

TouchWin Pro software

User manual

Basic description

- Thank you for purchasing the Xinje TS series HMI.
- This manual mainly introduces the use of TouchWin Pro editing software of TS series HMI.
- Before using the product, please read this manual carefully and use it on the premise of fully understanding its contents.
- Please deliver this manual to the end user.

Notice to users

- Only operators with certain electrical knowledge can conduct wiring and other operations on the human-computer interface. If there is any ambiguity, please consult the relevant technical department of the company.
- ◆ The examples listed in the manual and other technical materials are only for users' understanding and reference, and certain actions are not guaranteed.
- When using HMI with other products, please confirm whether it conforms to relevant specifications and principles.
- When using the HMI, please confirm whether it meets the requirements and safety by yourself. For the possible machine failure or loss caused by product failure, please set backup and security functions by yourself.
- Please avoid using HMI in the environment of high radiation and strong magnetic field to avoid interference

Declaration of responsibility

- Although the contents in the manual have been carefully checked, errors are inevitable, and we cannot guarantee that all the data are completely consistent.
- We will often check the contents of the manual and make corrections in the subsequent versions. We welcome your valuable suggestions.
- The contents introduced in the manual are subject to change without notice.

Related manual

Refer to the following manuals for TS hardware and connection with other communication devices.

- TS series HMI user manual [hardware]
- ◆ TS series HMI user manual [connection]

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Aug. 2021

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1. TouchWin Pro software

1-1. TouchWin Pro installation

1. PC hardware configuration

CPU above INTEL Pentium II, More than 64MB memory. Hard disk with more than 2.5GB and at least 1GB of disk space. 32-bit true color display with resolution above 800 x 600.

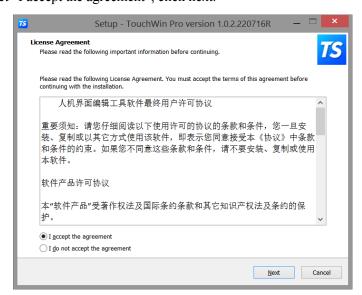
2. Operation system

Windows 7/ Windows 8/windows 10 /windows 11.

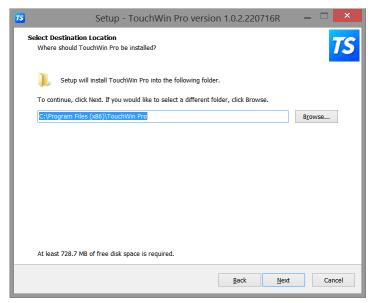
- 3. Installation steps
- (1) Find "setup. exe" in the installation file package and right click to run as an administrator. A dialog box as shown below appears. Select the language to install: (Note: Please close the anti-virus software during installation!)



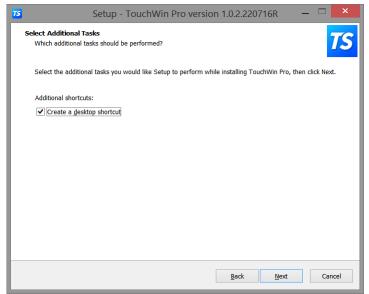
(2) Click OK, select "I accept the agreement", click next.



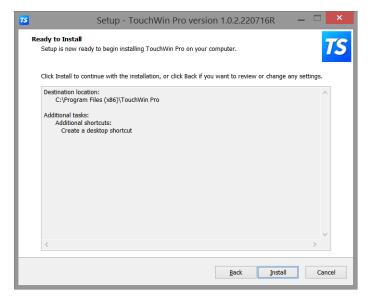
(3) Select the software installation folder. It is recommended to install the software on a non system disk and in the English path. (%/!/@ and other special characters cannot exist in the installation path name)



(4) Choose whether to add shortcuts.



(5) Click Install to finish the installation.



To install two or more different versions of editing software on the computer, you must select different

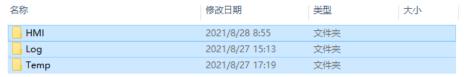
installation paths, otherwise overwriting the installation will cause the software to run abnormally or even fail to run.

1-2. TouchWin Pro software uninstallation

1. Find out "unins000.exe" in the software installation folder, double click it to uninstall the software.



- 2. Click Yes to unistall.
- 3. After the software uninstallation is completed, it will automatically exit the uninstallation program, and finally delete the installation directory folder by manual.



2. Make a simple program

TouchWin Pro editing software is simple and fast, and provides an ideal editing platform for beginners or users with a certain foundation. This chapter introduces the use of HMI editing software through a simple project production.

Please confirm the model of HMI and the type of communication equipment before making the program, which is the prerequisite for the normal operation of the screen program and equipment

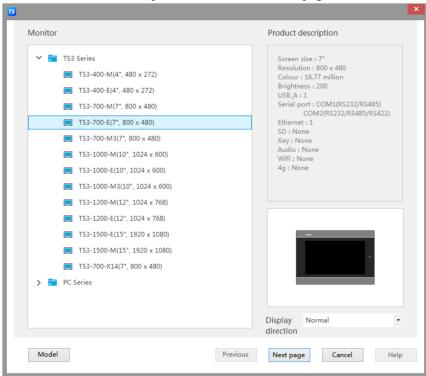
2-1. New program



1. Click

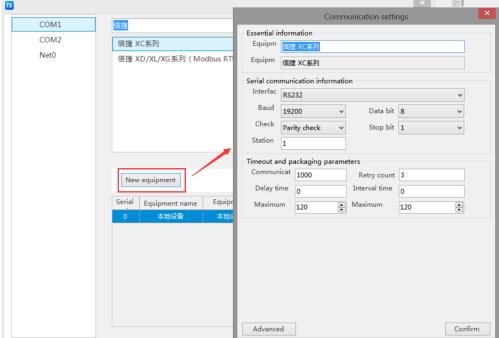
to build a new program.

2. Select correct HMI model, for example TS3-700-E. Click next page.



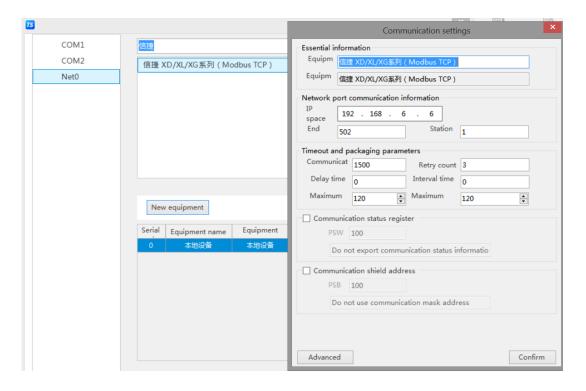
3. Set the COM port, the COM port has no equipment by default. You need to select the PLC brand through the pull-down menu. After selecting the correct PLC type in the list, click the "New Equipment" button, and set the equipment name and its communication parameters in the pop-up window



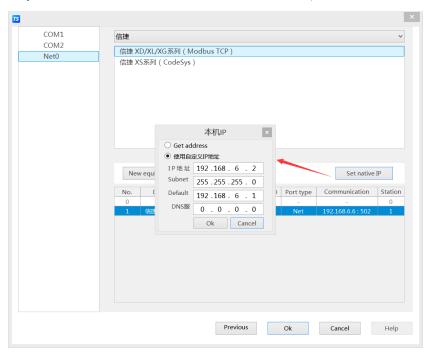


4. Set the Ethernet port (Net0), select the PLC brand through the pull-down menu, select the correct PLC type in the list, click the "New equipment" button, and set the communication parameters such as device name and IP address in the pop-up window.





Click the "Set native IP" button, and set the HMI native IP address parameters in the pop-up window (you can choose to automatically obtain the IP address or customize the IP address)



5. Click ok to finish the building.



- (1) TouchWin Pro software cannot support TG series HMI.
- (2) -E series HMI can support Ethernet devices.

2-2. Screen edit

Realize the reverse operation of digital value Y0, and display the output status of Y0 through the indicator on

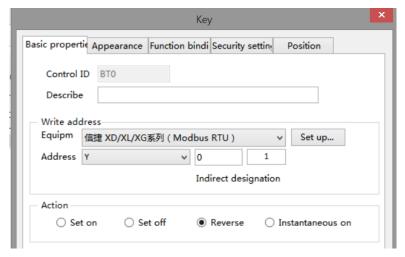
the HMI.

1. Make the button

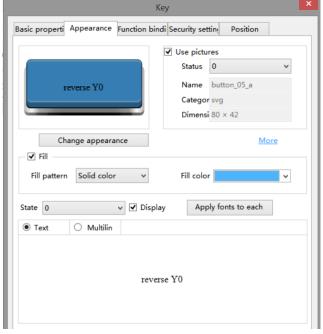
Click the menu Parts/key/key or key icon key in control window. Click on the editing screen to set its properties in the pop-up properties dialog box.

Basic properties

Write address: set to Y0. Action: set to reverse.



Text: enter reverse Y0.



You can click "Change appearance" to enter the resource material library of the system and select an appropriate appearance, or click "More" to select a custom picture as the appearance of the component.

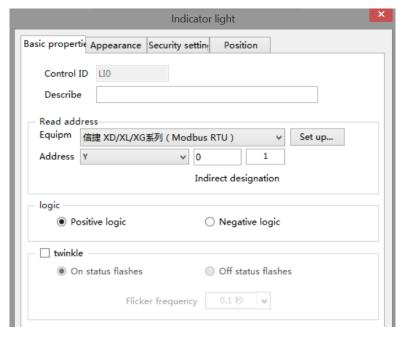
2. Indicator light

Click the menu Parts/key/indicator light or click the indicator icon in control window. Click on the editing screen to set its properties in the pop-up properties dialog box.

Basic properties

Read address: set to Y0.

Logic: set to positive logic.



Appearance

Set the appearance display of its ON status and OFF status respectively.



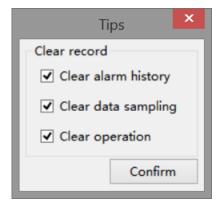
2-3. Offline simulator

In order to facilitate the user to debug and edit the screen, the actual operation of HMI and PLC can be simulated on the computer (no need to connect PLC).

1.Click the menu File/offline simulator or offline simulator icon Offline Simulator



2. The following prompt window will pop up in the interface, and it is recommended to select all of them, otherwise the simulation will be abnormal.



3.Click the "Reverse Operation" button to directly observe the output state of Y0 through the indicator light

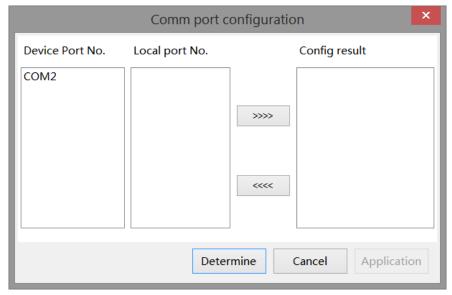


ON status OFF status

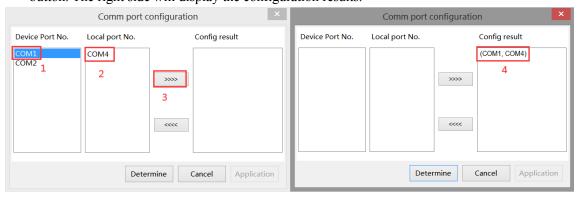
2-4. Online simulation

Simulate the actual operation of HMI and PLC on the computer to realize the monitoring function of the lower computer equipment (PLC must be connected to the computer, and the effective operation time of online simulation is within 2 hours).

1. Click the menu File/online simulation or online simulation icon online simulation icon in control window.

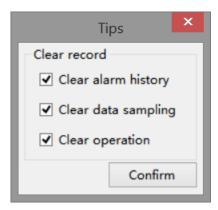


2. At this time, you need to configure the port. Configure the device port with the local port. First click to select the device port number, then click to select the local port number, and then click the middle button. The right side will display the configuration results.



	Device port	Select the HMI port number, that is, the COM port selected when adding a device for a new
	number	project, which can be viewed by clicking "File/System Settings - Equipment"
Ī	Local port	Select the port number of the PLC connected to the computer, which can be viewed through the
	number	computer device manager

3. The following prompt window will pop up in the interface, and it is recommended to select all of them, otherwise the simulation will be abnormal.



4. After the above operations are completed, click "OK" to enter the online simulation screen, which can realize the function of the computer monitoring the PLC. In the figure, Y0 output is achieved through reverse operation, as shown in the indicator light



If the prompt window of "communication timeout" appears on the online simulation interface, first check whether the port is correctly selected and configured, and then check whether the serial port in the computer is occupied by other software.

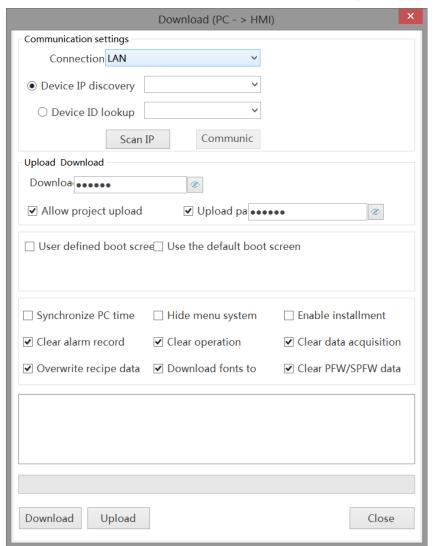


2-5. Program download

There are three download methods for TS series HMI: USB, LAN and Remote. LAN and Remote require (- E) series models.

The project downloaded by default does not support upload. If you need to support project upload, please select "Allow project upload" on the download page. Then, you can set the "upload password".

Click the menu File/download or the download icon bownload to show the following window.



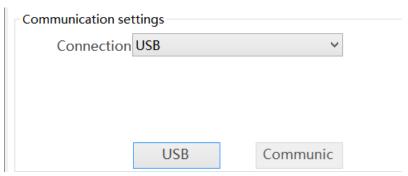
Communication settings	Set the download connection mode and corresponding parameter settings
Connection	Refers to the way to connect the HMI. You can select USB, LAN and remote
Download password	To set the download password of the project, it must be consistent with the password
	set in the HMI, otherwise it will not be downloaded. The default download password
	is 123456. For the modification of the password in the HMI, refer to chapter 7-2
	Password
Allow project upload	Set whether the current project can be uploaded
Upload password	When Allow Project Upload is selected, you can choose to set the upload password
User defined boot screen	After checking, click "Browse", and select the file as the HMI boot loading screen
	(the current version only supports images with 800 * 480 pixels and BMP format)
Synchronize PC time	The time information of the computer is synchronously downloaded to the HMI to
	synchronize the HMI clock with the computer

Hide menu system	There is a system menu at the lower right corner of the HMI by default, here you can
	set whether the menu is displayed
Enable installment	This download will enable the installment function
Clear alarm record	This download will delete the alarm information stored in HMI
Clear operation	This download will delete the operation record information stored in HMI
Clear data acquisition	This download will delete the data collection information stored in HMI
Overwrite recipe data	This download will overwrite the original recipe data in HMI with the recipe data set
	in the current project
Download fonts to	Download the fonts of the computer to the HMI to synchronize the HMI fonts with
	the computer
Clear PFW data	This download will delete PFW data stored in HMI
Download	Execute the download operation, and download the project to the HMI
Upload	Read the project in HMI to the computer, and check "Allow project upload" is
	selected when downloading the project in HMI, otherwise it will prompt that the
	project does not support upload
Close	Close the window

The connection mode is described in detail here:

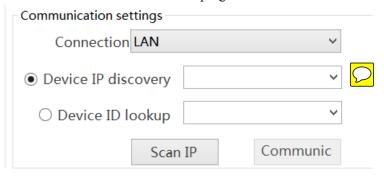
① USB: When USB connection mode is selected, it can be used after successful connection, and no other parameter setting is required.

USB refresh: Identify the currently available USB. If no USB is identified, the "communication" cannot be clicked.



Communication: It is used to test whether the HMI is successfully connected to the computer. After clicking, the connection status will be displayed on the right side of the button, including "connection succeeded, connection failed, connection timeout.

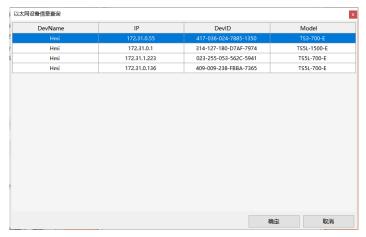
② LAN: When the LAN connection mode is selected, IP and ID settings will be displayed below. You need to enter the correct IP or ID address to download the program.



Device IP discovery: Input the IP address of the connected HMI, or select the last input address through the drop-down box

Device ID loopup: Input the ID address of the connected HMI, or select the last input address through the drop-down box. The touch screen ID can be viewed on the label on the back of the HMI.

Scan IP: When the IP address is uncertain or multiple HMIs are connected, click this button to scan the device IP connected to the computer, select the IP address to download from the scanned IP addresses, and click it to pop up the window below.



Communication: It is used to test whether the touch screen is successfully connected to the computer. After clicking, the connection success, connection failure or connection timeout will be displayed on the right side of the button

® Remote: When remote connection is selected, the HMI needs to be connected to the network, and the correct ID number and password need to be input, as shown in the following figure (not supported in the current version)



Device ID: Input the ID address of the connected HMI, or select the last input address through the drop-down box. The HMI ID can be viewed on the label on the back of the product.

Password: User defined remote connection password.

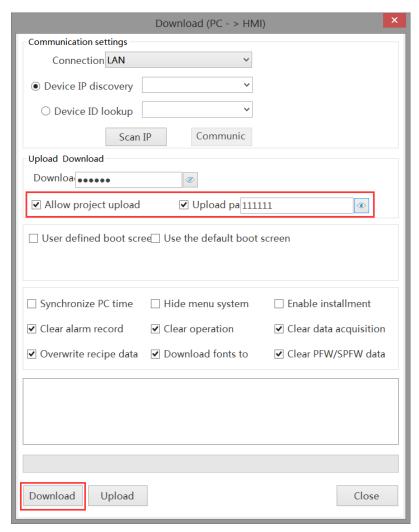
2-6. Upload project

The HMI supports the upload function of engineering data, which is convenient for data resource management.

Click the menu File/download or download icon vindow. The precondition for uploading is that "Allow Project Upload" is selected when downloading the project to the HMI. If the upload password is set, you need to enter the correct password to upload the project successfully.

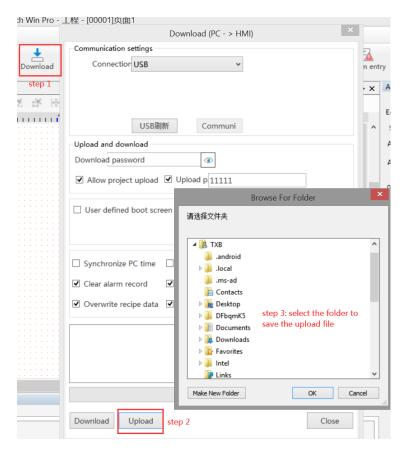


Password input range: 1-8 digits and characters.

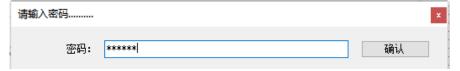


When the download is successful, the steps to upload the project are as follows:

1. Complete steps 1~3 as shown in the figure below



2. Click OK to pop up the password input dialog box. Enter the upload password set during download, and click OK. (If the upload password is not selected, this step is not available)



3. After clicking OK, the progress bar of file upload will be displayed, and the words "upload succeeded" will be displayed.





4. Open the path saved by the upload project, and you can see a Hmi.xjp file

If Allow Project Upload is not selected, a window prompt of "No Upload" will appear when clicking upload.



3. Software screen and window

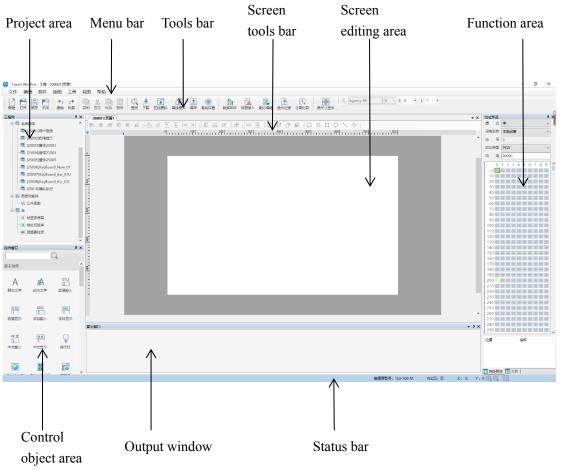
This chapter gives an overall description of the TouchWin Pro editing tool.



The software part of this manual is based on the status of the primary function software.

3-1. Software structure

Open TouchWin Pro, build a new project.



Project area	It involves basic operations such as creating, deleting, copying and cutting pictures and
	windows, and editing and using function blocks and libraries
Menu bar	There are 7 menus, including File, Edit, Part, Mapping, Tool, View, Help
Tools bar	Some common tools, including creating, saving, copying, cutting, searching, downloading,
	simulating, etc
Screen tools bar	Some tools for operating the contents of the screen during the screen editing, including
	alignment, centering, equal width, equal height, combination, etc
Screen editing	Project screen editing area
area	
Function area	Display and switching of function window can be freely set, including address preview and
	outline

Control object	Control list window for screen editing, including basic components, equipment, drawing, data
area	processing and special components
Output window	When the project reports an error, the error message will be displayed here, and the
	compilation information and results will also be displayed here when the project is simulated
	or downloaded
Status bar	Display HMI model, PLC port connection device, download port connection device, etc

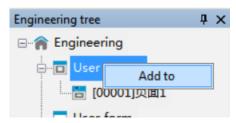
3-2. Project area

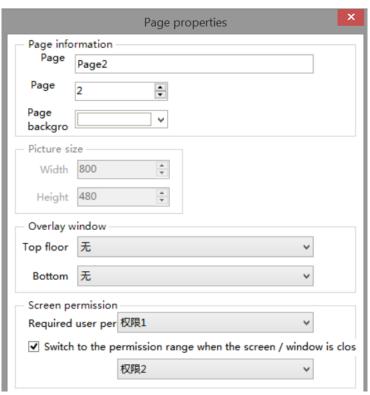
It is mainly used to add, cut, copy, paste and delete images, windows, function blocks and libraries.

3-2-1. Add

1. Add the screen

Select "User Screen" in the project area, right-click and select "Add to", and the following property dialog box will pop up:





Page name	Customize the name of this screen
Page no.	Set the number of the screen, which is incremented by default. After clicking "OK", the screen
	number cannot be changed
Page	Set the background color of the project screen
background	
Picture size	Set the width and height of the screen. If it is a user screen, the picture size is the resolution by

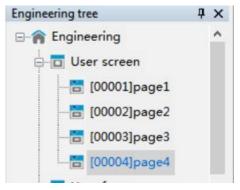
	default and cannot be changed. The user window can freely adjust the width and height
Overlay	Set the overlapping display window of the picture. Overlapping windows can be set at the top
window	and bottom layers. After setting, the set picture will be displayed on the top or bottom layer of
	the picture, but the superimposed picture can only be displayed and cannot be operated. For
	example, if the bottom overlay screen 1 is set in the properties of screen 2, the content of screen
	1 will be displayed in screen 2 like the background. The overlay screen will be displayed in gray
	during project editing to distinguish between the two screens, and will be displayed normally
	when simulated or downloaded into the HMI. See the following case description for specific use
	methods
Screen	Set operation permission for the current screen
permission	
Switch	After checking, when the screen/window is closed, the permission becomes another permission
permission	set (As shown in the figure above, when it is closed, the current screen permission is switched
range	from permission 1 to permission 2)

When the screen properties needs to be modified, select "Project Area/Object Screen Number", double-click the mouse left button directly, or click the mouse right button to select "properties".

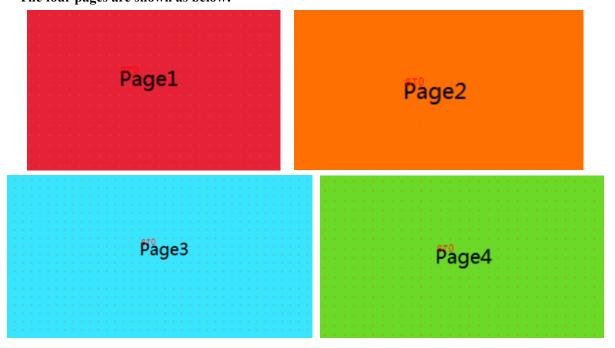


For the use of overlapping windows, the following is an example.

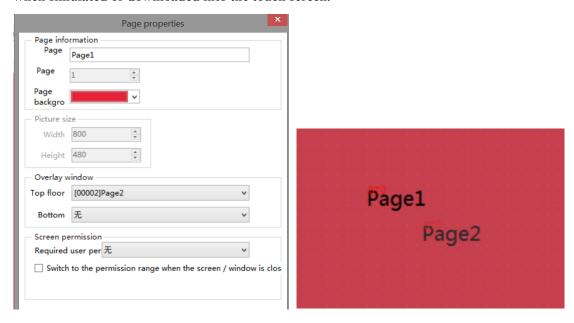
(1) Add 4 screens



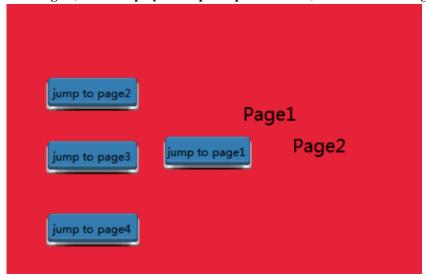
The four pages are shown as below:



(2) Set Page 2 as the top layer of Page 1. Operating Steps: Right click on Page 1, click Attribute, and select Page 2 at the top level under the overlapping window. At this time, the entire screen tone of Page 1 will darken, making it easy to distinguish between superimposed images. All components of Page 2 will be displayed on Page 1 and the tone will darken, and will be displayed normally when simulated or downloaded into the touch screen.



(3) You cannot open/switch from the current page to a window or page with the current page as the top/bottom layer. Take offline simulation as an example. Set the starting screen as Page 1. Page 1 that jumps from Page 3, 4 will display the superimposed screen, as shown in the figure below.



If you click the function key of "Jump to page 2" on page 1, the current screen will still be displayed (that is, the superimposed page 1).

If you click the function key "Jump to page 3/4" on page 1, the screen of page 3/4 will be displayed.

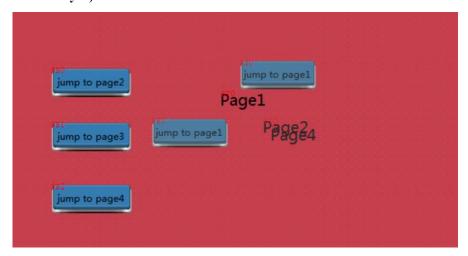
If you click the function key of "Jump to page 1" on page 3/4, the superimposed page 1 will be displayed.

If you click the function key of "Jump to page 1" on page 2, page 1 before superimpose will be displayed.

The same is true for the bottom layer.

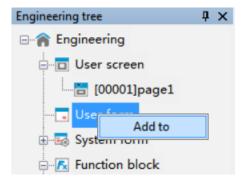
If the top layer and bottom layer are set at the same time, the superposition order of screen elements

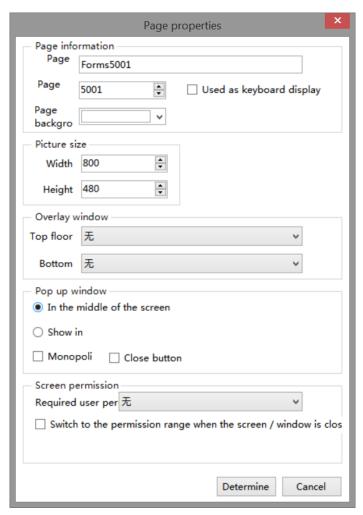
is current page ->top layer ->bottom layer, and the elements of the current page will be displayed at the top. (As shown in the following figure, the current page is Page 1, Page 2 is the top layer, and Page 4 is the bottom layer)



2. Add window

Select "User Form" in the project area, right-click and select "Add to", and the following property dialog box will pop up:



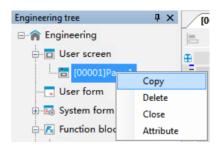


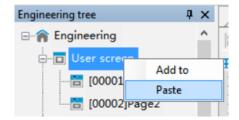
The properties interface of the new form is basically the same as that of the new screen. The following only describes the differences:

Page number	Set the number of the current form, which is incremented by default. After clicking OK, the
	form number cannot be changed. Different from the screen, the number of the form starts from
	5001
Picture size	Set the width and height of the form. The width and height can be adjusted freely
In the middle	Place the form in the center of the entire screen
of the screen	
Show in	The customizable form is located in the whole screen
Monopoly	When monopoly is checked, as long as this window is called, no other components in the screen
	can be clicked except the components in this window. When this window is closed, other
	components can be clicked normally, which is usually used in conjunction with the "close
	button"
Close button	After checking, the user does not need to do the close button alone, and there will be" x" close
	button

3-2-2. Copy paste

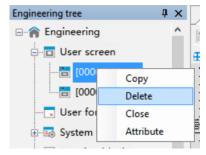
- 1. Select the screen to be operated, right-click and select copy.
- 2. Select the user screen in the project area, right-click and select "Paste" to complete the operation.





3-2-3. Delete

Select the screen to delete, right-click and select Delete to delete the screen.



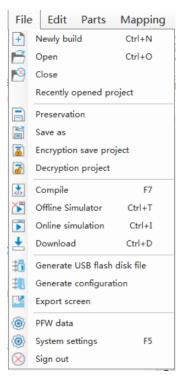
The operations of adding, copying, pasting and deleting "user window and function block" are the same as above.

3-3. Menu

The menu bar includes 7 groups of menus: File, Edit, Parts, Drawing, Tool, View and Help.

3-3-1. File

The file includes various operations on the project, such as new, open, close, save as, download, simulation, encryption save project.



1. New

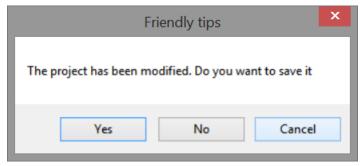
Create a new program, set the display and communication equipment, press Ctrl+N, and refer to section 2-1 for details.

2. Open

Click File/open or open icon in the tool bar, or press Ctrl+O, it will show below dialog box, select a project and click Open or double-click the project directly.

3. Close

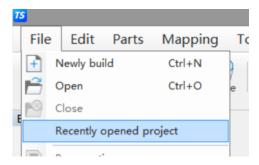
Click File/close or close icon in the tool bar to close the project. But it will not exit the software. If the project is not saved, the following prompt window will pop up.



Yes	Save the project. Then exit project editing
No	Do not save. Then exit project editing
Cancel	Return to screen editing status

4. Recently opened project

If the user has opened or edited some projects recently, the software will automatically remember the path and name of these projects, so that the user can find these projects more quickly without having to refind the project path. Move the mouse to File/Recently Opened Project, and the recently opened project will be displayed on the left. Click to open the corresponding project.



5. Save

Click File/save or save icon Preservation. Open the save dialog box, select the save path, enter the project name, and click Save.



In the process of editing the project screen, the user should save at any time to avoid data loss.

6. Save as

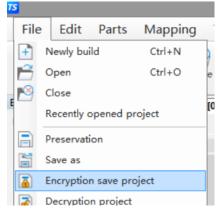
This operation is different from Save. Save uses a new file to replace the old one based on the original project. Save As saves the current project as a new project. After the Save dialog box pops up, select the storage path, enter the file name, and click Save.

7. Encryption save project

When the programmer needs to protect his own program and must give the program to the customer to download, the programmer can choose to encrypt and save it. After the file saved in this way is opened with editing software, the content of the screen cannot be seen, and no parameters can be modified. Only downloading and simulation can be done.

Operation steps:

(1) Open the project to be encrypted and click File - Encryption Save Project.



②After clicking, the pop-up window for entering password will appear, please set the encryption password (the password cannot be less than 6 digits)



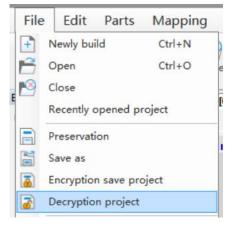
- 3 After entering the password, set the save path of the encryption project. The file default is the xep format, which cannot be changed
- 4) Open the path where the encryption project is located, and you can see an encrypted file ending in xep



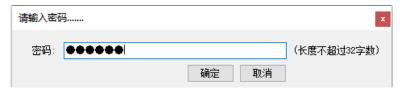
- (5) The encrypted file can only be opened for decryption, download, online simulation, offline simulation, compilation and other operations, and the project content cannot be modified in any way.
 - 8. Decryption project

It is used to decrypt the encrypted project. The decrypted project can be edited and downloaded normally. Operation steps:

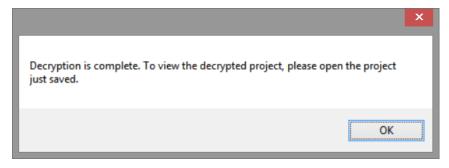
① Open the encrypted project. Refer to "7. Encryption save the project" above for the operation steps. Click File - Decryption Project.



2 Enter the password set during encryption and click OK.



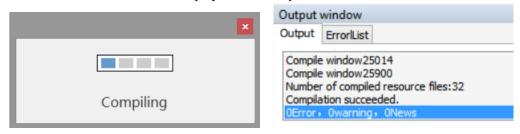
- 3 Select the save path of the decryption project and click Save to generate a project that can be edited and downloaded normally.
- 4 There will be a pop-up prompt after saving successfully.



(5) Open the save path of the decryption project. After the project is opened, it can be edited or downloaded normally.

9. Compile

Click File/compile or Compile. The system will check whether all control properties in each screen and window have errors. Compilation is a prerequisite operation for simulation and download. When you click Online Simulation, Offline Simulation or Download, the system will automatically execute the compilation operation. When compiling, a pop-up window as shown in the left figure will pop up in the center of the software, and the compilation information and results will be displayed in the output window



10. Offline simulation

In order to facilitate the user to debug and edit the screen, simulate the actual operation of HMI and PLC on the computer (no need to connect PLC). Click File/offline simulation or

11. Online simulation Simulate the actual operation of HMI and PLC on the computer to realize the monitoring function of the lower

computer equipment (PLC must be connected to the computer). Click File/online simulation or perform online simulation.

12. Download

Realize downloading the editing screen data to the HMI, click File/download or press Ctrl+D to perform downloading function.

For detailed operations of offline simulation, online simulation and download, please refer to chapter 2-3, 2-4 and 2-5.

13. Generate USB flash disk file

Export and store the project as dat file. The file name can be customized, but the suffix must be Dat, copy the generated file to the root directory of the USB flash disk, connect the HMI with the USB flash disk, and download the file directly to the TS series HMI.

Operation steps:

① Click File/Generate USB flash disk file, it will show path selection dialog box. Click to be saved in the pop-up window, and enter the name of the USB flash drive project file to be saved. Please note that the file must be saved as .dat.



②After selecting the path, click the "Export" button.

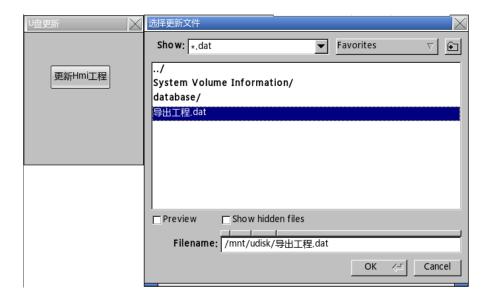


Note: HV1 is an old version and HV2 is a new version. Only HV1 can be selected for the old version of the touch screen, and only HV2 can be selected for the new version of the touch screen. Otherwise, the firmware will be prompted as incorrect. Please refer to 7-3 for the hardware version of the touch screen currently used Device information.

③ If the export is successful, you will be prompted as shown in the following figure, and a file will be generated in the saved path. The file type must be .dat (do not modify the file suffix). Copy the file to the root directory of USB flash drive for later use.



4 Insert the U disk into the U disk port of the HMI, and the "U disk update" pop-up window will pop up in the upper left corner of the HMI. Click "Update HMI Project", and the file selection window will pop up, as shown in the following figure on the right. Select the project to be imported in the list, and click "OK" button at the lower right corner. The system will automatically import the project file, and the progress bar of the import project will be displayed on the screen. After the import is completed, remove the U disk.



(5) Import is successful.



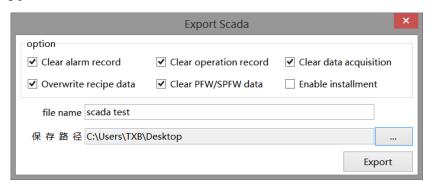
The "Allow project upload" set in the software download interface does not take effect after the project is updated with a USB flash drive, that is, the project updated with a USB flash drive is not allowed to upload.

14. Generate SCADA

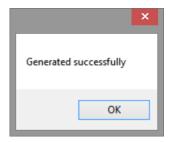
The SCADA generation let the computer replaces the HMI and communicates directly with PLC and other external communication devices. The difference between its function and the online simulation function is: when the online simulation function is implemented, the user needs to install TouchWin Pro editing software. The user does not need to install TouchWin Pro editing software when the SCADA is running.

Operation steps:

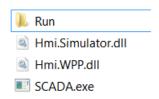
- (1) Click File/generate SCADA
- (2) Set the saving path and file name

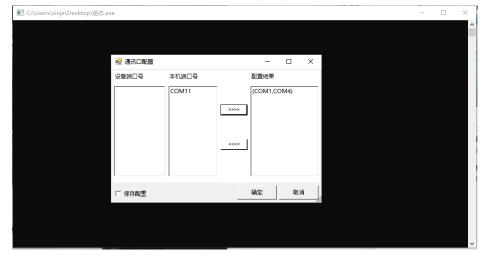


(3) Generate SCADA is successful.



4) Generate four files in the saved path, click the SCADA name .exe file, and configure the communication port to run normally.



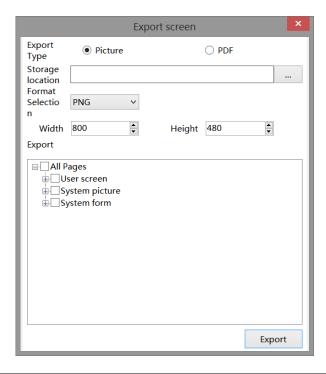




Refer to chapter 2-4 for the configuration interface of communication port.

15. Export screen

The function of screen export is to save screens in the form of pictures or PDFs for document writing or picture preview. The name is picture name+ID. Click the "File" menu and select "Export Screen", and the following window will pop up:



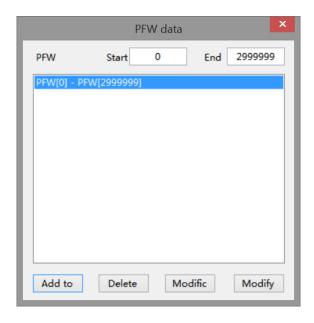
Export type	Select the format of screen export. The default export is picture format, or PDF format can be
	selected as required. After selection, the screens in the project will be exported in the form of
	pictures or PDF
Screen	Select the screen to be exported. You can select a screen or window to export, or select all to
selection	export
Format	Select the export format. If the export type is a picture, the optional formats here are png, jpg
	and bmp. If the export type is PDF, there is no optional format here
Storage	Set the export path, click "Select Folder", and set the target path in the pop-up window. The
	selected image or PDF will be saved in the path set by the user
Size	When selecting an image for export type, you need to set the width and length of the generated
	image. The default is the display size of the selected HMI model for the current project. You can
	customize the width and length of the exported image according to your needs

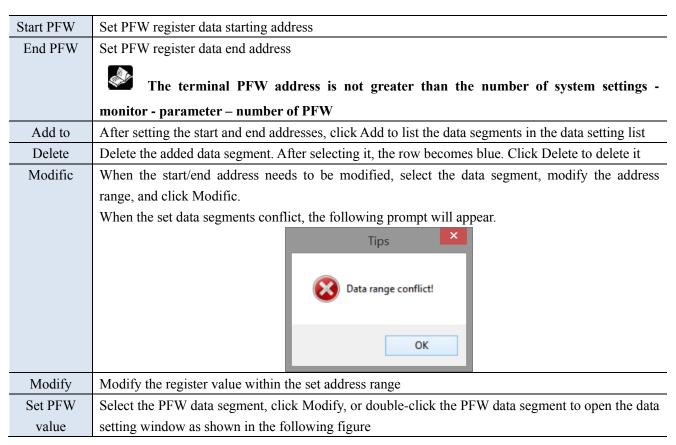
After setting the parameters, click Export. The system will automatically perform the export task. If the export is successful, the export successfully window will pop up.

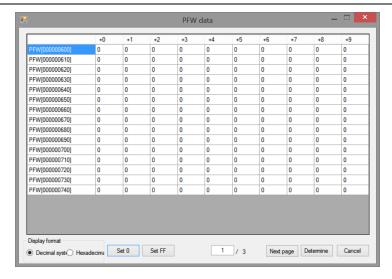
16. PFW data

This operation is to modify the system parameters of the project. After the program is downloaded again, the PFW data is initialized. Generally, when the recipe function needs to set the initial value, it can be modified after being downloaded to the HMI.

Set PFW address range







Decimal: data display in decimal format

Hex: data display in hex format

Set 0: set all data in the setting segment to 0

Set FF: Set all data in the setting segment to FFFF

OK: make the settings effective

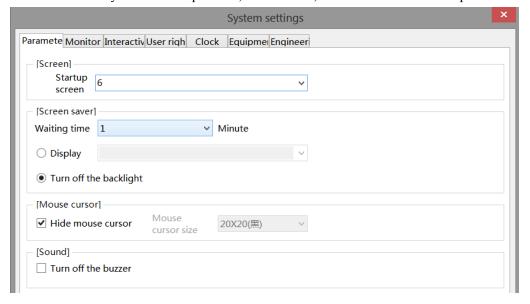
Cancel: not effective

17. System settings

This operation is to modify the system parameters of the project.

Parameter

Click "Parameters" to directly set the startup screen, screen saver, mouse cursor and sound parameters.

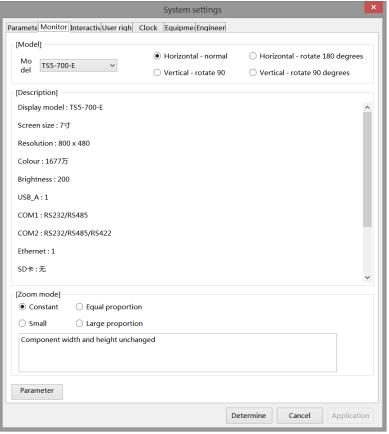


Screen	Input the startup screen number, that is, when the HMI is powered on after downloading the
	program, the screen that runs first is usually the main screen of the program or the screen with
	the highest frequency of use
Screen saver	This function is an automatic measure when the HMI is not triggered for a long time. After a
	period of no trigger operation, the touch screen can turn off the backlight or jump to the
	specified screen according to the settings
Waiting time	Select time or no screen saver according to user requirements

Display	When the time conditions are met, jump to the target screen
Turn off the	Turn off the backlight when the time conditions are met
backlight	Note: Only one operation can be selected between turning off the backlight and display screen
Hide mouse	When checked, the mouse cursor will not be displayed when the touch area is clicked
cursor	
Mouse cursor	Set the size and color when the mouse cursor is displayed. The color can only be black or white
size	
Sound	It is used to set whether the screen will emit sound when the HMI is working normally. The
	default is that there is sound output. If "Close buzzer" is checked here, no sound will be emitted
	when the HMI is working, whether the screen is clicked or the alarm is triggered

■ Monitor

Modifiy the HMI model and display direction.

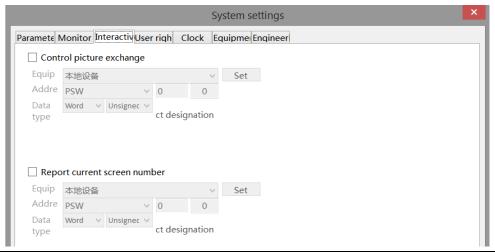


Model	Display the current HMI model and display direction. If you want to modify the display model,
	you can click OK to take effect after selecting a new display model and setting the display
	direction correctly. The display direction defaults to normal horizontal display. In order to adapt
	to various occasions, we provide the options of 180° rotation, 90° clockwise rotation and 90°
	counterclockwise rotation. The rotation options are appropriate according to the actual use
	situation. (The default is horizontal display. If it is switched to other display directions, it will
	automatically jump to the calibration screen after downloading, requiring the user to calibrate
	again)
Description	Display the current screen size, resolution, color, brightness, USB port, COM port and other
	information
Zoom mode	When changing the display model, the proportional relationship between the width and height
	of components in the screen and the display size

Constant	Component width and height remain the same
Equal	The width and height of components are scaled according to the width and height of the display
proportion	
Small	The component width and height values are scaled according to the small value of the display
	width and height ratio
Large	The width and height of components are scaled according to the large value of the width and
proportion	height ratio of the display
Parameter	Set the number of system registers
	Number of PSW: Number of PFW: Number of PFW: Number of PFSBs: 10000

■ Interactive

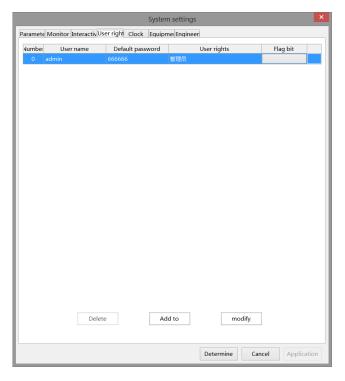
It mainly realizes the attribute relation between the screen and the register. Click Interact, and the settings shown in the following figure appear:



Control picture	Jump to the screen according to the value of the current register. If the register value is 10, it
exchange	means jump to the screen No. 10. Use the PLC register to control the screen switching. It is
	recommended to use the rising edge or falling edge signal for the triggering conditions.
Report current	The screen number of the current operation screen is displayed. If the current operation
screen number	interface is screen 7, the register will display 7
Equipment	Current equipment port for communication
Set	Click to enter address setting, and select to use system register or user-defined label in the
	pop-up window
Address	Set the object type and address of the current register
Data type	Set the data type of the register selected in the previous item. Byte represents 8 bits, Word
	represents 16 bits, DWord represents 32 bits, and DDWord represents 64 bits. In the second
	box, you can select decimal, hexadecimal, unsigned number, floating point number, etc
Indirect	The current register address changes with the indirectly specified register value, that is, Dx
designation	[Dy]=D[x+Dy value](x, y=0, 1, 2, 3)

User rights

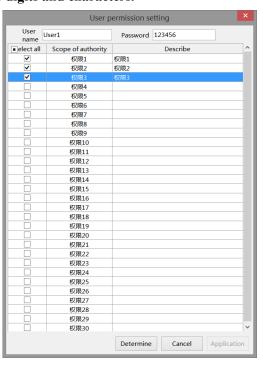
The user authority function plays the role of engineering and data protection to improve program security. Authority settings are usually used for hiding and encrypting parts or pictures. Relevant operations can only be performed when the password is correctly entered.



There are 30 permissions from "Permission 1 to Permission 30" set here, each of which is an equal level. Click the "Add to" button to add a user when using it. When adding a user, check the range of permissions that the user can operate, as shown in the following figure. After entering the password of the user "User1", you can operate the password protection functions of Permission 1, Permission 2 and Permission 3. At the same time, the corresponding flag is ON.

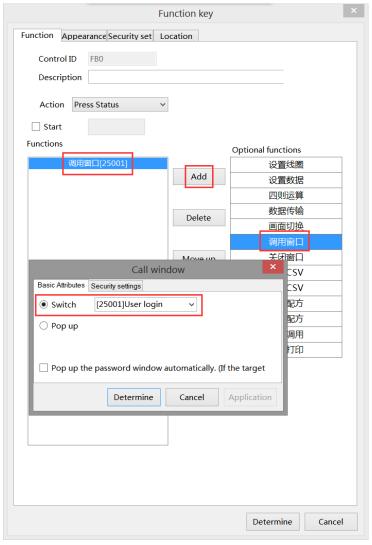


Password input range: 1-8 digits and characters.



If multiple users need different permissions, you can add users according to the above operations and select corresponding permissions. By default, the project has an administrator permission of Admin. The administrator permission level is the highest, and all permission protection functions can be operated. Here are two ways to log in:

(1) Call the user login interface through the function key See the following figure for operation steps:



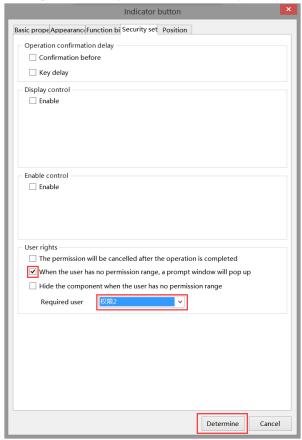
Click the function key to call up the user login window (see the figure below), select the user name to log in, enter the password correctly, and the lower left corner will display the login successfully, if the password is entered incorrectly, the login failure will be displayed.

Take user1 as an example.

Select the user name of User1 from the drop-down list, enter the correct login password 123456, and click the "Login" button to display that the login is successful (see the left figure). At the same time, the password will be cleared. After the login is successful, you will have permissions 1, 2, and 3 at the same time. To log out, also select User1's user name in the drop-down list, enter the correct login password 123456, and click the "logout" button to display that the logout was successful (see the right figure). At the same time, the password will be cleared, or you can quickly log out by turning the flag position OFF. After the logout is successful, the user will have no rights (1, 2, 3).



(2) Select "When the user has no permission, a prompt window will pop up" Taking the indicator button as an example, the settings are shown in the figure below



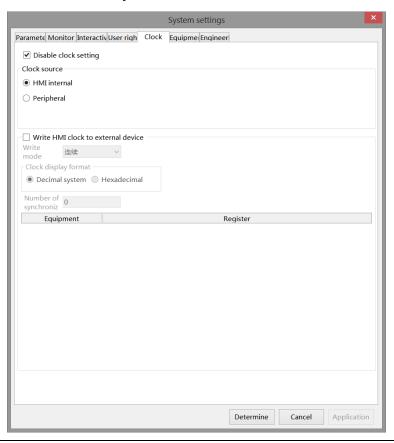
Download to the screen, click the indicator button, and the following window will pop up



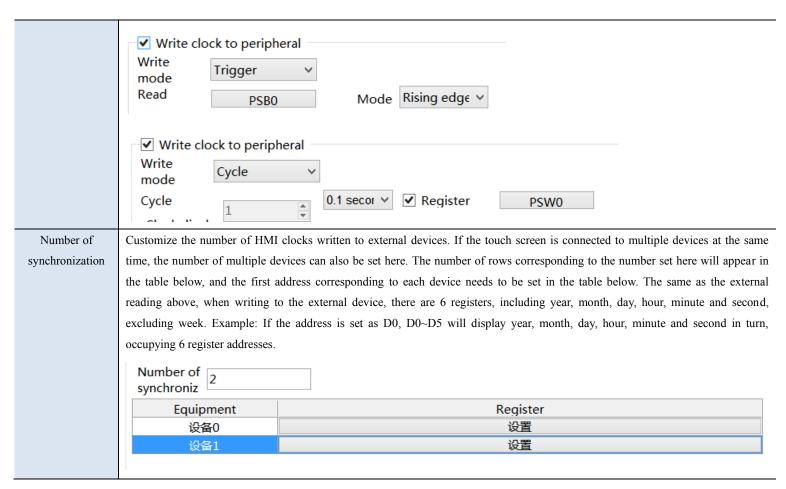
Click "User Login" to enter the user login interface. Refer to User1 login introduction above for the operation steps. Click "OK" to close this pop-up window

■ Clock

The HMI is equipped with the clock function as standard, which is mainly used to set the clock source and transmit the touch screen clock to externally connected PLC and other devices.

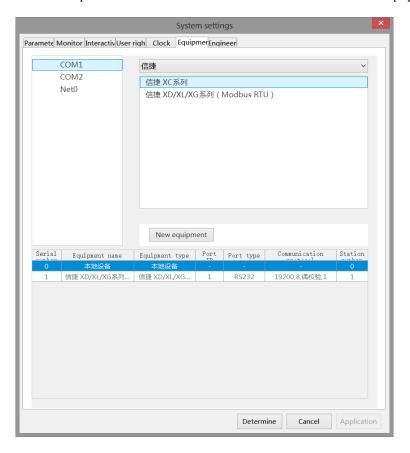


Disable clock	If selected, the HMI internal clock cannot be modified, which is used for installment payment and other time encryption projects to
setting	prevent the clock modification from affecting the function
Clock source	To set the clock source of the HMI, you can choose to use the HMI internal clock or import from an external device. The default is
	the HMI internal clock. When you select an external device, the following settings will appear
	Clock source
	O HMI internal Clock display format
	Peripheral Decimal system Hexadecimal
	Addr ess PSW0
Clock display	When setting to read from an external device. You can select decimal or hexadecimal format.
format	For example: when HMI communicates with Xinje PLC, if you choose to read the clock from the external device, and Xinje PLC
	clock format is hexadecimal, so the clock display format here should also be hexadecimal.
Address	Set the first address of clock reading, that is, read the time from the set address, and set it as the time of HMI. The address requires
	that year, month, day, hour, minute and second each occupy a single word (16 bit) register, excluding week. For example, if the
	address is set to D0, the values of 6 registers D0~D6 will be read from D0, which will be used as year, month, day, hour, minute and
	second in turn
Write mode	After checking "Write HMI clock to external register", you can set the HMI clock export mode. You can select continuous, trigger or
	cycle. The default is continuous, that is, every second change can be written to the external address in real time. When you select
	trigger or cycle, you need to set the transmission conditions, as shown in the following figure. Note that when the writing mode is
	cycle, the minimum cycle cannot be less than 100 milliseconds.



Equipment

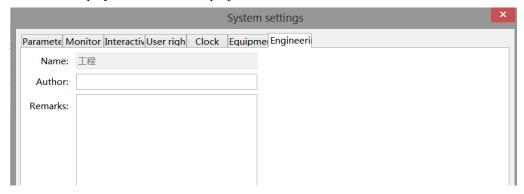
It mainly sets the communication parameters between HMI and PLC and other external equipment



New equipment	Add different device types. Select COM1/COM2/Net0 on the left and click "New equipment"
	to add a new device
Equipment	The name of a user-defined device. When multiple devices are added to the same serial port,
name	the name cannot be duplicate
Equipment type	The protocol name
Port ID	The COM port where the device is located is automatically generated by the system, no need to
	set
Port type	The interface type selected when creating a new device is generally RS232, RS485, RS422 or
	Net
Communication	When it is on the serial port, the baud rate, data bit, parity mode, stop bit and other parameters
protocol	are displayed here.
	When it is on the Ethernet port, the IP address and port number of the device are displayed
	here. Double click to modify the parameters.
	Communication settings Communication settings
	Essential information Equip 情慧 XD/XL/XG系列(Modbus RTU)2 Equip 情慧 XD/XL/XG系列(Modbus TCP)
	Equip 信捷 XD/XL/XG系列(Modbus RTU)
	Serial communication information Interfa RS232 Network port communication information IP 192 · 168 · 6 · 6
	Baud 19200 v Data bit 8 v End 502 Station 1
	Check Parity check V Stop bit 1 V Timeout and packaging parameters Communi 1500 Retry 3
	Timeout and packaging parameters Delay 0 Interval
	Communi 1000 Retry 3 Maximum 120 Maximum 120 Delay 0 Interval 0 Communication status register
	Maximum 120 Maximum 120 PSW 100
	Do not export communication status i
	□ Communication shield address PSB 100
	Do not use communication mask addr
	Advanced Confirm
Station no.	Device station number. When multiple devices are added to the same serial port, the station
	number cannot be duplicate
	'

■ Project

This item is used to set the name, author and comments of the current project. If the current project has been saved, the name item displays the name of the project and cannot be modified.

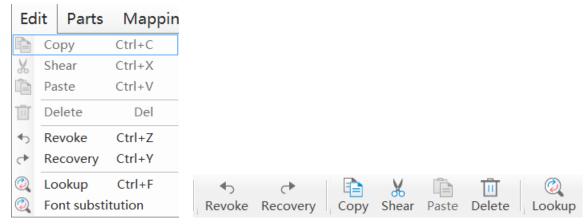


16. Sign out

This function is used to exit the TouchWin Pro editing software, which is different from the "Close" operation. If the user does not save the project, a save window will pop up to avoid losing the operation

3-3-2. Edit

The Edit menu is mainly used to edit components. The corresponding shortcut keys can be found in the toolbar for the functions in editing, as shown below:



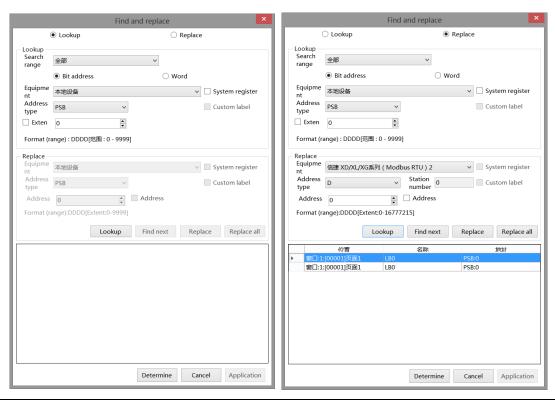
Сору	Select the target component and copy the component. The difference between the cutting
	operation and the cutting operation is that the original component no longer exists, but after the
	copy operation, the original component still exists. The shortcut key is Ctrl+C
Cut	Select the target object, cut it to the clipboard, shorcut keys Ctrl+X
Paste	It is the subsequent operation of "Cut" and "Copy". After cutting or copying the object
	component, execute the "Paste" operation to successfully transfer or copy the target component,
	shorcut keys Ctrl+V
Delete	Delete target object, shorcut keys Delete
Undo	Undo history operation, shorcut keys Ctrl+Z
Redo	Restore the history operation that was undone, shorcut keys Ctrl+Y

■ Lookup

This function is used to find and replace addresses in the project.

1 Lookup

It is used for address search in the project. Enter the target address and click "Search" to display the screen, control ID and address number of the target address found in the lower blank area (as shown in the right figure below).

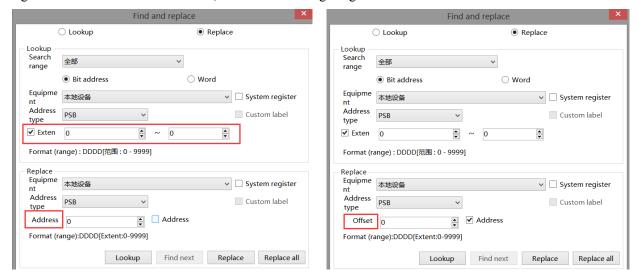


Look up	Select the search range. You can select a screen/window, or search in all the screens/windows.
search range	After selection, you will search within the selected range
Bit address	Set the search target as bit address
Word address	Set the search target as word address. Please note that only one of word address and bit address
	can be selected
Equipment	Select the name of the device to be searched, which can be selected from the local device (HMI
	internal) and the newly added devices in the COM port and Ethernet port devices
Address type	Select the address type. The address type here will change with the bit address or word address
	selected in the above search range. If the bit address is selected above, the address types displayed
	here are all bit address types. If the word address is selected above, the address type displayed
	here is the word address type.
Range	Set the detailed address number or address range to search. If "Range" is not checked, you only
	need to enter the address number to be searched in the rear input box, such as 0x0 under the
	modbus address; If "Range" is checked, two input boxes will appear. Enter the start address in the
	first input box and the end address in the second input box, such as 0x0~0x10. When the system
	performs the search task, it will search in 0x0~0x10, including the first and last addresses
System	After checking, the address can only be selected from the HMI system address, the device must
register	select "local device", and the specific system register name must be selected from the address
	type
Custom label	Select the address to find in the customized address label

② Replace

It is used to replace the address used in the project. It is usually used to change the address. The replacement needs to be used together with the search, and will be replaced in the found address. During operation, you need to first set the target address to be replaced in the search, and then set the replaced address in the replacement. Click "lookup". If you only need to replace one or more of them, you can click to select the control to be replaced in the search results, and click "Replace" to replace the selected control address with a new address. If you need to replace all controls, you can click Replace All to replace all the found controls with new addresses.

It should be noted that when "Range" is checked in the search, when using range search, an "Address Offset" option will appear in the replacement, as shown in the left figure below; After checking, the location of the original address will become "offset", as shown in the right figure below:

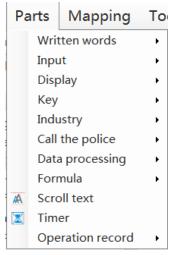


Case 1: When the range is checked and the address offset is not checked, all the addresses found in the range will be replaced with replacement addresses. If the search target is $a\sim b$ and the replacement target is c, the replacement result is $a\sim b$ replaced by c. For example, if the search range is set to $0x0\sim 0x10$ and the replacement address is 1x0, then all $0x0\sim 0x10$ addresses found will be replaced or replaced with 1x0.

Case 2: When the range is checked and the address offset is checked, there is an offset setting, that is, offset by the set offset in the search range. If the search target is a \sim b and the replacement offset is d, the replacement result is a+d \sim b+d. For example, if the search range is set to 0x0 \sim 0x10, and the replacement address type is set to 1x, then if the offset is set to 0, 0x0 will be replaced with 1x0, 0x1 with 1x1,..., 0x10 with 1x10. If the offset is set to 1, 0x0 will be replaced with 1x1, 0x1 with 1x2,..., 0x10 with 1x11. If the offset is set to a different value, the analogy will follow.

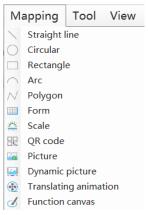
3-3-3. Parts

The component menu is mainly used for component editing, corresponding to the icon in the control window. Please refer to Chapter 4 for details.



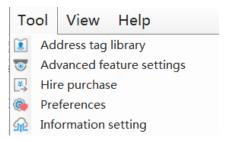
3-3-4. Mapping

This item includes basic tools such as straight line, circle, rectangle, arc, polygon, table, scale, QR code, picture, dynamic picture, and function canvas. There are corresponding shortcut icons in the control window, which can be realized through icons in the control window. Please refer to 4-1. drawing for specific use.



3-3-5. Tool

Used for address tag library settings and preferences.

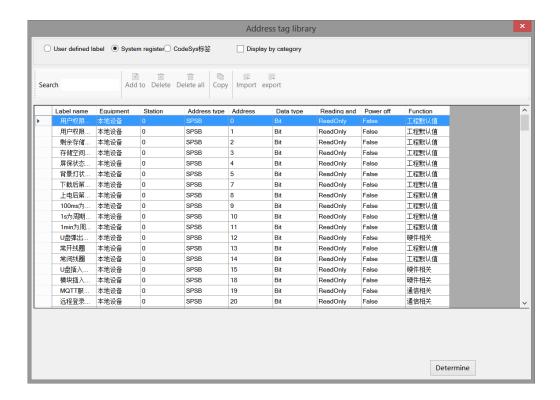


1. Address tag library

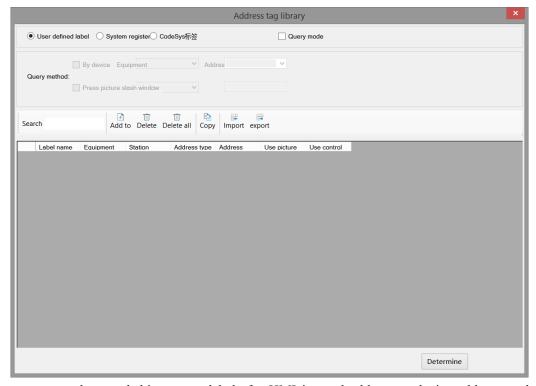
It is used to customize the address label, and can also view the meaning and address correspondence of the HMI internal system address in the library.

■ System register

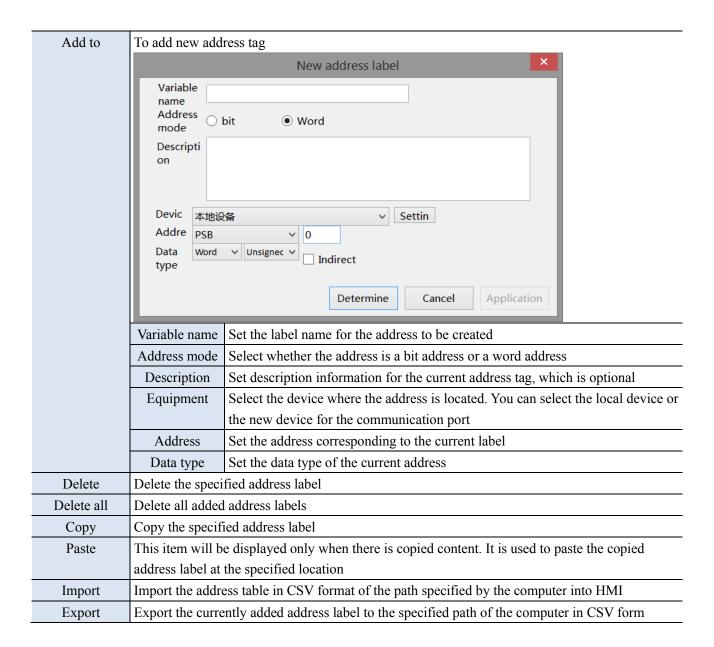
It is used to display HMI system address information for users to view and use.



■ User defined label



According to personal usage habits, create labels for HMI internal address or device address, and view the usage of each label address in this window. Refer to chapter 5-2 for specific usage methods.



2. Advanced feature settings

This function is not supported in the current version.

3. Hire purchase

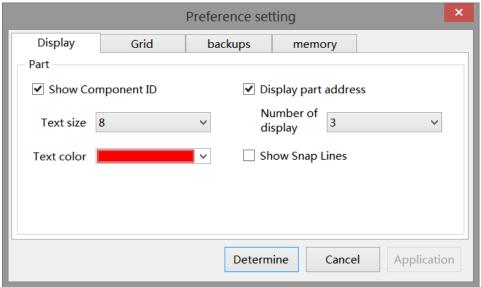
Implement the installment payment of the equipment and lock the equipment for encryption. Refer to chapter 4-7-4. Installments for details.

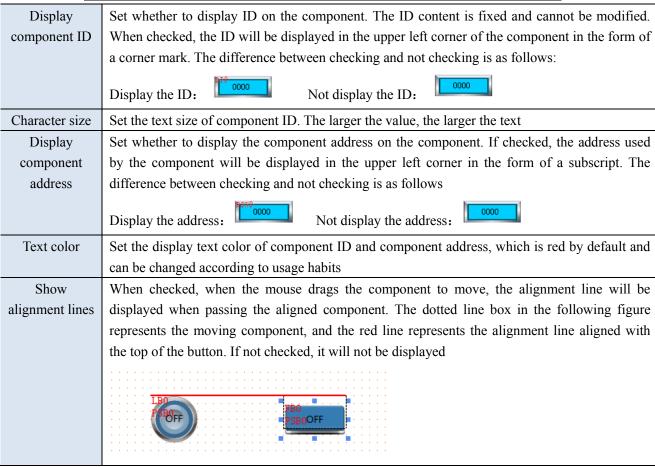
4. Preferences

This section covers some preferences during project editing, including component address/ID display, grid and backup settings.

Display

It is used to set whether the component ID, address and text color used in the control are displayed.



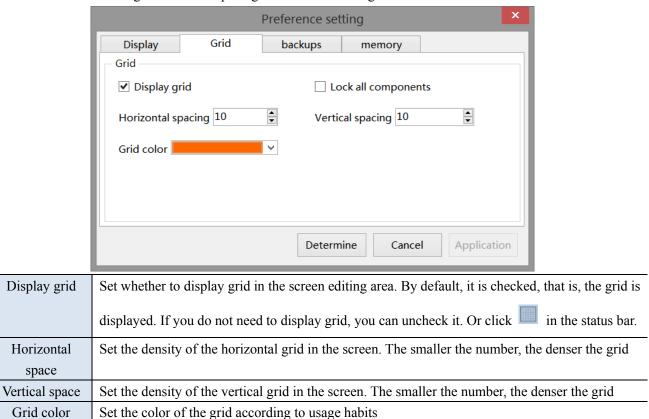


Grid

space

Lock all the components

It is used to set the grid color and spacing in the screen editing area.

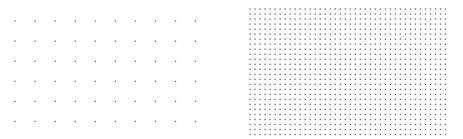


After checking, the component positions placed in all the pictures and windows of the current

project will be locked. After locking, you cannot drag the mouse to move the position, but you

For example, when the horizontal and vertical spacing is changed from "20" to "5", the difference is as follows:

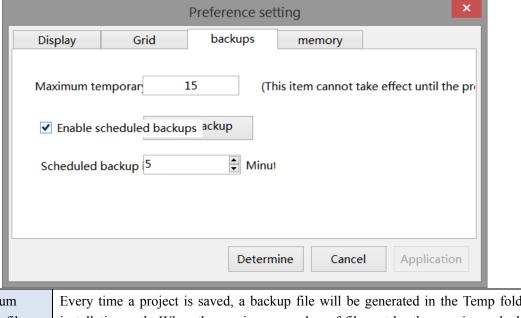
can adjust the position by pressing up, down, left and right on the keyboard



Space: 20 space: 5

Backup

It is used for backup and scheduled saving of project files.



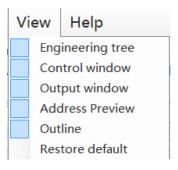
Maximum	Every time a project is saved, a backup file will be generated in the Temp folder of the
temporary files	installation path. When the maximum number of files set by the user is reached, the first
	backup project will be automatically overwritten. Click "Open Backup Folder" at the
	bottom right to view the backup program
Enable scheduled	After starting this item, you can set the automatic saving time in the "Scheduled Backup
backups	Interval" below to prevent data loss. When this item is not enabled, you need to manually
	save the project data

- 5. Information setting
- Download and upload program of PLC and HMI through the TS series HMI
- LAN and WAN VNC function
- Realize MQTT communication with Xinje Cloud, Alibaba Cloud, etc

Refer to chapter 8 for details.

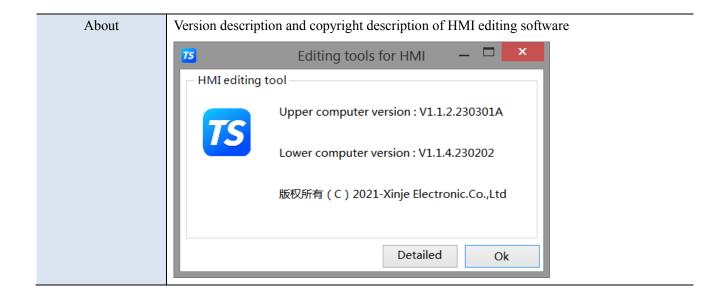
3-3-6. View

The view menu is used to display various tools and columns. The blue box in front of each item name indicates that it is activated, while the box is not displayed, indicating that the item is not activated. Click "Restore Default" to restore the original interface of the software.



3-3-7. Help

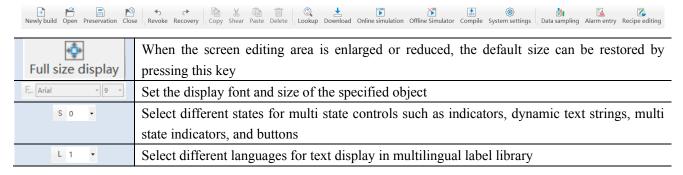




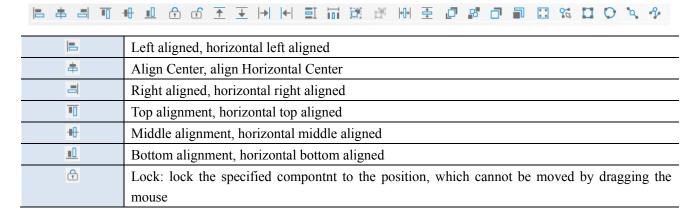
3-4. Tool bar

Toolbars are divided into software toolbars and picture toolbars, which involve some operations on components and pictures. When the mouse moves over relevant components during operation, relevant text prompts will appear. The specific allocation is as follows:

1. Software toolbar: it includes new, open, save, close, download, compile, online simulation, offline simulation and system settings for project related operations. For details, please refer to Section 3-3-1. It is used to undo, restore, copy, cut, paste, delete and search operations related to project editing. For details, please refer to chapter 3-3-2. As well as data sampling, alarm input, formula editing, and operation records for global operation of the project, please refer to chapter 4 for details.



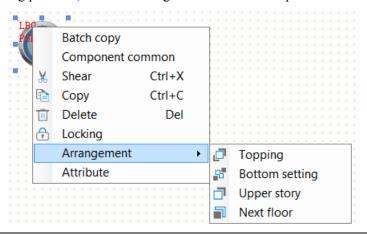
2. Screen toolbar: used to operate the selected component during screen editing. When the tool is gray, it is inoperable.



•	Unlock to move the specified component
<u></u>	Move up one unit, where one unit is the vertical spacing of the grid in the preferences
<u>+</u>	Move down one unit, where one unit is the vertical spacing of the grid in the preferences
 → 	Move right one unit, where one unit is the vertical spacing of the grid in the preferences
 ←	Move left one unit, where one unit is the vertical spacing of the grid in the preferences
≣I	Vertical equal distance, set the vertical spacing of multiple selected components to be consistent
ioi	Horizontal equal distance, set the horizontal spacing of multiple selected components to be consistent
20	Combination
<u>F</u>	Ungroup
+[]+	Equal width, based on the first selected component, set the width of all selected components to
	be consistent
<u>+</u>	Equal height, based on the first selected component, set the height of all selected components to
	be consistent
_	Move the specified part to the top
8	Move the specified part to the bottom
□	Move the specified part to the previous layer
	Move the specified part to the next layer
* *	Rectangle arrangement, multiple selected components are arranged according to the set
	rectangle
25	Point arrangement
П	Rectangle linear arrangement
	Circular linear arrangement
٥	Linear arrangement
♣	Polyline arrangement

3-5. Screen editing area

On the project screen editing platform, the user can right-click the selected part as follows:



Batch copy Batch copy the selected parts according to certain rules		Batch copy the selected parts according to certain rules
	Component	Perform global common operations on the selected components, and realize special attributes
common through "component specific"		through "component specific"
	Cut	Cut the selected part
	Сору	Copy the selected part

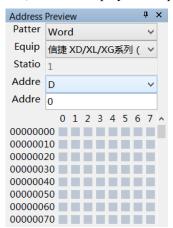
Delete	Delete the selected part	
Locking	The relative position is locked, and the element cannot be moved after operation. The	
	movement function can be realized by "unlocking"	
Layer	When 2 or more parts are stacked, the display layer of the target part can be adjusted through	
	the layer adjustment	
Top	Move the part to the top layer	
Bottom	Move the part to the bottom layer	
Previous layer	Move the part to the previous layer	
Next layer	Move the part to the next layer	
Attribute	View or change "Display", "Font", "Color", "Position" and other operations of object	
	components	

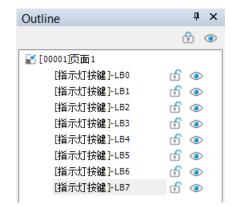
3-6. Function area

You can drag the commonly used window here to switch to use. By default, this is the commonly used address preview and outline.

The address preview is used to view the usage of the device address added in the HMI or the communication port, so that you can intuitively check which addresses are used. Green in the address table indicates used, while gray indicates unused. Click to select an address, and you can see which pictures and controls the address is used in below. Click any component below to get its position. Double click to open the component properties directly.

The outline is used to display the Chinese names and English IDs of all components in the current screen. You can set the lock, unlock, hide and display of components here.





3-7. Component area

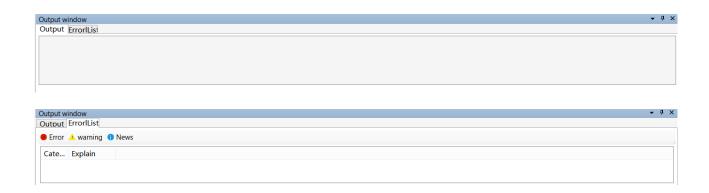
Display components and all components under the drawing menu, they are used for screen editing. For details, please refer to Chapter 4.

3-8. Output window

Display the compilation process and results of the current project.

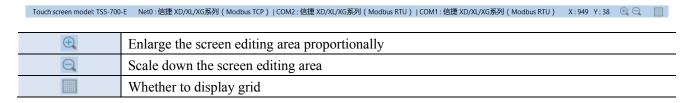
If the project is compiled successfully, it can be downloaded normally.

If the project compilation fails, "Error occurred in compilation" will be displayed, and the cause of the error will be displayed in the error list, which can quickly locate the problem.



3-9. Status area

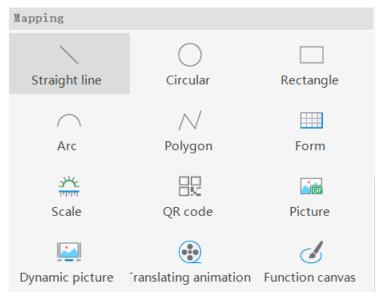
Display the current HMI model, COM port communication device, Ethernet port communication device, the coordinate position of the current mouse in the editing screen, the size of the zoom screen editing area, and the control grid display.



4. Components

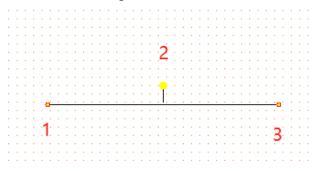
4-1. Drawing

The drawing bar includes line, circle, rectangle, arc, polygon, table, scale, QR code, picture, dynamic picture, translation animation, and function canvas.



4-1-1. Straight line

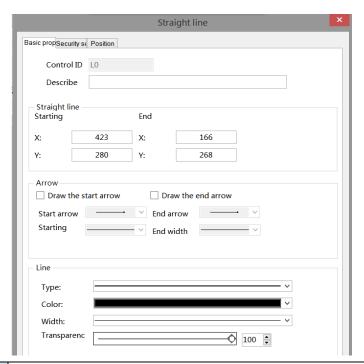
- 1. Click Mapping/straight line or icon, move the cursor to the screen, click the left mouse button at the starting point, drag the cursor to the end point, and then click the left mouse button (click the right mouse button or click ESC to cancel the placement) to complete the drawing of line segments. At the same time, a property box will pop up, and you can set it in the pop-up property dialog box.
- 2. Double click the drawn "line", or select "line", right-click, and select "attribute" to set the attribute.





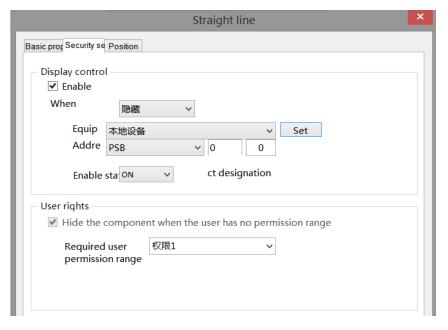
- (1) During drawing, long press the Shfit key to quickly draw horizontal or vertical lines
- (2) When the drawn line is selected, when the mouse is placed on point 1 or 3, the mouse shape changes from arrow to cross, long press the left mouse button to move left and right to change the length and rotation angle of the line. When the mouse is placed on point 2 (yellow point), the mouse shape changes from an arrow to a hand. Long press the left mouse button to move, and then rotate the whole figure with point 2 as the center.

■ Line property



Control ID		It is used for system management and cannot be operated by users
Describe		Can be used to comment on the purpose of this component
Straight	Starting	Set the X and Y values of the starting point of the line segment
line	End	Set the X and Y values of the end point of the line segment
Arrow		Draw the starting arrow. Check this option to set the style and size of the starting arrow
		Draw the end arrow. Check this option to set the style and size of the end arrow
Line	Type	Set the type of line, including solid line, long dotted line, short dotted line, point line
	Color	Set the color of the line
	Width	Set the width of the line
	Transparency	Set the transparency of the line (the closer the slider is to the left, the lower the
		transparency percentage, and the more transparent the component is)

Security setting

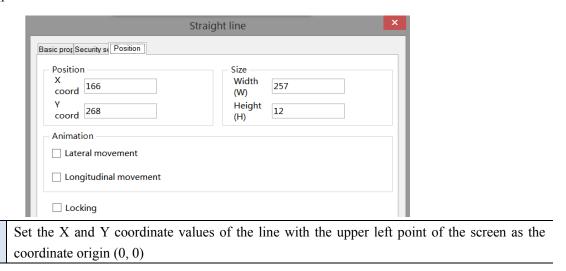


Display control	Use bits to control whether to display the part. When the condition is not met, the component will be hidden		
Enable	When checked, display control will be enabled		
When validation	When validation fails, it will hide the component		
fails			
Equipment	Current communication device		
Set	Click "Set" to enter the address setting interface, where you can set system registers and		
	user-defined tags. You can click the address tag below or the project tree/library/address tag		
	library to set the tags (see chapter 5-2 Address Tag Library for the use of address tag library		
	and user-defined tags)		
	Address		
	Equipme 本地设备 V Statio n		
	Address PSB V User defined label		
	Address 0 System register		
	Address [Extent: 0 - 9999]		
	format		
	Address tag		
	Determine Cancel Application		
Address	Set the target coil for bit control		
Enable status	Set ON status to be valid or OFF status to be valid		
User rights	Set the component authority level. Set the permission of this component. You need to enter the		
	password to use this component. When there is no permission for this component, this		
	component is hidden		

For example: if the equipment is set as shown in the above figure, the bit control is PSB0, and select "Hide the component when the user has no permission range", and the enable status is ON, then when the status of PSB0 is OFF, the component is hidden and not displayed.

Position

Position

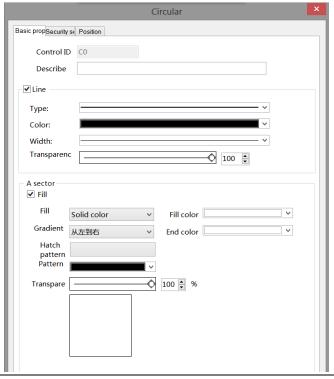


X coordinate	Set the X axis coordinate value of the line
Y coordinate	Set the Y axis coordinate value of the line
Size	Set the width and height of the line
Width (W)	Set the width of the line
Height (H)	Set the height of the line
Animation	Set whether the line can be moved
Lateral	Set the horizontal display position of the line according to the value of the register, that is,
movement	modify the X axis coordinate value. X axis coordinate value=X position+the value of the
	current register
Longitudinal	Set the vertical display position of the line according to the value of the register, that is,
movement	modify the Y axis coordinate value. Y axis coordinate value=Y position+the value of the
	current register
Locking	Set whether it can be moved during editing. When "Locking" is checked, it cannot be moved
	during editing. You can unlock it by unchecking this item, or you can set it by pressing the
	shortcut keys Lock and Unlock on the interface

4-1-2. Circular

- 1. Click "Mapping/Circular" in the menu or icon in the drawing bar of the control window, move the cursor to the screen, press and hold the left mouse button at the starting point, drag the cursor to the end point, and release the left mouse button (click ESC to cancel the placement) to complete the circle drawing. At the same time, a property box will pop up, and you can set it in the pop-up property dialog box.
- 2. Double click the drawn "circle", or select "circle", right-click, and select "attribute" to set the attribute.

Property



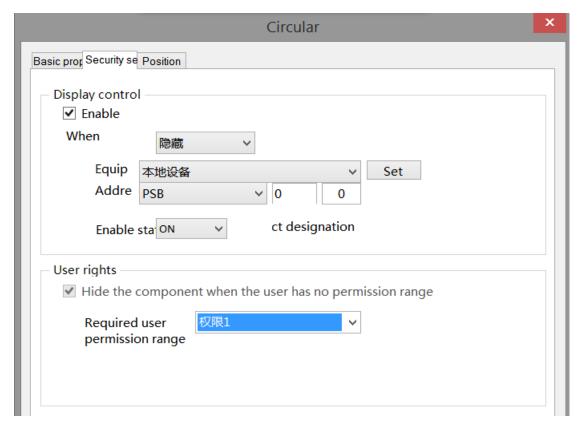
Control ID	It is used for system management component and cannot be operated by users
Describe	Can be used to comment on the purpose of this component

Line	Туре	Set the line type of the circle, including solid line, long dotted line, short dotted line, and
		point line
	Color	Set the border color of the circle
	Width	Set the line width of the circle
	Transparency	Set the line transparency of the circle (the closer the slider is to the left, the lower the
		transparency percentage, the more transparent the line is)
Sector	Fill	After checking "Fill", you can set the fill color, fill style and transparency of the circle
	Fill pattern	Can be filled with solid colors, gradients and patterns
	Transparency	Set the transparency of the circle by sliding the slider (the closer the slider is to the left,
		the transparency percentage is lower, the more transparent the filled area is)
		[C1] [C0]
		(
		transparency 100% transparency 50% transparency 0%



The set fill style, color and transparency can be previewed in the box below the transparency.

■ Security setting



Refer to chapter 4-1-1 straight line for security setting.

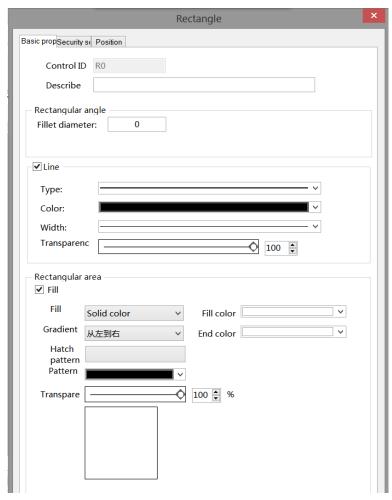
Position

Refer to chapter 4-1-1 straight line for position.

4-1-3. Rectangle

- 1. Click "Mapping/Rectangle" in the menu bar or icon in the control window's drawing bar, move the cursor to the screen, press and hold the left mouse button at the starting point, drag the cursor to the end point, and release the left mouse button (click ESC to cancel the placement) to finish the rectangle drawing. At the same time, a property box will pop up, and you can set it in the pop-up property dialog box.
- 2. Double click the drawn Rectangle/Rounded Rectangle, or select Rectangle/Rounded Rectangle, right-click, and select attribute.

Property



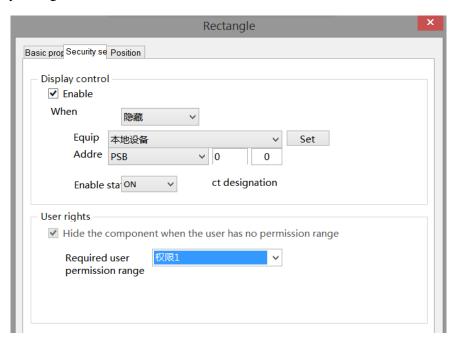
_				
	Control ID		It is used for system management component and cannot be operated by users	
	Des	scribe	Can be used to comment on the purpose of this component	
	Rectangular	Fillet	Set the fillet diameter (0-100) to 0, which is a rectangle. The larger the value, the	
	angle	diameter	larger the fillet diameter (the upper limit of the fillet diameter varies according to	
			the size of the rectangle placed)	
			Fillet Fillet Fillet diameter 83 diameter 40 diameter 0	
	Line	Type	Set the line type of the rectangle, including solid line, long dotted line, short dotted	
			line, and point line	

	Color	Cat the line calou of the materials
		Set the line color of the rectangle
	Width	Set the line width of the rectangle
		Transparency 100% 50% 0%
	Transparency	Set the transparency of rectangular lines (the closer the slider is to the left, the
		lower the transparency percentage, and the more transparent the lines are)
Rectangular	Fill	After checking "Fill", you can set the fill color, fill style and transparency of the
area		rectangular area
	Fill pattern	Can be filled with solid colors, gradients and patterns
	Transparency	Set the transparency of rectangle/rounded rectangle by sliding the slider (the closer
		the slider is to the left, the lower the transparency percentage, and the more
		transparent the filled area is)
		Transparency 100% 50% 0%



The set fill style, color and transparency can be previewed in the box below the transparency

Security setting



Same to chapter 4-1-1. Straight line security setting.

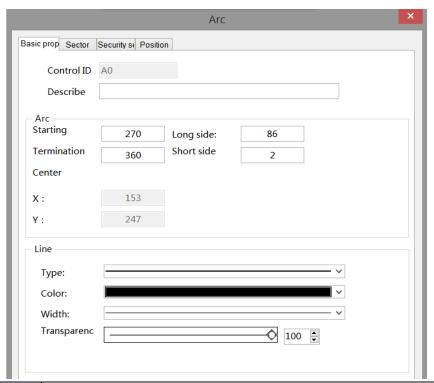
Position

Same to chapter 4-1-1. Straight line position part.

4-1-4. Arc

Click the "Mapping/Arc" icon in the menu bar or the icon in the control window's drawing bar, move the cursor to the screen, click the left mouse button at the starting point, drag the cursor to the end point, and then click the left mouse button to complete the arc drawing. At the same time, a property box will pop up, and you can set it in the pop-up property dialog box. The difference between arc and sector is whether they are closed. Double click the drawn Arc, or select the Arc, right-click, and select attribute.

■ Basic property

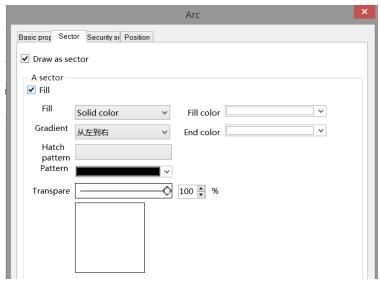


Control ID		It is used for system management component and cannot be operated by users
Γ	Describe	It can be used to remark the purpose of this control
Arc	Starting	Take the arc center as the base point, take the right direction of the horizontal line
		passing through the base point as the horizontal 0°, and the angle between the line
		passing through the base point and the starting point and the horizontal 0°
	Termination	Take the arc center as the base point, take the right direction of the horizontal line
		passing through the base point as the horizontal 0°, and the angle between the line
		passing through the base point and the end point and the horizontal 0°
	Long side	Set the long side of the arc
	Short side	Set the short side of the arc
	Center	The X and Y coordinate positions of the arc center are displayed and cannot be modified
		Start angle 0° Start angle 0°
		End angle 90° End angle 180°
Line	Type	Set the line type of arc, including solid line, long dotted line, short dotted line and point
		line

Color	Set the line color of the arc
Width	Set the line width of the arc
Transparency	Set the transparency of the line (the closer the slider is to the left, the lower the
	transparency percentage, the more transparent the line is)

■ Sector

The arc start point, end point and arc center point are connected to form a closed figure, that is, a sector.

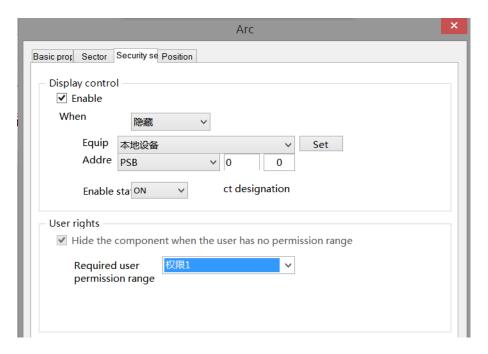


Sector	Select "draw as sector", and set the fill option
Fill	Set the fill color, fill style, and transparency of the sector
Pattern	Can be filled with solid colors, gradients and patterns
Transparency	Set the transparency of the sector by sliding the slider (the closer the slider is to the left,
	the lower the transparency percentage, and the more transparent the component is)
	Transparency 100% 0%



The set fill style, color and transparency can be previewed in the box below the transparency

■ Security setting



Same to chapter 4-1-1. Straight line security setting

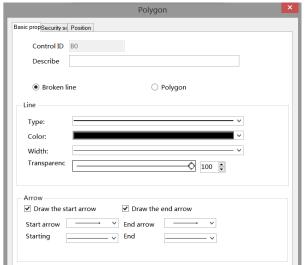
Position

Same to chapter 4-1-1. Straight line position part.

4-1-5. Polygon

- 1. Click the "Mapping/Polygon" icon in the menu bar or the icon in the control window's drawing bar, move the cursor to the screen, press the left mouse button at the starting point, drag the cursor to move, and determine the positions of the following endpoints in turn. Double click the left mouse button (click the right mouse button or cancel the placement with the ESC key) to finish the polyline drawing. At the same time, a property box will pop up, and you can set it in the pop-up property dialog box. The difference between polylines and polygons is whether they are closed.
- 2. Double click the drawn Polyline/Polygon, or select Polyline/Polygon, right-click, and select Attribute.
- Basic property

Polyline Polygon



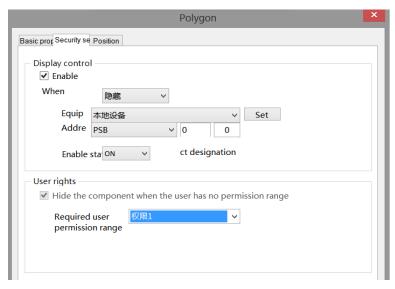


		,
Control ID		It is used for system management component and cannot be operated by users
Describe		It can be used to remark the purpose of this control
Broken line		Set whether it is a polyline
Polygon		When you select a polygon, the polyline automatically connects the start point and end
		point to generate a polygon. You can set the fill color, fill style, and transparency of the
		polygon
Line	Туре	Set the line type, including solid line, long dotted line, short dotted line, and point line
	Color	Set the line color
	Width	Set the line width
	Transparency	Set the transparency of the line (the closer the slider is to the left, the lower the
		transparency percentage, the more transparent the line is)
Arrow	Draw the start	After checking this option, you can set the style and size of the starting arrow
	arrow	
	Draw the end	After checking this option, you can set the style and size of the end arrow
	arrow	
Fill		Set the fill color, fill style and transparency of polygons
Pattern		Can be filled with solid colors, gradients and patterns
Transparency		Set the transparency of polygons by sliding the slider (the closer the slider is to the left,
		the lower the transparency percentage, and the more transparent the filled area is)
		4.4.4
		Transparency 100% 50% 0%



The set fill style, color and transparency can be previewed in the box below the transparency

Security setting



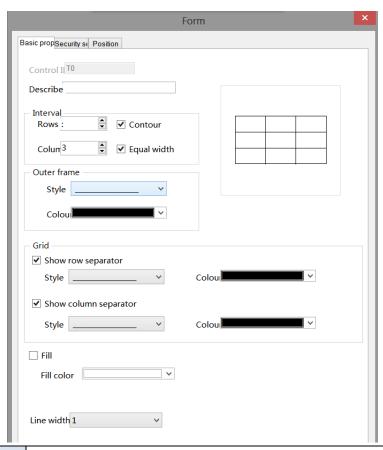
Same to chapter 4-1-1. Straight line security setting.

Position

Same as chapter 4-1-1. Straight line position part.

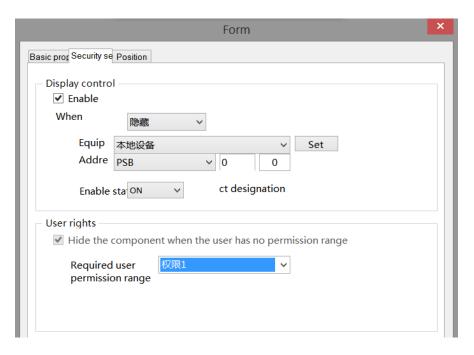
4-1-6. Form

- 1. Click "Mapping/Form" in the menu bar or icon in the drawing bar of the control window, move the cursor to the screen, click the left mouse button to place, click the right mouse button or click ESC to cancel the placement. Modify the length and width of the border through the border points.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components. You can also double-click the drawn "Table" or select "Table" and right-click to select Attribute.
 - Basic property



Control ID		It is used for system management control and cannot be operated by users
Ι	Describe	Can be used to comment on the purpose of this component
Interval	Rows	Set the number of rows in the table. The default value is 3
	Columns	Set the number of columns in the table. The default value is 3
	Contour	Set whether the table is equal in height
	Equal width	Set whether the table is equal in width
Outer	Style	Select the style of the outline, including solid line, long dotted line, short dotted line,
frame		and point line
	Color	Set the color of the outer border
Grid	Show row	Set the color and style of row separator
	separator	
	Show column	Set the color and style of column separator
	separator	
Fill		Set the fill color in the table
Line width		Set the width of table lines

■ Security setting



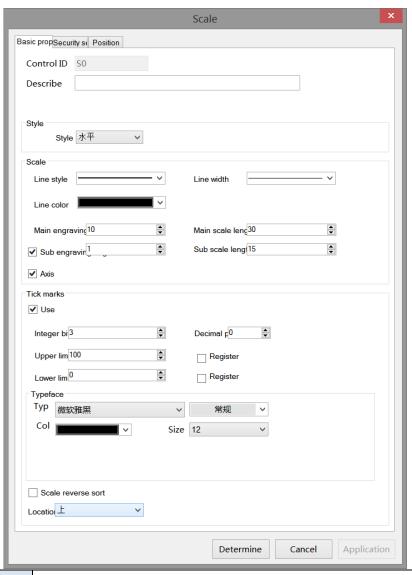
Same to chapter 4-1-1. Straight line security setting.

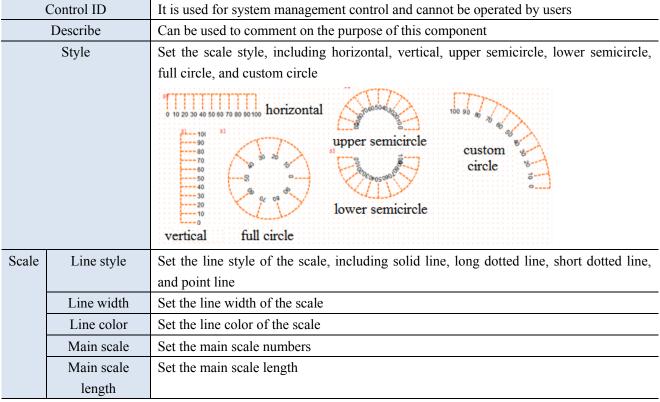
Position

Same as chapter 4-1-1. Straight line position part.

4-1-7. Scale

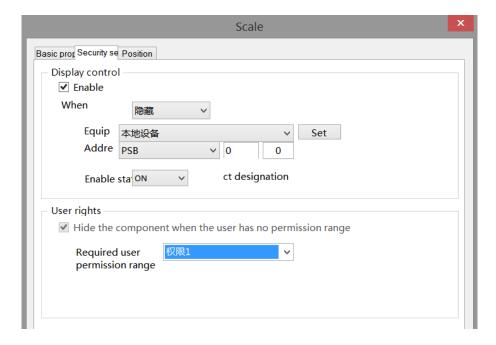
- 1. Click "Mapping/Scale" in the menu bar or icon in the control window's drawing bar, move the cursor to the screen, click the left mouse button to place, click the right mouse button or click ESC to cancel the placement. Modify the length and width of the border through the border points.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components. You can also double-click "Scale" or select "Scale", right-click and select Attribute.
 - Basic property





	Sub scale	Set the sub scale numbers
	Sub scale	Set the sub scale length
	length	
	Axis	Set whether the axis is displayed
S	Scale marks	Select it to set the following items
Iı	nteger digits	Set the number of integer bits of the scale mark
D	ecimal digits	Set the number of decimal places of the scale mark
1	Upper limit	Set the upper limit of the scale value, that is, the maximum value
	Register	Check "Register", and the upper limit value can be controlled by the register
]	Lower limit	Set the lower limit of the scale value, i.e. the minimum value
	Register	Check "Register", and the lower limit value can be controlled by the register
	Typeface	Set the scale font, font size, font style, color and alignment method
Scal	le Reverse Sort	When not checked, the semicircle scale is displayed counterclockwise, the horizontal
		scale is displayed from left to right, and the vertical scale is displayed from bottom to
		top; When checked, the semicircle scale is displayed clockwise, the horizontal scale is
		displayed from right to left, and the vertical scale is displayed from top to bottom
	Location	Set the scale position as up, down or center

Security setting



Same to chapter 4-1-1. Straight line security setting.

Position

Same as chapter 4-1-1. Straight line position part.

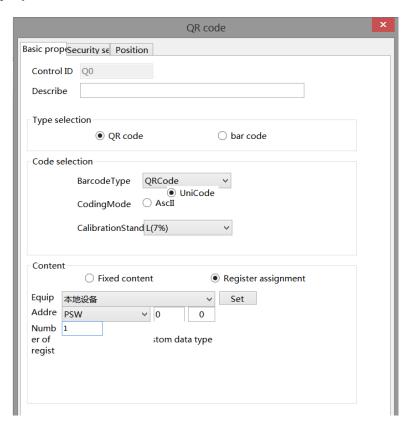
4-1-8. QR code

1. Click the "Mapping/QR Code" icon in the menu bar or the icon in the drawing bar of the control window, move the cursor to the screen, click the left mouse button to place it, click the right mouse button or

click ESC to cancel the placement. Modify the length and width of the border through the border points.

2. When setting attributes, you can set them in the attribute box that pops up when placing components, or you can double-click QR Code or select QR Code and right-click to select Attribute.

Basic property

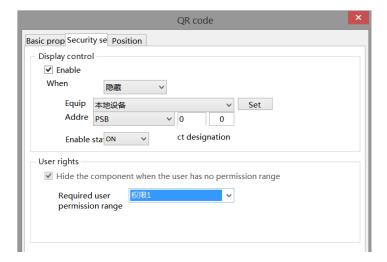


Control ID		It is used for system management control and cannot be operated by users		
Describe		Can be used to comment on the purpose of this component		
Тур	e selection	You can select QR code or barcode		
Code	Barcode type	Set the type of barcode. The QR code includes QRCode, DataMatrix, PDF417		
selection		QRCode (It is mainly used in the Internet, logistics information tracing, retail billing applications, etc. For example, the QR code presented by mobile payment is the most commonly used QR code type) DataMatrix (Mainly used in the industrial field to achieve quality traceability)		
		PDF417 (It is mainly used for certificate management, report management, etc)		

		Bar code (Mainly used for commodity barcode)		
	Coding mode	Set the encoding method of AscII or UniCode (this option is available only for		
		QRCode types, and only has AscII for other types)		
	Calibration	Set calibration standard (only available under QRCode type)		
	standard	CalibrationStand L(7%)		
		L(7%) M(15%) Q(25%) C) Fixed conte H(30%)		
		Calibration standard of QR code: When you encode QR code, you also create some		
		redundant data, which will help QR reader read QR code accurately. Even if part of		
		it is unreadable data, it will not affect reading correct information.		
		There are four levels of error correction in the QR code, the lowest is		
		L: Calibrate 7% of the font size		
		M: Calibrate 15% of the font size		
		Q: Calibrate 25% of the font size		
		H: Calibrate 30% of the font size		
Content	Fixed content	Display fixed content (click the blank part to set the content)		
	Register	Dynamically specifying QR Codes with registers		
	assignment			
	Equipment	Select the current device port for communication		
	Address	Set the QR code monitoring address and whether there is offset		
	Number of	Set the number of registers (you can enter the corresponding number of registers		
	register	according to the content to be set. If you do not check the user-defined data type, the		
		default is WORD-16 bits)		
	Custom data	After checking, you can set the data type. DWORD-32 bits, DDWORD-64 bits		
	type			

Note: If the QR code content is specified by a register, the register should be a character input register, and data input registers are not supported.

Security setting



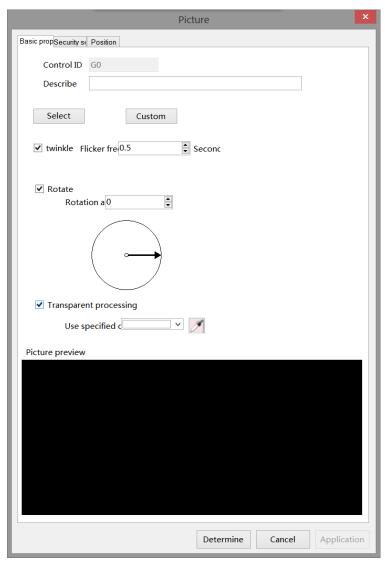
Same to chapter 4-1-1. Straight line security setting.

Position

Same as chapter 4-1-1. Straight line position part.

4-1-9. Picture

- 1. Click the "Mapping/Picture" icon in the menu bar or the in the control window, move the cursor to the screen, click the left mouse button to place it, click the right mouse button or click ESC to cancel the placement. Its size can be adjusted by dragging the mouse.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components, or you can double-click "GIF picture" or select "GIF picture", right-click and select "Attribute".
 - Basic property



Cor	ntrol ID	It is used for system management control and cannot be operated by users
De	escribe	Can be used to comment on the purpose of this component
S	Select	Click to insert the picture in the resource library
Cı	ustom	Click to add pictures on your computer

Twinkle	Set whether the picture flickers and flicker frequency (unit: second)
Rotate	Set whether the picture is rotated and the rotation angle
Transparent	Set the specified color to make the picture transparent (only one color of the selected picture
processing	can be transparent)
Picture preview	You can preview the selected picture



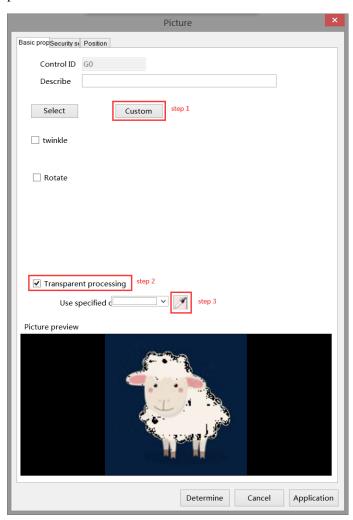
The color picker can select any color in the screen for color picking

Examples of transparent processing:

As shown in the figure below, prepare to remove the black background outside the lamb



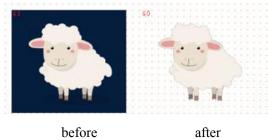
- (1) Select gif from the control window to put on the screen
- (2) Select the image to be processed from the customized path, click Transparent Processing, use the color picker to select the dark blue of the lamb background for color extraction, or select the same color as the lamb background after using the specified color



(3) After color selection, the page is displayed as shown below



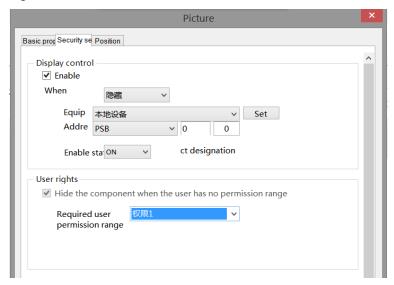
(4) Click OK to display as shown below



Transparent processing

after

Security setting



Same to chapter 4-1-1. Straight line security setting.

Position

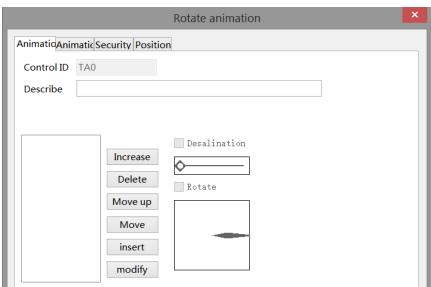
Same as chapter 4-1-1. Straight line position part.

4-1-10. Dynamic picture

1. Click "Mapping/Dynamic Picture" on the menu bar or click the 🖳 icon in the drawing bar of the control window, move the cursor to the screen, click the left mouse button to place it, click the right mouse button or click ESC to cancel the placement. Set multiple pictures. The pictures can be switched freely according to fixed time and order. The size can be adjusted by dragging the mouse.

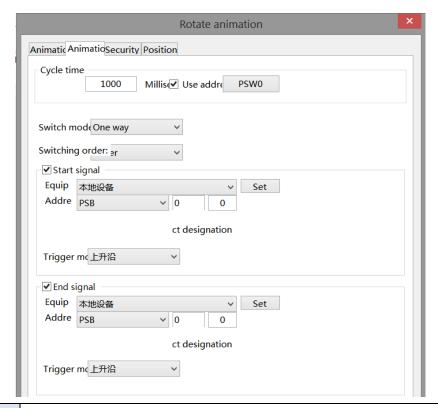
2. When setting attributes, you can set them in the attribute box that pops up when placing components. You can also double-click "Dynamic Picture" or select "Dynamic Picture", right-click and select "Attribute".

■ Animation materials

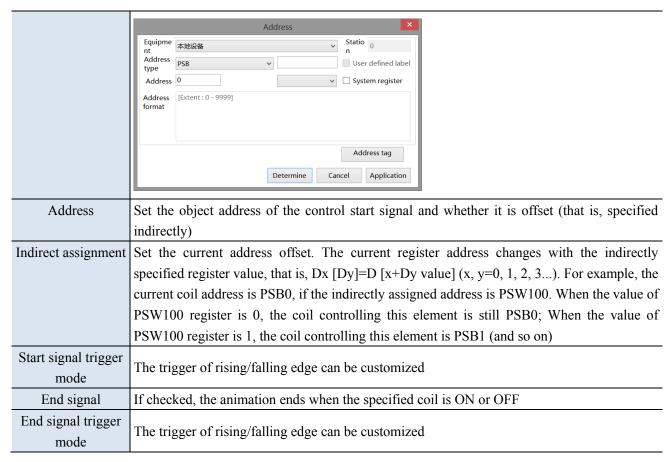


Control ID		It is used for system management control and cannot be operated by users		
Des	cribe	Can be used to comment on the purpose of this component		
Function	Increase	Pictures in the material library or user-defined pictures can be added (the picture size		
		should be less than 1920 * 1080)		
	Delete	Delete the specified pictures added to the material		
	Move up	Move the specified picture up		
	Move	Move the specified picture down		
	down			
	Insert	Insert picture in this position		
	Modify	Modify the selected picture		
Fad	e-out	After checking, you can set whether the picture needs to be faded by sliding the slider (the		
		closer the slider is to the left, the higher the degree of fading)		
		✓ Desalination ✓ Desalination		
		Rotate Rotate Rotate		
Ro	tate	After checking, the picture can be rotated at will to achieve the target effect (when the		
		pointer is dragged to rotate clockwise/counterclockwise, the picture will also rotate		
		clockwise/counterclockwise)		
		Desalination Rotate Rotate		

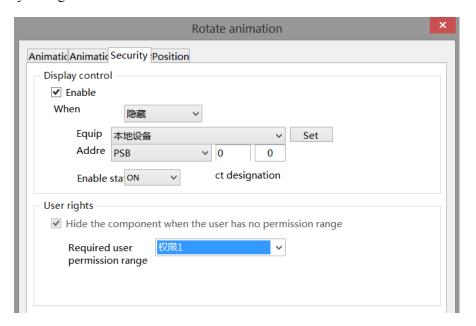
Animation



Cycle time		Set the time of a cycle (that is, all pictures are switched). You can set a constant or specify it
		through a register
Switch	One way	Pictures are displayed from the first to the last, and then from the first to the last
mode	Return	Pictures are displayed in the mode of first to last, then last to first, and then first to last
Switch	hing order	Set the switching order of the picture, which is specified by the picture number (1-10, 10-1,
		or randomly set by the user)
C	Order	Pictures are displayed in order
Reve	rse order	Pictures are displayed in reverse order
Ra	andom	Pictures are displayed randomly without fixed order, and they are displayed in the order set
		by the user, separated by English commas ","
Start signal		If checked, the animation starts when the specified coil is ON or OFF; If not checked, the
		animation will always act
Equ	iipment	Select the current device port for communication
	Set	Click "Set" to enter the address setting interface, where you can set and use system registers
		and user-defined tags. You can click the address tag library below or the project tree - library
		- address tag library to set the used tags (see chapter 5-2 Address Tag Library for the use of
		address tag library and user-defined tags)



Security setting



Same to chapter 4-1-1. Straight line security setting.

Position

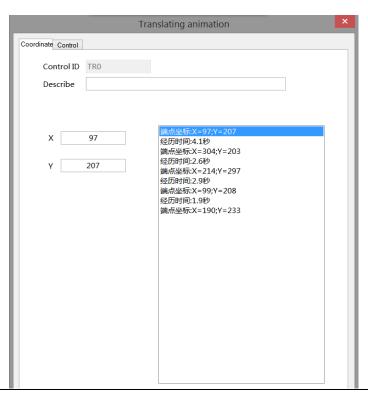
Same as chapter 4-1-1. Straight line position part.

4-1-11. Translating animation

The use of translation animation components can help users achieve animation functions, but a single translation animation component cannot achieve animation functions. It must be combined with the components that achieve animation functions.

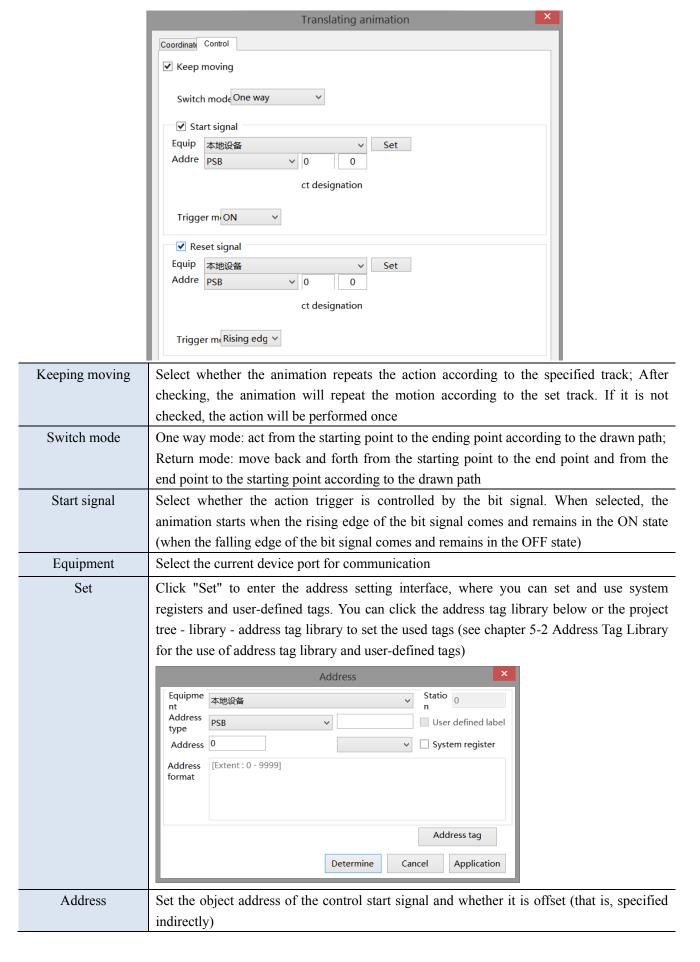
- 1. Click "Mapping/Translating Animation" on the menu bar or click the icon in the drawing bar of the control window, move the cursor to the screen, press the left mouse button at the starting point, drag the cursor to move, and determine the positions of the following endpoints in turn. Double click the left mouse button (click the right mouse button or click ESC to cancel the placement) to finish the drawing of the translating animation, and the property box will pop up at the same time.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components. You can also double-click "Translation Animation" or select "Translation Animation" and then right-click to select "Attributes".

Coordinate



Control ID		It is used for system management control and cannot be operated by users
Describ	e	Can be used to comment on the purpose of this component
Endpoint	X	Display the horizontal coordinate position of the current end point. After selecting the line
coordinates		"End point coordinate" on the right, you can modify it at the left "X"
	Y	Display the longitudinal coordinate position of the current end point. Select the line "End
		point coordinate" on the right and modify it at the left "Y"
Experience time		Display the time of moving from the current endpoint coordinate to the next endpoint
		coordinate, in seconds. After selecting the "experience time" line on the right, you can
		modify it at the "Time" position on the left

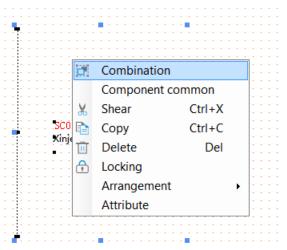
■ Control



Indirect assignment	Set the current address offset. The current register address changes with the indirectly
	specified register value, that is, Dx [Dy]=D [x+Dy value] (x, y=0, 1, 2, 3). For example,
	the current coil address is PSB0, if the indirectly assigned address is PSW100; When the
	value of PSW100 register is 0, the coil controlling this element is still PSB0; When the
	value of PSW100 register is 1, the coil controlling this element is PSB1 (and so on)
Start signal trigger	Customizable ON/OFF trigger
mode	
Reset signal	Select whether the end of the action is controlled by a bit signal. After selecting, when the
	rising/falling edge of the bit signal comes, the animation will start from the beginning
Reset signal trigger	The trigger of rising/falling edge can be customized
mode	

Example:

To realize the text string "Xinje Electric welcomes you!" Scroll the display from top to bottom on the screen. You can draw a vertical translation animation track on the screen, place a static text string, select a static text string and a translation animation component, click the right mouse button, and select "Combination" to facilitate the movement of the text string according to the translation animation track. The movement time and control can be set by selecting "attribute":

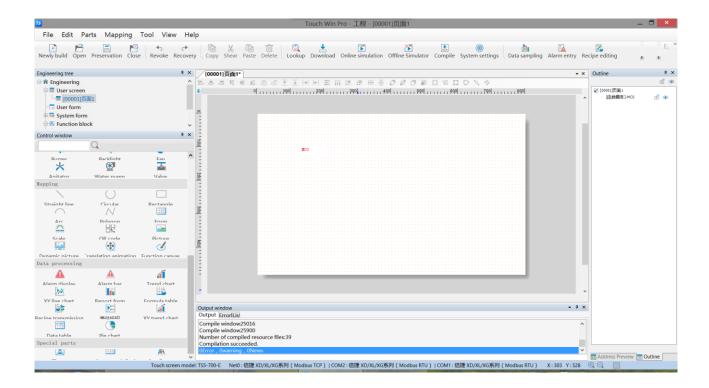


4-1-12. Function canvas

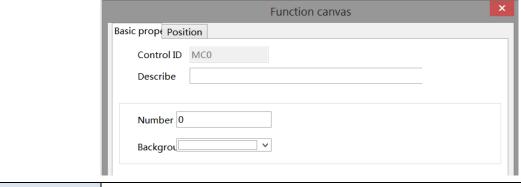
Through C function DCMapDrawLine, DCMapDrawRect, DCMapDraw irce, DCMapDrawEllipse, DCMapDrawCircleArc, DCMapDrawEiilpseArc, the function of drawing lines, rectangles, circles, ellipses, arcs and elliptical arcs on the function canvas is realized. Clear the function canvas through DCMapClear. The function canvas background color filling function is realized through DCMapSetBackColor. Refer to 6-2-5 API Functions for the use of function canvas related functions.

- Operate process
- 1. New project, screen content making
- (1) Click the "Mapping/Function Canvas" on the menu bar or the icon on the control window's drawing bar, move the cursor to the screen, click the left mouse button to place it, click the right mouse button or click ESC to cancel it. Modify the length and width of the border through the border points.

 The establishment is shown in the following figure:



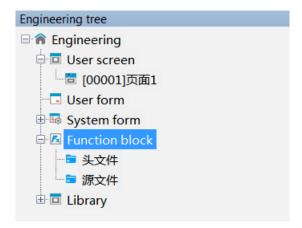
(2) When setting attributes, you can set them in the attribute box that pops up when placing components. You can also double-click the Function Canvas or select the Function Canvas, right-click, and select attribute.



Control ID	It is used for system management control and cannot be operated by users
Describe	Can be used to comment on the purpose of this component
Number	Set MacroDCMap function number
Background	Set Background color properties

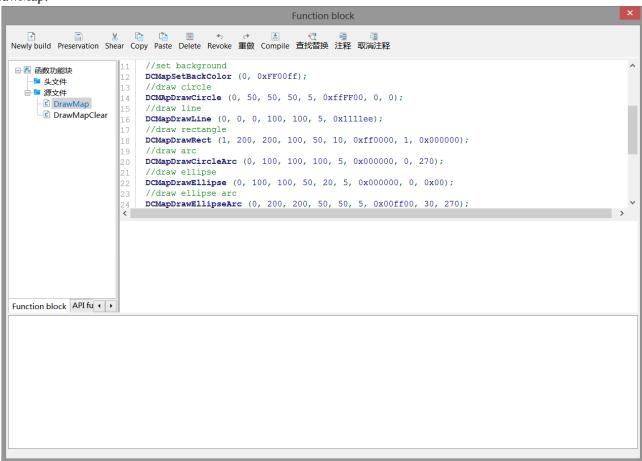
2. Add Function Block

(1) To create a function block, right-click the project tree - Function Block. In the pop-up dialog box, select "Add Function" to add 2 functions. Set the function name (i.e. the function block name, which can be 32 characters at most) to DrawMap and DrawMapClear:



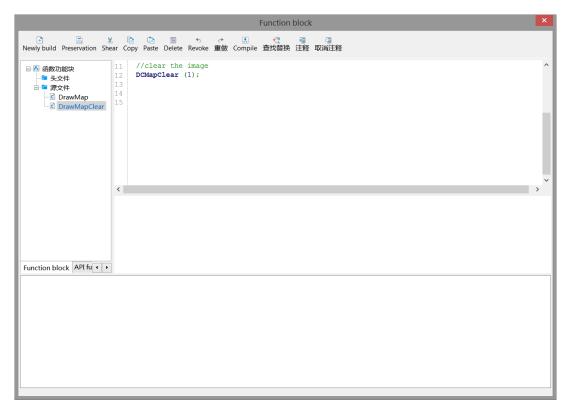
(2) Edit the function DrawMap, DrawMapClear. Open the function editing interface. The functions are as follows:

DrawMap:



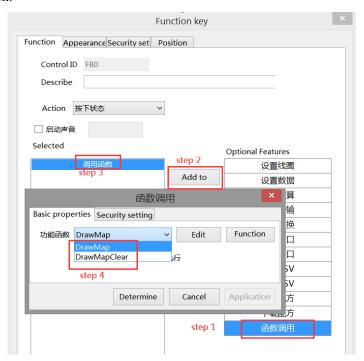
The TS series HMI uses RGB mode. One color occupies one byte, namely, 0xFF0000 is B (BLUE), 0x00FF00 is G (Green), and 0x0000FF is R (RED).

DrawMapClear:

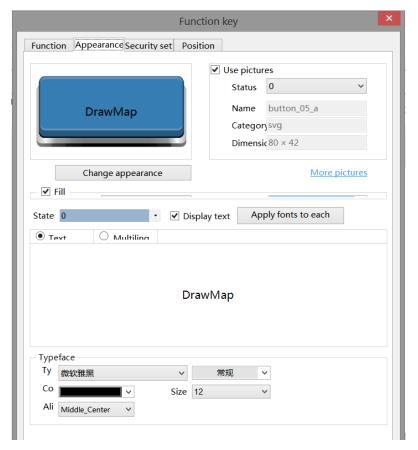


3. Call DrawMap, DrawMapClear

Place a function key on the screen, select "Function Call" from the "Optional Features" on the right, click "Add to" button to add this function, select the "Call Function" on the left, and select the name of the function to be called to add the function.



Click "Appearance" to set function key text, and finally click "OK" to finish setting.



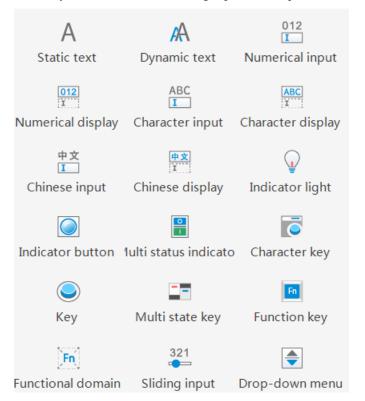
DrawMapClear function key is operated as above.

- 4. Download the program to the human-computer interface for operation.
- Position

Same as chapter 4-1-1. Straight line position part.

4-2. Parts

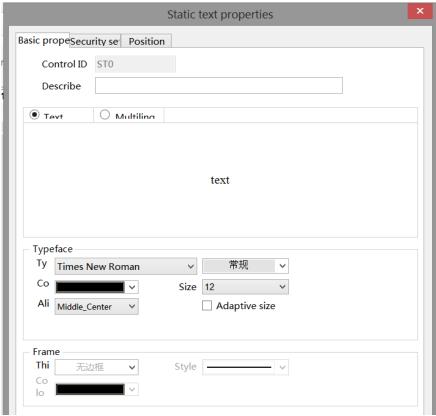
The basic components include: static text, dynamic text, value input, value display, character input, character display, Chinese input, Chinese display, indicator light, indicator button, multi status indicator light, character key, key, multi status key, function key, function domain, sliding input and drop-down menu.



4-2-1. Static text

Set the text to be displayed.

- 1. Click the "Part/Text/Static Text" icon in the menu bar or the A icon in the basic part bar of the control window, move the cursor to the screen, click the left mouse button to place it, click the right mouse button or click ESC to cancel the placement. Modify the length and width of the border through the border points.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components. You can also double-click Static Text or select Static Text and right-click to select Attribute.
 - Basic property



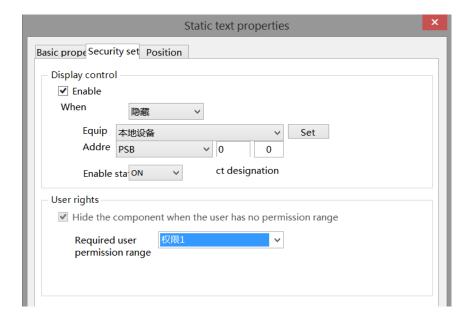
Control ID	It is used for system management control and cannot be operated by users
Describe	Can be used to comment on the purpose of this component
Text	Set the text to be displayed. Click/double click the text to modify it
Multilanguage	Set up multilingual display. After selecting, you can click the "Add" text on the right side or
library	the project tree - library – label multilingual on the left side of the project interface to manage
	multilingual (see chapter 4-7 for the library description for specific use)
Typeface	Set the text font, size, color and alignment (the position displayed in the box); You can check
	the adaptive size, that is, drag the mouse to change the size of the part, and the text size will
	change accordingly
Frame	Set the thickness, style and color of the border

Multi language library setting: if the current project has not edited labels in multiple languages, the text in the upper right corner is displayed as "New" (as shown in the left figure below). If the label has been edited in multiple languages, the text will be displayed as "Edit" (as shown in the right figure below).





Security setting



Same to chapter 4-1-1. Straight line security setting.

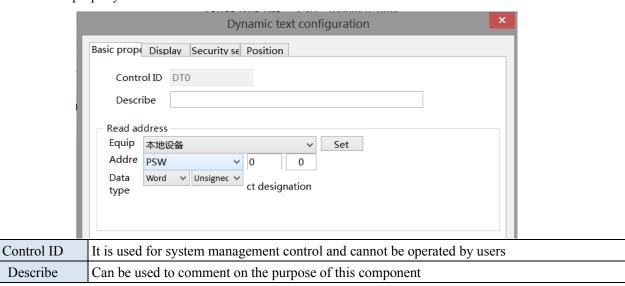
Position

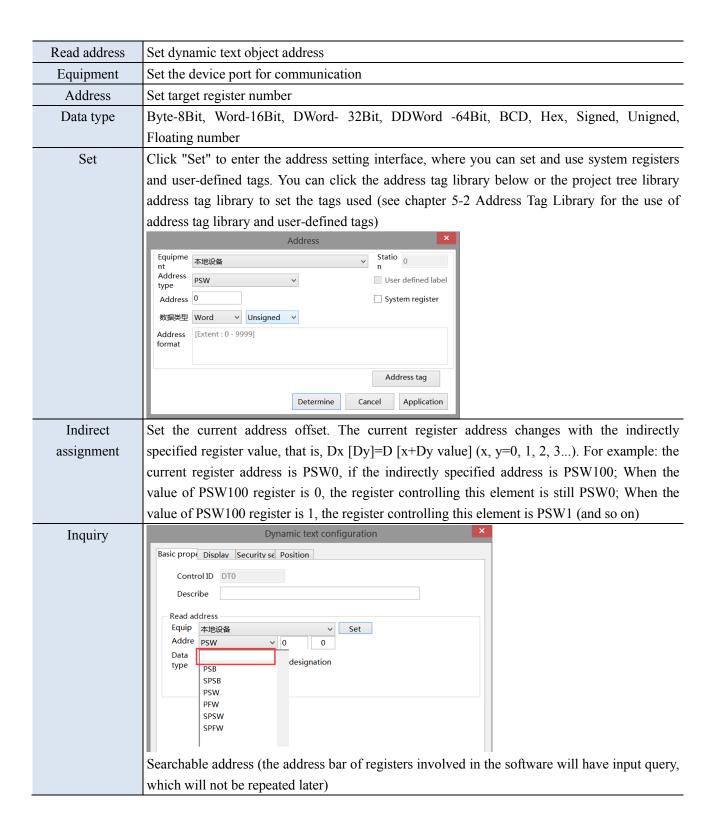
Same as chapter 4-1-1. Straight line position part.

4-2-2. Dynamic text

Different characters can be displayed according to different register values.

- 1. Click "Part/Text/Dynamic Text" in the menu bar or icon in the basic part bar of the control window, move the cursor to the screen, click the left mouse button to place it, click the right mouse button or click ESC to cancel it. Modify the length and width of the border through the border points.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components. You can also double-click "Dynamic Text" or select "Dynamic Text" and right-click to select "Attribute".
 - Basic property





Display

The display content of the register is determined by the value of the object register, and different characters can be displayed according to the value of the object register.



Content		Set the text to be displayed in each state, click the contents under "Serial Number", "Numeric
		Value" and "Text Description String" to modify it (you can select the contents under
		"Click/Double click" text description string from the text library, and click the ""
		Text description string
		Text1
		You can enter the multilingual settings, or the
		project tree - Library - Label Multilanguage - on the left side of the project bar for
		management (see chapter 5-1 Label Multilanguage for specific use)
Item	Add	Increase the number of dynamic text items
	delete	Delete the contents of the target option
	Move up	Move the target option up one physical location
	Move	Move the target option down one physical location
	down	
State		You can check the drop-down list to set the font and border corresponding to the
		corresponding register value (or click the "apply fonts to each state" button behind to set the
		font and border in all states)
Typeface		Set the text font, size, color and alignment (the position displayed in the box). You can check
		the adaptive size, that is, drag the mouse to change the size of the part, and the text size will
		change accordingly
Frame		Set the thickness, style and color of the border

.....

Example: The setting is as shown in the figure above. When the value of PSW0 is 0, the dynamic string displays the variable string 0.

When the value of PSW0 is 1, the dynamic string displays variable string 1 and so on.

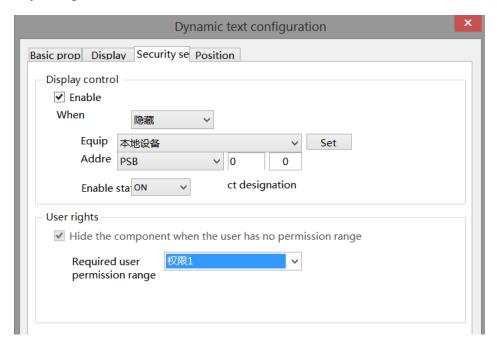




Maximum number of dynamic text strings:

When the data type is Word Usigned, the value range is 0~65535. Because the values of dynamic text strings cannot be repeated, the maximum number of dynamic text strings of this data type is 65536. The same applies to other data types.

Security setting



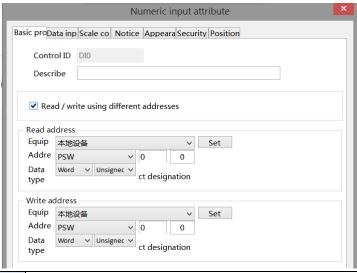
Same to chapter 4-1-1. Straight line security setting.

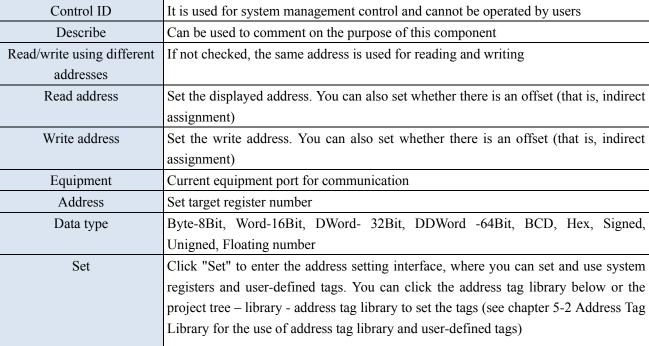
Position

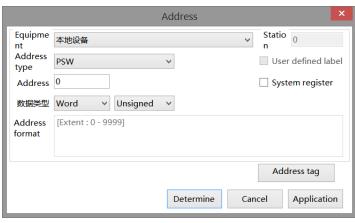
Same as chapter 4-1-1. Straight line position part.

4-2-3. Numeric input

- 1. Click the "Part/Input/Numerical Input" in the menu bar or the icon in the basic part bar of the control window, move the cursor to the screen, click the left mouse button to place it, click the right mouse button or click ESC to cancel it. Modify the length and width of the border through the border points.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components. You can also double-click Numeric Input or select Numeric Input and right-click to set attributes.
 - Basic property





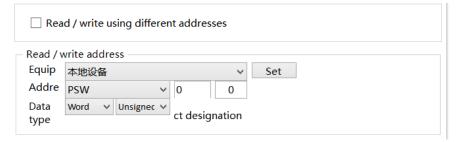


Indirect assignment

Set the current address offset. The current register address changes with the indirectly specified register value, that is, Dx [Dy]=D [x+Dy value] (x, y=0, 1, 2, 3...). For example: the current register address is PSW0, if the indirectly specified address is PSW100; When the value of PSW100 register is 0, the register controlling this element is still PSW0; When the value of PSW100 register is 1, the register controlling this element is PSW1 (and so on)

Example:

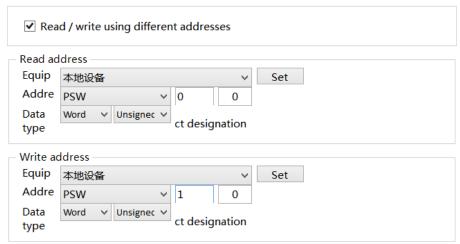
(1) Read/input using the same address (that is, do not check read/write using different addresses)



Input 1 to PSW0, and PSW0 displays 1; The number entered is the number displayed.



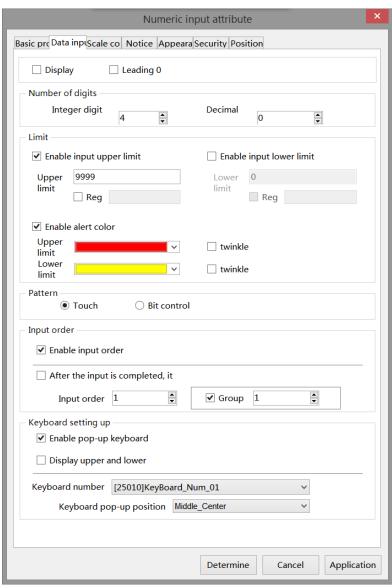
(2) Read/input using different addresses (that is, check read/write using different addresses)



At this time, the input box can set the value of PSW0, but the box displays the value of PSW1. For example: input 1 to PSW0, PSW0 still displays 0, and PSW1 displays 1.



■ Data input



Di	splay	After checking, the user will not see the entered value, and the value will be displayed as "* * *"
Leading 0		If the number of data digits does not meet the requirements, it shall be supplemented with 0 in
		front (For example, if the integer digits and decimal digits are set as 5 and 0 respectively for data
		input, and the leading 0 is selected, the input data will be 23 and 00023 will be displayed in the
		input box)
Nun	nber of	Set the integer and decimal digits displayed in the register
digits		
Limit	Enable	Set the upper limit of data input, which can also be specified by register
	input	If the upper limit is set to 10, 10 can be entered normally according to the input sequence, and 11
	upper	is not allowed to be entered.
	limit	
	Enable	Set the lower limit of data input, which can also be specified by register.
	input	If the lower limit is set to 10, you can normally enter a value of 10 or more. If you enter a value
	lower	below 10, the value in the current register will be displayed
	limit	
	Enable	Set the warning color of upper and lower limits and whether it flickers
	alert	If the same register is used in other locations and exceeds the upper and lower limits set by this
	color	register, a warning prompt will be triggered

Pattern

There are touch control and bit control. Touch control means to start the input program by touching the control. For bit control, start the input program when the specified coil is ON. In bit control state, when the coil is ON, trigger the keyboard to pop up, click ENT to input data, and click ESC to cancel the keyboard pop up

Input order

If it is enabled, the keyboard will jump to the corresponding input control in order to set different groups.

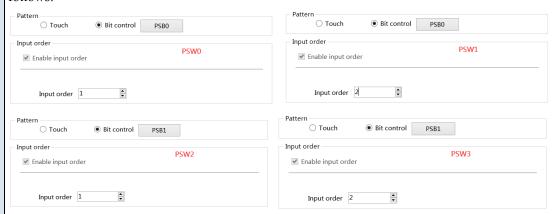
Example 1 (touch control): The data input controls PSW0, PSW1, PSW2 and PSW3 are set as follows.



PSW0 and PSW1 are in same group, and the order is 1 and 2 respectively; PSW2 and PSW3 are in same group, and the order is 1 and 2 respectively;

When you click PSW0, the keyboard will pop up. After entering the value, click ENT, the keyboard will automatically jump to PSW1. After entering the value, click ENT to complete the value input of PSW0 and PSW1 (if you check "No more input in sequence after input", the keyboard will not jump to the next component in the same group after completing the input at the selected component. If you want to input, you need to click the next component again for input); Similarly, enter PSW2 and PSW3.

Example 2 (bit control): The data input controls PSW0, PSW1, PSW2 and PSW3 are set as follows.



PSW0 and PSW1 are in same group, which are controlled by coil PSB0, and the sequence is 1 and 2 respectively; PSW2 and PSW3 are in same group, which are controlled by coil PSB1 in order of 1 and 2 respectively;

When PSB0 and PSB1 are set to OFF, clicking PSW0, 1, 2 and 3 will not pop up the keyboard.

When PSB1 is set to OFF and PSB0 is set to ON, the keyboard will jump out for PSW0. After entering the value, click ENT, the keyboard will automatically jump to PSW1. After entering the value, click ENT to complete the value input of PSW0 and PSW1; Similarly, when PSB0 is set to OFF, PSW2 and PSW3 are input when PSB1 is set to ON.

When PSB0 and PSB1 are both set to ON, the input program will be triggered in the order of PSW0, PSW2, PSW1 and PSW3. To cancel the input point ESC.



- 1. The keyboard pops up when the control coil is set to ON. After input, the control coil (PSB0, PSB1) will not reset automatically. If you want to re-enter data, please manually reset to ON to trigger.
- 2. It is recommended that the control coil be set to reverse state. If it is set to instantaneous ON, take PSW0 and PSW1 above as an example. If PSB0 is set to instantaneous ON, a keyboard will pop up for PSW0 at the same time of triggering. Click ENT after input, and the keyboard will disappear. Only PSW0 can be input. Even if it is triggered again, the keyboard will only be displayed below PSW0, and the setting of PSW1 cannot be completed.



Keyboard setting

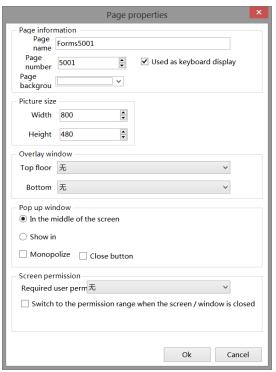
Set whether to pop up the keyboard, keyboard style selection, keyboard pop-up position, whether to display upper and lower limit values, etc



- 1. The keyboard suffix UL is the keyboard with upper and lower limits, such as 【25009】 KeyBoard Num 01UL
- 2. Users can also customize the keyboard.
- (1) Select the project tree user form, right-click Add to create a new user form.



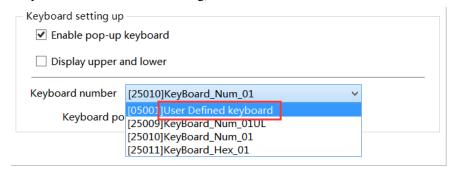
② "Used as keyboard display" should be selected for name and size of user-defined system form .



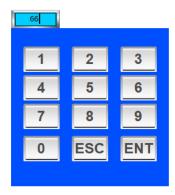
3 Place the required character keys on the user form. Refer to 4-2-12 for the use of character keys. In the following example, 0-9, ESC and ENT keys are placed.



4 Open the numeric input control, and a newly created "User defined keyboard" will appear at the keyboard number. After selecting, click OK

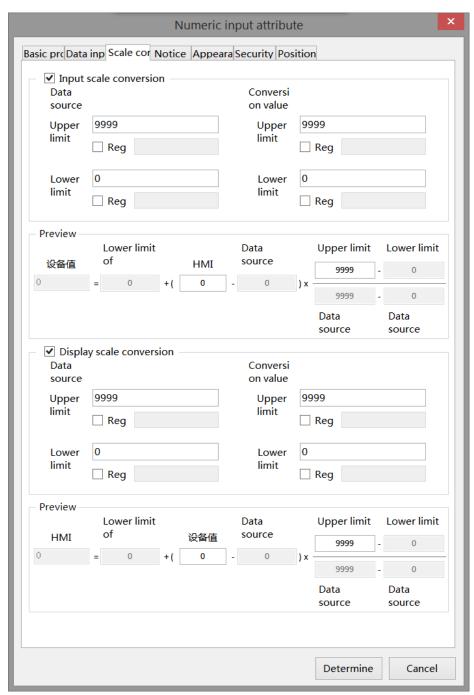


(5) At this time, click the numeric input control, and the displayed keyboard is the keyboard defined by yourself



■ Scale conversion

It is divided into input scale conversion and display scale conversion. After checking, the input or read value can be converted according to the set scale; The conversion effect can be simulated in the software, as shown below:

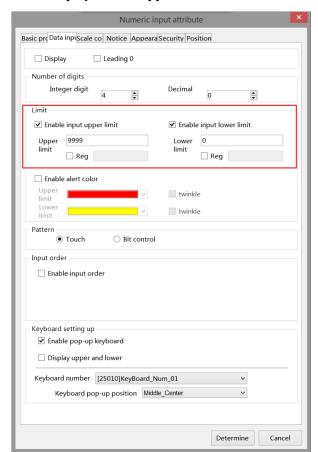


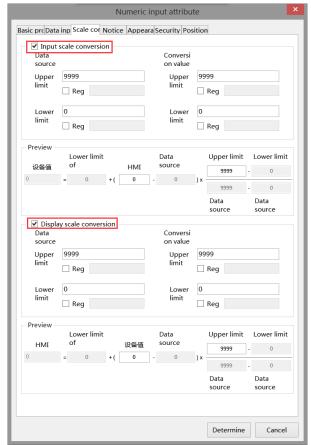
Input scale	The input data is obtained from the original data in the operating object register after
conversion	conversion. To select this function, you need to set the upper and lower limits of the data
	source and conversion value. The upper and lower limits can be constant or specified by the
	register. The data source is the data input on the HMI, and the conversion value is the data
	written into the lower communication device after proportional conversion
Display scale	The display data is obtained from the original data in the monitoring object register after
conversion	conversion. Selecting this function requires setting the upper and lower limits of the data
	source and conversion value. The upper and lower limits can be constant or specified by the
	register. The data source is the data in the lower communication equipment, and the
	conversion value is the data displayed on the HMI after proportional conversion
Upper lower limit	Limit the upper and lower limits of the input (can be specified through the register)



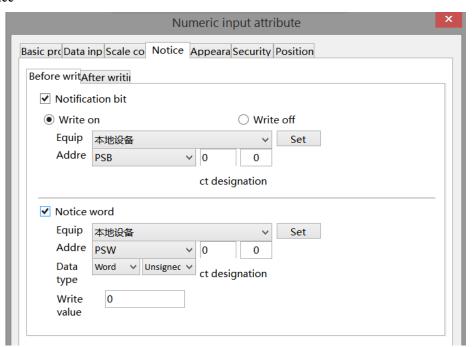
If the "enable input upper/lower limit" (as shown in the left figure below) and "input/display scale

conversion" (as shown in the right figure below) are checked at the same time, the upper and lower limits of data display are the upper and lower limits of scale conversion.





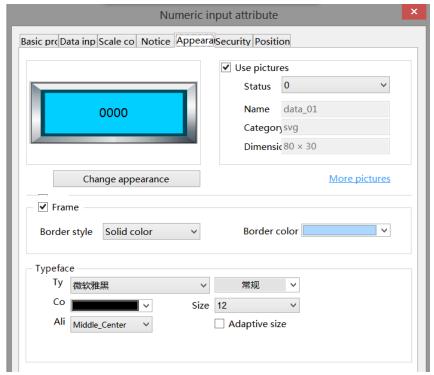
■ Notice



Notice

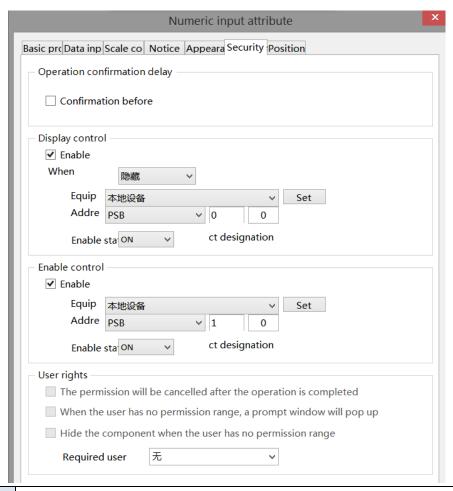
If selected "notification bit" or "notice word", the coil can be set ON/OFF, the register can be set value (notice word) before or after writing.

Appearance



Use picture	Set whether to use pictures
Change	You can click "Change Appearance" to change the appearance, or click "More Pictures" to select a
appearance	custom picture
Fill	Fill style (solid/gradient) and fill color can be set
Frame	Border style and color can be set
Typeface	You can set the font, size, color and display position of the font in the control (you can also check
	the adaptive size, that is, drag the mouse to change the size of the part, and the number size will
	change accordingly)

Security setting



Operation	The waiting time (s) can be set. If this option is checked, a pop-up window "Are you sure to
confirmation	execute this operation" will pop up when operating components. If you do not click "OK" or
delay	"Cancel" within the set waiting time, the pop-up window will disappear by itself and this
	operation will fail. If you click "OK" within the waiting time, the operation is successful.
	Clicking "Cancel" is invalid
Display control	Use bits to control whether to display the part. When the condition is not met, the component
	will be hidden
Enable	After selected, it will perform the display control
When validation	When validation fails, the component is hidden by default and cannot be changed
fails	
Address	Set the target coil of bit control
Enable status	Set ON status to be valid or OFF status to be valid.
	For example: if the equipment is checked as shown in the above figure, the bit control is PSB0,
	and it is hidden when validation fails, and the enable status is ON, then when the status of
	PSB0 is ON, the component is normally displayed, and when the status of PSB0 is OFF, the
	component is hidden and not displayed.
Enable control	The bit limit can be set (the enable state of the enable control can be customized). When the
	enabling conditions are met, the component can be used normally (as shown in the figure
	above: when the PSB1 is in the ON state and the trigger conditions are met at the same time,
	the component can be used; if the PSB1 is in the OFF state, the component is still unavailable
	even if the trigger conditions are met)
Indirect	Set the current address offset. The current coil address changes with the indirectly specified
assignment	register value, that is, Dx [Dy]=D [x+Dy value] (x, y=0, 1, 2, 3). For example, the current

	coil address is PSB0, if the indirectly assigned address is PSW100; When the value of
	PSW100 register is 0, the coil controlling this element is still PSB0; When the value of
	PSW100 register is 1, the coil controlling this element is PSB1 (and so on)
User rights	Set the controlled authority level.
	After setting the permission range of the required user, the following three functions can be
	checked as required:
	(1) Cancel the permission after the operation: if this option is not checked, the corresponding
	level password must be entered for each operation of this part. After checking, you only need
	to enter it successfully once.
	(2) When the user has no permission range, a prompt window will pop up.
	(3) When the user has no permission range, hide the component.

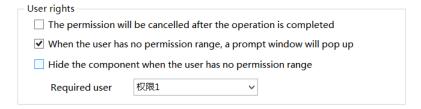


There are several combinations when logging in: (For the use of user rights, see chapter 3-3-1. File

- System Settings – user rights)

When a user logs in and does not migrate out, his/her permissions will remain. If you migrate out, the user will have no corresponding permission.

(1) When the user has no permission range, a prompt window will pop up



When this option is checked, if the user rights is not logged in, clicking the control will pop up a prompt window:



Click User Login, and it can be used normally after successful login. If the user has logged in and has this permission, he can directly operate the component without a prompt window.

(2) Hide the component when the user has no permission range



When this option is checked, the component will be hidden if there is no login user permission; If the user has logged in, the component will display normally.

(3) The permission will be cancelled after the operation is completed & When the user has no permission

range, a prompt window will pop up.

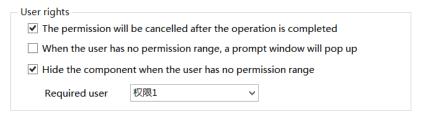
 ✓ The permission will be cancelled after the operation is completed ✓ When the user has no permission range, a prompt window will pop up 	User rights —		
✓ When the user has no permission range, a prompt window will pop up	$\overline{m{arphi}}$ The permission will be cancelled after the operation is completed		
	✓ When the user has no permission range, a prompt window will pop up		
$\hfill \Box$ Hide the component when the user has no permission range			
Required user 权限1	Required user	权限1	~

When this option is checked, if the user rights is not logged in, click the component and a prompt window will pop up:

权限提示 ×★ 操作级别高,您没有此权限用户登录 确定

Click the user log in. After logging in successfully, operate the component once. After the first operation, the system automatically cancels the permission limit of the component. Even after logging out, the component can be clicked normally. If the user has logged in, the component will display normally, and clicking the component will not pop up a prompt window.

(4) The permission will be cancelled after the operation is completed & Hide the component when the user has no permission range.



When this option is checked, if user rights is not logged in, the component will be hidden. After successful login, the component will be operated once. After the first operation, the system will automatically cancel the permission limit of the component. Even after logging out, the component will not be hidden. If the user has logged in, the component will display normally.

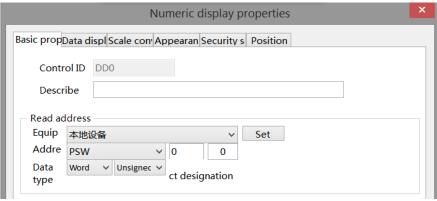
Position

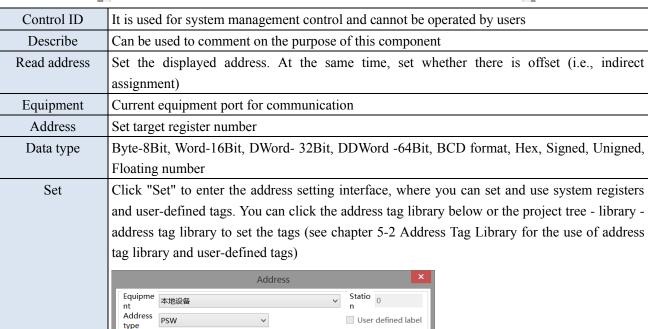
Same to chapter 4-1-1 straight line position part.

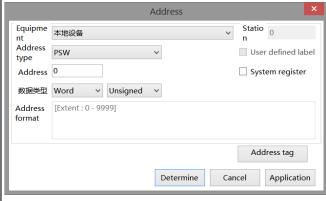
4-2-4. Numerical display

- 1. Click the "Part/Display/Numerical Display" in the menu bar or the control window, move the cursor to the screen, click the left mouse button to place it, click the right mouse button or click ESC to cancel it. Modify the length and width of the border through the border points.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components. You can also double-click numerical display or select numerical display, right-click, and select Attribute.

■ Basic property



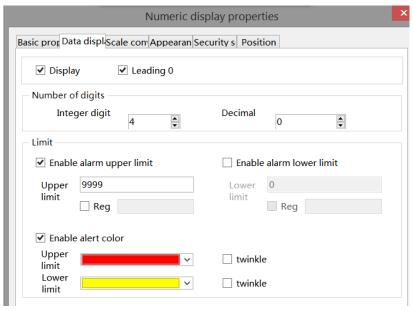




Indirect assignment

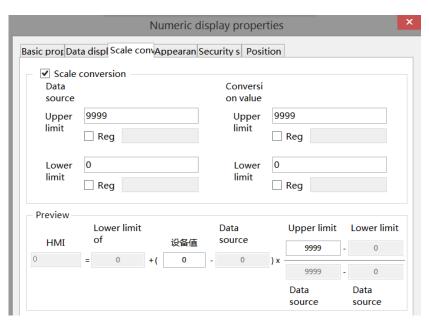
Set the current address offset. The current register address changes with the indirectly specified register value, that is, Dx [Dy]=D [x+Dy value] (x, y=0, 1, 2, 3...). For example: the current register address is PSW0, if the indirectly specified address is PSW100; When the value of PSW100 register is 0, the register controlling this element is still PSW0; When the value of PSW100 register is 1, the register controlling this element is PSW1 (and so on)

■ Data display



	Display	After checking, the user will not see the entered value, and the value will be displayed as "* *"
Leading 0		If the number of data digits does not meet the requirements, it shall be supplemented with 0 in front (For example: the integer digits and decimal digits are set as 5 and 0 respectively for data display. When leading 0 is selected, enter 23 and 00023 will be displayed in the input box)
Number of digits		Set the integer and decimal digits displayed in the register
Limit	Enable alarm upper limit	Set the upper limit of alarm input, which can be specified by register
	Enable alarm lower limit	Set the lower limit of alarm input, which can be specified by register
	Enable alert color	Set the warning color of the upper and lower limits and whether it flickers

■ Scale conversion



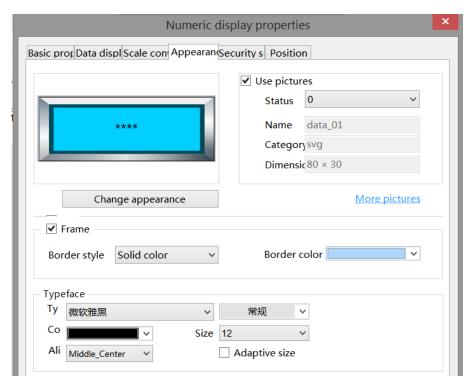
Scale conversion Set whether to perform scale conversion. After checking, the read value can be converted according to the set scale, and the conversion effect can be previewed in the software

The display data is obtained from the original data in the monitoring object register after conversion. Selecting this function requires setting the upper and lower limits of the data source and conversion value. The upper and lower limits can be constant or specified by the register. The data source is the data in the lower communication equipment, and the conversion value is the data displayed on the HMI after proportional conversion

Upper/lower limit

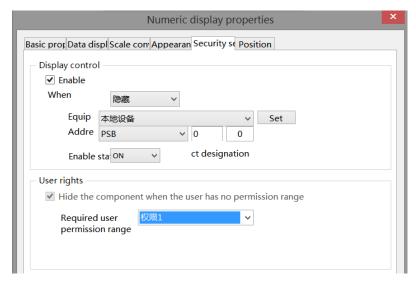
Limit the upper and lower limits of data (can be specified by register)

■ Appearance



Same to chapter 4-2-3 numerical input appearance part.

Security setting



Same to chapter 4-2-3 numerical input security setting part.

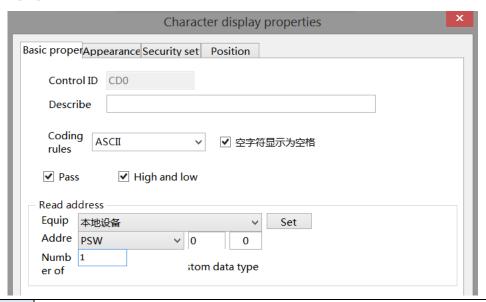
Position

Same to chapter 4-1-1 straight line position part.

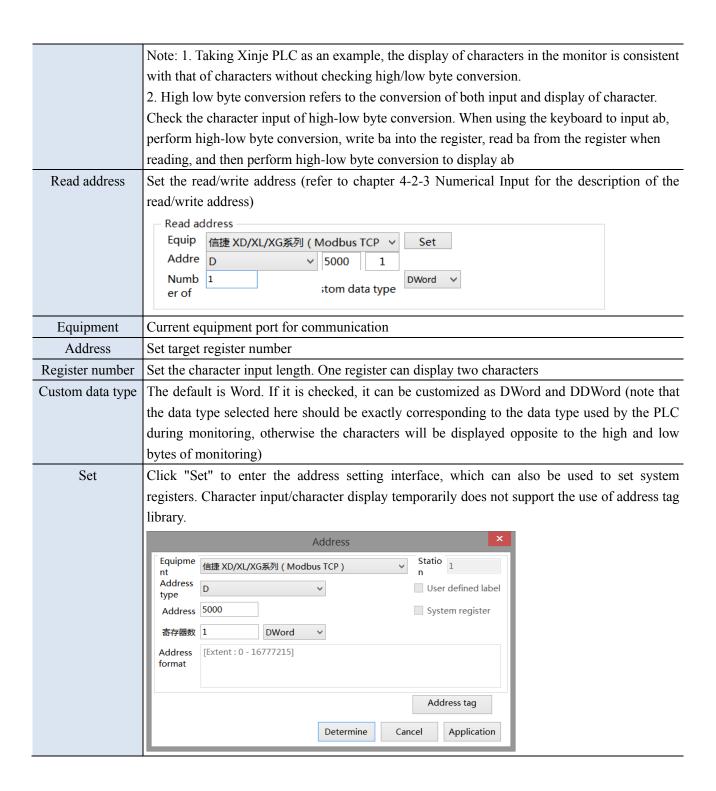
4-2-5. Character input

- 1. Click the "Part/Input/Character Input" icon in the menu bar or the icon in the basic part bar of the control window, move the cursor to the screen, click the left mouse button to place it, click the right mouse button or click ESC to cancel it. Modify the length and width of the border through the border points.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components, or you can double-click character input or select character input and right-click to select Attribute.

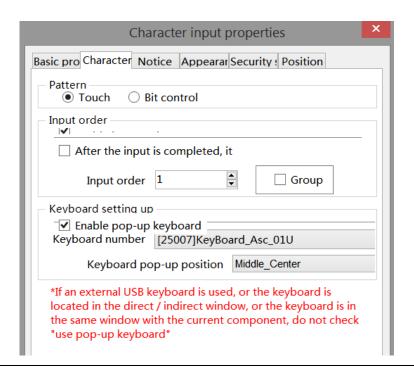
■ Basic property



	Control ID	It is used for system management control and cannot be operated by users		
	Describe	Can be used to comment on the purpose of this component		
	Coding rules	ASCII (select "blank characters are displayed as spaces"), UTF-8 and UTF-16 encoding rules		
		can be selected		
Ī	Password	After checking, the user will not see the entered value, and the value will be displayed as "* *		
		*"		
	High and low	After checking, the display order is changed to "low byte+high byte"		
		Character Input Display		
		not selected high and low abcd A abcd C		
		select high and low badc B badc D		
		ABCD is set to DWORD type of the same address.		
		Input abcd to A normally, then A and C display abcd, and B/D displays badc because high/low		
		byte conversion is checked.		
		Input abcd to B normally. At this time, B and D display abcd, and A/C displays bade because		
		high/low byte conversion is not checked.		



Character input



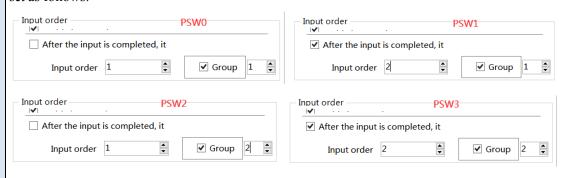
Pattern

There are touch control and bit control. Touch means to start the input program by touching the component, and bit control means to start the input program when the specified coil is ON. In the bit control state, when the coil reaches ON, trigger the keyboard to pop up, click ENT to enter data, and click ESC to cancel the keyboard pop up.

Input order

If it is enabled, the keyboard will jump to the corresponding input component, it can set different groups.

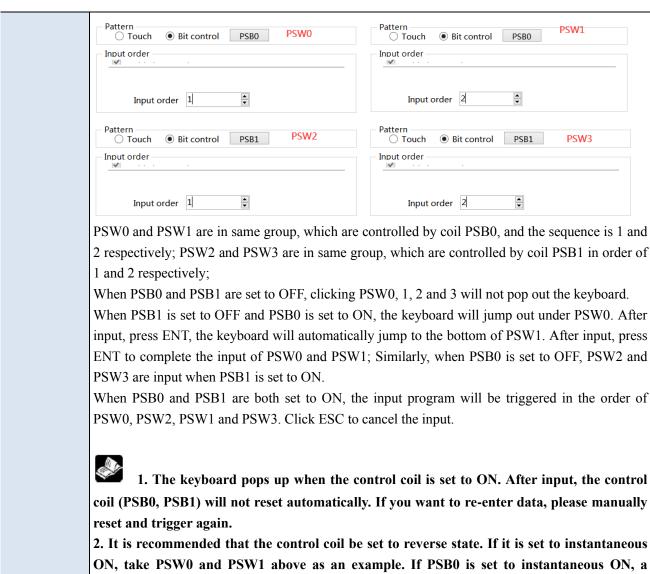
Example 1 (touch control): The character input component PSW0, PSW1, PSW2 and PSW3 are set as follows:



PSW0 and PSW1 are in same group, and the order is 1 and 2 respectively; PSW2 and PSW3 are in same group, and the order is 1 and 2 respectively.

When you click PSW0, the keyboard will pop up. After entering characters, click ENT, the keyboard will automatically jump to the bottom of PSW1. After entering characters, click ENT to complete the character input of PSW0 and PSW1 (if you check "No more input in sequence after input", the keyboard will not jump to the next component in the same group after completing the input at the selected component, and if you want to input, you need to click the next component again for input); Similarly, enter PSW2 and PSW3.

Example 2 (bit control): The character input component PSW0, PSW1, PSW2 and PSW3 are set as follows.

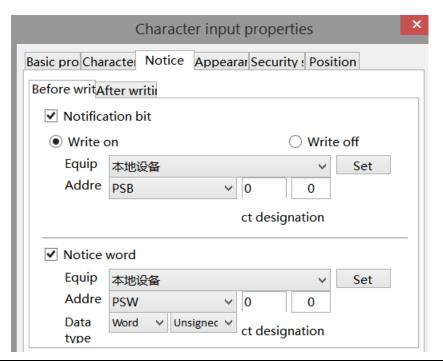


keyboard will pop up below PSW0 at the same time of triggering. Click ENT after input,

and the keyboard will disappear. Only PSW0 can be input. Even if it is triggered again, the keyboard will only be displayed below PSW0, and the setting of PSW1 cannot be completed.

	- Action-				
	○ Set on	O Set off	Reverse	○ Instantaneous on	
Keyboard	Set whether to pop up th	e keyboard, keyboa	ard style selection,	and keyboard pop-up position	
setting up					

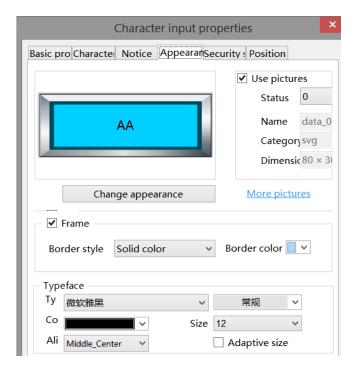
Notice



Notice

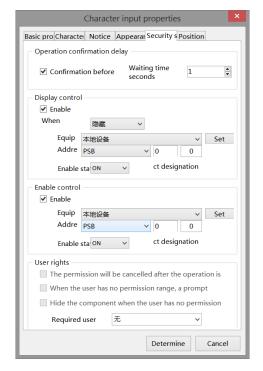
If Enable the notice, you can choose to set the target coil ON/OFF before/after writing, or set the target register to a constant (notification word) before or after writing. If Enable is not checked, the notification function will not take effect

■ Appearance



Same to chapter 4-2-3 numerical input appearance part.

Security setting



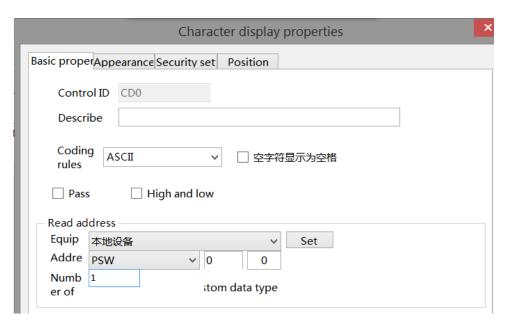
Same to chapter 4-2-3 numerical input security setting part.

Position

Same to chapter 4-1-1 straight line position part.

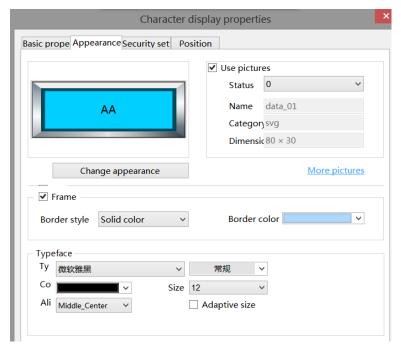
4-2-6. Character display

- 1. Click the "Part/Display/Character Display" in the menu bar or the control window, move the cursor to the screen, click the left mouse button to place it, click the right mouse button or click ESC to cancel it. Modify the length and width of the border through the border points.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components. You can also double-click Character Display or select Character Display, right-click, and select Attribute.
 - Basic



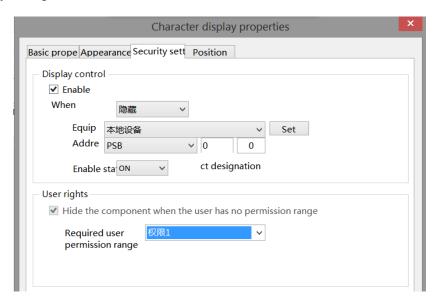
Control ID	It is used for system management control and cannot be operated by users		
Describe	Can be used to comment on the purpose of this component		
Coding rules	ASCII, UTF-8 and UTF-16 encoding rules can be selected		
Password	After checking, the user will not see the entered value, and the value will be displayed as "* *		
- 1122 0 - 12	*"		
High and low	After checking, the display order is changed to "low byte+high byte"		
C	Character Input Display		
	not selected high and low abcd A abcd C		
	select high and low badc D		
	ABCD is set to DWORD type of the same address.		
	Input abcd to A normally, then A and C display abcd, and B/D displays badc because high/low		
	byte conversion is checked.		
	Input abcd to B normally. At this time, B and D display abcd, and A/C displays bade because		
	high/low byte conversion is not checked.		
	Note: 1. Taking Xinje PLC as an example, the display of characters in the monitor is consistent		
	with that of characters without checking high/low byte conversion.		
	2. High low byte conversion refers to the conversion of both input and display of character.		
	Check the character input of high-low byte conversion. When using the keyboard to input ab,		
	perform high-low byte conversion, write ba into the register, read ba from the register when		
Read address	reading, and then perform high-low byte conversion to display ab		
Equipment	Set the read address Current equipment port for communication		
Address			
Register number	Set target register number Set the character input length. One register can display two characters.		
Custom data type	Set the character input length. One register can display two characters The default is Word. If it is checked, it can be customized as DWord and DDWord (note that		
Custom data type	the data type selected here should be exactly corresponding to the data type used by the PLC		
	during monitoring, otherwise the characters will be displayed opposite to the high and low		
	bytes of monitoring)		
Set	Click "Set" to enter the address setting interface, which can also be used to set system		
	registers. Character input/character display temporarily does not support the use of address tag		
	library		
	Address		
	Equipme 本地设备 Statio 0		
	Address type User defined label		
	Address 0 System register		
	寄存器数 1 Word >		
	Address [Extent: 0 - 9999] format		
	Address tag		
	Determine Cancel Application		

Appearance



Same to chapter 4-2-3 numerical input appearance part.

Security setting



Same to chapter 4-1-1 straight line security setting part.

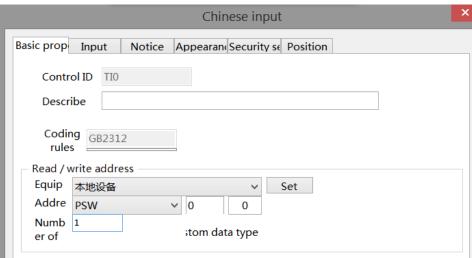
Position

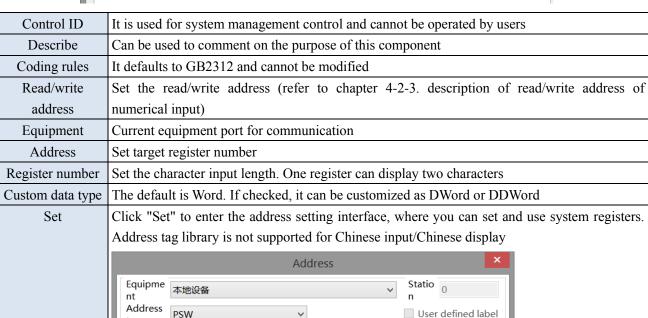
Same to chapter 4-1-1 straight line position part.

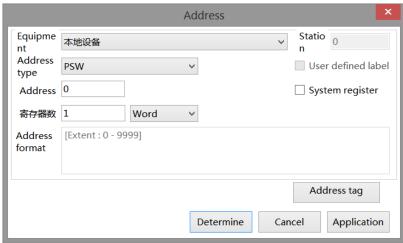
4-2-7. Chinese input

1. Click the "Part/Input/Chinese Input" icon in the menu bar or the icon in the basic part bar of the control window, move the cursor to the screen, click the left mouse button to place it, click the right mouse button or click ESC to cancel the placement. Modify the length and width of the border through the border points.

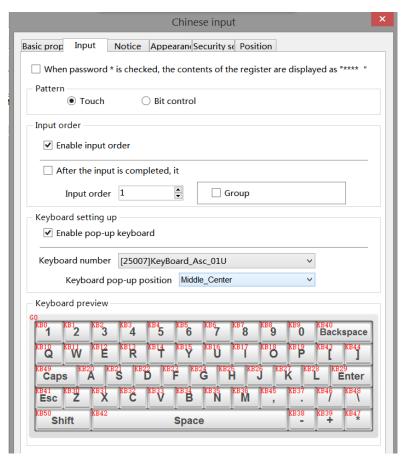
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components, or you can double-click "Chinese Input" or select "Chinese Input" and right-click to select Attributes.
 - Basic property

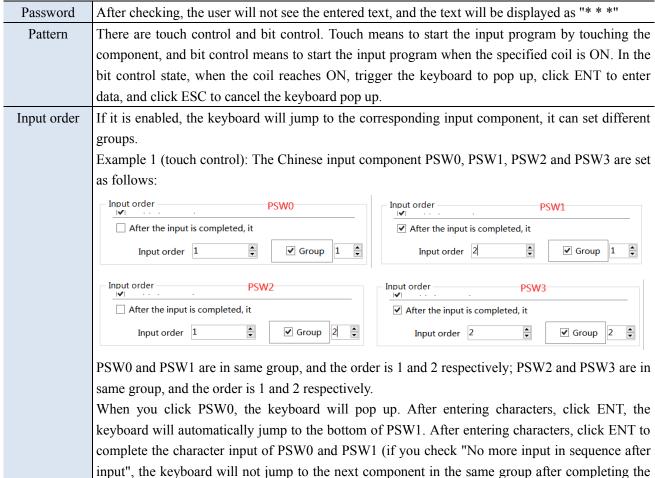






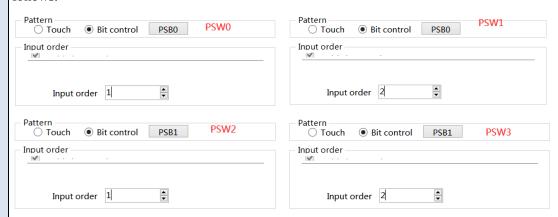
■ Input





input at the selected component, and if you want to input, you need to click the next component again for input); Similarly, enter PSW2 and PSW3.

Example 2 (bit control): The Chinese input component PSW0, PSW1, PSW2 and PSW3 are set as follows.

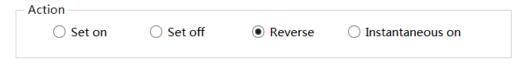


PSW0 and PSW1 are in same group, which are controlled by coil PSB0, and the sequence is 1 and 2 respectively; PSW2 and PSW3 are in same group, which are controlled by coil PSB1 in order of 1 and 2 respectively;

When PSB0 and PSB1 are set to OFF, clicking PSW0, 1, 2 and 3 will not pop out the keyboard. When PSB1 is set to OFF and PSB0 is set to ON, the keyboard will jump out under PSW0. After input, press ENT, the keyboard will automatically jump to the bottom of PSW1. After input, press ENT to complete the input of PSW0 and PSW1; Similarly, when PSB0 is set to OFF, PSW2 and PSW3 are input when PSB1 is set to ON.

When PSB0 and PSB1 are both set to ON, the input program will be triggered in the order of PSW0, PSW2, PSW1 and PSW3. Click ESC to cancel the input.

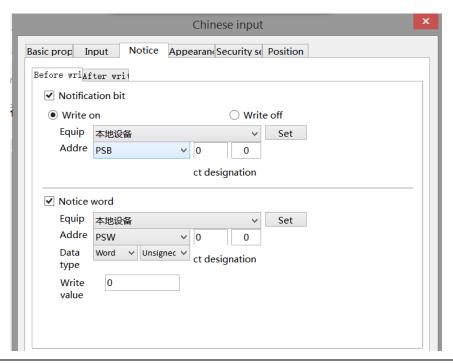
- 1. The keyboard pops up when the control coil is set to ON. After input, the control coil (PSB0, PSB1) will not reset automatically. If you want to re-enter data, please manually reset and trigger again.
- 2. It is recommended that the control coil be set to reverse state. If it is set to instantaneous ON, take PSW0 and PSW1 above as an example. If PSB0 is set to instantaneous ON, a keyboard will pop up below PSW0 at the same time of triggering. Click ENT after input, and the keyboard will disappear. Only PSW0 can be input. Even if it is triggered again, the keyboard will only be displayed below PSW0, and the setting of PSW1 cannot be completed.



Keyboard setting

Set whether to pop up the keyboard, keyboard style selection, and keyboard pop-up position

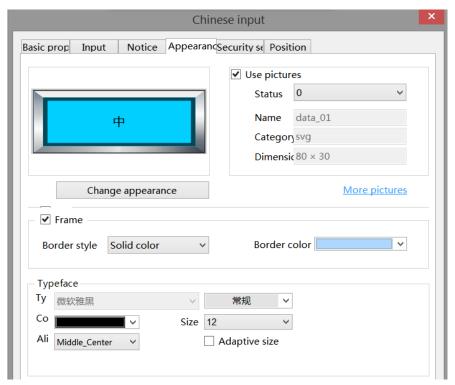
■ Notice



Notice

If Enabled, you can choose to write the target coil ON, OFF or the target register to a constant (notification word) before or after writing.

■ Appearance



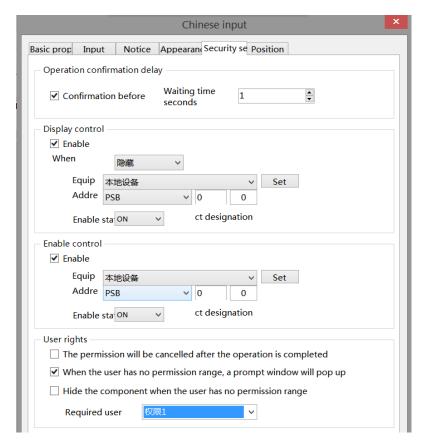
Same to chapter 4-2-3 numeric input appearance part.



The font for Chinese input can only be Microsoft Yahei by default, and no other font can be

set.

Security setting



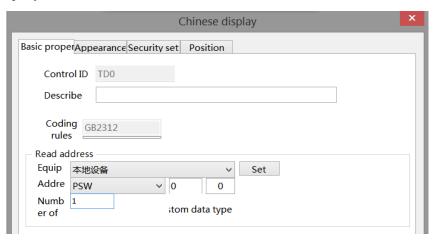
Same to chapter 4-2-3 numeric input security setting part.

Position

Same to chapter 4-1-1 straight line position part.

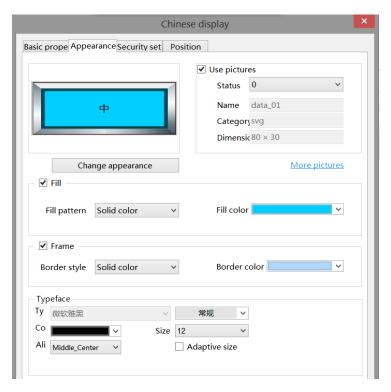
4-2-8. Chinese display

- 1. Click "Parts/Display/Chinese Display" in the menu bar or icon in the basic part bar of the control window, move the cursor to the screen, click the left mouse button to place it, click the right mouse button or click ESC to cancel the placement. Modify the length and width of the border through the border points.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components, or you can double-click "Chinese Display" or select "Chinese Display" and right-click to select Attributes.
 - Basic property



Control	ID	It is used for system management control and cannot be operated by users		
Describ	ne e	Can be used to comment on the purpose of this component		
Coding r	ules	It defaults to GB2312 and cannot be modified		
Read add	ress	Set the read address		
Equipme	ent	Current equipment port for communication		
Addres	SS	Set target register number		
Register nu	ımber	Set the character input length. One register can display two characters		
Custom dat	a type	The default is Word. If checked, it can be customized as DWord or DDWord		
Set		Click "Set" to enter the address setting interface, which can also be used to set system		
		registers. Address tag library is not supported for Chinese input/Chinese display		
		Address Equipme 本地设备		
		Determine Cancel Application		

Appearance

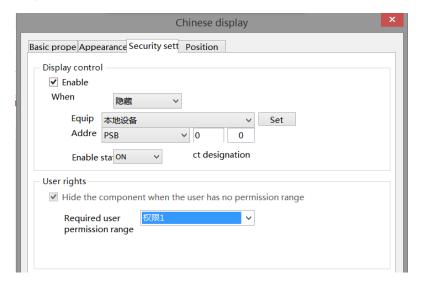


Same to chapter 4-2-3 numeric input appearance part.

The font displayed in Chinese can only be Microsoft Yahei by default, and no other font can

be set.

Security setting



Same to chapter 4-1-1 straight line security setting part.

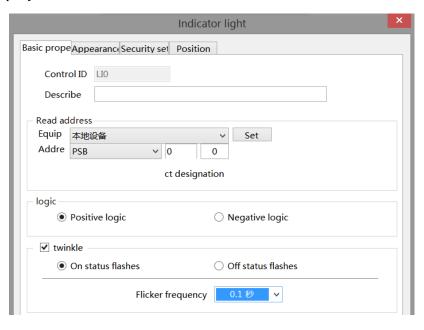
Position

Same to chapter 4-1-1 straight line position part.

4-2-9. Indicator light

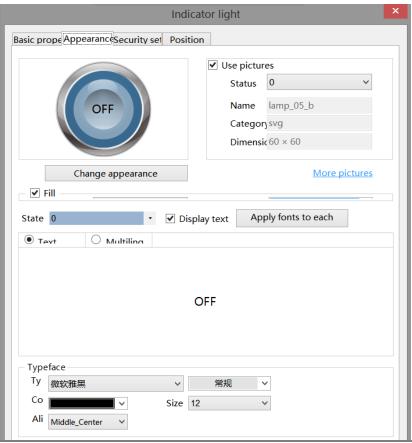
Displays the status of the specified coil.

- 1. Click the "Parts/Key/Indicator light" in the menu bar or the icon in the basic part bar of the control window, move the cursor to the screen, click the left mouse button to place it, click the right mouse button or click ESC to cancel it. Modify the length and width of the control through the boundary point.
- 2. When setting attributes, you can set them in the attribute box that pops up when you place components, or you can double-click the Indicator light or select the Indicator light and right-click to set attributes.
 - Basic property



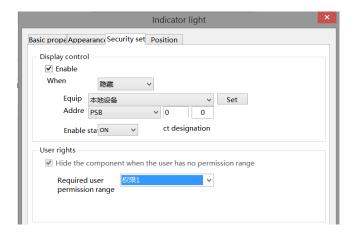
Control ID	It is used for system management control and cannot be operated by users	
Describe	Can be used to comment on the purpose of this component	
Read address	Set the read address	
Equipment	Current equipment port for communication	
Set	Click "Set" to enter the address setting interface, where you can set and use system registers	
	and user-defined tags. You can click the address tag library below or the project tree - library -	
	address tag library to set the tags used (see chapter 5-2 Address Tag Library for the use of	
	address tag library and user-defined tags)	
	Address	
	Equipme 本地设备 v Statio n	
	Address type User defined label	
	Address 0 System register	
	Address [Extent: 0 - 9999] format	
	Address tag	
	Determine Cancel Application	
Address	Set the target coil number	
Indirect	Set the current address offset. The current coil address changes with the indirectly specified	
assignment	register value, that is, Dx [Dy]=D [x+Dy value] (x, y=0, 1, 2, 3). For example, the current	
	coil address is PSB0, if the indirectly assigned address is PSW100; When the value of	
	PSW100 register is 0, the coil controlling this element is still PSB0; When the value of	
	PSW100 register is 1, the coil controlling this element is PSB1 (and so on)	
Logic	Select positive logic or negative logic (positive logic: coil is on in ON state, coil is off in OFF	
	state; negative logic: coil is off in ON state, coil is on in OFF state)	
Twinkle	Select whether to flash, including ON status flashing, OFF status flashing and flashing	
	frequency setting	

Appearance



Appearance	You can check whether to use pictures. If you check, you can set the appearance of the
	indicator in the (0, 1) two states. After selecting the state in the upper right corner, click
	"Change Appearance" or click "More Pictures" to select a custom picture to change the
	appearance
Fill	Fill style and color can be set
State	You need to check "Display Text" to set the text prompt content of the indicator in the (0, 1)
	two states, and you can set whether to use multiple languages (see chapter 4-7 for the specific
	use of multiple language libraries). Check the drop-down list to set the font corresponding to
	the corresponding status of the indicator light, or click the "apply fonts to each status" button
	to set the fonts in all statuses
Typeface	You can set the font, size, font style, color and the display position of the font in the
	component (you can also check the adaptive size, that is, drag the mouse to change the size of
	the component, and the text size will change accordingly)

Security setting



Same to chapter 4-1-1 straight line security setting part.

Position

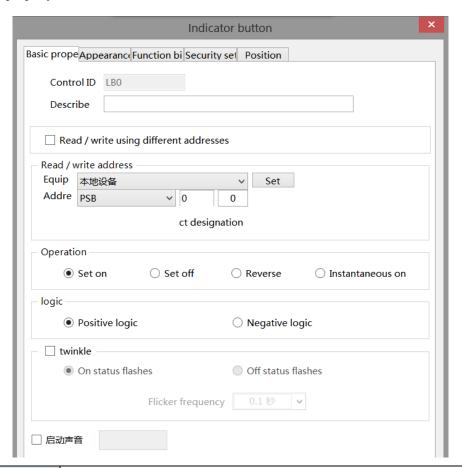
Same to chapter 4-1-1 straight line position part.

4-2-10. Indicator button

Control the status of the specified coil and display the status of the specified coil.

- 1. Click "Parts/Key/Indicator Button" in the menu bar or in the basic part bar of the control window, move the cursor to the screen, click the left mouse button to place it, click the right mouse button or click ESC to cancel the placement. Modify the length and width of the control through the boundary point.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components. You can also double-click the "Indicator Button" or select the "Indicator Button" and then right-click to select Attribute.

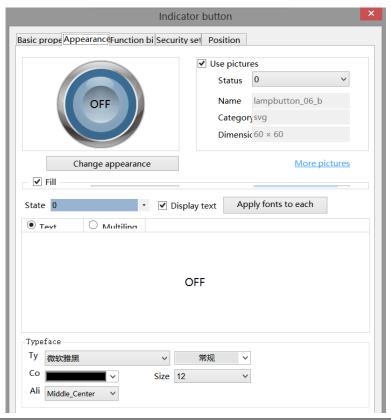
Basic property



Control ID	It is used for system management control and cannot be operated by users
Describe Can be used to comment on the purpose of this component	
Read/write using	If not checked, the same address is used for reading and writing (refer to chapter 4-2-3
different addresses	description of reading/writing address for numerical input)
Read address	Set the displayed address; You can also set whether there is an offset (that is, indirect
	assignment)
Write address	Set the write in address; You can also set whether there is an offset (that is, indirect
	assignment)

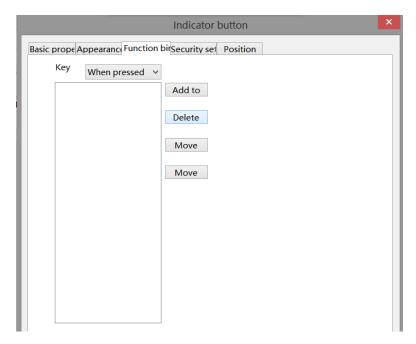
Equipment		Current equipment port for communication		
Address		Set the target coil number		
Set		Click "Set" to enter the address setting interface, where you can set and use system registers and user-defined tags. You can click the address tag library below or the project tree – library - address tag library to set the tags (see chapter 5-2 Address Tag Library for the use of address tag library and user-defined tags)		
		Address		
		Equipme 本地设备		
		Address tag Determine Cancel Application		
Indirect	assignment	Set the current address offset. The current coil address changes with the indirectly		
		specified register value, that is, Dx [Dy]=D [x+Dy value] (x, y=0, 1, 2, 3). For example, the current coil address is PSB0, if the indirectly assigned address is PSW100; When the value of PSW100 register is 0, the coil controlling this element is still PSB0; When the value of PSW100 register is 1, the coil controlling this element is PSB1 (and so on)		
Operation	Set ON	Set the control coil to logic 1 state		
	Set OFF	Set the control coil to logic 0 state		
	Reverse	Set the control coil to the opposite state		
	Instantaneous ON	When the key is pressed, the coil is in logic 1 state, and when the key is released, the coil is in logic 0 state		
Logic		Select positive logic or negative logic (positive logic: coil is on in ON state, coil is off in OFF state; negative logic: coil is off in ON state, coil is on in OFF state)		
Twinkle		Select whether to flash, including ON status flashing, OFF status flashing and flashing frequency setting		
Enable audio		When the trigger conditions are met, the customized audio can be played. At present, this function is only available in the TS5L series. For specific usage, see chapter 5-4 Use of Audio Resource Library		

Appearance



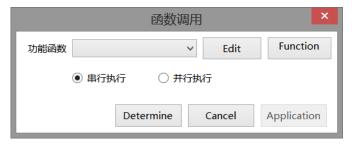
Appearance	You can check whether to use pictures. If you check, you can set the appearance of the
	indicator in the (0, 1) two states. After selecting the state in the upper right corner, click
	"Change Appearance" or click "More Pictures" to select a custom picture to change the
	appearance
Fill	Fill style (solid/gradient) and fill color can be set
State	You need to check "Display Text" to set the text prompt content of the indicator in the (0, 1)
	two states, and you can set whether to use multiple languages (see chapter 4-7 for the specific
	use of multiple language libraries); Check the drop-down list to set the font corresponding to
	the corresponding status of the indicator light, or click the "apply fonts to each status" button
	to set the fonts in all statuses
Typeface	You can set the font, size, font style, color and the display position of the font in the
	component

■ Function binding



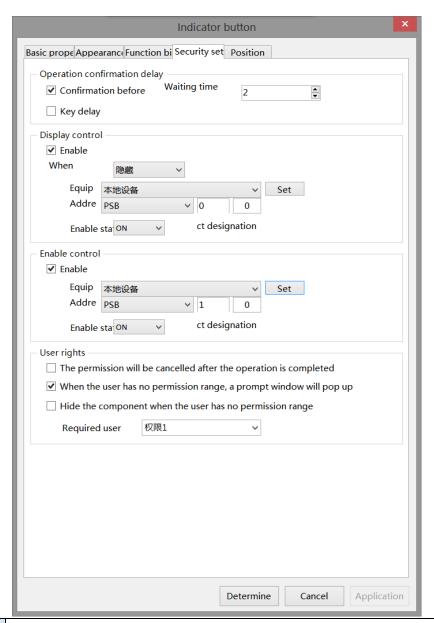
Calling the C function can complete more and more complex operations and communications. Function use is equivalent to chapter 4-2-15 item (10) function key - function call.

Key operation		Set the operation mode, including pressing and releasing
Function iter	n Add to	Add function
	Delete	Delete the function
	Move	Move the target function up one physical location
	up	
	Move	Move the target function down one physical location
	down	



Function	Select the function to be called from the drop-down menu
Edit/Function	Click to enter the function editing page
Serial execution	The task calling this function can only continue the subsequent processing after the
	function is executed. Therefore, this function must have appropriate exit conditions
Parallel execution	Call the task of this function, create a new task to execute the function, and the caller will
	continue the subsequent processing

Security setting



Operation	The waiting time (s) can be set. If this option is checked, a pop-up window "Are you sure to
confirmation	execute this operation" will pop up when operating components. If you do not click "Confirm"
delay	or "Cancel" within the set waiting time, the pop-up window will disappear by itself and this
	operation will fail. If you click "OK" within the waiting time, the operation is successful. If
	you click "Cancel", the operation is invalid.
Key delay	The operation will not take effect until the set delay time is long pressed
Display control	Use bits to control whether to display the component. When the condition is not met, the
	component will be hidden
Enable	When checked, display control will be enabled
When validation	Set the display of the component when validation fails
fails	
Address	Set the target coil for bit control
Enable status	Set ON status to be valid or OFF status to be valid.
	For example, if the equipment is checked as shown in the figure above, the bit control is PSB0,
	and it is hidden when the verification fails, and the enabling status is ON, then the component
	will be displayed normally when the status of PSB0 is ON, and it will not be displayed when
	the status of PSB0 is OFF

Enable control	The bit limit can be set (the enabling state of the enable control can be customized). When the
	enabling conditions are met, the component can be used normally (as shown in the figure
	above: when the PSB1 is in the ON state and the trigger conditions are met at the same time,
	the component can be used; if the PSB1 is in the OFF state, the component is still unavailable
	even if the trigger conditions are met)
User rights	Set the controlled authority level.
	After setting the permission range of the required user, the following three functions can be
	checked as required:
	(1) Cancel the permission after the operation: if this option is not checked, the corresponding
	level password must be entered for each operation of this component. After checking, you only
	need to enter it successfully once
	(2) When the user has no permission range, a prompt window will pop up
	(3) When the user has no permission range, hide the component.



the user rights function please refer to chapter 4-2-3 numerical input.

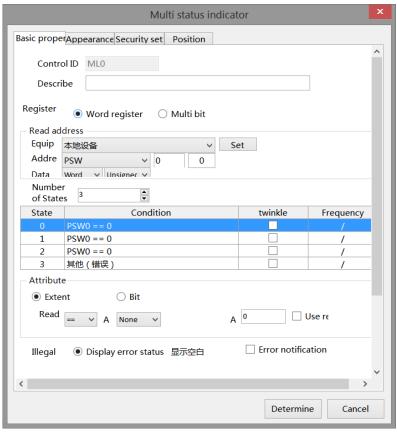
Position

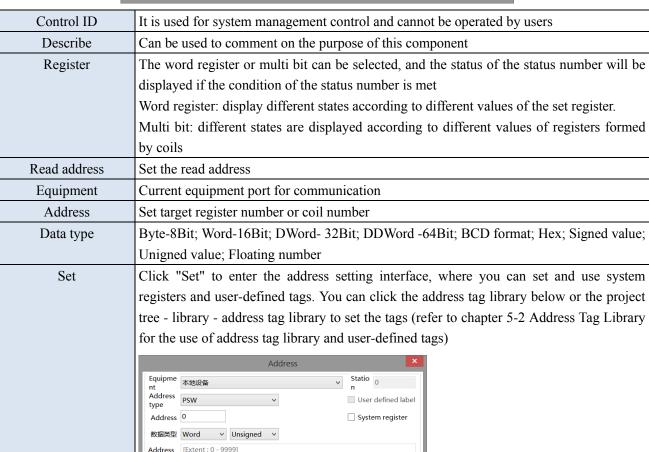
Same to chapter 4-1-1 straight line position part.

4-2-11. Multi-state indicator

Different states are displayed according to different values of registers.

- 1. Click "Part/Key/Multi state Indicator" in the menu bar or icon in the basic part bar of the control window, move the cursor to the screen, click the left mouse button to place it, click the right mouse button or click ESC to cancel it. Modify the length and width of the control through the boundary point.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components. You can also double-click the "Multi state Indicator" or select the "Multi state Indicator", right-click and select Attribute.
 - Basic properties





Cancel

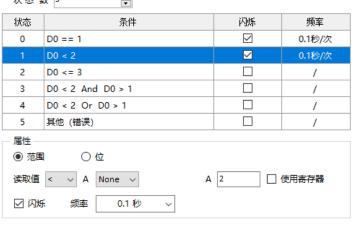
Determine

Address tag

Application

Indirect assignment	Set the current address offset. The current coil address changes with the indirectly
	specified register value, that is, Dx [Dy]=D [x+Dy value] (x, y=0, 1, 2, 3). For example,
	the current coil address is PSB0, if the indirectly assigned address is PSW100; When the
	value of PSW100 register is 0, the coil controlling this element is still PSB0; When the
	value of PSW100 register is 1, the coil controlling this element is PSB1 (and so on)
Number of state	Set the number of statuses. The lower status display table will synchronously increase or
	decrease the number of statuses
State display table	After setting in the lower attribute column, you can directly observe the set status in the
	status display table (you cannot modify it directly on the table, but only through the lower
	attribute)
Attribute – word	状 本 数 5 ▲

Attribute – word register



(1) Range: Numerical comparison method: "<", ">", "<=", ">=", "==", "!=";

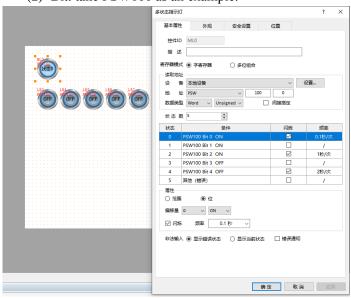
None: only one numerical value. Such as status 0, 1, 2.

And: Both numerical judgment conditions must be met. Such as state 3.

Or: Any numerical value can be judged to meet the conditions. Such as state 4.

Blinking: When flashing is checked, the flashing frequency can be set, and the setting will be displayed in the status display table above synchronously.

(2) Bit: take PSW100 as an example.



When PSW100.0 is ON, PSW100 flashes at a frequency of 0.1 seconds per time and the font display status is 0.

When PSW100.1 is ON, PSW100 font display status 1.

When PSW100.2 is ON, PSW100 flashes at the frequency of 1 second/time and the font display status is 2.

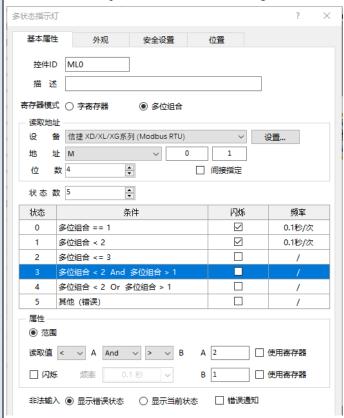
When PSW100.3 is OFF, PSW100 font displays status 3.

When PSW100.4 is OFF, PSW100 flashes at the frequency of 2 seconds/time and the font display status is 4.

If the status of PSW100.0-PSW100.4 is inconsistent with the set conditions, PSW100 font will display error status.

Attribute – Multi bit

The comparison method of word register is to directly read the internal value of the register to determine whether the conditions are met. However, the value of the register cannot be directly read by the combination of multi bit. The value of the register is represented by the combination of multiple coils. The following describes how the multi bit combination represents the value of the register



As shown in the figure above, the number of digits set is 4. The coil states of M0, M1, M2 and M3 represent different values. The minimum number is 0 and the maximum number is 15.

- (1) When M0 is on and others are off, it represents the value 1
- (2) When M1 is on and others are off, it represents the value 2
- (3) When M2 is on and others are off, it represents the value 4
- (4) When M3 is on and others are off, it represents the value 8
- (5) When all are off, it represents the value 0
- (6) When it is fully lit, it represents the value 15

And so on

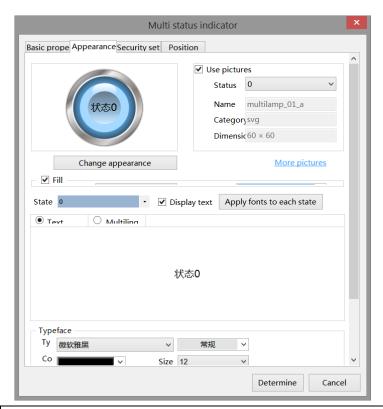
Illegal input

When the value of the register does not meet any of the set states, the checked state (error state or current state) will be displayed, and the error notification can be selected (the set coil light will be on when illegal input occurs)



If the conditions meet multiple settings at the same time, the top status will prevail.

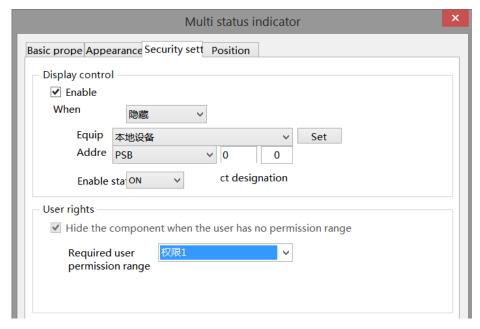
■ Appearance



Appearance	You can check whether to use pictures. If you check, you can set the appearance of the
	multi state indicator in multiple states. After selecting the state in the upper right corner,
	click "change appearance" or click "more pictures" to select a custom picture to change the
	appearance
Fill	Fill style (solid/gradient) and fill color can be set
Status	You need to check "Display Text" to set the text prompt content of the multi status indicator
	in different states, and you can set whether to use multiple languages (refer to chapter 5-1
	Label Multiple Languages for the specific use of multiple language libraries). Tick the
	drop-down list to set the font corresponding to the corresponding status of the multi status
	indicator, or click the "apply fonts to each status" button to set the font of all statuses
Typeface	The font, size, color and alignment can be set (the display position of the font in the
	component)

The appearance states have pictures for 3 states and 1 error state by default. When there are more than 4 states, you need to manually add the appearance in different states in the gallery.

Security setting



Same to chapter 4-1-1 straight line security setting part.

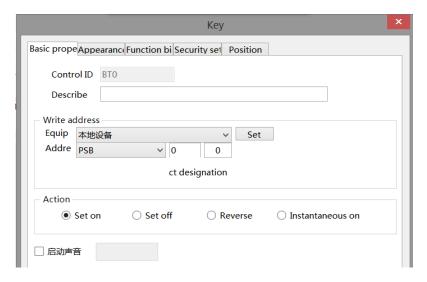
Position

Same to chapter 4-1-1 straight line position part.

4-2-12. Key

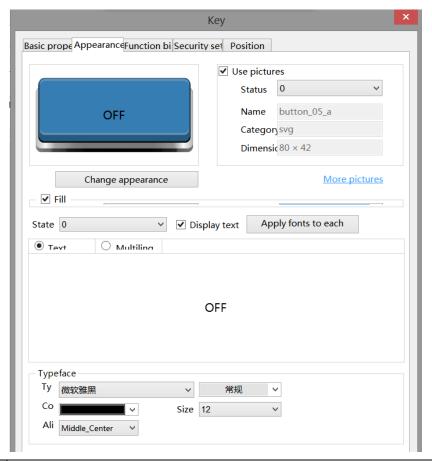
Controls the status of the specified coil.

- 1. Click the "Part/Key/Key" in the menu bar or the icon in the basic part bar of the control window, move the cursor to the screen, click the left mouse button to place it, click the right mouse button or click ESC to cancel the placement. Modify the length and width of the component through the boundary point.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components, or you can double-click the "key" or select the "key" and right-click to select attribute.
 - Basic property



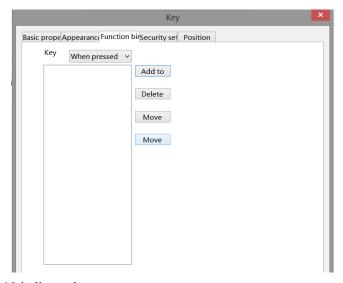
Control ID	or the project
Write address Equipment Current equipment port for communication Address Set the target coil number Click "Set" to enter the address setting interface, where you can set an registers and user-defined tags. You can click the address tag library below tree - library - address tag library to set the tags (see chapter 5-2 Address T the use of address tag library and user-defined tags) Address Address Address Address Fequipme Address Address Format Address Fexting Address Address Address Address Fexting Address	or the project
Set the target coil number Set Click "Set" to enter the address setting interface, where you can set an registers and user-defined tags. You can click the address tag library below tree - library - address tag library to set the tags (see chapter 5-2 Address T the use of address tag library and user-defined tags) Address Equipme **BB** Address Lequipme **BB** Address Lequipme **BB** Address System register Address Figure **Address T the user defined label type Address Lequipme **BB** Address Address Address Lequipme **BB** Address Address Address Address Address Address Address Address Address Address T the user defined label type Address Address Address Address T the user defined label type Address Address Address Address Address T the user defined label type Address Address Address Address Address tag	or the project
Set Set the target coil number Click "Set" to enter the address setting interface, where you can set an registers and user-defined tags. You can click the address tag library below tree - library - address tag library to set the tags (see chapter 5-2 Address T the use of address tag library and user-defined tags) Address Address Equipme Address FSB User defined label Address Format Address Extent: 0 - 9999]	or the project
Click "Set" to enter the address setting interface, where you can set an registers and user-defined tags. You can click the address tag library below tree - library - address tag library to set the tags (see chapter 5-2 Address T the use of address tag library and user-defined tags) Address Equipme Address PSB User defined label Address [Extent: 0 - 9999] Address tag Address tag Address tag	or the project
registers and user-defined tags. You can click the address tag library below tree - library - address tag library to set the tags (see chapter 5-2 Address T the use of address tag library and user-defined tags) Address Equipme 本地设备 Address psB Address psB Address [Extent: 0 - 9999] Address format	or the project
tree - library - address tag library to set the tags (see chapter 5-2 Address T the use of address tag library and user-defined tags) Address Equipme 本地设备 Address PSB V User defined label User defined label Address format Address format	
the use of address tag library and user-defined tags) Address Equipme nt Address type User defined label User defined label System register Address format Extent: 0 - 9999]	Γag Library for
Address Equipme nt	
Equipme nt Address type PSB User defined label Address format [Extent: 0 - 9999] Address format Address tag	
Address PSB User defined label User defined label Address System register Address Extent: 0 - 9999 Address tag	
Address type Address Address format Address type Address	
Address format [Extent: 0 - 9999] Address tag	
Address tag	
Determine Cancel Application	
Determine Cancer Application	
Indirect assignment Set the current address offset. The current coil address changes with	-
specified register value, that is, Dx [Dy]=D [x+Dy value] (x, y=0, 1, 2, 3).	-
the current coil address is PSB0, if the indirectly assigned address is PSW1	ŕ
value of PSW100 register is 0, the coil controlling this element is still PS	
value of PSW100 register is 1, the coil controlling this element is PSB1 (and	a so on)
Action Set ON Set the control coil to logic 1 state	
Set OFF Set the control coil to logic 0 state	
Reverse Set the control coil to the opposite state	
Instantaneous When the key is pressed, the coil is in logic 1 state, and when the key is rele	leased, the coil
ON is in logic 0 state	
Enable audio When the trigger conditions are met, the customized audio can be played. A	-
function is only available in the TS5L series. For specific usage, see chapt	ner 5-4 Use of
Audio Resource Library	

Appearance



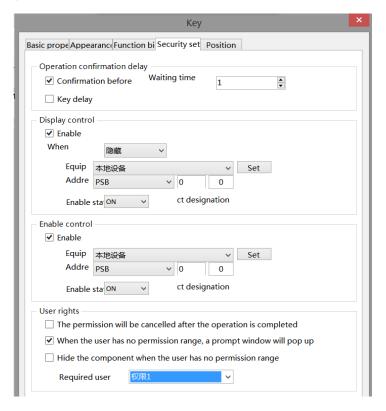
Appearance	You can check whether to use pictures. If you check, you can set the appearance of the key in
	the (0, 1) two states. After selecting the state in the upper right corner, click "Change
	Appearance" or click "More Pictures" to select a custom picture to change the appearance
Fill	Fill style (solid/gradient) and fill color can be set
State	You need to check "Display Text" to set the text prompt content when the key is in the (0, 1)
	two states, and you can set whether to use multiple languages (see chapter 5-1 Label Multiple
	Languages for the specific use of multiple language libraries). Tick the drop-down list to set
	the font corresponding to the corresponding state of the button, or click the "apply fonts to
	each state" button to set the font in all states
Typeface	You can set the font, size, color and display position of the font in the component

■ Function binding



Same to chapter 4-2-10 indicator button.

Security setting



Same to chapter 4-2-10 indicator button security setting part.

Position

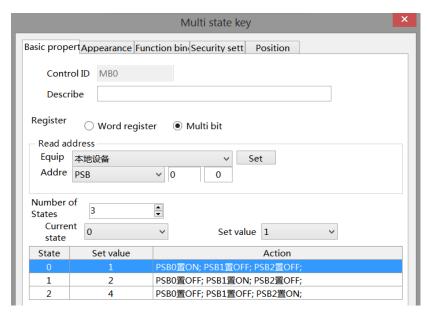
Same to chapter 4-1-1 straight line position part.

4-2-13. Multi state key

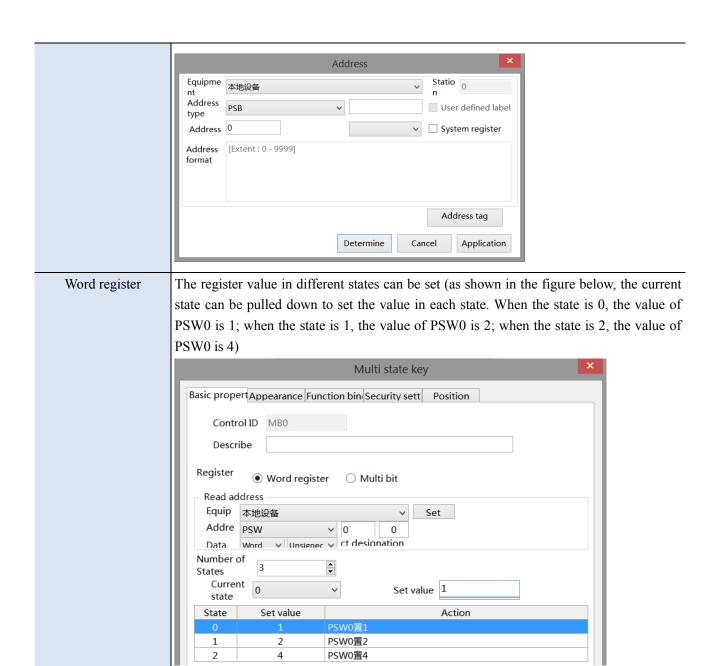
Pressing this component can control the status of different coils or set different values for registers.

- 1. Click "Part/Key/Multi state Key" in the menu bar or in the basic part bar of the control window, move the cursor to the screen, click the left mouse button to place it, click the right mouse button or click ESC to cancel it. Modify the length and width of the control through the boundary point.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components. You can also double-click the "Multi state key" or select the "Multi state key" and right-click to select Attribute.

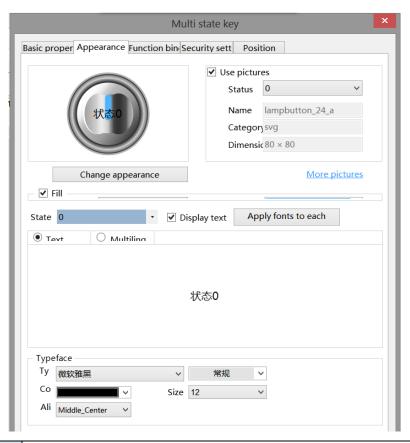
■ Basic property



Control ID	It is used for system management control and cannot be operated by users
Describe	Can be used to comment on the purpose of this component
Register	Multi bit or word register can be selected
Multi bit	The status of the coil in different states can be set (as shown in the figure above, when the
	number of bits is set to 3, the number of states is at most 2^3=8. You can pull down the
	current state to set the value in each state, and the value represented by the lighting of
	PSB0, PSB1, and PSB2 coils will be automatically generated under the action bar)
Equipment	Current equipment port for communication
Address	Set the target coil address
Indirect assignment	Set the current address offset. The current coil address changes with the indirectly
	specified register value, that is, Dx [Dy]=D [x+Dy value] (x, y=0, 1, 2, 3). For example,
	the current coil address is PSB0, if the indirectly assigned address is PSW100; When the
	value of PSW100 register is 0, the coil controlling this element is still PSB0; When the
	value of PSW100 register is 1, the coil controlling this element is PSB1 (and so on)
Set	Click "Set" to enter the address setting interface, where you can set and use system
	registers and user-defined tags. You can click the address tag library below or the project
	tree - library - address tag library to set the tags used (see chapter 5-2 Address Tag Library
	for the use of address tag library and user-defined tags)

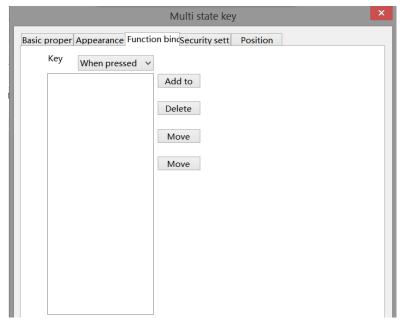


Appearance



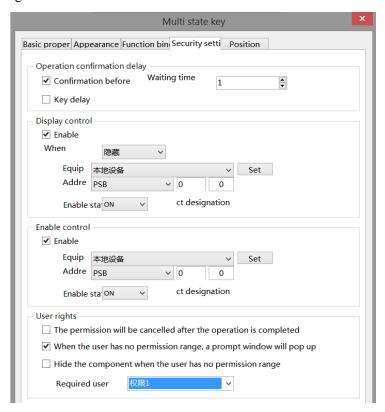
Appearance	You can check whether to use pictures. If you check, you can set the appearance of the multi state key in different states. After selecting the state in the upper right corner, click
	"Change appearance" or click "More pictures" to select a custom picture to change the
	appearance
Fill	Fill style (solid/gradient) and fill color can be set
State	You need to check "Display Text" to set the text prompt content of the multi status key in
	different states, and you can set whether to use multiple languages
Typeface	You can set the font, font style, size, font style, color and the display position of the font
	in the component

■ Function binding



Same to chapter 4-2-10 indicator button.

Security setting



Same to chapter 4-2-10 indicator button security setting part.

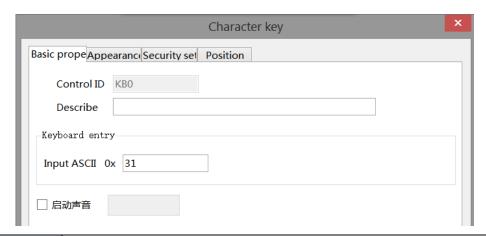
Position

Same to chapter 4-1-1 straight line position part.

4-2-14. Character key

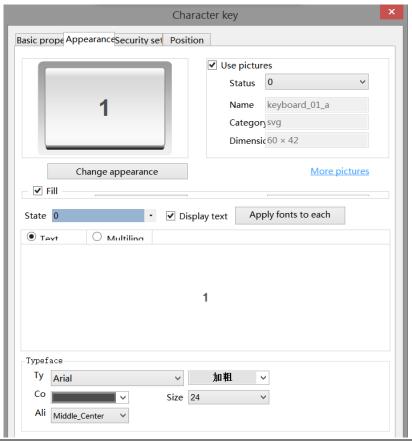
- 1. Click the "Part/Key/Character Key" in the menu bar or the icon in the basic part bar of the control window, move the cursor to the screen, click the left mouse button to place it, click the right mouse button or click ESC to cancel it. Modify the length and width of the control through the boundary point.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components. You can also double-click the "character key" or select the "character key" and then right-click to select attribute.

Basic property



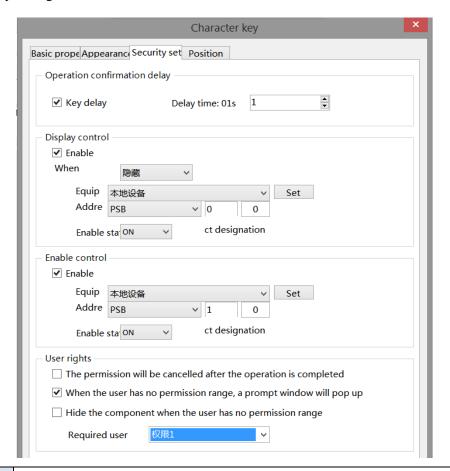
Control ID	It is used for system management control and cannot be operated by users
Describe	Can be used to comment on the purpose of this component
Keyboard entry	Enter the ASCII code corresponding to the key. The ASCII code value corresponding to
	the commonly used keys is shown below:
	1-0X31 $2-0X32$ $3-0X33$ $4-0X34$ $5-0X35$ $6-0X36$ $7-0X37$
	8-0X38 $9-0X39$ $0-0X30$ ESC $-0X1B$ ENT $-0XD$
Enable audio	When the trigger conditions are met, the customized audio can be played. At present, this
	function is only available in the TS5L series. For specific usage, see chapter 5-4 Use of
	Audio Resource Library

Appearance



Appearance	You can check whether to use pictures. If you check, you can set the appearance of the key in
	the (0, 1) two states. After selecting the state in the upper right corner, click "Change
	Appearance" or click "More Pictures" to select a custom picture to change the appearance
Fill	Fill style (solid/gradient) and fill color can be set
State	You need to check "Display Text" to set the text prompt content when the key is in the (0, 1)
	two states, and you can set whether to use multiple languages (see chapter 5-1 Label Multiple
	Languages for the specific use of multiple language libraries). Tick the drop-down list to set
	the font corresponding to the corresponding state of the button, or click the "apply fonts to
	each state" button to set the font in all states
Typeface	You can set the font, size, color and display position of the font in the component

■ Security setting



Key delay	The operation will not take effect until the set delay time is long pressed
Display control	Use bits to control whether the part is displayed. When the conditions are not met, the
	component is hidden. It is hidden by default and cannot be modified
Enable	When checked, display control will be enabled
When validation	Set the display of the component when validation fails
fails	
Address	Target coil with positioning control
Enable state	Set ON status to be valid or OFF status to be valid.
	For example, if the equipment is checked as shown in the figure above, the bit control is PSB0,
	and it is hidden when the verification fails, and the enable state is ON, then the component will
	be displayed normally when the status of PSB0 is ON, and it will not be displayed when the
	status of PSB0 is OFF.
Enable control	The bit limit can be set (the enable state of the enable control can be customized). When the
	enabling conditions are met, the component can be used normally (as shown in the figure
	above: when the PSB1 is in the ON state and the trigger conditions are met at the same time,
	the component can be used; if the PSB1 is in the OFF state, the component is still unavailable
	even if the trigger conditions are met)
User rights	Set the controlled authority level.
	After setting the permission range of the required user, the following three functions can be
	checked as required:
	(1) Cancel the permission after the operation: if this option is not checked, you need to enter
	the corresponding level password for each operation of this part. After checking, you only need

to enter it once
(2) When the user has no permission range, a prompt window will pop up
(3) When the user has no permission range, hide the component.



Refer to chapter 4-2-3 for the use of user rights function.

Position

Same to chapter 4-1-1 straight line position part.

4-2-15. Function key

Pressing this component can realize multiple functions at the same time.

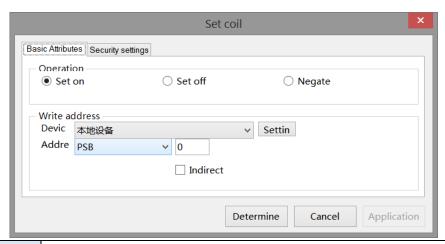
- 1. Click the "Part/Key/Function Key" icon in the menu bar or the icon in the basic part bar of the control window, move the cursor to the screen, click the left mouse button to place it, click the right mouse button or click ESC to cancel it. Modify the length and width of the control through the boundary point.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components, or you can double-click Function Key or select Function Key and right-click to select Attribute.
 - Function



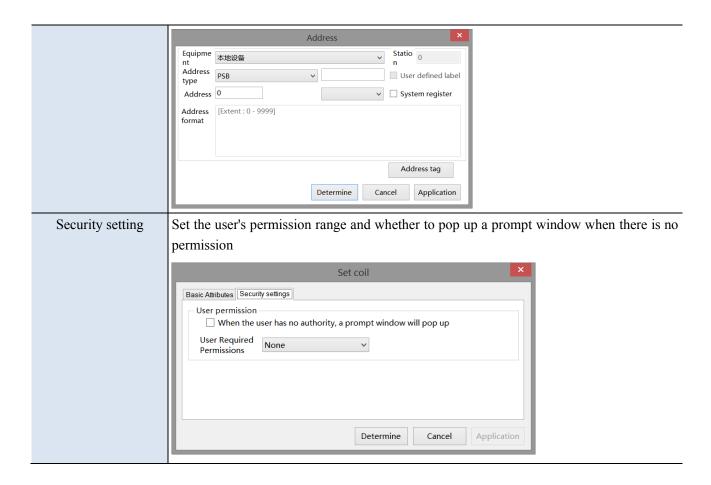
Control ID	It is used for system management control and cannot be operated by users
Describe	Can be used to comment on the purpose of this component
Action	Set the operation mode, including press state and release state
Enable audio	When the trigger conditions are met, the customized audio can be played. At present, this
	function is only available in the TS5L series. For specific usage, see chapter 5-4 Use of

		Audio Resource Library
Operations	Add to	Add functions
	Delete	Delete functions
	Move	Move the target option function up for one physical location
	up	
	Move	Move the target option function down for one physical location
	down	
Optional features		Select the corresponding function, click the "Add to" button to add the function item to
		the left list - Selected Functions. Double click the selected function to enter the setting
		window

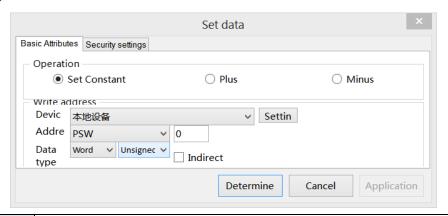
(1) Set coil



Operation	Set ON	Set the control coil to logic 1 state
	Set OFF	Set the control coil to logic 0
	Reverse	Set the control coil to the opposite state
Write ad	ldress	Set the write in address
Equipment		Current equipment port for communication
Addre	ess	Set target coil address
Indirect ass	ignment	Set the current address offset. The current coil address changes with the indirectly
		specified register value, that is, $Dx[Dy]=D[x+Dy \text{ value}]$ (x, y=0, 1, 2, 3). For example,
		the current coil address is PSB0, if the indirectly assigned address is PSW100; When the
		value of PSW100 register is 0, the coil controlling this element is still PSB0; When the
		value of PSW100 register is 1, the coil controlling this element is PSB1 (and so on)
Set	-	Click "Set" to enter the address setting interface, where you can set and use system
		registers and user-defined tags. You can click the address tag library below or the project
		tree - library - address tag library to set the tags (see chapter 5-2 Address Tag Library for
		the use of address tag library and user-defined tags)



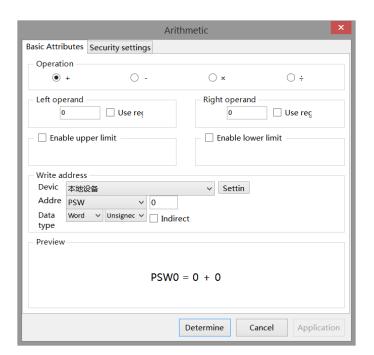
(2) Set data



Operation	Constant	The specified value setting of the specified object is equivalent to the data setting (it can be
		set as a constant or specified through a register)
	Plus	You can set the value added each time (it can be set as a constant or specified through the
		register), and set the increment value and upper limit value and whether to cycle
	Minus	You can set the value of each decrement (which can be set as a constant or specified
		through the register), the decrement value, the lower limit value and whether to cycle
Write address		Set the write in address
Equipment		Current equipment port for communication
Address		Set the target coil address
Data type		Byte-8Bit, Word-16Bit, DWord- 32Bit, DDWord -64Bit, BCD format, Hex, Signed value,
		Unigned value, Floating number
Set		Click "Set" to enter the address setting interface, where you can set and use system
		registers and user-defined tags. You can click the address tag library below or the project

tree - library - address tag library to set the tags (see chapter 5-2 Address Tag Library for the use of address tag library and user-defined tags) Address Equipme 本地设备 Address PSW User defined label type Address 0 System register 数据类型 Word ∨ Unsigned ∨ Address [Extent: 0 - 9999] format Address tag Determine Application Indirect assignment Set the current address offset. The current coil address changes with the indirectly specified register value, that is, Dx [Dy]=D [x+Dy value] (x, y=0, 1, 2, 3...). For example, the current coil address is PSB0, if the indirectly assigned address is PSW100; When the value of PSW100 register is 0, the coil controlling this element is still PSB0; When the value of PSW100 register is 1, the coil controlling this element is PSB1 (and so on) Set the user's permission range and whether to pop up a prompt window when there is no Security setting permission Set data Basic Attributes Security settings User permission $\hfill \square$ When the user has no authority, a prompt window will pop up **User Required** None Permissions Determine Cancel Application

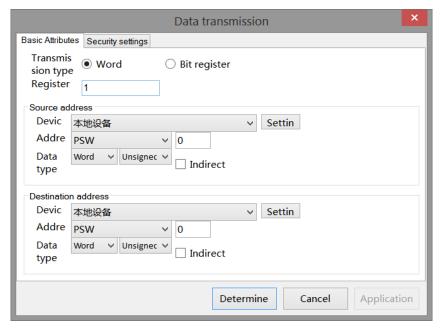
(3) Arithmetic

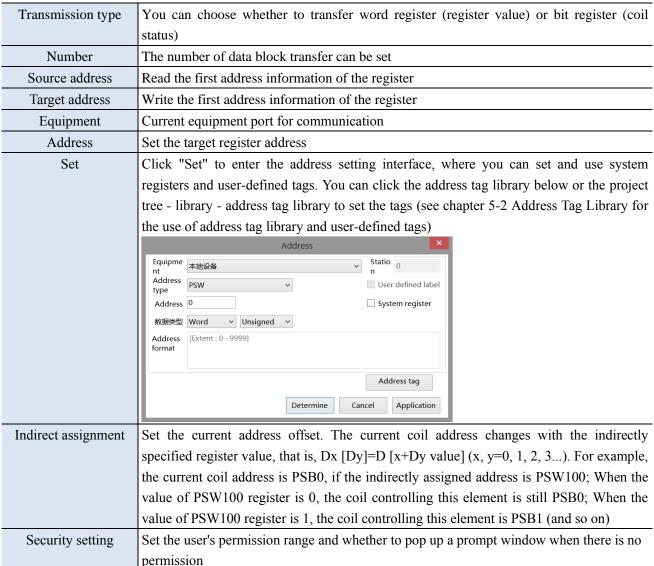


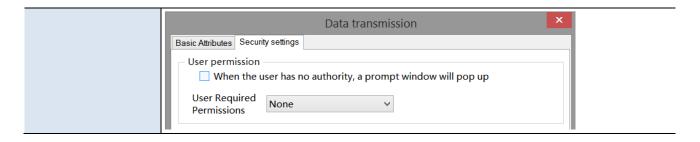
Operation	From left to right, add (+), subtract (-), multiply (×), Divide (÷)
Left operand	Sets the value of the left operand, which can be a constant or specified by a register
Right operand	Sets the value of the right operand, which can be a constant or specified by a register
Enable upper limit	Function key - for upper limit of the arithmetic object register, you can enter a constant or
	specify it by the register
Enable lower limit	Function key – for lower limit of the arithmetic object register, you can enter a constant or
	specify it by the register
Write address	Set the write in address
Equipment	Current equipment port for communication
Set	Click "Set" to enter the address setting interface, where you can set and use system
	registers and user-defined tags. You can click the address tag library below or the project
	tree - library - address tag library to set the tags (see chapter 5-2 Address Tag Library for
	the use of address tag library and user-defined tags)
	Address
	Equipme 本地设备 V Statio 0
	Address PSW Vser defined label
	type Address 0 System register
	数据类型 Word > Unsigned >
	Address [Extent: 0 - 9999]
	format
	Address tag
	Determine Cancel Application
A 11	
Address	Set the target register address
Data type	Byte-8Bit, Word-16Bit, DWord- 32Bit, DDWord-64Bit, BCD format, Hex, Signed value,
T 11 / 1	Unigned value, Floating number
Indirect assignment	Set the current address offset. The current coil address changes with the indirectly
	specified register value, that is, Dx [Dy]=D [x+Dy value] (x, y=0, 1, 2, 3). For example,
	the current coil address is PSB0, if the indirectly assigned address is PSW100; When the
	value of PSW100 register is 0, the coil controlling this element is still PSB0; When the
G ', ','	value of PSW100 register is 1, the coil controlling this element is PSB1 (and so on)
Security setting	Set the user's permission range and whether to pop up a prompt window when there is no
	permission
	Arithmetic
	Basic Attributes Security settings
	User permission —
	☐ When the user has no authority, a prompt window will pop up
	User Required None
	Permissions

(4) Data transmission

Transfer the specified source register/coil data to the target register/coil, for batch data transmission.

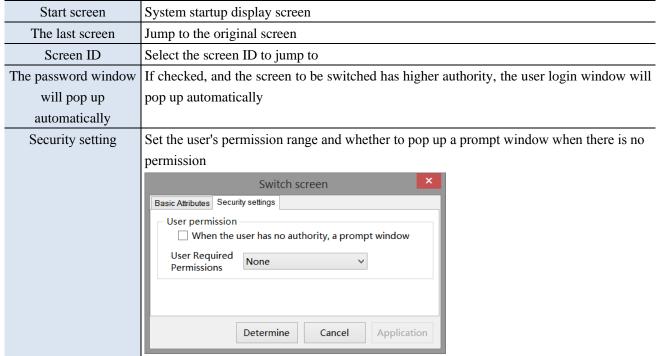






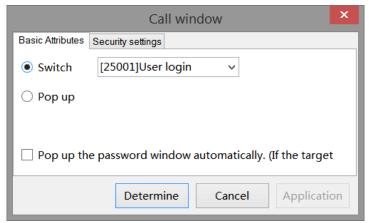
(5) Screen switch Jump to the specified screen.

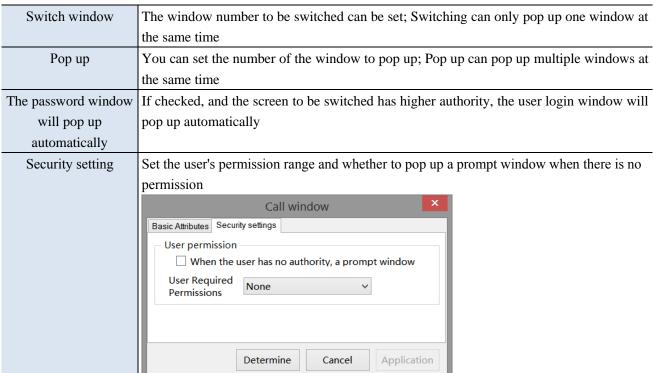




(6) Call window

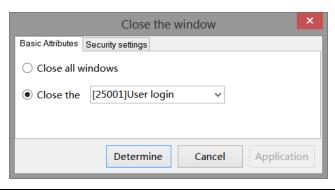
Switch or pop-up the specified window.





(7) Close window

You can choose to close the specified window or all windows.

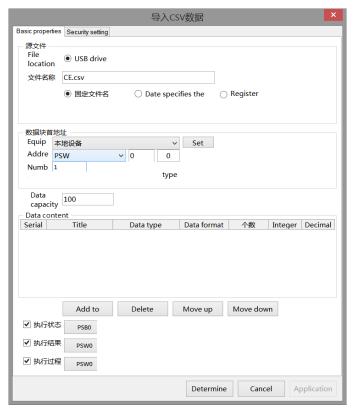


Close all the window	All windows of the current screen can be closed
Close window	The window number to be closed can be set
Security setting	Set the user's permission range and whether to pop up a prompt window when there is no
	permission



(8) Import csv data

The previously stored data can be called in for reference or updated in the HMI.



Source	File	You can only import from the USB flash disk
file	location	
	File name	It can be set as a fixed file name (the file name is defined by itself), a file name specified by
		the date, or a file name specified by the contents of the register (the file name only supports
		characters, not Chinese, and cannot contain special characters)
Data b	lock start	Set the object type and first address of the import destination address, which is generally set
address		as the internal register PSW or PFW of the HMI
Equipment		Current equipment port for communication
Ac	ldress	Set target register number
Custom Data Type		If it is not checked, the default type is Word, and you can also select Dword or DDword;
		Byte-8Bit, Word-16Bit, DWord- 32Bit, DDWord -64Bit, BCD format, Hex, Signed value,
		Unigned value, Floating number
Data	capacity	Data capacity to be imported each time (maximum data capacity 65535)
Data content		Select the same title, data type, data format, number of words, integer digits, and decimal

	digits as the table to be imported
Add to/delete	Add/delete imported row information
Move up/down	Change the order of added lines
Execution status	The bit indicates whether it is in the import status. When it is ON, it indicates that it is in the
	import status. After the import is successful, the OFF status will be restored
Execution result	The running result of the import operation is represented by the value in the register;
	0: Import succeeded; 1: Wrong file name; 2: Error file index; 3: The file path does not exist;
	4: File creation failed
Execution process	The implementation progress of the import is indicated by numerical display (the progress is
	indicated by a numerical value between 0 and 100, and 100 indicates completion)
Security setting	Set the user's permission range and whether to pop up a prompt window when there is no
	permission
	导入CSV数据
	Basic Attributes Security settings
	User permission When the user has no authority, a prompt window will pop up User Required Permissions None

(9) Export csv data

This function can transfer the data in the HMI to the USB flash disk in the form of CSV files.

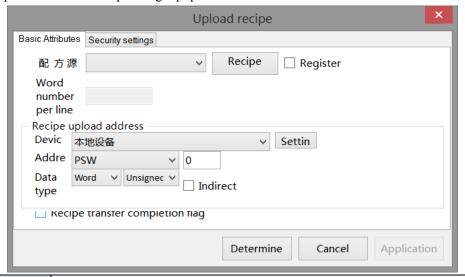


Data source start	Set the data type and first address of the export data, which is generally set as the internal
address	register PSW or PFW of the HMI
Equipment	Current equipment port for communication
Address	Set the target register address
Custom Data Type	If it is not checked, the default type is Word, and you can also select Dword or DDword;

		Byte-8Bit, Word-16Bit, DWord- 32Bit, DDWord -64Bit, BCD format, Hex, Signed value,
		Unigned value, Floating number
Target file	File	Only the USB flash disk position can be selected for export
	location	
	File name	It can be set as a fixed file name (the file name is defined by itself), a file name specified
		by the date, or a file name specified by the contents of the register (the file name only
		supports characters, not Chinese, and cannot contain special characters)
Data c	apacity	Data capacity to be exported each time (maximum data capacity 65535)
Data c	ontent	Select the same title, data type, data format, number of words, integer digits, and decimal
		digits as the table to be imported
Add to	/delete	Add/delete imported row information
Move u	ıp/down	Change the order of added lines
Execution status		The bit indicates whether it is in the export status. When it is ON, it indicates that it is in
		the export status. After the export is successful, the OFF status will be restored
Execution	on result	The running result of the export operation is represented by the value in the register;
		0: Export succeeded; 1: Wrong file name; 2: Error file index; 3: The file path does not
		exist; 4: File creation failed
Executio	n process	The exported execution progress is represented by numerical display (the progress is
		represented by a numerical value between 0 and 100, and 100 indicates completion)
Security	y setting	Set the user's permission range and whether to pop up a prompt window when there is no
		permission
		导出CSV数据
		Basic Attributes Security settings
		User permission When the user has no authority, a prompt window will pop up
		Hear Paguired
		Permissions None V
		- "

(10) Upload recipe

Upload the recipe data in the corresponding equipment data area to the HMI.



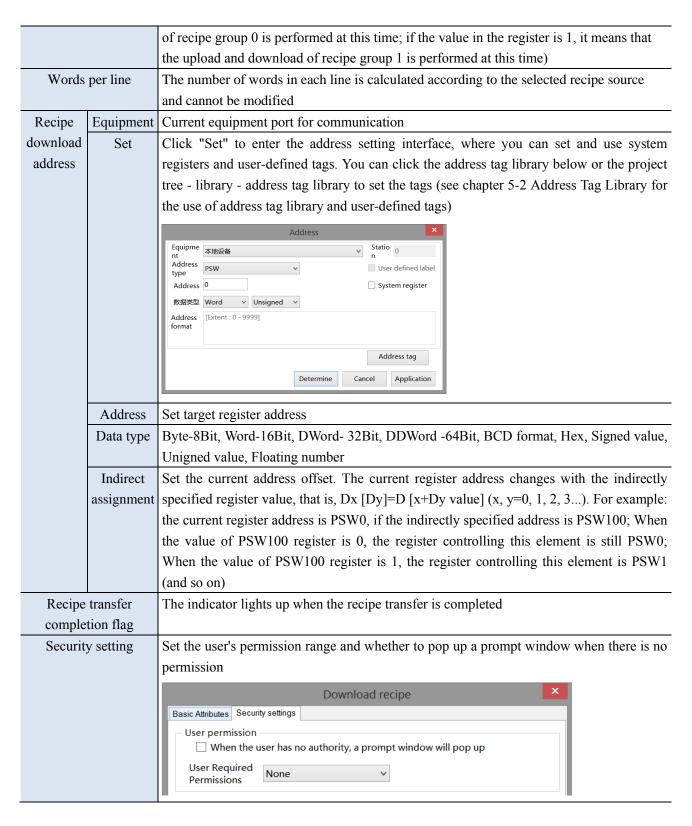
Recipe source	Data upload object register address (click recipe configuration to set relevant information
	about the recipe, and refer to chapter 4-6 recipe
Register	When this option is checked, the value in the register can be used to control which recipe

		group is exported (if the value in the register is 0, it means that the upload and download of recipe group 0 is performed at this time; if the value in the register is 1, it means that
		the upload and download of recipe group 1 is performed at this time)
Words	per line	The number of words in each line is calculated according to the selected recipe source
		and cannot be modified
Recipe	Equipment	Current equipment port for communication
upload address	Set	Click "Set" to enter the address setting interface, where you can set and use system registers and user-defined tags. You can click the address tag library below or the project tree - library - address tag library to set the tags (see chapter 5-2 Address Tag Library for
		the use of address tag library and user-defined tags)
		Address ×
		Equipme 本地设备 V Statio
		Address type PSW User defined label
		Address 0 System register
		数据类型 Word V Unsigned V
		Address [Extent: 0 - 9999] format
		Address tag
		Determine Cancel Application
	Address	Set the target register address
	Data type	Byte-8Bit, Word-16Bit, DWord- 32Bit, DDWord -64Bit, BCD format, Hex, Signed value,
		Unigned value, Floating number
	Indirect	Set the current address offset. The current register address changes with the indirectly
	assignment	specified register value, that is, $Dx [Dy]=D [x+Dy value] (x, y=0, 1, 2, 3)$. For example:
		the current register address is PSW0, if the indirectly specified address is PSW100; When
		the value of PSW100 register is 0, the register controlling this element is still PSW0;
		When the value of PSW100 register is 1, the register controlling this element is PSW1
		(and so on)
•	transfer	The indicator lights up when the recipe transfer is completed
	tion flag	
Security	y setting	Set the user's permission range and whether to pop up a prompt window when there is no
		permission
		Upload recipe Basic Attributes Security settings User permission When the user has no authority, a prompt window will pop up User Required Permissions None
		<u> </u>

(11) Recipe download

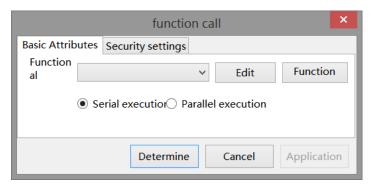
Download the recipe data of the HMI to the corresponding equipment data area.

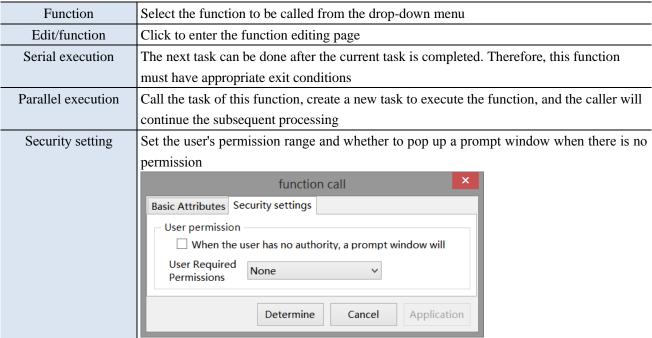
Recipe source	data Download object register address (click Recipe Configuration to set relevant
	information about recipe)
Register assignment	When this option is checked, the value in the register can be used to control which recipe
	group is exported (if the value in the register is 0, it means that the upload and download



(12) Call function

Calling the C language function can complete more complex operations and communications.



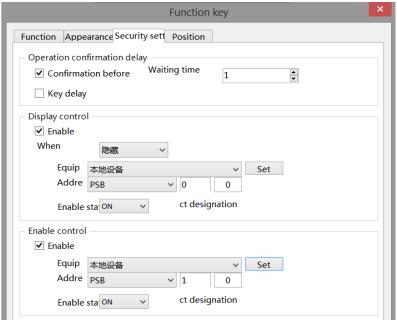


Appearance

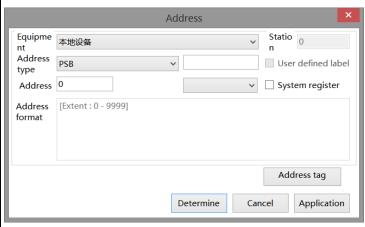


	Change	You can check whether to use pictures. If you check, you can set the appearance of the function
	appearance	keys in different states. After selecting the state in the upper right corner, click "Change
		Appearance" or click "More Pictures" to select a custom picture to change the appearance
	Fill	Fill style (solid/gradient) and fill color can be set
Ī	State	You need to check "Display Text" to set the text prompt content of the function key in the (0, 1)
		two states. You can set whether to use multiple languages (see chapter 5-1 Label Multiple
		Languages for the specific use of multiple language libraries); Tick the drop-down list to set the
		font corresponding to the corresponding state of the function key, or click the "apply fonts to
		each state" button to set the font in all states
	Typeface	You can set the font, size, font style, color and the display position of the font in the component

■ Security setting



Operation The waiting time (s) can be set. If this option is checked, a pop-up window "Are you sure to confirmation execute this operation" will pop up when operating components. If you do not click "Confirm" delay or "Cancel" within the set waiting time, the pop-up window will disappear by itself and this operation will fail; If you click "OK" within the waiting time, the operation is successful. Clicking "Cancel" is invalid Key delay The operation will not take effect until the set delay time is long pressed Display control Use bits to control whether to display the part. When the condition is not met, the component will be hidden. It is hidden by default and cannot be modified Equipment Current equipment port for communication Address Set the coil address for bit control Indirect Set the current address offset. The current coil address changes with the indirectly specified register value, that is, Dx [Dy]=D [x+Dy value] (x, y=0, 1, 2, 3...). For example, the current assignment coil address is PSB0, if the indirectly assigned address is PSW100; When the value of PSW100 register is 0, the coil controlling this element is still PSB0; When the value of PSW100 register is 1, the coil controlling this element is PSB1 (and so on) Set Click "Set" to enter the address setting interface, where you can set and use system registers and user-defined tags. You can click the address tag library below or the project tree - library address tag library to set the tags (see chapter 5-2 Address Tag Library for the use of address tag library and user-defined tags) Address Equipme 本地设备 Statio 0



Enable	When checked, display control will be enabled
When validation	Set the display of the component when validation fails
fails	
Enable state	Set ON status to be valid or OFF status to be valid.
	For example: if the equipment is checked as shown in the above figure, the bit control is PSB0,
	and hide is selected when validation fails, and the enabling status is ON, then when the status
	of PSB0 is ON, the component is normally displayed, and when the status of PSB0 is OFF, the
	component is hidden and not displayed.
Enable control	The bit limit can be set (the enabling state of the enable control can be customized). When the
	enabling conditions are met, the component can be used normally (as shown in the figure
	above: when the PSB1 is in the ON state and the trigger conditions are met at the same time,
	the component can be used; if the PSB1 is in the OFF state, the component is still unavailable
	even if the trigger conditions are met)

Position

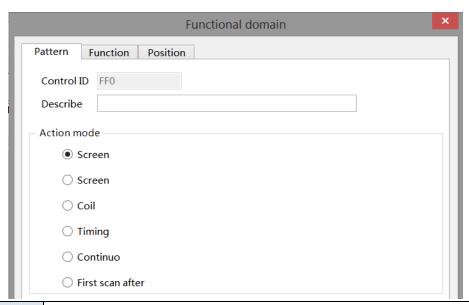
Same to chapter 4-1-1 straight line position part.

4-2-16. Function domain

The function is the same as the function key. This part is a hidden component in the screen, and the specified action will be executed when the required conditions are met. Different from the function keys that need to be manually triggered, the function domain is automatically triggered after the set conditions are met, not only by the key triggering. For the hidden effect in the screen, the function field is generally set as a common component in use, to achieve the purpose that it can be executed in all screens.

- 1. Click the menu bar "Part/Key/Function domain" or the control window basic part bar icon, move the cursor to the screen, click the left mouse button to place, click the right mouse button or click ESC to cancel the placement. Modify the control length and height through the boundary point.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components. You can also double-click the "Function domain" or select the "Function domain" and right-click to select "Attribute" to set attributes.

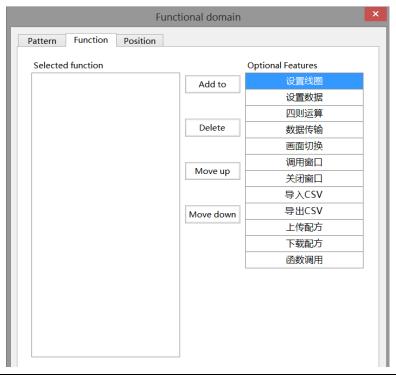
■ Pattern



Control ID	It is used for system management control and cannot be operated by users
Describe	Can be used to comment on the purpose of this component
Action mode	Set the operation mode. You can only select one trigger action
Screen start	The first scan after the start of the screen where the function domain is located, and the
	relevant functions are executed once
Screen close	The first scan after the screen where the function domain is located is closed, and the
	relevant functions are executed once
Coil	The rising edge means that when the specified coil jumps from OFF to ON, the relevant
	functions are executed once
	The falling edge means that when the specified coil jumps from ON to OFF, the relevant
	functions are executed once
Timing	When the screen is called, after all functions are executed, there are 2 options below for the
	next execution time:
	1. "Timing/continuous mode coil limit" controls whether the current mode is executed
	according to the ON/OFF of the coil
	2. "Display timing interval time" user-defined display register to display timing interval in
	real time (unit: ms), which can only be displayed but not set

Continue	When the screen is called, each scan will execute relevant functions
	When the "Timing (seconds)" or "Continuous" option is selected, the "Timing/Continuous
	Mode Coil Limit" can be selected to set the control coil, that is, when only this coil is set to
	ON/OFF, this function executes
First scan after	For the first scan after downloading the screen, relevant functions are executed once, and
downloading	the simulation is invalid
First scan after	The first scan after the system is powered on and started, and the relevant functions are
startup	executed once, and the simulation is invalid
Logic	Only when the value of the specified register is $<$, $>$, \le , \ge , $=$ the constant value, the
	relevant function is executed once
	Note: When the specified register is a floating point number, a setting for the number of
	decimal places will be added. During the setting, pay attention to the consistency between
	the number of decimal places set for the constant value and the number of decimal places
	set.
	○ 画面开始 客存器设置 ? ×
	地址
	设备本地设备
	地 址 PSW
	数据类型 DWord ✓ Float ✓ 回接指定
	确定 取消 应用
	● 数值逻辑条件● PSW0小数位数0→
	==

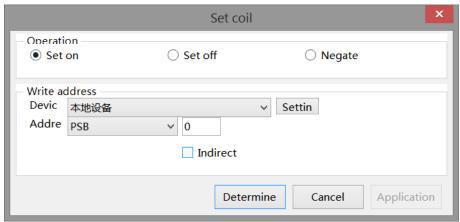
■ Function

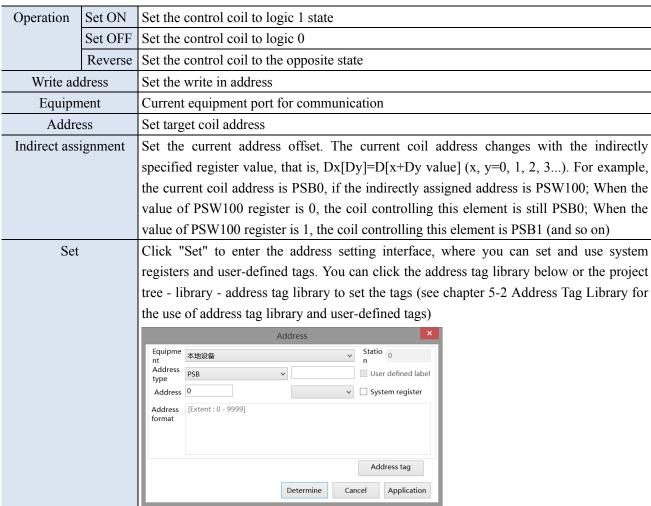


Item	Add to	Add the function
	Delete	Delete the function
	Move up	Move the target function up one physical location

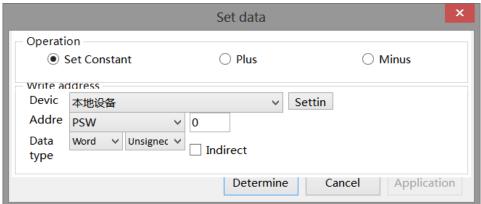
	Move down	Move the target function down one physical location
Optio	onal features	Select the corresponding function, click the "Add" button to add the function item to the
		left list. Double click the selected function to enter the setting window

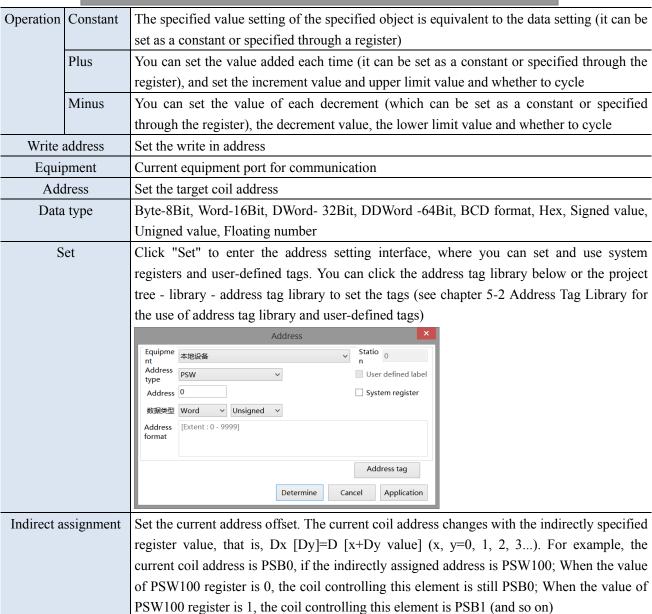
(1) Set coil



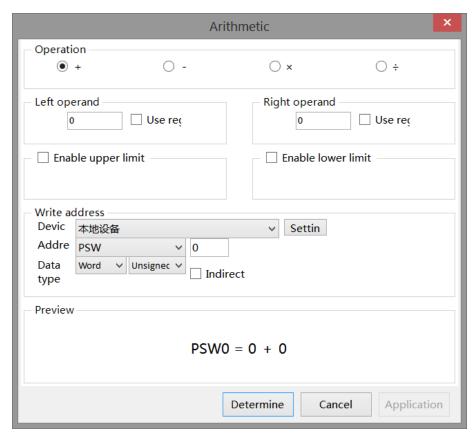


(2) Set data

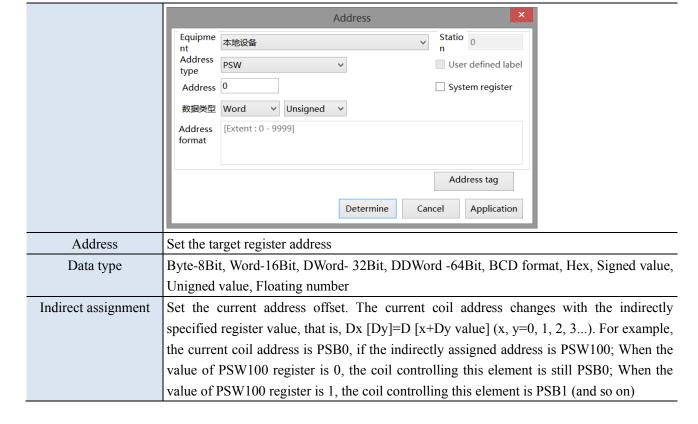




(3) Arithmetic

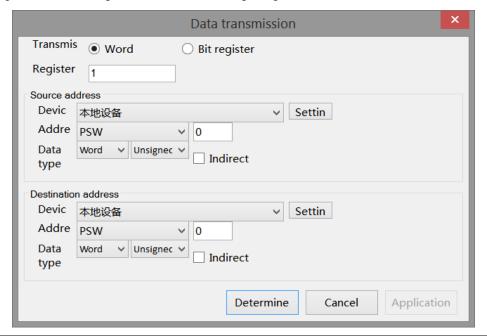


Operation	From left to right, add (+), subtract (-), multiply (×), Divide (÷)
Left operand	Sets the value of the left operand, which can be a constant or specified by a register
Right operand	Sets the value of the right operand, which can be a constant or specified by a register
Enable upper limit	Function key - for upper limit of the arithmetic object register, you can enter a constant or
	specify it by the register
Enable lower limit	Function key – for lower limit of the arithmetic object register, you can enter a constant or
	specify it by the register
Write address	Set the write in address
Equipment	Current equipment port for communication
Set	Click "Set" to enter the address setting interface, where you can set and use system
	registers and user-defined tags. You can click the address tag library below or the project
	tree - library - address tag library to set the tags (see chapter 5-2 Address Tag Library for
	the use of address tag library and user-defined tags)



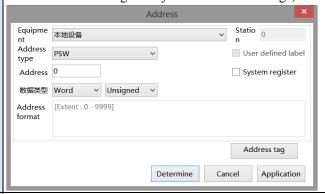
(4) Data transmission

Transfer the specified source register/coil data to the target register/coil, for batch data transmission.



Transmission type	You can choose whether to transfer word register (register value) or bit register (coil
	status)
Number	The number of data block transfer can be set
Source address	Read the first address information of the register
Target address	Write the first address information of the register
Equipment	Current equipment port for communication
Address	Set the target register address
Set	Click "Set" to enter the address setting interface, where you can set and use system

registers and user-defined tags. You can click the address tag library below or the project tree - library - address tag library to set the tags (see chapter 5-2 Address Tag Library for the use of address tag library and user-defined tags)



Indirect assignment

Set the current address offset. The current coil address changes with the indirectly specified register value, that is, Dx [Dy]=D [x+Dy value] (x, y=0, 1, 2, 3...). For example, the current coil address is PSB0, if the indirectly assigned address is PSW100; When the value of PSW100 register is 0, the coil controlling this element is still PSB0; When the value of PSW100 register is 1, the coil controlling this element is PSB1 (and so on)

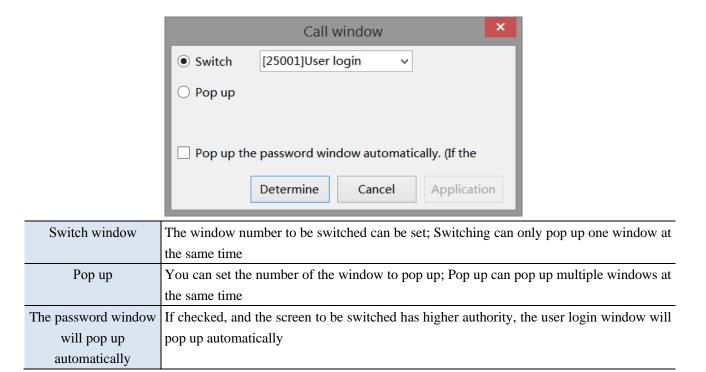
(5) Screen switch Jump to the specified screen.



Start screen	System startup display screen
The last screen	Jump to the original screen
Screen ID	Select the screen ID to jump to
The password window	If checked, and the screen to be switched has higher authority, the user login window will
will pop up	pop up automatically
automatically	

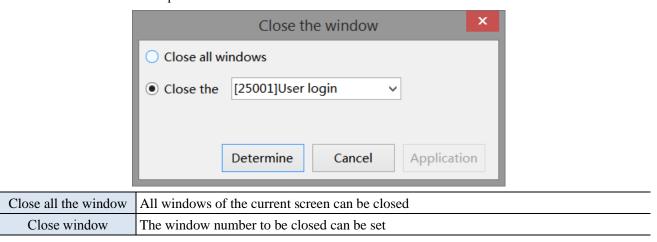
(6) Call window

Switch or pop-up the specified window.



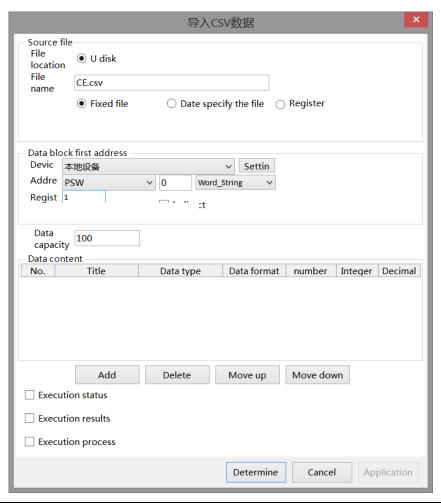
(7) Close window

You can choose to close the specified window or all windows.



(8) Import csv data

The previously stored data can be called in for reference or updated in the HMI.

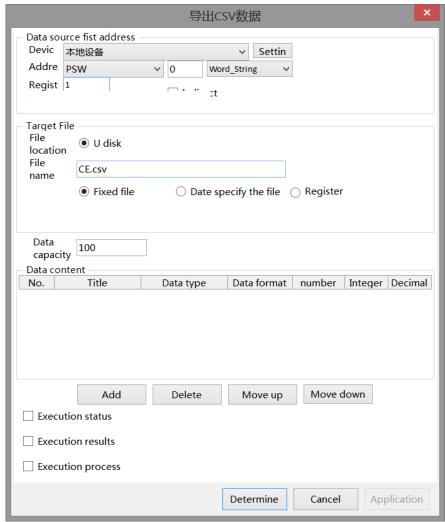


Source	File	You can only import from the USB flash disk
file	location	
	File name	It can be set as a fixed file name (the file name is defined by itself), a file name specified by
		the date, or a file name specified by the contents of the register (the file name only supports
		characters, not Chinese, and cannot contain special characters)
Data b	lock start	Set the object type and first address of the import destination address, which is generally set
ad	dress	as the internal register PSW or PFW of the HMI
Equ	ipment	Current equipment port for communication
Ac	ldress	Set target register number
Custom	Data Type	If it is not checked, the default type is Word, and you can also select Dword or DDword;
		Byte-8Bit, Word-16Bit, DWord- 32Bit, DDWord -64Bit, BCD format, Hex, Signed value,
		Unigned value, Floating number
Data	capacity	Data capacity to be imported each time (maximum data capacity 65535)
Data	content	Select the same title, data type, data format, number of words, integer digits, and decimal
		digits as the table to be imported
Add	to/delete	Add/delete imported row information
Move	up/down	Change the order of added lines
Execut	tion status	The bit indicates whether it is in the import status. When it is ON, it indicates that it is in the
		import status. After the import is successful, the OFF status will be restored
Execut	tion result	The running result of the import operation is represented by the value in the register;
		0: Import succeeded; 1: Wrong file name; 2: Error file index; 3: The file path does not exist;
		4: File creation failed

Execution process	The implementation progress of the import is indicated by numerical display (the progress is
	indicated by a numerical value between 0 and 100, and 100 indicates completion)

(9) Export csv data

This function can transfer the data in the HMI to the USB flash disk in the form of CSV files.

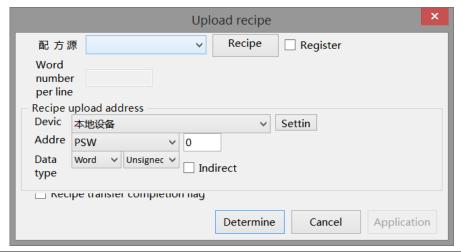


Data source start		Set the data type and first address of the export data, which is generally set as the internal
address		register PSW or PFW of the HMI
Equipment		Current equipment port for communication
Address		Set the target register address
Custom Data Type		If it is not checked, the default type is Word, and you can also select Dword or DDword;
		Byte-8Bit, Word-16Bit, DWord- 32Bit, DDWord -64Bit, BCD format, Hex, Signed value,
		Unigned value, Floating number
Target file	File	Only the USB flash disk position can be selected for export
	location	
	File name	It can be set as a fixed file name (the file name is defined by itself), a file name specified
		by the date, or a file name specified by the contents of the register (the file name only
		supports characters, not Chinese, and cannot contain special characters)
Data capacity		Data capacity to be exported each time (maximum data capacity 65535)
Data content		Select the same title, data type, data format, number of words, integer digits, and decimal
		digits as the table to be imported
Add to/delete		Add/delete imported row information

Move up	/down	Change the order of added lines
Execution	n status	The bit indicates whether it is in the export status. When it is ON, it indicates that it is in
		the export status. After the export is successful, the OFF status will be restored
Execution	n result	The running result of the export operation is represented by the value in the register;
		0: Export succeeded; 1: Wrong file name; 2: Error file index; 3: The file path does not
		exist; 4: File creation failed
Execution	process	The exported execution progress is represented by numerical display (the progress is
		represented by a numerical value between 0 and 100, and 100 indicates completion)

(10) Upload recipe

Upload the recipe data in the corresponding equipment data area to the HMI.

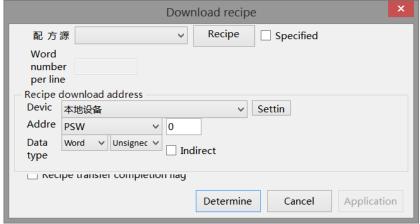


Recipe source		Data upload object register address (click recipe configuration to set relevant information	
receipe source			
		about the recipe, and refer to chapter 4-6 recipe	
Reg	gister	When this option is checked, the value in the register can be used to control which recipe	
		group is exported (if the value in the register is 0, it means that the upload and download	
		of recipe group 0 is performed at this time; if the value in the register is 1, it means that	
		the upload and download of recipe group 1 is performed at this time)	
Words	per line	The number of words in each line is calculated according to the selected recipe source	
		and cannot be modified	
Recipe	Equipment	Current equipment port for communication	
upload	Set	Click "Set" to enter the address setting interface, where you can set and use system	
address		registers and user-defined tags. You can click the address tag library below or the project	
		tree - library - address tag library to set the tags (see chapter 5-2 Address Tag Library for	
		the use of address tag library and user-defined tags)	
		Address	
		Equipme 本地设备 V Statio 0 n	
		Address type User defined label	
		Address 0 System register	
		数据类型 Word v Unsigned v	
		Address [Extent: 0 - 9999]	
		format	
		Address tag	
		Determine Cancel Application	
	Address	Set the target register address	
	11441055	Totale master regioner manifests	

	Data type	Byte-8Bit, Word-16Bit, DWord- 32Bit, DDWord -64Bit, BCD format, Hex, Signed value,
		Unigned value, Floating number
	Indirect	Set the current address offset. The current register address changes with the indirectly
	assignment	specified register value, that is, Dx [Dy]=D [x+Dy value] (x, y=0, 1, 2, 3). For example:
		the current register address is PSW0, if the indirectly specified address is PSW100; When
		the value of PSW100 register is 0, the register controlling this element is still PSW0;
		When the value of PSW100 register is 1, the register controlling this element is PSW1
		(and so on)
Recipe	transfer	The indicator lights up when the recipe transfer is completed
comple	tion flag	

(11) Recipe download

Download the recipe data of the HMI to the corresponding equipment data area.

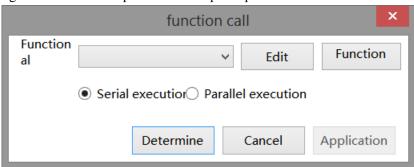


Recipe source		data Download object register address (click Recipe Configuration to set relevant
		information about recipe)
Register a	ssignment	When this option is checked, the value in the register can be used to control which recipe
		group is exported (if the value in the register is 0, it means that the upload and download
		of recipe group 0 is performed at this time; if the value in the register is 1, it means that
		the upload and download of recipe group 1 is performed at this time)
Words	per line	The number of words in each line is calculated according to the selected recipe source
		and cannot be modified
Recipe	Equipment	Current equipment port for communication
download	Set	Click "Set" to enter the address setting interface, where you can set and use system
address		registers and user-defined tags. You can click the address tag library below or the project
		tree - library - address tag library to set the tags (see chapter 5-2 Address Tag Library for
		the use of address tag library and user-defined tags)
		Address
		Equipme attitio 0 nt
		Address psw User defined label
		Address 0 System register
		数据类型 Word v Unsigned v
		Address [Extent: 0 - 9999] format
		Address tag
		Determine Cancel Application

	Address	Set target register address
	Data type	Byte-8Bit, Word-16Bit, DWord- 32Bit, DDWord -64Bit, BCD format, Hex, Signed value,
		Unigned value, Floating number
	Indirect	Set the current address offset. The current register address changes with the indirectly
	assignment	specified register value, that is, Dx [Dy]=D [x+Dy value] (x, y=0, 1, 2, 3). For example:
		the current register address is PSW0, if the indirectly specified address is PSW100; When
		the value of PSW100 register is 0, the register controlling this element is still PSW0;
		When the value of PSW100 register is 1, the register controlling this element is PSW1
		(and so on)
Recipe transfer		The indicator lights up when the recipe transfer is completed
completion flag		

(12) Call function

Calling the C language function can complete more complex operations and communications.



Function	Select the function to be called from the drop-down menu
Edit/function	Click to enter the function editing page
Serial execution	The next task can be done after the current task is completed. Therefore, this function
	must have appropriate exit conditions
Parallel execution	Call the task of this function, create a new task to execute the function, and the caller will
	continue the subsequent processing

Security setting



The bit limit can be set (the enabling state of the enable control can be customized). When the enabling condition is met, the component can be used normally (as shown in the figure above: when PSB0 is in the ON state and the trigger condition is met at the same time, the component can be used; if PSB0 is in the OFF state, the component is still unavailable even if the trigger condition is met).

Position

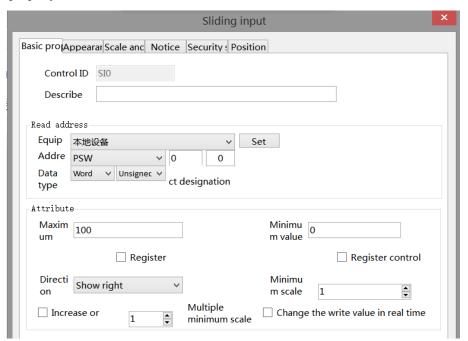
Same to chapter 4-1-1 straight line position part. (It is not allowed to modify the size and move horizontally and vertically).

4-2-17. Sliding input

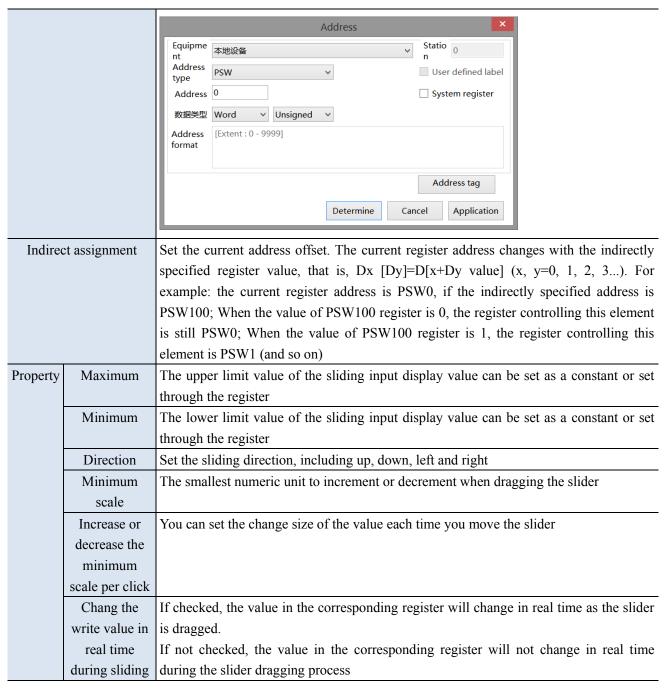
The value can be displayed in the slider area, or the value in the set data address can be changed by dragging and sliding.

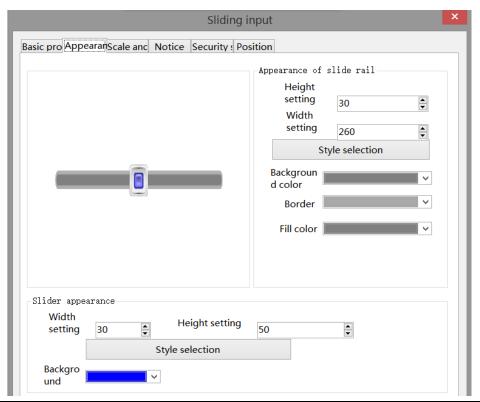
- 1. Click "Part/Input/Sliding Input" in the menu bar or in the basic part bar of the control window, move the cursor to the screen, click the left mouse button to place it, click the right mouse button or click ESC to cancel the placement. Modify the control length and height through the boundary point.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components, or you can double-click "Sliding Input" or select "Sliding Input" and right-click, and then select "Attributes" to set attributes.

Basic property



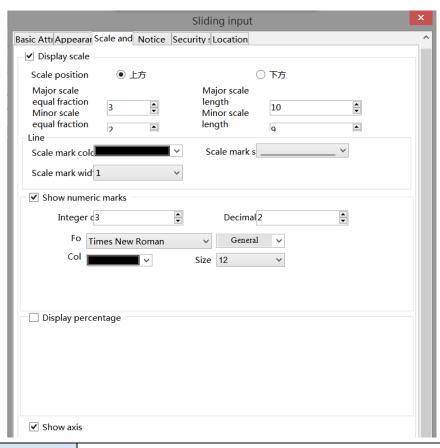
Control ID	It is used for system management component and cannot be operated by users
Describe	Can be used to comment on the purpose of this component
Read address	Set the register address, and set whether the address is offset (that is, specified
	indirectly)
Equipment	Current equipment port for communication
Address	Set target register number
Data type	Byte-8Bit, Word-16Bit, DWord- 32Bit, DDWord -64Bit, BCD format, Hex, Signed
	value, Unigned value, Floating number
Set	Click "Set" to enter the address setting interface, where you can set and use system
	registers and user-defined tags. You can click the address tag library below or the
	project tree - library - address tag library to set the tags (see chapter 5-2 Address Tag
	Library for the use of address tag library and user-defined tags)





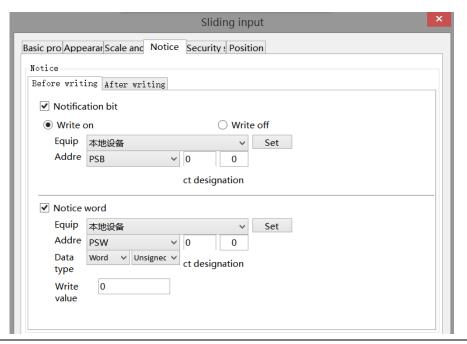
Appearance	Set the height, width, style and color of the slide rail (when modifying, you can observe the
of slide rail	modification results in the left preview in real time
Slider	Set the height, width, style and color of the slider (when modifying, you can observe the

■ Scale and mark



Display scale	If checked, scale will be displayed; if unchecked, scale will not be displayed
Scale position	Set the scale display position, which can be displayed above or below the slider
Scale	Set the number and length of major and minor scales
Line	Set the color, style, and width of tick marks
Show numeric	Set the display format of the scale mark. Choose one of the two display methods
markers/display percentage	
Show numeric markers	You can set the number of integer and decimal digits of the displayed number, and
	whether the font, size, color, font style and horizontal and vertical directions are
	aligned
Display percentage	You can set the font, size, color, font style, horizontal and vertical alignment of the
	displayed percentage
Display axis	Set whether the axis is displayed at the bottom of the scale

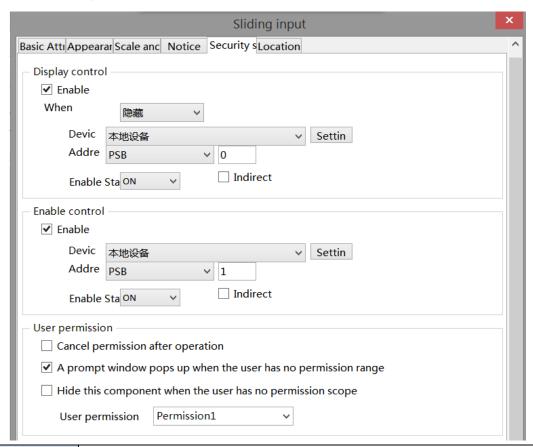
■ Notice



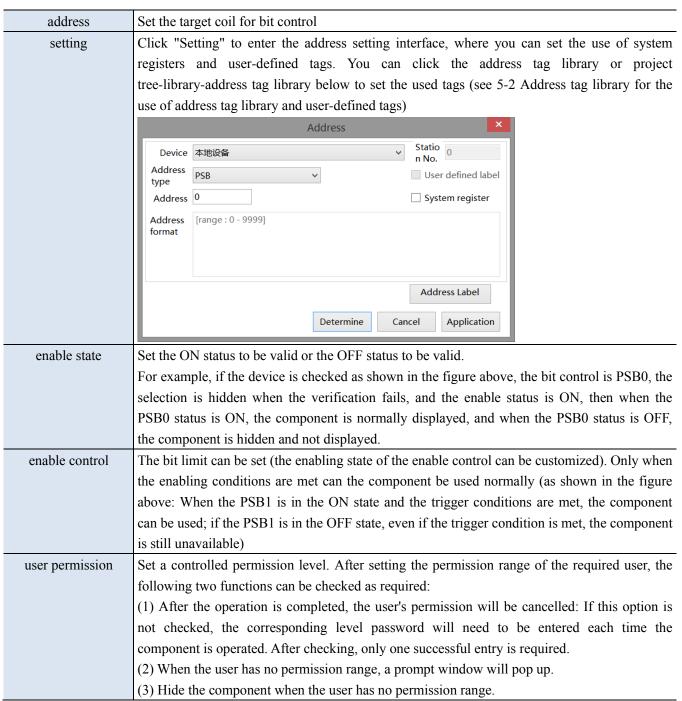
Notice

If notification bit or notice word is enabled, you can select to write the target coil ON, OFF or the target register to a constant before or after writing. If not enable them, the notification function will not take effect

Security setting



display control	Use bit to control whether to display the part, and hide the part when the condition is not met
enable	When checked, display control will be enabled
When validation fails	Set the display of this part when validation fails
device	The equipment port for current communication





Refer to chapter 4-2-3 for the use of permission functions.

■ Location

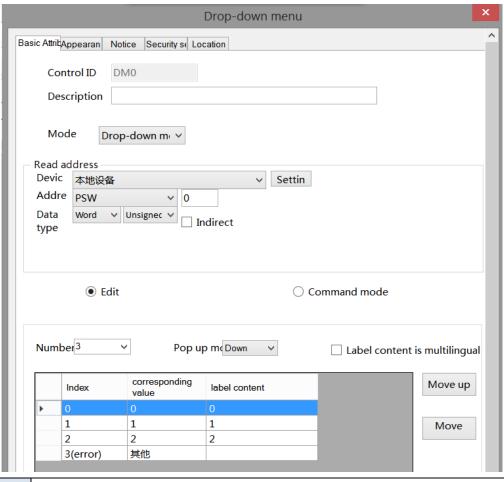
Same to location part of chapter 4-1-1 straight line.

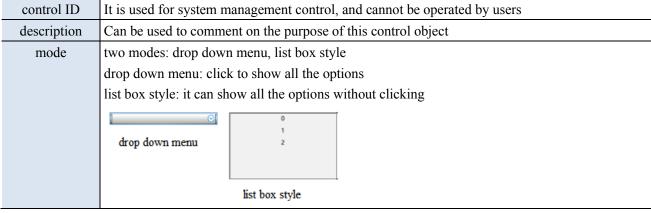
4-2-18. Drop down menu

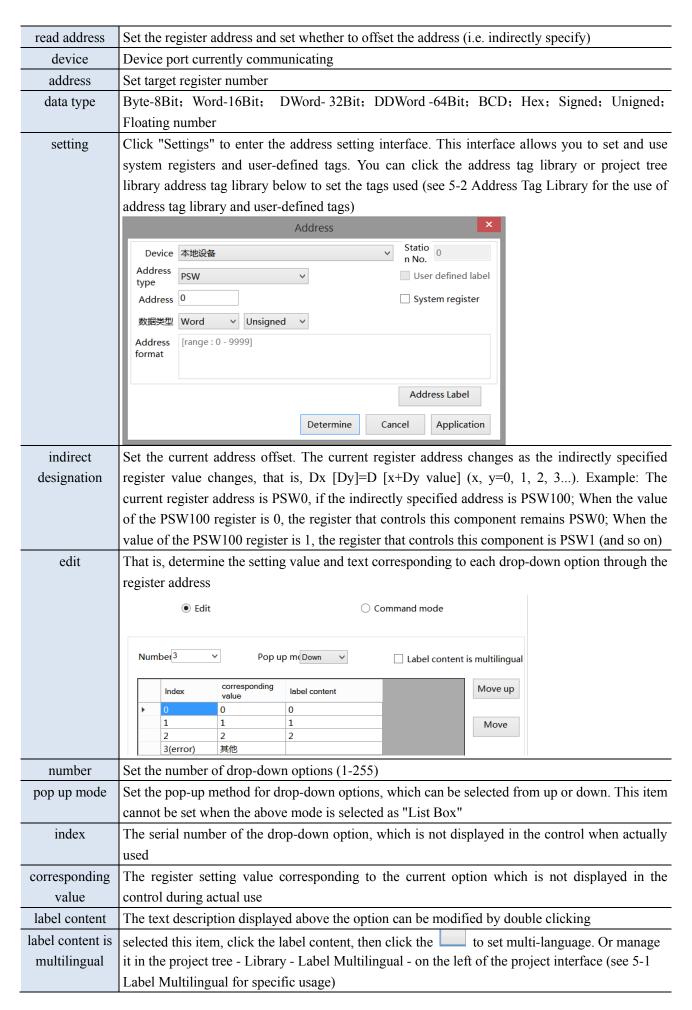
Call the pull-down window, click the selected key to set the register value, and close the pull-down window.

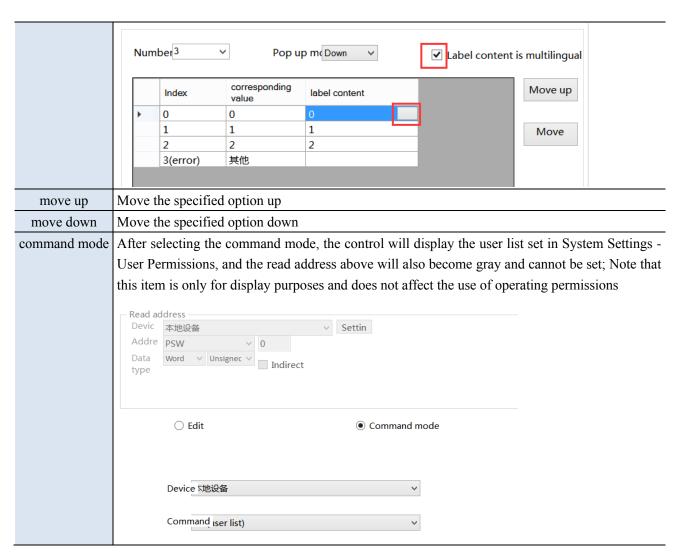
- 1. Click the menu "Parts/Key/Dropdown Menu" or the drop-down menu icon in control window's basic parts bar ", move the cursor to the screen, click the left mouse button to place, click the right mouse button, or use the ESC key to cancel the placement. Modify the length and width of the component through boundary points.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components, or you can double-click the "drop-down menu" or select the "drop-down menu" and right-click to select "basic attribute" for attribute settings.

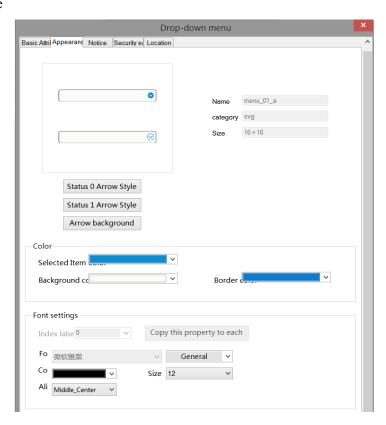
■ Basic attribute





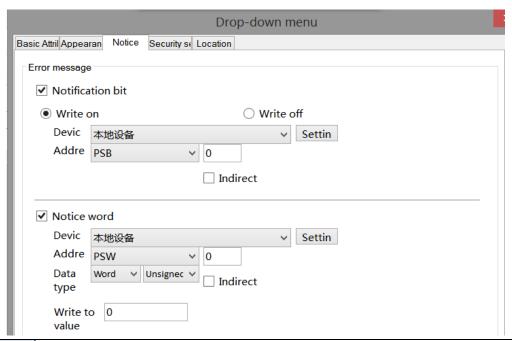






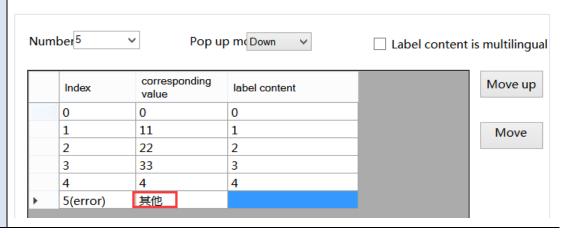
status 0 arrow style	Select the appropriate arrow style in the gallery
status 1 arrow style	Select the appropriate arrow style in the gallery
arrow back ground	Select the appropriate arrow background style in the gallery
color	You can set the color, background color, and border color of the selected item
font settings	"You can set the font, font style, size, font style, color, and display position of the font in the
	control through the number of the drop-down index label (you can click "Copy this property to
	each" to format the font in all states)"

Notice

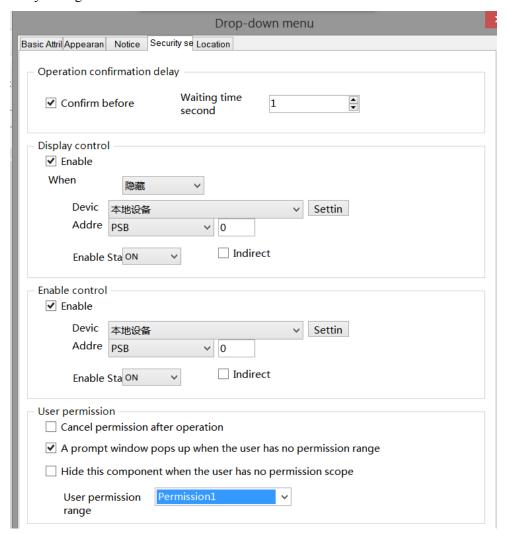


error message

If Enable is checked, when the value of the read address is an unset corresponding value (that is, other numbers that are not set to 0, 11, 22, 33, and 4), it will write ON or OFF to the target coil or write a constant to the target register; If Enable is not checked, the notification function will not take effect



■ Security setting



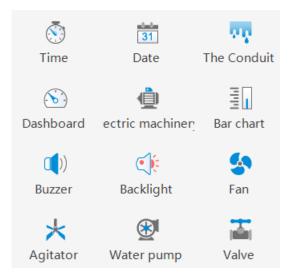
Same to the security setting part of chapter 4-2-3. numerical input.

■ Location

Same to location part of chapter 4-1-1 straight line.

4-3. Device

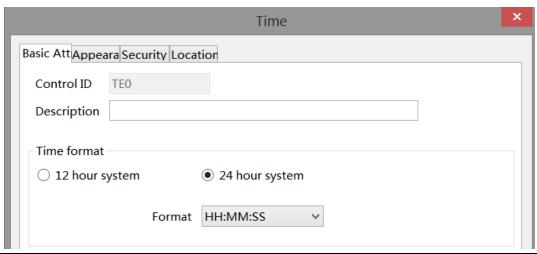
The device bar includes: time, date, pipe, dashboard, motor, bar chart, buzzer, backlight, fan, mixer, water pump, and valve.



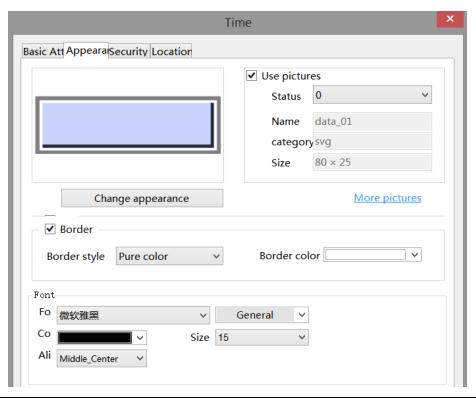
4-3-1. Time

This control is used to display the current time of the HMI.

- 1. Click the "O" time icon in the control window's device bar or menu bar "Parts/Industry/Time", move the cursor to the screen, click the left mouse button to place, click the right mouse button, or click ESC to cancel the placement. Modify the length and width of the border through boundary points.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components, or you can double-click "Time" or select "Time" and then right-click and select "attributes" to set attributes.
- Basic attribute

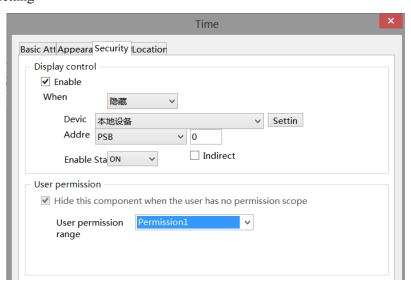


control ID	It is used for system management control, and cannot be operated by users
description	Can be used to comment on the purpose of this control
time format	Set the time format, including "12 hour system" and "24 hour system", with 4 formats available



appearance	To set the display appearance, click "Change Appearance" or "More Pictures" to make
	changes
use pictures	Set whether to use pictures
fill	Set the fill color and fill style for the appearance (solid/gradient)
border	Set the fill color and fill style of the border (solid/gradient)
font	Set scale font, color, size, and alignment

Security setting



Same to chapter 4-1-1 straight line security setting part.

Location

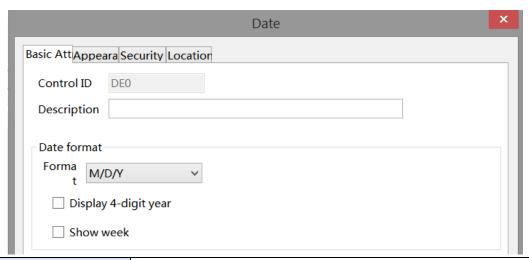
Same to chapter 4-1-1 straight line location part.

4-3-2. Date

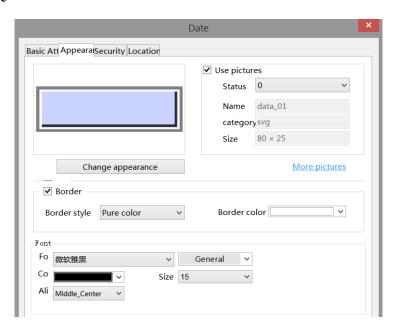
This control is used to display the current date (year month day) of the touch screen.

- 1. Click the date icon in the menu bar "Parts/Industry/Date" or in the control window, move the cursor to the screen, click the left mouse button to place, click the right mouse button, or click ESC to cancel the placement. Modify the length and width of the border through boundary points.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components, or you can double-click "Date" or select "Date" and right-click to select "attributes" to set attributes.

■ Basic attributes

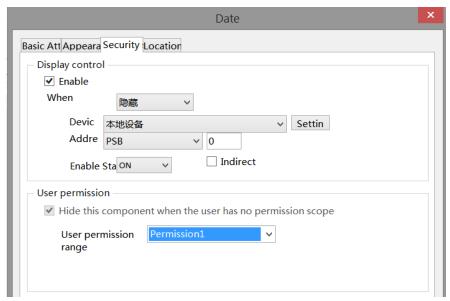


control ID		It is used for system management control, and cannot be operated by users
description		Can be used to comment on the purpose of this control
date	format	set the date format
format	display 4-digit	Set whether to display a 4-digit year
	year	
	show week	Set whether to display the week



change appearance	To set the display appearance, click "Change Appearance" or "More Pictures" to make
	changes
use pictures	Set whether to use pictures
fill	Set the fill color and fill style for the appearance (solid/gradient)
boarder	Set the fill color and fill style of the border (solid/gradient)
font	Set scale font, color, size, and alignment

Security setting



Same to chapter 4-1-1 straight line security setting part.

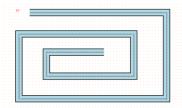
■ Location

Same to chapter 4-1-1 straight line location part.

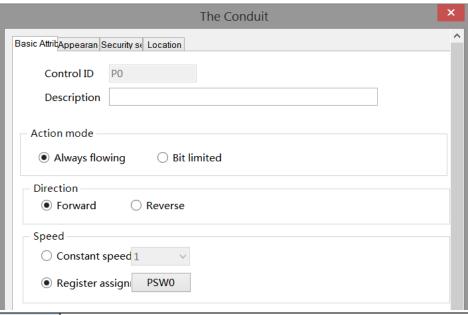
4-3-3. Pipe

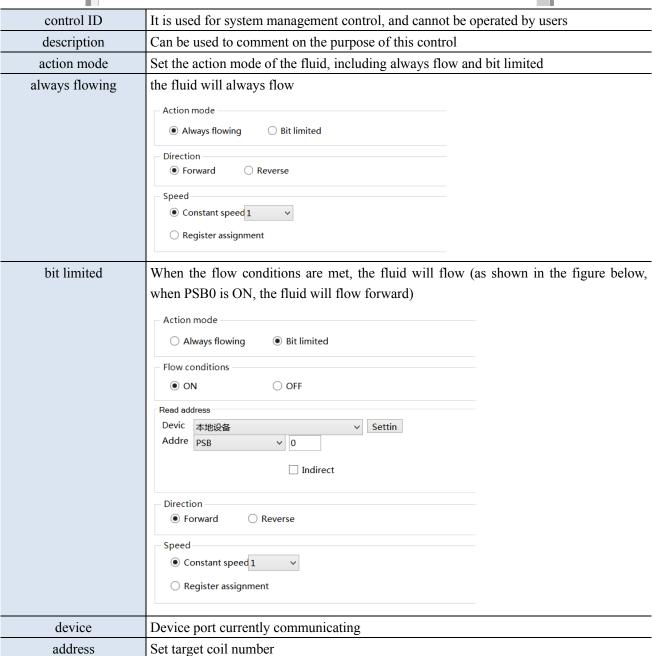
This control is used to simulate pipe movements in the field control system.

- 1. Click the pipe icon in the menu bar "Parts/Industry/pipe" or in the control window's device bar, move the cursor to the screen, press the left mouse button at the starting point, drag the cursor to move, and determine the positions of the subsequent end points in turn. When it is the last vertex, double-click the left mouse button to complete the pipe layout, and click the right mouse button or press ESC to cancel placement.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components, or you can double-click "Pipe" or select "Pipe" and right-click to select "attributes" for attribute settings.

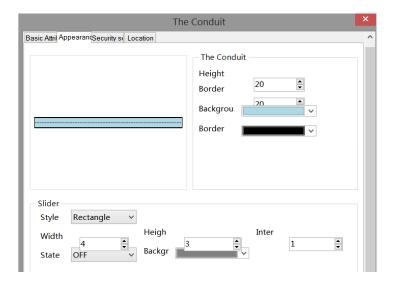


■ Basic attributes





setting Click "Settings" to enter the address setting interface. This interface allows you to set and use system registers and user-defined tags. You can click the address tag library or project tree - library - address tag library below to set the tags used (see 5-2 Address Tag Library for the use of address tag library and user-defined tags) Address Statio 0 Device 本地设备 n No. Address PSB User defined label V type Address 0 System register [range: 0 - 9999] Address format Address Label Cancel Application Determine Indirect designation Set the current address offset. The current coil address changes with the indirectly specified register value, that is, Dx [Dy]=D [x+Dy value] (x, y=0, 1, 2, 3...). Example: The current coil address is PSB0, if the indirectly specified address is PSW100; When the value of the PSW100 register is 0, the coil that controls this element remains PSB0; When the value of the PSW100 register is 1, the coil that controls this element is PSB1 (and so on) flow condition Select the action mode of the fluid to be ON or OFF (only available when bit limited) read address Set the controlled coil address and set whether there is an offset (this option is only available when bit limited) direction Set the flow direction of the fluid, including forward and reverse directions Set the flow speed of the fluid. You can manually set a constant speed or set a register to speed control the speed. (When the speed set in the register is "0, flow at the lowest speed of 1, when set to 25, flow at the highest speed of 25.)



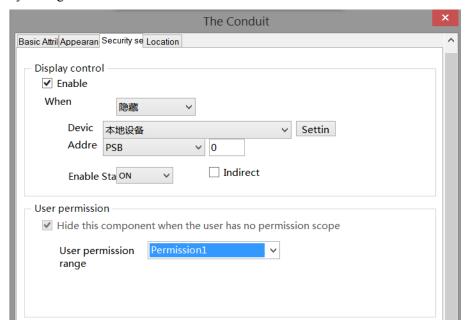
the	height	Set the height of the pipe
conduit	border (%)	Set the border width ratio of the pipe
	background	Set the background color of the pipe
	border	Set the color of the pipe periphery
slider	style	Set the style of the slider, including rectangles and arrows
	width	Set the width of the slider
	height	Set the height of the slider
	space	Set the interval of the slider
	state	Set the slider in two states: ON or OFF
	background	Set the color of the slider in both ON/OFF states





=(height*border width%) / 2.

Security setting



Same to chapter 4-1-1 straight line security setting part.

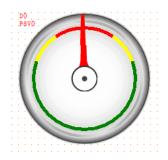
■ Location

Same to chapter 4-1-1 straight line location part.

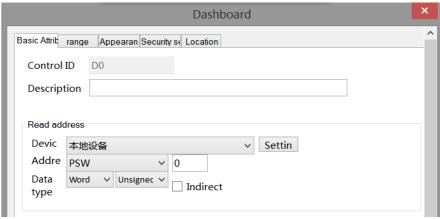
4-3-4. Dashboard

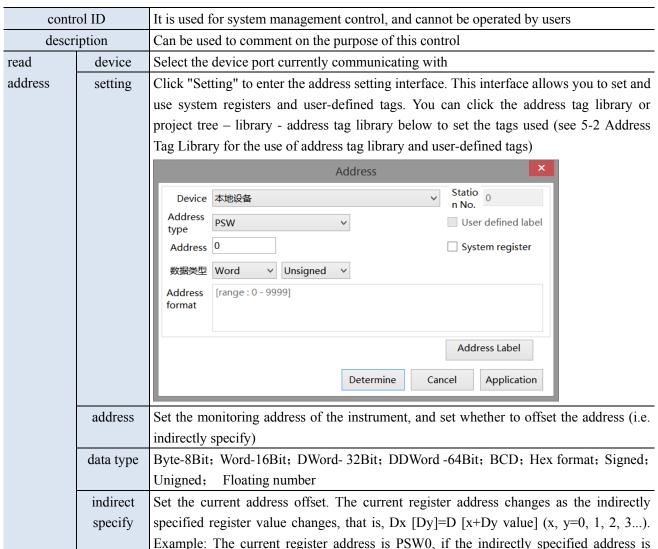
This control is used to display the meter.

- 1. Click the dashboard icon in the menu bar "Parts/Industry/Dashboard" or in the device bar of the control window, move the cursor to the screen, click the left mouse button to place, click the right mouse button, or click ESC to cancel the placement. Modify the length and width of the border through boundary points.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components. You can also double-click "Dashboard" or select "Dashboard" and right-click to select "attributes" to set attributes.



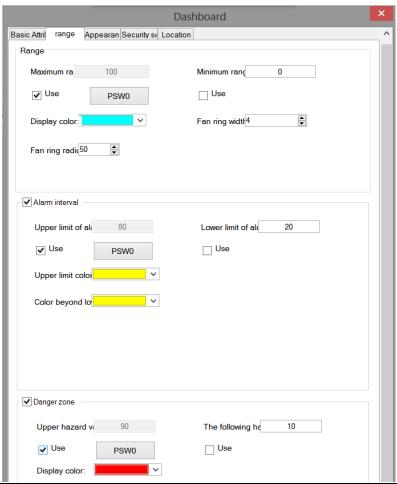
Basic attributes





PSW100; When the value of the PSW100 register is 0, the register that controls this component remains PSW0; When the value of the PSW100 register is 1, the register that controls this component is PSW1 (and so on)

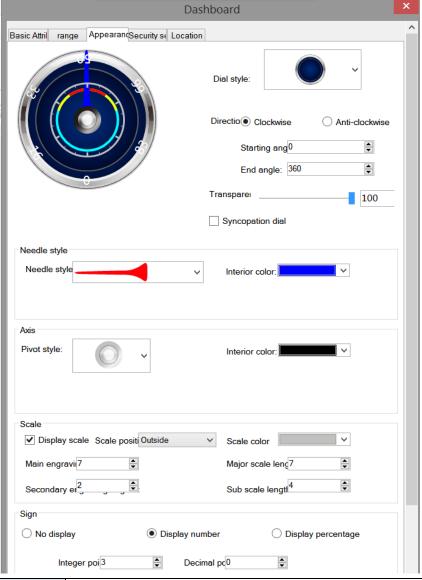
■ Range



range	max range	Set the maximum value of the instrument. You can set a constant or choose to use
		register control
	min range	Set the minimum value of the instrument. You can set a constant or choose to use
		register control
	display color	Set the display color of the meter
	fan ring width	Set the fan ring width for the meter display
	fan ring radius	Set the fan ring radius for the instrument display
alarm	upper limit of	Set the maximum alarm value of the instrument. You can set a constant or choose
interval	alarm	to use register control
	lower limit of	Set the minimum alarm value of the instrument. You can set a constant or choose to
	alarm	use register control
	upper limit	Set the color exceeding the upper limit, which will be displayed when the reading
	color	value of the instrument exceeds the upper limit value
	color beyond	Set the color exceeding the lower limit, which will be displayed when the reading
	lower limit	value of the instrument exceeds the lower limit value
danger	upper hazard	Set the maximum dangerous value of the instrument. You can set a constant or
zone	value	choose to use register control
	lower hazard	Set the minimum dangerous value of the instrument, which can be set as a constant

value	or controlled by registers
display color	Set the color of the danger range, and display the set color when the reading value
	of the instrument register is within the danger range

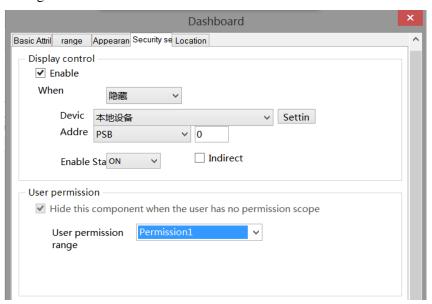
The range of the danger zone should be greater than or equal to the range of the alarm zone. If equal, the color displays the color of the danger zone.



dial style	You can select a dial style in the drop-down box
direction	Set the direction indicated by the needle, clockwise or counterclockwise
starting angle	Set the starting angle of the meter (0°- 359°)
end angle	Set the ending angle of the meter (0°- 360°)
transparency	Set the transparency of the dial. (Tick off the syncopation dial to set the
	transparency.) You can complete the setting by sliding the slider. The closer the
	slider is to the left, the smaller the value, and the more transparent the component
syncopation dial	It is possible to cut off the dial that is not in the starting and ending angles

needle	needle style	You can select a needle style in the drop-down box
style	interior color	Set the internal color of the needle
axis	pivot style	You can select a pivot style in the drop-down box
	interior color	Set the interior color of the pivot
	external color	Set the outer frame color of the pivot
scale	display scale	Check to set whether to display the scale (if you check not to display the scale, the
		mark set below will not be displayed either)
	scale position	Set the position of the scale, including inside, outside, and center
	scale color	Set the color of the scale
	main scale	Set the number of divisions for the main scale
	division	
	main scale	set the main scale length
	length	
	subscale	Set the number of divisions for the subscale
	division	
	subscale length	set the subscale length
sign	no display	When checked, no numbers or percentages will be displayed on the instrument
	display number	When checked, the number is displayed on the instrument
	display	When checked, the percentage is displayed on the instrument
	percentage	
	integer position	Set the integer digits of the display number (valid when marked as "Display
		Number" or "Display Percentage")
	decimal position	Set the decimal places for displaying numbers (valid when marked with "Display
		Numbers" or "Display Percentage")
	font	Set the font, color, and size of the displayed numbers (valid when marked as
		"Display Numbers" or "Display Percentage")

Security setting



Same to chapter 4-1-1 straight line security setting part.

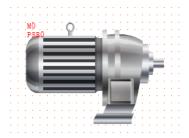
■ Location

Same to chapter 4-1-1 straight line location part.

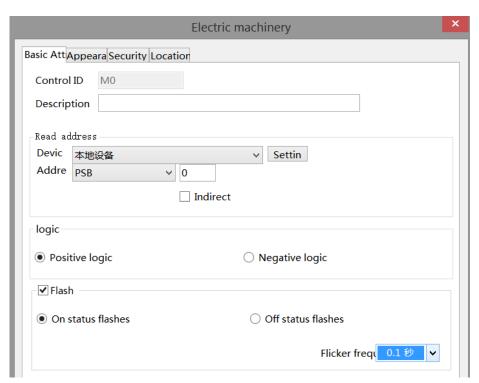
4-3-5. Electric machinery

This control can be used to simulate the operation process of the motor. When the controlled coil reaches the specified state, the motor can display the corresponding state.

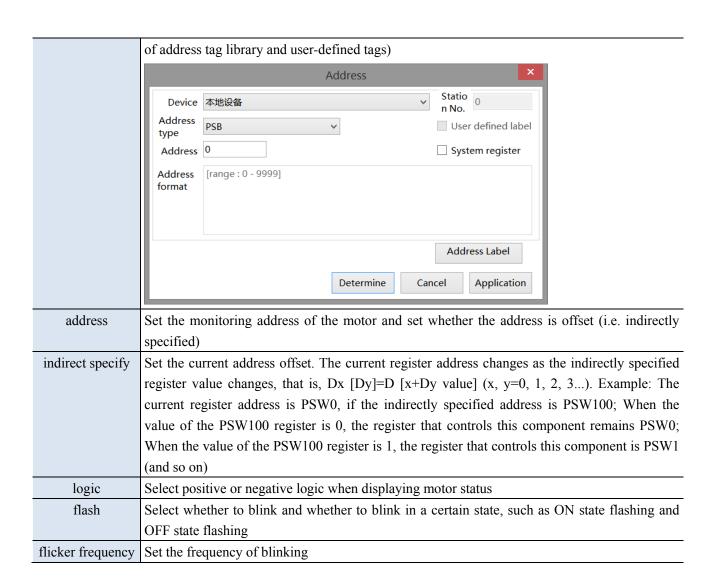
- 1. Click the icon in the menu bar "Parts/Industry/Motors" or in the control window's device bar, move the cursor to the screen, click the left mouse button to place, click the right mouse button, or use the ESC key to cancel the placement. Modify the length and width of the border through boundary points.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components, or you can double-click "Motor" or select "Motor" and right-click to select "attributes" for attribute settings.



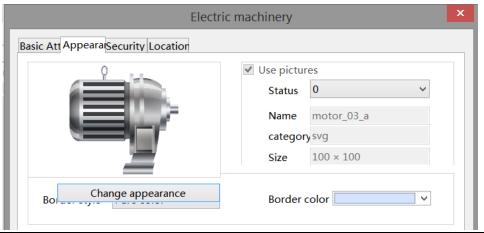
■ Basic attributes



control ID	It is used for system management control, and cannot be operated by users
description	Can be used to comment on the purpose of this control
read address	Set the coil address of the control motor and set whether there is an offset (i.e. indirectly
	specified)
device	Select the device port currently communicating with
setting	Click "Settings" to enter the address setting interface. This interface allows you to set and use
	system registers and user-defined tags. You can click the address tag library or project tree -
	library - address tag library below to set the tags used (see 5-2 Address Tag Library for the use

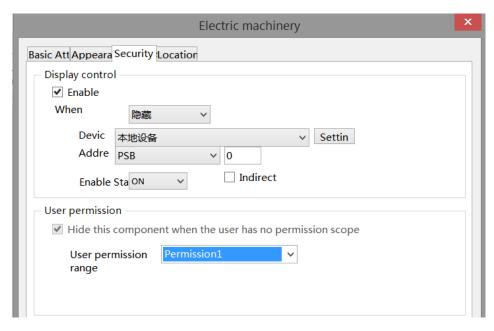


Appearance



change appearance	Set display appearance
use pictures	Set whether to use pictures.
	You can set the appearance of clicking in two states: (0, 1). After selecting the state in
	the upper right corner, click "Change Appearance" or click "More Pictures" to select
	custom images to change the appearance
border	Set border style and color

Security setting



Same to chapter 4-1-1 straight line security setting part.

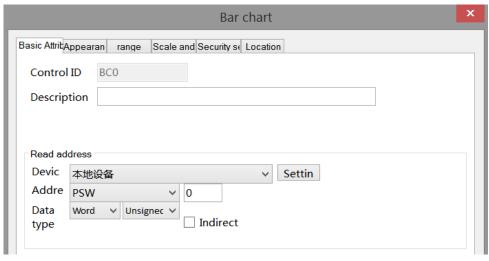
■ Location

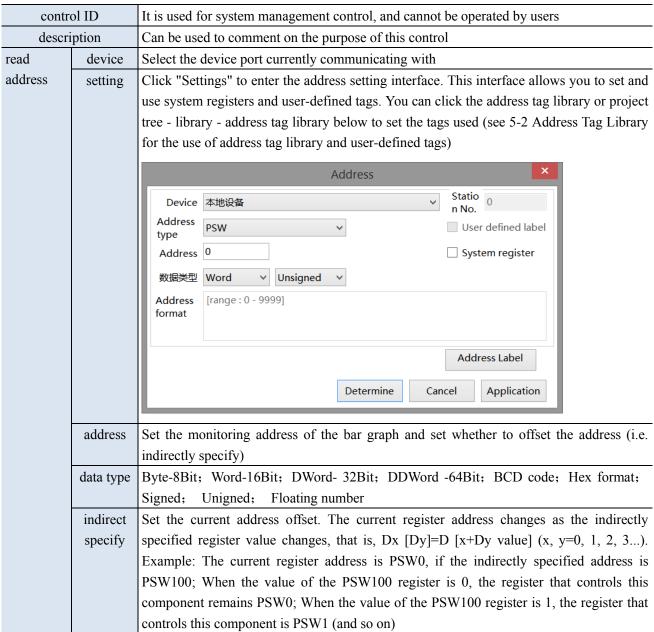
Same to chapter 4-1-1 straight line location part.

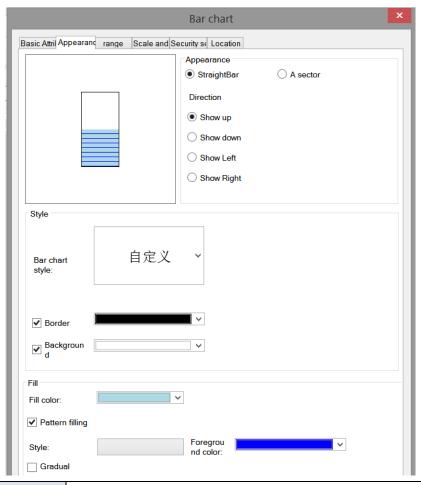
4-3-6. Bar chart

This control is used to achieve the target object data value, represented by a bar graph, and is more direct. It is usually applied to analog quantities such as pressure changes, liquid level changes, and temperature changes, and can directly reflect the relationship between the current value and the full scale value:

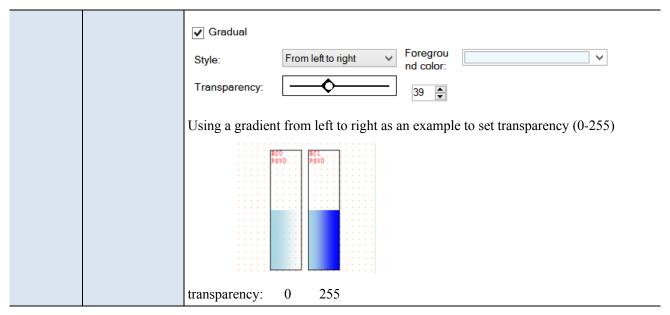
- 1. Click the bar graph icon in the menu bar "Parts/Industry/Bar chart" or in the device bar of the control window, move the cursor to the screen, click the left mouse button to place, click the right mouse button, or click ESC to cancel the placement. Modify the length and width of the border through boundary points.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components, or you can double-click on "Bar Chart" or select "Bar Chart" and right-click to select "Attributes" for attribute settings.
 - Basic attributes



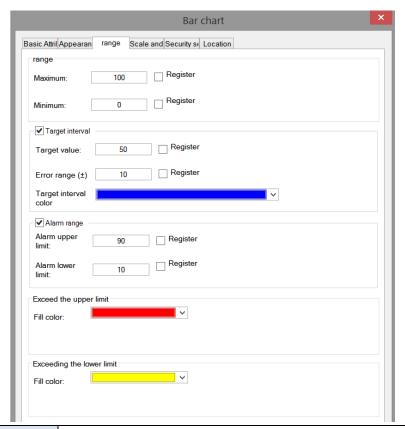




appearance		Select the appearance of the bar graph, and you can choose between straight bars or
		sectors
straightbar		The style of a regular bar chart
di	rection	Set the bar graph indication direction, including up, down, left, and right display
a	sector	Displayed as a fan, starting angle and coverage angle can be set
proportion o	of inner and outer	Change the display radius of the sector by changing this value (scale range: 1-99)
rings		300 7510 9510 9510
		proportion: 1 50 100
di	rection	Set the fan indication direction, clockwise or counterclockwise
style	bar chart style	Select the bar chart style in the drop-down box
	border	Set the border color of the bar chart
	background	Set the background color of the bar chart
fill	fill color	Choose a fill color
	pattery filling	Set a fill style, and set the foreground color
	gradual	Choose whether to gradient fill, set the gradient style, foreground color, and
		transparency (you can set the transparency by sliding the slider. The closer the
		slider is to the left, the lower the transparency value, and the more transparent the
		foreground color is)



Range



range		Set the display range of the bar graph
max		Set the max value of the bar graph, which can be specified by setting a register
min		Set the min value of the bar graph, which can be specified by setting a register
target	target value	Set the target value, and display the set color when the value is within the target
interval		value +/- allowable error
	error range	Used to determine the target range
	target interval	Set target interval color
	color	
alarm	alarm upper	Set the maximum alarm value of the bar graph, which can be specified by setting a
range	limit	register

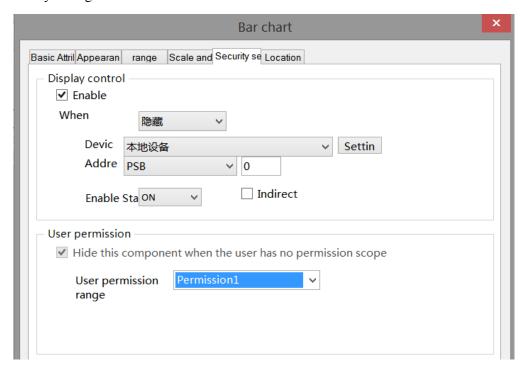
	alarm lower	Set the minimum alarm value of the bar graph, which can be specified by setting a
	limit	register
	color	Set the lower alarm range liquid color
exceed the	fill color	Set the color of liquids exceeding the upper limit
upper limit		
exceed the	fill color	Set the color of liquids exceeding the lower limit
lower limit		

Scale and mark



scale		Set whether to display the scale and select a scale style
scale position		Set the position of the scale, including inside and outside
main engraving		Set the number of divisions for the main scale
major scale length		set the main scale length
secondary engraving		Set the number of divisions for the sub scale
subscale length		set the subscale length
scale style		Set the color, style, and width of the scale
number	display	Choose whether to display numbers on the bar graph and set the font, size, and
		alignment for display
	display	Choose whether to display percentages on the bar graph and set the font, size, and
	percentage	alignment to display
axis	show axis	Set whether to display the axis line at the bottom of the scale

Security setting



Same to chapter 4-1-1 straight line security setting part.

■ Location

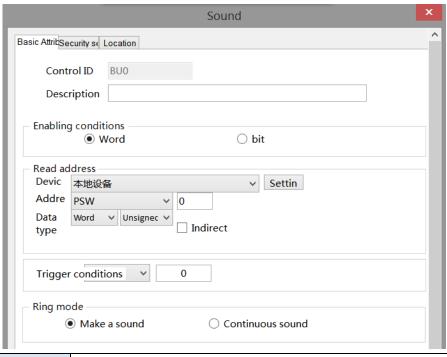
Same to chapter 4-1-1 straight line location part.

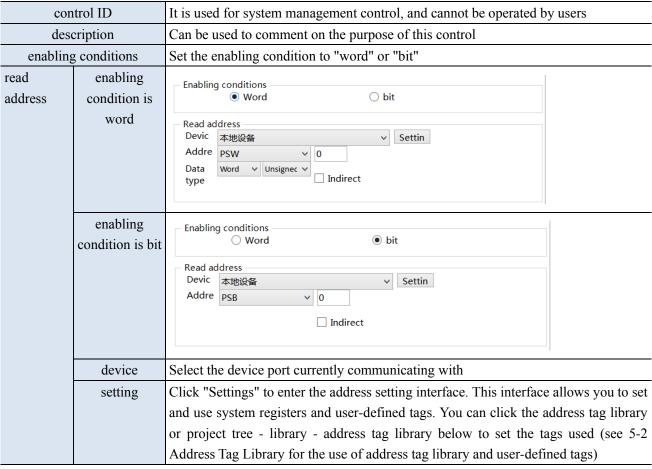
4-3-7. Buzzer

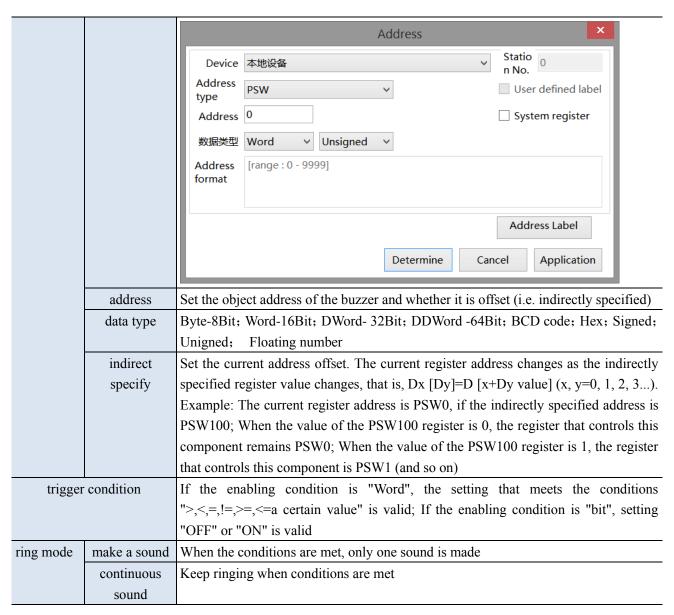
When the specified coil is triggered or the specified conditions are met, the buzzer emits a sound. This component is invisible and is not visible when downloaded to the HMI.

- 1. Click the buzzer icon in the menu bar "Parts/Industry/Buzzer" or in the device bar of the control window, move the cursor to the screen, click the left mouse button to place, click the right mouse button, or click ESC to cancel the placement.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components. You can also double-click "Buzzer" or select "Buzzer" and right-click to select "attributes" to set attributes.

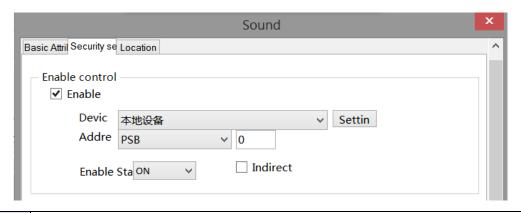
■ Basic attributes







Security setting



enable

The bit limit can be set (the enabling state of the enabling control can be customized). Only when the enabling conditions are met can the component be used normally (as shown in the figure above: When PSB0 is in the ON state and the trigger conditions are met, the component can be used; if PSB0 is in the OFF state, even if the trigger condition is met, the component is still unavailable)

■ Location

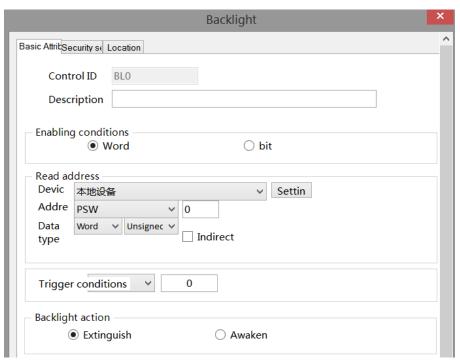
same to chapter 4-1-1 straight line location part. (It is not allowed to modify the size and move horizontally and vertically)

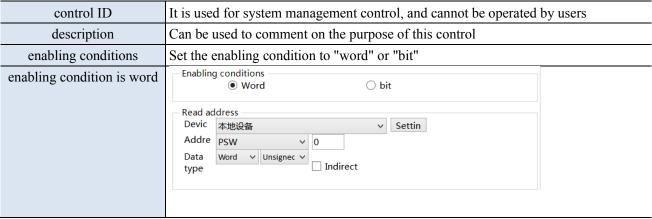
4-3-8. Backlight

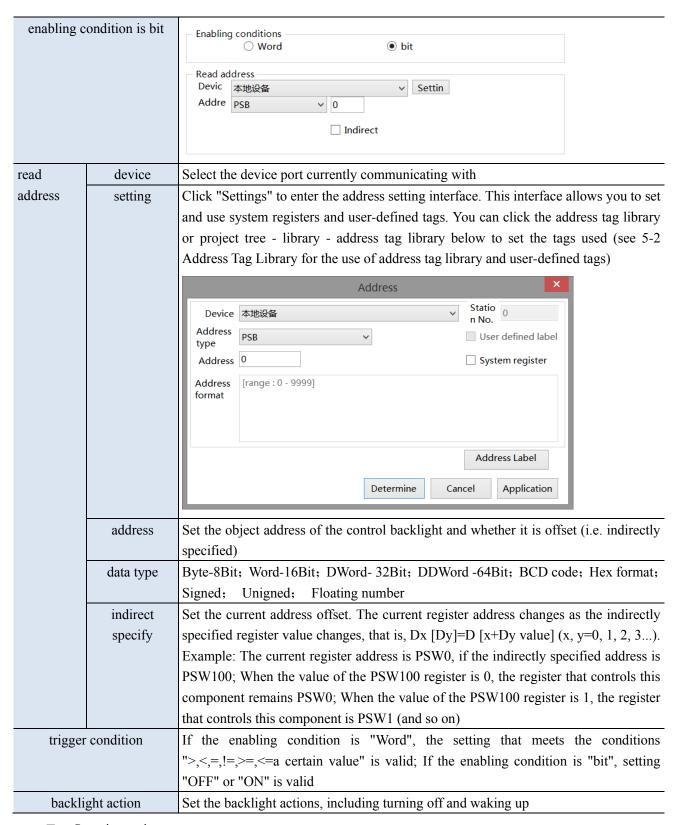
This control is used to determine whether to display the backlight. When the backlight control coil is triggered, the screen backlight is turned on, which means exiting the screen saver black screen. If the screen saver is not entered or set to display the screen, this function is invalid. This component is invisible and is not visible when downloaded to the HMI.

- 1. Click the backlight icon in the menu bar "Parts/Industry/Backlight" or in the control window's device bar, move the cursor to the screen, click the left mouse button, click the right mouse button, or use the ESC key to cancel placement.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components. You can also double-click "Backlight" or select "Backlight" and right-click to select "attributes" to set attributes.

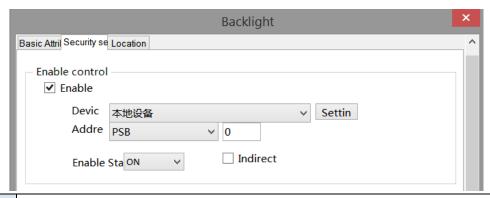
■ Basic attributes







Security setting



enable control The bit limit can be set (the enabling state of the enabling control can be customized). Only when the enabling conditions are met can the component be used normally (as shown in the figure above: When PSB0 is in the ON state and the trigger conditions are met, the component can be used; if PSB0 is in the OFF state, even if the trigger condition is met, the component is still unavailable)

Location

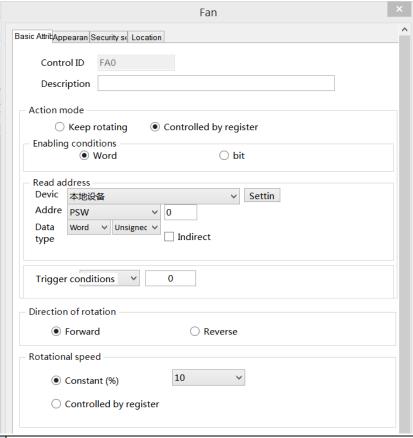
Same to chapter 4-1-1 straight line location part (It is not allowed to modify the size and move horizontally and vertically)

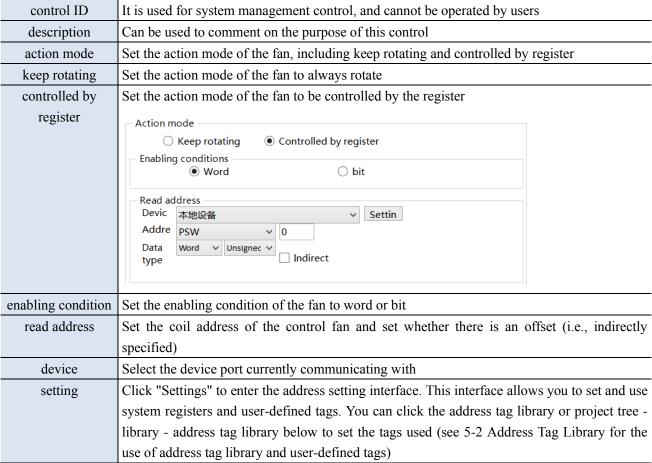
4-3-9. Fan

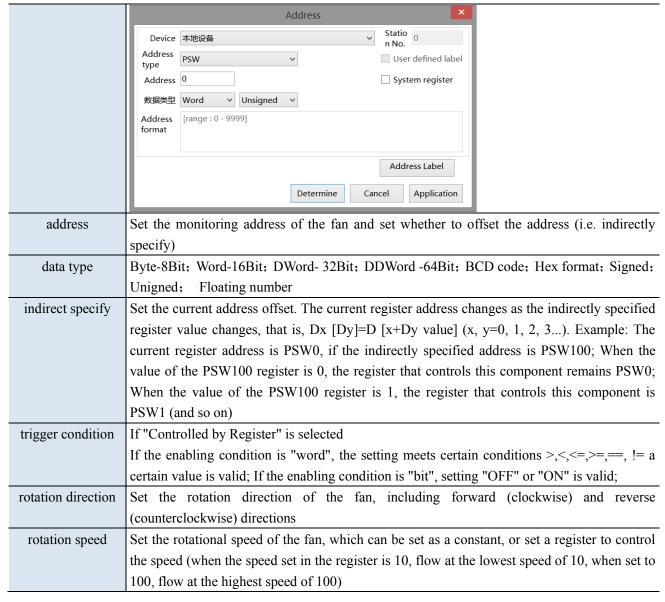
- 1. Click the fan icon in the menu bar "Parts/Industry/Fan" or in the device bar of the control window, move the cursor to the screen, click the left mouse button to place, click the right mouse button, or click ESC to cancel the placement. Modify the length and width of the border through boundary points.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components, or you can double-click "Fan" or select "Fan" and right-click to select "attribute" for attribute settings.



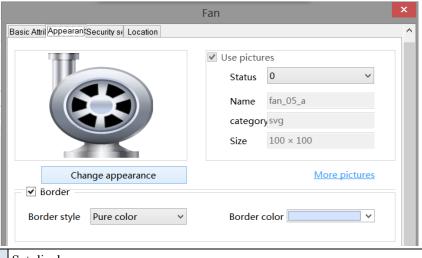
Basic attributes







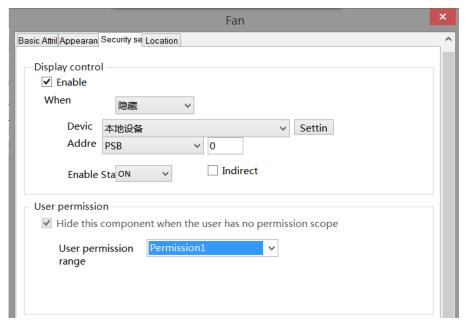
Appearance



change appearance	Set display appearance
use pictures	Set whether to use pictures.
	You can set the appearance of clicking in three states (0, 1, 2). After selecting the state in the
	upper right corner, click "Change Appearance" or click "More Pictures" to select custom

	images to change the appearance
fill	Set the fill style (solid/gradient) and fill color
border	Set border style (solid/gradient) and border color

Security setting



same to chapter 4-1-1 straight line security setting part.

■ Location

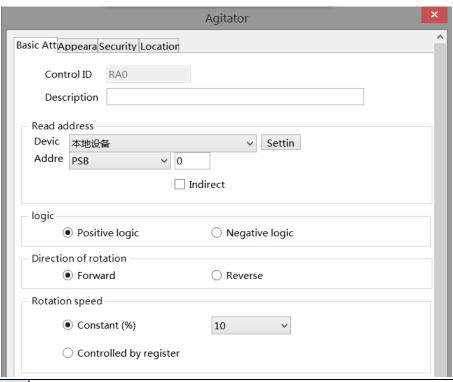
Same to chapter 4-1-1 straight line location part.

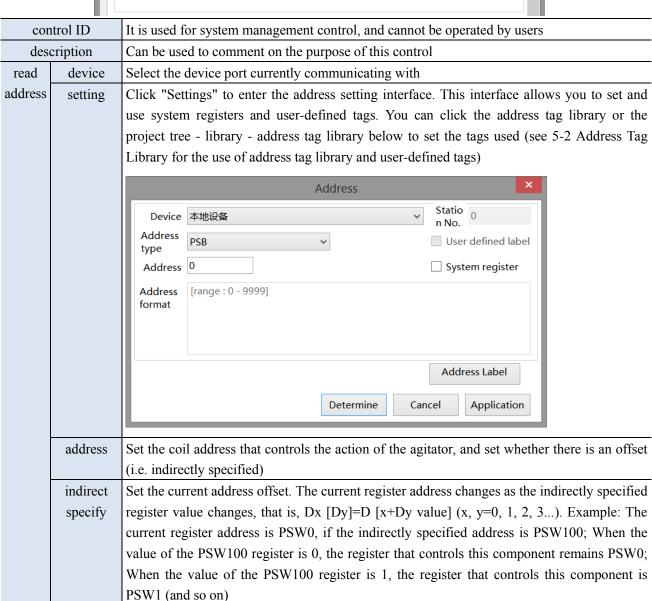
4-3-10. Agitator

- 1. Click the agitator icon in the menu bar "Parts/Industrial/Agitator" or in the control window's device bar, move the cursor to the screen, click the left mouse button to place, click the right mouse button, or press ESC to cancel placement. Modify the length and width of the border through boundary points.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components. You can also double-click "agitator" or select "agitator" and right-click to select "attributes" to set attributes.



Basic attributes





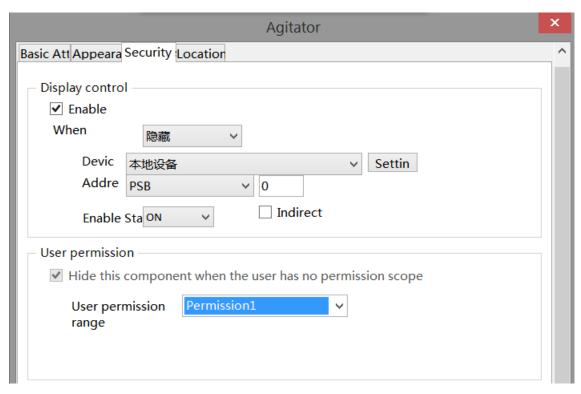
logic	Select the agitator action state as positive logic or negative logic;
	Positive logic: Start action when the set coil is in the ON state; Negative logic: Start action
	when the set coil is in the OFF state
direction of rotation	Set the rotation direction of the mixer, including forward (clockwise) and reverse
	(counterclockwise) directions
rotation speed	Set the rotation speed of the agitator, which can be set as a constant, or set a register to
	control the speed (when the speed set in the register is 10, flow at the lowest speed of 10,
	when set to 100, flow at the highest speed of 100)

Appearance



change appearance	set the display appearance
use pictures	Set whether to use pictures
	You can set the appearance of clicking in three states (0, 1, 2). After selecting the state in the
	upper right corner, click "Change Appearance" or click "More Pictures" to select custom
	images to change the appearance;
border	Set border style and color

■ Security setting



same to chapter 4-1-1 straight line security setting part.

■ Location

Same to chapter 4-1-1 straight line location part.

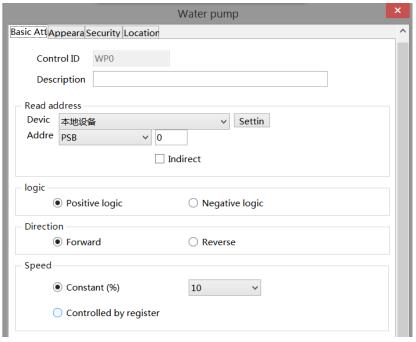
4-3-11. Water pump

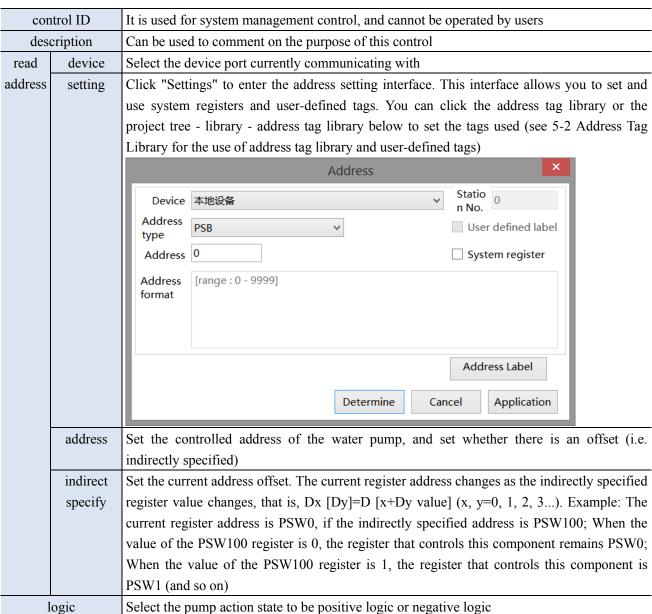
This control is used to simulate the operation process of the on-site water pump. When the target coil reaches the specified state, the water pump starts to operate.

- 1. Click the water pump icon in the menu bar "Parts/Industry/Water Pump" or in the control window's equipment bar, move the cursor to the screen, click the left mouse button to place, click the right mouse button, or click ESC to cancel placement. Modify the length and width of the border through boundary points.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components, or you can double-click "Water Pump" or select "Water Pump" and right-click to select "attributes" for attribute settings.



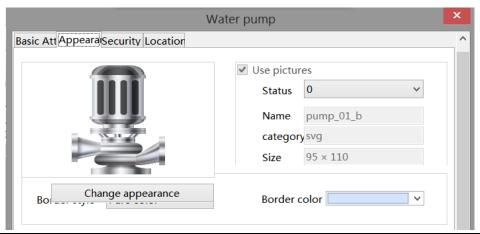
■ Basic attributes





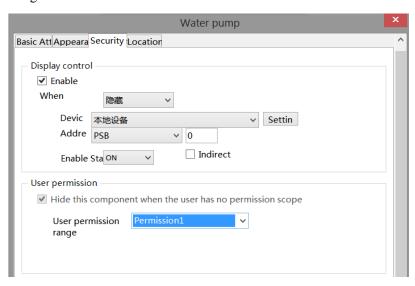
	Positive logic: Start action when the set coil is in the ON state; Negative logic: Start action
	when the set coil is in the OFF state
direction	Set the rotation direction of the water pump, including forward direction (water flow from
	left to right) and reverse direction (water flow from right to left)
speed	Set the flow speed of water flow, which can be set as a constant, or set a register to control
	the speed (when the speed set in the register is 10, flow at the lowest speed of 10, when set
	to 100, flow at the highest speed of 100)

■ Appearance



change appearance	Set display appearance
use pictures	Set whether to use pictures;
	You can set the appearance of clicking in two states: (0, 1). After selecting the state in the
	upper right corner, click "Change Appearance" or click "More Pictures" to select custom
	images to change the appearance
border	Set border style and color

Security setting



same to chapter 4-1-1 straight line security setting part.

■ Location

Same to chapter 4-1-1 straight line location part.

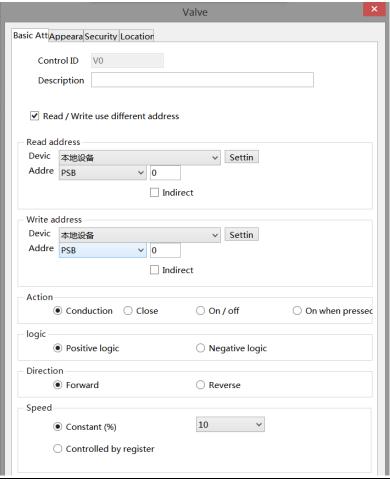
4-3-12. Valve

This control is used to simulate the operation of valves in the field control system. The following valve states are in the closed and open flow states, respectively.

- 1. Click the icon in the menu bar "Parts/Industry/Valves" or in the control window's device bar, move the cursor to the screen, click the left mouse button to place, click the right mouse button, or click ESC to cancel the placement. Modify the length and width of the border through boundary points.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components, or you can double-click "Valve" or select "Valve" and right-click to select "attributes" for attribute settings.



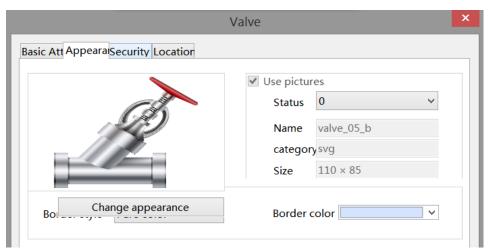
■ Basic attributes



control ID	It is used for system management control, and cannot be operated by users
description	Can be used to comment on the purpose of this control
read/write use	You can check whether to use a different address for reading/writing (refer to 4-2-3

different address	Numerical Input for the description of the reading/writing address)
read address	Set the read address of the valve and set whether there is an offset (i.e. indirectly specified)
write address	Set the write address of the valve and set whether there is an offset (i.e. indirectly specified)
indirect specify	Set the current address offset. The current register address changes as the indirectly specified
	register value changes, that is, Dx [Dy]=D [x+Dy value] (x, y=0, 1, 2, 3). Example: The
	current register address is PSW0, if the indirectly specified address is PSW100; When the
	value of the PSW100 register is 0, the register that controls this component remains PSW0;
	When the value of the PSW100 register is 1, the register that controls this component is
	PSW1 (and so on)
action	Select the control action of the valve
ON	After triggering, the valve is always open
OFF	After triggering, the valve is always close
ON/OFF	When triggered for the first time, the valve is in the open state, and when triggered again, it is
	in the closed state, which is reversed
ON when pressed	When pressed, the valve is in an open state; When released, the valve is closed
logic	Select whether the valve action state is positive logic or negative logic;
	Positive logic: Start action when the set coil is in the ON state;
	Negative logic: Start action when the set coil is in the OFF state
direction	Set the flow direction of water flow, including forward direction (water flow from left to
	right) and reverse direction (water flow from right to left)
speed	Set the flow speed of water flow, which can be set as a constant, or set a register to control
	the speed (when the speed set in the register is 10, flow at the lowest speed of 10, when set to
	100, flow at the highest speed of 100)

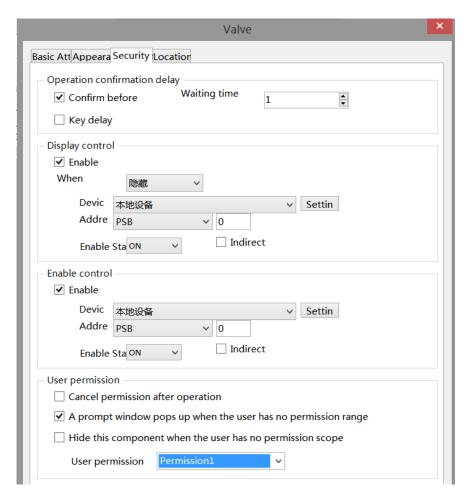
Appearance



change appearance	Set display appearance
use pictures	Set whether to use pictures
status	There are two optional states, 0 and 1, to set the state of the control
name	Display the name of this control
category	Display the category of this control
size	Displays the current size of the control
border	Set border style and color

Security setting

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Same to chapter 4-2-10 indicator key security setting part.

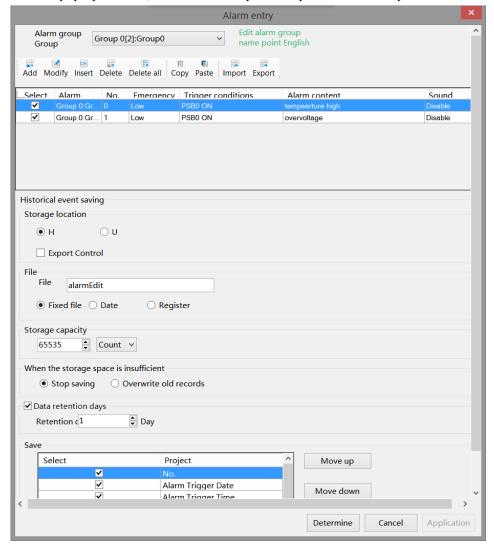
■ Location

Same to chapter 4-1-1 straight line location part.

4-4. Alarm

4-4-1. Alarm entry

Click "Parts/Alarm/Alarm Entry" in the menu bar or click Alarm to add alarm objects and corresponding alarm information to the pop-up window, which can be imported/exported to the computer for alarm display.



■ Alarm group

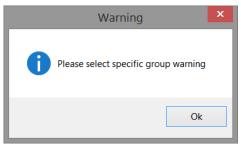
C	•
alarm group	Set the group of the alarm group, and select the corresponding group display in the alarm
	display
edit alarm group	Click to set the name of each alarm group
name	

■ Information

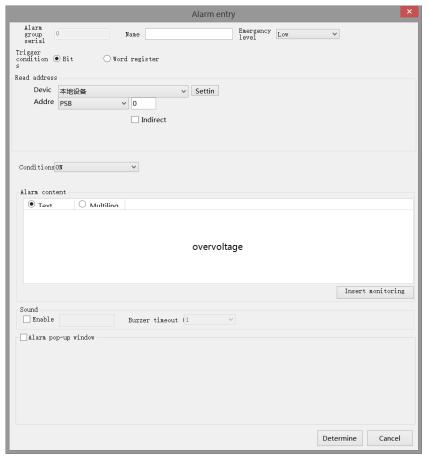
add	add alarm information
modify	Modify the selected alarm information, and the modify information interface is consistent
	with the add information interface
insert	Insert an alarm message below the selected alarm message
delete	Delete the selected alarm information
delete all	Delete all alarm information

copy	Tick the alarm information to be copied in the front box
paste	Paste the copied information, and the pasted alarm information will be displayed on the last
	line
import	Import an edited Excel file from your computer
export	Export the alarm information edited in the software as an Excel file to the designated location
	in the computer

Before clicking Add, you must first select an alarm group in the group, otherwise a prompt to select an alarm group will pop up, as shown in the following figure:

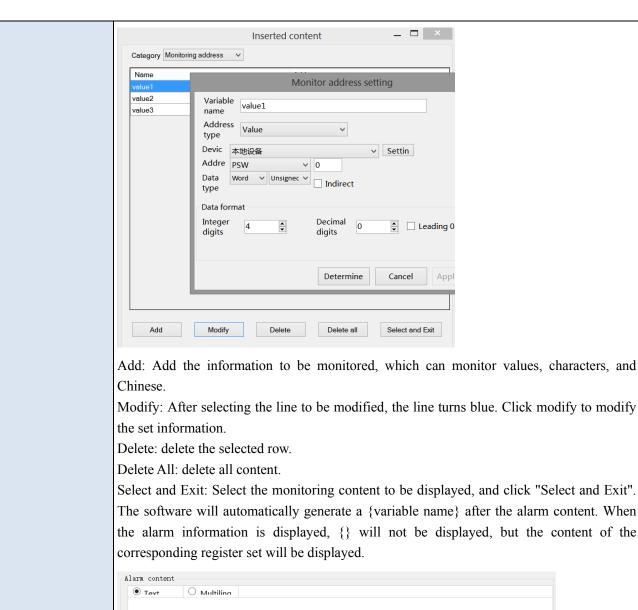


After clicking Add, you can add alarm signals and corresponding alarm information in the pop-up window, as shown in the following figure:



Alarm Group Serial	Display the current alarm group and cannot be modified	
Number		
name	Custom alarm name	
emergency level	Set the alarm urgency level of the current alarm information. You can select "Low, Normal,	
	High, and Urgent" to increase the urgency level in turn	
read address	Set the displayed address; You can also set whether there is an offset (i.e. indirectly	

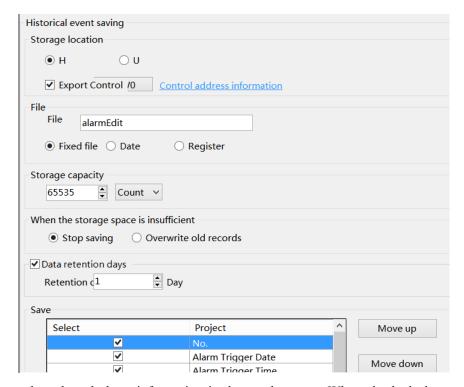
	specified)		
device	Device port currently communicating		
address	Set target coil number		
setting	Click "Settings" to enter the address setting interface. This interface allows you to set and		
	use system registers and user-defined tags. You can click the address tag library or the		
	project tree - library - address tag library below to set the tags used (see 5-2 Address Tag		
	Library for the use of address tag library and user-defined tags)		
	Address		
	Device 本地设备 V Statio n No.		
	Address type User defined label		
	Address 0 System register		
	Address [range: 0 - 9999]		
	format		
	Address Label		
	Determine Cancel Application		
indirect specify	Set the current address offset. The current coil address changes with the indirectly specified		
	register value, that is, Dx [Dy]=D [x+Dy value] (x, y=0, 1, 2, 3). Example: The current		
	coil address is PSB0, if the indirectly specified address is PSW100; When the value of the		
	PSW100 register is 0, the coil that controls this element remains PSB0; When the value of		
	the PSW100 register is 1, the coil that controls this element is PSB1 (and so on)		
condition	Set the trigger conditions for alarm information, and you can select bit registers and word		
	registers; When selecting a bit register, you can choose to set the trigger conditions to ON,		
	OFF, ON ->OFF, and OFF ->ON, which can be selected according to project needs. When		
	selecting a word register, you can choose to trigger when >, <, =, !=, >=, <= a certain value		
alarm content	Edit the text information or multilingual display of the alarm (refer to 5-1 for the description		
	of the multilingual library for specific use). You can select to insert the register address		
	display. After clicking "Insert Monitoring", edit the required information in the pop-up		
	window and select it. The information of the set monitoring address will be displayed in the		
	alarm content.		



sound sound enable When checked, the buzzer will sound when the alarm is triggered. If the selected touch screen model is TS5L series, the alarm sound can be customized. Refer to 5-4 Audio Resource Library for usage methods buzzer Set the time for the buzzer to sound, in seconds, selectable from 1 to 30 seconds timeout alarm pop-up When checked, the selected window will be displayed on the touch screen when the alarm is window triggered ✓ Alarm pop-up window Pop up wir [20002]Local informa V Pop up cycle Pop up once O Pop up cycle ✓ Close the window after the alarm

pop up	Select the window to pop up, and it will pop up on the touch screen after the
window	alarm is triggered
pop up cycle	Popup once: only pop up once. After clicking Close, the window will not pop
up again even if the alarm does not disappear	
	Popup Cycle: After the alarm is triggered, the window will pop up. When the
	window is closed and the alarm signal does not end, it will pop up again at
	the set cycle. The default cycle is 1000 milliseconds, that is, 1 second (the
	pop up cycle unit can be customized in milliseconds/seconds/minutes)
close the	After checking, if the window has not been manually closed since it pops up,
window after	it will actively close the window when the alarm signal disappears
the alarm	

Historical event saving



Set whether to store the selected alarm information in the touch screen. When checked, the generated alarm information will be stored in the touch screen. You can use the alarm list to display historical alarm information.

	1 3		
storage location	To set the storage location, you can select HMI or USB flash disk, or use a register to		
	specify the storage location. For example, if you set the register PSW0, then when		
	PSW0=1, the storage location is HMI; When PSW=3, the storage location is a USB flash		
	drive		
	When simulating, the storage location of alarm information is:		
	(1) Save to USB flash drive: software directory Temp/Run/storage/udisk/alarm		
	(2) If you choose to save to the hmi: software directory Temp/Run/db/alarm, saving		
	files in this way cannot be directly opened for viewing. To view, you need to export		
	to a USB flash drive through the export control register, and then view the exported		
	files in the path saved to the USB flash drive		
HMI export	Set the export control register (if set to PSW0, three consecutive addresses with PSW0 as		
	the first address control different states), and click "Control Address Information" to		

	preview
	Prompt
	Command:PSW0 1.Export alarm data to U disk 2.Export alarm data to U disk and clear the d
	speed of progress:PSW1
	1.The value of 0-100 indicates the progress,
	result:PSW2
	0. Data export
	1. Data export succeeded
	2. The export device does not exist
	Note: This function takes effect only when the storage location is selected as HMI or specified as HMI by using "Register Specified Storage Location".
	"When inputting 1 or 2 to the command register, the database can be controlled to be
	exported to a USB flash drive, and the exported file format is xjdb. The xjdb to csv tool can
	be opened by double clicking on the software root directory Tool\XJDbTool\
	XJDbTool.exe, which is set as the default opening method for xjdb. After opening, enter the
	path name of the csv, and click "Export" to convert the xjdb format file to a csv format file.
file	Set stored file information
file	Set the name of the stored file, with which the system will store data
fixed file name	The stored file name is fixed, that is, the name set in the file name (the file name supports
	up to 200 characters)
Date Specify File	The stored file name is named with a date, such as the file exported on May 29, 2021, with
Name	the file name 20210529
Dynamically specify	Set a register address, and the stored file will be named after the contents of the register.
file name	When selecting a dynamically specified file name, you need to select a string type register
	such as character input and Chinese input. (File names support up to 200 characters)
storage capacity	Set the total amount of collected data information Maximum storage conseits 65535 pieces
when the storage	Maximum storage capacity 65535 pieces Stop saving or overwriting old records when the storage space is insufficient
space is insufficient	Stop saving of overwriting old records when the storage space is insufficient
stop saving	When checked, stop saving data when the storage space is insufficient
overwrite old	When checked, when the storage space is insufficient, it will continue to save and overwrite
records	the old records
data retention days	The default time for storing files on the screen is 1 day. After the time expires, the files will
	be deleted. The maximum retention time for files can be set to 1000 days
save	Set the stored items and sorting, and select serial number, alarm trigger date, alarm trigger
	time, alarm information, confirmation time, alarm times, and alarm recovery time

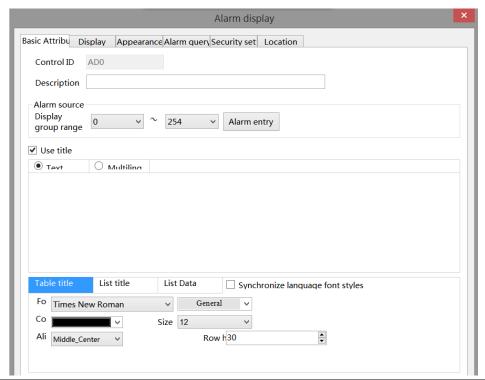


4-4-2. Alarm display

Display historical alarm information in a table, allowing you to query records for a certain period of time.

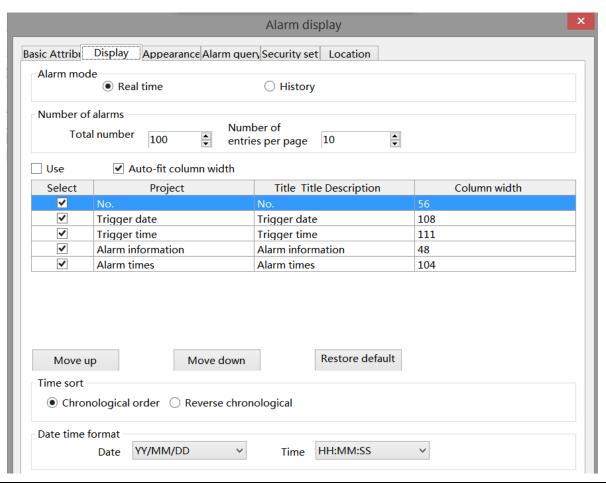
- 1. Click alarm display icon in the menu bar "Parts/Alarm/Alarm Display" or in the device bar of the control window, move the cursor to the screen, click the left mouse button to place, click the right mouse button, or click ESC to cancel the placement. Modify the length and width of the border through boundary points.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components, or you can double-click "Alarm Display" or select "Alarm Display" and right-click to select "attributes" for attribute settings.

■ Basic attributes



Control ID	It is used for system management control, and cannot be operated by users	
description	Can be used to comment on the purpose of this control	
alarm source	Set the source of the alarm and customize the alarm group range to be displayed (if the selection	
	range is 0-0, only the alarm information selected for the 0th group will be displayed, and other	
	groups will not be displayed)	
use title	When checked, the table title is displayed at the top of the table	
text	Edit title content	
multiling	If you want the title to be displayed in multiple languages, check this option to directly launch an	
	existing multilingual library or add a new multilingual library (see 5-1 Label Multilingual for	
	specific usage of multilingual libraries).	
font	Set the font, color, size, alignment, and row height of the table title/list title/list data. You can	
	check to use the same font. After checking, the color, size, alignment, and line height of the three	
	fonts should be consistent.	

Display



aları	m mode	Select whether the information displayed in the current table is real-time or historical.	
real time When che		When checked, the alarm information displayed in the table is real-time alarm information	
		display, that is, only the information currently in the alarm state is displayed, and the completed	
		alarm information content will not be displayed.	
hi	story	When this option is selected, the table will not only display real-time alarm information, but also	
		display alarm information for the history of ended alarms in the table.	
number	total	Set the total number of alarm messages displayed.	
of	number		
alarms	number of	Set the number of alarms displayed on the current page.	
	entries per	When the number of pages per page is set to be less than the total number of pages, buttons or	
	page	scroll bars are displayed on the side of the table to click or scroll to view information that is	
		displayed on the current page.	
info	rmation	use After checking, click "" below the setting bar (see the figure below) to enter	
		multilingual settings, or the project tree - Library - Label Multilingual for	
		management (see 5-1 Label Multilingual for specific usage).	
		Title Title Description Settings	
		No	
		Trigger date	
		Trigger time	
		Alarm information	
		auto-fit When checked, column widths cannot be customized, and the software will	

	column	automatica	ally adjust to the most suitable size based on the project image.		
	width				
	Set the displayed information content, and you can select serial number, alarm trigger date,				
	trigger time, alarm information, confirmation time (only available in history mode), alarm times,				
	and alarm recovery time (only available in history mode).				
	project				
		No. Displays the number of the table column.			
		trigger	Date when the alarm was generated.		
		date			
		trigger	The time when the alarm occurred.		
		time			
		alarm	Preset content in alarm entry.		
		info			
		confirm	The time at which the confirmation operation was performed. (This item		
		time	is not available when the mode is selected as real-time)		
		alarm	Current alarm times.		
		times			
		recover	The time when the alarm disappears. (This item is not available when		
		time	the mode is selected as real-time).		
		1	d to adjust the order of items, you can click the "Move Up, Move Down"		
		-	you need to restore the default sorting, you can click "Restore Default".		
	title		le name for each column, which is consistent with the project name by		
	_	scription default. You can change it to a name that meets your own requirements as needed.			
	column width		blumn width for each column, which can only be modified if Auto-fit //idth is not checked.		
time sort			play mode and select whether the latest alarm is displayed before or after.		
chronological order					
	_	_	mation is displayed at the top and the Unrecovered Alarm		
			alarm information is displayed at the Information at the Top", the		
	bottom of	the table.	That is, the latest alarm information is unrecovered alarm		
	displayed at	t the bottom	n of the table. information will be displayed		
reverse	In contrast	to the chron	nological order, the alarms generated first centrally at the top of the table		
chronological			ottom, and the alarms generated later are regardless of the time		
	displayed a	displayed at the top, that is, the latest alarm information is sequence.			
	displayed a	bove the tal	ble.		
date time format	Set the forn				
enable confirm			form information confirmation. This option is only available if the alarm		
	mode is seld		<u> </u>		
mode			rmation confirmation.		
single click			omatic confirmation will be generated when an alarm message is clicked,		
1 11 11 1			e will be generated.		
double click			tomatic confirmation will be generated when you double-click an alarm		
long pross	message, and a confirmation time will be generated.				
long press	When checked, an alarm message will be automatically confirmed when long pressed, and a				
	confirmation time will be generated.				

information hiding control

After checking, specify a register to control the display of alarm information, as shown in the following figure. You can hide confirmed information, recovered information, or use them in combination (only available if the alarm mode is selected as History).



The information hiding control is using the 0th, 1st, and 2nd bits of the binary system, and then input the corresponding decimal system in the set register for control.

If the information control register is set to psw0

Hide confirmed information: Binary: 0001; Decimal: 1, psw0 Enter 1 to hide confirmed information;

Hide recovered information: binary: 0010; Decimal: 2, psw0 Enter 2 to hide recovered information;

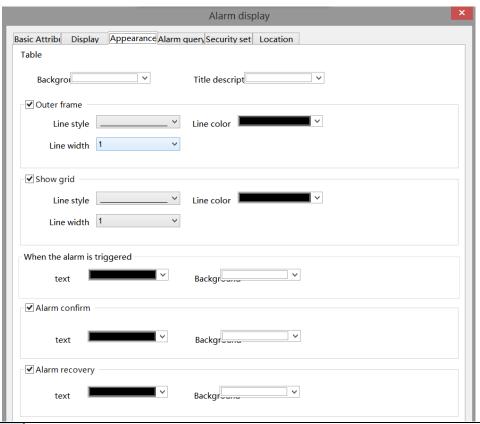
Hide unrecovered information: binary: 0100; Decimal: 4, psw0 Enter 4 to hide unrecovered information;

To hide confirmed and recovered information: binary: 0011, decimal: 3, psw0 Enter 3 to hide; The rest are hidden in the same way.

Appearance

table background

title background



Set the background color of the table header row. If the header is not checked, the setting has no

Set the color of the table border and background.

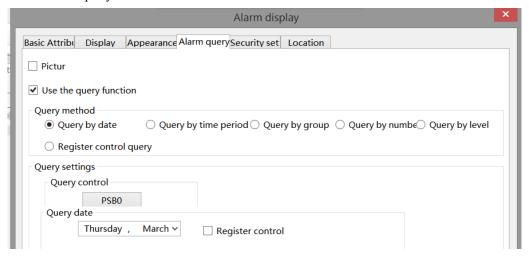
Set the background color of the entire table.

	effect.				
outer frame	Choose whether to display the table outline.				
	line style	Set the line style of the outer frame of the table. You can select straight lines,			
		dashed lines, points, and point lines, as shown in the figure.			
	line color	Set the line color for the table outline.			
	line width	Set the line width of the outer frame.			
show grid	Choose whe	ther to display the grid within the table.			
	line style	Set the line style of the grid of the table. You can select straight lines, dashed lines,			
		points, and point lines, as shown in the figure.			
	line color	Set the line color for the table grid.			
	line width	Set the line width of the grid.			
when the alarm	Set the text display color and background color of the corresponding alarm information content				
is triggered	when the alarm is triggered.				
	text	Set the text display color of the alarm message content.			
	background	Select the background display color for the alarm message content.			
alarm confirm	Set the text	display color and background color of the corresponding alarm message content			
	after alarm o	confirmation.			
	text	Set the text display color of the alarm message content.			
	background	Select the background display color for the alarm message content.			
alarm recovery	Set the text	display color and background color of the corresponding alarm information content			
	after the alarm is restored.				
	text	Set the text display color of the alarm message content.			
	background	Select the background display color for the alarm message content.			

Display the alarm color when an alarm occurs. Display the confirmation color when the alarm has not been restored and has been confirmed. Display the restored color when the alarm is restored and confirmed. Alarm information clearing: The internal address of the button is SPSB120, which triggers the clearing of alarm information.

■ Alarm query

The information found will be displayed in the alarm display table. If you need to use this function, you can directly check "use the query function".



There are 5 query methods: query by date, query by time period, query by group, query by number, and query by level. The user can choose any of these five query methods, or dynamically specify the query method

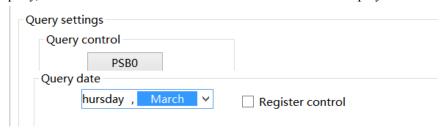
through registers. The specific methods are as follows:

query control

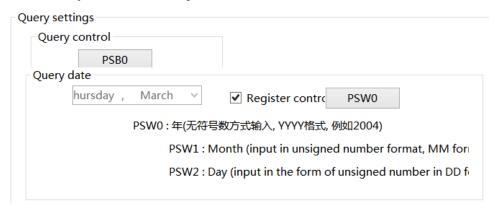
Set an address, and when set to this address, the query function will be triggered, and the query results will be displayed in the table.

(1) query by date

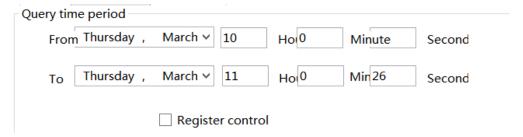
Enter the date to query, and all alarms under this date will be filtered out and displayed in the table.



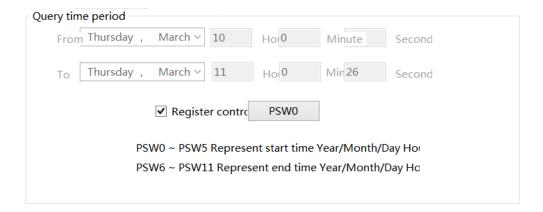
You can also select "Register Control" to dynamically set the query address. As shown in the following figure, if you set a header address, such as PSW0, the query address will occupy a total of 3 addresses from PSW0 to PSW2, where PSW0 represents the year, PSW1 represents the month, and PSW2 represents the day, all of which are single word unsigned numbers. For example, PSW0=2021, PSW1=5, and PSW2=29, the alarm record information on May 29, 2021 will be queried.



(2) Enter the start time and end time to query in the specified address, set the query control address, and then display all the alarm information filtered out for this time period in the alarm table.



Similarly, you can also use register control. After setting the first address, 12 register addresses including the first address will be occupied. The first 6 addresses represent the year, month, day, hour, minute, second of the start time, and the last 6 addresses represent the year, month, day, hour, minute, second of the end time. The format is consistent with that set manually.



(3) Query by group

Select an alarm group, which is the newly added alarm group in the alarm login. When the query control address is triggered, the information for the specified group will be displayed in the alarm display table.



After selecting register control, you need to set a register and select the alarm group number to query in this register. This number is the alarm group number set in the alarm login. After the query trigger bit is triggered, the information of the specified group will be displayed in the alarm display table



(4) Query by number

Select the alarm number. When the query control address is triggered, the information of the specified number will be displayed in the alarm display table.



After selecting register control, it is necessary to set a register in which to set the alarm number to be queried. After the query trigger bit is triggered, the information with the specified number will be displayed in the alarm display table



(5) Query by level

Select an alarm level that matches the level set in the alarm login. When the query control address is triggered, the specified level of information will be displayed in the alarm display table.



After selecting register control, you need to set a register in which to set the level to be queried. Values of 0 to 3 indicate the alarm level: Low, Normal, High, and Urgent. After the query trigger bit is triggered, the specified

group of information will be displayed in the alarm display table.

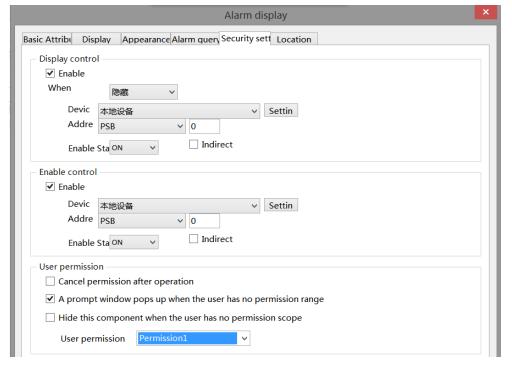


(6) register control query

Use registers to dynamically specify the query method. 0 indicates query by date, 1 indicates query by time period, 2 indicates query by group, 3 indicates query by number, and 4 indicates query by level. Users can choose according to their needs.



Security setting



Same to chapter 4-2-10 indicator key security setting part.

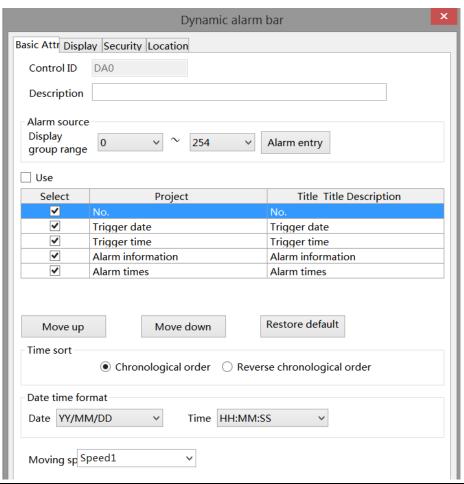
■ Location

Same to chapter 4-1-1 straight line location part.

4-4-3. Alarm bar

- 1. Click alarm bar icon in the menu bar or Parts/Alarm/Alarm Bar in the device bar in the control window, move the cursor to the screen, click the left mouse button to place, click the right mouse button, or click ESC to cancel the placement. Modify the length and width of the border through boundary points.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components, or you can double-click the "Alarm Bar" or select the "Alarm Bar" and right-click to select "attributes" for attribute settings.

Basic attributes



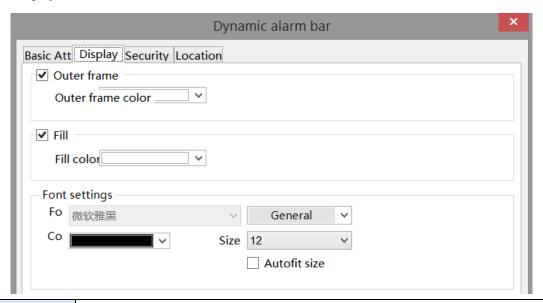
	control ID	It is used for system management control, and cannot be operated by users				
	description	Can be used to comment on the purpose of this control				
Ī	alarm source	Set the source of the alarm and select a group from the alarm input (if the selection range is 0-0,				
		only the alarm information for the selected group 0 will be displayed, and other groups will not				
		be displayed)				
Ī	use	If the alarm bar displays content in multiple languages, check this option to directly launch an				
	multi-language	existing multilingual library or add a new multilingual library (see 5-1 Label Multilingual for				
		specific usage of multilingual libraries)				
Ī	project	Edit the display items for each column of the table				
Ī	No.	Display the sequence number of the table column	If you need to adjust the			
	trigger date	Date when the alarm was generated	order of items, you can			
Ī	trigger time	Time when the alarm was generated	click the "Move Up,			

alarm	Preset content in alarm entry	Move Down" button. If	
information		you need to restore the	
alarm times	Display the total number of times this alarm occurred	default sorting, you can	
		click "Restore Default"	
time sort	Set the information display mode and select whether the latest alarm is displayed before or after		
chronological	According to the sequence of alarm time generation, the display generated first is displayed first,		
order	and the display generated later is displayed last, that is, the latest alarm information is displayed		
	at the end		
reverse	Contrary to the chronological order, the alarm generated first is display	ayed at the bottom, and the	
chronological	alarm generated later is displayed at the top, that is, the latest alarm information is displayed in		
order	front of the alarm bar		
date time	Set the date and time format		
format			
moving speed	The higher the speed number, the faster the scrolling speed		

When use multiple languages is checked, "..." will be displayed in the lower right corner of the title description. Clicking it will jump to the multi language library setting interface to set multiple languages.

✓ Use						
Select	Project	Title Title Description	Settings			
✓	No.	No.				
~	Trigger date	Trigger date	•••			
~	Trigger time	Trigger time	•••			
~	Alarm information	Alarm information				
~	Alarm times	Alarm times	•••			

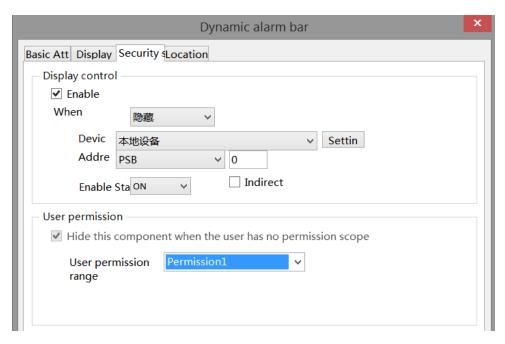
■ Display



	outer frame		Set the outer frame color of the dynamic alarm bar
fill fill color Set the backgroun		fill color	Set the background color of the dynamic alarm bar
		transparency	You can complete the setting by sliding the slider (the closer the slider is to the left, the
			lower the transparency percentage, and the more transparent the component)
font setting		nt setting	You can set the color, size, and alignment of the font (you can also check autofit size, which
			means that dragging the mouse changes the size of the component, and the text size changes

accordingly)

Security setting



Same to chapter 4-1-1 straight line security setting part.

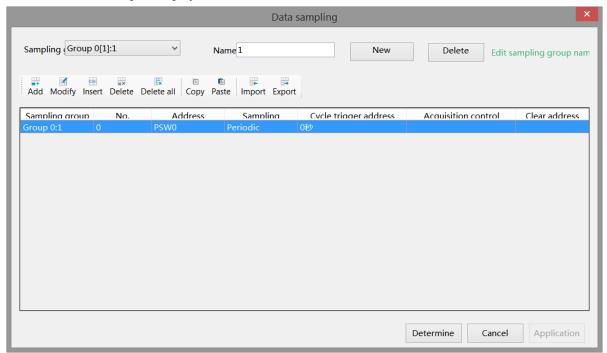
■ Location

Same to chapter 4-1-1 straight line location part.

4-5. Data processing

4-5-1. Data sampling

Click "Parts/Data Processing/Data Sampling" in the menu bar or click Data sampling in the toolbar to enter the data sampling setting interface, where you can add the data objects to be collected, as well as information such as object types, sampling conditions, and whether to store them. You can import/export them to a computer for use in trend charts and report displays.



Sampling group

sampling group	Select the sampling group. To facilitate user management of data, we have set the	
	classification of the group, and each group can add many collection methods	
name	Set the name of the sampling group	
new	Modify the name and click to add a sampling group	
delete	After selecting a sampling group, click to delete the selected sampling group	
edit sampling group	Batch management of established sampling group name	
name		

Note: When creating a new sampling group for the first time, please enter a user-defined name in the "Name" field and click "New" to add a new sampling group. Otherwise, a message "Sampling Group Name cannot be blank" will be displayed.

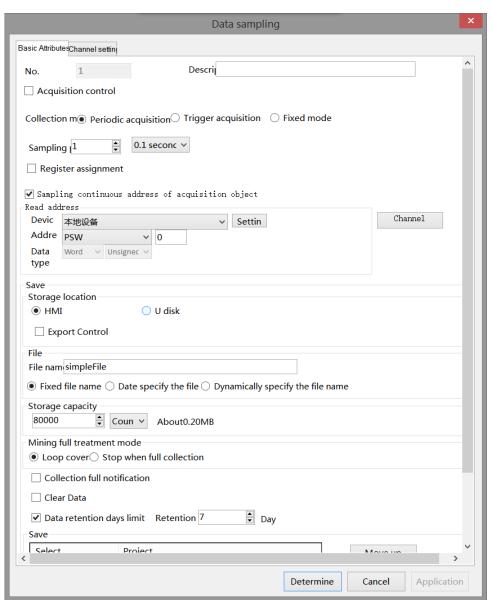
■ Information

add	After selecting a sampling group, click Add to open the data sampling attribute setting
auu	After selecting a sampling group, check Add to open the data sampling attribute setting
	box (see "Information Add" below for specific setting methods)
modify	Modify the selected sampling information
insert	Insert a new sampling information at the selected sampling information, optionally above
	or below

delete	Delete selected sampling information
delete all	Delete all sampling information for this group
copy	Copy selected sampling information
paste	Paste the copied information, and the copied information will be displayed on the last line
	of the current sampling group
import	Import excel file from your computer
export	Export all the sampling information edited in the software to the designated location on
	the computer as an Excel file

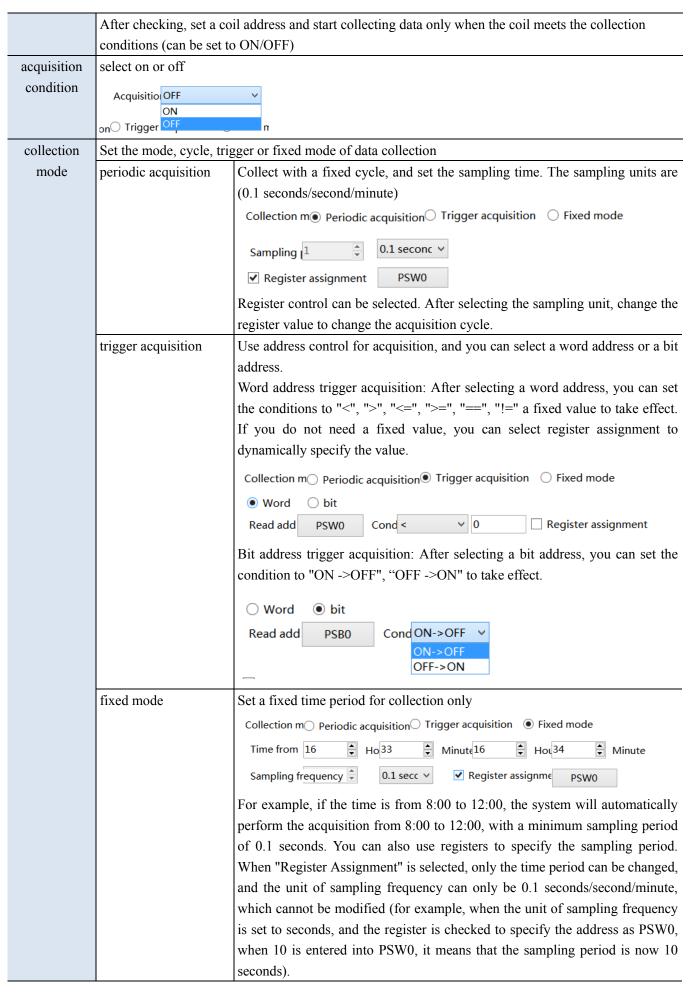
Add information

After clicking "Add"/"Modify", the window shown below will pop up, where you can edit the sampling information.

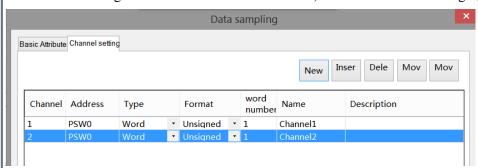


■ Basic attributes

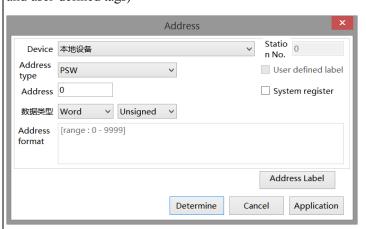
No.	The number of this sampling group is displayed and cannot be edited	
description	Set the description of the sampling group for use only as a note for project editing	
acquisition control	Acquisitio OFF	



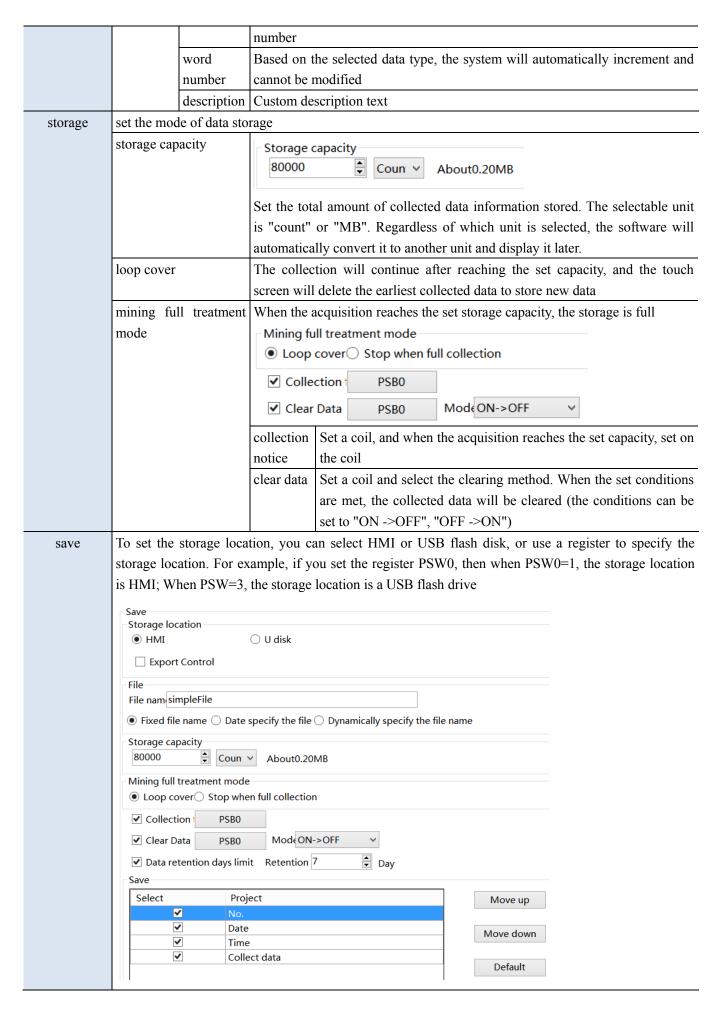
Sampling continuous address of acquisition object Add the address of the data object that needs to be sampled. If the sampling address is continuous, you can directly set the first address on the current page. Click "Channel Settings" on the right to enter the channel setting interface. Click Add Channels, and the system will automatically list them in order based on the user-defined data type. Channel settings will be described in detail below. If the sampling address is not continuous, you can uncheck "sampling continuous address of acquisition object", Click "Channel" on the right to set the address in the channel, as shown in the following figure

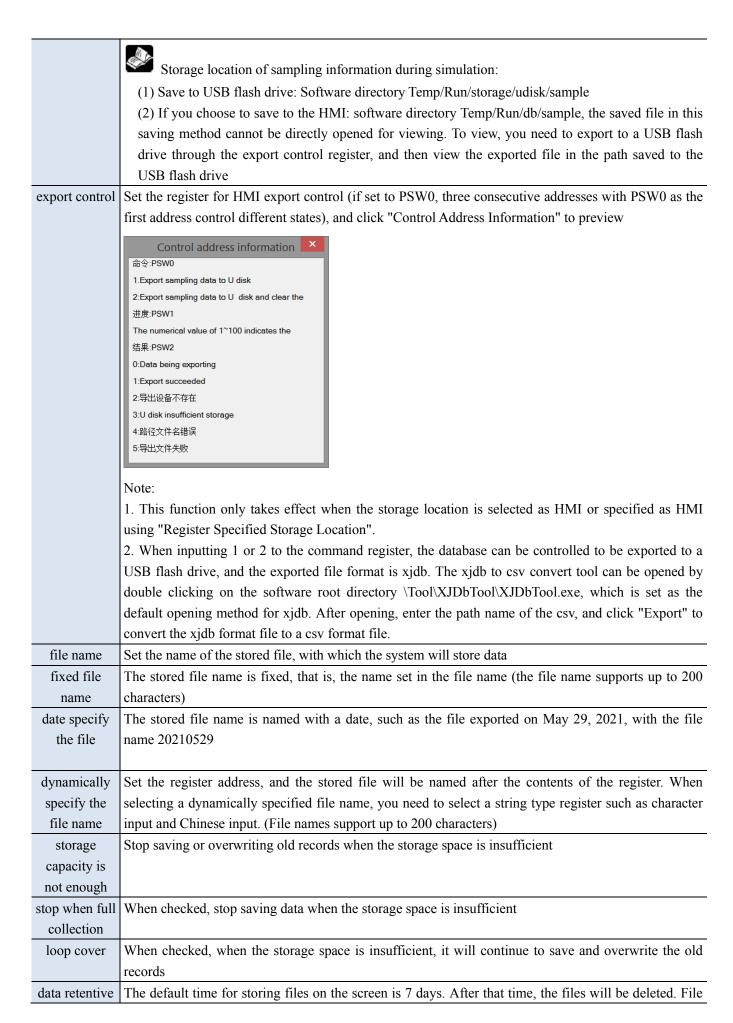


read	device	Device port currently communicating
address	address	Set Target Register Number
	data type	The default value is Word unsigned and cannot be modified. To modify the
		channel data type, click "Channel Settings" to change it
	setting	Click "Settings" to enter the address setting interface. This interface allows
		you to set and use system registers and user-defined tags. You can click the
		address tag library or project tree - library - address tag library below to set
		the tags used (see 5-2 Address Tag Library for the use of address tag library
		and user-defined tags)



operation	new	add sampling channel
items	insert	Insert a new channel below the selected channel
	delete	delete the selected channel
	move up	Move the selected channel up
	move	Move the selected channel down
	down	
channel	channel	Incremental by default and cannot be modified
setting	address	You can customize settings only if "Sampling continuous address of
		acquisition object" is not checked. If it is checked, the system will
		automatically increment based on the first address and data type.
	type	Byte-8Bit, Word-16Bit, DWord- 32Bit, DDWord -64Bit
	format	BCD-BCD format, Hex format, Signed number, Unigned number, Floating

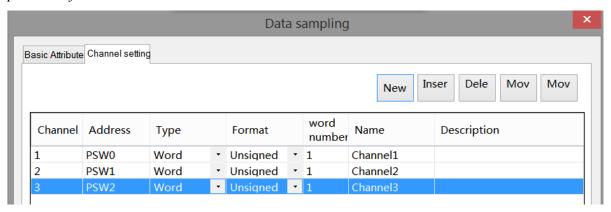




days limit	retention time can be set to a maximum of 1000 days
save content	Set the stored items and sorting. The saved content can be selected from serial number, date, time, and
	collected data. You can move the saved content up, down, and restore the default sorting operation.

Channel setting

Set the data source of the current sampling group. When the address of the selected collection object is continuous, the address column cannot be edited, and the system automatically increments based on the data type of the previous row of data. The address column can only be edited if "sampling continuous address of acquisition object" is not checked.

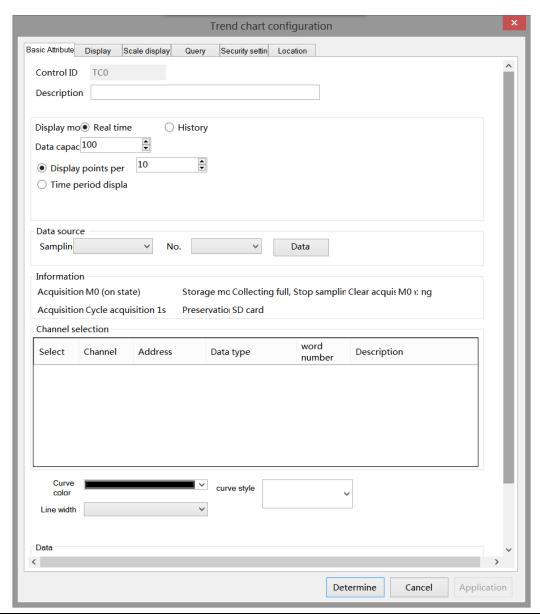


4-5-2. Trend map

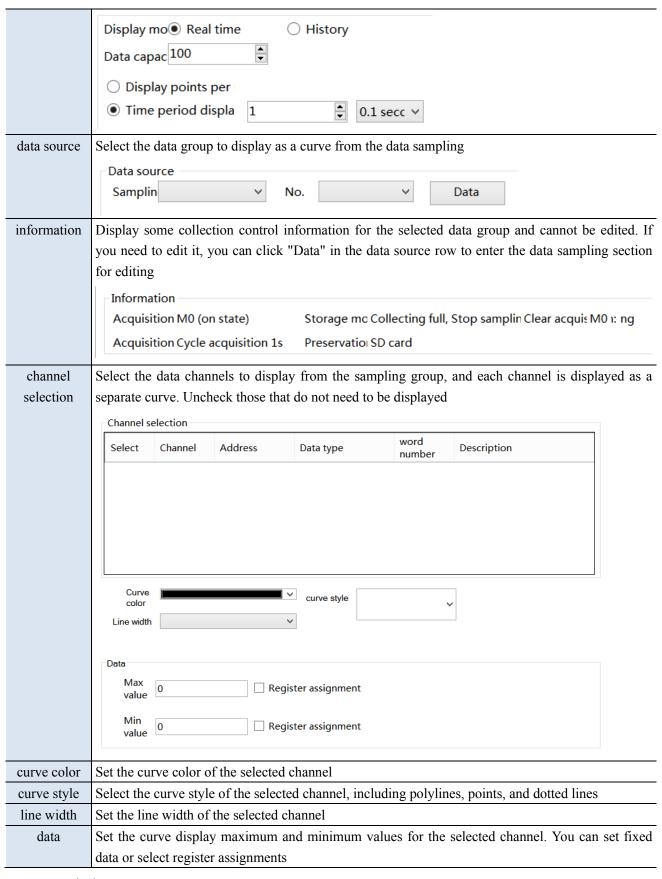
Display the data collected during data sampling in the form of a curve, and query the data within a certain time range.

- 1. Click trend chart icon in the menu bar or click "Parts/Data Processing/Trend Chart" in the device bar in the control window, move the cursor to the screen, click the left mouse button to place, click the right mouse button, or click ESC to cancel the placement. Modify the length and width of the border through boundary points.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components. You can also double-click on "Trend Chart" or select "Trend Chart" and right-click to select "Properties" to set attributes.

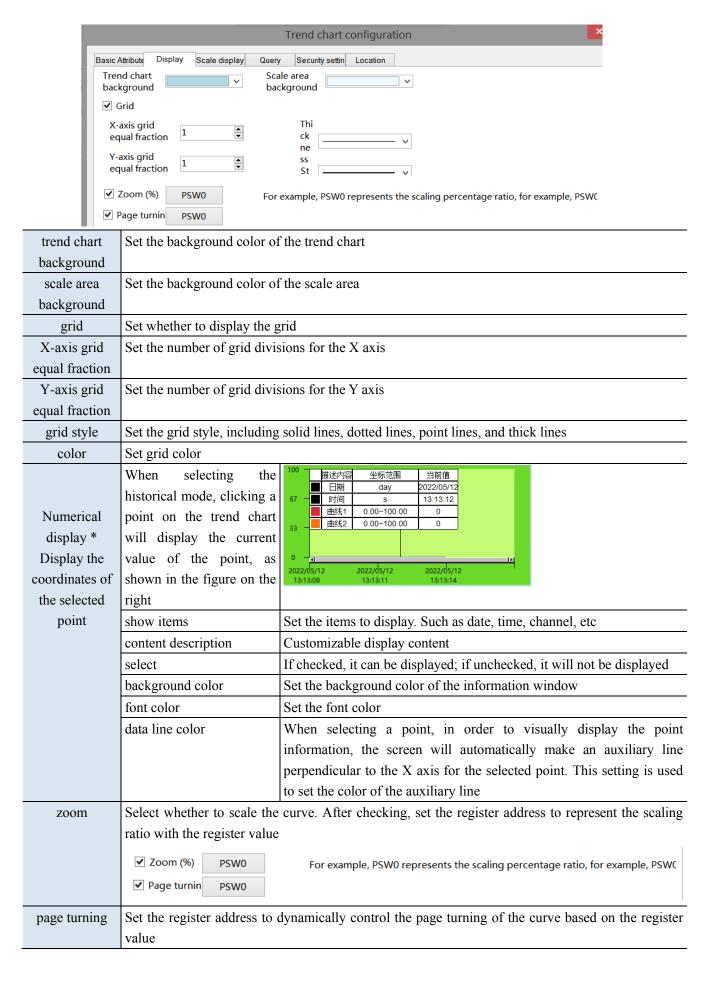
■ Basic attributes



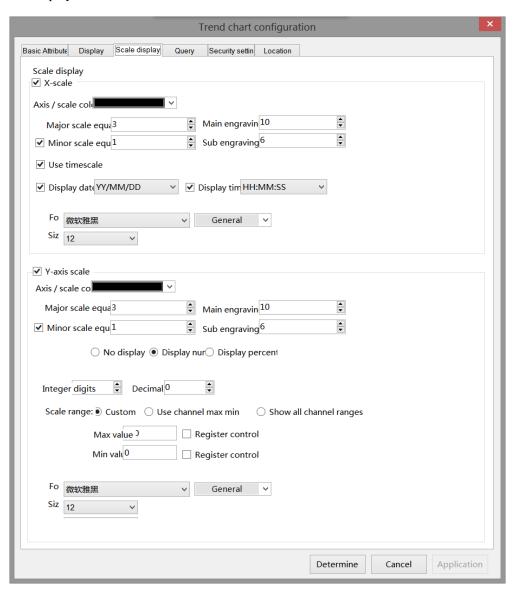
control ID	It is used for system management control, and cannot be operated by users
description	Can be used to comment on the purpose of this control
display mode	Select whether the data displayed in the trend chart is real-time or historical data
data capacity	Set the maximum number of points displayed in the trend graph (the maximum data capacity of a
	single channel is 5000)
display	Set the number of data points on the current display page of the trend chart (the maximum data
points per	capacity of a single channel is 5000). When the number of points per screen is set to be less than
screen	the maximum number of points, a button or scroll bar is displayed below the curve to click or
	scroll to view the curve that is not displayed on the current page
time period	Set the time displayed on the current display page of the trend chart. The unit can be customized,
display per	with a minimum unit of 0.1 seconds.
screen	



Display



■ Scale display



X scale	axis/scale color	Set the display color for the X axis and scale	
	major scale	Set the number of segments for the X-axis major divisions	
	segment		
	main scale length	Set the display length of the major divisions	
	sub scale	When checked, the sub scale will be displayed on the control, where the number of	
	segment	sub scale segments is set	
	sub scale length	Set the display length of the sub scale	
use time scale		When checked, it will be displayed in the control with a time scale	
dis	splay date	When checked, the date will be displayed on the time scale	
display time		When checked, the time will be displayed on the time scale	
font		Set the font for scale display	
size		Set the size of the scale display text	
Y scale	axis/scale color	Set the display color for the Y axis and scale	
	major scale	Set the number of segments for the Y-axis major divisions	
	segment		
	main scale length	Set the display length of the major divisions	

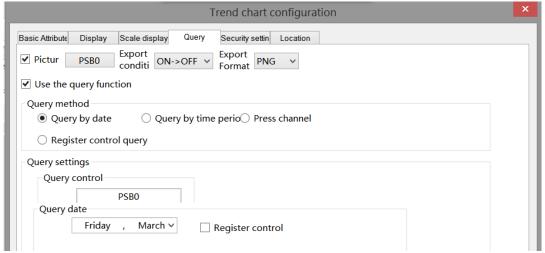
	sub scale	When checked, the sub scale will be displayed on the control, where the number of	
	segment	sub scale segments is set	
	sub scale length	Set the display length of the sub scale	
SC	cale style	Choose whether to display scale marks, which is the style of display. You can choose	
		to display numbers or percentages, or not to display them	
ir	nteger bit	After selecting the display flag, you can set the integer digits displayed as needed	
decimal bit		Set the number of decimal places to display numbers as needed	
sc	ale range	Set the maximum and minimum values for scale display	
		(1) Use a custom range that can be set as a constant or specified through a register	
		(2) Use the maximum and minimum values in the channel	
		(3) Show all channel ranges	
	font Set the font for scale display		
size Set the size of the scale display text		Set the size of the scale display text	

Query

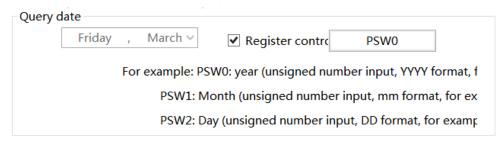
After checking Use the query function with the query function of filter data based on conditions and display it in the current trend graph.

There are three ways to query: query by date, query by time period, and query by channel. You can also use register control to query.

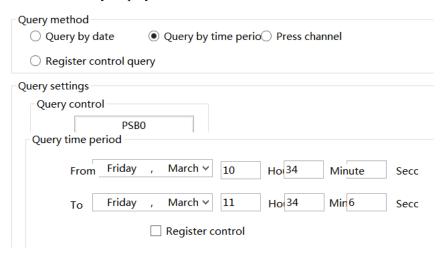
(1) Query by Date: Enter the date to query. After the query control bit is turned on, the filtered results will be automatically displayed.



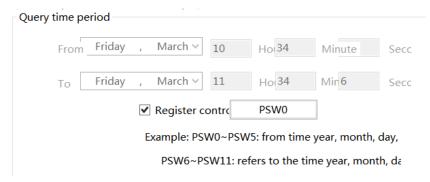
You can also select "register control query" to dynamically set the query address. As shown in the following figure, if you set a header address, such as PSW0, the query address will occupy a total of 3 addresses from PSW0 to PSW2, where PSW0 represents the year, PSW1 represents the month, and PSW2 represents the day, all of which are single word unsigned numbers. For example, PSW=2021, PSW2=5, and PSW3=29, the data collection record information on May 29, 2021 will be queried.



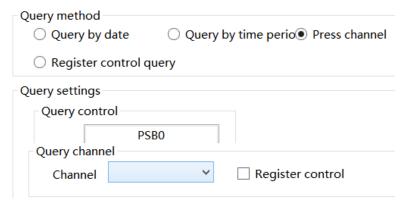
(2) Query by time period: Enter the start time and end time to query. After the query trigger bit is turned on, the filtered results will be automatically displayed.



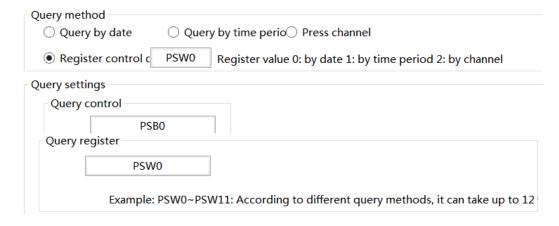
Similarly, you can also use register control. After setting the first address, 12 register addresses, including the first address, will be occupied. The first 6 addresses represent the year, month, day, hour, minute, and second of the start time, and the last 6 addresses represent the year, month, day, hour, minute, and second of the end time. The format is consistent with that manual setting.



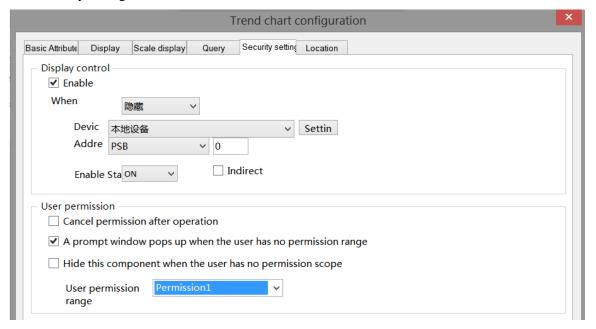
(3) Query by channel: Select or dynamically specify the number of channels to query the records of corresponding channels.



(4) Register control query: Determine the query method based on different register values. When the value is 0, query by date. When the register value is 1, query by time period. When the register value is 2, query by channel.



Security setting



Same to chapter 4-2-10 indicator key security setting part.

■ Location

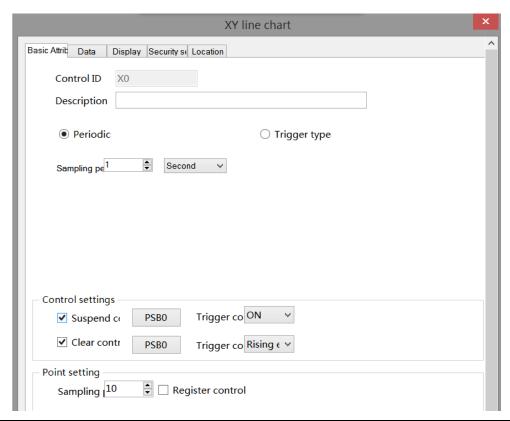
Same to chapter 4-1-1 straight line location part.

4-5-3. XY line chart

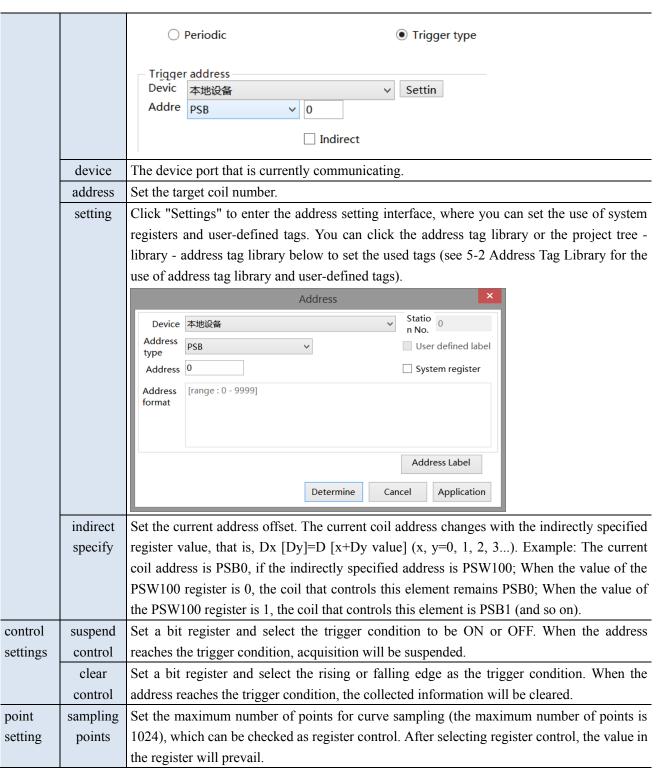
By collecting data from two consecutive sets of registers on the site, one or more consecutive sets of coordinate points are formed, and graphs are drawn and displayed in the form of points, lines, or dotted lines, which is beneficial for the on-site engineer to analyze the accuracy of the data.

- 1. Click icon in the menu bar or click "Parts/Data Processing/XY Line Chart" in control window device bar, move the cursor to the screen, click the left mouse button to place, click the right mouse button, or press ESC to cancel the placement. Modify the length and width of the border through boundary points.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components. You can also double-click the "XY Line Chart" or select the "XY Line Chart", right-click, and select "Attributes" to set attributes.

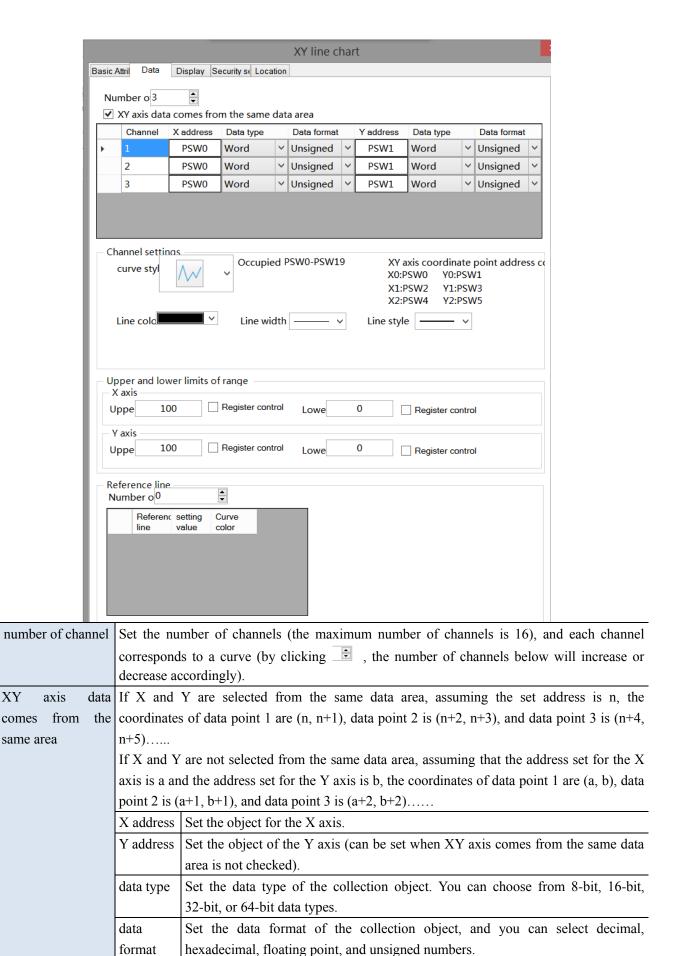
Basic attributes



control ID		ol ID	It is used for system management control and cannot be operated by users.			
description		iption	Can be used to comment on the purpose of this control.			
samp	ling	periodic	Set the sampling period and collect it regularly according to the cycle time. The cycle time			
mode	2		defaults to 1 second, and can be adjusted as needed (collection unit: 0.1			
			second/second/minute).			
		trigger	Set a bit register and select the rising or falling edge as the trigger condition. When the			
		type	address reaches the trigger condition, a piece of information is collected.			



Data



lower Display range of X and Y axis data objects.

Each channel can be set with a different curve style, line color, width, and line type.

XY

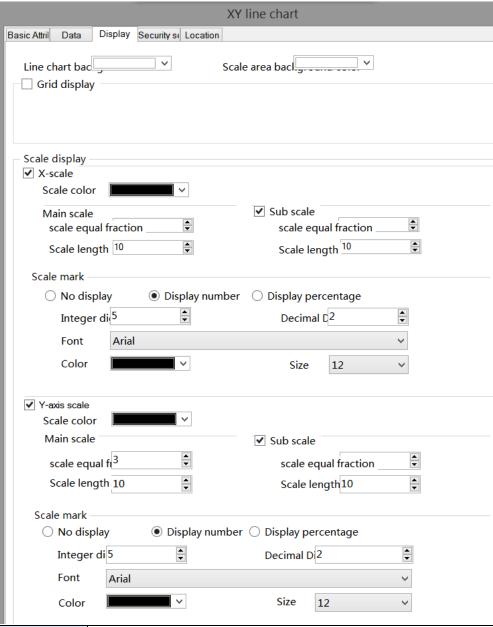
channel setting

and

upper

limits of range	X axis upper limit: Set the maximum value of X-axis data, which can be specified by		
		register.	
		lower limit: Set the minimum value of X-axis data, which can be specified by	
		register.	
	Y axis	xis upper limit: Set the maximum value of Y-axis data, which can be specified by	
		register.	
		lower limit: Set the minimum value of Y-axis data, which can be specified by	
		register.	
reference line	Select whether to set a reference curve, and set coordinate points and curve colors. The		
	coordinate points can be dynamically specified by the register.		

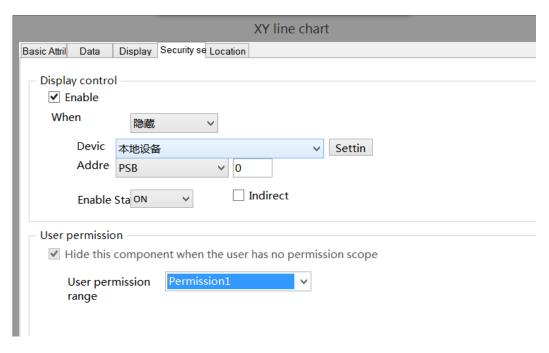
Display



liı	ne chart background	Set the background color of the line chart.
	color	
sc	ale area background	Set the background color of the scale area.
	color	

	grid display	Set whether the	grid is displayed.	
grid	X axis grid equal	Sets the number	r of grid divisions for the X axis.	
display	Yaxis grid equal	Sets the number of grid divisions for the Y axis.		
	line style	Set the line style	e, including solid line, dotted line, dot line, thick line, and so on.	
	line color	Set the grid cold	or.	
			Y Scale area back	
		Line chart bac ✓ Grid display	Scale alea Dackgrand	
		X-axis grid eq		
		Line style	Y Line color	
scale	X scale	Scale Color	Sets the display color for the X axis and scale.	
display		main scale	Set the X axis main scale segments	
		equal fraction		
		main scale	Set the main scale display length	
		length		
		sub scale equal	after checking, display sub scale on the control, set the sub scale	
		fraction	segments	
		sub scale	Set the sub scale display length	
		length		
	scale mark		to display scale marks, which is the display style. You can choose to	
			s, percentages, or not.	
		integer bit	After selecting the display flag, you can set the integer digits	
			displayed as needed.	
		decimal bit	Set the number of decimal places to display numbers as needed.	
		font	Set the font for the scale display.	
		size	Set the size of the scale display text.	
	** 1	color	Set the color of the scale display text.	
	Y scale	scale color	Set the display color for the Y axis and scale.	
			Set the Y axis main scale segments	
		equal fraction	Set the main goals display length	
		main scale length	Set the main scale display length	
			after checking, display sub scale on the control, set the sub scale	
		fraction	segments	
			Set the sub scale display length	
		length	See the sad seale display length	
		10115111		

■ Security setting



Same to chapter 4-1-1 straight line security setting part.

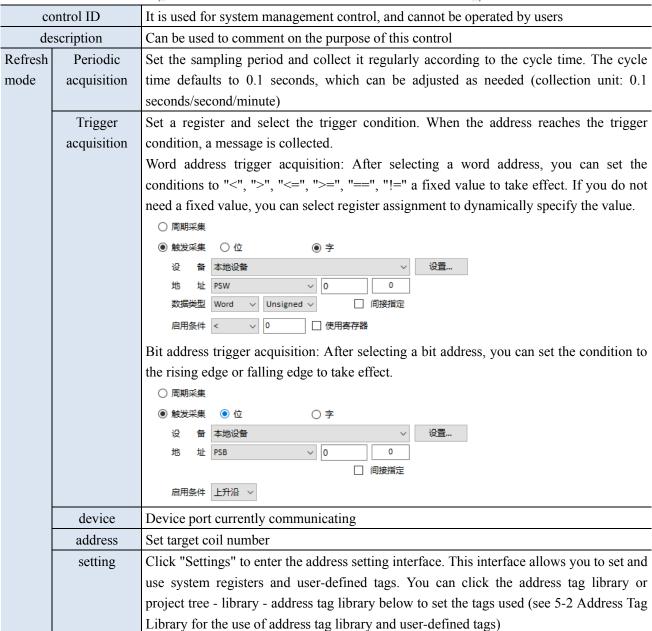
Location

Same to chapter 4-1-1 straight line location part.

4-5-4. XY trend chart

- 1. Click the XY trend chart display icon in the control window device bar or "Parts/Data Processing/XY Trend Chart" in the menu, move the cursor to the screen, click the left mouse button to place, click the right mouse button, or click ESC to cancel the placement. Modify the length and width of the border through boundary points.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components. You can also double-click on the "XY Trend Chart" or select the "XY Trend Chart", right-click, and select "Attributes" to set attributes.
 - Basic attributes





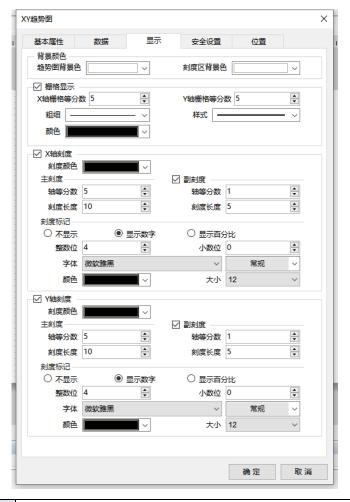
		地址
	indirect	Set the current address offset. The current coil address changes with the indirectly
	specify	specified register value, that is, Dx [Dy]=D [x+Dy value] (x, y=0, 1, 2, 3). Example:
		The current coil address is PSB0, if the indirectly specified address is PSW100; When
		the value of the PSW100 register is 0, the coil that controls this element remains PSB0;
		When the value of the PSW100 register is 1, the coil that controls this element is PSB1
		(and so on)
point	sampling	Set the maximum number of points for curve sampling, which can be checked as register
setting	points	control. After selecting register control, the value in the register will prevail
	Acquisition	Set the collection status when the sampling points are fully collected, stop sampling,
	and	clear the data, and resample or cycle over
	processing	
	method	
	Upper and	Set the upper and lower limits of the XY axis, which can be specified through registers
	lower limits	
	of range	

Data



channel numbers	Each channel corresponds to a curve. You can edit the channel by clicking Add Channel and	
	Delete Channel	
X address	Set the data type and format of the X-axis address	
Y address	Set the data type and format of the Y-axis address	
data type	Set the data type of the collection object. You can select 8-bit, 16-bit, 32-bit, or 64-bit data	
	types	
data format	Set the data format of the collection object, and you can select decimal, hexadecimal, floating	
	point, and unsigned numbers	
curve style	After selecting a channel, you can set the display style of the curve, the thickness, style, and	
	color of the curve line	
reference line	Click on the add/delete button to add/delete reference lines. The coordinate value of the	
	reference line cannot be a decimal	
description	User defined description content	
curve color	Set the color of the reference line	
curve mode	Two display modes for lines or points	
Coordinate point	Set the coordinate points of the reference line	

■ Display



trend chart background		Set the background	l color of the trend chart	
color				
scale	area background	Set the background	l color of the scale area	
	color			
	grid display	Set whether to display a grid		
grid	X-axis grid	Set the number of grid divisions on the X-axis		
display	equifraction			
	Y-axis grid	Set the number of	grid divisions on the Y-axis	
	equifraction			
	thickness	Set the thickness of grid lines		
	style	Set the style of gri	d lines, including solid lines, dashed lines, dotted lines, thick lines,	
		etc		
color		Set the color of grid lines		
scale	X/Y axis scale	scale color	Set the display color of the X/Y axis and scale	
display		main scale	Set X/Y axis main scale segments	
		equifraction		
		main scale length	Set main scale display length	
		sub scale	After checking, display sub scale on the control, set the sub scale	
		equifraction	segments	
		sub scale length	Set sub scale display length	
	scale mark	Choose whether to display the scale mark, which is the displayed style. You can		
		choose to display r	numbers, percentages, or not	

	integer bit	After selecting the display flag, you can set the number of integer digits displayed as needed
	decimal bit	Set the decimal places for displaying numbers as needed
	font	Set the font for scale display
	size	Set the size of the scale display text
	color	Set the color of the scale display text
Y scale	scale color	Set the Y axis scale color
	main scale	Set the Y axis scale segments
	equifraction	
	main scale length	Set the main scale display length
	sub scale	After checking, display sub scale on the control, set the sub scale
	equifraction	segments
	sub scale length	Set sub scale display length

Security setting



Same to chapter 4-1-1 straight line security setting part.

■ Location

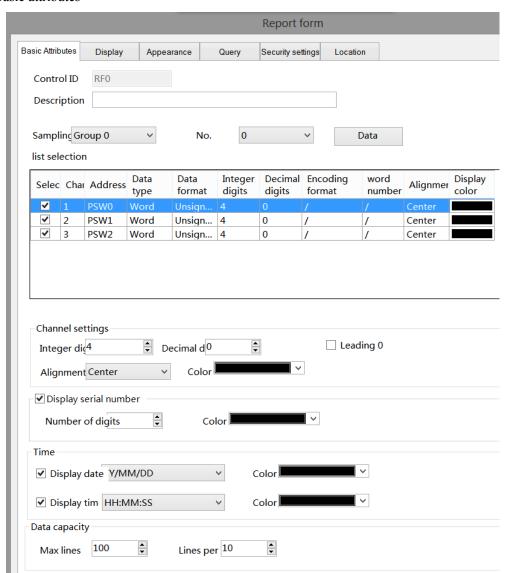
Same to chapter 4-1-1 straight line location part.

4-5-5. Report form

Display the records stored in data sampling in a table format, allowing for querying data within a certain time range.

- 1. Click the icon in the control window, or click Parts/Data Processing/Report form in the menu, move the cursor to the screen, click the left mouse button to place, click the right mouse button or use the ESC key to cancel the placement. Modify the length and width of the border through the boundary point.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components. You can also double-click on "Report form" or select "Report form" and right-click to select "attributes" for attribute settings.

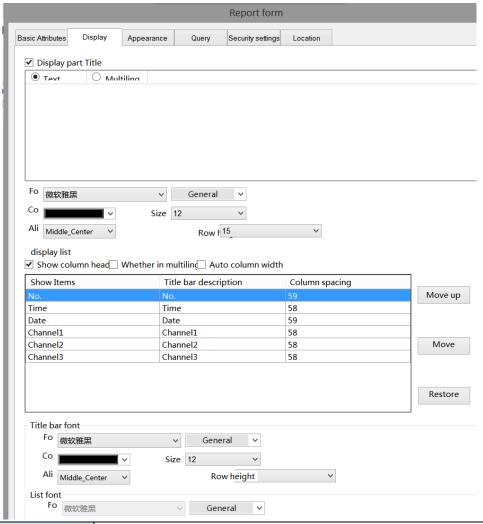
■ Basic attributes



control ID	Used for system management controls, user cannot operate	
description	Can be used to annotate the purpose of this control	
sampling group	Select the data to be displayed from the data sampling and display it by group. If you	
	need to modify the sampling data, you can click on "Data" on the right to enter the data	
	sampling page for modification.	
list selection	Select the channels that need to be displayed from the sampling group. The default is to	
	select all. If there are any channels that do not need to be displayed, you can uncheck	
	them. Each channel occupies one column of data display.	
channel settings	Set the integer and decimal places displayed for each channel, whether to lead with 0,	
	alignment, and text color.	
display serial number	Choose whether to display the sequence number column. If you choose to display it, the	
	automatically incremented sequence number will be displayed in the first column of the	
	table.	
number of digits	Set the number of digits displayed in the sequence number column, with a default of 3	
	digits.	
color	Set the color for displaying text in the sequence number column.	
time	Choose whether to display the time column.	

display date		Set the date display format.	
color		Set the color of the date display text.	
display time		Set the time display format.	
color		Set the color of the time display text.	
data	max lines	Set the maximum number of rows displayed in the table (up to 5000 rows).	
capacity	lines per page	Set the number of data rows on the current display page of the table. When the collecte	
		rows exceed the set number of rows per screen, there is a moving bar below the trend	
		chart to control the page turning of the trend chart.	

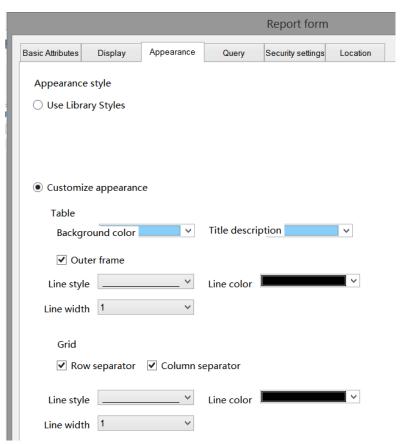
Display



display part title		Set the title of the control is displayed in the first row of the table or can be set to			
		multiple languages (refer to 5-1 for details of multiple languages).			
	font	Set the font for component titles.			
	size	Set the size of the component title text.			
	color	Set the color of component title text.			
display	show column head	After checking, the title of each column can be displayed.			
list	whether in	When checked, multiple languages will be used for the title line.			
	multiling				
	auto column width	After checking, the table will automatically adjust the column width based on the			
		content of each column.			

title bar font		Set the font, size, and color of the title bar.			
list font		Set the font, size, and color of text in the list except for the title.			
list	chronological	According to the order of collection time, the first collected information is			
sequence	order	displayed below the table, and the later collected information is displayed above			
		the table, that is, the latest collection information is displayed at the bottom.			
	Time reversal	According to the reverse order of collection time, the first collected information is			
		displayed on the top of the table, and the second collected information is displayed			
		below the table, that is, the latest collection information is displayed at the top.			

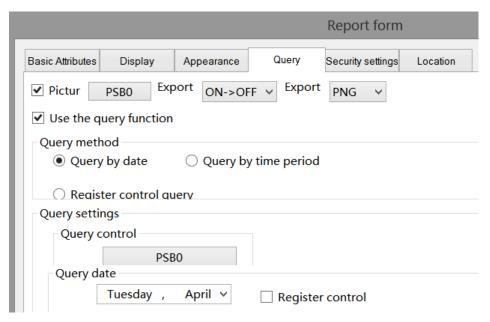
Appearance



use library style		Select a table style from the gallery.			
st	yle selection	Click to select the desired style appearance from the gallery.			
	style color	Modify the appearance color.			
custo	nize appearance	Set your own appearance style.			
table	background color	Set the overall background color of the table.			
	title background	Set the background color of the title row.			
	color				
	outer frame	After checking, display the peripheral border.			
	line style	Set the form of box and line, you can choose lines, dotted lines, dashed lines, etc.			
	line color	Set the color of the border lines.			
	line width	Set the width of the line.			
grid	grid	Set the display style of the grid.			
	row separator	When checked, a horizontal border will be displayed.			
	column separator	When checked, a vertical border will be displayed.			

	line style	Set the form of box and line, you can choose lines, dotted lines, dashed lines, etc.
line color		Set the color of the border lines.
	line width	Set the width of the line.

Query



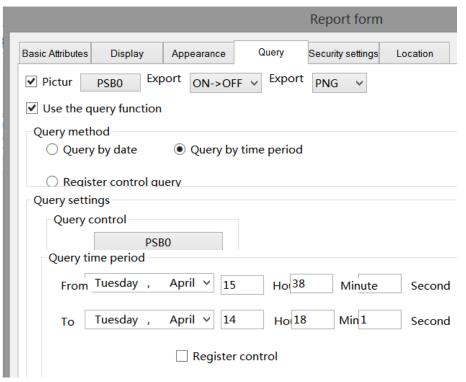
After checking, you can use the query function to filter data based on conditions and display it in a table. There are two ways to query: by date, by time period, or by register control.

(1) Query by Date: Enter the date you want to query, and after the query control bit is connected, the filtered results will be automatically displayed.

You can also choose "register control" to dynamically set the query address. As shown in the following figure, setting a first address, such as PSW0, will occupy a total of three addresses from PSW0 to PSW2. PSW0 represents year, PSW1 represents month, and PSW2 represents day, all of which are single word unsigned numbers. For example, PSW=2021, PSW2=5, and PSW3=29, the data collection record information on May 29, 2021 will be queried.



(2) Query by time period: Enter the start and end times to query, and after the query trigger bit is connected, the filtered results will be automatically displayed.



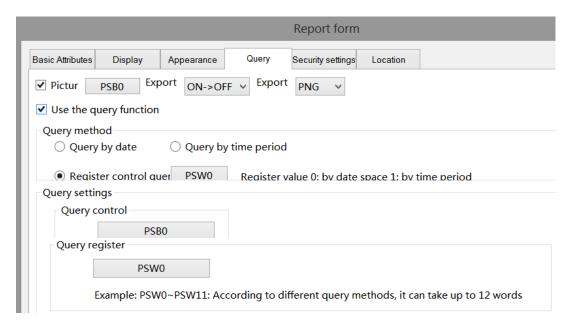
Similarly, register control can also be used. After setting the first address, 12 register addresses, including the first address, will be occupied. The first 6 addresses represent the year, month, day, hour, minute, and second of the start time, and the last 6 addresses represent the year, month, day, hour, minute, and second of the end time. The format is consistent with manual settings.



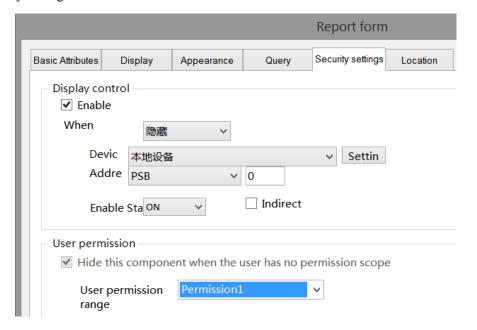
PSW0 ~ PSW5 Represent start time Year/Month/Day

PSW6 ~ PSW11 Represent end time Year/Month,

(3) Register controlled query method: Determine the query method based on different register values. When the value is 0, query by date; when the register value is 1, query by time period.



Security setting



Same to chapter 4-1-1 straight line security setting part.

■ Location

Same to chapter 4-1-1 straight line location part.

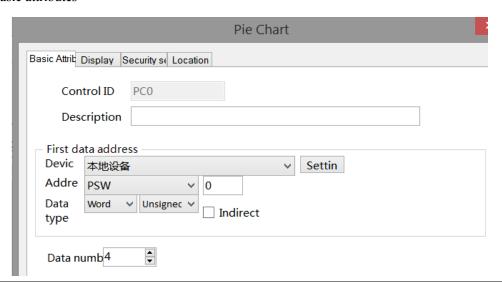
4-5-6. Pie chart

Proportion of data displayed in block format

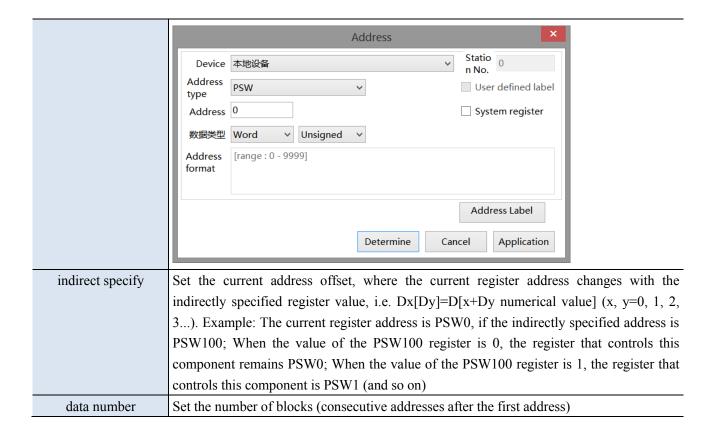
Example: If the first address is a and the number is set to n, then the addresses displayed for each section are a, a+1, a+2... a+(n-1). The proportion of each sector is the current sector's value/the sum of the values of each sector.

- 1. Click the "Parts/Data Processing/Pie Chart" in menu bar or the " pie chart icon in the device bar of the control window, move the cursor to the screen, click the left mouse button to place, click the right mouse button or use the ESC key to cancel the placement. Modify the length and width of the border through the boundary point.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components. You can also double-click on the "pie chart" or select the "pie chart" and right-click to select "attributes" for attribute settings.

Basic attributes

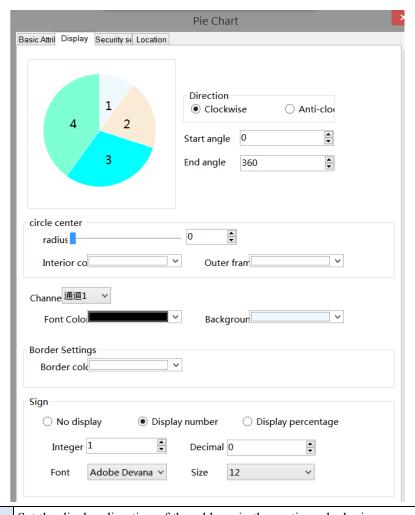


control ID	Used for system management controls, user cannot operate		
description	Can be used to annotate the purpose of this control		
first data address	Set the first address for displaying section data		
device	The device port currently communicating with		
address	Set target register number		
data type	Byte-8Bit; Word-16Bit; DWord-32Bit; DDWord-64Bit; BCD format; Hex; Signed		
	number; Unigned number; Floating number		
setting	Click "Settings" to enter the address setting interface. This interface allows you to set the		
use of system registers and user-defined labels. You can click on the address la			
	or the project tree - library - address label library below to set the labels used (refer to 5-2		
	Address Label Library for the use of address label library and user-defined labels)		



Display

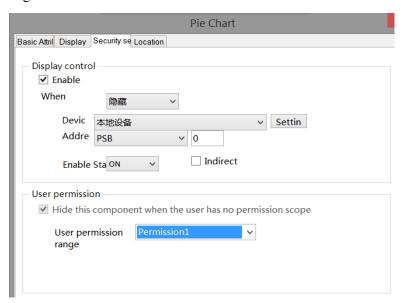
direction



Set the display direction of the address in the section, clockwise or counterclockwise

clockwise		Arrange the display in the order of clock rotation			
counterclockwise		Display in reverse order of clock rotation			
start angle		Set the starting angle for the pie chart display, with a default of 0 degrees and a clock			
		direction of 12 o'clock (0 o'clock)			
ene	d angle	Set the ending angle for the pie chart display, default to 360 degrees, clock 12 o'clock (0			
		o'clock) direction, default to full circle display			
circle	circle	Set center size			
center	center				
	radius	Set the radius of the circle, which can be set through the scroll bar or by entering a number			
	interior	Set the display color inside the center of the circle			
	color				
	outer frame	Set the display color of the center outline			
	color				
channel	channel	Select each channel and set the font and background color for each channel			
	font color	Set the font color of the selected channel			
background		Set the background color of the selected channel			
	color				
border	border	Set the color of the pie chart border			
settings	color				
sign	sign	Set the data style displayed on the section, which can be displayed as a percentage,			
		numerical value, or not displayed			
	decimal	Set the decimal places for displaying numbers or percentages, which cannot be set when the			
		marker is selected not to be displayed			
	font	Set the displayed data font, which cannot be set when the tag is selected not to be displayed			
	size	Set the text size for displaying data			

■ Security setting



Same to chapter 4-1-1 straight line security setting part.

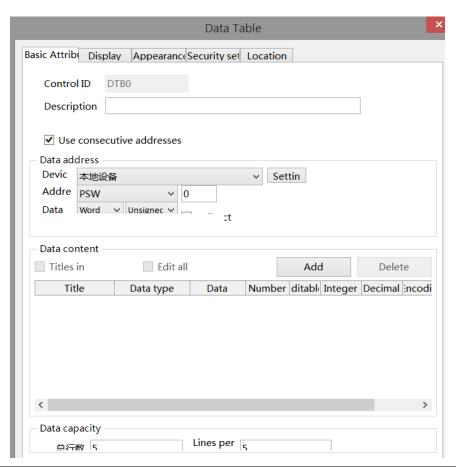
■ Location

Same to chapter 4-1-1 straight line location part.

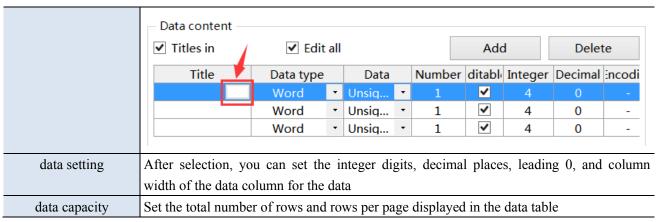
4-5-7. Data table

- 1. Click the " table icon in the control window or Parts/Data Processing/Data Tables in the menu, move the cursor to the screen, click the left mouse button to place, click the right mouse button, or use the ESC key to cancel the placement. Modify the length and width of the border through the boundary point.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components, or double-click the drawn "Data Table" or select "Data Table" and right-click to select "attributes" for attribute settings.

Basic attributes

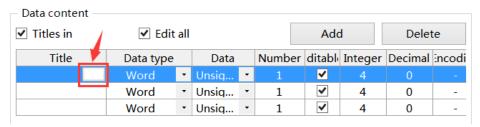


control ID	Used for system management controls, user cannot operate		
description	Can be used to annotate the purpose of this control		
use consecutive	When checked, the address order will be automatically calculated based on the first		
addresses	address (please refer to the notes below for the use of consecutive addresses without		
	checking)		
data address	Set the first address of the data (only appears when continuous addresses are checked)		
data content	Set the data title, data type, and data format to be displayed in the table		
add/delete	add or delete the data		
edit all	After checking, all the data items to be edited can be checked with one click, and the data		
	can be modified in the data table		
titles in	When checked, the title can be in multiple languages. After checking, the title name of		
multi-language	each column can be set to display in multiple languages. Click "to enter the		
	multilingual settings (refer to 5-1 label multilingual for specific usage)		





(1) When the title is checked to display multiple languages, "will be displayed in the title description. Clicking on it will lead to the multi language library setting interface for setting multiple languages.



(2) When continuous addresses are not used, the display is shown in the following figure:



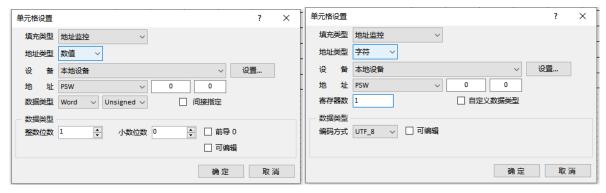
The way to set data is as follows:

1 Place the mouse over the table, and when the mouse changes from an arrow to a hand shape, click on a cell in the table to set the address

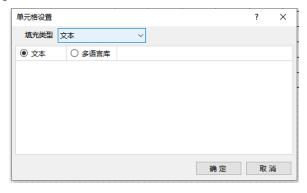


(2) Set the address

Fill type: address monitoring, monitoring numerical values and characters.



Fill type: text monitoring

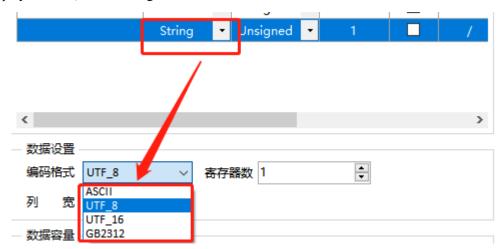


Set the description of three controls including data input, character input, and Chinese input.

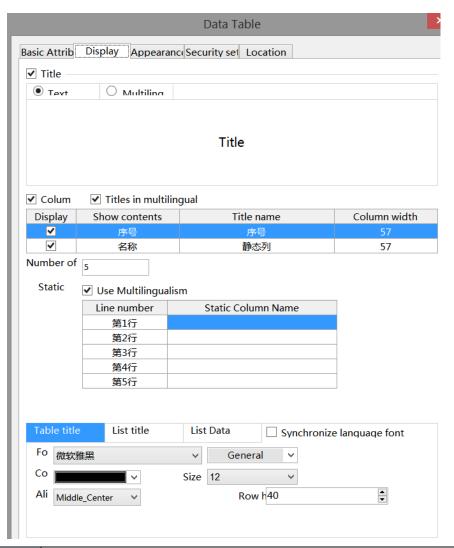
(3) When the data type is string, characters or Chinese can be displayed.

To display characters, the encoding format must be set to ASCII, UTF 8 or UTF 16.

To display Chinese, the encoding format needs to be set to GB2312.

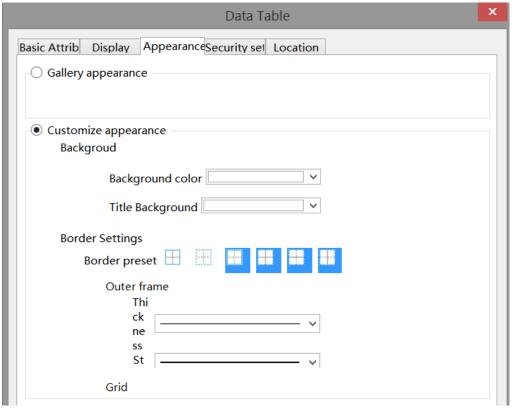


■ Display



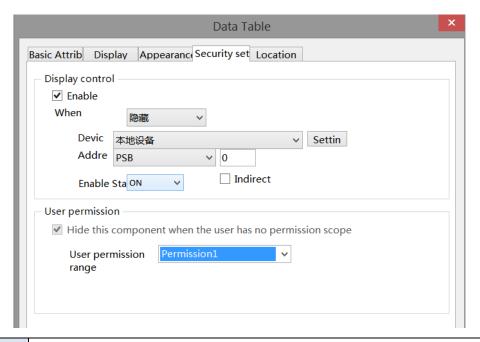
title	text	Set the name of the data table header		
	multiling	After checking, the header content can be set to multiple languages		
column		Show column titles after checking		
titles in m	ultilingual	After checking, the title of each column can be set to display in multiple languages		
display number		After checking, an automatically incremented sequence number column will be displayed		
		in the first column of the table		
display name		After checking, the custom name of each row will be displayed, which can be edited in		
		the static column name table below, or whether to use multiple languages can be set		
table/list title Set the font, color, size, alignment, and line height for the title display		Set the font, color, size, alignment, and line height for the title display		
list data Set the color, size, alignment, and row height of the data style font		Set the color, size, alignment, and row height of the data style font		
synchronize language You can check to use the same font. After checking, the color, size, alignment,		You can check to use the same font. After checking, the color, size, alignment, and line		
font height of the three fonts remain consistent		height of the three fonts remain consistent		

Appearance



gallery	style	Click and select a table style from the gallery			
appearance	selection	Gallery appearance			
			Style selection		
customize	background	background	Set Table Background Color		
appearance		color			
		title color	set title background color		
	border	border preset	Select a border style based on the preview image		
	settings	outer frame Choose border thickness, style, and color			
		grid Choose the thickness, style, and color of the grid			

Security setting



display control	Use bit control to display the component, and hide the control when the condition is not met		
enable	When checked, display control will be enabled		
When validation	Set the display of the control when validation fails		
fails			
address	Set the target coil for positioning control		
enable state	Set the ON state to be valid or the OFF state to be valid;		
	Example: If the device is checked as shown in the above figure, the bit control is PSB0, and if		
	verification fails, it is hidden. If the enabled state is ON, the component is displayed normally		
	when PSB0 is ON, and if PSB0 is OFF, the component is hidden and not displayed.		
user permission	Set controlled permission levels. After setting the required user's permission range, the		
	following three functions can be checked as needed:		
	(1) After the operation is completed, the usage permission will be cancelled: if this option is		
	not checked, the corresponding level password needs to be entered every time the component		
	is operated. After checking, only one entry is required.		
	(2) When the user has no permission range, a prompt window will pop up.		
	(3) When the user does not have permission range, hide the component.		



Please refer to chapter 4-2-3 value input for permission function.

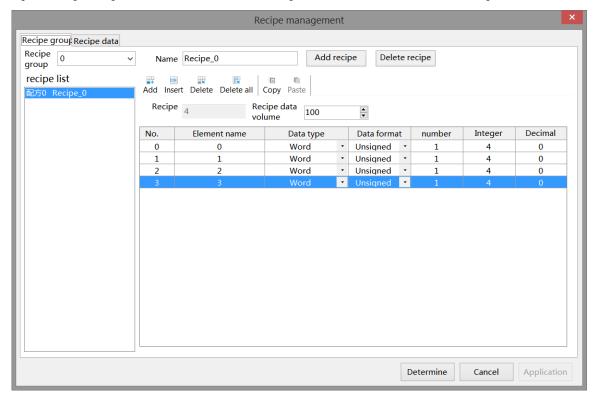
■ Location

Same to chapter 4-1-1 straight line location part.

4-6. Recipe

4-6-1. Recipe edit

click "parts/recipe/recipe edit in the menu or click recipe edit icon in tool bar to enter recipe edit interface.



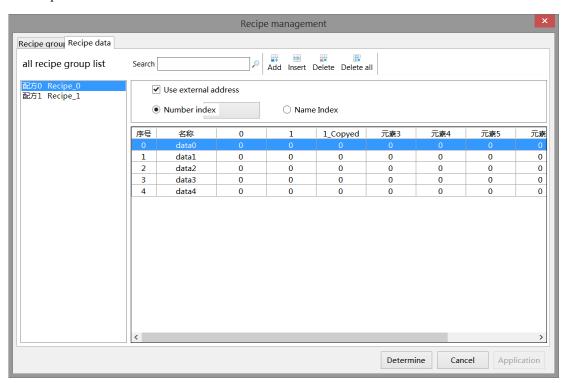
■ Recipe group

= Recipe group							
recipe group	Select the recipe group that needs to be edited, and all added recipe groups can be selected						
	through th	ne drop-down menu					
name	Set the na	me of the recipe group					
add recipe	After ente	ering the name, click on	"Add Recipe" to a	add a	new recipe gr	rou	p
delete recipe	Click to d	lelete the selected recipe	group				
recipe group list	Display a	ll added recipe group nu	imbers and names	in tl	ne list below		
add	Add recip	e elements					
insert	Insert a no	Insert a new recipe element below the selected recipe element					
delete	Delete sel	Delete selected recipe elements					
delete all	Delete all elements in this group						
copy	Copy the selected recipe element						
paste	Pasting the copied data at the selected location, a new piece of data named xxxx_copyed						
	will be ad	will be added					
	No.	Element name	Data type		Data format		
	0	0	Word	Ŧ	Unsigned	7	
	1	1	Word	•	Unsigned	•	
	2	1_Copyed	Word	•	Unsigned	•	
recipe length	Automatically display the length of the currently added recipe and cannot be edited						
recipe volume	Each group of recipe data has a separate data volume. As shown in the above figure, if the						
	data amount is set to 100, it means that up to 100 sets (0-99) of data can be set within the						

recipe group 0. If it exceeds this, a pop-up prompt will appear in the following figure. **Prompt** Current recipe has reached upper limit of data Ok recipe element list Show all added elements element No. Recipe element number, cannot be modified element Set element names, such as water, length, etc name data type Set the recipe element data type, which can be selected from 8-bit, 16-bit, 32-bit, or 64-bit data format Set the data format for recipe elements only when selecting

| Byte_String | Word_String | DWord_String | DDWord_String | DDWord_Strin the numbers can be set. Byte_String-1 character number Word_String-2 characters DWord String-4 characters DDWord_String-8 characters words Display the address length occupied by this element, with 16 bits being 1, 32 bits being 2, and 64 bits being 4 integer Set the integer digits of data Set the number of decimal places for data decimal

Recipe data



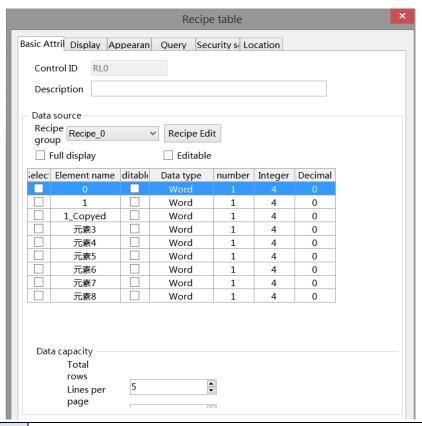
search Enter a name to search for recipe data		
add Add recipe data below the selected location		
insert	insert Insert a new piece of data at the selected data	
delete Delete selected recipe data		
delete all Delete all recipe data for this group		
use external address Recipe index function, which can be indexed by recipe number or name		

4-6-2. Recipe table

Used to display the recipe data set in recipe edit, which can be edited in this table.

- 1. Click "Parts/Recipe/Recipe Table" icon in the menu bar or " icon in the device bar of the control window, move the cursor to the screen, click the left mouse button to place, click the right mouse button, or use the ESC key to cancel the placement. Modify the length and width of the border through the boundary point.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components. You can also double-click on the "Recipe Table" or select "Recipe Table" and right-click to select "attributes" for attribute settings.

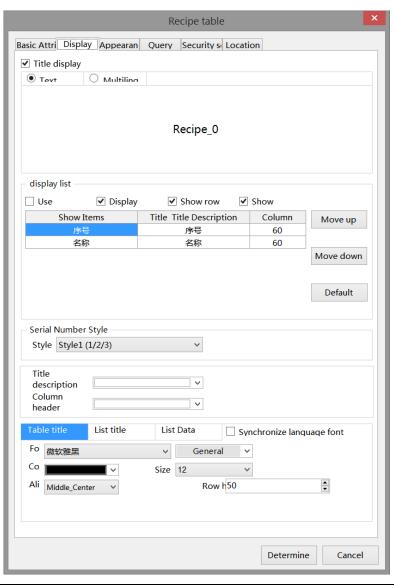
Basic attributes



control ID		Used for system management controls, user cannot operate
description		Can be used to annotate the purpose of this control
data	recipe	Select the recipe group that needs to be displayed, or click on the recipe editor to add or
source	group	modify the recipe group
		When the recipe group is selected, the table below displays all the elements of the
		selected recipe group

full display		After checking, all the recipe items to be displayed can be checked with one click. Only
		when checked under the "Selection" column will the data of each group of the element be
		displayed. If you do not want to display the data of a certain element, simply uncheck it
editable		After checking, all the recipe items to be edited can be checked with one click, and the
		data can be modified in the recipe table. Only after checking the "Editable" column and
		downloading it to the screen or simulating it can the data of a certain element be edited. If
		a certain element is not checked, it cannot be modified
data	total rows	Set the maximum number of rows displayed in the table
capacity	lines per	Set the number of rows displayed on each page to be less than or equal to the maximum
	page	number of rows per page

Display



title	title display	To display the title, you need to check the title display option before you can set the
display		relevant settings for the title
	text	Set the name of the recipe table header
	multiling	After checking, the header content can be set to multiple languages
display list	use	After checking, the title of each column can be set to display in multiple languages

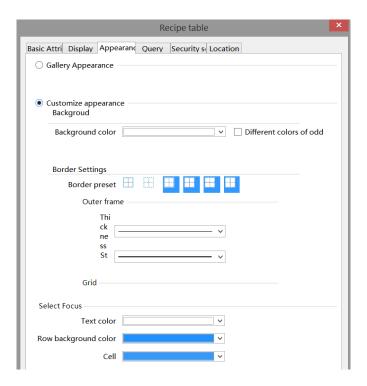
multilanguage	
display no.	After checking, an automatically incremented sequence number column will be
	displayed in the first column of the table
show row title	After checking, the column titles and element names for each row will be displayed,
	and you can also edit the title names in the table below
show column	After checking, the column title (i.e. element name) of the list name will be
title	displayed, or you can edit the title name in the table below
operations	After selecting a row in the table, you can click "Move Up" or "Move Down" to
	move the selected row up or down. You can click on the default and restore the
	default settings with one click

When the list displays multiple languages, "..." will be displayed in the bottom right corner of the title description. Clicking on it will lead to the multi language library setting interface to set up multiple languages.



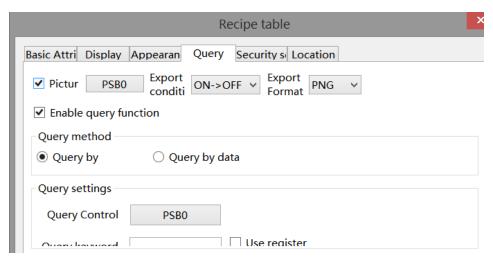
serial number style	Set the style of the sequence number column, 1/2/3 or the group1/group2/group3				
title background colo	Set the background color of the title				
column title Set the background color of column title					
background color					
font	Set the font, color, size, alignment, and row height for table titles/list titles/list data. You				
	can check to use the same font. After checking, the three fonts, color, size, alignment, and				
	row height, all remain consistent.				

Appearance



gallery	style selection		Click and select a table style from the gallery			
appearance			Gallery Appearance			
			Style selection			
customize	background	background	set the background color of the table			
appearance	setting	color				
background	different		After selection, you can set the odd and even rows to display different			
		color of	colors			
		odd	Customize appearance			
			Backgroud			
			Odd line color			
			Even line color			
	border	border	Select a border style based on the preview image			
	setting	preset				
		outer frame	Set the thickness, style, and color of the outer frame			
		grid	Set the thickness, style, and color of the grid			
	select focus	select focus	Set the display style			
		text color	Set the text color displayed			
		row	Set the selected row background color			
		background				
		color				
		cell	Set the background color of the selected cells			

■ Query



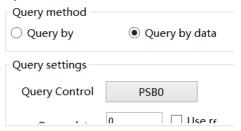
Select Enable query function to use query function. Filter data based on conditions and display it in the current recipe table.

There are two ways to query: by keyword and by data, and you can also use register control to query.

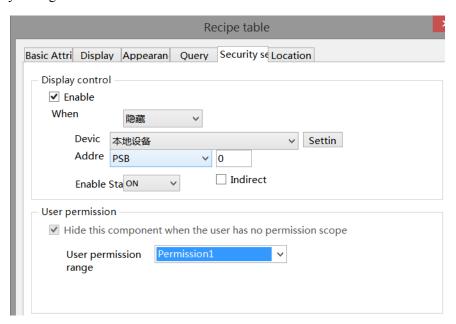
(1) Query by keyword: Enter the keyword to be queried, and after the query control bit is connected, the filtered results will be automatically displayed; You can also choose to use registers to dynamically specify keywords for queries.



(2) Query by data: Enter the data to be queried, and after the query control bit is turned on, all recipes containing this data will be automatically displayed. Alternatively, you can choose to use registers to dynamically specify the query data.



Security setting



Same to chapter 4-1-1 straight line security setting part.

■ Location

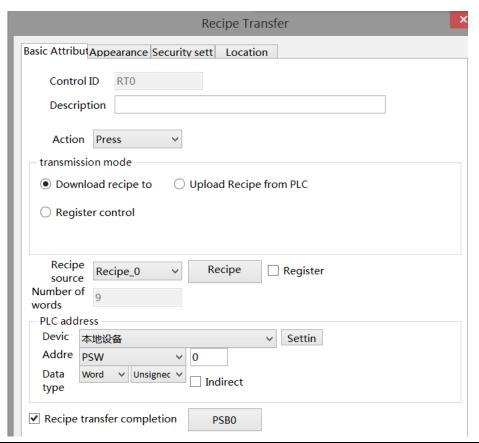
Same to chapter 4-1-1 straight line location part.

4-6-3. Recipe transfer

Use this button to upload and download recipes.

- 1. Click "Parts/Recipe/Recipe Transfer" icon in the menu bar or the " icon in the device bar of the control window, move the cursor to the screen, click the left mouse button to place, click the right mouse button, or use the ESC key to cancel the placement. Modify the length and width of the border through the boundary point.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components. You can also double-click on "Recipe Transfer" or select "Recipe Transfer" and right-click to select "attributes" for attribute settings.

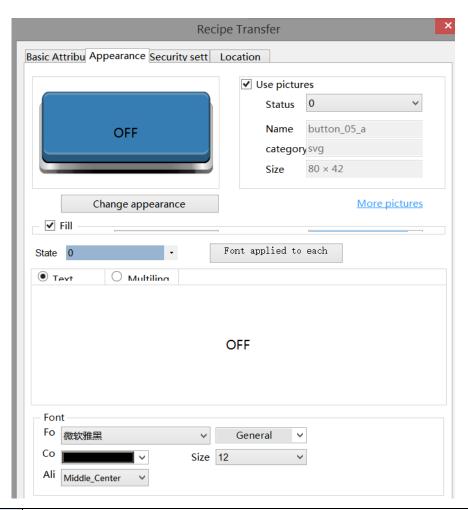
Basic attributes



control ID	Used for system management controls, user cannot operate		
description	Can be used to annotate the purpose of this control		
action	Select the button action mode, and you can choose to transmit when pressed or released		
transmission mode	smission mode Set the transmission direction of the recipe, which can be downloaded from the HMI to		
	the PLC or uploaded from the PLC to the HMI		
download recipe to PLC Transfer the recipe data in the HMI to the PLC address, which is set in the a			
	below		
upload recipe from PLC	Read the data from the PLC address to the HMI and replace the existing recipe data		
register control Using register controlled transmission method, transmitting through rising/fallin			
	triggering		

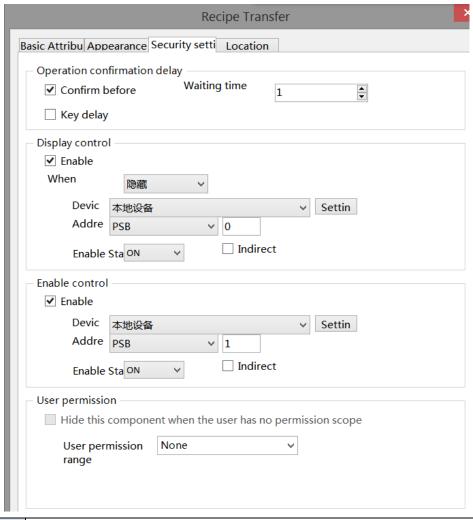
	_ transmission mode
	Download recipe to Upload Recipe from PLC
	O Download recipe to O Opioad Recipe Iron FEC
	Register control Download recipe to
	☐ Upload Recipe from
recipe source	Select the recipe group that needs to be transferred, or click on the [recipe] button to
• .	modify the recipe data
register	After checking this option, the value in the register can be used to control which recipe
	group to export (if the value in the register is 0, it means that the upload and download
	data transmission of recipe group 0 is being carried out; if the value in the register is 1, it means that the upload and download data transmission of recipe group 1 is being
	carried out)
number of words	Display the length of the recipe that needs to be transferred and cannot be changed
PLC address	Set the PLC initial address for transmission or upload, and calculate the occupied
	address length based on the word numbers set above
device	The device port currently communicating with
address	Set Target Register Number
data type	Byte-8Bit; Word-16Bit; DWord-32Bit; DDWord-64Bit; BCD; Hex; Signed number;
	Unigned number; Floating number
setting	Click "Settings" to enter the address setting interface. This interface allows you to set
	the use of system registers and user-defined labels. You can click on the address label
	library or the project tree - library - address label library below to set the labels used
	(refer to 5-2 Address Label Library for the use of address label library and user-defined
	labels)
	Address
	Device 本地设备 Statio n No.
	Address
	User defined label
	type VSW V User defined label
	type VSW V User defined label
	type Address O System register
	type
	type
	type
	type
indirect specify	type
indirect specify	type Address 0 System register 数据类型 Word VUnsigned VAddress [range:0-9999] Address Label Determine Cancel Application Set the current address offset, where the current register address changes with the
indirect specify	System register Address Label Determine Cancel Application Cancel Application Set the current address offset, where the current register address changes with the indirectly specified register value, i.e. Dx [Dy]=D [x+Dy numerical value] (x, y=0, 1, 2, the current register address changes with the indirectly specified register value, i.e. Dx [Dy]=D [x+Dy numerical value] (x, y=0, 1, 2, the current register address changes with the indirectly specified register value, i.e. Dx [Dy]=D [x+Dy numerical value] (x, y=0, 1, 2, the current register address changes with the indirectly specified register value, i.e. Dx [Dy]=D [x+Dy numerical value] (x, y=0, 1, 2, the current register address changes with the indirectly specified register value, i.e. Dx [Dy]=D [x+Dy numerical value] (x, y=0, 1, 2, the current register address changes with the indirectly specified register value, i.e. Dx [Dy]=D [x+Dy numerical value] (x, y=0, 1, 2, the current register address changes with the indirectly specified register value, i.e. Dx [Dy]=D [x+Dy numerical value] (x, y=0, 1, 2, the current register address changes with the indirectly specified register value, i.e. Dx [Dy]=D [x+Dy numerical value] (x, y=0, 1, 2, the current register address changes with the indirectly specified register value, i.e. Dx [Dy]=D [x+Dy numerical value] (x, y=0, 1, 2, the current register address changes with the indirectly specified register value, i.e. Dx [Dy]=D [x+Dy numerical value] (x, y=0, 1, 2, the current register address changes with the current r
indirect specify	type Address 0 System register 数据类型 Word VUnsigned VAddress [range:0-9999] Address Label Determine Cancel Application Set the current address offset, where the current register address changes with the
indirect specify	Set the current address offset, where the current register address changes with the indirectly specified register value, i.e. Dx [Dy]=D [x+Dy numerical value] (x, y=0, 1, 2, 3). Example: The current register address is PSW0, if the indirectly specified address
indirect specify	Set the current address offset, where the current register address changes with the indirectly specified register value, i.e. Dx [Dy]=D [x+Dy numerical value] (x, y=0, 1, 2, 3). Example: The current register address is PSW100; When the value of the PSW100 register is 0, the register that controls this
indirect specify	Set the current address offset, where the current register address changes with the indirectly specified register value, i.e. Dx [Dy]=D [x+Dy numerical value] (x, y=0, 1, 2, 3). Example: The current register address is PSW100; When the value of the PSW100 register is 0, the register that controls this component remains PSW0; When the value of the PSW100 register is 1, the register that

Appearance



use pictures	You can check whether to use images. If checked, you can set the appearance of the recipe
	transmission in two states: (0, 1). After selecting the state in the upper right corner, click
	"Change Appearance" or "More pictures" to select custom images to change the appearance
fill	Can set fill styles (solid/gradient) and fill colors
state	You can set the text prompt content for recipe transmission in two states (0, 1), and whether to
	use multiple languages (please refer to the description of libraries in chapter 4-7 for specific
	use of multiple language libraries). Check the drop-down list to set the font corresponding to
	the corresponding status of the recipe transmission, or click on the "Font applied to each state"
	button to set the font for all states
font	The font, size, color, and display position of the font in the control can be set

■ Security setting



	operation	You can set the delay time (s). If this option is checked, a pop-up window will appear when	
	confirmation	operating the component, saying "Are you sure to execute this operation?" If you do not click	
	delay	"ok" or "cancel" within the set waiting time, the pop-up window will disappear and the	
		operation will fail; If you click 'OK' within the waiting time, the operation is successful, but	
		clicking 'Cancel' is invalid.	
	key delay	Long press the set delay time before the operation takes effect	
	display control	Use bit control to display the component. When the conditions are not met, the control is	
		hidden and defaults to hidden, which cannot be modified	
	enable	When checked, display control will be enabled	
When validation Set the display of the control when validation fails		Set the display of the control when validation fails	
	fails		
	address	set the target coil for bit control	
	enable state	Set the ON state to be valid or the OFF state to be valid.	
		Example: If the device is checked as shown in the above figure, the bit control is PSB0, and if	
		verification fails, it is hidden. If the enabled state is ON, the component is displayed normally	
		when PSB0 is ON, and if PSB0 is OFF, the component is hidden and not displayed.	
	enable control	Can be set with bit restrictions (customizable enable control enabled state), and only when the	
		enable conditions are met can the component be used normally (as shown in the figure above:	
		when PSB1 is in the ON state and the trigger conditions are met, this component can be used;	
		if PSB1 is in the OFF state, even if the trigger condition is met, this component is still	
		unavailable)	

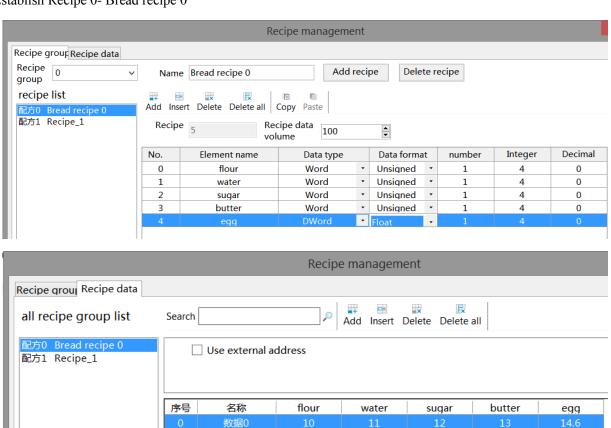
user permission	Set controlled permission levels.
	To set the permissions for this component, you need to enter the password for the set
	permission level before the component can be used normally. When there is no permission for
	this component, it will be hidden

■ Location

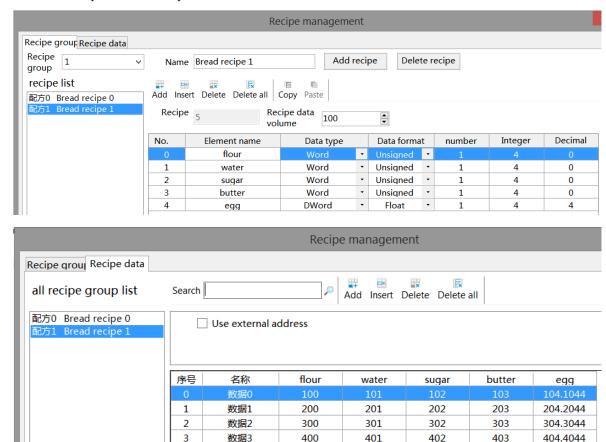
Same to chapter 4-1-1 straight line location part.

4-6-4. Recipe transfer application

- 1. Create the recipe data table to be transferred in "Recipe Edit" (for the convenience of explaining the function, the following data is for example)
- 1> Establish Recipe 0- Bread recipe 0



2> Build Recipe 1-Bread recipe 1



504.5044

604.6044

704.7044

804.8044

904.9044

1004.1004

2. Set data transfer function

数据4

数据5

数据6

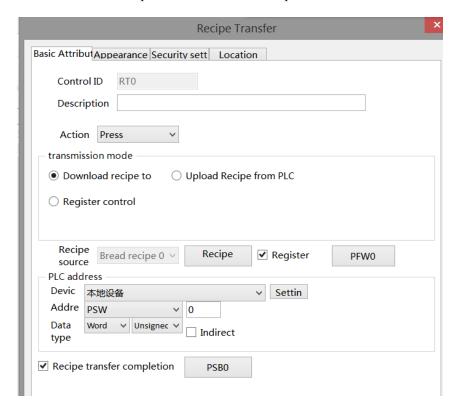
数据7

数据8

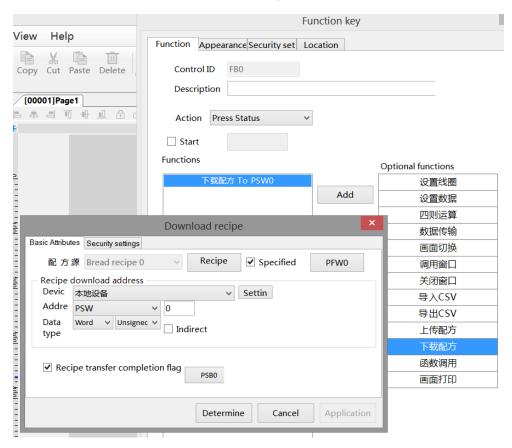
数据9

1> Establish recipe transfer settings (the function of transferring recipe data can be achieved through function keys/recipe transfer).

recipe transfer-download recipe to PLC

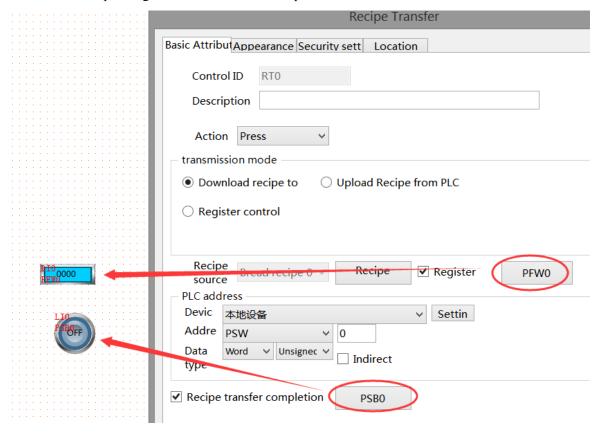


Function key - recipe download



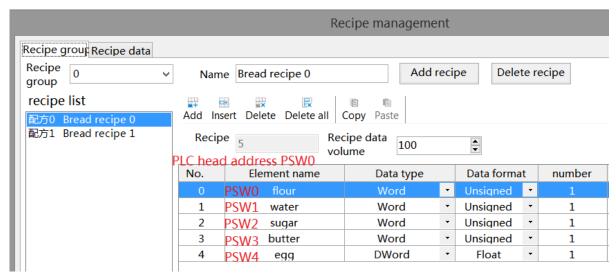
Recipe upload is the same as recipe download, simply change the "Download Recipe to PLC"/"Download Recipe" to "Upload Recipe from PLC"/"Upload Recipe". The recipe transfer function is consistent with the recipe transfer function achieved by the function keys. Below is an example of recipe transfer

2> Place corresponding controls based on the set parameters.



Note:

The address set by the PLC is shown in the following figure, starting from the first address and progressing sequentially according to the element data type address



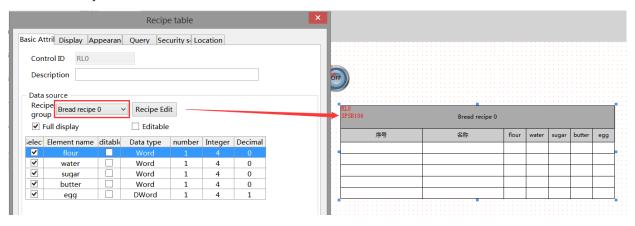
The data type of the PLC address should be consistent with the element data type set in the recipe table, such as egg element



The data type is Dword-Float, then when setting PLC address, it needs to set to this type.



3. Put the recipe table on the screen



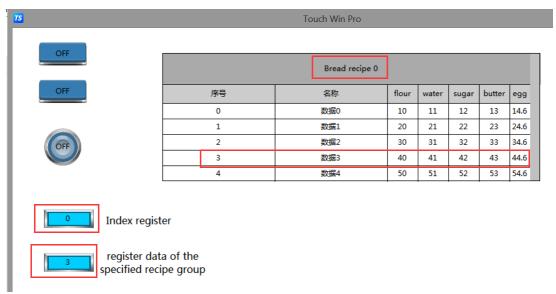
4. Put a recipe index register SPSW256.



5. Take offline simulation as an example:

1> Recipe download

As shown in the following figure, change the register data of the specified recipe group to 0 and the index register to 3. Click the recipe download button. At this moment, download data 3 from recipe table 0 to PLC. After the download is completed, the recipe transfer completion flag will light up. To restore it, you need to manually set it to OFF.



As shown in the following figure, change the register data of the specified recipe group to 1 and the index register to 0. Click the recipe download button. At this point, download the data 0 from recipe table 1 to the

PLC. After the download is completed, the recipe transmission completion flag will light up. To restore it, you need to manually set it to OFF.





Bread recipe 1						
序号	名称	flour	water	sugar	butter	egg
0	数据0	100	101	102	103	104.1044
1	数据1	200	201	202	203	204.2044
2	数据2	300	301	302	303	304.3044
3	数据3	400	401	402	403	404.4044
4	数据4	500	501	502	503	504.5044

2> Recipe upload

As shown in the following figure, change the register data of the specified recipe group to 0 and the index register to 0. Click the upload recipe button. At this point, upload the data from the PLC to the data 0 in the recipe table 0. After the upload is completed, the recipe transfer completion flag will light up. To restore, you need to manually set it to OFF.

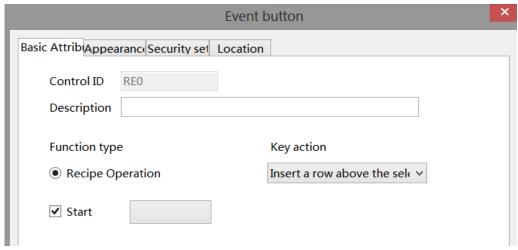




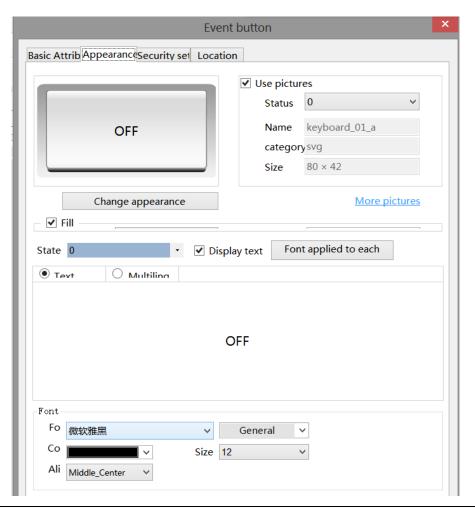
Bread recipe 0						
序号	名称	flour	water	sugar	butter	egg
0	数据0	10	11	12	13	14.6
1	数据1	20	21	22	23	24.6
2	数据2	30	31	32	33	34.6
3	数据3	40	41	42	43	44.6
4	数据4	50	51	52	53	54.6

4-6-5. Event button

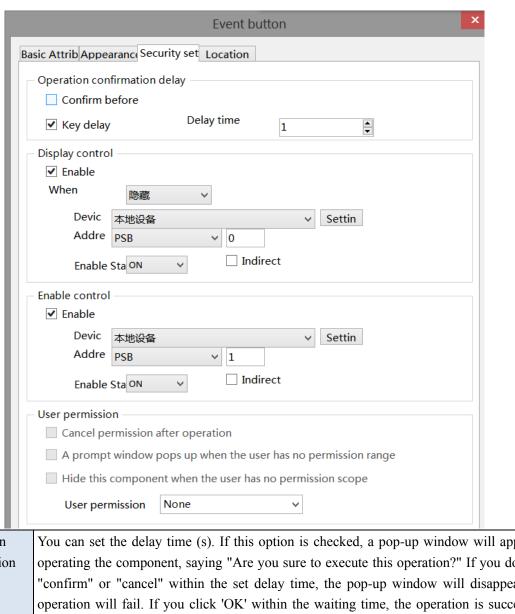
- 1. Click on the "Parts/Recipe/Event Button" icon in the menu bar or the "icon in the device bar of the control window, move the cursor to the screen, click the left mouse button to place, click the right mouse button, or use the ESC key to cancel the placement. Modify the length and width of the border through the boundary point.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components. You can also double-click the "Event Button" or select the "Event Button" and right-click to select "attributes" for attribute settings.
 - Basic attributes



control ID		Used for system management controls, user cannot operate			
description		Can be used to annotate the purpose of this control			
function type		The recipe operation is checked by default and cannot be unchecked			
key action	Insert a row	After selecting a row of recipe data in the recipe table, click this control to insert a row			
	above the	of data with empty name, empty data (the data type of the selected row element is			
	selected row	string), or 0 (the data type of the selected row element is Byte, Word, DWord,			
		DDWord) above the row			
Insert a row		After selecting a row of recipe data in the recipe table, click this control to insert a row			
below the		of data with empty name, empty data (the data type of the selected row element is			
	selected row	string), or 0 (the data type of the selected row element is Byte, Word, DWord,			
		DDWord) below the row			
delete		After selecting a row of recipe data in the recipe table, click this control to delete the			
selected row		entire row in which it belongs			
	copy	After selecting a row of recipe data in the recipe table, click this control to add a blank			
	selected row	row of recipe data with the same name as the row below it			



font	Can set font, font style, color, size, and font display position in the control			
	set the font for all states			
	corresponding state of the event button, or click the "Font applied to each state" button behind to			
	5-1 labels for multiple languages). Tick the drop-down list to set the font corresponding to the			
	multiple languages can be set (for specific use of multiple language libraries, please refer to chapter			
state	The text prompt content of the event button can be set in two states (0, 1), and whether to use			
fill	Can set fill styles (solid/gradient) and fill colors			
	click "More pictures" to select custom images to change the appearance			
	two states (0, 1). After selecting the state in the upper right corner, click "Change appearance" or			
appearance	You can check whether to use images. If checked, you can set the appearance of the event button in			



operation	You can set the delay time (s). If this option is checked, a pop-up window will appear when
confirmation	operating the component, saying "Are you sure to execute this operation?" If you do not click
delay	"confirm" or "cancel" within the set delay time, the pop-up window will disappear and the
	operation will fail. If you click 'OK' within the waiting time, the operation is successful, but
	clicking 'Cancel' is invalid
key delay	Long press the set delay time before the operation takes effect
display control	Use bit control to display the component. When the conditions are not met, the control is
	hidden and defaults to hidden, which cannot be modified
enable	When checked, display control will be enabled
When validation	Set the display of the control when validation fails
fails	
address	Set the target coil for positioning control
enable state	Set the ON state to be valid or the OFF state to be valid.
	Example: If the device is checked as shown in the above figure, the bit control is PSB0, and if
	verification fails, it will be hidden. If the enabled state is ON, the component will be displayed
	normally. If the PSB0 state is OFF, the component will be hidden and not displayed
enable control	Can be set with bit restrictions (customizable enabled state), and only when the enable
	conditions are met can the component be used normally (as shown in the figure above: when
	PSB1 is in the ON state and the trigger conditions are met, this component can be used; if
	PSB1 is in the OFF state, even if the trigger condition is met, this component is still
	unavailable)

user permission Set of After

Set controlled permission levels

After setting the required user's permission range, the following three functions can be checked according to the needs.

- (1) After the operation is completed, the usage permission will be cancelled: if this option is not checked, the corresponding level password needs to be entered every time the component is operated. After checking, only one successful input is required.
- (2) When the user has no permission range, a prompt window will pop up.
- (3) When the user does not have permission range, hide the component.



The function of permission please refer to chapter 4-2-3 value input.

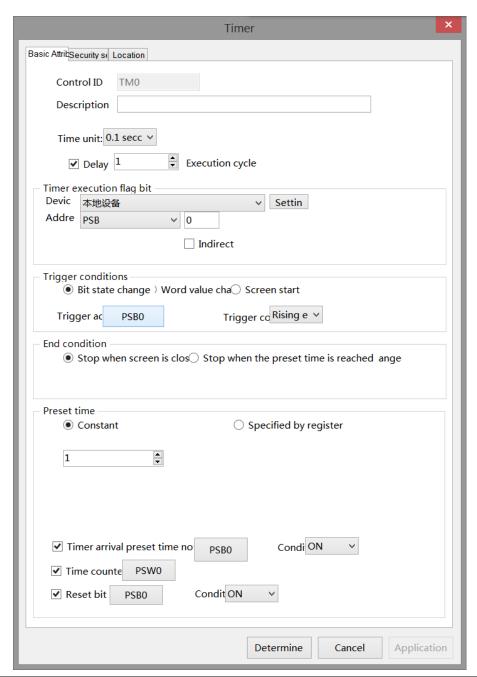
Location

Same to chapter 4-1-1 straight line location part.

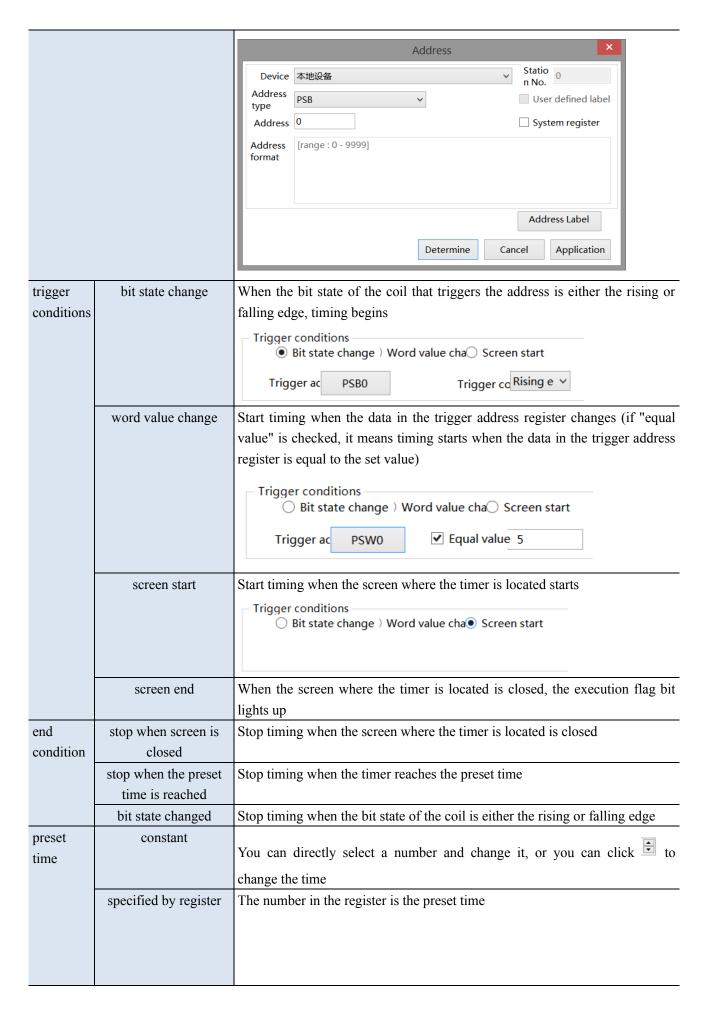
4-7. Special component

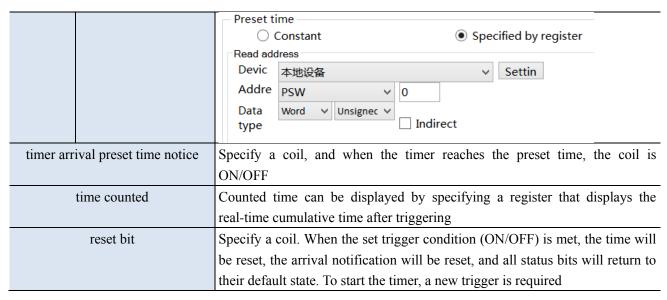
4-7-1. Timer

- 1. Click Parts/industry/timer or the icon in the device bar of the control window, move the cursor to the screen, click the left mouse button to place, click the right mouse button, or use the ESC key to cancel the placement.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components. You can also double-click on "Timer" or select "Timer" and right-click to select "attributes" for attribute settings.
 - Basic attributes

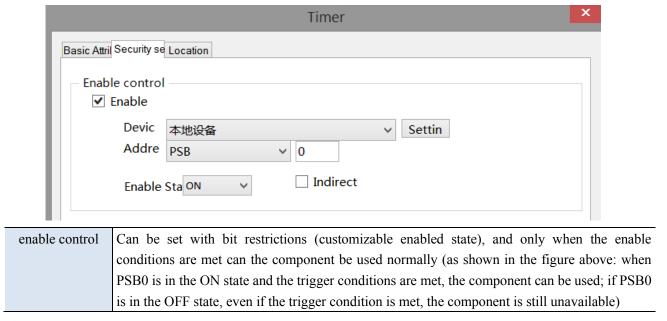


control ID	Used for system management controls, user cannot operate
description	Can be used to annotate the purpose of this control
time unit	The minimum unit is 0.1 seconds, seconds or minutes
delay/execution cycle	After setting, the timer will only start executing after the set cycle time is
	executed when the trigger conditions for the timer are met
timer execution flag bit	When executing, the target coil lights up and goes out after the execution is
	completed
device	The device port currently communicating with
address	Set target coil number
setting	Click "Settings" to enter the address setting interface. This interface allows
	you to set the use of system registers and user-defined labels. You can click
	on the address label library or the project tree - library - address label library
	below to set the labels used (refer to 5-2 Address Label Library for the use of
	address label library and user-defined labels)





Security setting



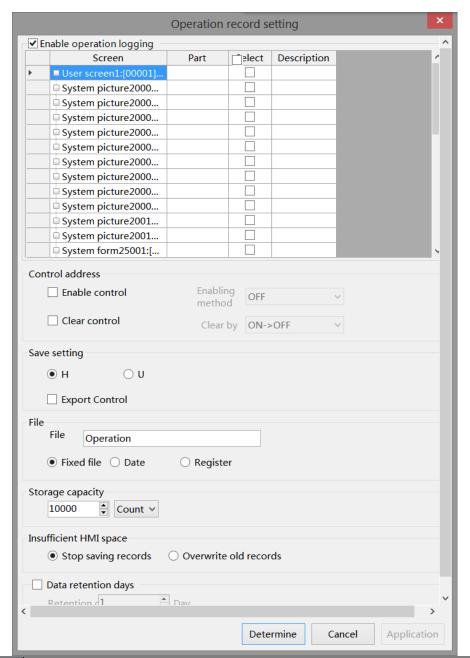
■ Location

Same to chapter 4-1-1 straight line location part. (Cannot make size modifications or move horizontally or vertically)

4-7-2. Operation record

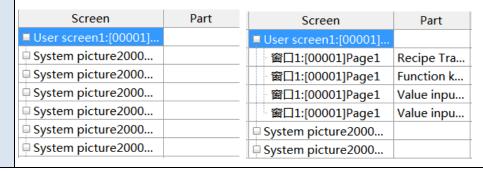
This control can record the user's usage steps and content of other operable controls, and display them through the "Operation Record Display". This function can be used to assist in analyzing operational processes and problem points.

Click on the menu bar 'Parts/Operation Record/Operation Record' or click Operation record in the toolbar to enter the operation record configuration interface. After checking the enable operation record, the display is as follows:



select

Select to indicate that if the control is operated, the operation record will be displayed on the "Operation Record Display"; You can click the " " sign to expand the controls in the screen and set whether to check them.



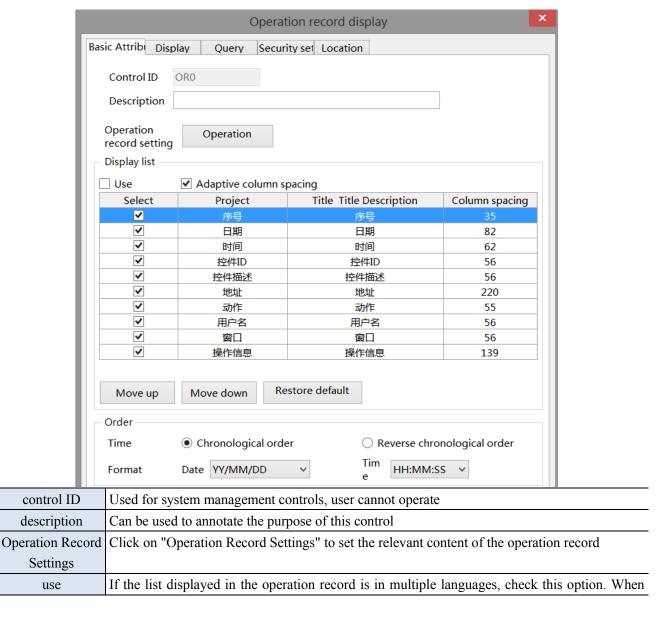
When checking User Screen 1, it represents checking all the controls in User Screen 1, and unchecking is the same; When you only want to monitor the operation of a certain control in screen 1, simply select the control you want to monitor.

Set the register for HMI export control (if set to PSW0, three consecutive addresses with control address PSW0 as the first address will control different states), which can be viewed by clicking on the blue font "Control Address Information" in the bottom right corner Prompt Command:PSW0 1. Export operation records to USB flash disk 2. Export operation record to USB flash disk speed of progress:PSW1 1.The value of 0-100 indicates the progress, result:PSW2 0. Data export 1. Data export succeeded 2. The export device does not exist Note: 1. This function only takes effect when the storage location is selected as HMI or when "register specified storage location" is specified as HMI. 2. When inputting 4 and 6 to the command register, the database can be controlled to be exported to a USB drive, and the exported file format is xidb. The xidb to CSV tool can be opened by double clicking on the software root directory \Tool\XJDbTool\XJDbTool.exe, which is set as the default opening method for xidb. After opening, enter the path name of the CSV and click "Export" to convert the xidb format file to a CSV format file. Set the storage address, which can be specified by selecting HMI, USB flash drive, or register save setting When simulating, the storage location displayed for the operation record is: (1) Save to USB drive: Software directory: Temp/Run/storage/udisk/history (2) If you choose to save to the hmi: software directory Temp/Run/db/history, the saved file cannot be directly opened for viewing. To view it, you need to export to a USB drive and then view the exported file in the path saved to the USB drive file Set the file name for storage, and the system will store data with this name fixed file The stored file name is fixed, which is the name set in the file name (the file name can support up to 200 characters) date The stored file name is named with a date, for example, the file exported on May 29, 2021 is named 20210529 Set the register address, and the stored files will be named based on the contents of the register. register When selecting dynamically specified file name, it is necessary to select a string type register such as character input and Chinese input. (File names can support up to 200 characters) Set the total amount of collected data information stored; storage capacity Maximum storage capacity 65535 pieces insufficient HMI Set the status to stop saving or overwriting old records when storage space is insufficient space stop saving After checking, stop saving data when storage space is insufficient records overwrite old After checking, when the storage space is insufficient, it will continue to save and overwrite

4-7-3. Operation record display

- 1. Click on "Parts/Operation Record/Operation Record Display" icon in the menu bar or the " " Operation Record Display "icon in the device bar of the control window, move the cursor to the screen, click the left mouse button to place, click the right mouse button or use the ESC key to cancel the placement. Modify the length and width of the border through the boundary point.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components. You can also double-click on "Operation Record Display" or select "Operation Record Display" and right-click to select "attributes" for attribute settings.

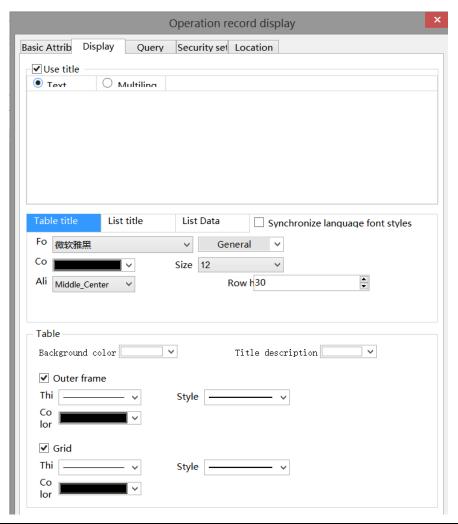
Basic attributes



multi-language	using multiple languages is checked, a multi language setting table will be	1 3
	right side of the title description. Clicking on it will lead to the multi language	ge library setting
	interface for setting multiple languages. The use of multiple languages can be	e found in labels
	chapter 5-1. Multiple languages	
adaptive column	After checking, the column width cannot be customized, and the software w	rill automatically
space	adjust it to the most suitable size based on the project screen	
select	Only when checked can it be displayed in the list	
No.	Display the sequence number of table columns	
date	Date generated during control operation	
time	Time generated during control operation	
control ID	The ID number of the control	
control	Description content of the control	
description		If you need to
address	The address of the control, which can display whether it is an internal or	adjust the order
	external address	of items, you
action	Set Word, Set ON, Set OFF, Toggle (bit reverse), Write Const Value, Write	can click the
	String, Return To Prev Window, Go To Next Window, Upload recipe,	"Move Up,
	Download recipe, Press, Release	Move Down"
user name	Do you have user privileges to log in at this time? If not logged in, it will not	button below. If
	be displayed	you want to
window	The window number where the control is manipulated	restore the
operate	Bit Set ON	default sorting,
infomation	Bit Set OFF	you can click
	Write (Initial value) ->(Input value)	"Restore
	Bit Set ON->OFF	Default
	Bit Set OFF->ON	Sorting"
	Write newVal	
	Write (Initial string) ->(Input string)	
	Window (Current page) ->(Jump to page)	
	Upload (recipe name)	
	download (recipe name)	
order	Set the information display mode and select whether the latest operation rec	ord is displayed
	before or after	
chronological	According to the order in which the operation record time is generated, the fir	est generated one
order	is displayed at the top, and the later generated one is displayed at the bottom,	that is, the latest
	operation record is displayed at the bottom of the table	
reverse	Contrary to the chronological order, the first generated operation record is	displayed at the
chronological	bottom, and the later generated operation record is displayed at the top, t	hat is, the latest
order	operation record information is displayed at the top of the table	
time date format	me date format set the date and time format	

When using multiple languages is checked, "..." will be displayed in the bottom right corner of the title description. Clicking on it will lead to the multi language library setting interface to set multiple languages.

■ Display

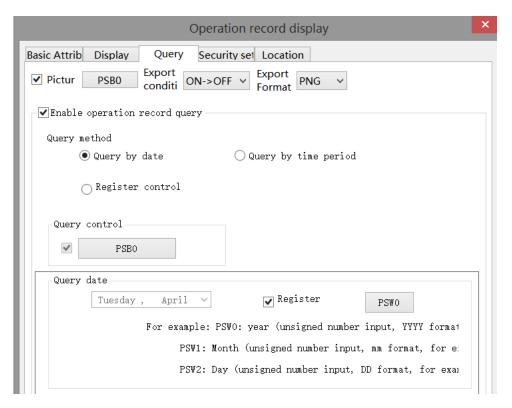


use title	text	Set the name of the operation record display header
	multiling	After checking, the header content can be set to multiple languages (refer to 5-1
		for details on using multiple languages)
synchronize lan	nguage font styles	If unchecked, the title font and list font can be set separately
		If checked, the two fonts, colors, sizes, and alignment remain consistent
1	font	Font, color, size, and alignment can be set
table	background	Set the background color of the table
	color	
	title background	Set the background color of the table title
	color	
	outer frame	The thickness, style, and color of the outer frame can be set, and will only be
		displayed when checked
	grid	The thickness, style, and color of the grid can be set, and will only be displayed
		when checked



When "synchronize language font styles" is checked, all fonts display the title font.

■ Query



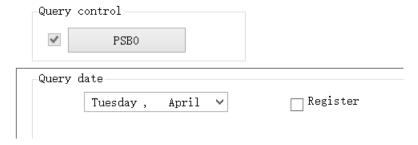
The information found will be displayed in the operation record display table. If you need to use this function, check the "Enable operation record query" function.

There are two query methods: query by date and query by time period. These two query methods can be freely selected by users or dynamically specified through registers, as follows:

query control Set an address, and when set to that address, the query function will be triggered, and the query results will be displayed in the table

(1) Query by Date

Entering the date to be queried will filter out all operation record information under this date and display it in the table.

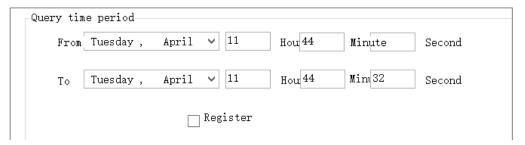


You can also choose "Register" to dynamically set the query address. As shown in the following figure, setting a first address, such as PSW0, will occupy a total of three addresses from PSW0 to PSW2. PSW0 represents year, PSW1 represents month, and PSW2 represents day, all of which are single word unsigned numbers. For example, PSW0=2021, PSW1=5, and PSW2=29, the operation record information for May 29, 2021 will be queried.

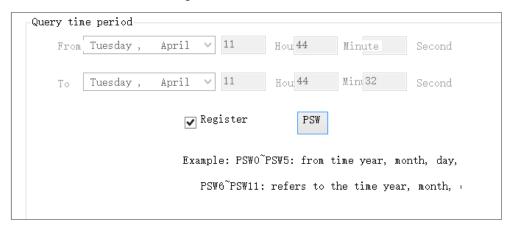


(2) Query by time period

Enter the start and end times to be queried in the specified address, set the query control address, and display all information filtered out during this time period in the table.



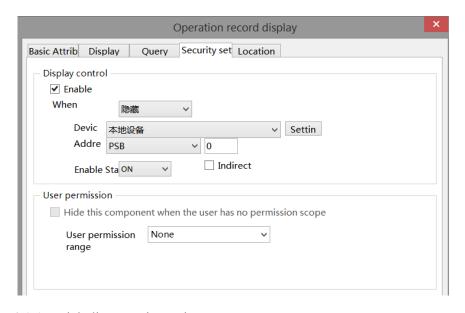
Similarly, register control can also be used. After setting the first address, 12 register addresses, including the first address, will be occupied. The first 6 addresses represent the year, month, day, hour, minute, and second of the start time, and the last 6 addresses represent the year, month, day, hour, minute, and second of the end time. The format is consistent with manual settings.



(3) Register Control Query Method

Use registers to dynamically specify the query method. A register value of 0 indicates querying by date, and a value of 1 indicates querying by time period. Users can choose according to their own needs.

Security setting



Same to chapter 4-1-1 straight line security setting part.

Location

Same to chapter 4-1-1 straight line location part.

4-7-4. Hire purchase

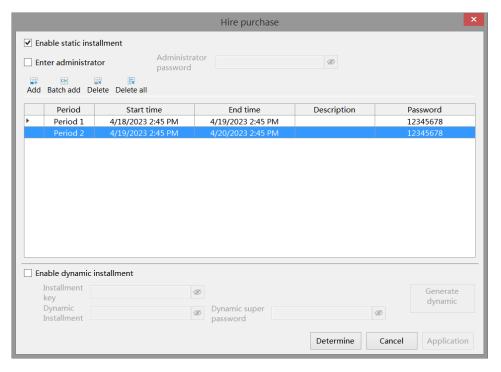
1. Function enter

Click Menu bar-Tool-Hire purchase or click Hire purchase in the tool bar.

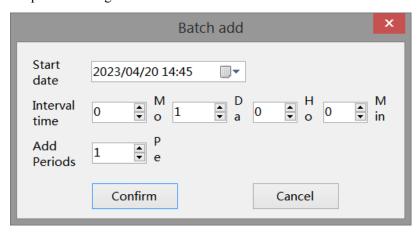
2. Function introduction

Implement installment payment for equipment and perform lock and encryption processing on the equipment. The installment configuration is completely user-defined, including the number of installment periods, the expiration date of each installment, and the password for each installment. Configuration information needs to be maintained by customers themselves, and this feature has the advantages of free configuration and high security.

- 3. Use the function
- (1) Static installment payment



- Check "Enable static installment", add the number of installment periods, set the start time, end time, description, and password.
- Enter administrator password to cancel installment payment: If this option is checked in the project, set the administrator password and download it. In any installment payment pop-up window that pops up, enter the custom administrator password, which will cancel subsequent installment payments and close the window to enter the project operation page. Passwords support letters (case sensitive) and numbers, with a password length limit of 10 characters.

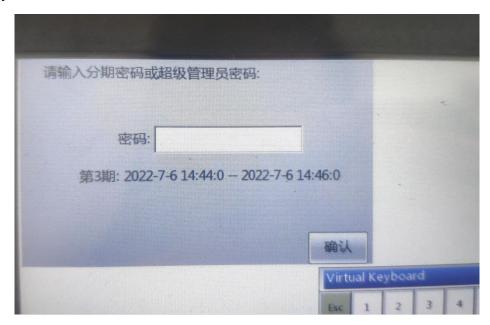


- Add: Click "Add" and add an installment payment setting in order at the bottom of the table. You can set the start and end dates, time, and password yourself.
- Batch Add: Click "Batch Add" to set multiple installment payments (up to 60 installments). Set the start time, date, interval time, and number of batch copies independently. Click OK and it will be displayed below. You can set the start and end date, time, and password by yourself.
- The time supports selection and input, and the description can be edited. The default password is 12345678. The password supports letters (case sensitive) and numbers, and the length of the password is 20 characters, which can be modified. The maximum number of sessions is 60, and the end time of the previous session defaults to the start time of the following session. All start and end times can be modified.
- Delete: Click a row in the installment payment table, select it with the cursor, and then click

"Delete" to delete the installment payment

■ Delete All: Click 'Delete All' to clear all installment payment settings.

HMI display:

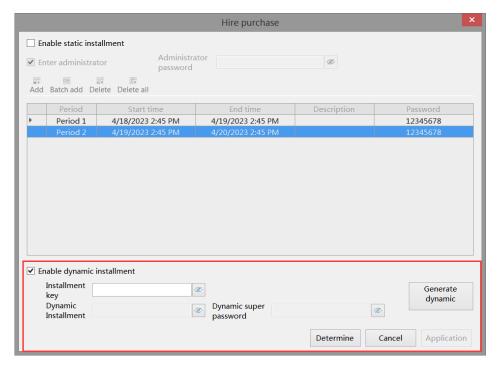


When the start time of installment payment is reached, a pop-up window will pop up in the upper right corner of the HMI. At this time, only the installment payment password can be entered, and the rest of the screen is not clickable; Enter the current password in the pop-up window to use it normally until the start date of the next installment. If the password is entered incorrectly, it will prompt for an incorrect password input, and you must re-enter the correct password to use it properly.



The difference between an administrator password and a regular installment password is:

- 1. The administrator password means that regardless of the installment payment period, simply entering the "administrator password" will cancel the installment payment function. The regular installment password is only used to confirm the current installment payment, and subsequent installments will still pop up at the set start time.
- 2. Password settings for both: The password can have up to 10 digits and supports letters (uppercase and lowercase) and numbers.
 - (2) Dynamic installment payment
 - Enable dynamic installment



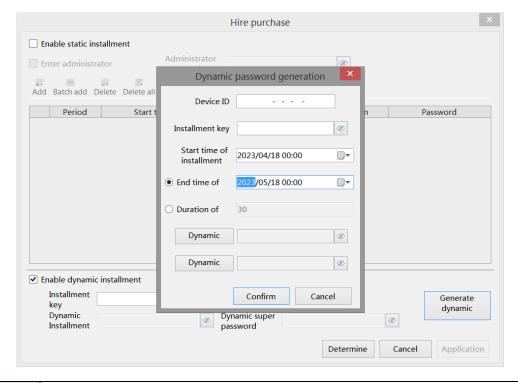
Only by checking this option can dynamic installment payments be set.

 <u> </u>	<u> </u>	
installment key	The password includes uppercase and lowercase letters and numbers, and the length does no	
	exceed 10 digits; You can also enter the installment key in the "Generate dynamic" interface,	
	and the passwords in both places are synchronized	
dynamic	The password is automatically generated by the system. The dynamic password on this	
installment	interface can only be viewed and copied, and cannot be edited	
dynamic super	The password is automatically generated by the system, and the dynamic super password on	
password	this interface can only be viewed and copied, and cannot be edited	

The dynamic password and dynamic super password are both 32-bit. When copying the password, manually select all with the mouse and copy it when the password is visible.

■ Generate dynamic password

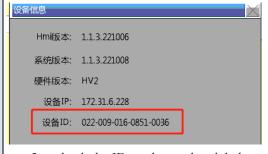
Click "generate dynamic" to enter dynamic installment password interface.



device ID

Each screen only has a unique device ID, and there are three ways to query the screen ID;

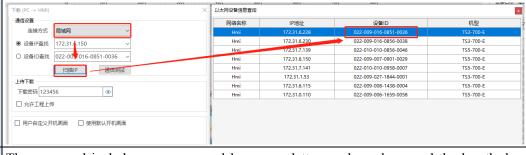
1. click on the lower right corner of HMI screen, select ", it will pop up a window, the red color area is the device ID.



2. check the ID on the product label.



3. When downloading, select the LAN download and scan the IP interface to find the required device ID based on the model and IP address



installment key The password includes uppercase and lowercase letters and numbers, and the length does not

	exceed 10 digits; You can also enter the installment key in the "installment payment" inter	
	and the passwords in both places are synchronized	
start time of	Set the start time for the required installment encryption	
installment		
end time of	Set the end time for the required installment encryption	
installment		
duration of	Set the required duration for installment encryption	
installment		
dynamic	The password is automatically generated by the system, and the dynamic installment password	
password	on this interface can only be viewed and cannot be copied or edited.	
	Click on "Dynamic password" and the dynamic installment password will be automatically	
	generated. This password is used for decryption during the current period and is associated with	
	the device ID, installment key, and time (start time, end time/duration). As long as one of the	
	parameters is modified, you need to click on "Dynamic Password" again. The password will be	
	updated. If no parameters are modified, the password will not be updated.	
dynamic super	The password is automatically generated by the system, and the dynamic super password on this	
password	interface can only be viewed and cannot be copied or edited.	
	Click on 'Dynamic Super Password' and the dynamic super password will be automatically	
	generated. This password can lift all installment restrictions and has the highest authority to lift	
	them. And it is only related to the device ID and installment key, and is not related to the	
	installment time. If you modify the device ID or installment key, you need to click on "Dynamic	
	Super Password" again to update the password. If you do not modify any parameters, the	
	password will not be updated.	

In the pop-up window, enter the device ID, installment key, start time, and then select the end time or enter the duration. Entering the installment end time can automatically calculate the duration (one decimal place). Both are required items, otherwise dynamic installment passwords and dynamic super passwords cannot be successfully generated.

HMI display

When entering the installment state, the HMI automatically enters the lock interface and prompts the user to enter the corresponding password.

If the installment password is entered correctly, it will prompt the remaining available days (which is consistent with the installment duration), and the system screen can continue to use normally within the duration range.

If the super password is entered correctly, it will prompt for permanent use; If the password is entered incorrectly, click OK and prompt "Incorrect password input".

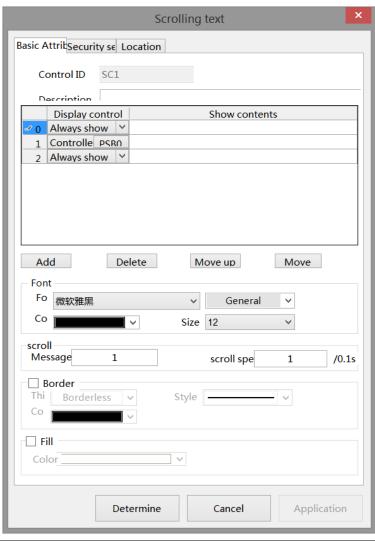
If no password has been entered, click OK and a prompt will appear stating 'Password input is blank'. And the current interface window cannot be closed.

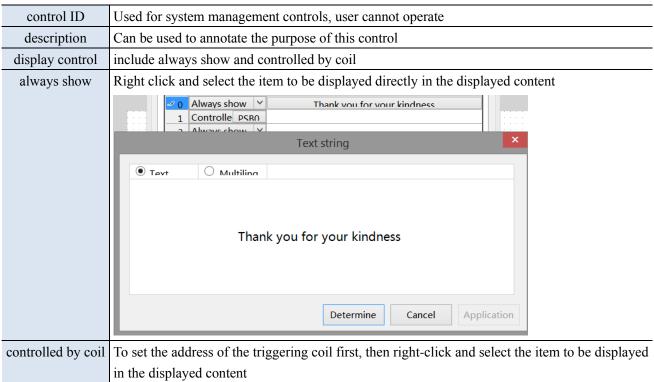


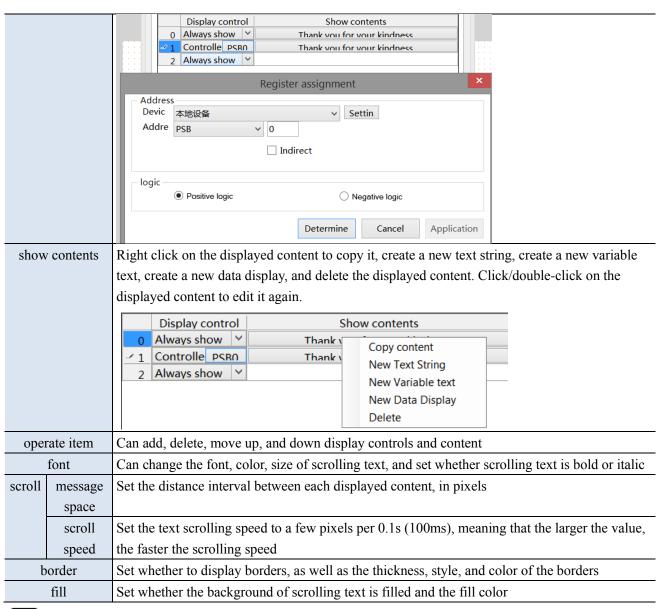
4-7-5. Scrolling text

To achieve the effect of trotting horse lamp for the text:

- 1. Click on the "Parts/Text/Scrolling Text" icon in the menu bar or the icon in the special component bar of the control window, move the cursor to the screen, click the left mouse button to place, click the right mouse button or use the ESC key to cancel the placement. Drag the boundary point to modify the length and width of the border.
- 2. When setting attributes, you can set them in the attribute box that pops up when placing components. You can also double-click on "Scrolling Text" or select "Scrolling Text" and right-click to select "attributes" for attribute settings.
 - Basic attributes





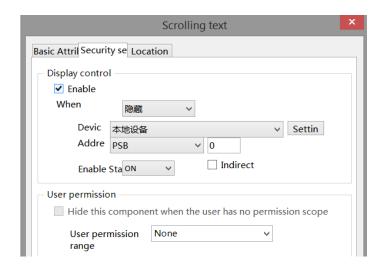


The use of text string refers to the use of static text string in chapter 4-2-1.

The use of variable text refers to the use of dynamic text in chapter 4-2-2.

The use of data display refers to the use of data display in chapter 4-2-4.

Security setting



Same to chapter 4-1-1 straight line security setting part.

■ Location

Same to chapter 4-1-1 straight line location part.

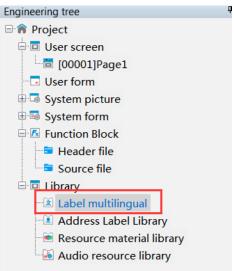
5. Library description

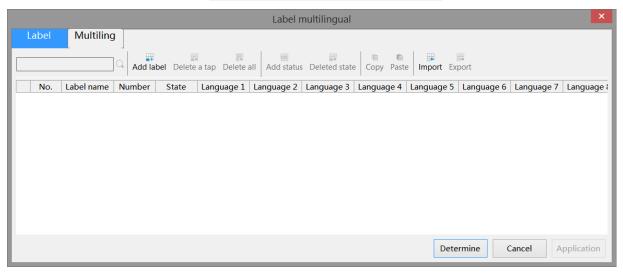
5-1. Label multilingual

When the text content of a component requires the display of multiple languages, programmers can establish the content of a multilingual tag library according to actual needs, and support the display of text in 8 different languages simultaneously.

In addition to using a multilingual tag library, it is also necessary to cooperate with the use of the system address "multilingual switching". The effective setting range for "multilingual switching" is 0-7, and different data corresponds to the desired language type to be displayed. The following is an example of using indicator buttons to illustrate how to use multiple languages.

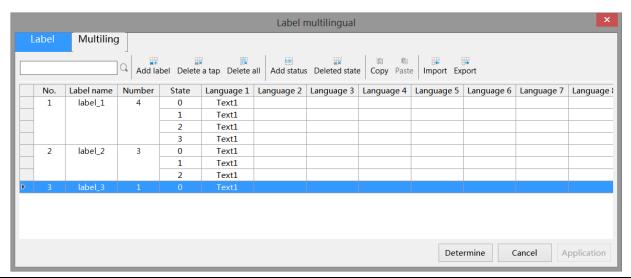
When multiple languages need to be used in engineering documents, it is necessary to first establish a multilingual table and then select the desired label from it. Double click on the project tree library - label - multi language icon to enter the following interface.





Label multilingualism is divided into label libraries and multilingual tables. Label libraries are suitable for multi-state components, such as indicator lights that turn on or off two states, indicator buttons, buttons, or multi-state indicator lights for multiple states, multi-state buttons, etc. Multilingual tables are suitable for components with only a single state, such as static text, dynamic text, data tables, etc.

■ Label library



	search	Search for the set language and quickly locate the line
	add label	add a label
	delete label	Delete selected labels
	delete all	Delete all labels
Ī	add status	Add a state to a certain label (for example, the indicator light has two states, state 0 and
		state 1. Here, two states need to be added, and the text of the set state corresponds to each
		other)
	delete status	Delete selected status
	copy	Copy the selected row
	paste	Paste a copied line
	import	Import Label Library Table
	export	Export Label Library Table

Operation steps

(1) Click to add a label to define the name, quantity, status, and related language of the text label (click on the drop-down list after the status to set the text content in different states).

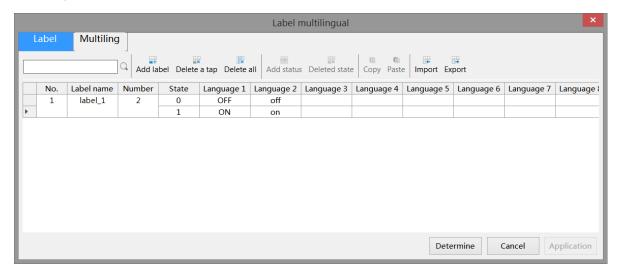




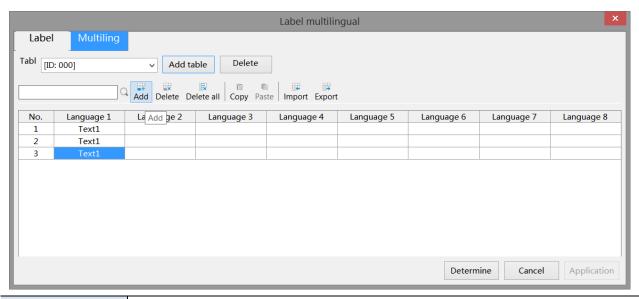


status 1 setting

(2) After clicking OK, it will be displayed in the table and can be modified directly in the table. (Double click to bring up the settings bar in the first step, and click below the language to directly modify the text)



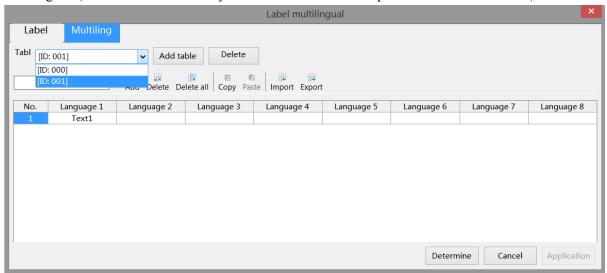
- (3) click determine to save the settings.
- Multilingual table



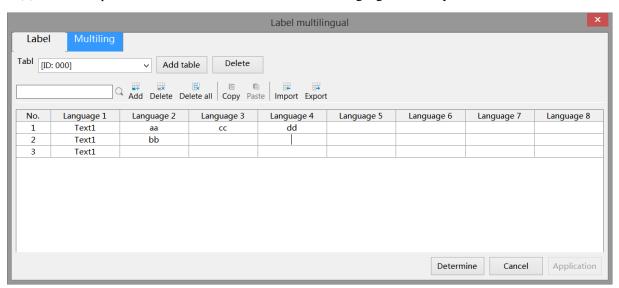
add table	Add a multilingual table
delete	delete the table
search	Search for the set language and quickly locate the line
add	Add a number to the selected table
delete	Delete numbers in the selected table
delete all	Delete all numbers
copy	Copy the row containing the selected number
paste	Paste a copied line
import	Import Multilingual Table
export	Export Multilingual Table

Operation steps:

(1) Click to add a table, and the added table will be displayed in the screen, as shown in the following figure. (You can select the table you want to set from the drop-down list after the 'Table')



(2) Click on options such as add/delete and click under Language to directly set text.

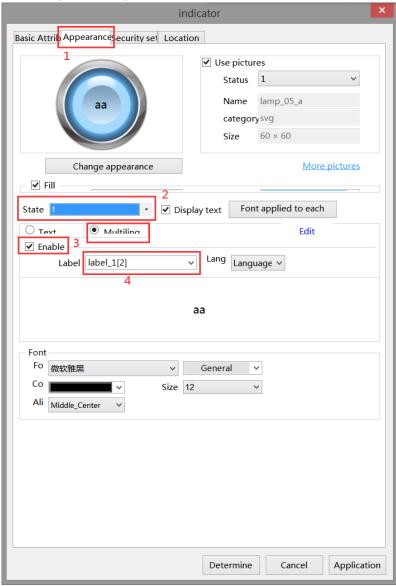


(3) click determine to save the setting.

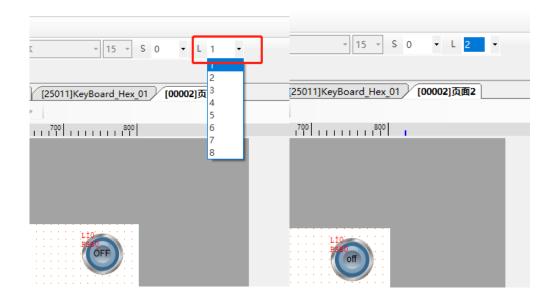
■ Examples of Multilingual Usage of Labels

1. Example of using label library (indicator light)

In the "Appearance" tab of the indicator light, follow the operating steps as shown in the figure to set it. You can click on the "Edit" font to directly jump to the label multilingual setting interface. (For the "indicator light [2]" in the fourth step, refer to the operating steps of the label library mentioned earlier.)



As shown in the following figure, select multiple languages from the drop-down list after "L" (downloaded to the HMI, you can switch between multiple languages by using the values in the system register SPFW260. The input value range 0-7 corresponds to the set language 1 to language 8, and if the input value is not 0-7, language 1 will be displayed).

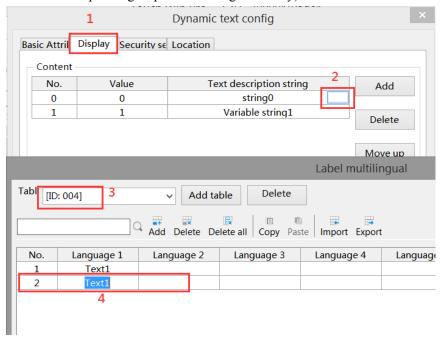


2. Example of using multiple language library (static text/dynamic text string)

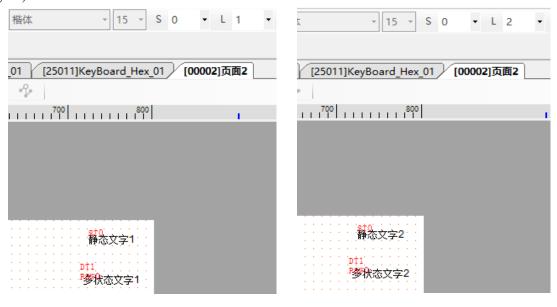
In the "Basic attributes" tab of static text, follow the operating steps as shown in the figure to set it. You can click "Edit" font to directly jump to the label multilingual setting interface. (For the "ID: 004" in the fourth step, refer to the operating steps of a multilingual library)



In the "Display" tab of the dynamic text string, follow the operating steps as shown in the figure to set it. You can click "..." in the second step to directly jump to the label multilingual setting interface. (For the third and fourth steps, please refer to the operating steps of multilingual library)



As shown in the following figure, select multiple languages from the drop-down list after "L". (Downloading to the HMI, multilingual switching through the values in the system register SPFW260. The input value range 0-7 corresponds to the set language 1 to language 8, respectively. If the input value is not 0-7, language 1 will be displayed.).



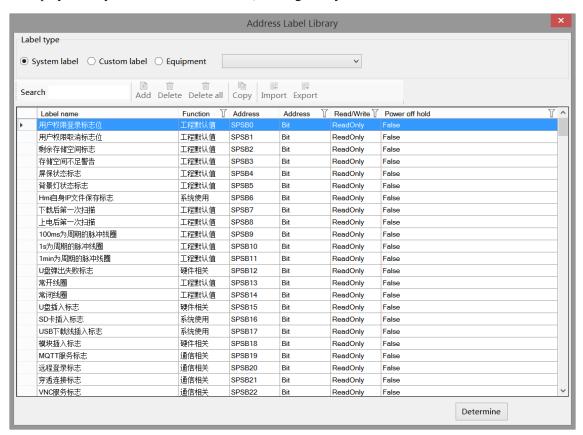
language 1 language 2

5-2. Address label library

Used for customizing address labels, and can also view the meaning and correspondence of HMI internal system addresses in the library.

System register

Used to display HMI system address information, making it easy for users to view and use.



You can search in the search area and click to quickly query the required registers (system registers cannot be changed).

type	label name	device	station	address	address	data type	read write	power-off
		name	no.	type			mode	holding
	User permission login flag	Local	0	SPSB	0	Bit	ReadOnly	False
	bit	device						
	User permission	Local	0	SPSB	1	Bit	ReadOnly	False
	cancellation flag bit	device						
	Remaining storage space	Local	0	SPSB	2	Bit	ReadOnly	False
		device						
HMI	Insufficient storage space	Local	0	SPSB	3	Bit	ReadOnly	False
	warning	device						
	Screen saver status flag	Local	0	SPSB	4	Bit	ReadOnly	False
		device						
	Backlight control	Local	0	SPSB	5	Bit	ReadOnly	False
		device						
	First scan after download	Local	0	SPSB	7	Bit	ReadOnly	False

type	label name	device	station	address	address	data type	read write	power-off
		name	no.	type			mode	holding
		device						
	First scan after power on	Local	0	SPSB	8	Bit	ReadOnly	False
		device						
	Pulse coil with a period of	Local	0	SPSB	9	Bit	ReadOnly	False
	100ms	device						
	Pulse coil with a period of 1	Local	0	SPSB	10	Bit	ReadOnly	False
	second	device						
	Pulse coil with a period of 1	Local	0	SPSB	11	Bit	ReadOnly	False
	minute	device						
	normally open coil	Local	0	SPSB	13	Bit	ReadOnly	False
		device						
	normally close coil	Local	0	SPSB	14	Bit	ReadOnly	False
		device						
	Clear alarm records	Local	0	SPSB	120	Bit	R/W	False
		device						
	HMI ID	Local	0	SPSW	0	String	ReadOnly	False
		device						
	Year -Decimal	Local	0	SPSW	16	Word	ReadOnly	False
		device						
	Month -Decimal	Local	0	SPSW	17	Word	ReadOnly	False
		device						
	Day -Decimal	Local	0	SPSW	18	Word	ReadOnly	False
		device						
	Hour -Decimal	Local	0	SPSW	19	Word	ReadOnly	False
		device						
	Minute -Decimal	Local	0	SPSW	20	Word	ReadOnly	False
		device	_					
	Second -Decimal	Local	0	SPSW	21	Word	ReadOnly	False
		device		~~~~				- 4
	Week -Decimal	Local	0	SPSW	22	Word	ReadOnly	False
	37 11	device		CDCHI	22	117 1	D. 10.1	F 1
	Year -Hex	Local	0	SPSW	23	Word	ReadOnly	False
	V 4 77	device		GDGY:	2.4	337 4	D 10 1	E.
	Month - Hex	Local	0	SPSW	24	Word	ReadOnly	False
	D 11	device		CDCHI	25	1 17 1	n. 10 1	г.1
	Day - Hex	Local	0	SPSW	25	Word	ReadOnly	False
	11 11	device	0	CDCH	26	337 1	Day 10, 1	Г-1-
	Hour - Hex	Local	0	SPSW	26	Word	ReadOnly	False
	M	device		CDCHI	27	117 1	n. 10 1	F 1
	Minute - Hex	Local	0	SPSW	27	Word	ReadOnly	False
	C 1 17	device	0	CDCH	20	777 1	Day 10, 1	Г-1-
	Second - Hex	Local	0	SPSW	28	Word	ReadOnly	False
		device						

type	label name	device	station	address	address	data type	read write	power-off
		name	no.	type			mode	holding
	Week - Hex	Local	0	SPSW	29	Word	ReadOnly	False
		device						
	Current screen number	Local	0	SPSW	30	Word	ReadOnly	False
		device						
	System running time	Local	0	SPSW	31	DWord	ReadOnly	False
		device						
	HMI software version	Local	0	SPSW	90	String	ReadOnly	False
		device						
	System runtime - hour	Local	0	SPSW	200	Word	ReadOnly	False
		device						
	System runtime - minute	Local	0	SPSW	201	Word	ReadOnly	False
		device						
	System runtime - second	Local	0	SPSW	202	Word	ReadOnly	False
		device						
	Backlight adjustment	Local	0	SPFW	252	Word	R/W	True
	(values 0-11)	device						
	Recipe Index	Local	0	SPFW	256	Word	R/W	True
		device						
	Start screen number	Local	0	SPFW	257	Word	R/W	True
		device						
	Screensaver time	Local	0	SPFW	258	Word	R/W	True
		device						
	Multi language switching	Local	0	SPFW	260	Word	R/W	True
		device						
	Turn off the buzzer	Local	0	SPFW	448	Bit	R/W	True
		device						
	hide cursor	Local	0	SPFW	449	Bit	R/W	True
		device						
	Hide System Menu	Local	0	SPFW	450	Bit	R/W	True
	·	device						
	Turn off backlight	Local	0	SPFW	452	Bit	R/W	True
		device						
	Flash disk eject failure flag	Local	0	SPSB	12	Bit	ReadOnly	False
		device						
	Flash disk insertion flag	Local	0	SPSB	15	Bit	ReadOnly	False
		device						
	Module insertion flag	Local	0	SPSB	18	Bit	ReadOnly	False
Hardware		device						
	Clear alarm records	Local	0	SPSB	120	Bit	R/W	False
		device						
	restart	Local	0	SPSB	200	Bit	WriteOnly	False
		device						
	Safely ejecting the flash	Local	0	SPSB	201	Bit	WriteOnly	False
	yy							

type	label name	device	station	address	address	data type	read write	power-off
		name	no.	type			mode	holding
	disk	device						
	HMI hardware version	Local	0	SPSW	33	String	ReadOnly	False
		device						
	HMI software version	Local	0	SPSW	90	String	ReadOnly	False
		device						
	MQTT service flag	Local	0	SPSB	19	Bit	ReadOnly	False
		device						
	Remote login flag	Local	0	SPSB	20	Bit	ReadOnly	False
		device						
	passthrough connection flag	Local	0	SPSB	21	Bit	ReadOnly	False
		device						
	VNC service flag	Local	0	SPSB	22	Bit	ReadOnly	False
		device						
	Informationization LAN	Local	0	SPSB	23	Bit	ReadOnly	False
	Connection Flag	device						
	Communication failure flag	Local	0	SPSB	48	Bit	ReadOnly	False
		device						
	Communication failure flag	Local	0	SPSB	49	Bit	ReadOnly	False
	for communication port 1	device						
	Communication failure flag	Local	0	SPSB	50	Bit	ReadOnly	False
	for communication port 2	device						
	Communication failure flag	Local	0	SPSB	51	Bit	ReadOnly	False
	for communication port 3	device						
Communication	Ethernet device	Local	0	SPSB	52	Bit	ReadOnly	False
Communication	communication failure flag	device						
	Number of devices	Local	0	SPSW	43	Word	ReadOnly	True
		device						
	port 1 communication	Local	0	SPSW	44	Word	ReadOnly	False
	successful times	device						
	port 1 communication error	Local	0	SPSW	45	Word	ReadOnly	False
	times	device						
	port 1 communication	Local	0	SPSW	46	Word	ReadOnly	False
	timeout times	device						
	port 1 communication	Local	0	SPSW	47	Word	ReadOnly	False
	failure times	device						
	port 2 communication	Local	0	SPSW	48	Word	ReadOnly	False
	successful times	device						
	port 2 communication error	Local	0	SPSW	49	Word	ReadOnly	False
	times	device						
	port 2 communication	Local	0	SPSW	50	Word	ReadOnly	False
	timeout times	device						
	port 2 communication	Local	0	SPSW	51	Word	ReadOnly	False
	failure times	device						

type	label name	device	station	address	address	data type	read write	power-off
		name	no.	type			mode	holding
	port 3 communication	Local	0	SPSW	52	Word	ReadOnly	False
	successful times	device						
	port 3 communication error	Local	0	SPSW	53	Word	ReadOnly	False
	times	device						
	port 3 communication	Local	0	SPSW	54	Word	ReadOnly	False
	timeout times	device						
	port 3 communication	Local	0	SPSW	55	Word	ReadOnly	False
	failure times	device						
	present connection method	Local	0	SPSW	56	Word	ReadOnly	False
		device						
	present connection signal	Local	0	SPSW	57	Word	ReadOnly	False
	strength	device						
	Informatization IP address	Local	0	SPSW	58	Word	ReadOnly	False
		device						
	Informatization subnet	Local	0	SPSW	62	Word	ReadOnly	False
	mask	device						
	Informatization default	Local	0	SPSW	66	Word	ReadOnly	False
	gateway	device						
	Informatization port no.	Local	0	SPSW	70	Word	ReadOnly	False
		device						
	Informatization DNS server	Local	0	SPSW	71	Word	ReadOnly	False
		device						
	Informatization MAC	Local	0	SPSW	75	Word	ReadOnly	False
	address	device						
	Informatization module	Local	0	SPSW	81	Word	ReadOnly	False
	information	device						
	Ethernet device 1 IP	Local	0	SPFW	1	Word	R/W	True
	address	device						
	Ethernet device 1 port no.	Local	0	SPFW	5	Word	R/W	True
		device						
	Ethernet device 2 IP	Local	0	SPFW	6	Word	R/W	True
	address	device						
	Ethernet device 2 port no.	Local	0	SPFW	10	Word	R/W	True
		device						
	Ethernet device 3 IP	Local	0	SPFW	11	Word	R/W	True
	address	device						
	Ethernet device 3 port no.	Local	0	SPFW	15	Word	R/W	True
		device						
	Ethernet device 4 IP	Local	0	SPFW	16	Word	R/W	True
	address	device						
	Ethernet device 4 port no.	Local	0	SPFW	20	Word	R/W	True
		device						
	Ethernet device 5 IP	Local	0	SPFW	21	Word	R/W	True

type	label name	device	station	address	address	data type	read write	power-off
		name	no.	type			mode	holding
	address	device						
	Ethernet device 5 port no.	Local	0	SPFW	25	Word	R/W	True
		device						
	Ethernet device 6 IP	Local	0	SPFW	26	Word	R/W	True
	address	device						
	Ethernet device 6 port no.	Local	0	SPFW	30	Word	R/W	True
		device						
	Ethernet device 7 IP	Local	0	SPFW	31	Word	R/W	True
	address	device						
	Ethernet device 7 port no.	Local	0	SPFW	35	Word	R/W	True
		device						
	Ethernet device 8 IP	Local	0	SPFW	36	Word	R/W	True
	address	device		~~				
	Ethernet device 8 port no.	Local	0	SPFW	40	Word	R/W	True
		device	_					
	Ethernet device 9 IP	Local	0	SPFW	41	Word	R/W	True
	address	device		an			D 777	
	Ethernet device 9 port no.	Local	0	SPFW	45	Word	R/W	True
		device						
	Ethernet device 10 IP	Local	0	SPFW	46	Word	R/W	True
	address	device		CDEW	50	*** 1	D /III	
	Ethernet device 10 port no.	Local	0	SPFW	50	Word	R/W	True
	T1	device		GDEW.	5.1	*** 1	D /III	
	Ethernet device 11 IP	Local	0	SPFW	51	Word	R/W	True
	address	device	0	CDEW		337 1	D AV	
	Ethernet device 11 port no.	Local device	0	SPFW	55	Word	R/W	True
	Ed. (1.: 12.ID		0	CDEW	5.6	3371	D AV	т.
	Ethernet device 12 IP	Local	0	SPFW	56	Word	R/W	True
	address	device	0	CDEW	(0)	Word	R/W	True
	Ethernet device 12 port no.	Local device	0	SPFW	60	word	K/W	True
	Ethernet device 13 IP	Local	0	SPFW	61	Word	R/W	True
	address	device	0	SPFW	01	word	K/W	True
	Ethernet device 13 port no.	Local	0	SPFW	65	Word	R/W	True
	Ethernet device 13 port no.	device	U	SELW	03	word	IN/ W	True
	Ethernet device 14 IP	Local	0	SPFW	66	Word	R/W	True
	address	device		DI I: W		WOIU	10/ 44	Truc
	Ethernet device 14 port no.	Local	0	SPFW	70	Word	R/W	True
	Emerine device 14 port 110.	device		DI I: VV	/ 0	WOIU	10/ 44	Truc
	Ethernet device 15 IP	Local	0	SPFW	71	Word	R/W	True
	address	device		DI I: VV	/ 1	WOIU	10/ 44	Truc
	Ethernet device 15 port no.	Local	0	SPFW	75	Word	R/W	True
	Emerier device 13 port 110.	device		DI I: W	13	WOIU	10/ 44	Truc
		ucvice	<u> </u>					<u></u>

type	label name	device	station	address	address	data type	read write	power-off
		name	no.	type			mode	holding
	Ethernet device 16 IP	Local	0	SPFW	76	Word	R/W	True
	address	device						
	Ethernet device 16 port no.	Local	0	SPFW	80	Word	R/W	True
		device						
	Ethernet device 17 IP	Local	0	SPFW	81	Word	R/W	True
	address	device						
	Ethernet device 17 port no.	Local	0	SPFW	85	Word	R/W	True
		device						
	Ethernet device 18 IP	Local	0	SPFW	86	Word	R/W	True
	address	device						
	Ethernet device 18 port no.	Local	0	SPFW	90	Word	R/W	True
		device						
	Ethernet device 19 IP	Local	0	SPFW	91	Word	R/W	True
	address	device						
	Ethernet device 19 port no.	Local	0	SPFW	95	Word	R/W	True
		device						
	Ethernet device 20 IP	Local	0	SPFW	96	Word	R/W	True
	address	device						
	Ethernet device 20 port no.	Local	0	SPFW	100	Word	R/W	True
		device						
	Ethernet device 21 IP	Local	0	SPFW	101	Word	R/W	True
	address	device						
	Ethernet device 21 port no.	Local	0	SPFW	105	Word	R/W	True
		device						
	Ethernet device 22 IP	Local	0	SPFW	106	Word	R/W	True
	address	device						
	Ethernet device 22 port no.	Local	0	SPFW	110	Word	R/W	True
		device						
	Ethernet device 23 IP	Local	0	SPFW	111	Word	R/W	True
	address	device						
	Ethernet device 23 port no.	Local	0	SPFW	115	Word	R/W	True
		device						
	Ethernet device 24 IP	Local	0	SPFW	116	Word	R/W	True
	address	device						
	Ethernet device 24 port no.	Local	0	SPFW	120	Word	R/W	True
		device						
	Ethernet device 25 IP	Local	0	SPFW	121	Word	R/W	True
	address	device						
	Ethernet device 25 port no.	Local	0	SPFW	125	Word	R/W	True
		device						
	Ethernet device 26 IP	Local	0	SPFW	126	Word	R/W	True
	address	device						
	Ethernet device 26 port no.	Local	0	SPFW	130	Word	R/W	True

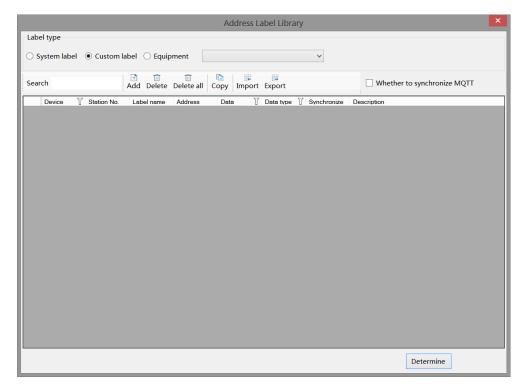
type	label name	device	station	address	address	data type	read write	power-off
		name	no.	type			mode	holding
		device						
	Ethernet device 27 IP	Local	0	SPFW	131	Word	R/W	True
	address	device						
	Ethernet device 27 port no.	Local	0	SPFW	135	Word	R/W	True
		device						
	Ethernet device 28 IP	Local	0	SPFW	136	Word	R/W	True
	address	device						
	Ethernet device 28 port no.	Local	0	SPFW	140	Word	R/W	True
		device						
	Ethernet device 29 IP	Local	0	SPFW	141	Word	R/W	True
	address	device						
	Ethernet device 29 port no.	Local	0	SPFW	145	Word	R/W	True
		device						
	Ethernet device 30 IP	Local	0	SPFW	146	Word	R/W	True
	address	device						
	Ethernet device 30 port no.	Local	0	SPFW	150	Word	R/W	True
		device						
	Ethernet device 31 IP	Local	0	SPFW	151	Word	R/W	True
	address	device						
	Ethernet device 31 port no.	Local	0	SPFW	155	Word	R/W	True
		device						
	Ethernet device 32 IP	Local	0	SPFW	156	Word	R/W	True
	address	device						
	Ethernet device 32 port no.	Local	0	SPFW	160	Word	R/W	True
		device						
	Ethernet device 33 IP	Local	0	SPFW	161	Word	R/W	True
	address	device						
	Ethernet device 33 port no.	Local	0	SPFW	165	Word	R/W	True
		device						
	Ethernet device 34 IP	Local	0	SPFW	166	Word	R/W	True
	address	device						
	Ethernet device 34 port no.	Local	0	SPFW	170	Word	R/W	True
		device	_					
	Ethernet device 35 IP	Local	0	SPFW	171	Word	R/W	True
	address	device						
	Ethernet device 35 port no.	Local	0	SPFW	175	Word	R/W	True
	P	device		<u> </u>	4=-	*** *		
	Ethernet device 36 IP	Local	0	SPFW	176	Word	R/W	True
	address	device						
	Ethernet device 36 port no.	Local	0	SPFW	180	Word	R/W	True
		device						
	Ethernet device 37 IP	Local	0	SPFW	181	Word	R/W	True
	address	device						

type	label name	device	station	address	address	data type	read write	power-off
		name	no.	type			mode	holding
	Ethernet device 37 port no.	Local	0	SPFW	185	Word	R/W	True
	Ed. (1 : 20 ID	device	0	CDEW	106	XX71	D AV	т.
	Ethernet device 38 IP address	Local device	0	SPFW	186	Word	R/W	True
		Local	0	SPFW	190	Word	R/W	True
	Ethernet device 38 port no.	device	0	SPFW	190	word	K/W	True
	Ethernet device 39 IP	Local	0	SPFW	191	Word	R/W	True
	address	device	U	311.44	191	word	IX/ W	True
	Ethernet device 39 port no.	Local	0	SPFW	195	Word	R/W	True
	Ethernet device 37 port no.	device	U	311 W	173	word	IX/ W	Truc
	Ethernet device 40 IP	Local	0	SPFW	196	Word	R/W	True
	address	device		SIIW	170	word	IX W	Truc
	Ethernet device 40 port no.	Local	0	SPFW	200	Word	R/W	True
	Editioner device to port no.	device		SII W	200	Word	10, 11	1140
	Ethernet device 41 IP	Local	0	SPFW	201	Word	R/W	True
	address	device		SII W	201	word	10 11	Truc
	Ethernet device 41 port no.	Local	0	SPFW	205	Word	R/W	True
	Editioner device 11 port no.	device		SII W	203	Word	10, 11	1140
	Ethernet device 42 IP	Local	0	SPFW	206	Word	R/W	True
	address	device		SII W	200	Word	10, 11	1140
	Ethernet device 42 port no.	Local	0	SPFW	210	Word	R/W	True
	r	device						
	Ethernet device 43 IP	Local	0	SPFW	211	Word	R/W	True
	address	device						
	Ethernet device 43 port no.	Local	0	SPFW	215	Word	R/W	True
		device						
	Ethernet device 44 IP	Local	0	SPFW	216	Word	R/W	True
	address	device						
	Ethernet device 44 port no.	Local	0	SPFW	220	Word	R/W	True
		device						
	Ethernet device 45 IP	Local	0	SPFW	221	Word	R/W	True
	address	device						
	Ethernet device 45 port no.	Local	0	SPFW	225	Word	R/W	True
		device						
	Ethernet device 46 IP	Local	0	SPFW	226	Word	R/W	True
	address	device						
	Ethernet device 46 port no.	Local	0	SPFW	230	Word	R/W	True
		device						
	Ethernet device 47 IP	Local	0	SPFW	231	Word	R/W	True
	address	device						
	Ethernet device 47 port no.	Local	0	SPFW	235	Word	R/W	True
		device						
	Ethernet device 48 IP	Local	0	SPFW	236	Word	R/W	True

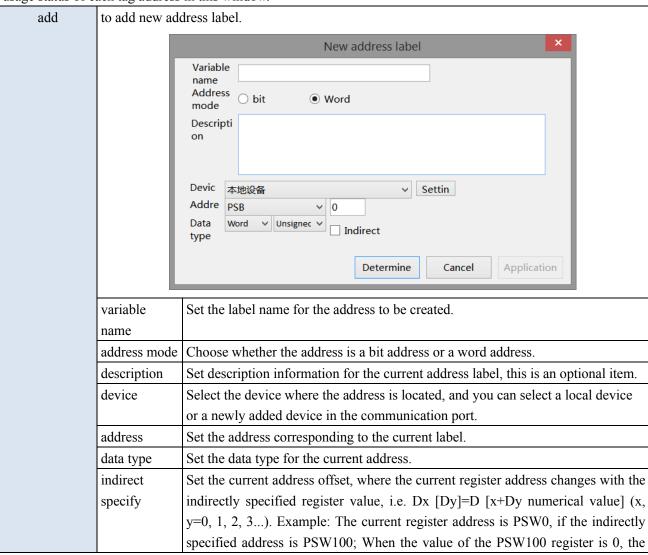
type	label name	device	station	address	address	data type	read write	power-off
		name	no.	type			mode	holding
	address	device						
	Ethernet device 48 port no.	Local	0	SPFW	240	Word	R/W	True
		device						
	Ethernet device 49 IP	Local	0	SPFW	241	Word	R/W	True
	address	device						
	Ethernet device 49 port no.	Local	0	SPFW	245	Word	R/W	True
		device	_					
	Ethernet device 50 IP	Local	0	SPFW	246	Word	R/W	True
	address	device						
	Ethernet device 50 port no.	Local	0	SPFW	250	Word	R/W	True
		device						
	HMI IP address	Local	0	SPFW	318	Word	R/W	True
		device						
	HMI subnet	Local	0	SPFW	322	Word	R/W	True
		device						
	HMI gateway	Local	0	SPFW	326	Word	R/W	True
		device						
	HMI port no.	Local	0	SPFW	330	Word	R/W	True
		device						
	HMI DNS server	Local	0	SPFW	331	Word	R/W	True
		device						
	Communication port 1	Local	0	SPFW	335	Word	R/W	True
	interface type	device						
	Communication port 1	Local	0	SPFW	336	Word	R/W	True
	device station no.	device						
	Communication port 1	Local	0	SPFW	337	Word	R/W	True
	device baud rate	device						
	Communication port 1	Local	0	SPFW	338	Word	R/W	True
	device data bit	device						
	Communication port 1	Local	0	SPFW	339	Word	R/W	True
	device stop bit	device						
	Communication port 1	Local	0	SPFW	340	Word	R/W	True
	device parity bit	device						
	Communication port 1	Local	0	SPFW	341	Word	R/W	True
	delay before sending	device						
	Communication port 2	Local	0	SPFW	343	Word	R/W	True
	interface type	device						
	Communication port 2	Local	0	SPFW	344	Word	R/W	True
	device station no.	device						
	Communication port 2	Local	0	SPFW	345	Word	R/W	True
	device baud rate	device						
	Communication port 2	Local	0	SPFW	346	Word	R/W	True
	device data bit	device						

type	label name	device	station	address	address	data type	read write	power-off
		name	no.	type			mode	holding
	Communication port 2	Local	0	SPFW	347	Word	R/W	True
	device stop bit	device						
	Communication port 2	Local	0	SPFW	348	Word	R/W	True
	device parity bit	device						
	Communication port 2	Local	0	SPFW	349	Word	R/W	True
	delay before sending	device						
	Communication port 3	Local	0	SPFW	351	Word	R/W	True
	interface type	device						
	Communication port 3	Local	0	SPFW	352	Word	R/W	True
	device station no.	device						
	Communication port 3	Local	0	SPFW	353	Word	R/W	True
	device baud rate	device						
	Communication port 3	Local	0	SPFW	354	Word	R/W	True
	device data bit	device						
	Communication port 3	Local	0	SPFW	355	Word	R/W	True
	device stop bit	device						
	Communication port 3	Local	0	SPFW	356	Word	R/W	True
	device parity bit	device						
	Communication port 3	Local	0	SPFW	357	Word	R/W	True
	delay before sending	device						
	Communication port 1	Local	0	SPFW	400	Bit	R/W	True
	station number shielding	device						
	Communication port 2	Local	0	SPFW	416	Bit	R/W	True
	station number shielding	device						
	Communication port 3	Local	0	SPFW	432	Bit	R/W	True
	station number shielding	device						
	VNC service control	Local	0	SPFW	451	Bit	R/W	True
		device						

Custom label

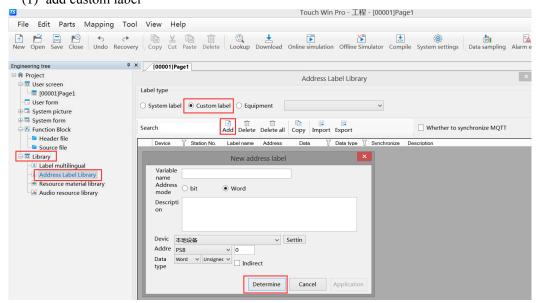


According to personal usage habits, create tags for HMI internal addresses or device addresses, and view the usage status of each tag address in this window.

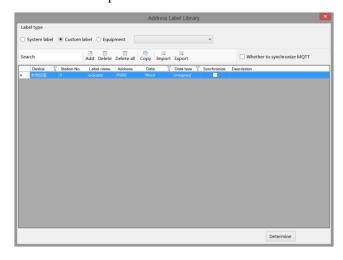


	register that controls this component remains PSW0; When the value of the PSW100 register is 1, the register that controls this component is PSW1 (and so	
	on).	
delete	Delete the specified address label.	
delete all	Delete all added address labels.	
copy	Copy the specified address label.	
paste	This item is only displayed when there is copied content, used to paste the copied address label	
	at the specified location.	
export	Export the currently added address label in CSV format to the specified path in the computer.	
import	Import the CSV format address table of the specified path in the computer into the HMI.	
example	The indicator button uses a user-defined label.	

(1) add custom label

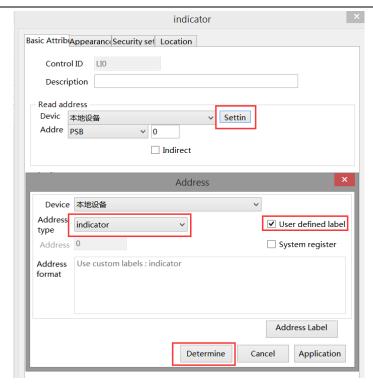


after clicking ok, it will show below picture:

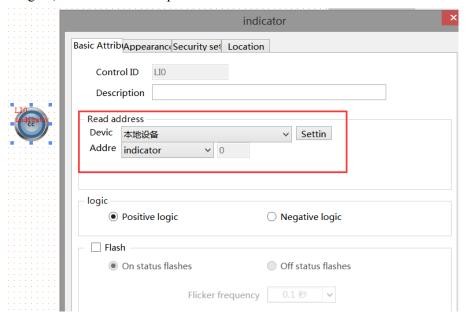


(2) use custom label

Place indicator buttons on the engineering screen and follow the steps shown in the following figure for configuration.



after clicking ok, it will show below picture:



At the same time, the usage screen and window of customized label will also be displayed. Click on Library/ Address Label Library/ Custom Labels to view. (When a control reads/writes to the same address, "1 1" will appear as shown in the following figure)

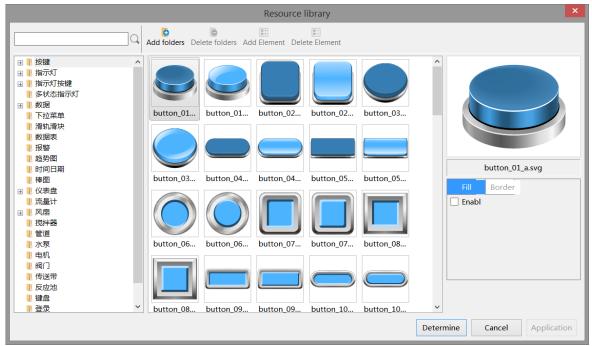


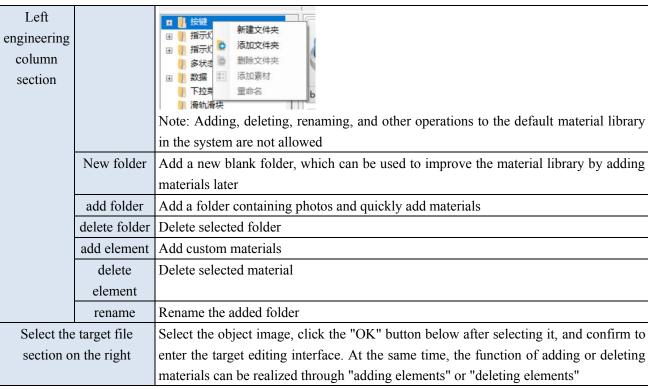
5-3. Resource material library

By accessing the resource material library, diversity in the appearance of editing tools can be achieved. Double click on the Project Tree/ Resource Material Library icon.



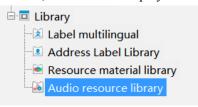
The resource material library selection image dialog box appears, as shown in the following figure:

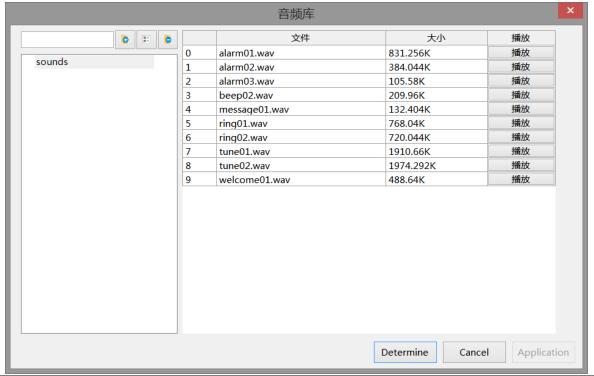


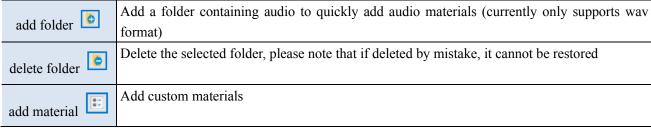


5-4. Audio resource library

The audio resource library can manage all audio information in the software, including buttons, indicator buttons, character keys, function keys, alarms, and other audio playback functions.

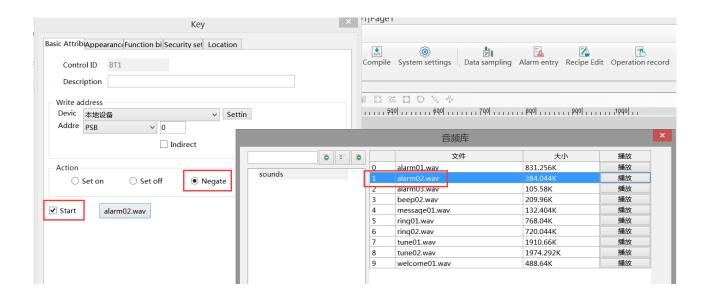






Take the indicator button as an example (follow the steps in the figure).

- Step 1: Select the indicator light button and place it on the screen.
- Step 2: Set operation related parameters according to usage requirements. As shown in the figure, the setting is reversed, meaning that every time the indicator button is clicked, the status of the indicator button changes, and it also triggers the function of playing audio. (There is currently no pause function, as long as there is a trigger signal, the selected audio will be played completely).
- Step 3: Check the start sound and click on the gray box behind it to enter the audio library interface.
- Step $4 \sim$ Step 5: Select an audio file in the audio library, select it, and click OK.
- Step 6: After clicking OK at the indicator button component, the selected audio name will be displayed in the gray box.



6. Function block

This chapter explains the usage of the C function by introducing the C instruction and combining some simple examples. Therefore, only some simple and easy to understand C function knowledge is used in the introduction. The main purpose is to help customers understand this function, understand some basic writing rules, and some precautions during use.

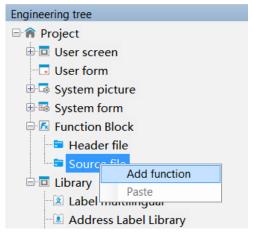
6-1. Function block introduction

6-1-1. Function block operating conditions

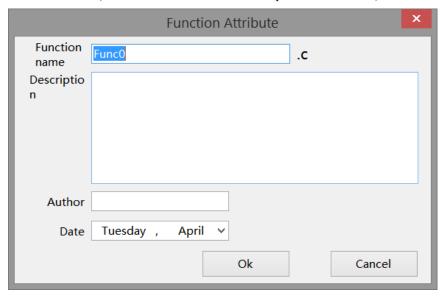
Unlike general TG series HMI, TS series HMI support function block offline/online simulation.

6-1-2. Build a function block

1. Open TouchWin Pro software, click engineering tree/project/function block/source file/add function.

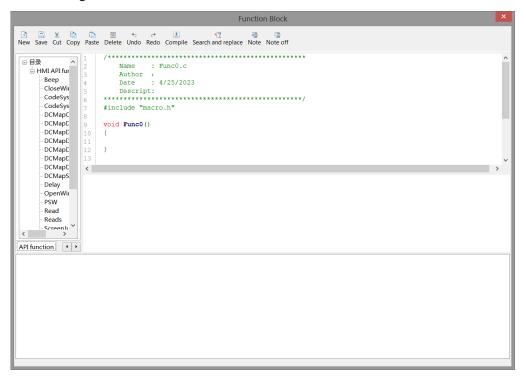


2. Fill in the basic information of the function block in the pop-up information dialog box, and click "OK" to create a new function. (Function block names can be up to 30 characters)



Function Name naming Rules Refer to 6-2-1 Writing Method.

Select the newly created function, double-click the left mouse button, and open the function block for function writing.

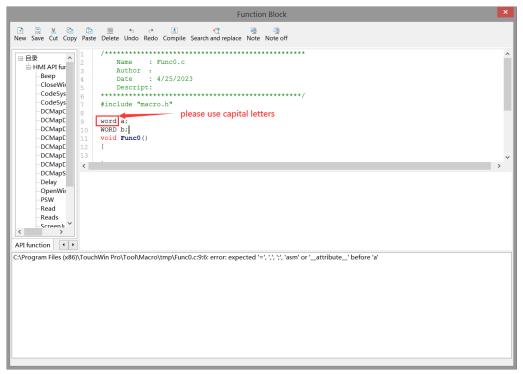


6-1-3. Function block compilation

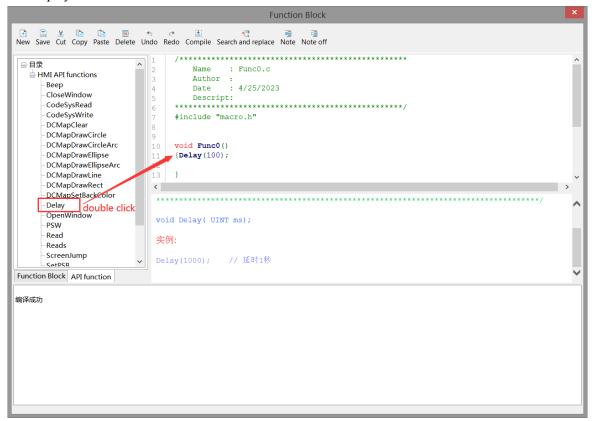
Depending on the current use of the computer keyboard, users can compile functions by pressing the F5 key on the keyboard or the 'Compile' button on the menu bar during the editing process.

The compilation function can detect whether the function has syntax and writing errors, variable definitions, editing function errors, etc.

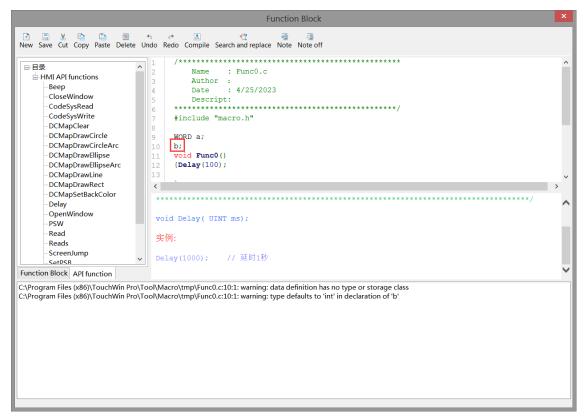
1. Grammar and writing errors



2. When using functions or macros in the function library, directly select the function to be used in the function library list, double-click it, or input the function in the editing area according to the format displayed in the function list:



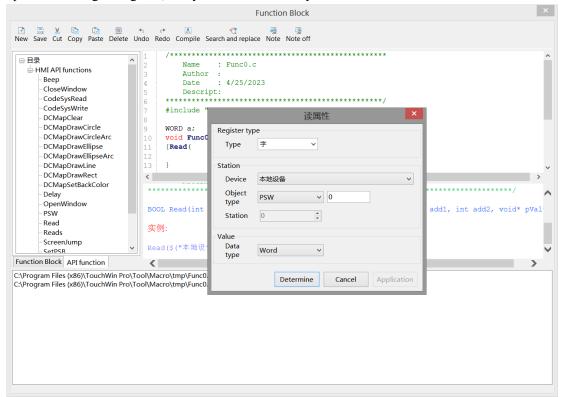
3. undefined variable



4. Function edit error

When operating functions, many users manually enter function names and variables within the function, which can easily lead to editing errors. When inputting functions, you can refer to the following usage methods:

For example, Read function: directly select "Read" in the API function list, double-click it, and the function will be displayed in the editing area. Then press "shift + (" key on the keyboard. The system will pop up the following dialog box, and you can set it directly.





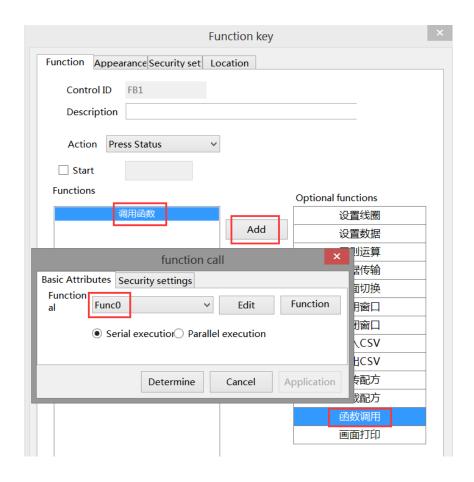
When editing functions, the input method needs to be set to English.

6-1-4. Run the function block

Users can choose function keys/functional domains/indicator buttons/buttons/multi state buttons to call function blocks according to their own needs. The specific introduction is as follows:

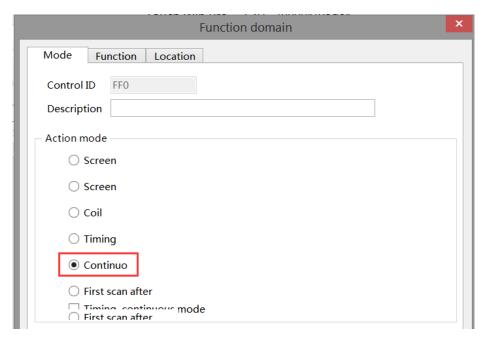
1. Function key calls function blocks

Place a function key on the screen, select "Function Call" from the "Optional Functions" on the right, and then click the "Add" button to add this function. Select "Call Function" on the left, and select the name of the function to be called to add the function.

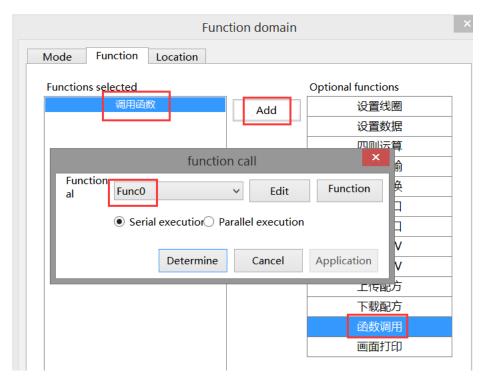


2. Function domain calls function blocks

1> Place a functional domain in the screen and set the "Action Mode" to "Continuous".



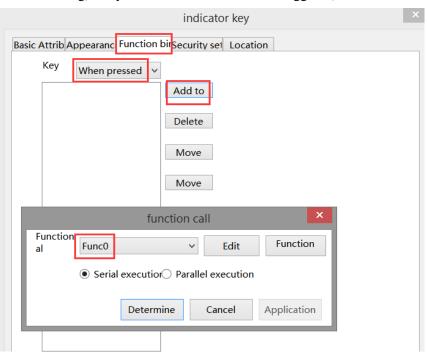
2> Function options: Select "Function Call" from the "Optional Functions" on the right, then click the "Add" button to add this function. Select "Call Function" on the left, and select the name of the function to be called to add the function.



3. Indicator light button/button/multi state button call function block

Taking the indicator key as an example:

Place an indicator button on the screen and set it under the function binding bar. The setting steps are shown in the following figure. After setting, every time the indicator button is triggered, the set function will be called.



6-2. Function block explanation

6-2-1. Writing method

The writing of function block identifiers is entirely in accordance with the standard C language. The effective character sequence used to identify names in C language is called identifier, which refers to user-defined variable, function, constant, and statement symbol names.

■ Legal identifier

- (1) Composed of letters, numbers, and underscores
- (2) The first digit can only be a letter or an underscore
- (3) Cannot be exactly the same as the keywords in C language
- (4) 256 characters or less in length
- (5) The defined function name and variable name cannot be the same as the standard function name in C language

6-2-2. Function type

According to the usage of functions, the HMI editing software TouchWin Pro divides functions into header files and source files. The header file and source file are not function types, they are two different file types. The header file is "xxxx. h" and the source file is "xxxx. c".

■ Header file function

Header file: can define global variables, declare or implement functions, and the variables and functions defined in the header file can be used in the source file containing the header file. When the header file contains other header files, variables and functions in the header file can also be used.

Example:

```
Func.h

// System header files or other header files included

#include <stdio.h> // use system header file<>>

#include <string.h>

#include "Func1.h" // use user-defined header file""

int a = 10; // define the variables

void Test() // realize the function

{
    a = 20;
}

int Add(int a, int b); // declare the function and implement it in the source file
```

■ Source file function

Source file: can define variables and implement specific function functions. It can be called through controls such as function keys, function domains, indicator buttons, buttons, and multi state buttons.

Example:

Func.c

```
#include "Func.h"
int b = 20;  // define the variables
int Add(int a, int b)
{
    return a + b;
}
```

6-2-3. Predefined data types

```
#pragma once
  #include "funkey.h"
  enum LocalRegType
      TP_PSB = 0,
      TP_SPSB,
      TP_PSW,
      TP_PFW,
      TP_SPSW,
      TP_SPFW,
      TP_COUNT,
  };
enum VarDataType
  DT_Bit = 0x1,
  DT_Byte = 0x2,
  DT_WORD = 0x4,
  DT_DWORD = 0x8,
  DT_DDWORD = 0x10,
  DT_String = 0x20,
  DT_Bytes = 0x40,
  DT_Words = 0x80,
  DT_DWords = 0x100,
  DT_DDWords = 0x200,
};
enum NewVarDataType
  DT_Word = 0x4,
  DT_DWord = 0x8,
  DT_DDWord = 0x10,
  DT_Byte_String = 0x40,
```

```
DT_Word_String = 0x80,
DT_DWord_String = 0x100,
DT_DDWord_String = 0x200,
};

typedef int(*_Sys_HMIMacroApi)(const char* apiid, void *param);
extern int _MID(int mapid);
typedef char bool;
typedef unsigned int DWORD;
typedef unsigned short WORD;
```

6-2-4. Predefined macro instructions

```
#define Max(a,b)
                               (((a) > (b)) ? (a) : (b))
Eg. Max(3, 4) == 4
#define Min(a,b)
                               (((a) < (b)) ? (a) : (b))
Eg. Min(3, 4) == 3
#define MAKEWORD(byl, byh)
                                 ((WORD)(((BYTE)(byl)) | ((WORD)((BYTE)(byh))) << 8))
Eg. MAKEWORD(0x01, 0x02) == 0x0201
#define MAKELONG(wl,wh)
                                 ((long)(((WORD)(wl))|((DWORD)((WORD)(wh))) << 16))
Eg. MAKEDWORD(0x01, 0x02) == 0x00020001
#define LOWORD(1)
                                 ((WORD)(1))
Eg. LOWORD(0x00020001) == 0x0001
#define HIWORD(1)
                                ((WORD)(((DWORD)(1) >> 16) \& 0xFFFF))
Eg. HIWORD(0x00020001) == 0x0002
#define LOBYTE(w)
                                 ((BYTE)(w))
Eg. LOBYTE(0x0201) == 0x01
#define HIBYTE(w)
                                ((BYTE)(((WORD)(w) >> 8) \& 0xFF))
Eg. HIBYTE(0x0201) == 0x02
```

6-2-5. API function

6-2-5-1. Read/Write

function	Read and write operations (for reading and writing bits and registers)				
format	read	void Read(int devId, int staID, int objType, int dataType, int add1, int add2,			
	operation	void* pValue);			
	write	void Write(int devId, int staID, int objType, int dataType, int add1, int add2, void			
	operation	pValue);			
note	devId:	device ID			
	staID:	station no.			
	objType:	Register Address Type			
	dataType:	Register data type			
		DT_Bit Enumeration Type, occupy 1 byte			
		DT_Byte occupy 1 byte			

		DT WORD account 2 butes		
		DT_WORD occupy 2 bytes		
		DT_DWORD occupy 4 bytes		
		DT_DDWORD occupy 8 bytes		
	add1,add2:	register address		
	pValue:	data buffer (The length should match the dataType)		
	return value	TRUE / FALSE (Success/Failure)		
example	bool bValue;// Define a Boolean variable			
	WORD wValue;// Define an integer variable			
	Read(_T("Xinje XD/XL/XG series (Modbus RTU)"), 1, TP2_M, DT_Bit, 0, 0, &bValue);//read bit M0			
	Read(_T("Xinje XD/XL/XG series (Modbus RTU)"), 1, TP2_D, DT_WORD, 0, 0, &wValue);//read			
	D0			
	Write(_T("Xinje XD/XL/XG series (Modbus RTU)"), 1, TP2_M, DT_Bit, 10, 0, bValue);//write bit			
	M10			
	Write(_T("Xinje XD/XL/XG series (Modbus RTU)"), 1, TP2_D, DT_WORD, 10, 0, wValue);//write			
	D10			
caution	When writing Read functions, be sure to add the&addressing character			

6-2-5-2. Reads/Writes

function	read write register groups			
format	read	void Reads(int devId, int staID, int objType,int dataType, int addr,int addr1, int		
	operation	regs, void* pRegs);		
	write	void Writes(int devId, int staID, int objType,int dataType, int addr,int addr1, int		
	operation	regs, void* pRegs);		
note	devId:	device ID		
	staID:	station no.		
	objType:	register address type		
	dataType:	register data type		
	addr add1:	register address		
	regs:	register numbers		
	pRegs:	data buffer (The length should match the size of the register group that needs to		
		be read and written)		
	return value:	TRUE / FALSE (Success/Failure)		
example	WORD wValue [10];// Define an integer variable			
	Reads(_T("XINJE XD/XL/XG series (Modbus RTU)"), 1, TP2_D, DT_WORD, 0, 0, 10, wValue);			
	//read D0 group Writes(_T("XINJE XD/XL/XG series (Modbus RTU)"), 1, TP2_D, DT_WORD, 100, 0,			
	10,wValue);//write D100 group			
caution	Read and write data for floating point numbers and multiple continuous address registers.			

6-2-5-3. WriteF

function	Write register (used to write floating point number)		
format	BOOL WriteF(int devId, int staID, int objType, int dataType, int add1, int add2, void pValue);		
note	devId:	device ID	
	staID:	station no.	
	objType:	register address type	
	dataType:	register data type	
	add1,add2:	register address	
	pValue:	data buffer (The length should match the dataType type)	
	return	TRUE / FALSE (Success/Failure)	
	value:		
example	double bValue;// Define a double precision variable		
	WriteF(_T("XINJE XD/XL/XG series (Modbus RTU)"), 1, TP2_D, DT_DDWORD, 0, 0,bValue);//write D0		

6-2-5-4. Delay

function	delay	delay	
format	void Delay(UINT ms);		
note	ms:	delay time (unit: ms)	
example	Delay(10);//delay 10ms		
	Delay(10	Delay (1000);//delay 1s	

6-2-5-5. ScreenJump

function	screen jump	
format	WORD ScreenJump(WORD ScreenNo);	
note	screenNo:	screen no.
example	Return:	jump to screen no.
	ScreenJump(2);//jump to screen no.2	

6-2-5-6. OpenWindow

function	open window		
format	void Ope	void OpenWindow(int winNo, int winX, int winY);	
note	winNo: window no.		
example	winX: Start position of window X-axis		
	winY:	Start position of window Y-axis	
	OpenWindow(5001,10,10);//display window 5001 at the location (10, 10)		

6-2-5-7. CloseWindow

function	close window	
format	void CloseWindow(WORD winNo);	
note	winNo:	window no.

example	CloseWindow(5001);//close window no. 5001

6-2-5-8. Beep

function	Buzzer sounds once
format	void Beep(void);
example	Beep();// Buzzer sounds once

6-2-5-9. PSW

function	PSW register can be operated directly, the type is unsigned short (i.e. WORD)		
example	PSW[300]++; // PSW[300]++ as word		
	DWORD dwValue = *(DWORD*)(PSW + 300); // send the value in PSW[300] and PSW[301] to a		
	double word		
	float fValue = *(float*)(PSW + 300); // read the value in PSW[300] and PSW[301] as floating		
	number format		
	(DWORD)(PSW + 300) = dwValue; // set a double word value to PSW[300] and PSW[301]		

6-2-5-10. SetPSB

function	set ON/OFF PSB	
format	SetPSB(addr, val);	
note	Addr:	register address
	Val:	data buffer, 1-ON;0-OFF
example	SetPSB(0,1);//set ON PSB0	
	SetPSB(0,0);//set OFF PSB0	

6-2-5-11. DCMapSetBackColor

function	Modify the background color of the function canvas		
format	BOOL DCMapSetBackColor(DWORD dwDCMapID, DWORD BackColor)		
note	dwDCMapID:	Set Function Canvas Number	
	BackColor:	Set color values, usually entered in hexadecimal, such as 0x00ff00	
example	DCMapSetBackColor (1,0x000000);// Fill the background color of the function canvas number 1		
	with black		
caution	The TS series HMI uses RGB mode, where one color occupies one byte, i.e. 0xFF0000		
	represents B (BLUE), 0x00FF00 represents G (Green), and 0x0000FF represents R (RED).		

6-2-5-12. DCMapDrawLine

	function	Custom Line Drawing		
Ī	format	BOOL DCMapDrawLine(DWORD dwDCMapID, int x, int y, int Width, int Height, int		
		linewidth, DWORD color)		
	note	dwDCMapID:	Set Function Canvas Number	
		X:	Set the X-axis coordinate point value of the starting point of the line using the	

		upper left corner of the function canvas as the coordinate origin (0,0)
	y:	Set the Y-axis coordinate point value of the starting point of the line using the
		upper left corner of the function canvas as the coordinate origin (0,0)
	Width:	Set the Y-axis coordinate point value of the endpoint of the line using the upper
		left corner of the function canvas as the coordinate origin (0,0)
	Height:	Set the Y-axis coordinate point value of the endpoint of the line using the upper
		left corner of the function canvas as the coordinate origin (0,0)
	Linewidth:	Set the line width, i.e. thickness
	Color:	Set Line Color Values
example	int x_pos,y_pos	s,line_height,line_width,linewidth;
	DWORD line_c	color;
	x_pos=PSW[30	0];
	y_pos=PSW[30	1];
	line_color=*(D	WORD *)(PSW+302);
	line_height=PS	W[304];
	line_width=PSW[305];	
	linewidth=PSW[306];	
	DCMapClear(1); // Use the DCMapClear command to delete the drawing during use	
	DCMapDrawLine (1,x_pos,y_pos,line_width,line_height,linewidth,line_color);	

6-2-5-13. DCMapDrawRect

function	Custom Draw Rectangle			
format	BOOL DCMapDrawRect (DWORD dwDCMapID, int x, int y, int Width, int Height, int			
	linewidth, DWORD color, BOOL FillRect, DWORD FillColor)			
note	dwDCMapID:	Set Function Canvas Number		
	X:	Set the X-axis coordinate point value of the starting point of the rectangle		
		using the upper left corner of the function canvas as the coordinate origin (0,0)		
	y:	Set the Y-axis coordinate point value of the starting point of the rectangle		
		using the upper left corner of the function canvas as the coordinate origin (0,0)		
	Width: Set rectangular width value			
	Height: Set rectangular height value			
	Linewidth: Set the width of the rectangular line, i.e. thickness			
	Color:	or: Set the color value of rectangular edges		
	FillRect:	Set whether the interior of the rectangle needs to be filled, 0 is not filled, and		
		is filled		
	E'IIC 1			
	FillColor:	, ,		
example	int x_pos,y_pos,rec_height,rec_width,linewidth;			
	DWORD rec_color, fillcolor;			
	bool Fill;			
	Read(_T("local device"), 0, TP_PSB, DT_Bit, 300, 0, &Fill);			
	x_pos=PSW[300];			
	y_pos=PSW[301			
	rec_color=*(DWORD *)(PSW+302);			

```
rec_height=PSW[304];
rec_width=PSW[305];
linewidth=PSW[306];
fillcolor=*(DWORD *)(PSW+308);

DCMapClear(1);
DCMapDrawRect(1,x_pos,y_pos,rec_width,rec_height,linewidth,rec_color,Fill,fillcolor);
```

6-2-5-14. DCMapDrawCircle

function	Custom circle drawing				
format	BOOL DCMapDrawCircle(DWORD dwDCMapID, int x, int y, int Radius, int linewidth,				
	DWORD color, BOOL FillRect, DWORD FillColor)				
note	dwDCMapID:				
	X:	Set the X-axis coordinate point value of the center display position using the			
		upper left corner of the function canvas as the coordinate origin (0, 0)			
	y:	Using the upper left corner of the function canvas as the coordinate origin (0, 0), set the Y-axis coordinate point value for the center display position			
	Radius:	Set circle radius			
	Linewidth:	Set the width of the circular line, i.e. thickness			
	Color:	Set the color value of the circular edge			
	FillRect:	Set whether to fill the interior of the circle, 0 for no filling, 1 for filling			
	FillColor:	Set the circle fill color value. If FillRect is set to 0, the fill color setting is			
		invalid			
example	int x_pos,y_pos,Radius,linewidth;				
	DWORD circle_color,fillcolor;				
	bool fill;				
	Read(_T("local device"), 0, TP_PSB, DT_Bit, 300, 0, &fill);				
	x_pos=PSW[300];				
	y_pos=PSW[301];				
	circle_color=*(DWORD *)(PSW+302);				
	Radius=PSW[304];				
	linewidth=PSW[306];				
	fillcolor=*(DWORD *)(PSW+308);				
	DCMapClear(1				
	DCMapDrawCircle(1,x_pos,y_pos,Radius,linewidth,circle_color,fill,fillcolor);				

6-2-5-15. DCMapDrawCircleArc

function	Custom arc drawing			
format	BOOL DCMapD	BOOL DCMapDrawCircleArc(DWORD dwDCMapID, int x, int y, int Radius, int linewidth,		
	DWORD color, I	DWORD color, DWORD StartAngle, DWORD EndAngle)		
note	dwDCMapID: Set Function Canvas Number			
	X:	Using the upper left corner of the function canvas as the coordinate origin (0,		
		0), set the X-axis coordinate point value for the display position of the arc		
		center		

	y:	Using the upper left corner of the function canvas as the coordinate origin			
		(0,0), set the Y-axis coordinate point value for the display position of the arc			
		center			
	Radius:	Radius: Set the arc radius value			
	Linewidth:	Set the arc line width value, i.e. thickness			
	Color:	Set the color value of arc edges			
	StartAngle:	Set the starting angle value of the arc, which is the angle between the line			
		connecting the base point and starting point and the horizontal 0 $^{\circ}$			
	EndAngle:	Set the angle value of the endpoint of the arc, which is the angle between the			
		line connecting the base point and endpoint and the horizontal 0 $^{\circ}$			
example	int x_pos,y_pos	s,Radius,linewidth;			
	DWORD circle	DWORD circle_color;			
	float StartAngle	float StartAngle,EndAngle;			
	x_pos=PSW[30	x_pos=PSW[300];			
	y_pos=PSW[30	y_pos=PSW[301];			
	circle_color=*(circle_color=*(DWORD *)(PSW+302);			
	Radius=PSW[3	Radius=PSW[304];			
	linewidth=PSW	linewidth=PSW[306];			
	StartAngle=*(f	StartAngle=*(float *)(PSW+308);			
	EndAngle=*(fl	EndAngle=*(float *)(PSW+310);			
	DCMapClear(DCMapClear(1);			
	DCMapDraw(CircleArc(1,x_pos,y_pos,Radius,linewidth,circle_color,StartAngle,EndAngle);			
caution	Taking the arc	Taking the arc origin (center point) as the base point, the direction to the right of the horizontal			
	line passing the	line passing through that base point is horizontal 0 $^{\circ}$.			

6-2-5-16. DCMapDrawEllipse

function	Customize drawing ellipses				
format	BOOL DCMapDrawEllipse(DWORD dwDCMapID, int x, int y, int X_Axis_Len, int				
	Y_Axis_Len, in	t linewidth, DWORD color, BOOL FillRect, DWORD FillColor)			
note	dwDCMapID:	Set Function Canvas Number			
	X:	Using the upper left corner of the function canvas as the coordinate origin (0,			
		0), set the display position of the ellipse origin X-axis coordinate point value			
	y:	Using the upper left corner of the function canvas as the coordinate origin (0,			
	0), set the Y-axis coordinate point value of the ellipse origin display position				
	X_Axis_Len:	X_Axis_Len: Set the ellipse radius value of the X axis			
	Y_Axis_Len:	xis_Len: Set the ellipse radius value of the Y axis			
	Linewidth:	h: Set the elliptical line width, i.e. thickness			
	Color:	Set elliptical edge color values			
	FillRect:	: Set whether to fill the interior of the ellipse, 0 for no filling, 1 for filling			
	FillColor:	Set the fill color value. If FillRect is set to 0, the fill color setting is invalid			
example	int x_pos,y_pos,x_Axis,Y_Axis,linewidth;				
	DWORD E_color,fillcolor;				
	bool Fill;				
	x_pos=PSW[300];				

```
y_pos=PSW[301];
E_color=*(DWORD *)(PSW+302);
x_Axis=PSW[305];
Y_Axis=PSW[304];
linewidth=PSW[306];
Read(_T("local device"), 0, TP_PSB, DT_Bit, 300, 0, &Fill);
fillcolor=*(DWORD *)(PSW+308);
DCMapClear(1);
DCMapDrawEllipse(1,x_pos,y_pos,x_Axis,Y_Axis,linewidth,E_color,Fill,fillcolor);
caution
The function parameters x and y are the origin (center point) of the ellipse, not the focal point.
```

6-2-5-17. DCMapDrawEllipseArc

function	Customize drawing elliptical arcs			
format	BOOL DCMapDrawEllipseArc(DWORD dwDCMapID, int x, int y, int X_Axis_Len, int			
	Y_Axis_Len, int linewidth, DWORD color, DWORD StartAngle, DWORD EndAngle)			
note	dwDCMapID: Set Function Canvas Number			
	x:	Using the upper left corner of the function canvas as the coordinate origin (0,		
	0), set the display position of the elliptical arc origin X-axis coordinate			
		value		
	y:	Using the upper left corner of the function canvas as the coordinate origin (0,		
		0), set the display position of the elliptical arc origin Y-axis coordinate point		
		value		
	X_Axis_Len:	Set the X-axis radius value of the elliptical arc		
	Y_Axis_Len:	Set the Y-axis radius value of the elliptical arc		
	Linewidth:	Set the width of the elliptical arc line, i.e. thickness		
	Color:	Set the color value of elliptical arc edges		
	StartAngle: Set the starting angle value of the elliptical arc, which is the angle between			
		line connecting the base point and starting point and the horizontal 0 $^{\circ}$		
	EndAngle:	Set the angle value of the endpoint of the elliptical arc, which is the angle		
		between the line connecting the base point and endpoint and the horizontal 0 $^{\circ}$		
example	int x_pos,y_pos,x_Axis,Y_Axis,linewidth;			
	DWORD eArc_color;			
	float StartAngle,EndAngle;			
	x_pos=PSW[300];			
	y_pos=PSW[301];			
	eArc_color=*(DWORD *)(PSW+302);			
	x_Axis=PSW[305];			
	Y_Axis=PSW[304];			
	linewidth=PSW[306];			
	StartAngle=*(float *)(PSW+308);			
	EndAngle=*(floa			
	DCMapClear(1)			
	DCMapDrawEll	ipseArc(1,x_pos,y_pos,x_Axis,Y_Axis,linewidth,eArc_color,StartAngle,EndAngle		
);			
caution	Taking the origin	(center point) of the elliptical arc as the base point, the direction to the right of		

the horizontal line passing through the base point is horizontal 0 $^{\circ}$. The function parameters x
and y are the origin (center point) of the elliptical arc, not the focal point.

6-2-5-18. DCMapClear

function	Clear Canvas Content		
format	BOOL DCMapClear(DWORD dwDCMapID)		
note	dwDCMapID:	dwDCMapID: Set Canvas Number	
example	DCMapClear (1);// Clear the contents of the function canvas number 1		

6-3. Project example

6-3-1. Data compare

Example requirements:

Take three integers from the PLC for comparison, and output the maximum and minimum values for display on the HMI.

Example device:

- (1) One TS3-700-E and one XD5E-30T4-E
- (2) One USB download cable, one PLC communication cable, and one computer

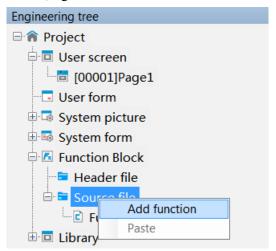
Related information:

- (1) User Manual for XD/XL Series Programmable Controllers (Basic Instructions)
- (2) TouchWin Pro Editing Software User Manual

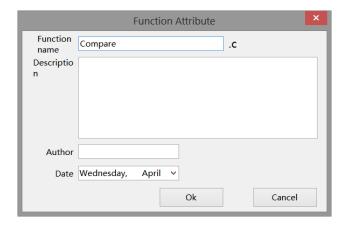
Operation process:

1. Establish C function block

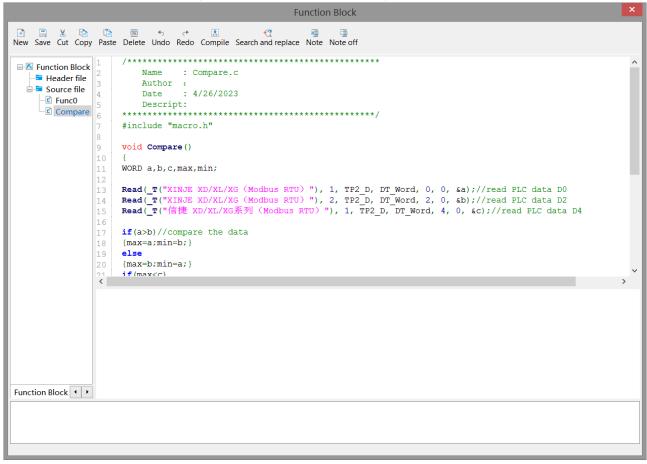
In the Engineering Tree Function Block, right-click and select Add Function.



The function block information input box appears (as shown in the figure below), fill in the relevant information and click OK.

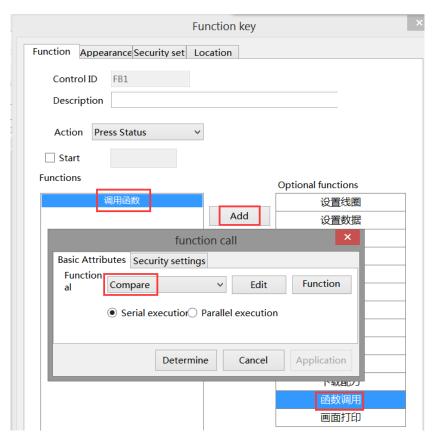


Establish a C function block editing environment, with the following functions:



2. Call the function

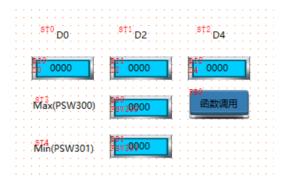
Place a function key on the screen, and the remaining settings are shown in the following figure. Select "Function Call" from the "Optional Functions" on the right, then click the "Add" button to add this function. Double click "Call Function" in the "Selected Functions" section, and select the name of the function to be called in the "Function" section (select the newly created function "Compare" above) to add the function.



Click on the "Appearance" option, set the function key text to "Function Call", and finally click "OK" to complete the settings.

3. screen editing

Place 3 numerical inputs, addresses D0, D2, D4, 2 numerical displays, addresses PS300, PSW301, 5 text strings, as follows:



4. Finally, download the program to the HMI and connect it to the PLC for operation.

6-3-2. Clear the data block

Example requirements:

The data blocks in the PLC are cleared to zero.

Example device:

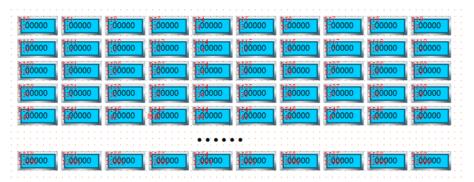
- (1) One TS3-700-E and one XD5E-30T4-E
- (2) One USB download cable, one PLC communication cable, and one computer

Related information:

(1) TouchWin Pro Editing Software User Manual

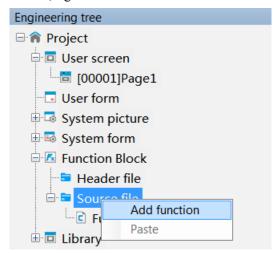
Operation process:

1. Place 3000 data input components on the screen, with addresses set to D0, D1... D2999, and attributes set to WORD. The number of digits is 5, and unsigned number (i.e. WORD unsigned). As follows:

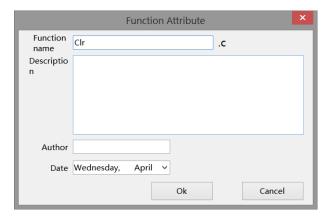


2. Establish C function block

In the Engineering Tree Function Block, right-click and select Add Function.



The function block information input box appears (as shown in the figure below), fill in the relevant information and click OK.

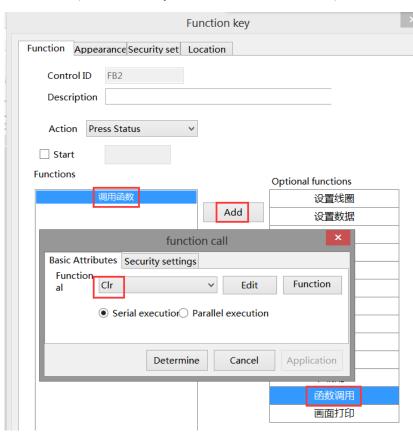


Establish a C function block editing environment, with the following functions:

```
Function Block
New Save Cut Copy Paste Delete Undo Redo Compile Search and replace Note Note off
■  Function Block
                           Name
                                   : Clr.c
    Header file
                           Author
  Source file
                           Date
                                   : 4/26/2023
      Func0
                           Descript:
      Compare
      Clr
                       #include "macro.h"
                      void Clr()
                      {WORD a[100]={0};
                      for{i=0;i<30;i++}</pre>
                             Writes(_T("XINJE XD/XL/XG (Modbus RTU) "), 1, TP2 D, DT Word, 0+100*i, 0, 100, a);
                 14
15
                 16
```

3. call the function

Place a function key on the screen, and the remaining settings are shown in the following figure. Select "Function Call" from the "Optional Functions" on the right, then click the "Add" button to add this function. Double click "Call Function" in the "Selected Functions" section, and select the name of the function to be called in the "Function" section (select the newly created function "Clr" above) to add the function.



Click on the "Appearance" option, set the function key text to "Reset", and finally click "OK" to complete the settings.

4. Download the program to the HMI for operation.

6-3-3. Four arithmetic operations of floating point

Example requirements:

Perform addition, subtraction, multiplication, and division operations.

Example device:

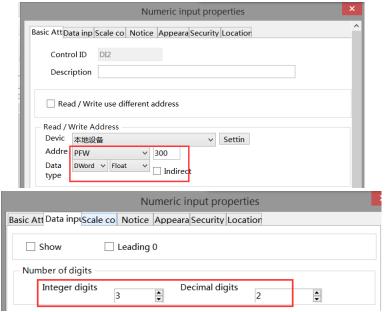
- (1) One TS3-700-E
- (2) One USB download cable and one computer

Related information:

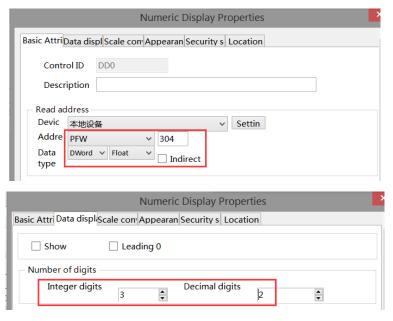
(1) TouchWin Pro Editing Software User Manual

Operation process:

- 1. New project, screen content production
- (1) Place two data input components on the screen, with their addresses set to PFW300 and PFW302, their attributes set to DWORD, floating point display (DWORD float), integer bits 3 and decimal bits 2. The settings are shown in the following figure (all other data input operations are the same):

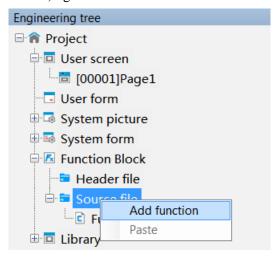


(2) Place four data display components on the screen, with addresses of PFW304, PFW306, PFW308, and PFW310. The attributes are all set to DWORD, floating point display (DWORD float), with 3 integer bits and 2 decimal bits. The settings are shown in the following figure (all other data display operations are the same):

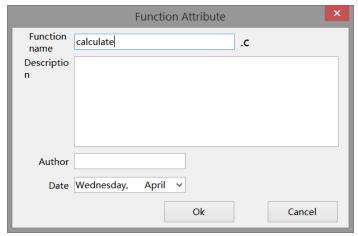


3. Establish C function block

In the Engineering Tree Function Block, right-click and select Add Function.



The function block information input box appears (as shown in the figure below), fill in the relevant information and click OK.

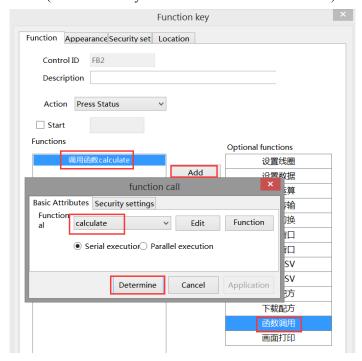


Establish a C function block editing environment, with the following functions:

```
Function Block
New Save Cut Copy Paste Delete Undo Redo Compile Search and replace Note Note off
■  Function Block
                           Name
                                   : calculate.c
    Header file
                           Author :
  Source file
                           Date
                                    : 4/26/2023
      □ Func0
                       Descript:
      Compare
      -Clr
                       #include "macro.h"
      -calculate
                       void calculate()
                       float a,b,result[4];
                      Reads(_T("local device"), 0, TP_PFW, DT_DWord, 300, 0, 1, &a);
Reads(_T("local device"), 0, TP_PFW, DT_DWord, 302, 0, 1, &b);
                 13
14
                       result[0]=a+b;
                       result[1]=a-b;
                       result[2]=a*b;
```

4. call the function

Place a function key on the screen, and the remaining settings are shown in the following figure. Select 'Function Call' from the 'Optional Functions' on the right, then click the' Add 'button to add this function. Double click on' Call Function 'in the' Selected Functions' section, and select the name of the function to be called in the 'Functions' section (select the newly created function' calculate 'above) to add the function.



Click on the "Appearance" option, set the function key text to "Four operations", and finally click "OK" to complete the settings.

5. Download the program to the HMI for operation.

6-3-4. Data type cast

Example requirements:

It is mainly used to realize the forced conversion of data type through C function, where floating point is converted to integer, and integer is converted to floating point.

Example device:

- (1) One TS3-700-E
- (2) One USB download cable and one computer

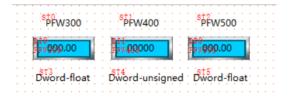
Related information:

(1) TouchWin Pro Editing Software User Manual

Operation process:

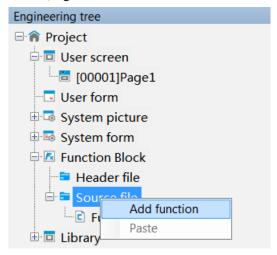
1. New project, screen content production

Place two data input components on the screen, with their addresses set to PFW300 and PFW400, and their attributes set to DWORD. The PFW300 data type is floating point (DWORD float), with 3 integer bits and 2 decimal bits. The PFW400 data type is set to unsigned numbers with 5 integer bits and 0 decimal places. Place a data display unit on the screen, with the address set to PFW500, the attribute set to DWORD, the data type floating point (DWORD float), integer bits 3 and decimal bits 2. The settings are shown in the following figure:

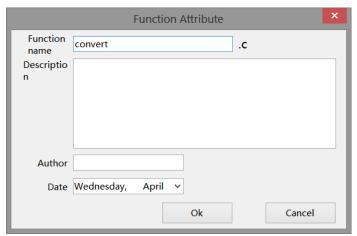


3. Establish C function block

In the Engineering Tree Function Block, right-click and select Add Function.



The function block information input box appears (as shown in the figure below), fill in the relevant information and click OK.



Establish a C function block editing environment, with the following function sections Convert: cast a floating point number to an integer.

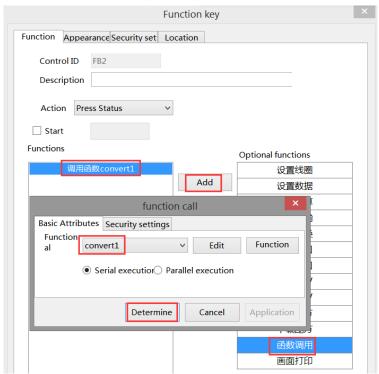
```
Function Block
New Save Cut Copy Paste Delete Undo Redo Compile Search and replace Note Note off
                        /****************
■  Function Block
                            Name : convert.c
    Header file
                            Author :
  ■ Source file
                                     : 4/26/2023
                            Date
      € Func0
                            Descript:
      Compare
      -Clr
                        #include "macro.h"
      calculate
      convert
                        void convert()
                       {float a;
Reads(_T("local device"), 0, TP_PFW, DT_DWord, 300, 0, 1, &a);
Write(_T("local device"), 0, TP_PFW, DT_DWord, 400, 0, a);
```

Convert1: Integer cast to floating point number.

```
Function Block
New Save Cut Copy Paste Delete Undo Redo Compile Search and replace Note Note off
■  Function Block
                           Name
                                    : convert1.c
    Header file
                            Author
  Date
                                     : 4/26/2023
      □ Func0
                           Descript:
      Compare
                        ******************************
      Clr
                       #include "macro.h"
      calculate
      convert
                        void convert1()
      convert1
                       DWORD b;
                       Read(T("local device"), 0, TP_PFW, DT_DWord, 400, 0, &b);
Writes(T("local device"), 0, TP_PFW, DT_DWord, 500, 0, 1, &c);
```

4. call the functions

Place a function key on the screen, and the remaining settings are shown in the following figure. Select "Function Call" from the "Optional Functions" on the right, then click the "Add" button to add this function. Double click on "Call Function" in the "Selected Functions" section, and select the name of the function to be called in the "Functions" section (select the newly created function "convert1" above) to add the function.



Click the "Appearance" option, set the function key text to "floating point>Integer", and finally click "OK" to complete the setting.

Create another function key, the operation is the same as above, call the function "convert", and the text is "integer>floating point number".

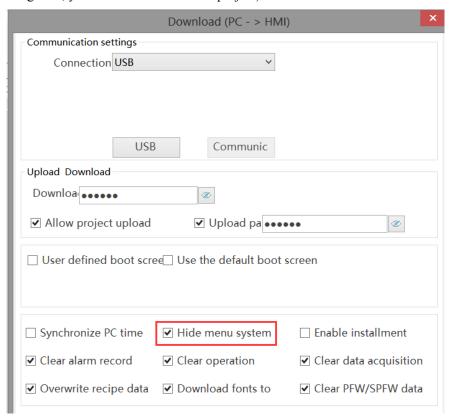
5. Download the program to the touch screen for operation.

7. HMI system settings

This function is to modify and display the system parameters of the HMI. After downloading the project, it will

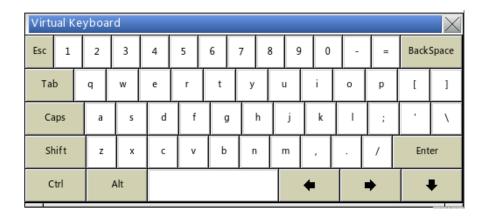
be displayed in the bottom right corner of the touch screen by default. Clicking on the "setting icon wil

display the default hidden "icon, which includes system settings, keyboard, and device information from left to right. If you do not need this function, you can hide it by checking the "Hide System Menu" on the project download page. The setting icon will not appear in the bottom right corner of the touch screen (after checking hide, you need to download the project).



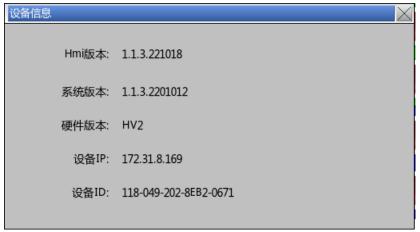
7-1. Keyboard

Click on the "icon to pop up the keyboard, which serves as the input keyboard for modifying system parameters on the touch screen and can also be used as the input keyboard for registers.

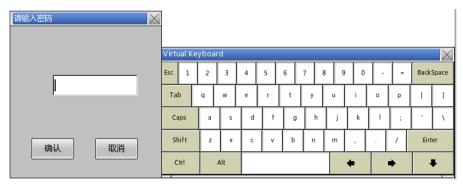


7-2. Device information

Click the icon to display a device information pop-up window, which includes HMI version, download version, system version, device IP, and device ID.



Click to pop up the 'Please Enter Password' pop-up window, where you can enter the 'Set Password' (default initial password 123456, which can be customized on the chapter 7-2 password setting page) and enter the setting interface. There are 7 pages under the settings interface, from left to right: name, password, network, time, VNC, system, and others.



7-3. Setting

7-3-1. Name

Click on "Name" to enter, click on the "Modify" button on this page to modify the name of this HMI. After entering the name, click "Confirm" to save it.



When the modified name is downloaded through the local area network on the download page, scan the IP to display the corresponding name.



7-3-2. Password

Click "Password" to enter, where you can modify the upload password, download password, set password, and VNC password. To modify the password, you need to enter the original password, and the system default password is "123456".



This function is used to modify the upload password of the corresponding project.
If the upload password is set in the software before downloading the project, and is modified
on the touch screen after downloading the project, the corresponding password when
uploading the project is the modified password.
If the upload password is set before downloading the project and is not modified on the touch
screen after downloading the project, the upload password remains the password set in the
software before downloading the project, and the upload password can be blank.
If the input upload password does not correspond to the set password, the download page will
prompt for an incorrect command password. For the specific operation steps of the project
upload function, please refer to chapter 2-6 Upload Project
The download password is used for the download interface and can only be modified through
the password setting interface in the HMI settings. After modifying the download password,
the corresponding password on the download page during project download is the modified
password, and the download password cannot be empty. If the entered download password
does not correspond to the set password, the download page will prompt "Command password
error". Please refer to chapter 2-5 project download for the specific operation steps of the
engineering download function
This function is used to modify the password for entering HMI settings. After modifying the
setting password, the corresponding password when entering the settings is the modified
password. If the entered setting password is incorrect, the HMI page will pop up a "Password
Incorrect" pop-up window. The HMI settings interface can only be accessed by entering the
correct setting password.
This function is used to modify the password when VNC connects to the HMI the next time.
This function is used to modify the password when connecting to the HMI remotely the next
time. The modified password requires a HMI restart to take effect

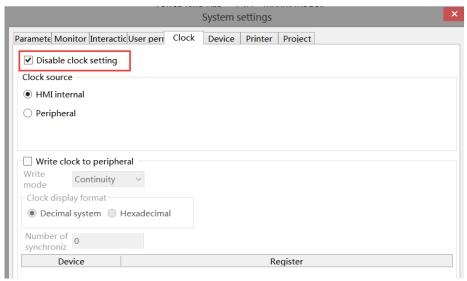
7-3-3. Network

Click "Network" to enter, where you can modify the IP address of the HMI. You can choose to automatically obtain the IP address through DHCP or manually set the IP address. If an IP address is set in the project, the IP displayed on this page after downloading the project is the IP set by the project.



7-3-4. Time

Click "Time" to enter. On this page, you can modify the display time of the HMI. If you want to set the time, you need to remove the default "Disable Clock Setting" check from the system clock setting page in the project. Then you can download the project to the HMI and modify the time on this page.





7-3-5. VNC



VNC connection supports two connection methods: one is the information configuration entry within TS software. The other type is an external VNC Viewer.

	Only a single VNC can be enabled, that is, only one VNC entry can		
Start vive single-connection	be enabled to connect to this HMI. If an external VNC Viewer is		
	enabled, priority should be given to connecting to the VNC		
	configured internally in the software, and the settings will take		
	effect synchronously.		
Start VNC multi-connection ■ Output Description Description ■ Output Description D	Support multiple VNC usage, that is, multiple VNC entries are		
Start VIVE matti-connection	enabled simultaneously to connect to this HMI, and synchronization		
	takes effect after setting.		
	Close VNC connection, that is, other VNC ports cannot enable VNC		
Stop vive connection	connection to this HMI. After setting, synchronization will take		
	effect.		

7-3-6. System

Click "System" to enter, where you can view system information and the proportion of system resources.



7-3-7. Others

Click "Other" to enter, where you can set whether to use the mouse pointer and set touch calibration. After checking "Use Mouse Pointer", the mouse cursor will appear on the touch screen. On the software system settings page, you can choose whether to hide the mouse cursor and set the size of the mouse cursor.

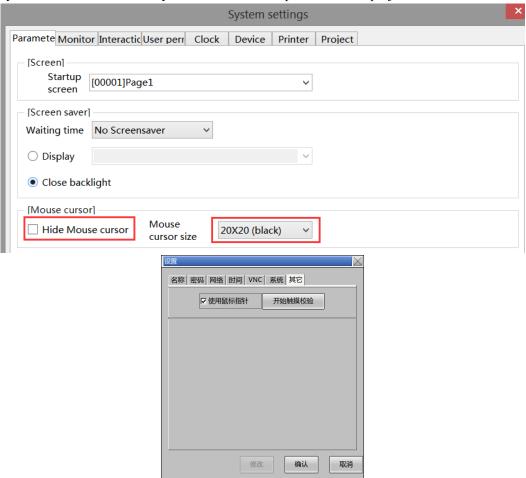
If "Hide Mouse Cursor" is checked in the software system setting before downloading the project, the mouse cursor will not be displayed on the touch screen after downloading the project.

If "Use Mouse Pointer" is checked in the touch screen settings interface after downloading the project, the mouse cursor will be displayed on the touch screen.

If the software system setting does not check "Hide Mouse Cursor" before downloading the project, the mouse cursor will be displayed on the touch screen after downloading the project.

If 'Use Mouse Pointer' is not checked in the touch screen settings interface after downloading the project, the mouse cursor will not be displayed on the touch screen.

The display of the mouse cursor is only related to the final operation of the project.

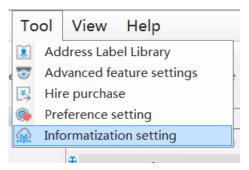


Click on the "Start Touch Verification" touch screen to power on again and enter the calibration page. Long press and hold the center of the "field grid" on the calibration page to calibrate. After the "field grid" turns green, release this point and calibrate clockwise from the top left corner. After the calibration of the "field grid", another kind of "field grid" will appear. Continue to press and hold the center of the "field grid" in sequence to light up. After the calibration is completed, the touch screen will restart. If the calibration fails, it will return to the first "field grid" to continue calibration.

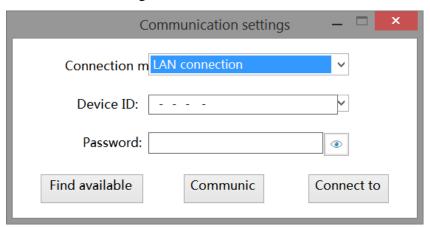
8. Informationization settings

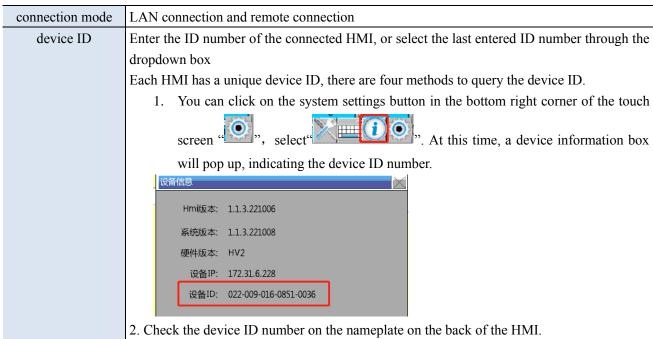
8-1. Information configuration login

1. Click on the menu bar - Tools - Informatization Setting to enter the Informatization Configuration interface



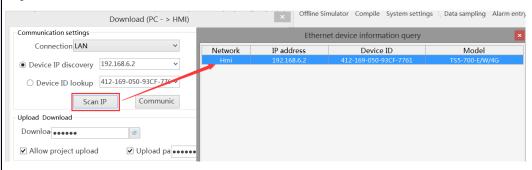
2. Information communication settings interface







3. When downloading, select the LAN download and scan the IP interface to find the required device ID based on the model and IP address.



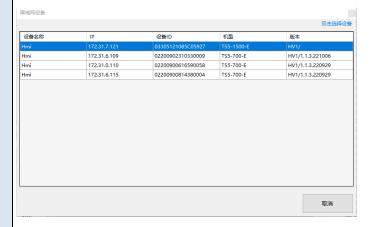
4. See the description of 'Find Available Devices' below

password

default password: 12345678 (user can define the password, refer to chapter 7-3-2 password)

find available device

When the device ID address is uncertain or multiple touch screens are connected, you can click this button to scan the device IP that the computer is connected to. Select the IP address that needs to be connected from the scanned IP address, click "Find Available Devices", and the following pop-up window will pop up. Double click to select the device you want to connect to



communication test

Used to test whether the HMI is successfully connected to the computer. After clicking, a prompt box will pop up displaying whether the connection was successful or failed



connect to the device

After entering the correct device ID and password, click "Connect to the Device" to successfully log in to the information configuration interface



- 1. When connecting to a local area network, the HMI IP and the computer IP must be in the same network segment. When selecting the LAN connection method, it is necessary to enter the correct ID number and password; Alternatively, by clicking to find available devices, double-click to select the device you want to connect to (the default connection password is 12345678).
- 2. Before using the information function for the first time, the HMI must contain a program. When making remote connections for the first time, it must be connected through a local area network. After entering the information configuration interface, different internet access methods (4g/wifi) should be selected based on the modules behind the HMI. For specific usage methods, please refer to 2-3 internet access methods. After successful configuration, enter the device ID number and remote connection password to successfully connect remotely.
- 3. The information function can also be used when the project is not open. Select LAN or remote connection, and only after successful connection can you enter the configuration page. When modifying information configuration, it is necessary to maintain the connection between HMI and PC.

8-2. State information

View the currently mounted modules and system information:

Informatizati \circ - imes

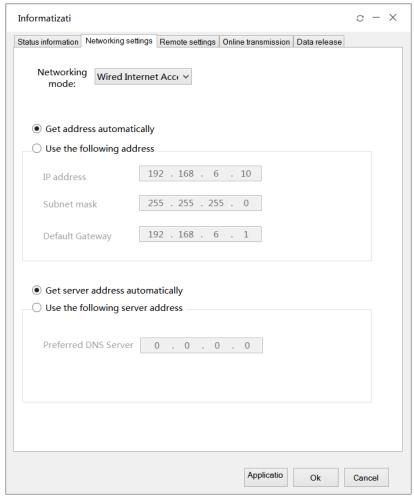
Status information Network	ing settings	Remote settings	Online transmission	Data release
Module information:				
Module V1.0 version:				
Name	Regi	ster	Value	Notes
Networking mode	SP	SW56	3	Single word Dec integer
Signal intensity	SP	SW57	0	Single word Dec integer
System time SF		SW16	2023-05-06 11:5:7	Six word Dec integer
device running time SF		SW200	00:28:18	Triword decimal integer
IP address		SW58	192.168.6.2	Quadword Dec integer
Subnet mask	SP	SW62	255.255.255.0	Quadword Dec integer
Gateway	SP	SW66	192.168.6.1	Quadword Dec integer
DNS SPS		SW71	0.0.0.0	Quadword Dec integer
MAC address	MAC address SPSV		3C-47-57-07-75-FF	Six word Hex integer
VNC Service Enable Fl	SP	SB22	1	Bit, binary
MQTT server enable fl SPS		SB19	0	Bit, binary
LAN connection sign SPS		SB23	1	Bit, binary
Login server flag	SP	SB20	1	Bit, binary

Module information	Display the current module name, wired/4G/WiFi		
Module version	Display the current module version		
Networking mode	1: 4G 2: WiFi 3: wired		
Signal intensity	Effective in 4G and WiFi modes, displaying signal strength (-51dB~-113dB)		
	The signal greater than -51 is strongest, and the signal less than -113 is weakest		
System time	Display the current system time		
Device running time	Accumulated time of operation after starting the device		
IP address	Display the IP address obtained by the current device		
Subnet mask	Displays the subnet mask obtained by the current device		
Gateway	Display the gateway address obtained by the current device		
DNS	Displays the Domain Name System server address obtained by the current device		
MAC address	MAC address		
VNC service enable flag	1: ON 0: OFF		
MQTT service enable flag	1: ON 0: OFF		
LAN connection flag	1: ON 0: OFF		
Login server flag	1: ON 0: OFF		

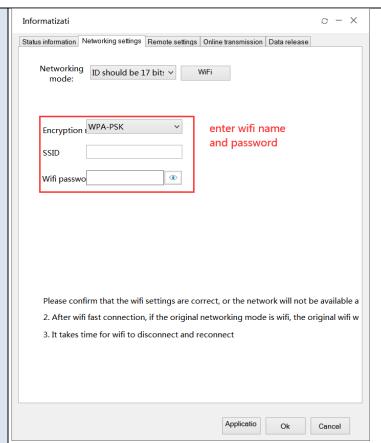
This page displays the corresponding status information and system registers of the module, which can only be viewed and cannot be modified.

8-3. Networking settings

You can set the internet access method here: 4G, WiFi, or wired mode:



4G	When selecting 4G internet access, there is no need to configure parameters. After
	selecting 4G internet access, click "Application" below, and a pop-up window will
	prompt you to restart the HMI. After clicking "OK", restart the HMI, and the
	configuration parameters will take effect. Next time, remote login information
	configuration interface can be used
WIFI	When selecting WIFI to access the internet, users can manually enter their SSID and
	wireless password, or click on the WiFi scan button to view the SSID, encryption
	method, and signal strength of nearby devices. Click on Connect and enter the correct
	WiFi password. If the connection is normal, the parameter values will be
	automatically filled in to the parameter page
	1-directly enter wifi name and password.
	Note: The password and name must be entered correctly, otherwise it may cause
	incorrect WiFi configuration to be downloaded and remote connections will not be
	able to log in. If this situation occurs, it is necessary to connect through the local area
	network and reconfigure the WiFi.



2-scan the parameters through wifi.

- Step 1: Click on "WiFi Scan"
- Step 2: Click the "Quick Connect" button
- Step 3: Enter the corresponding WiFi password in the pop-up prompt box. If the password is entered correctly, there will be a prompt of "Connection Successful", otherwise there will be a prompt of "Connection Failed"
- Step 4: After successful connection, click the "OK" button, display "Download successful". The configuration parameters will take effect and remote connection can be made



wired

When selecting wired Internet access, users can configure to obtain IP automatically, or manually set Internet access parameters, including IP address, subnet mask, default

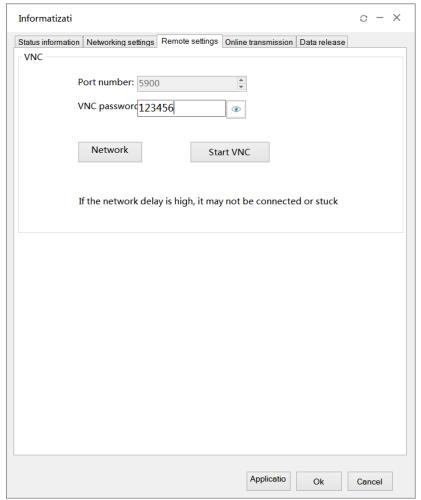
gateway and DNS



- 1. The settings on this page will take effect after downloading the program and power on the HMI again.
- 2. If switching the internet mode causes the HMI to be unable to connect, please use Ethernet to connect to the local area network and reset the information settings.

8-4. Remote settings

Enabling and disabling VNC functions enables remote control.



Port number	The default is 5900 and cannot be modified
VNC password	The default password is 123456 (customizable password, refer to chapter 7-3-2
	password)
Network detection	After clicking on network detection, an attempt will be made to establish an Frp
	connection with the HMI, reporting the connection status and whether the connection
	is normal or abnormal
Start VNC	Open the local VNC client when clicking to start VNC
Stop VNC	Close the local VNC client when clicking to stop VNC

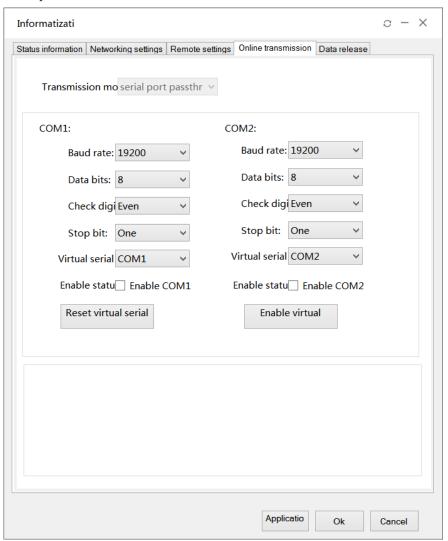


Note: If the network latency is high, VNC may not be able to connect or get stuck.

8-5. Online transmission

Transparent transmission function, which means that the computer does not need to be connected to a PLC, but only needs to be connected to a HMI to control the PLC. The PLC program can be directly downloaded and monitored through the HMI. Two transparent transmission methods are currently supported: serial port transparent transmission and VPN transparent transmission.

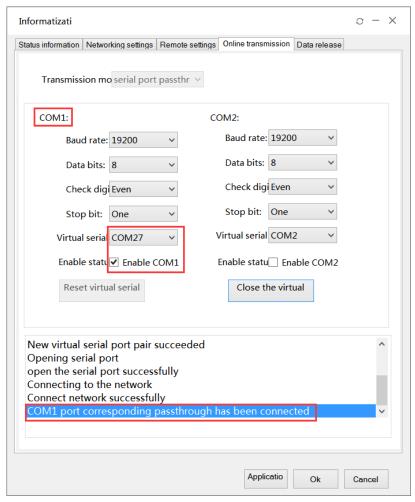
Transparent transmission function requirements: The HMI is TS5 series, and the PLC is connected to the HMI through serial/network ports.



transmission mode	Serial port transparent transmission, VPN transparent transmission
baud rate	9600/19200/38400/57600/115200
data bit	7/8
parity bit	None/Odd/Even
stop bit	None/One/Two/OnePointFive
virtual serial port	COM1-COM255 optional
enable status	Check whether to enable COM1/COM2 ports, both serial ports can be enabled for virtual serial
	ports at the same time
reset virtual serial	After modifying multiple serial port parameters, it can be directly reset
port	
enable virtual	Enable the virtual serial port of COM1/COM2 for further transparent operation

Serial port transparent connection steps:

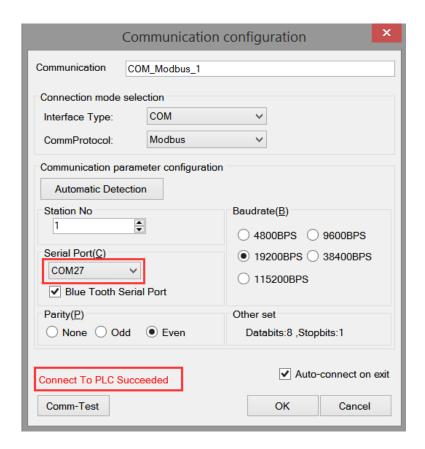
- (1) Connect the COM port of the PLC to the COM port of the TS5 through an XVP cable.
- (2) Connect the HMI to the PC using a local area network/remote connection (refer to Information Configuration Login for connection steps), and enter the Information Settings Online Transparent Transmission interface.
- (3) Set the serial port transmission related parameters, including baud rate, data bits, check bits, stop bits, etc., to be consistent with the PLC serial port parameters. Select the virtual serial port and enable it to start the transparent transmission service.



After enabling, the Device Manager interface will have a virtual serial port as shown in the figure below. Click "Abort" or "Clear residual virtual serial port", and the established virtual serial port will exit and no longer occupy the system port number.



- (4) Open PLC programming software XDPpro.
- (1) select local serial port (COM1), click Comm-test, it shows "connect to PLC succeeded", click ok.
- ② after connecting, the right lower corner will show 1,Scan Cycle:0.0ms , now user can download and monitor the PLC program.





Note:

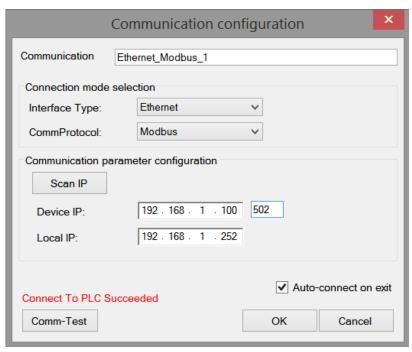
- 1. During transparent transmission, it is necessary to maintain network connectivity. If disconnected, it will affect transparent transmission operations.
- Transparent transmission can only be operated on the premise that PLC and HMI can communicate normally.
 During transparent transmission, communication between HMI and PLC will be disconnected, and it will resume after the transparent transmission is completed.
- 3. Only serial port transparent transmission is supported in LAN connection, and two transparent transmission methods are supported in remote connection mode.
- 4. Try to avoid using COM1 and COM2 for virtual serial ports to avoid confusion.

VPN transparent transmission steps:

- (1) PLC and HMI are connected through a network cable.
- (2) Configure HMI to remote connection mode and enter the information settings online transparent transmission interface
- (3) Select VPN transparent transmission method, set the network segments of PLC, HMI, and virtual gateway in the same network segment, and click "Enable VPN".



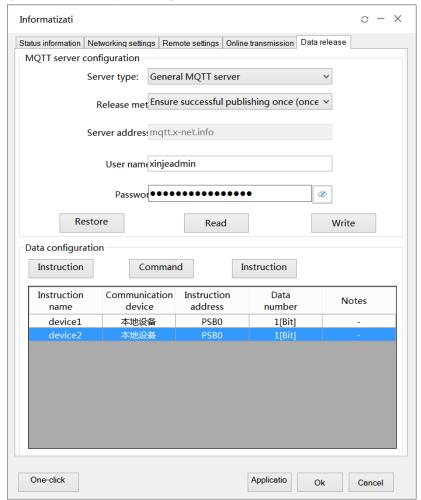
- (4) Open PLC programming software XDPpro.
- ① enter the device IP and local IP, local IP refers to the local IP of the virtual network card, click Comm-test, it shows "connect to PLC succeeded", click ok.
- ② after connecting, the right lower corner will show 1,Scan Cycle:0.0ms , now user can download and monitor the PLC program.



Note: Enabling VPN will occupy the HMI IP, and the IP in the bottom right corner of the touch screen will be blank. After closing VPN, you need to reconfigure the IP (if not on site, you can connect remotely through VNC).

8-6. Data release

Data release refers to sending local data information to the cloud through a specified protocol. Currently, it supports the MQTT protocol of the Xinje Cloud platform.



Data release function requirements: The HMI is TS5 series, 4G/WIFI/wired connected and can access mqtt.x-net-info.

Note: The cloud platform corresponding to the Xinje MQTT protocol is only limited to Cloud v4.1 and above.

MQTT server setting

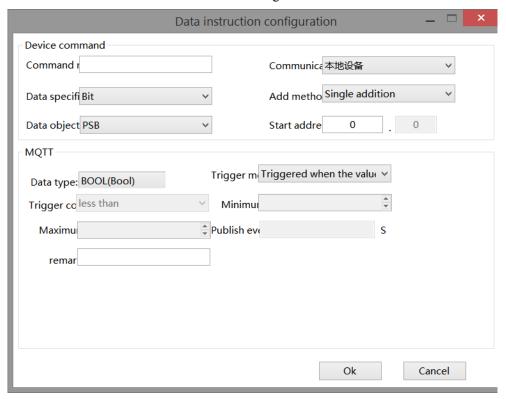
	server type	general MQTT server
	publish once	Corresponding QoS service quality level: QoS0, published only once, regardless of
		whether it reaches the publisher or not, the publisher (when the client or server is
		the sender) only sends once, regardless of whether the receiving end has received
		the data
release	Successfully	Corresponding QoS service quality level: QoS1, successfully published at least
method	published at least	once. The publisher needs to confirm upon arrival. After publishing the message, the
method	once (possibly	publisher waits for the recipient's confirmation message. If the receiving end does
	multiple times)	not reply, resend it
	Ensure successful	Corresponding QoS service quality level: QoS2, to ensure successful publication
	publishing once	once, the publisher needs to confirm upon arrival, and the recipient needs to confirm
	(with and only once)	again by the publisher
server address		Default mqtt.x-net-info and cannot be modified

user name	The default is xinjeadmin, which can be modified by users themselves
password	Default 16 bits password and not visible
restore	Restore the publishing method, username, and password to the default configuration
1	Read the published MQTT configuration, password, username, and publishing
read	method
write	Write the latest configuration to the MQTT server

Data Configuration: Configure data publishing, allowing for creation, deletion, and editing of published content.

add	Add instructions to be released
instruction	
edit	Edit the added instructions to view their details or modify them
instruction	
delete	To delete an added instruction, left click on the line that needs to be deleted and click on the
instruction	instruction to delete it

Click on the command add to enter the data command configuration and edit the data source



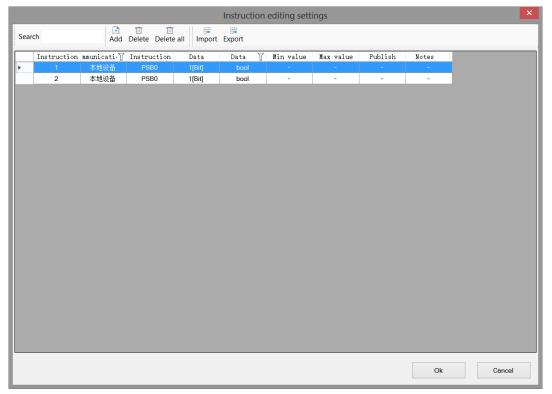
device command:

command name	Name the current instruction, the instruction name cannot be empty
communication	Select the data source, which can be connected to devices within the HMI project or local HMI
device	
data	select the data format, Bit/Word
specification	
add method	Single addition: mapping one instruction to one address
	Batch Add: Multiple addresses mapped to a specified command (with consistent data types)
data object	select the register type
start address	enter the start address

MQTT:

111011.	
data type	the data type includes INT16U, INT16S, INT32U, INT32S, INT64S, Float, Double, Char[]
trigger method	Triggered when the value changes, triggered when the condition is met, and triggered at a fixed
	time
trigger	Trigger conditions are divided into: less than, within range, greater than, not equal to, and
condition	beyond range
minimum	Set the minimum value of the range. When the trigger condition is greater than, this item is not
	filled in
maximum	Set the maximum value of the range, and leave this field blank when the trigger condition is less
	than
publish space	The interval between publishing data, in seconds
remark	Comment name for data

Click on the command edit and enter the editing interface:



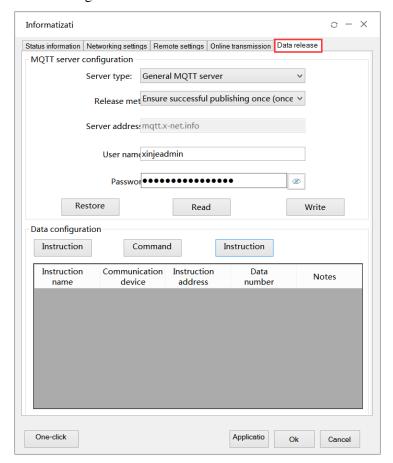
communication	Filter and query based on device type
device	
Display by	Check 'Display by Category' to filter and query based on device type, station number, register
category	type, address, data type, data format, triggering method, minimum triggering range, maximum
	triggering range, reporting interval, unit (note) or quantity
search	Enter relevant keywords to search
add	add a instruction
delete	Select a line of instructions to delete
delete all	delete all the commands



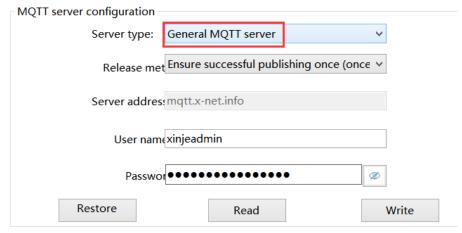
Note: Xinje Cloud Server Monitoring currently does not support monitoring bit group addresses.

Operation steps (take Xinje Cloud server as an example):

(1) Enter the information settings - data release interface.



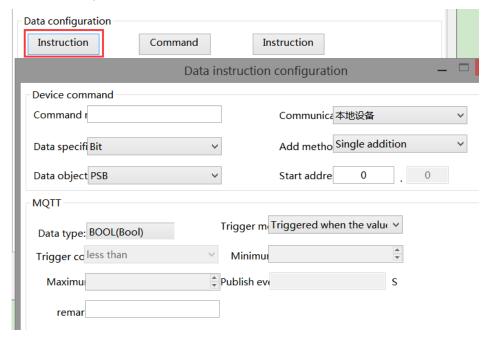
(2) select server type: general MQTT server.



(3) select release method, please choose it as needs.

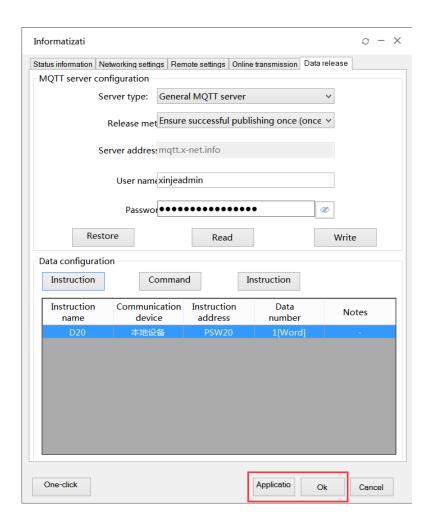


(4) click add instrcution, click ok after addition.



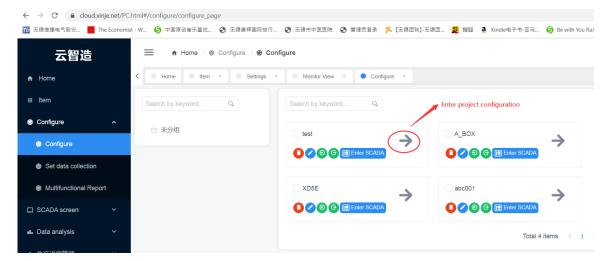
Note: When adding or deleting device protocols in the system settings, it is necessary to download the project to the HMI in order to update the communication devices in the data command settings.

(5) After adding instructions, click Apply or Confirm, then power on the HMI again to complete data publishing. After successful publishing, open the Xinje Cloud Server and proceed to the next step on the server.



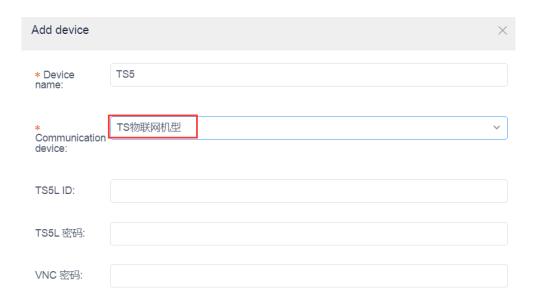
Xinje Cloud operation steps:

(1) login Xinje Cloud, add a new project.

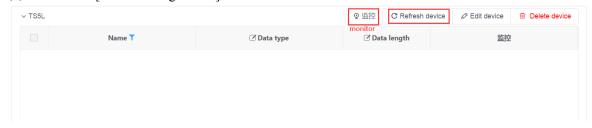


(2) After entering the project, click "New Device", select the TS IoT model for the communication device, and then enter the ID number of the HMI and the TS5L password (remote password, 12345678 by

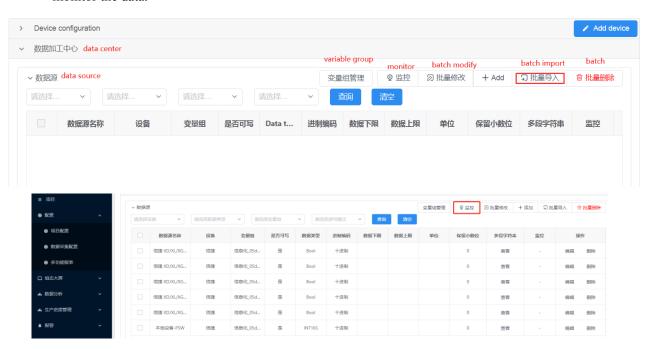
default), which can be modified on the screen. The cloud platform limits 8 bits password, VNC password (123456 by default), and click Save.



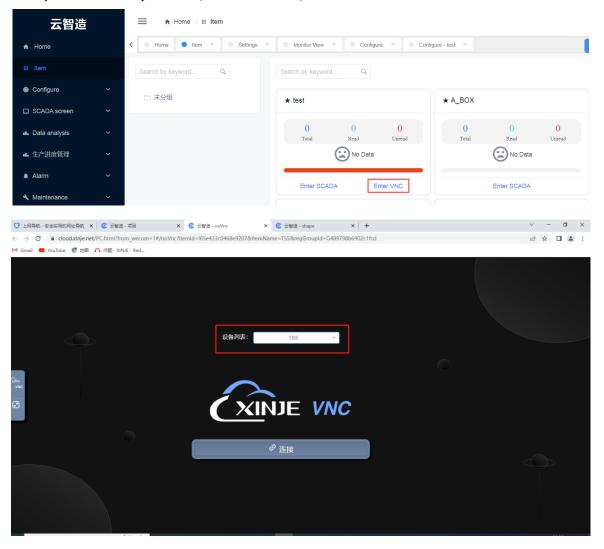
(3) Monitor in [device configuration]: click "refresh device" and monitor to see all the data.



(4) Monitor in [data source]: after adding device, click "batch import", it will pop up a window. Select the device added just now, then select "import all" or "import part". After importing, click monitor to monitor the data.



(5) Xinje Cloud VNC monitor: select the project, click "enter VNC". Select the device name, click connect, input correct VNC password (default is 123456) to enter VNC interface



Note: Please refer to the Xinje Cloud manual for the specific operation of the cloud platform.





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