

HMI Designer

User Manual

V1.1.44

Online documentation: https://www.yuque.com/hmi-/manual

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1. Welcome to **HMI Designer** 1

This section explains the ease of use and operating environment that HMI Designer provides to users on the interface, as well as the related features it supports.

List of shutdown types.

1.1 Overview

Human-Machine Interface (HMI, also known as user interface or touchscreen), serves as a bridge for communication between the system and the user.

We are committed to providing our customers with high-quality and high-performance interactive solutions. We deeply understand that aesthetically pleasing design...

Design, a user-friendly interface, and stable, reliable performance are core elements that customers seek in high quality. Therefore,

We dedicate ourselves to continuous innovation to ensure that every human-computer interface we create becomes your top choice.

In today's rapidly developing technological world, human-computer interfaces have become a crucial link connecting humans and machines. They can...

It can transform complex information into a form that is easy for humans to understand, thereby achieving efficient information exchange and interaction. Whether...

Human-machine interfaces play a crucial role in fields such as industrial control, medical equipment, and smart homes.

Our series of human-machine interfaces has already won in the market thanks to its superior performance and wide range of applications.

It has earned a good reputation. Primarily used in industrial control, it achieves precise control of equipment through visual touchscreen operation.

Control. At the same time, we have also launched customized human-machine interface solutions to meet the needs of different industries.

Diverse customer needs.

It is worth mentioning that our independently developed configuration engineering editing software provides a human-machine interface for development.

Strong support. This software boasts a beautiful interface and powerful functionality, making it easy to use and significantly improving development efficiency.

By integrating editing, simulation, and downloading functions, we can help customers quickly build human-machine interfaces that meet their actual needs.

noodle.

Furthermore, our HMI supports PLC communication protocols from mainstream manufacturers on the market, eliminating the need for cumbersome queries and...

With simple configuration, communication with various devices can be easily achieved. This saves customers a significant amount of time and effort during system integration and debugging.

Time and effort have increased work efficiency.

In our future development, we will continue to uphold the principles of innovation, quality, and service, and continuously improve the human-computer interface.

Performance and functionality create greater value for customers. We believe that human-machine interfaces will play a crucial role in the fields of automation and intelligence.

It will play an increasingly important role and become a vital force in promoting scientific and technological progress.

1.2 What is **an HMI Designer ?**

The HMI Designer software only supports editing the QJ-P series, and its characteristics are as follows:

(1) A more user-friendly editing interface

(2) A richer library of 3D graphics

(3) The components are more refined.

(4) The display of instruments and other components is smoother.

(5) Faster software download speed

(6) More powerful search function

(7) The compiled output is easier to interpret.

1.3 Usage Environment

Hardware/System	Specification
CPU	X86_64 CPU AMD or Intel
Memory	1GB or more
harddisk	400 MB or more
operating system	Windows 7 / Windows 10 / Windows 11
warn	Windows XP and Linux are not supported .
monitor	Supports full-color monitors with a resolution of 1024 x 768 or higher.

2HMI Model Support Table 2

This section explains the HMI model coding rules, the model table that HMI Designer supports editing, and is divided into sub-chapters by model.

The sections list: detailed parameters, interface descriptions, and installation dimensions.

2.1 Model Description

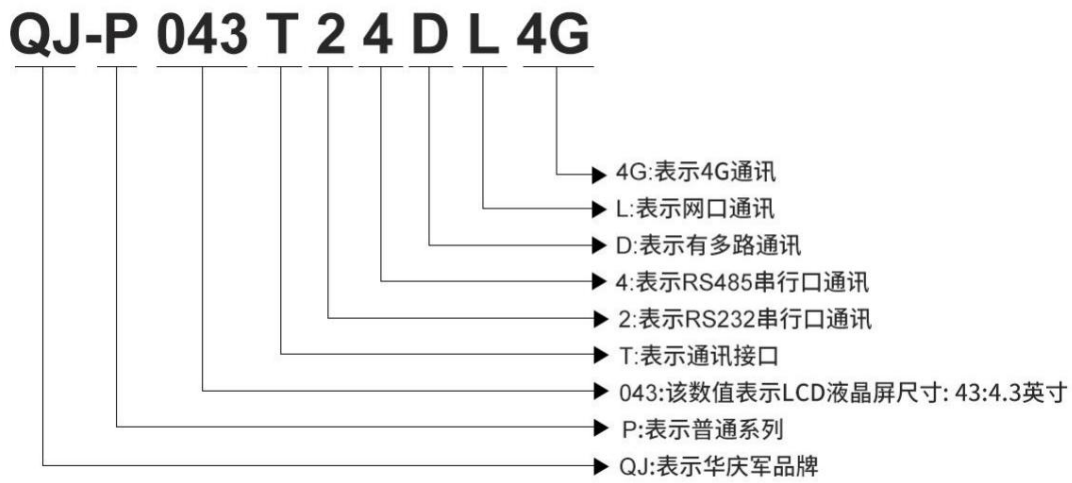


Figure 2.1 Model Description Diagram

2.2 Model Support Table

series	model	Remark
QJ-P	QJ-P043TXX	4.3 inches
	QJ-P070TXX	7 inches
	QJ-P100TXX	10.1 inches
	QJ-P150TXX	15 inches

2.3 QJ-P043TXX

2.3.1 Detailed Parameters

QJ-P043TXX		QJ-P043T24	QJ-P043T24L	QJ-P043T24L4G
	Size and	4.3 inches		
Electrical Specifications	power supply voltage	10~28VDC		

	Power supply	150mA(24VDC)		
	current, reverse connection	support		
	protection,	3.6W		
Screen Specifications	power consumption, LCD	TFT		
	panel material,	480*272		
	resolution,	350cd/m2		
	brightness,	LED (PWM stepless adjustment)		
	backlight	True Color 65K RGB		
	type, color, touch method	resistive 4H Industrial Anti-interference		
Core Specifications	Processor	Cortex-A7*2 1.2Ghz		
	memory	64M DDR		
	storage	128M NAND Flash		
	RTC	Built-in real-time clock		
	USB	Supports USB flash drive updates Supports data cable updates		
Communication port	RS-232	Route 1		
	RS-485	Route 1		
	10/100M network port			have
	4G CAT.1	Does Siemens have a full range		have
Communication Protocol	of PLCs? Mitsubishi PLC series Huaqingjun's complete PLC series Omron PLC Series Huichuan PLC Series Panasonic PLC Series Delta's full range of PLCs Haiwei full series PLCs Xinje's full range of PLCs Hollysys PLC Series Display Control MODBUS RTU MODBUS TCP Custom Protocol			
Environmental requirements	Operating temperature,	-20~70ÿ		
	storage temperature,	-30~80ÿ		
	ambient humidity,	10~90%RH (non-condensing)		
External dimensions	frame dimensions,	130mm*105mm*33mm		
	and opening dimensions.	106mm*80mm		
net weight				

2.3.2 Interface Description

4.3 inches		
	RS-232	RS-485
pin		
1		
2		
3	TXD	
4	RXD	
5		B-
6		A+

2.3.3 Installation Dimensions

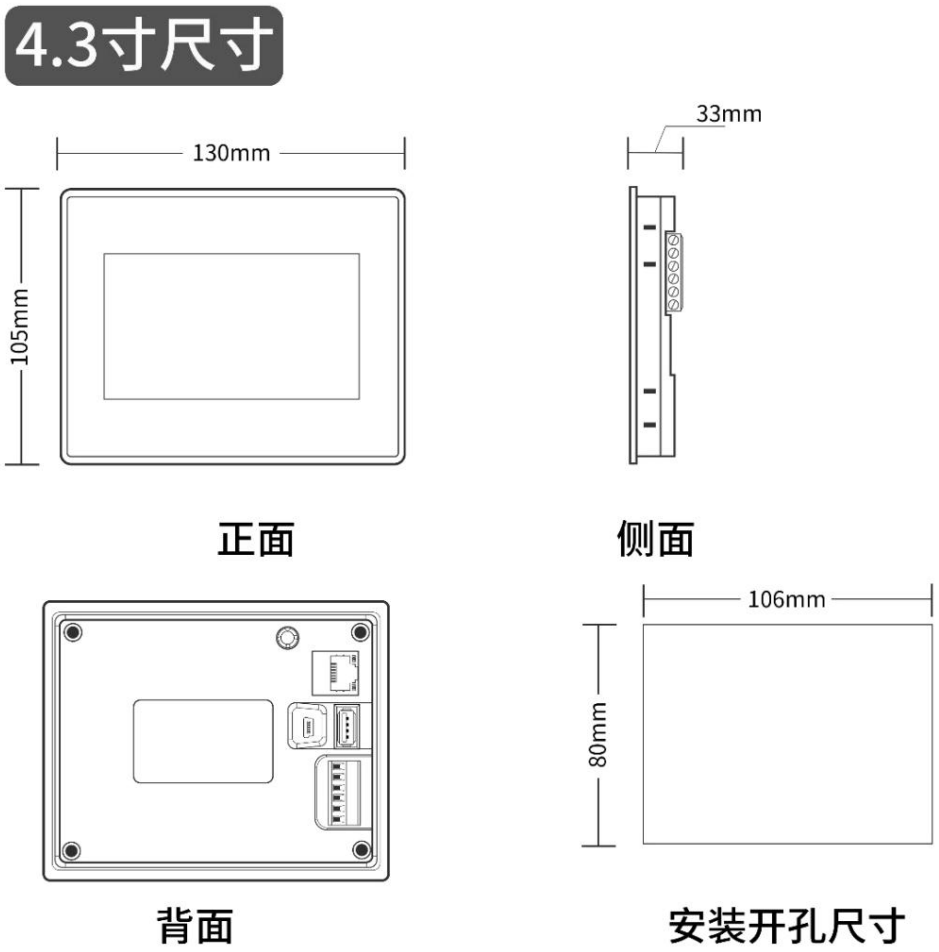


Figure 2.3.3 4.3-inch HMI Dimension Diagram

2.3.4 Hardware Wiring Diagram

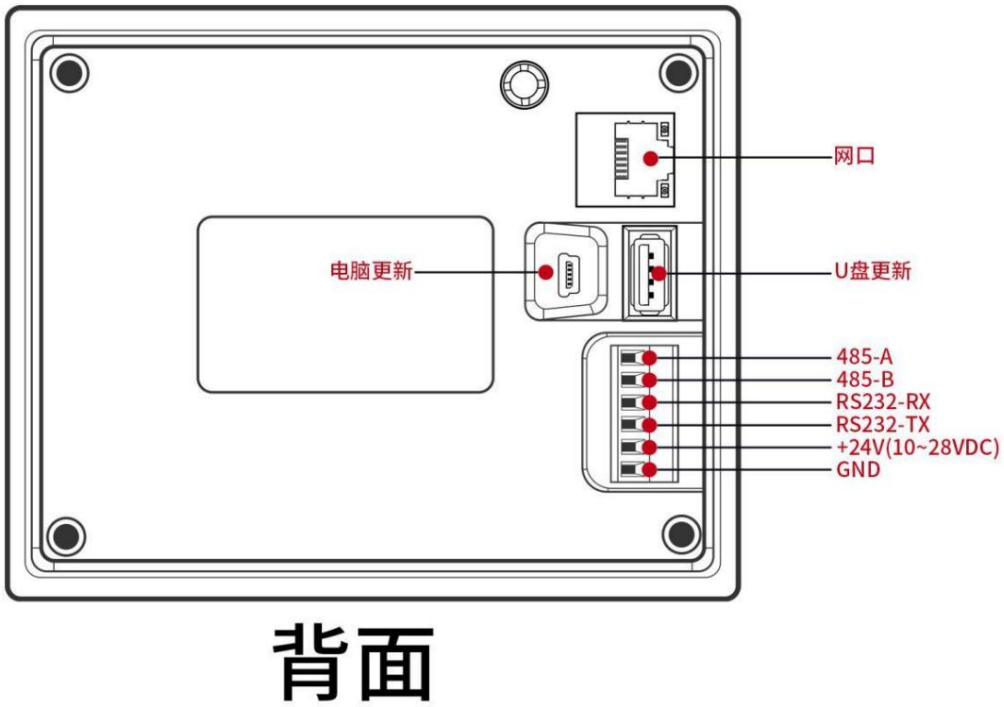


Figure 2.3.4 Schematic diagram of 4.3-inch hardware wiring

2.4 QJ-P070TXX

2.4.1 Detailed Parameters

QJ-P070TXX		QJ-P070T24D	QJ-P070T24DL	QJ-P070T24DL4G
	Size,	7 inches		
Electrical Specifications	power supply	10~28VDC		
	voltage, power	350mA(24VDC)		
	supply current, reverse	support		
		8.5W		
Screen Specifications	connection protection,	TFT		
	power	800*480		
		350cd/m2		
	consumption, LCD	LED (PWM stepless adjustment)		
	panel	True Color 65K RGB		
	material, resolution, brightness, backlight type, color, touch method	resistive 4H Industrial Anti-interference		
Core Specifications	Processor	Cortex-A7*2 1.2Ghz		
	memory	Built-in 64M DDR		
	storage	128M NAND Flash		
	RTC	Built-in real-time clock		
	USB	Supports USB flash drive updates Supports data cable updates		
Communication port	RS-232	Route 1		
	RS-485	Route 2		
	RS-422	Route 1		
	10/100M 4G CAT.1	Wu	Do	have
	Ethernet ports	Wu	you	have
Communication Protocol	have a full range of Siemens PLCs ? Mitsubishi PLC series Huaqingjun's complete PLC series Omron PLC Series Huichuan PLC Series Panasonic PLC Series Delta's full range of PLCs Haiwei full series PLCs Xinje's full range of PLCs Hollysys PLC Series Display Control MODBUS RTU MODBUS TCP Custom Protocol			
Environmental requirements	Operating temperature,	-20~70ÿ		
	storage temperature,	-30~80ÿ		
	ambient humidity,	10~90%RH (non-condensing)		
External dimensions	frame dimensions,	222mm*194mm*38mm		
	and opening dimensions.	177mm*122mm		
net weight				

2.4.2 Interface Description

7 inches				
	Port COM1		Port COM2	
	RS-485-1	RS-422	RS-232	RS-485-2
pin				
1	B1-			
2	A1+		RXD	
3			TXD	
4				
5	GND		GND	
6		RS422 Send -		
7		RS422 Send+		A2+
8		RS422 Receiver -		B2-
9		RS422 Receiver +		

2.4.3 Installation Dimensions

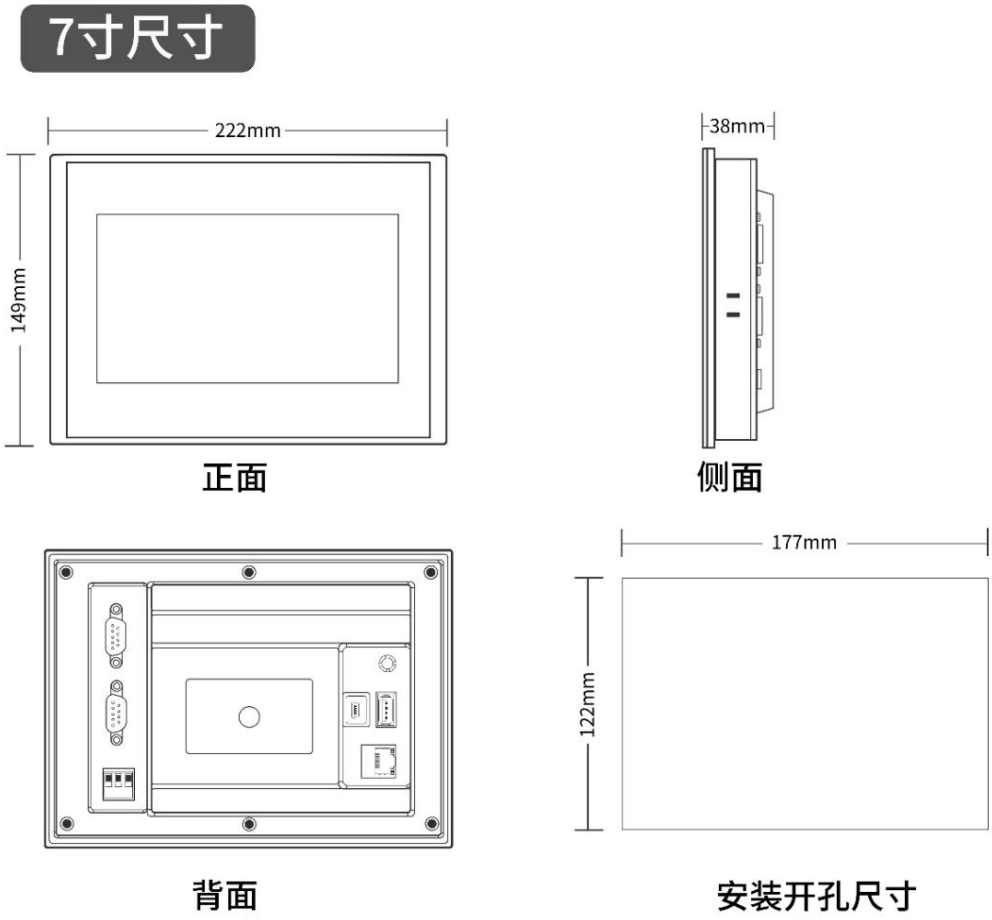


Figure 2.4.3 7-inch HMI Dimension Diagram

2.4.4 Hardware Wiring Diagram

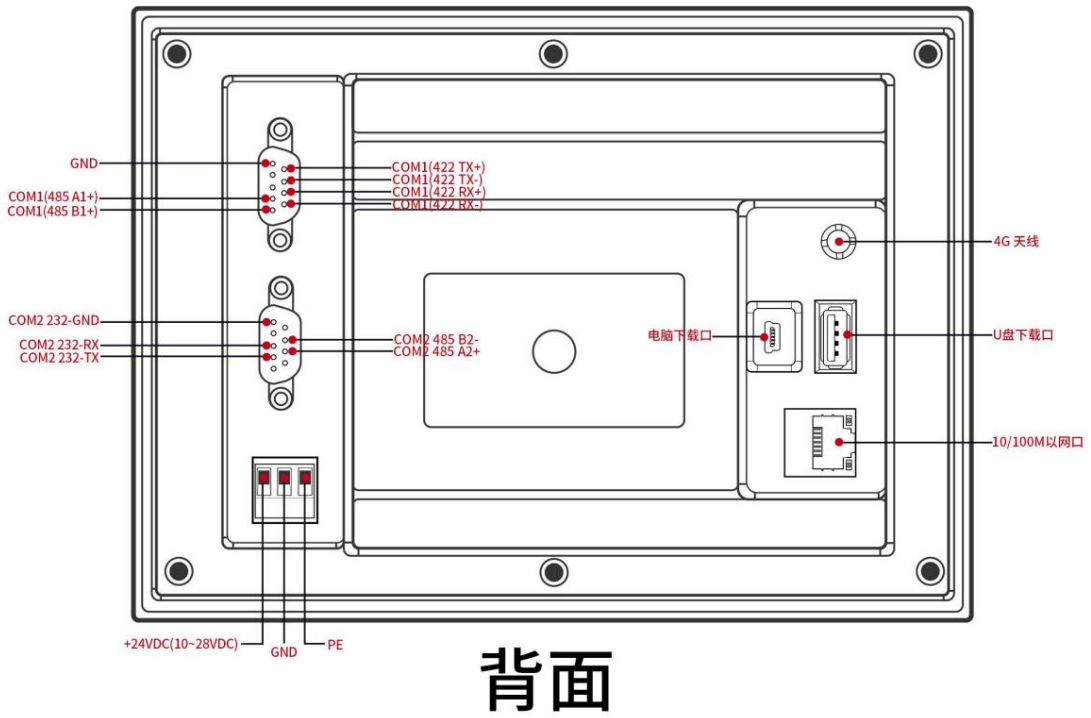


Figure 2.4.4 Hardware wiring diagram

2.5 QJ-P100TXX

2.5.1 Detailed Parameters

QJ-P100TXX		QJ-P100T24D	QJ-P100T24DL	QJ-P100T24DL4G
	Size,	10.1 inches		
Electrical Specifications	power supply	10~28VDC		
	voltage, power	500mA(24VDC)		
	supply current, reverse	support		
		12W		
Screen Specifications	connection protection,	TFT		
	power	1024*600		
		350cd/m2		
	consumption, LCD	LED (PWM stepless adjustment)		
	panel	True Color 65K RGB		
	material, resolution, brightness, backlight type, color, touch method	resistive 4H Industrial Anti-interference		
Core Specifications	Processor	Cortex-A7*2 1.2Ghz		
	memory	Built-in 64M DDR		
	storage	128M NAND Flash		
	RTC	Built-in real-time clock		
	USB	Supports USB flash drive updates Supports data cable updates		
Communication port	RS-232	Route 1		
	RS-485	Route 2		
	RS-422	Route 1		
	10/100M Ethernet ports, no		Do	have
	4G, CAT.1 port.		you	have
Communication Protocol	have a full range of Siemens PLCs ? Mitsubishi PLC series Huaqingjun's complete PLC series Omron PLC Series Huichuan PLC Series Panasonic PLC Series Delta's full range of PLCs Haiwei full series PLCs Xinje's full range of PLCs Hollysys PLC Series Display Control MODBUS RTU MODBUS TCP Custom Protocol			
Environmental requirements	Operating temperature,	-20~70ÿ		
	storage temperature,	-30~80ÿ		
	ambient humidity,	10~90%RH (non-condensing)		
External dimensions	frame dimensions,	273mm*192mm*42mm		
	and opening dimensions.	245mm*163mm		
net weight				

2.5.2 Interface Description

10.1 inches				
	Port COM1		Port COM2	
	RS-485-1	RS-422	RS-232	RS-485-2
pin				
1	B1-			
2	A1+		RXD	
3			TXD	
4				
5	GND		GND	
6		RS422 Send -		
7		RS422 Send+		A2+
8		RS422 Receiver -		B2-
9		RS422 Receiver +		

2.5.3 Installation Dimensions

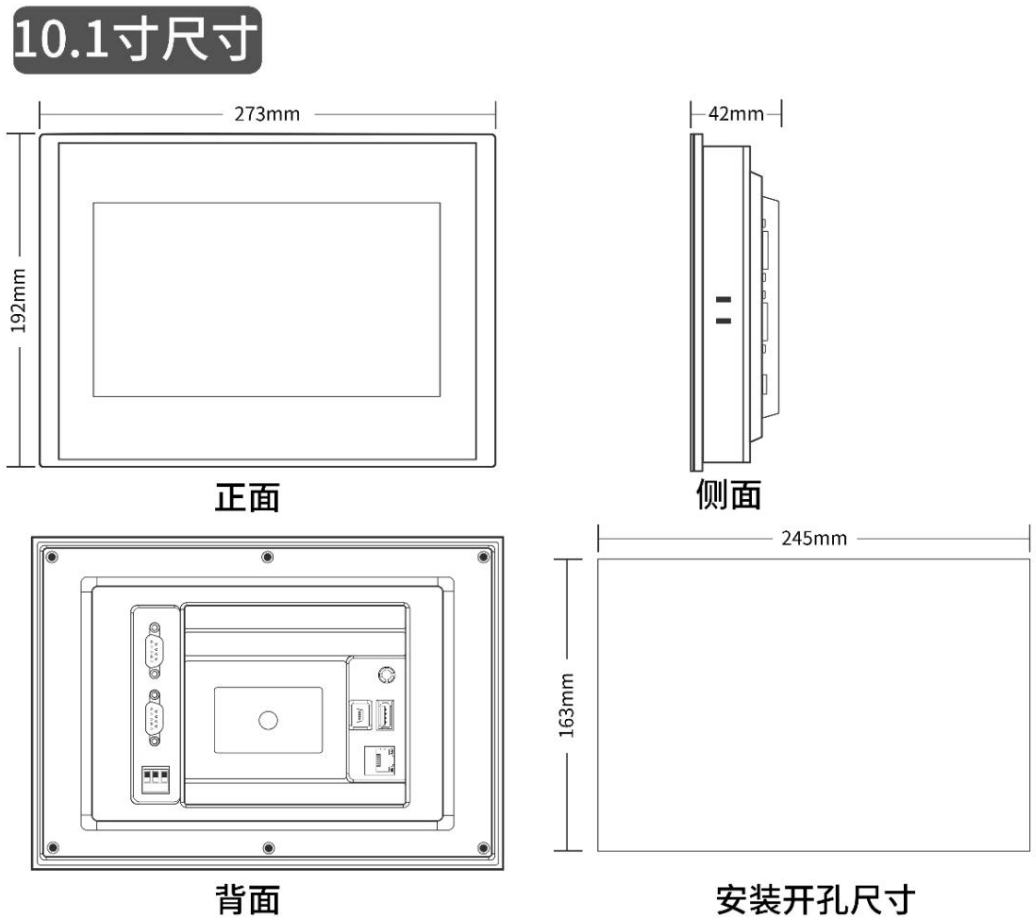


Figure 2.5.3 Dimensions of 10.1-inch HMI

2.5.4 Hardware Wiring Diagram

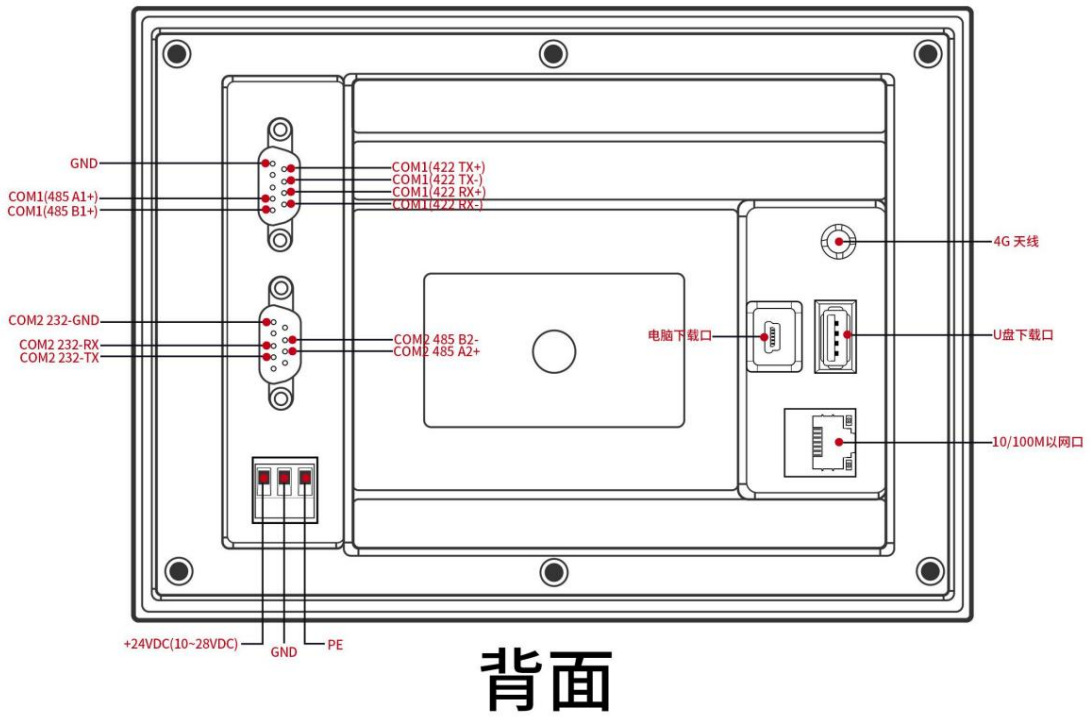


Figure 2.5.4 Hardware wiring diagram

2.6 QJ-P150TXX

2.6.1 Detailed Parameters

QJ-P150TXX		QJ-P150T24D	QJ-P150T24DL	QJ-P150T24DL4G
	Size,	15-inch		
Electrical Specifications	power supply	10~28VDC		
	voltage, power	800mA(24VDC)		
	supply current, reverse	support		
		19W		
Screen Specifications	connection protection,	TFT		
	power	1920*1080		
		350cd/m2		
	consumption, LCD	LED (PWM stepless adjustment)		
	panel	True Color 256K		
	material, resolution, brightness, backlight type, color, touch method	resistive 4H Industrial Anti-interference		
Core Specifications	Processor	Cortex-A7*2 1.2Ghz		
	memory	Built-in 64M DDR		
	storage	128M NAND Flash		
	RTC	Built-in real-time clock		
	USB	Supports USB flash drive updates Supports data cable updates		
Communication port	RS-232	Route 1		
	RS-485	Route 2		
	RS-422	Route 1		
	10/100M 4G CAT.1	Wu	Do	have
	Ethernet ports	Wu	you	have
Communication Protocol	have a full range of Siemens PLCs ? Mitsubishi PLC series Huaqingjun's complete PLC series Omron PLC Series Huichuan PLC Series Panasonic PLC Series Delta's full range of PLCs Haiwei full series PLCs Xinje's full range of PLCs Hollysys PLC Series Display Control MODBUS RTU MODBUS TCP Custom Protocol			
Environmental requirements	Operating temperature,	-20~70ÿ		
	storage temperature,	-30~80ÿ		
	ambient humidity,	10~90%RH (non-condensing)		
External dimensions	frame dimensions,	396mm*260mm*23mm		
	and opening dimensions.	387mm*250mm		
net weight				

2.6.2 Interface Description

15-inch				
	Port COM1		Port COM2	
	RS-485-1	RS-422	RS-232	RS-485-2
pin				
1	B1-			
2	A1+		RXD	
3			TXD	
4				
5	GND		GND	
6		RS422 Send -		
7		RS422 Send+		A2+
8		RS422 Receiver -		B2-
9		RS422 Receiver +		

2.6.3 Installation Dimensions

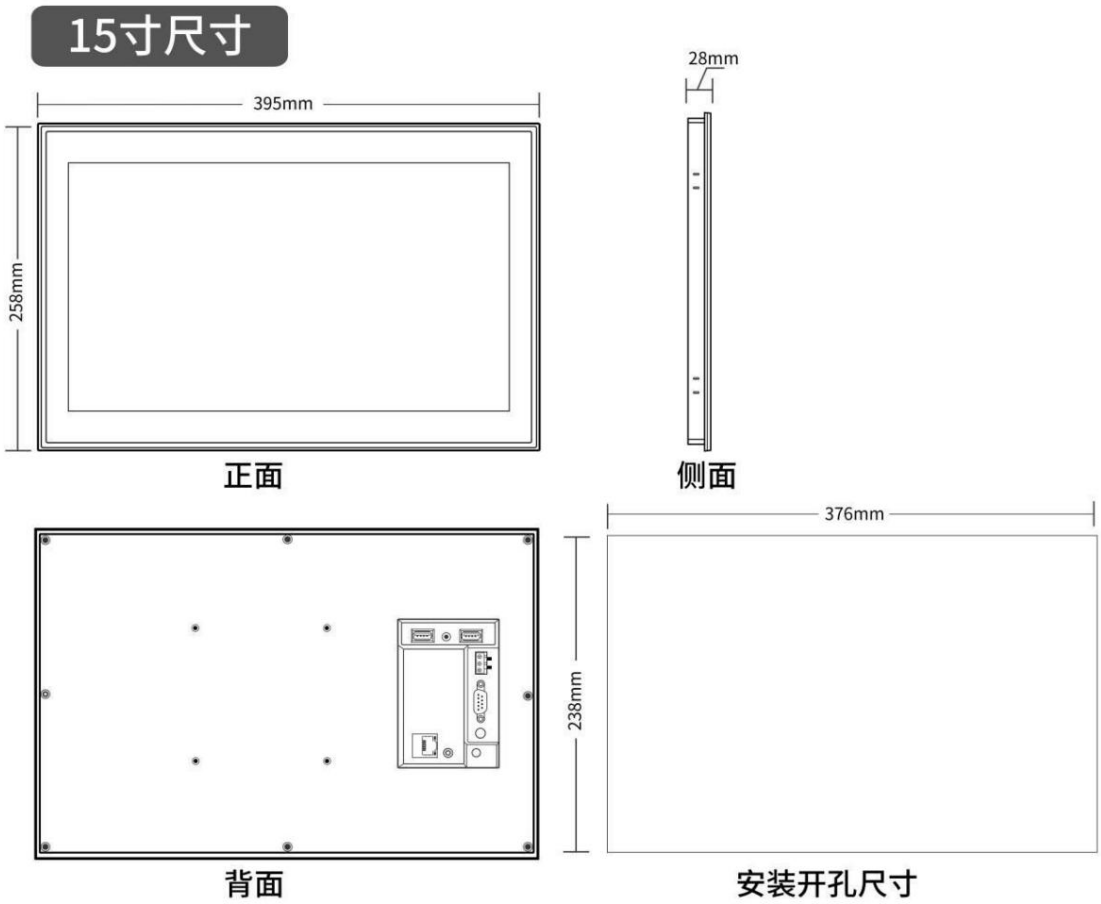


Figure 2.6.3 15-inch HMI Dimension Diagram

2.6.4 Hardware Wiring Diagram

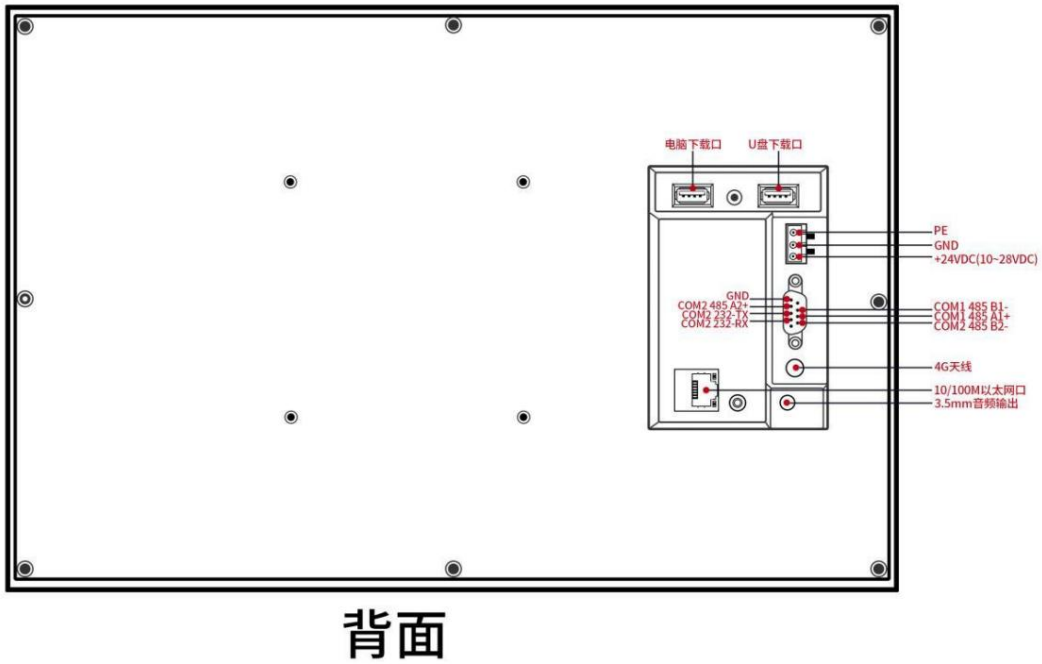


Figure 2.6.4 Hardware wiring diagram

3. Software Installation and Basic Operations 3

This section explains the installation of the HMI Designer software, provides a basic introduction to the software interface, and outlines the basic HMI development process.

3.1 Installation and Operation

The HMI Designer software can be run simply by unzipping. It is compatible with Windows 7 / Windows 10 / Windows...

11. Operating System. No additional driver installation is required for Windows 10 and later systems; however, it is required for Windows 7.

USBCDC driver (refer to section 3.1.2 USBCDC driver installation). The following is a detailed explanation of the installation process using an example.

3.1.1 Detailed Installation Instructions for HMI Designer Software

The following example is performed on a Windows 10 system.

1. Obtain the HMI Designer software compressed package.



Figure 3.1.1.1 HMI Designer software package

2. Unzip the compressed file.



Figure 3.1.1.2 (Left) HMI Designer software compressed package, (Right) Folder generated after decompression

3. Go to the folder, find "HMI Designer.exe" or "HMI Designer.exe", and double-click to open it.

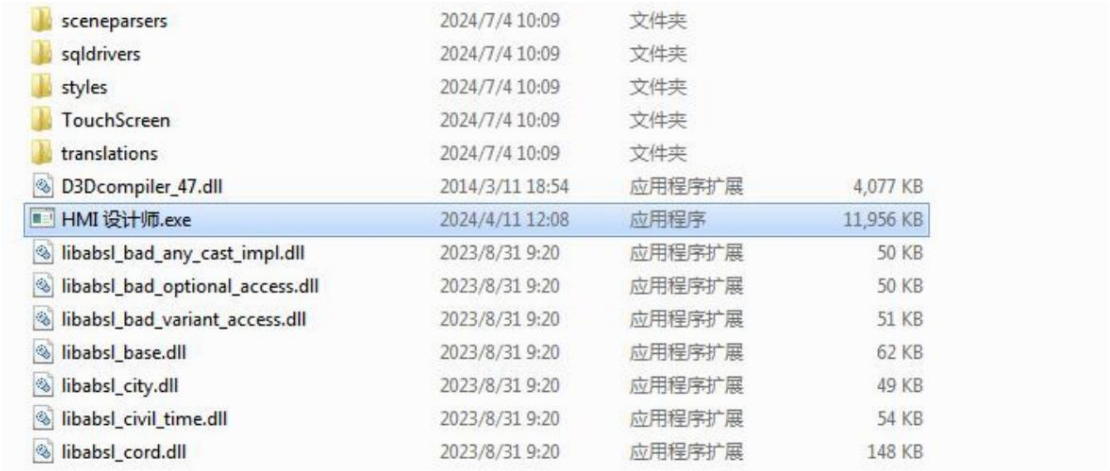


Figure 3.1.1.3 shows the "HMI Designer.exe" file in the unzipped folder.

4. Right-click "HMI Designer.exe" or "HMI Designer.exe", select "Create Shortcut" or "Send to".

ÿ Desktop shortcut for easy access.



Figure 3.1.1.4 Right-click "HMI Designer.exe"



Figure 3.1.1.5 New HMI Designer desktop shortcut

3.1.2 USBCDC driver installation (Windows 7 only)

For Windows 10 and later systems, the USB CDC driver does not need to be installed; only Windows 7 requires it. The following steps...

The example is performed on a Windows 7 system.

1. Unzip "USBCDC driver.zip".



Figure 3.1.2.1 (Left) USBCDC driver compressed package, (Right) Folder generated after decompression

2. Double-click to open "VCP_V1.4.0_Setup.exe" and follow the instructions in the USBCDC driver installation program.

Install.

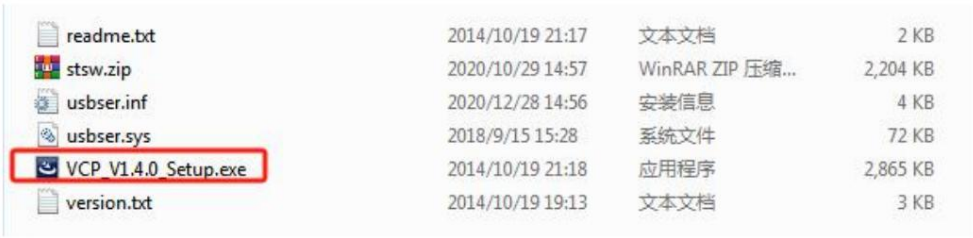


Figure 3.1.2.2 shows the "VCP_V1.4.0_Setup.exe" file in the extracted folder.

3. Prepare one USB-to-USB cable or USB-to-MiniUSB cable, plug one end into the computer, and the other end into the HMI connector.

mouth.

4. Open Device Manager. If a new COM port is displayed when the USB cable is plugged in, the driver installation was successful.

3.2 Introduction to the Main Window

The HMI Designer editing window is divided into eight areas. The default layout and toolbar for each of these eight areas are standard.

It's a standard Windows window program, therefore its operation is consistent with the toolbar in Windows. (See Figure 3.2)

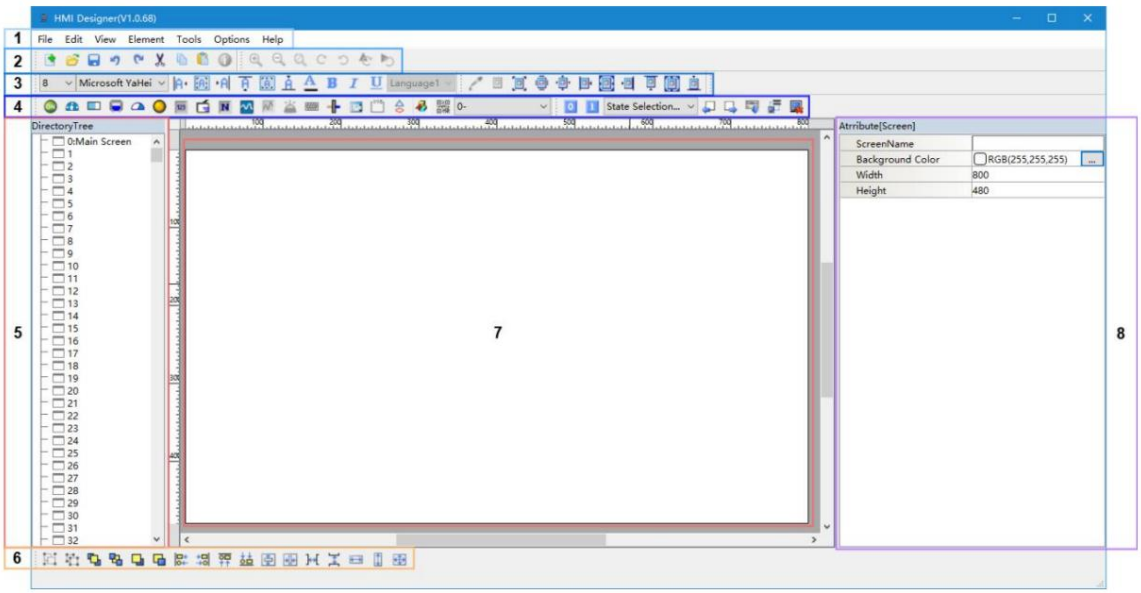


Figure 3.2 Main Window View

1. Menu bar: All functions of the software can be accessed here.

2. The standard toolbar is responsible for basic interactive functions, such as creating a new file, opening a file, saving, undoing, and canceling undo.

   Pin, cut, copy, paste.

3. (Left) Text toolbar, used for quick settings of text properties. (Right) Image toolbar, used for quick access to...

   Image layout settings.

4. Control shortcut bar, for quick selection of controls for convenient use.

5. Page window bar: Used to select the current page. Displays information about the control elements on the current page.

6. The control operation bar is responsible for adjusting the hierarchical overlap of controls. The selected control group can be moved left, right, top, and bottom.

   Quickly align control groups. Quickly sort control groups by equal spacing. Quickly and uniformly set the size of control groups by height, width, or dimensions.

   This is a reference value.

7. The current page editing window is the main operation window for the actual content displayed on the HMI.

8. Properties window: Set various properties; commonly used for setting control properties.

3.3 HMI Development Process

The following content will follow the HMI development workflow and, using a simple engineering case, gradually introduce the relevant aspects of HMI development.

Closed steps.

3.3.1 HMI Development Workflow Diagram

Please refer to the following flowchart, which outlines the basic steps for developing an HMI project.

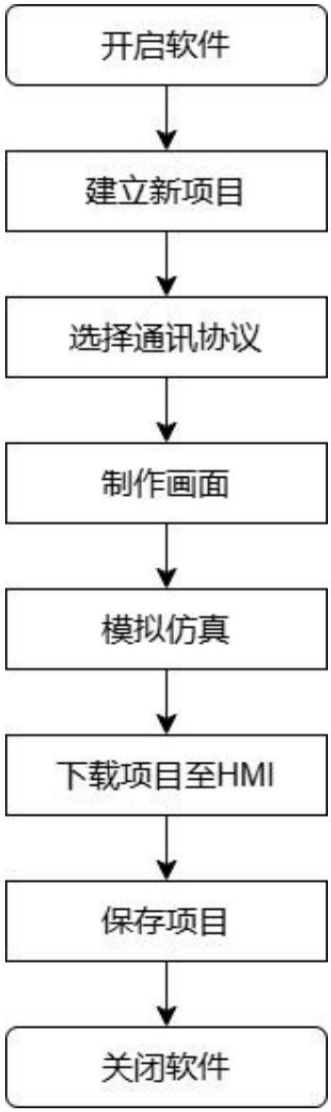


Figure 3.3.1 HMI Development Workflow Diagram

3.3.2 Start the software

Method 1. Double-click "HMI Designer.exe" in the folder.

Method 2. Double-click the shortcut: 

3.3.3 Establishing new projects

• Method 1. Click the shortcut button below



Figure 3.3.3.1 Method 1 for Creating a New Project

Method 2. Click "New Project" under the "File" menu.

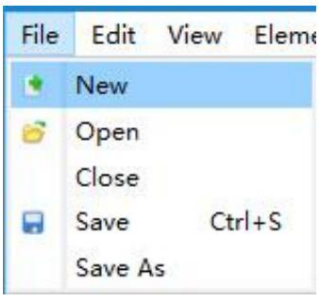


Figure 3.3.3.2 Method 2 for Creating a New Project

3.3.4 Selecting a Communication Protocol

Supported communication protocols and attribute settings are shown in the table below.

Device type and communication protocol	Siemens PLC series Mitsubishi PLC series Huaqingjun's complete PLC series Omron PLC Series Huichuan PLC Series Panasonic PLC Series Delta's full range of PLCs Haiwei full series PLCs Xinje's full range of PLCs Hollysys PLC Series Display Control MODBUS RTU MODBUS TCP Custom Protocol
Communication port	For the corresponding HMI hardware port, please refer to the HMI model support documentation. surface.
Baud rate,	Supports multiple baud rates from 1200 to 256000.
data bits,	Supports 8 / 7 / 6 / 5
parity bits,	Support N/E/O/S/M
stop bits,	Supports 1 / 2 / 1.5
timeout	Each instruction is considered to have timed out if the wait exceeds N milliseconds. . indivual Each control has its own timeout period.
Frame interval time	After each instruction is sent and the return code is successfully received, wait for N. Send the next instruction in milliseconds.
Number of retries	The number of times this command will be resent after a timeout.

The steps to open the communication protocol design interface are as follows.

Step 1. Open the communication protocol settings interface from the menu bar.



Figure 3.3.4.1 Opening the communication protocol settings interface via the menu bar

Step 2. Open the communication protocol settings interface from the menu bar.

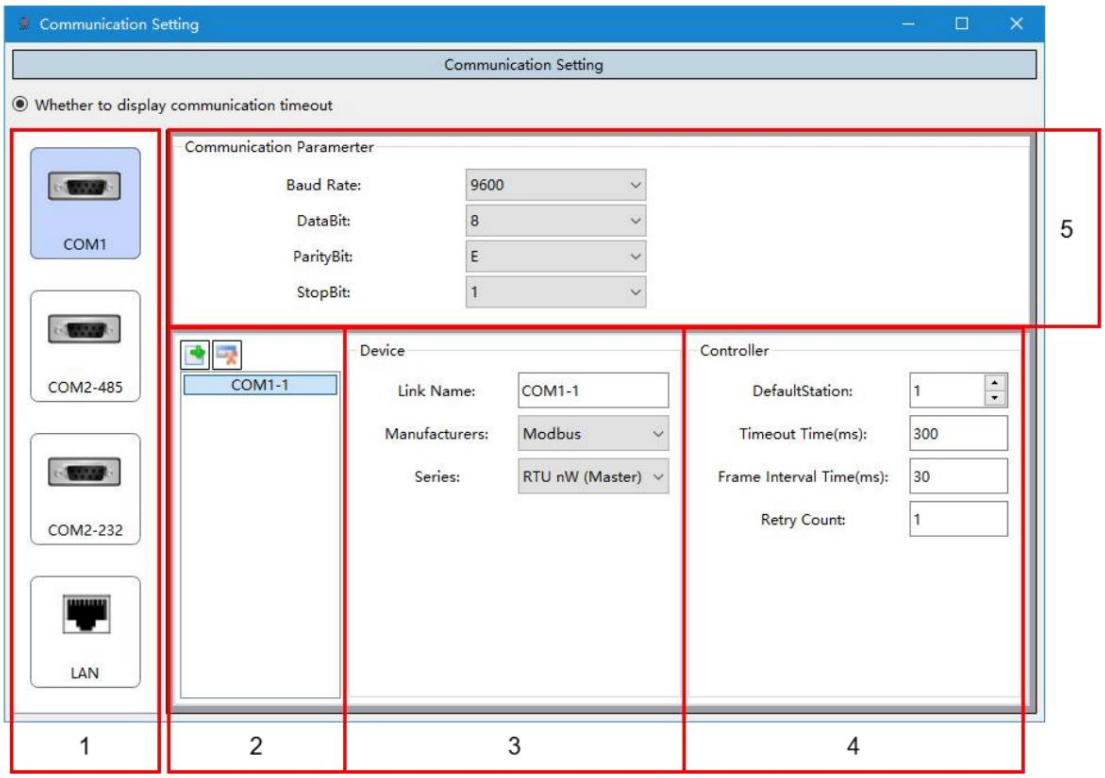


Figure 3.3.4.2 Communication Protocol Settings Interface

1. Communication port selection bar.

2. Current communication port configuration file.

3. From top to bottom: Configuration file name edit box, communication protocol category drop-down menu, current communication category.

Sub-protocols.

4. From top to bottom: Device default station number, communication timeout setting, frame interval, and reconnection upon failure.

Number of attempts.

5. From top to bottom: baud rate, data bits, parity bits, stop bits.

Step 3. After completing the settings, the software will automatically save them. Click the "X" in the upper right corner of the settings interface to close the settings window.

The noodles are fine.

3.3.5 Creating the Screen – Automatic Switching Button

This section briefly introduces how to create the "self-toggle button" control, gradually explaining how...

This section covers creating controls, modifying their properties and states, and how to use the software's extensive built-in image library.

This software has a built-in image library of over 6,000 images across 70+ categories, and the library will be further expanded in the future.

The software's built-in resource library offers a rich selection for convenient design use. Furthermore, users can add their own designs at any time.

The designed materials are used in the software.

Step 1. Right-click in the current page editing window to open the control selection window, as shown in the image below.

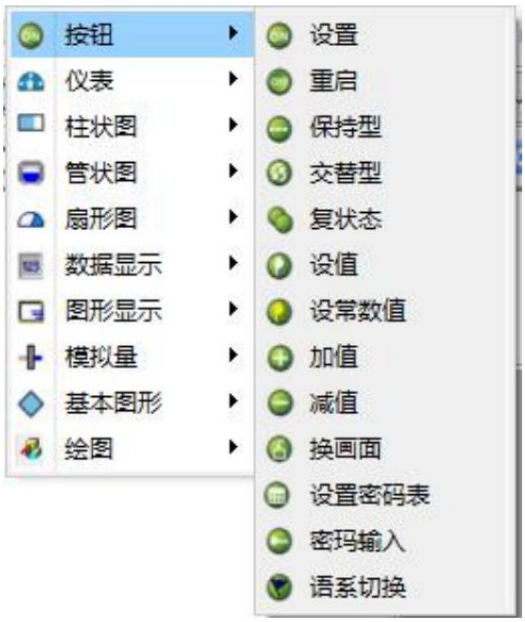


Figure 3.3.5.1 Control Selection Interface

Step 2. Select the "Multi-state button" control.



Figure 3.3.5.2 Selecting the multi-state button

Step 3. In the current page editing window, hold down the left mouse button and drag to the desired size.

Release the left mouse button to place the control.

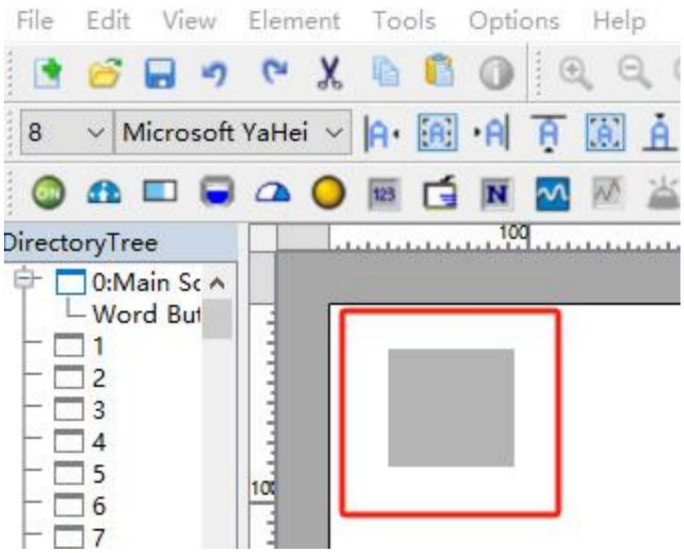


Figure 3.3.5.3 Creating a control

Step 4. Click the control to modify its properties. When the control is selected, an anchor point will appear indicating that it is selected.

[Selected]. Note that all the following operations are based on the control being selected. If you find that there is no corresponding option or content, please...

Click the control again to select it.

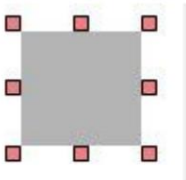


Figure 3.3.5.4 Selected Control

Step 5. In the Control Properties Editing Window, click "..." in the "Read Address Bar" field, and then change the settings in the pop-up window.

The address is set to $100. Then click OK. The specific steps are as follows.

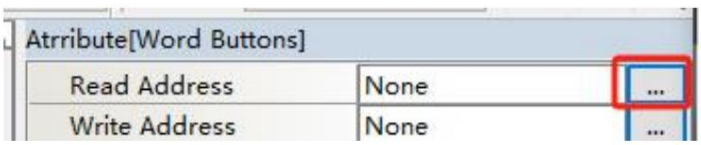


Figure 3.3.5.5 Before changing the control's read address

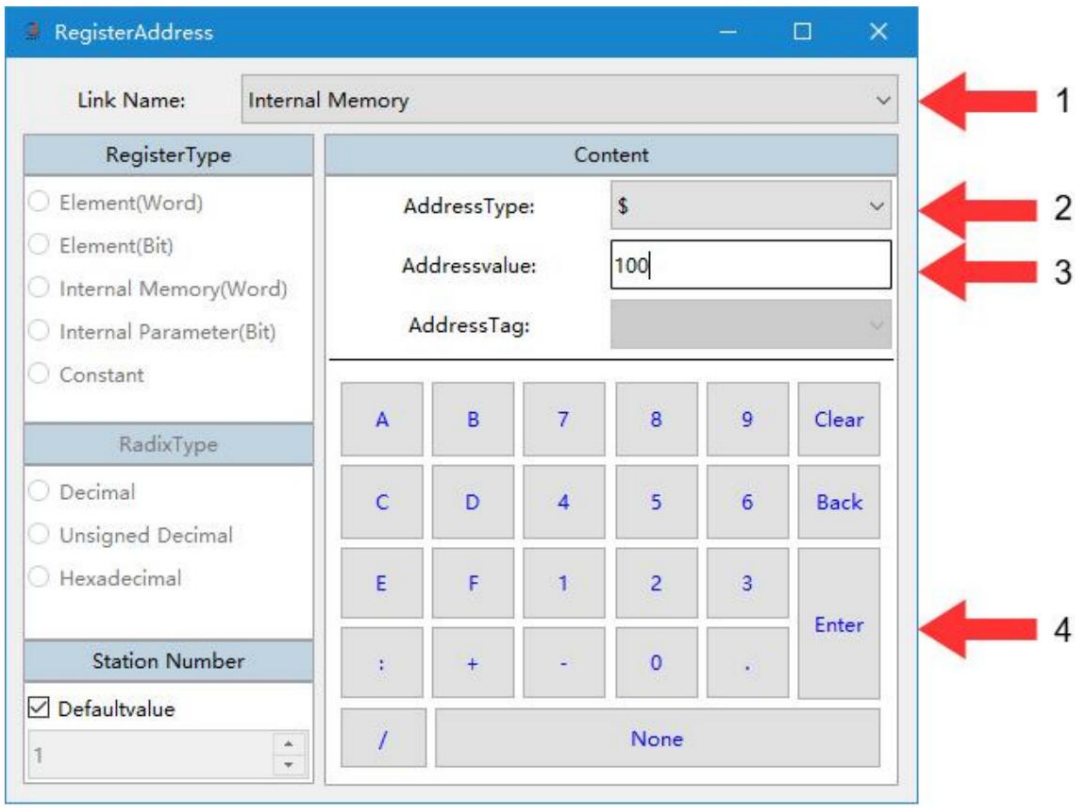


Figure 3.3.5.6 shows how to change the register to an internal register [$100] in the interface according to numerical order.

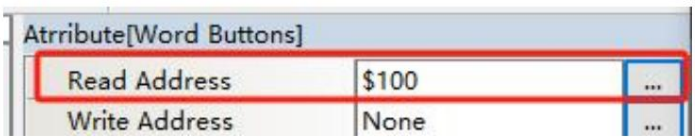


Figure 3.3.5.7 After changing the control's read address

Step 6. The write address operation, which was performed in the manner described in Step 4, is also changed to the internal register $100.

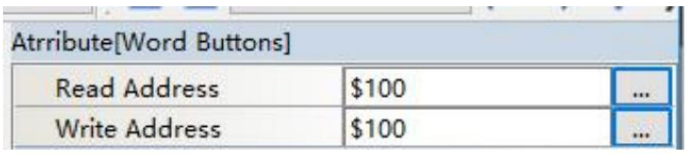


Figure 3.3.5.8 After changing the control write address

Step 7. In the Control Properties Editing Window, change the control image.

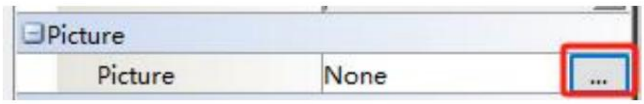


Figure 3.3.5.9 Opening the control image settings window

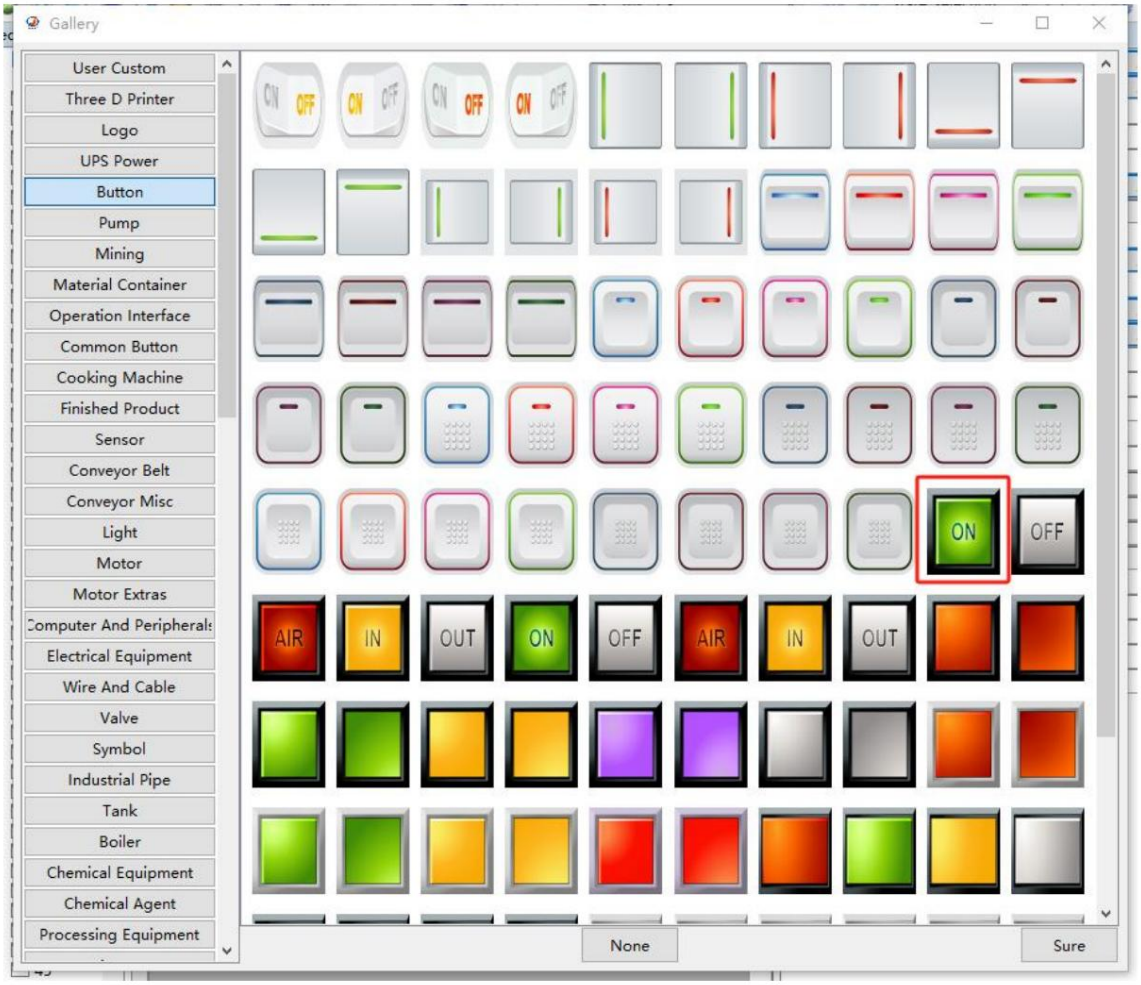


Figure 3.3.5.10 Setting control images in the image library interface



Figure 3.3.5.11 After setting

Step 8. In the [Controls Menu Bar], switch the current state of the control to 1 to observe its appearance.

The change has occurred; the control is now in a new state. Modifying a property in one of its states will not affect...

The properties that affect the other states of the control.

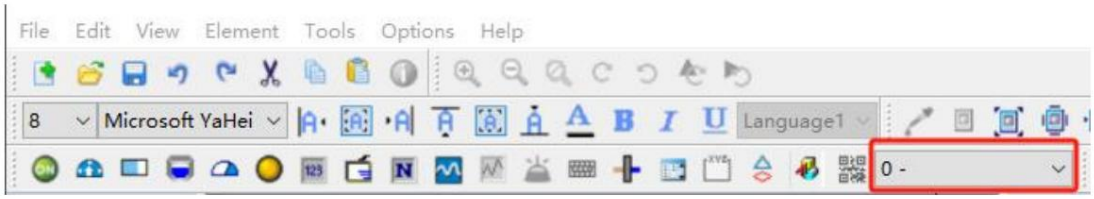


Figure 3.3.5.12 The "Control Status Selected" drop-down menu in the control menu bar.

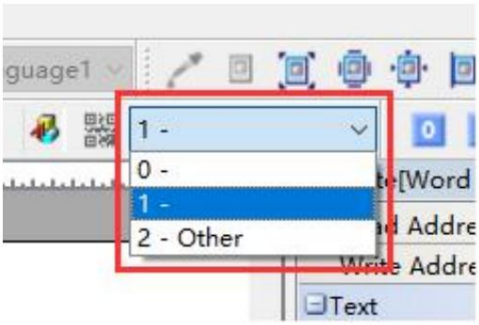


Figure 3.3.5.13 The current state of the toggle control is 1.

Step 9. Following Step 7, set the image of the control in the new state.

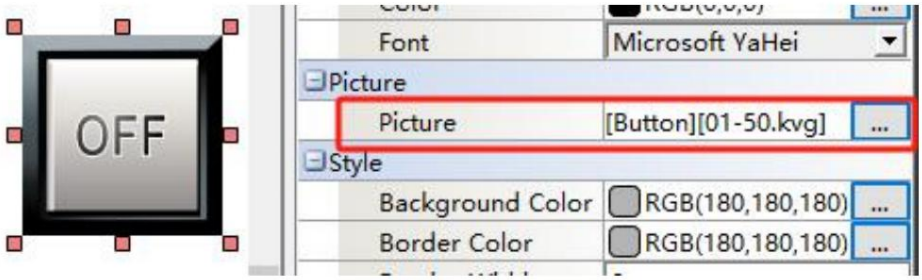


Figure 3.3.5.14 After setting the image of the control in the new state

3.3.6 Simulation



Figure 3.3.6.1 The ÿOnline Simulationÿ function in the menu bar

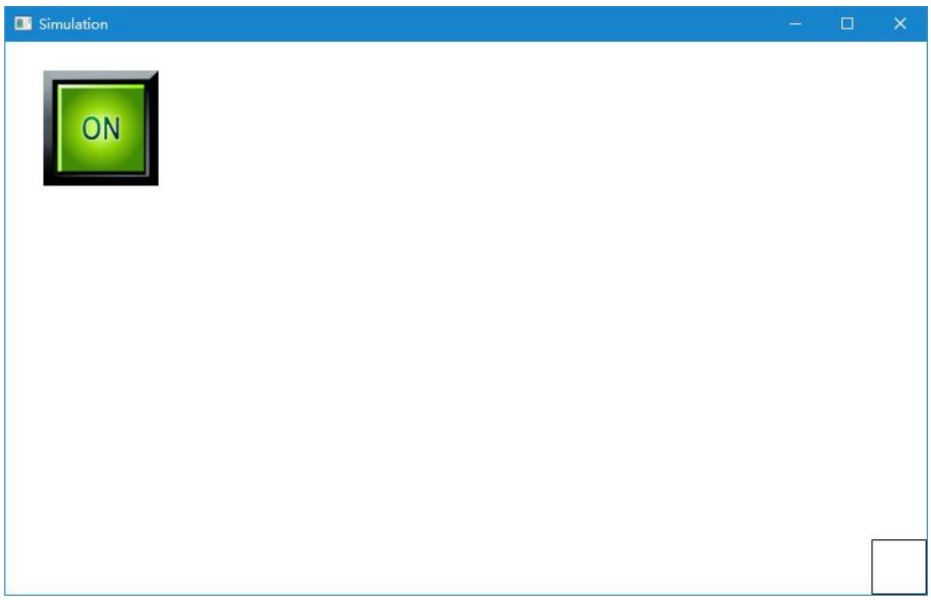


Figure 3.3.6.2 Simulation Interface

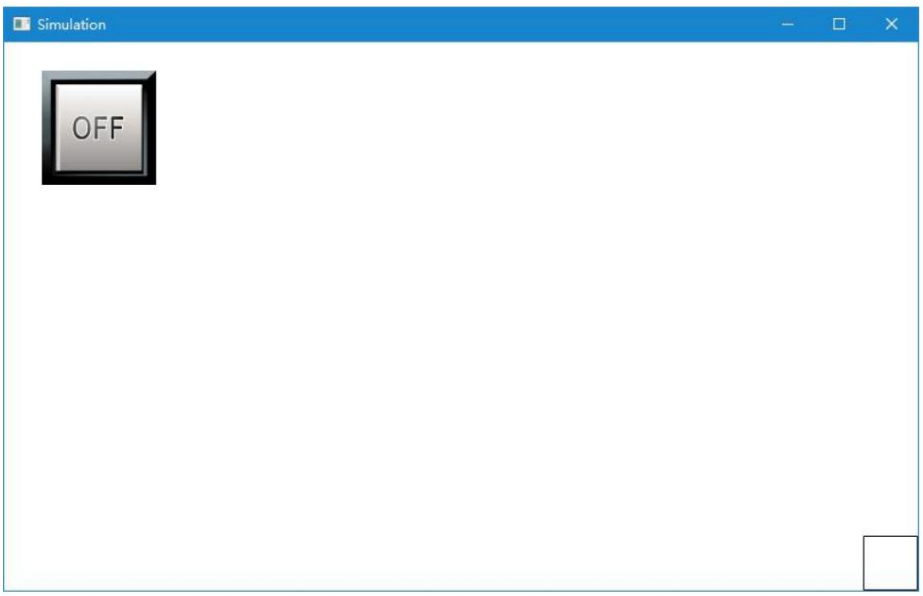


Figure 3.3.6.3 Click the control to toggle its state.

3.3.7 Downloading the project to **the HMI**

You need to connect the HMI to your computer using a USB cable before downloading.



Figure 3.3.7.1 The "Download Items" function in the menu bar

3.3.8 Saving Projects



Figure 3.3.8.1 The "Save" shortcut in the shortcut bar.

3.3.9 Close the software



Figure 3.3.9.1 The "Close" button in the upper right corner of the software.

4. Software Global Settings 4

This section explains the "Software Global Settings" function, as opposed to "Control Settings." "Control Settings" only apply to individual controls.

This applies to only one control and will not affect other objects. These changes to global settings will affect the HMI device.

For example, setting HMI screen brightness, screen-off time, and configuring communication protocols.

4.1 Communication Protocol Settings Interface

4.1.1 Communication Protocol Support Table

The supported communication protocols and attribute settings are shown in the table below.

Device type and communication protocol	Siemens PLC series Mitsubishi PLC series Huaqingjun's complete PLC series Omron PLC Series Huichuan PLC Series Panasonic PLC Series Delta's full range of PLCs Haiwei full series PLCs Xinje's full range of PLCs Hollysys PLC Series Display Control MODBUS RTU MODBUS TCP Custom Protocol
Communication port	For the corresponding HMI hardware port, please refer to the HMI model support documentation. surface.
Baud rate,	Supports multiple baud rates from 1200 to 256000.
data bits,	Supports 8 / 7 / 6 / 5
parity bits,	Support N/E/O/S/M
stop bits,	Supports 1 / 2 / 1.5
timeout	Each instruction is considered to have timed out if the wait exceeds N milliseconds. . indivual Each control has its own timeout period.
Frame interval time	After each instruction is sent and the return code is successfully received, wait... Send the next instruction after N milliseconds.
Number of retries	The number of times this command will be resent after a timeout.

4.1.2 How to access the communication protocol settings interface and related settings

Step 1. Open the communication protocol settings interface from the menu bar.

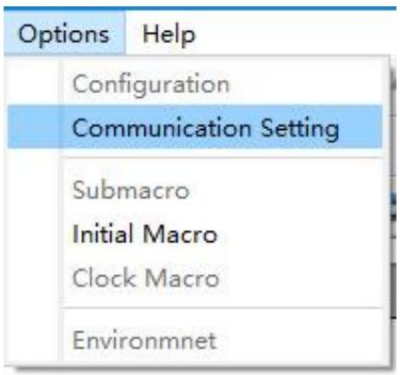


Figure 4.1 Opening the communication protocol settings interface via the menu bar

Step 2. Open the communication protocol settings interface from the menu bar.

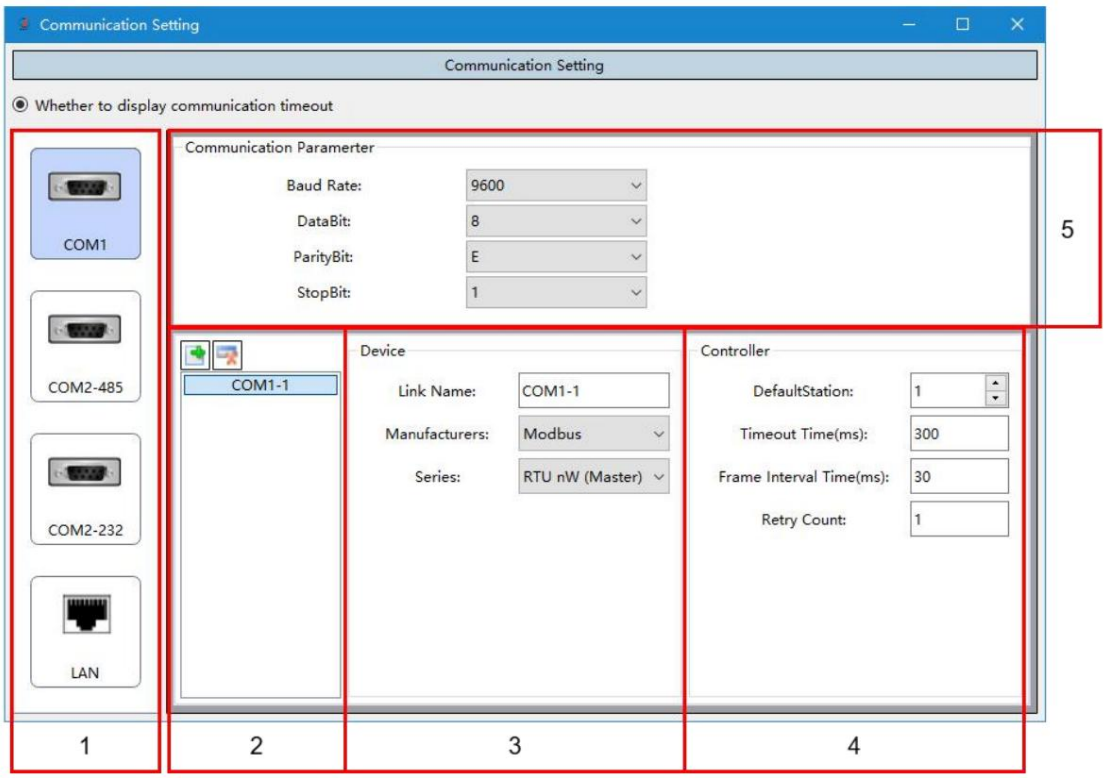


Figure 4.2 Communication Protocol Settings Interface

1. Communication port selection bar.

2. Current communication port configuration file.

3. From top to bottom: Configuration file name edit box, communication protocol category drop-down menu, current communication category.

Sub-protocols.

4. From top to bottom: Device default station number, communication timeout setting, frame interval, and reconnection upon failure.

Number of attempts.

5. From top to bottom: baud rate, data bits, parity bits, stop bits.

Step 3. After completing the settings, the software will save automatically. Click the X in the upper right corner of the settings interface to close the settings interface.

5 registers 5

This section explains how to set up a register in software and introduces the relevant registers of the HMI: internal system registers.

5.1 Register Settings Interface

In this software, a register settings interface will pop up whenever you need to set a register address. The following is the interface for opening register settings.

A method or procedure for making noodles.

Step 1. Right-click to select a control and drag and drop it. The following example shows selecting a Set button control.



Figure 5.1.1 Selecting a Set button control



Figure 5.1.2 Placing controls in the main window

Step 2. In the properties window on the right, click the "..." button in the Select Address section.

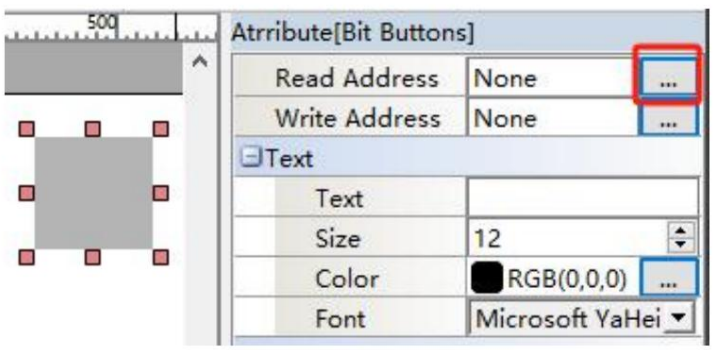


Figure 5.1.3 Click the "..." button to open the register settings interface.

Step 3. Set the associated register properties in the register interface.

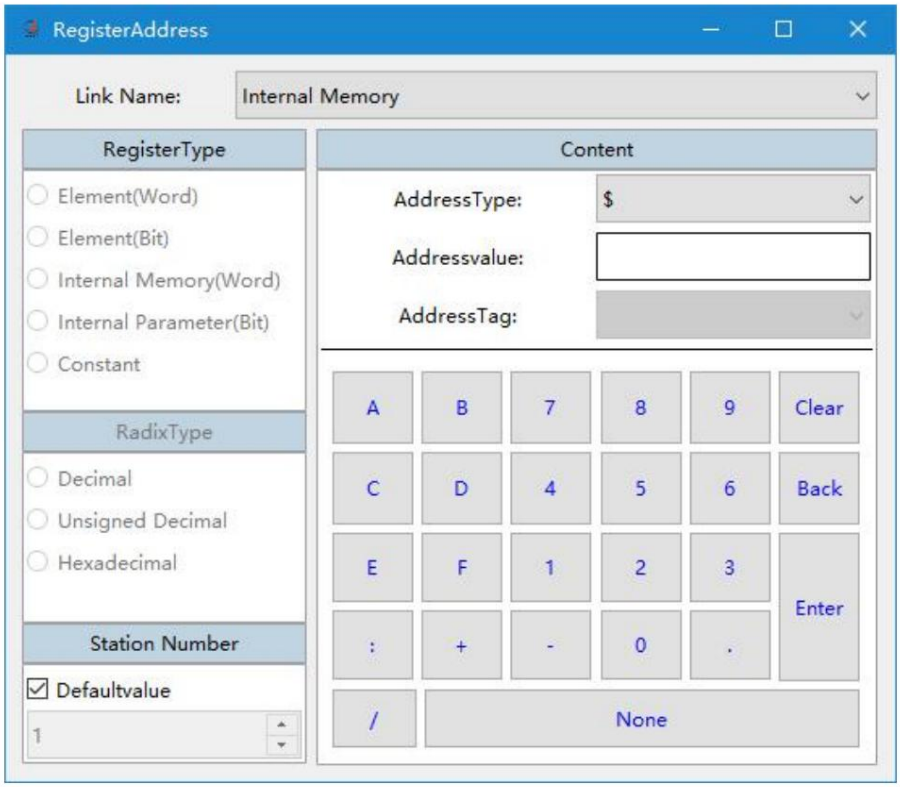
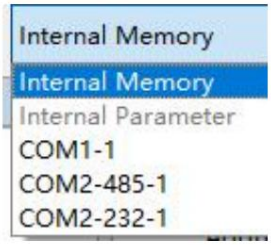
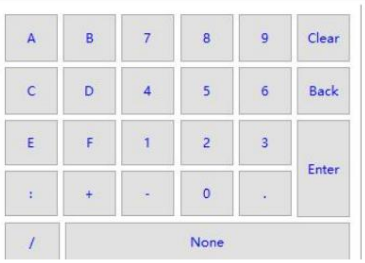


Figure 5.1.4 Register parameter setting interface

Attributes	Function	Function Introduction
		- Internal Memory, Internal Registers - Internal Parameter, Internal Parameter Register instrument - COM1-1, Serial Port 1 Register - COM2-485-1, 485 serial port register - COM2-232-1, 232 serial port register
		- Select address type
	Set address value	- Can be directly edited and entered
	Set address labels	
	Used for entering values via mouse click	

5.2 Internal System Register **Parameters**

These internal system register parameters allow users to understand the status values of the HMI's internal system. HMI

There are three different types of internal registers: internal register $, power-off retained internal memory $M, and inter-register register $M.

Connect to the address register *$.

5.2.1 Internal Registers ($)

The internal registers are freely accessible memory within the HMI and can be configured with various settings, such as the communication location of components.

Address, etc. This internal register lacks power-off retention; when the HMI loses power, the data in the register cannot be retained.

The HMI provides 65,536 16-bit internal registers.

Access type	Component	Access range
Word		$0 - $65535
Bit	types	$0.0 - $65535.15
$n $nb Note: n is Word (0-65535); b is Bit (0-15)		

5.2.2 Power-off retention of internal register ($M)

This register provides power-off retention; when the HMI is powered off, the data in the register is retained.

Users can record important numerical data in this register. The HMI also provides 1024 16-bit power-off retention registers.

Partial registers ($M0.0 - $M1023.15).

Access type	Component types	Access range
Word	$Mn	$0 - $1023
Bit	$Mn.b	$0.0 - $1023.15
Note: n represents a word (0-1023); b represents a bit (0-15).		

5.2.3 Indirect Addressing Register ($)

Indirect addressing registers do not have power-off retention functionality; when the HMI is powered off, the data in the register cannot be retained.

Access type	Component	Access range
Word	types	$0 - $65535
*$n Note: n is the number of Words (0-65535)		

Indirect addressing registers provide pointer access functionality. The indirect addressing register *$n first retrieves the value from $n, and then...

Treat this value as a new address, and then access the value at this new address. For example, if $10 **= 101 and $101 = 55, then *$10 =**

55ÿ

6 buttons 6

This section explains button controls, listing their functions and properties one by one.

This section primarily explains the button controls provided by the software, along with detailed instructions on how to operate, use, and configure them.

Right-clicking the current page's editing window opens a control selection window, as shown in the image below.

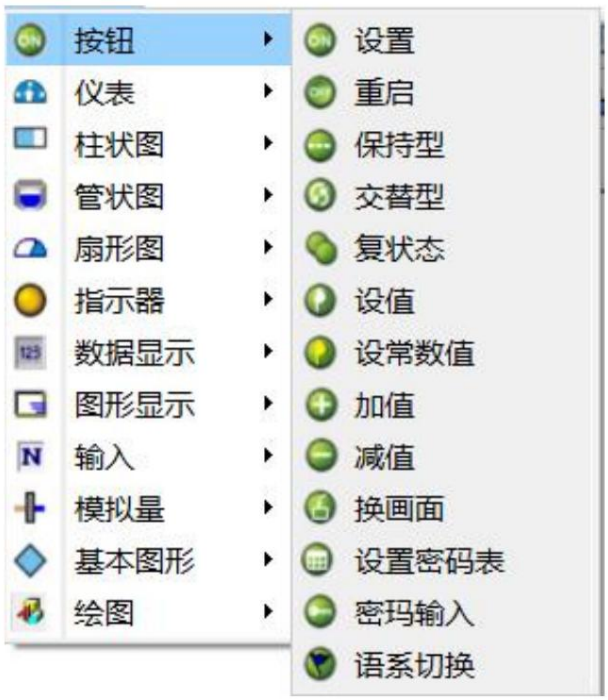


Figure 6 Button Control Diagram

6.1 Setting Public Properties for Button Class

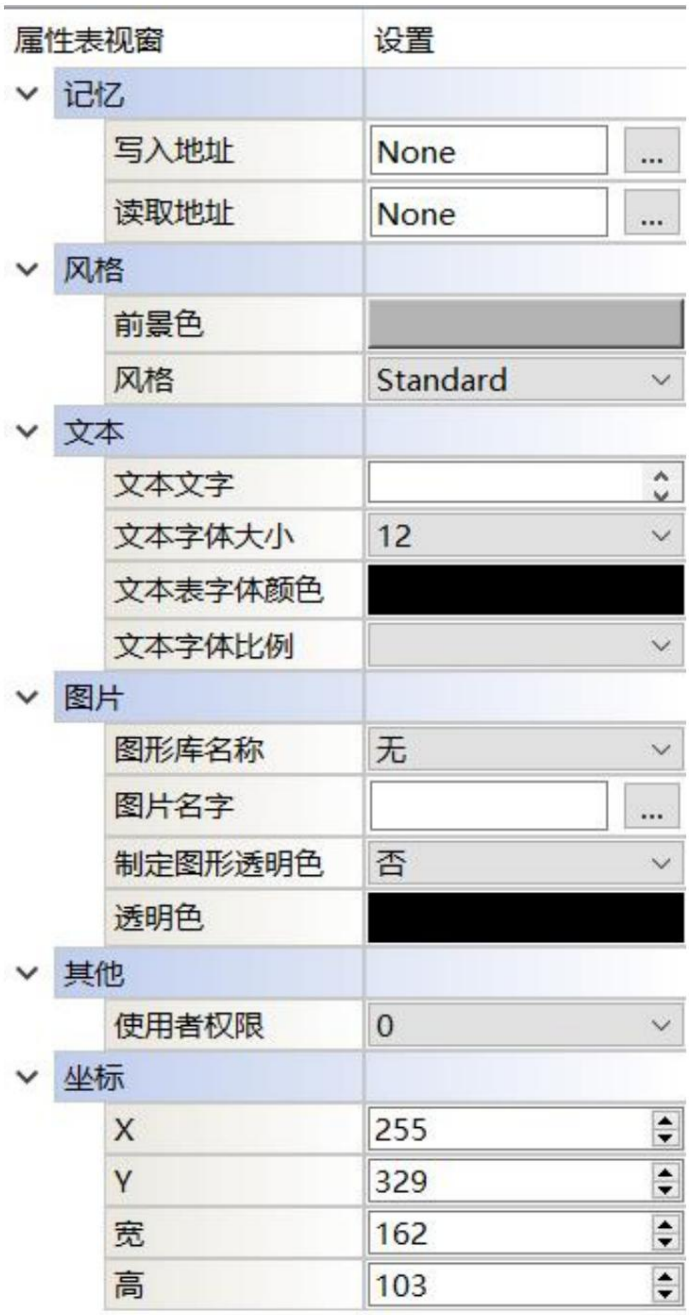
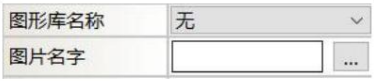
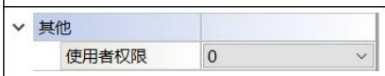
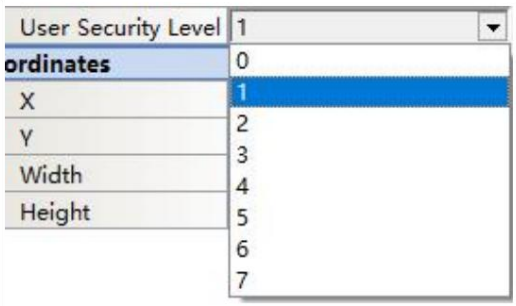
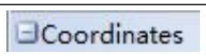
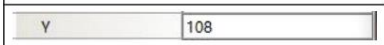
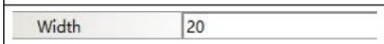
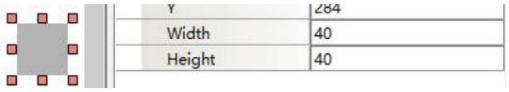


Figure 6.1 Button control property diagram

Attributes	Function	Function Introduction
	Read memory address - Selectable internal register or communication register address for reading.	The value of the target memory address.
	Write to memory address - You can choose the address of an internal register or a communication register.	- If only the write memory address is set but the read memory address is not set - The HMI will automatically read the value written to the memory address.
	Control Text Properties - Used to set the text properties of the corresponding control, such as: text content, word count, etc.	Body size, text color, font
	Settings Control Displayed text content	
	Set text size	
	Set text color	
	Set font	
	Notice	- Only one of the control's image class properties and control's style class properties can be selected. Enabling the former will override the latter. - That is, if the control image class attribute is enabled, then the control style class The property will be hidden, and any changes to the style property will have no effect.
	Image class property of control - Used to replace the control display with an image from the resource library.	
	Replace the control with The image set	
	Set up users Access permissions	- 0 allows access to all users; 1 to 7 represent different access levels. Other access permissions. - Higher-level permissions allow access to controls with lower-level permissions. For example: XXX

		
	Coordinate properties - used to set the position and size of the control.	
	Control coordinates X-axis position	- The origin is the top left corner of the current page, and the left and right directions are the X-axis. The right-hand direction is considered positive. - This value will increase when the control is moved to the right, and increase when it is moved to the left. This value will decrease. This value can be directly edited and modified; the results will be reflected on the page in real time. In the middle.
	Control coordinates Y-axis position	- The origin is the top left corner of the current page, and the vertical direction is the Y-axis. The direction below is the positive direction. - This value increases when the control is moved down and increases when it is moved up. This value will decrease. This value can be directly edited and modified; the results will be reflected on the page in real time. In the middle.
	The width of the control - this value can be directly edited, and the result will be reflected on the page in real time. In the middle.	 
	The height of the control - This value can be directly edited, and the result will be reflected on the page in real time. In the middle.	 

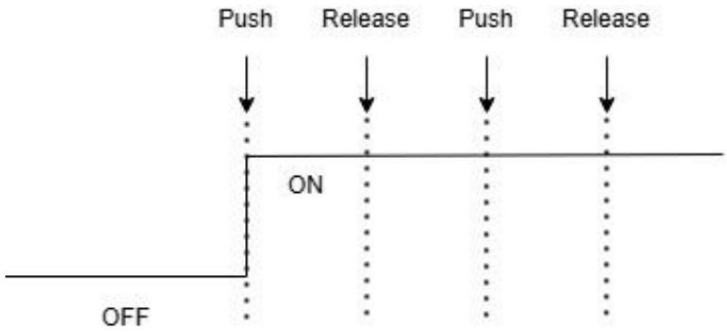
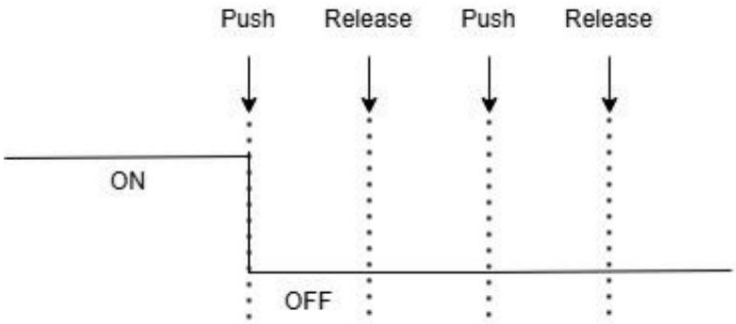
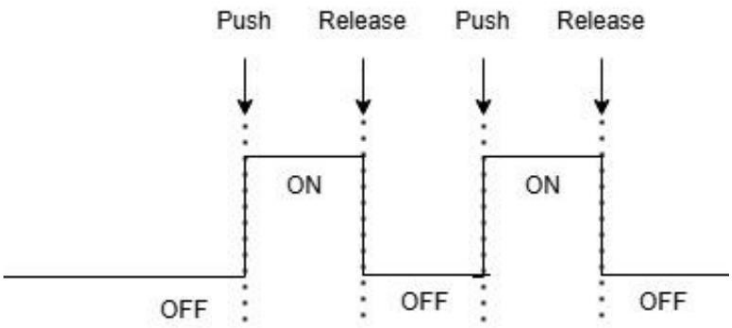
6.2 ON / OFF / Alternating / Holding

ON/OFF/hold/alternate controls all control the specified communication by touching a button or using a macro.

The address is switched between ON and OFF.

Users can access the controls via the right-click menu in the current page editing window, the control shortcut bar, or the menu bar control menu.

[Single], can be created in any of the three ways: set ON and set OFF controls.

<table>
<tr><td rowspan="3">
</td><td colspan="2">
</td></tr>
<tr><td>Let ON</td><td>- The ON button's action is to set the specified communication address to ON when the ON button is touched.
Touching the ON button again will not change the status to OFF.</td></tr>
<tr><td rowspan="3">
</td><td colspan="2">
</td></tr>
<tr><td>Set OFF</td><td>- The OFF button's action is that when the OFF button is touched, the specified communication address will be set to...
OFF. Touching the OFF button again will not change the status to ON.</td></tr>
<tr><td rowspan="3"></td><td colspan="2">
</td></tr>
<tr><td>Alternating type</td><td>- When an alternating type button is pressed, it reverses the value of the specified communication address.</td></tr>
</table>

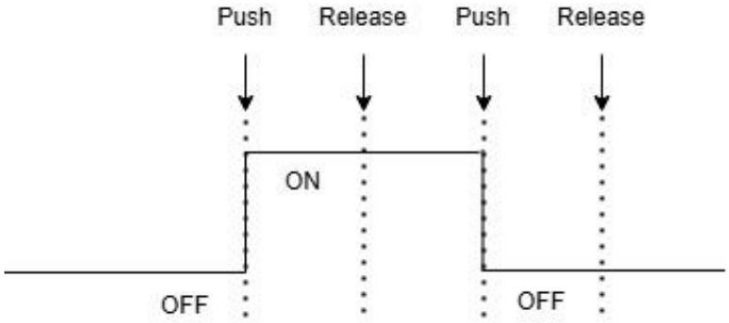
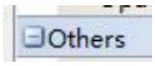
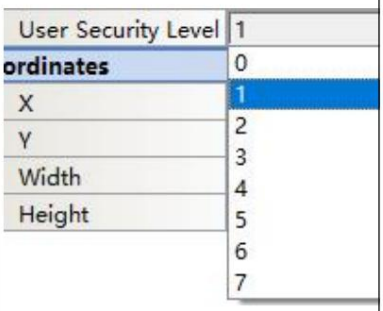
		Unlike hold buttons, when you stop touching the alternating button, the specified communication address value will still be maintained. It remains in the reverse state until the alternating button is touched again, at which point it will return to the original state of the specified communication address.
		
	Hold-type - The action of a hold-type button is that when the hold-type button is touched, it will hold the specified communication location.	The address value is reversed; once the hold button is no longer touched, the specified communication address will be restored. The original state. To continuously reverse the communication address value, you must keep pressing and holding the button. button.

Figure 6.1.1 Property settings page for ON/OFF/hold/alternate control

	Other class attributes	- Used to set control subclasses and user access rights limit.
	Set up users Access permissions	- 0 allows access for all users, 1 to 7 points Different levels of access permissions. - Higher privileges can access controls with lower privileges. Item. 

6.3 Complex State

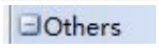
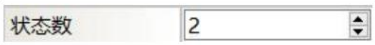
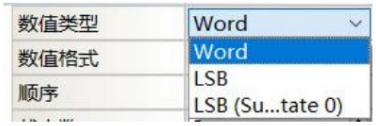
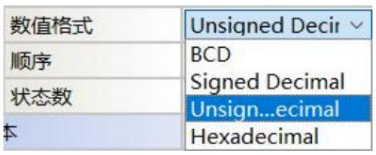
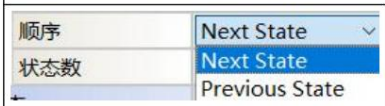


Figure 6.3.1 Complex state ICON

Complex states can be used to display multiple different state images or state values. The user can set the memory address of the complex state to...

The value is $100, and the total number of states is set to 4. When the value of $100 is changed, the state component will switch according to the order set by the user.

To switch states, please refer to the table below for relevant parameters.

Attributes	Function	Function Introduction
		
	Set the total number of states	- Sets the total number of states the control can have.
	Set the numerical storage unit	- Word, stored as a word - LSB, first converts the data in the register to binary, then uses the least significant bit (not zero) to determine the current state of the object. - LSB (Support State 0) allows the use of 0 as the state identifier. The control in state 0 is shown in the image below. 
	Set numerical interpretation format	- Unsigned Decimal.
	Set data increment or decrement.	- Next State: Reads the value from the specified register, increments the value by one, and writes it back to the specified register. - Previous State: Reads the value from the specified register, decrements the value by one, and writes it to the specified register. - If the value exceeds the total number of states set in the complex state control, jumps to the first or last state for loop processing.

6.4 Setting Value



Figure 6.4.1 Complex state ICON

Touching this button on the HMI will bring up the system's built-in keyboard input window on the screen, allowing the user to input text.

Input value. When ENTER is pressed, the HMI sends a value to the corresponding register, and the maximum input value is equal to the minimum input value.

The value can be determined by the user, and a trigger address can also be set before or after input to trigger a specified control.

Device Bit address.

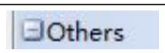
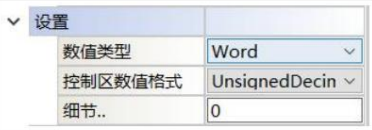
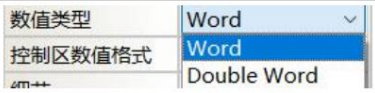
Attributes	Function	Function Introduction
⊟Others		
设置 数值类型 Word 控制区数值格式 Unsigned Deci 整数位 5 小数位数 0 最大 9999 最小 0 最小 0 最大 65535	Configure control details	- Set the unit of numerical storage - Set the format of numerical parsing

6.5 Assume constant values



Figure 6.5.1 Complex state ICON

Touching this button on the HMI will change the register value to the specified constant value.

Attributes	Function	Function Introduction
		
	Configure control details	Numerical formats, etc.
	Set the numerical storage unit	- Word, 16-bit word width - Double Word, 32-bit width
	Set the numerical parsing format	- Unsigned Decimal.
	Set the numerical target constant value	- Sets the constant value written to the target register when the constant value control is clicked.

6.6 Added/Subtracted Values

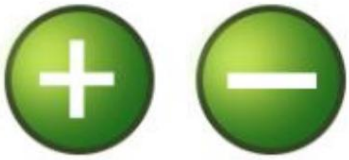


Figure 6.6.1 Complex state ICON

Touching the plus or minus button on the HMI will cause the HMI to first read the value in the register and then add or subtract the set value.

The operation involves adding or subtracting a predetermined number of values, and only then is the result written to the corresponding register. If the value after addition or subtraction exceeds the predetermined value...

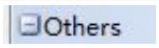
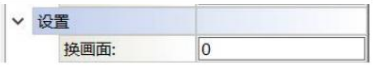
Setting upper/lower limits and adding or subtracting values will maintain the upper/lower limit values in the corresponding registers.

6.7 Screen Change

The screen change button provides the function of "Go to a specific screen". After the user clicks this button, they will be redirected to the specified screen.



Figure 6.7.1 Screen switching controls

Attributes	Function	Function Introduction
		
	Set the target jump screen	- Used to specify the screen to navigate to when this button is clicked.

6.9 Setting up a password table



Figure 6.9.1 Setting the password table ICON

This feature allows you to set passwords for different levels of access. The image below shows the setup after placing the "Set Password Table" button control.

Click the "True" button to bring up the HMI simulation interface.

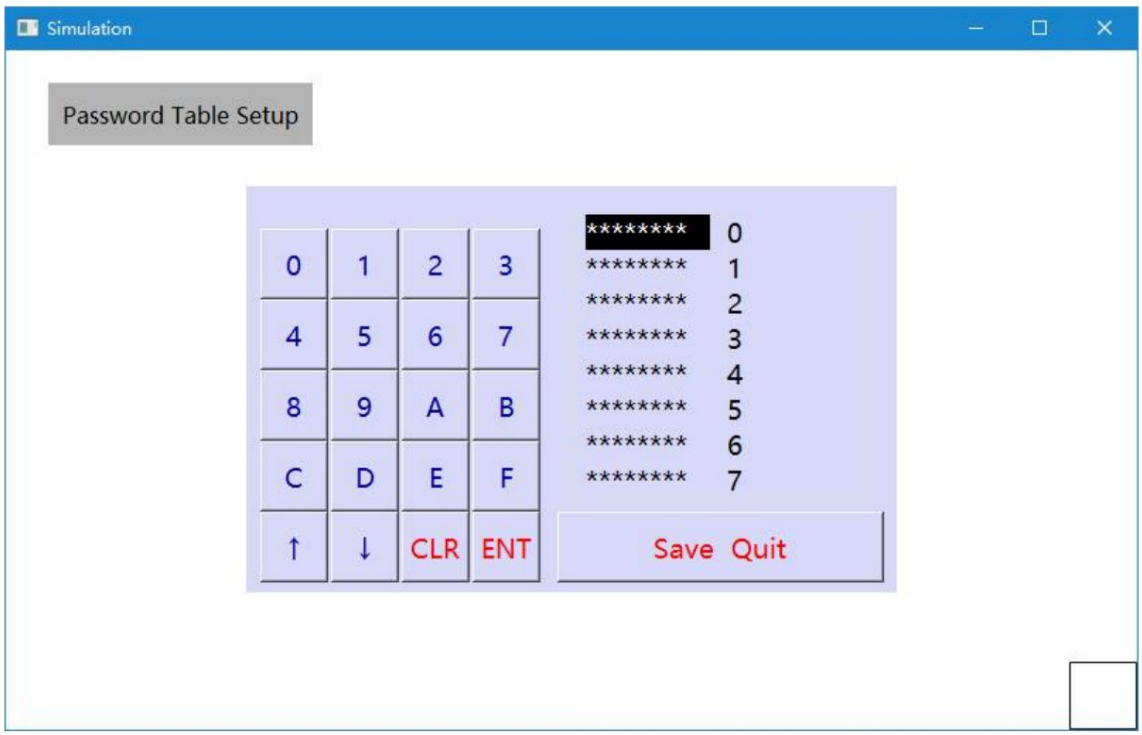
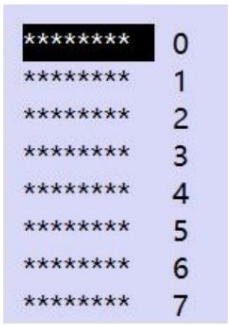
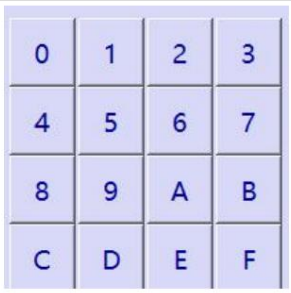
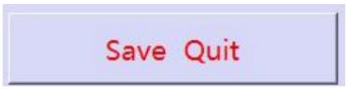


Figure 6.8 HMI simulation interface diagram for setting the password table control

[Set Password Table] Operation Function Menu

Attributes	Function	Function Introduction
	Display current Select Permission Password	- The black square background indicates the currently selected password.
	User input area	- Used to enter password
	Select Up - Select the level of access password to change - When clicked, the black square background will move upwards.	
	Select down - Select down to change the password for the level of permissions - When clicked, the black square background will move down.	
	Clear the currently selected password	- Clicking this will clear the password for the currently selected level of permissions. - You must clear the password before changing it.
	Confirm password	- Click "Confirm" to save the entered password to the HMI. - After entering the new password, you need to click "Confirm".
	Save and Exit - Save your current settings and close this pop-up.	

6.10 Password Input



Figure 6.10.1 Password Input ICON

This feature provides password input level permissions. The image below shows a simulation with the "Password Input" button control placed.

Clicking this button will bring up the HMI simulation interface.

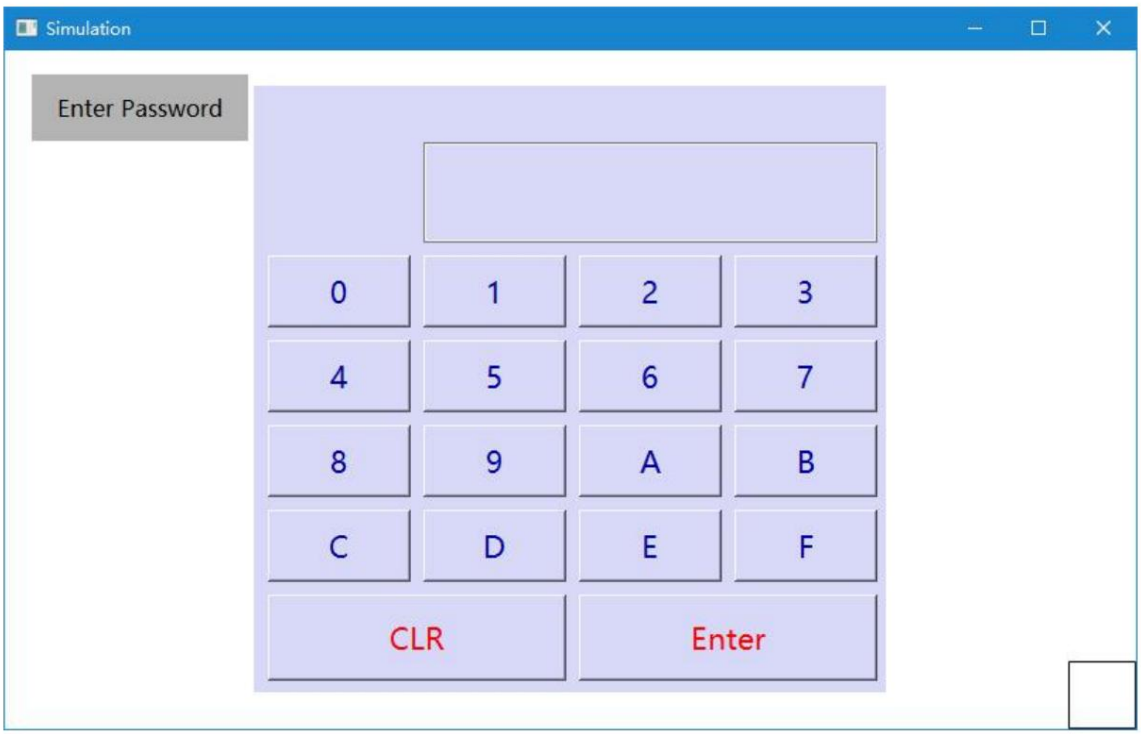
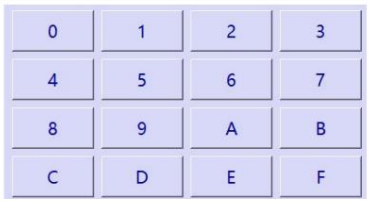


Figure 6.9 Simulation interface diagram of password input control HMI

[Password Input] Operation Menu

Attributes	Function	Function Introduction
	Encrypted Password Display - Displays the number of digits in the currently entered password in an encrypted format.	
	User input area	- Used to enter password
	Clear the currently selected password	Clicking this will clear the currently entered password.
	Confirm password	Click to confirm if the password is correct and close the pop-up window.

7 Instruments

This section explains instrument-type controls, listing them by function and attribute.

The software provides meter controls that allow users to display the meter value at a set memory address, and can also indicate whether...

Exceeding the upper limit or falling below the lower limit and target value, and furthermore, allowing customization of the memory addresses for the target value and upper and lower limits, it enables its functionality.

It allows for more flexible application and better meets user needs; different colors can also be used to distinguish between lower limits, upper limits, and target values.

The addition of colors allows users to more clearly distinguish the set display colors. Furthermore, animations have been added to the instrument cluster.

With anti-aliasing, the components display more smoothly and the image is more refined when they are in motion.

Right-clicking in the current page editing window will open the control selection window, as shown in the image below.

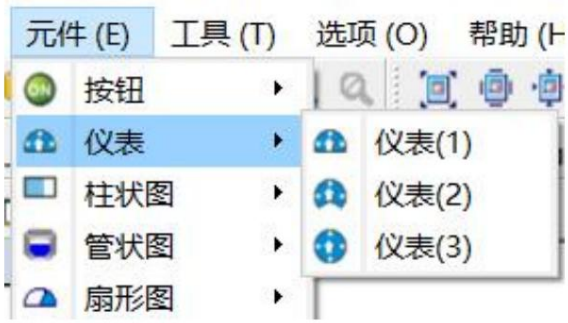


Figure 7 Instrument Control Menu Diagram

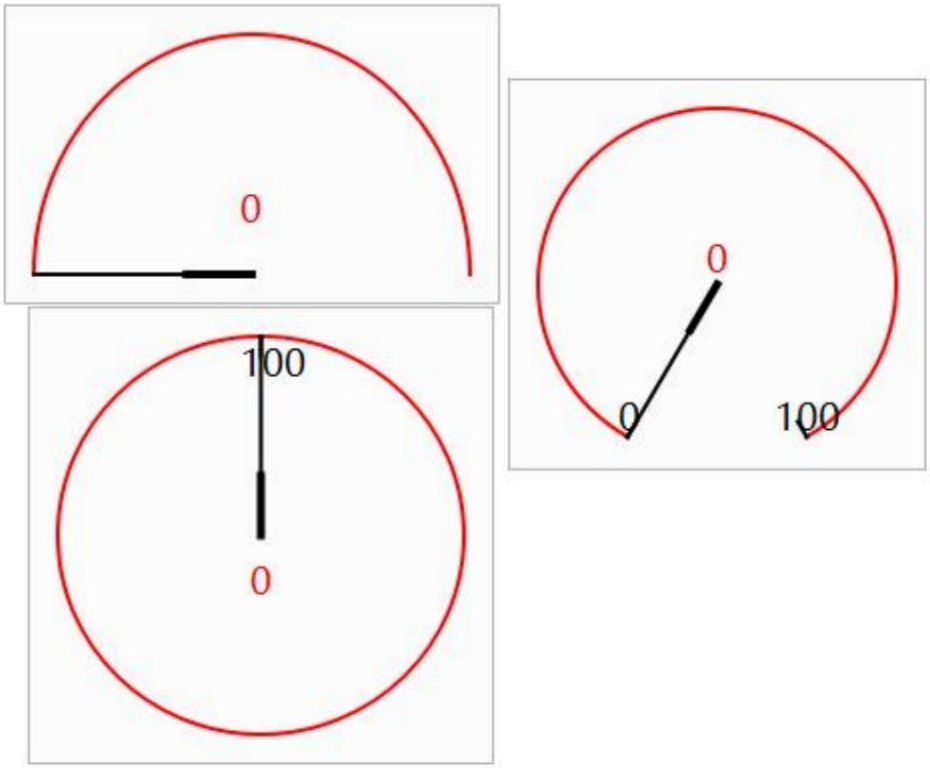


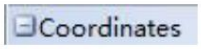
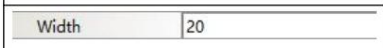
Figure 7 Instrument Control Diagram

7.1 Instrument Class Attribute Settings

The instrument class property settings are applicable to instrument class controls.



Figure 7.1.2 Attribute Settings Page

Attributes	Function	Function Introduction
	Read memory address - Selectable internal register or communication register address for reading.	The value of the target memory address.
	Control color properties - Used to set the color properties of controls.	
	Set background color	
	Set border color	
	Set the number of main segments on the ruler.	
	Set the number of scale segments.	
	Coordinate properties - used to set the position and size of the control.	
	Control coordinates X-axis position	- The origin is the top left corner of the current page, and the left and right directions are the X-axis. The right-hand direction is considered positive. - This value increases when the control is moved to the right, and increases when it is moved to the left. This value will decrease. This value can be directly edited and modified; the results will be reflected on the page in real time. In the middle.
	Control coordinates Y-axis position	- The origin is the top left corner of the current page, and the vertical direction is the Y-axis. The direction below is the positive direction. - This value will increase when the control is moved down, and increase when it is moved up. This value will decrease. This value can be directly edited and modified; the results will be reflected on the page in real time. In the middle.
	The width of the control - this value can be directly edited, and the result will be reflected on the page in real time.	In the middle.
	The height of the control - This value can be directly edited, and the result will be reflected on the page in real time.	In the middle.

8 Histograms

8

This section explains histogram-type controls, listing their functions and properties one by one.

The histogram control reads the register values corresponding to memory addresses and displays them in a histogram from minimum to maximum value.

The formula is displayed on the HMI. The histogram control is similar to the standard histogram control; both allow customization of target values and upper/lower limits in memory.

The address allows for more flexible use of its functions and better meets user needs; different colors can also be used to distinguish its minimum and maximum limits.

The use of colors such as upper limit and target value allows users to more clearly distinguish what the set display color is.

Right-clicking in the current page editing window will open the control selection window, as shown in the image below.

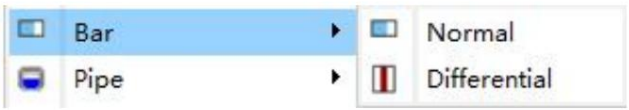


Figure 8 Histogram Control Menu

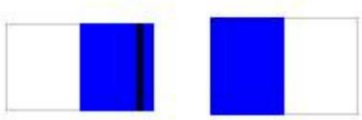


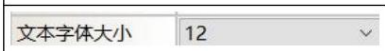
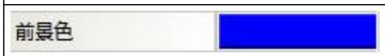
Figure 8 (Left) General type histogram (Right) Difference type histogram control diagram

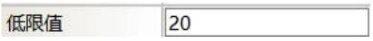
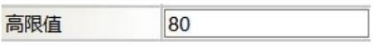
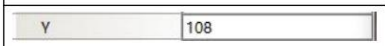
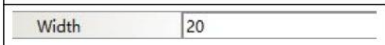
8.1 Setting Common Properties for Histogram Classes

The common property settings for histograms are applicable to histogram controls; generally, histograms do not have special properties.



Figure 8.1.1 Attribute Settings Page

Attributes	Function	Function Introduction
	Read memory address - Selectable internal register or communication register address for reading.	The value of the target memory address.
	Control Text Properties - Used to set the text properties of the corresponding control, such as: text content, word count, etc.	Body size, text color, font
	Settings Control Displayed text content	
	Set text size	
	Set text color	
	Set border color	
	Below the specified lower limit The color displayed at that time	
	Higher than the specified upper limit The color displayed at that time	
	Set the foreground color	
	Set background color	
	Set target value Line segment position	
	Set the color of the difference values - only applies to difference histograms	
	Control style class properties	
	Set the growth direction - you can set the direction to left, right, up, or down.	

	Set minimum value	
	Set maximum value	
	Set whether to display the target value	
	Set a lower limit value for judgment - the set color will be displayed if the value is below this value.	
	Set an upper limit value for the display; if the value exceeds this limit, the set color will be displayed.	
	Coordinate properties - used to set the position and size of the control.	
	Control coordinates X-axis position	- The origin is the top left corner of the current page, and the left and right directions are the X-axis. The right-hand direction is considered positive. - This value will increase when the control is moved to the right, and increase when it is moved to the left. This value will decrease. This value can be directly edited and modified; the results will be reflected on the page in real time. In the middle.
	Control coordinates Y-axis position	- The origin is the top left corner of the current page, and the vertical direction is the Y-axis. The direction below is the positive direction. - This value increases when the control is moved down and increases when it is moved up. This value will decrease. This value can be directly edited and modified; the results will be reflected on the page in real time. In the middle.
	The width of the control - this value can be directly edited, and the result will be reflected on the page in real time. In the middle.	
	The height of the control - This value can be directly edited, and the result will be reflected on the page in real time. In the middle.	

8.2 Special Properties of Difference Histograms

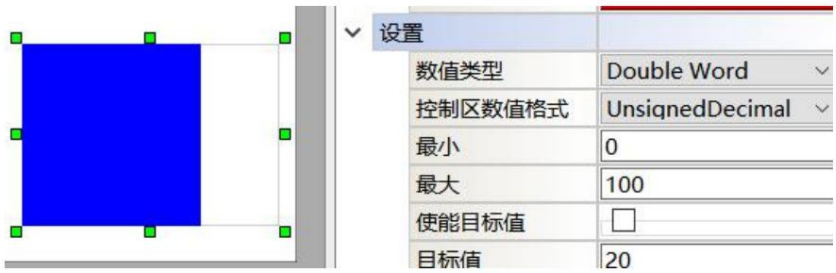


Figure 8.2.1 Special properties of the difference type histogram control

Attributes	Function	Function Introduction
Color		
颜色	Set the color of the difference value.	
Style		
显示格式 水平	Set the control to be placed horizontally or vertically.	
限制 60	Set the difference benchmark value	
显示偏差限制启用	Enable differentiated display?	- Must be enabled to use the differentiated color feature.

9 tubular diagrams 9

This section explains the tubular chart control, describing it item by item according to its function and properties.

Right-clicking in the current page editing window will open the control selection window, as shown in the image below.



Figure 9. Tube chart control menu

9.1 Tubular Diagram **(1/2)** Property Settings

Tubular diagram (1) and tubular diagram (2) differ only in shape; their functions are identical. The following will use the tubular diagram as an example.

The diagram (1) will be used for explanation. The value of the register corresponding to the memory address read from the diagram will be determined according to the set parameters.

The target value, lower limit, and upper limit are used to graphically display the data on the tubular chart. The tubular chart (1) component is the same as the histogram component.

Both can be customized with target values and high/low limits for memory addresses, allowing for more flexible use of their functions and meeting user needs.

Different colors can also be used to distinguish between lower limits, upper limits, target values, etc., allowing users to more clearly identify the settings.

What is the displayed color?

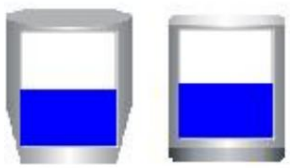
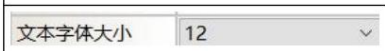


Figure 9.1 (Left) Tube diagram (1), (Right) Tube diagram (2) Control diagram



Figure 9.1.1 Attribute Settings Page

Attributes	Function	Function Introduction
	Read memory address - Selectable internal register or communication register address for reading.	The value of the target memory address.
	Control Text Properties - Used to set the text properties of the corresponding control, such as: text content, word count, etc.	Body size, text color, font
	Settings Control Displayed text content	
	Set text size	
	Set text color	
	Control color properties - Used to set the color properties of controls.	
	Set border color	
	Below the specified lower limit The color displayed at that time	
	Higher than the specified upper limit The color displayed at that time	
	Set the foreground color	
	Set background color	
	Set target value Line segment position	
	Set the color of the difference values - only applies to difference histograms	
	Control style class properties	

显示格式 水平	Set the growth direction - you can set the direction to left, right, up, or down.	
最小 0	Set minimum value	
最大 100	Set maximum value	
使能目标值	Set whether to display the target value	
低限值 20	Set a lower limit value for judgment - the set color will be displayed if the value is below this value.	
高限值 80	Set an upper limit value for the display; if the value exceeds this limit, the set color will be displayed.	
Coordinates	Coordinate properties - used to set the position and size of the control.	
X 396	Control coordinates X-axis position	- The origin is the top left corner of the current page, and the left and right directions are the X-axis. The right-hand direction is considered positive. - This value will increase when the control is moved to the right, and increase when it is moved to the left. This value will decrease. This value can be directly edited and modified; the results will be reflected on the page in real time. In the middle.
Y 108	Control coordinates Y-axis position	- The origin is the top left corner of the current page, and the vertical direction is the Y-axis. The direction below is the positive direction. - This value will increase when the control is moved down, and increase when it is moved up. This value will decrease. This value can be directly edited and modified; the results will be reflected on the page in real time. In the middle.
Width 20	The width of the control - this value can be directly edited, and the result will be reflected on the page in real time. In the middle.	
Height 20	The height of the control - This value can be directly edited, and the result will be reflected on the page in real time. In the middle.	

9.2 Tube Diagram **(3/4/5/6/7) Attribute Settings**

These types of tubular diagrams do not have parameters such as memory addresses to be written to or read from, or numerical settings. Users can only set their display parameters.

The pipe diameter is shown.

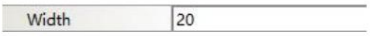


Figure 9.2.1 shows the tubular chart (3/4/5/6/7) control diagrams from left to right.



Figure 9.2.2 Attribute Settings Page

Attributes	Function	Function Introduction
Style		
管道仪表 2	Set control size	
Coordinates	Coordinate properties - used to set the position and size of the control.	
X 396	Control coordinates X-axis position	- The origin is the top left corner of the current page, and the X-axis extends left and right. The lateral direction is the positive direction. - This value increases when the control is moved to the right, and decreases when it is moved to the left. The value will decrease. This value can be directly edited and modified; the results will be displayed on the page in real time. middle.
Y 108	Control coordinates Y-axis position	- The origin is the top-left corner of the current page, and the Y-axis extends vertically. The following... The lateral direction is the positive direction. - This value increases when the control is moved down, and decreases when it is moved up.

		The value will decrease. This value can be directly edited and modified; the results will be displayed on the page in real time. middle.
	The width of the control - this value can be directly edited, and the result will be reflected on the page in real time.	middle.
	The height of the control - This value can be directly edited, and the result will be reflected on the page in real time.	middle.

10 sector diagram 10

This section explains pie chart controls, listing their functions and properties item by item.

Right-clicking in the current page editing window will open the control selection window, as shown in the image below.

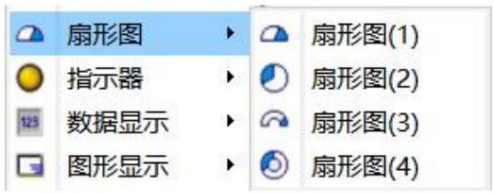


Figure 10. Sector Chart Control Menu

10.1 Pie Chart **(1/2/3/4)** Attribute Settings

The components of sector diagrams (1), (2), (3), and (4) differ only in shape; the rest...

All functions are the same. The following explanation will use a pie chart (1) as an example. The pie chart reads the register corresponding to the memory address.

The values will be displayed graphically in the set pie chart group based on the set target value, lower limit, and upper limit.

On the component. The sector diagram (1) component is the same as the instrument component, and both can customize the memory addresses of the target value and the high and low limits, so that

Its functions can be used more flexibly to meet user needs, and different colors can be used to distinguish its lower limit, upper limit, and target.

The use of colors such as labels allows users to more clearly distinguish what the set display color is.

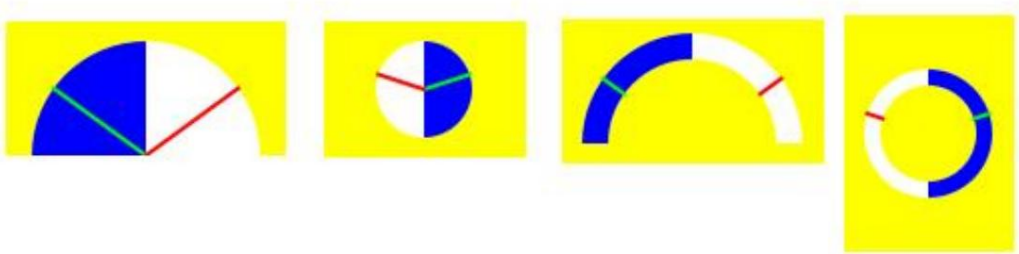


Figure 10.1 shows the control diagrams of the pie charts (1/2/3/4) from left to right.

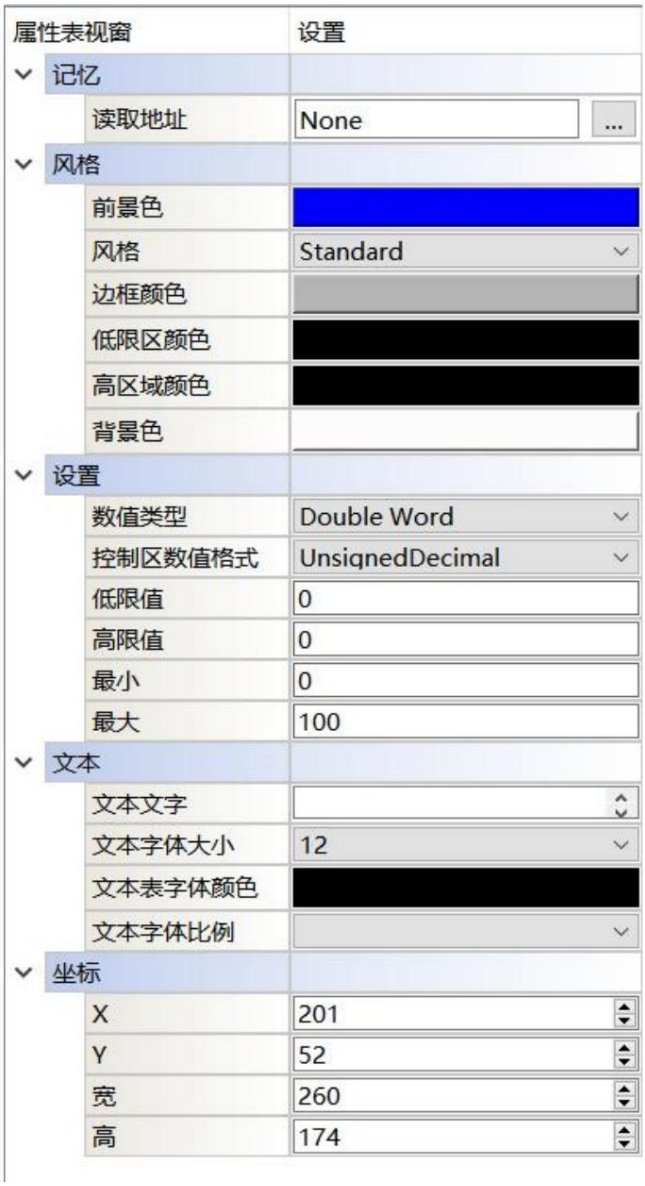
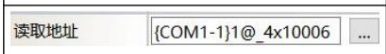
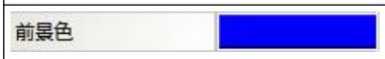
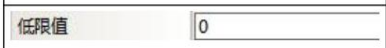
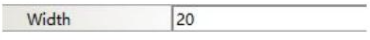


Figure 10.1.1 Attribute Settings Page

Attributes	Function	Function Introduction
	Read memory address - Selectable internal register or communication register address for reading.	The value of the target memory address.
	Control color properties - Used to set the color properties of controls.	
	Set border color	
	Below the specified lower limit The color displayed at that time	
	Higher than the specified upper limit The color displayed at that time	
	Set the foreground color	
	Set background color	
	Control style class properties	
	Set a lower limit value for judgment - the set color will be displayed if the value is below this value.	
	Set an upper limit value for the display; if the value exceeds this limit, the set color will be displayed.	
	Coordinate properties - used to set the position and size of the control.	
	Control coordinates X-axis position	- The origin is the top left corner of the current page, and the left and right directions are the X-axis. The right-hand direction is considered positive. - This value increases when the control is moved to the right, and increases when it is moved to the left. This value will decrease. This value can be directly edited and modified; the results will be reflected on the page in real time. In the middle.
	Control coordinates Y-axis position	- The origin is the top left corner of the current page, and the vertical direction is the Y-axis. The direction below is the positive direction. - This value will increase when the control is moved down, and increase when it is moved up. This value will decrease. This value can be directly edited and modified; the results will be reflected on the page in real time. In the middle.
	The width of the control - this value can be directly edited, and the result will be reflected on the page in real time.	

M

		In the middle.
Height 20	The height of the control - This value can be directly edited, and the result will be reflected on the page in real time.	In the middle.

11 data shows 11

This section explains data display controls, listing their functions and properties item by item.

Right-clicking in the current page editing window will open the control selection window, as shown in the image below.

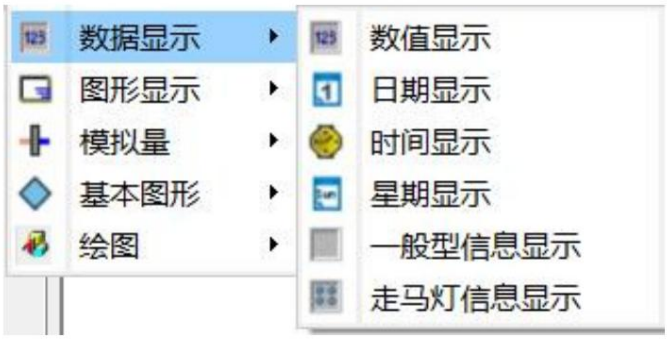


Figure 11 Data Display Control Menu

These types of controls work by reading the value from a specified register address, displaying the value directly, or indirectly mapping it to a specified register address.

This should be displayed in the information table.

From left to right, the only options are: numerical display (directly reading the target register address and displaying the array according to the set format), and text display.

Word/Number display (reads the value from the target register address and converts it into specified information), Date display (displays the current date).

Date, time display (displays current time), weekday display (displays current weekday), general information display.

(Displays user-specified information), scrolling information display (information is displayed sequentially).



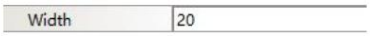
Figure 12 Data Display Control Diagram

11.1 Data Display Class Public Attribute Settings



Figure 11.1.1 Attribute Settings Page

Attributes	Function	Function Introduction
	Read memory address - Selectable internal register or communication register address for reading.	The value of the target memory address.
	Control Text Properties - Used to set the text properties of the corresponding control, such as: text content, word count, etc.	Body size, text color, font
	Settings Control Displayed text content	
	Set text size	
	Set text color	
	Notice	- Only one of the control's image class properties and control's style class properties can be selected. Enabling the former will override the latter. - That is, if the control image class attribute is enabled, then the control style class The property will be hidden, and any changes to the style property will have no effect.
	Coordinate properties - used to set the position and size of the control.	
	Control coordinates X-axis position	- The origin is the top left corner of the current page, and the left and right directions are the X-axis. The right-hand direction is considered positive. - This value increases when the control is moved to the right, and increases when it is moved to the left. This value will decrease. This value can be directly edited and modified; the results will be reflected on the page in real time. In the middle.
	Control coordinates Y-axis position	- The origin is the top left corner of the current page, and the vertical direction is the Y-axis. The direction below is the positive direction. - This value will increase when the control is moved down, and increase when it is moved up. This value will decrease. This value can be directly edited and modified; the results will be reflected on the page in real time. In the middle.

	The width of the control - this value can be directly edited, and the result will be reflected on the page in real time. In the middle.	
	The height of the control - This value can be directly edited, and the result will be reflected on the page in real time. In the middle.	

12 Graphics Display

This section describes graphical display controls, explaining them item by item according to their functions and properties.

Right-clicking in the current page editing window will open the control selection window, as shown in the image below.



Figure 13 Graphical display control menu

12.1 State Diagram Display Attribute Settings

The state graph display control allows setting multiple state graphs, with the values read from the set read addresses corresponding to the states.

Its status value is displayed graphically on the human-machine interface.

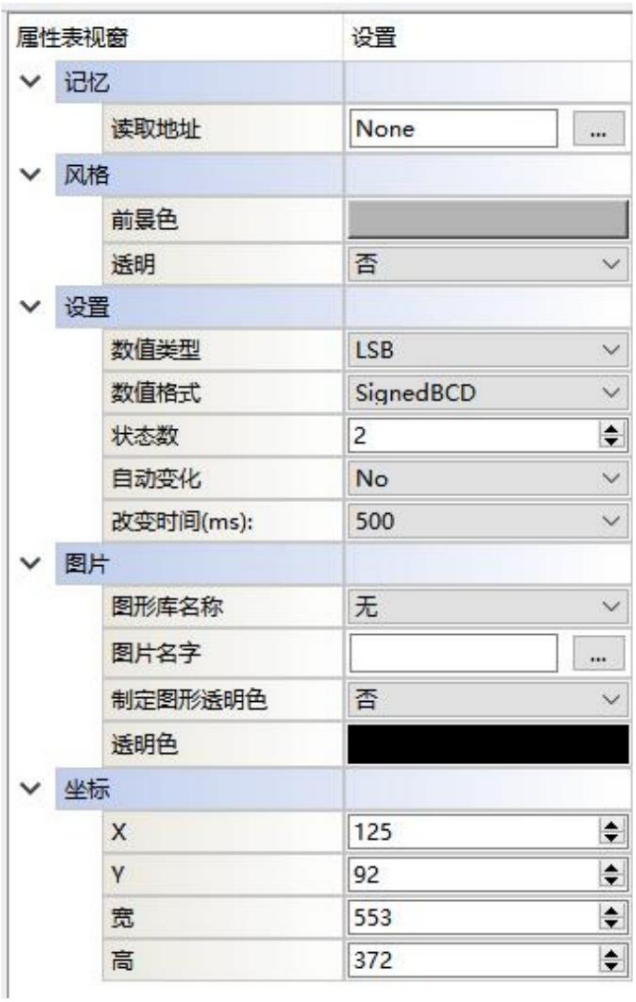
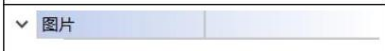
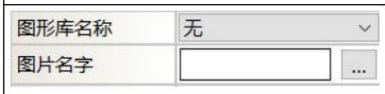
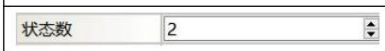


Figure 12.1.1 Attribute Settings Page

Attributes	Function	Function Introduction
	Read memory address - Selectable internal register or communication register address for reading.	The value of the target memory address.
	Control Text Properties - Used to set the text properties of the corresponding control, such as: text content, word count, etc.	Body size, text color, font
	Control Text Properties - Used to set the text properties of the corresponding control, such as: text content, word count, etc.	Body size, text color, font
	Settings Control Displayed text content	
	Set text size	
	Set text color	
	Control Text Properties - Used to set the text properties of the corresponding control, such as: text content, word count, etc.	Body size, text color, font
	Image class property of control - Used to replace the control display with an image from the resource library.	
	Replace the control with The image set	
	Other class properties - used to set control subclasses and user access permissions.	
	Set the total number of states - Sets the total number of states the control can have.	
	Set the numerical storage unit	- Word, stored as a word - LSB, first converts the data in the register to binary, then uses the least significant bit (not zero) to determine the current state of the object. - LSB (Support State 0) allows the use of 0 as the state identifier. The control in state 0 is shown in the image below. 

数值格式 SignedBCD	Set numerical interpretation format	- Unsigned Decimal.
改变时间(ms): 500	Change the image switching time unit to milliseconds.	
Coordinates	Coordinate properties - used to set the position and size of the control.	
X 396	Control coordinates X-axis position	- The origin is the top left corner of the current page, and the left and right directions are the X-axis. The right-hand direction is considered positive. - This value increases when the control is moved to the right, and increases when it is moved to the left. This value will decrease. This value can be directly edited and modified; the results will be reflected on the page in real time. In the middle.
Y 108	Control coordinates Y-axis position	- The origin is the top left corner of the current page, and the vertical direction is the Y-axis. The direction below is the positive direction. - This value will increase when the control is moved down, and increase when it is moved up. This value will decrease. This value can be directly edited and modified; the results will be reflected on the page in real time. In the middle.
Width 20	The width of the control - this value can be directly edited, and the result will be reflected on the page in real time.	In the middle.
Height 20	The height of the control - This value can be directly edited, and the result will be reflected on the page in real time.	In the middle.

13 Simulation Controls

This section explains the simulation adjustment controls, describing them item by item according to their functions and properties.

Right-clicking in the current page editing window will open the control selection window, as shown in the image below.



Figure 13 Simulation of the adjustment control menu

13.1 Setting the Properties of the Sliding Control

The slider control allows users to easily drag and adjust the values of the registers it is bound to.

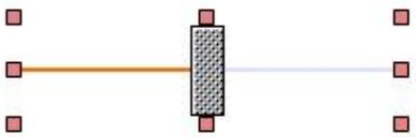


Figure 13.1 Sliding Control Diagram

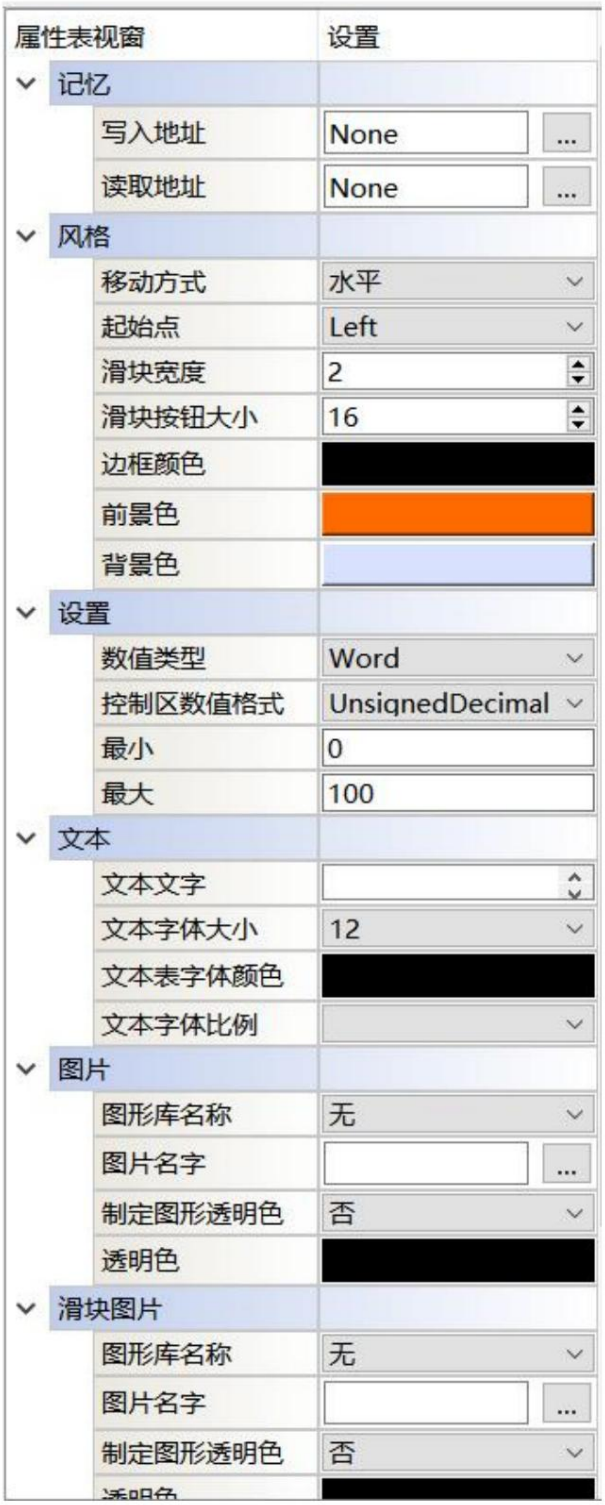


Figure 13.1 Property diagram of the sliding control

Attributes	Function	Function Introduction
读取地址 None ...	Read memory address - Selectable internal register or communication register address for reading.	The value of the target memory address.
写入地址 None ...	Write to memory address - You can choose the address of an internal register or a communication register.	- If only the write memory address is set but the read memory address is not set - The HMI will automatically read the value written to the memory address.
Style	Control style class properties	
起始点 Left	Set the sliding direction	
滑块宽度 2	Set spindle Line thickness	
滑块按钮大小 16	Set slider size	
Other		
最小 0	Set the minimum value of the slider.	
最大 100	Set the maximum value of the slider.	

14 Basic Shapes 14

This section explains basic graphic controls, listing their functions and properties one by one.

Right-clicking in the current page editing window will open the control selection window, as shown in the image below.

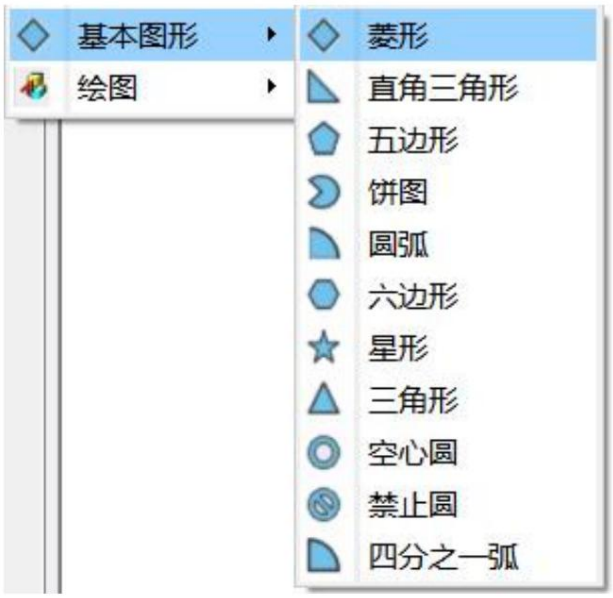


Figure 14 Basic Graphics Control Menu

Basic graphical controls provide convenient basic elements for decorating the interface.

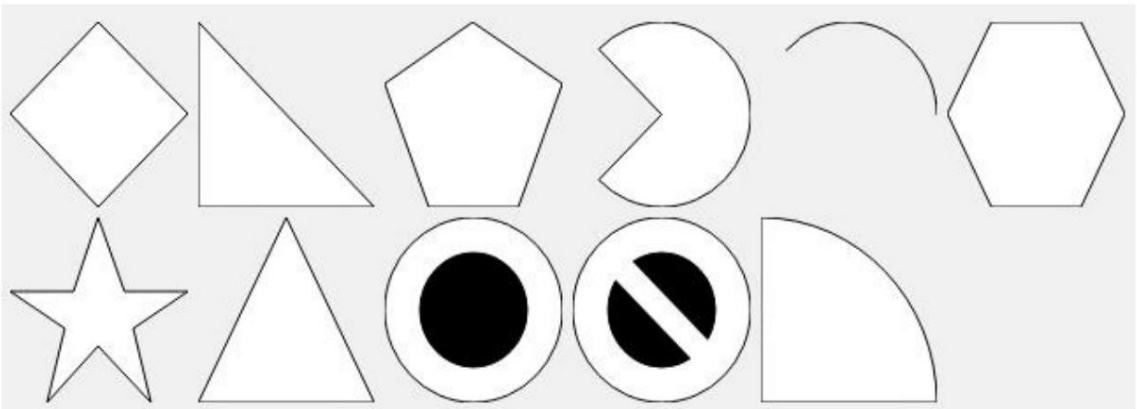


Figure 14 Basic Graphics Control Diagram

14.1 Basic Graphic Common Attribute Settings



Figure 14.1.1 Attribute Settings Page

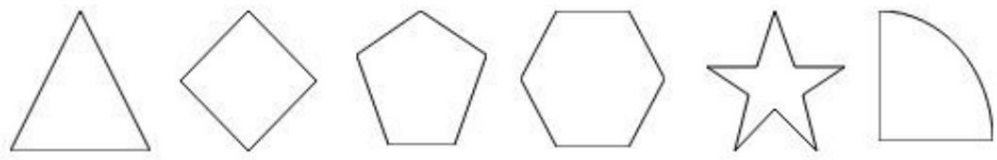


Figure 14.1.2 Controls without special attribute settings

Attributes	Function	Function Introduction
	Control color properties - Used to set the color properties of controls.	
	Set line color	
	Set foreground color - only effective when transparency is off.	
	Control style class properties	
	Set line thickness	
	Set whether the interior is transparent.	
	Coordinate properties - used to set the position and size of the control.	

14.2 Setting Special Properties for Right Triangles

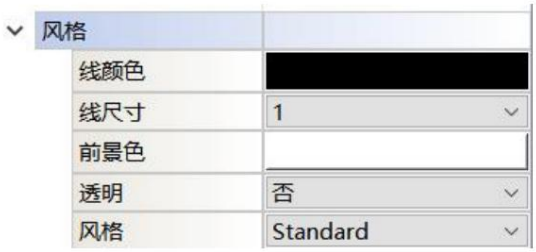


Figure 14.2.1 Control and Special Property Settings Page

Attributes	Function	Function Introduction
Style		
RotationStyle Standard	Set control rotation angle	- Standard - Rotate 90 degrees clockwise - Rotate 140 degrees clockwise - Rotate 270 degrees clockwise

14.3 Special Attribute Settings for Hollow Circles and Prohibited Circles



Figure 14.3.1 Control and Special Property Settings Page

Attributes	Function	Function Introduction
Style		
环空宽度 20	Set the ring width	

14.4 Special Property Settings for Quarter Arcs and Circles

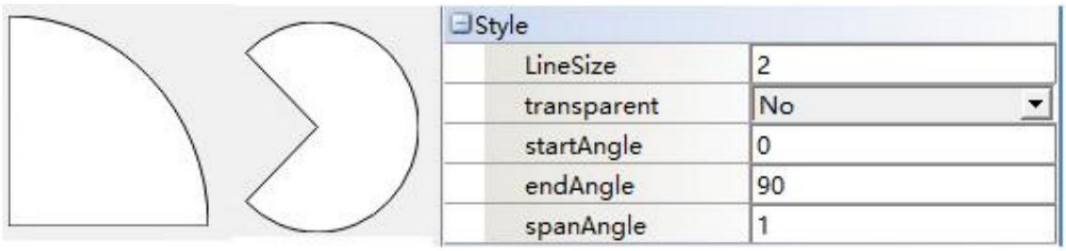


Figure 14.4.1 Control and Special Property Settings Page

Attributes	Function	Function Introduction
Style		
startAngle 0	Set the starting angle	
endAngle 90	Set termination angle	
spanAngle 1	Set rotation angle	

15 Drawings 15

This section explains drawing controls, listing their functions and properties one by one.

Right-clicking in the current page editing window will open the control selection window, as shown in the image below.

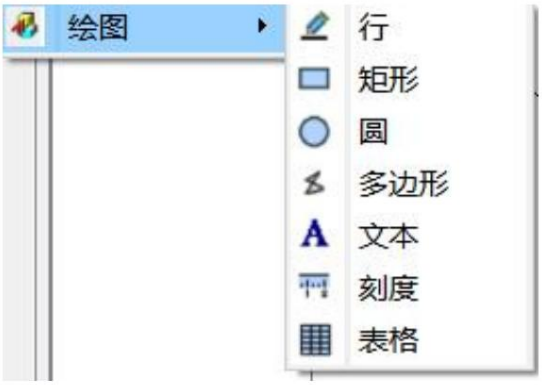


Figure 15. Drawing Control Menu

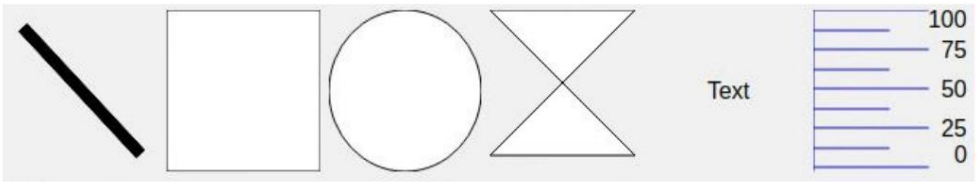


Figure 15.1 Drawing control diagram

15.1 Setting Properties for Line, Rectangle, Circle, and Polygon Controls

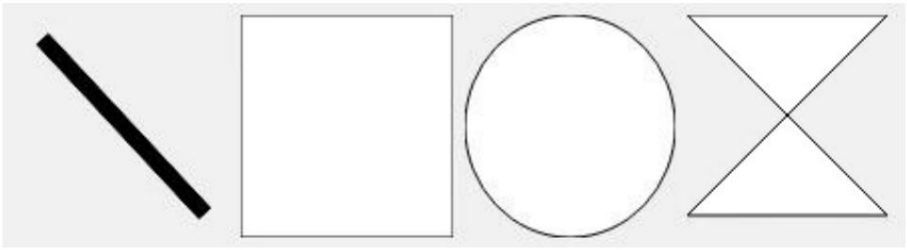
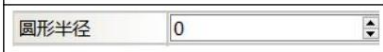


Figure 15.1.1 Attribute Settings Page



Figure 15.1.2 Attribute Settings Page

Attributes	Function	Function Introduction
	Set line color	
	Set line thickness	
	Set transparency	

15.2 Text Control Property Settings



Figure 15.2.1 Control Diagram



Figure 15.2.2 Attribute Settings Page

Attributes	Function	Function Introduction
	Control Text Properties - Used to set the text properties of the corresponding control, such as: text content, word count, etc.	Body size, text color, font
	Settings Control Displayed text content	
	Set text size	
	Set text color	

15.3 Scale Control Property Settings

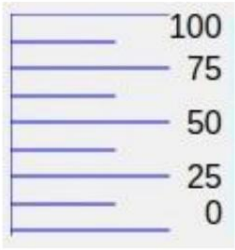
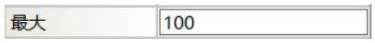


Figure 15.3.1 Control Diagram

属性表视窗	设置
风格	
显示标记	是
主刻度	5
次刻度数目	1
网格颜色	
风格	Standard
设置	
数值类型	Word
控制区数值格式	UnsignedDecimal
最小	0
最大	100
小数位数	0
文本	
文本字体大小	12
文本表字体颜色	
坐标	
X	177
Y	119
宽	298
高	320

Figure 15.2.2 Attribute Settings Page

Attributes	Function	Function Introduction
	Set grid color	
	Setting whether Display scale	
	Set the number of main scales	
	Set the number of sub-scalers	
	Set the maximum value of the ruler.	
	Set the minimum value of the ruler.	

16 Lua script macro commands

This section explains Lua script macro commands.

16.1 Editing Window

The editing window can be opened by going to [Options] => [Lua Script Macros], as shown in the image below.

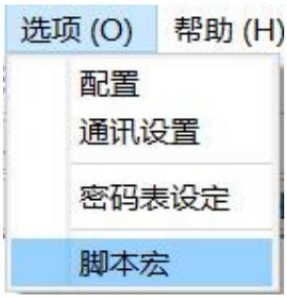


Figure 16. QR code control menu

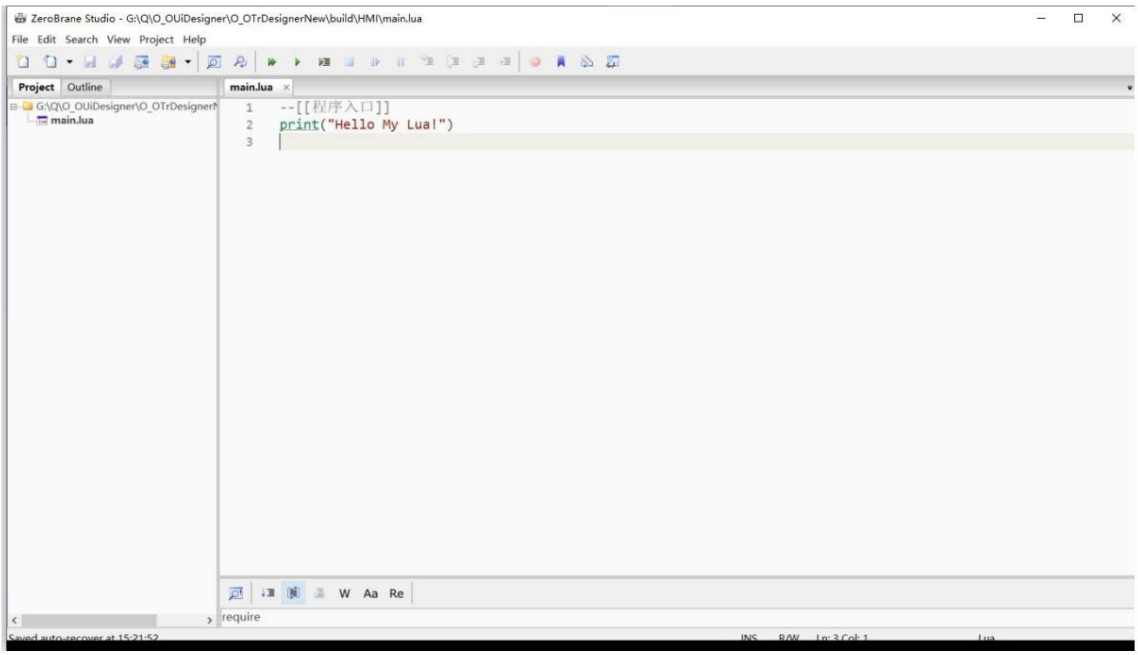


Figure 16.1 Editing window diagram

16.2 Lua Execution Flow

In the folder containing the HMI Designer software, there is a folder named "HMI". When downloading the program...

This will download all files and subdirectories in this folder to the HMI. Then the HMI will locate the files in this directory.

The main.lua file is executed.

The Main.lua file is the program's entry point and the beginning of the program. Users can edit their own script logic in this file.



Figure 16.2 Program Entry Point

16.3 Lua Debugging Information

In simulation mode, clicking "Simulate" will automatically bring up a pop-up debugging information window. This information is generated by the script through...

The print() function outputs information to help users debug.



Figure 16.3.1 Debugging Information

In physical mode, you need to connect a device to view debugging information. This can be done via USB/LAN/WAN.

Connect the device; a debugging information window will automatically pop up upon successful connection.



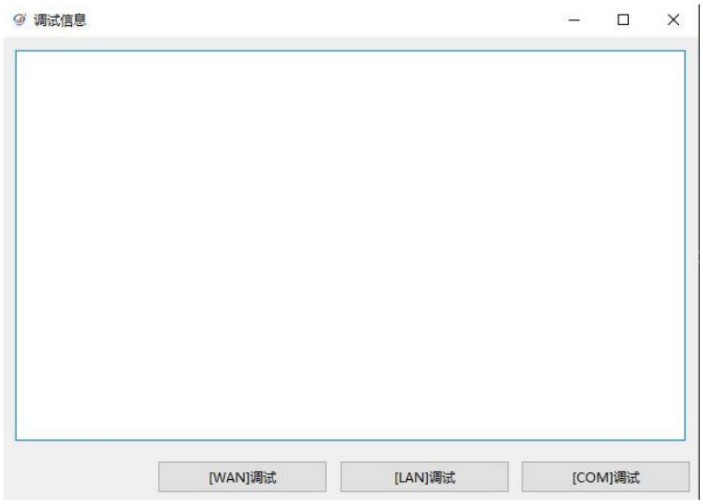


Figure 16.3.2 Connection and debugging of physical components