

# **TouchWin edit tool**

**User manual** 

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## 1 TouchWin editing software

## 1-1. Installation and uninstallation of TouchWin editing software

## 1-1-1. Installation

If you want to install more than two versions of editing software, you need to choose different installaton paths. If you make overwrite installation, the software will operate unusually and even not operate.

1. Software source

CDROM or enter the xinje company website <u>www.xinje.com</u> to get the installation software and the installation instructions.

2. Hardware settings of computer

CPU: above INTEL Pentium II

RAM: above 64MB

HARD DISK: above 2.5GB the disk space can not be less than 1GB

DISPLAY: the resolution ratio of 32 bit true color display is above 800 x 600

3. Operating system

Windows 98/Windows 2000/Windows XP/Windows ME/WIN 7

4. Install steps (for example V2.C.6 simplified Chinese version)

(1) find the "setup.exe" in the installation file and double click it, then the following dialogue box will appear:

Setup - TouchWin 2012 Edit	
Setup - TouchWin 2012 Edit	Tool  Welcome to the TouchWin 2012 Edit Tool Setup Wizard  This will install TouchWin 2012 Edit Tool V2.D1h on your computer. It is recommended that you close all other applications before continuing. Click Next to continue, or Cancel to exit Setup.
Setun	Next > Cancel

(2) click the "next". The following will appear on the screen, then choose the "I accept this

### agreement" and click the "next";

B Setup - TouchWin 2012 Edit License Agreement Please read the following imp	Tool
	Please read the following License Agreement. You must accept the terms of this agreement term         End User License Agreement         Term         Please read this entire agreement.         This End-User License Agreement ("EULA") is a legal agreement between you (either an individual or a single entity) and the author of this Software Inc for the software product, which includes computer software and may include associated media, pointed materias, and "online" or electronic documentation ("SOFTWARE PRODUCT").         By installing, copying, or otherwise using the SOFTWARE PRODUCT, you agree to be bound by the terms of this EULA. If you do not agree to the terms of this EULA, do not install or use the gruenae for a full refund.         Registered Version       Term
Setup	< Back Next > Cancel

(3) Input the username, company name and serial number. Serial No. is "XinjeTouchWin". (you can copy from the "serial\_no.txt" in the software setup package) Then click the "next".

Setup - TouchWin 2012 Edit	Tool	
User Information Please enter your information.		
	User Name: TXB Organization: Serial Number:	
Setup	< Back Next >	Cancel

(4) click the "browse" and set the software installation catalogue or use the default installation path, then click the "next".

授 Setup - TouchWin 2012 Edit To Select Destination Location Where should TouchWin 2012 Ed	ol dit Tool be installed?	
	Setup will install TouchWin 2012 Edit Tool into the following folde To continue, click Next. If you would like to select a different fold	er. Ier, click Browse.
	–At least 496.0 MB of free disk space is required. F:∖TouchWin 2012 Edit Tool	Browse
Setup	< Back Next >	Cancel

(5) click the "browse" and choose the shortcut path of creating the program in the start menu.

🔂 Setup - TouchWin 2012 Edit Tool		X
Select Start Menu Folder Where should Setup place the progr	ram's shortcuts?	
	Setup will create the program's shortcuts in the following Start Menu folder.	
	To continue, click Next. If you would like to select a different folder, click Browse.	
	Xinje\TouchWin 2012 Edit Tool Browse	
Saup	< Back Next > Canc	el 📄

(6) click the "install" button according to guide. At last click the "finish" button to install the software successfully.

(7) The following shortcut will appear on the desktop after finishing the installation. Please double click the icon to open the software.



## 1-1-2. Uninstall

1. Click the "start/program/ Thinget/TouchWin for TH/ B unload" or double click "

2. According to the step one, click the "yes(Y)" to confirm to uninstall the software.

3. click the "confirm" button. After uninstalling the software, please delete the catalogue folder.

## 1-2. Installation and uninstall the USB download cable

#### USB download cable is only suitable for TH, TG series HMI.

TH, TG series HMI support the USB2.0(USB-B) standard communication port. It is in the top right corner on the back of HMI. It can realize high-speed downloading and its transmission rate can be up to 480Mbps. This section will introduce how to install the USB download cable driver and download the program.

Now USB download driver has two kinds of installation modes in the system of Win98, WinXP, Win7-32 Bit. They are automatic installation and manual installation. It only can be installed manually in the system of Win7-64Bit.

#### 1. Automatic installation

#### **Concrete operations**

(1) choose the relevant USB drive setup bag according to the relevant operation system. Then double click the "installvista32.exe".

	installvista32.exe installvista Microsoft 基础类应 1.0.0.1
(2)	click the "install" button, then install the drive.
	🗿 Thinget TH USB Driver Install
	Prepare to install driver for Thinget TH USB If the driver for Thinget TH USB has been installed, please click "Cancel" button. Click "Setup" button to install the driver.
	Attention: Please do not connect with TH panel when installing !
	Install Cancel

(3) use the USB download cable to connect HMI USB download port and computer USB port.

then give the HMI power again and download program.

## 2. Manual installation

## **Concrete operation**

- use the USB download cable to connect HMI USB download port and computer USB port. Then give the HMI power again. The catalogue box "find the guide of new hardware" will appear. Please choose "no" and click the "next".
- (2) Choose the "install from list or assigned address (advance)", then click the "next".
- (3) choose "include this place in the search" in the option of "search the best drive program in those places". Click the "browse" and find the relevant drive file. Click the "confirm", then click the "next".

## Win98 system should choose Win98. WinXP and Win7-32Bit system should choose WinXP. Win7-64Bit system should choose Win7.

- (4) Click the "finish" to install the drive successfully.
- (5) Download program.

#### 3. Uninstall the USB download cable drive

(1) Use the USB download cable to connect HMI USB download port and computer USB port. Then repower the HMI, and right click the "my computer" to choose "device manager". Click the "universal serial bus controllers", then you can see the information of installed USB drive such as "Thinget TH USB Device".

(2) According to above operation, choose the "Thinget TH USB Device". Right click to choose "uninstall".

(3) Click the "confirm" button, then the drive will be uninstalled.

## 2 Simplified project manufacture

The characteristic of TouchWin editing software is simple and fast. It provides an ideal editing platform for beginners or those who have some basis. This chapter introduces the use method of HMI editing software by a simple project manufacture.

Please confirm the HMI type and the communication equipment type before making the screen. This is the premise of making the screen program and equipment operate normally.

## 2-1. create project

- 1. open the software and click the standard tool bar "D" icon or "new" in the "file" menu.
- 2. Choose the correct HMI type.



3. Set PLC port and choose the correct PLC type and set the communication parameters.

Do not useF	PLC Port	
Thinget XC	Series	-
Thinget FC	Series	=
Mitsubishi F	X Series	
Mitsubishi F	X3U/G Series	
Mitsubishi Q	Series	
Mitsubishi F	X BD(232/485)	
Siemens S7	-200 Series	
Siemens S7	-300/400	
Omron CPM	/CQM Series	
Ommon CP/C	1/CS Series	*
Parameters	19200, 8, Eve	n, 1

4. Set download port. When Download port communicates without external equipment, please choose "don't use Download port". When Download port communicates with external equipment, please choose the correct equipment type and set communication parameters.

	DownLoad Port	
	Do not useDownLoad Port	
	Thinget XC Series	
	Thinget FC Series	
	Mitsubishi FX Series	
	Mitsubishi FX3U/G Series	
	Mitsubishi Q Series	
	Mitsubishi FX BD(232/485)	=
	Siemens S7-200 Series	
	Siemens S7-300/400	

5. Set expanded port like Download port. Please choose the "unused equipment" when expanded port communicates without external equipment. Please choose the correct equipment type and set communication parameters when expanded port communicates with external equipment.

_
Ξ

Only TH765-NT3, TH765-NU3 needs to set expanded port. Please pay attention to the operation.

6. Input name, author and remarks according to requirement. Click the "finish" button at last, then the project will be created.

工程			×
	夕称	「程	
	-040		
	作者		
	备注		
< _ 上-	─步®)  下-	一步 (1) 〉 完成	取消

## 2-2. Screen editing

We will make a simple button. The function is to set ON /OFF the PLC output terminal Y0.

1. Bit Button

Click the menu "part/operate/bit button" or icon "So", click in the editing screen.

Object

Object type: set to "Y0"

B	utton					
	Object	Operate	Button	Color	Position	
	St Di Vi	ation evice rStaNO	LC Port	0 Sta	ation	•
	Object ObjType		(	•	0 indirect	

operate

Button operation: set to "reverse".

B	Button					
	Object	Operate	Button	Color	Position	1
	Button					
	🔘 Set ON 🔘 Set OFF 💿 Reverse 🔘 On Instant					

button

text: input "reverse"

Button	
Object Operate Button Color Position	
Text More Language	
Reverse	*
	-

#### 2. Lamp

Click the menu "part/operate/lamp" or icon """, click in the editing screen, and set attributes in the attribute catalogue box.

object

```
object type: set to "Y0".
```

Ŀ	amp								
	Obje	ect	Lamp	Twinkle	Color	Position			
		- Sta De	ation evice	PLC Port			_	•	]
	VirStaNO		StaNO		0 St	ation		1	]
		Ob Ob	iject oj Type	Y	•	indirect	0		

#### 2-3. Off-line simulation

To debug the program, you can simulate the program in the software without connecting the PLC.

- 1. Click the menu "file/off-line simulation" or icon " 🕱 "
- 2. Click the "reverse" button. You can set ON and set OFF the Y0.



## 2-4. On-line simulation

Simulate practical operation situation of the HMI and PLC in the computer. Realize the monitoring function for lower-computer. (PLC should be connected to computer, and the operation time of on-line simulation should be within half an hour)

1. click the menu bar "file/on-line simulation" or "on-line simulation" icon " **\*\***", the following catalogue box will appear. Please click the "ok" button to enter the simulation screen.



on-line simulation only support equipment of Modbus RTU protocol. Such as XINJE

#### PLC, XINJE inverter and so on.

2. Click the right key of mouse in the blank of screen. Choose the "Com Port" in the catalogue box, and set the PLC Port to the serial port of connecting to the computer. The other keep default. Close the "COM Port" catalogue box at last.

Com Port	
PLC Port Download Port	COM3 -

- Log history record of logging in and quiting time
- About informations about AutoWin version
- Com Port the above catalogue box will appear. Set the computer serial port number which is connected with HMI PLC port /Download port.
- ➢ Exit exit

3. Please click the right key of mouse in the blank area again after those operations above. Choose the "Exit" to exit current on-line simulation operation, then open the on-line simulation again to perform the simulation function for lower-computer PLC.

If "communicating" window appears in the on-line simulation screen, you need to check if the setting is correct for "PLC Port". Then check if you open the simulation screen again after exiting simulation operation. Then check if the serial port is occupied by other softwares.

## 2-5. Program download

TouchWin software support two kinds of download style, and they are common download and complete download. Please choose the revelant download cable to download according to different kinds of HMI. This case uses USB download cable to download program. If you want to know the serial port download, please refer to the HMI hardware handbook.

## 2-5-1. Common download

Click the menu bar "file/download" or "download" icon " 🚔 ", then you can download the program. This download style doesn't have upload function.

## 2-5-2. Complete download

Click the "complete download" icon "<sup>1</sup>, then you can download the program. This download style can upload the HMI program to computer.



the following versions can not support upload function

(1) V2.78 version doesn't have complete download function. So the program can not be uploaded.

(2) V2.99-V2.C.6 versions should set parameters in the software. Please choose the "complete download" in "tool/option", and choose "complete download".

If the program has been downloaded to HMI and you didn't set as above before downloading, program can not be uploaded into computer.

## 2-5-3. U flash disk download

Note: only suitable for V2.C.6d to V2.C.6i version software.

TH (-U), TG (-U), TG (-E) series HMI has USB-A(USB2.0) port. You can use U flash disk to download HMI program to many HMI. The process of downloading is simple and fast. Suitable occasion: the local with machine has no computer or it is far away from office, no download cable, equipment need to upgrade and update program.

#### **Concrete operations:**

- 1. Click "export project" in the "file" menu.
- 2. Following interface will appear in the editing screen. Please click "ok" button and export data.

spore rojece	
Export complete !	
Export project to file Panel via U-Disk.	'C:\Export.dat', it can be loaded into
1	ОК

## Export Project

3. According to the above operations, open the C:\ in the computer to find Export.dat and copy it into the U flash disk.



4. Set the third DIP switch of HMI to ON. Then repower the HMI, and the following picture will

appear in the screen.



5. Insert U flash disk ino the U flash disk port and click "import". Set the third DIP switch of HMI to OFF after dowloading, and repower it to display program.



- (1) The chosen type should be same as HMI when you are programming.
- (2) If the chosen type is wrong, click "import". The interface of import program will not appear and the alarm of inconsistent type will not appear also.
- (3) U flash disk download function only can be supported by V2.C.6d-V2.C.6i version software. But this function is forbidden in the V2.C.6i version. So customer need to install 2C.6d version software if he wants to use the U flash disk download function. After installing the software, you need to download a empty program to use U flash disk download function. It is aimed at updating the lower-computer system. If not, the above import interface will not appear even if the third dial switch is ON.
- (4) U flash disk download function, insert the U flash disk into the HMI. The U flash disk will import program to HMI automatically if there is no operation after 3s. You can not pull out the U flash disk in the process of importing. If not, the program can not be downloaded successfully.
- (5) You need to use U flash disk which its capacity is less than 32G.
- (6) It doesn't support mobile HDD.

#### 2-6. Upload program

HMI support uploading project. It is useful for data resource management.

Click the "upload" icon "<sup>(1)</sup>" to upload program. Please make the operations in chapter 2-5-2 at first. If not, the message "project is inexistent" will appear.

- No encryption You don't need to input password. It is open to all customers
- Encryption You need to input password to upload the project

## 3 Software screen and window

This chapter will have complete introductions of HMI editing software TouchWin.

Part of this handbook is based on primary function software. If you want to know advanced functions, please contact us to get advanced function manual.

## 3-1. Software structure

TouchWin Edit Tool - Project - So	rreen1 🖉 🖉 🖉 🖉 🖉 🖉 👘 👘 👘 👘
e Edit View Part Tool W	Indow Help Menu
i 🗳 🔒 🐰 🐴 💼 🕫 💡	A 🗚 👫 🐨 🌑 🧐 🎀 🎟 🎟 📾 📧 📧 🕼 💷 📾 📾 🗉 🗄 🖬 🖓 🔚 🗖 🗞 🖓 🛄
	? ??   X ⊂ N ⊷ ∽   A < J □ □ □ D 💥 🛠   FW 🊃 💷 📕 rtc 🐭 🗄 🗄 CT ⋯ ⊙; 🔄 S LC Log iat
אן איי איי איי איי איי איי איי איי איי א	$\mathbf{ar} \otimes \mathbf{an} = \mathbf{arts} \text{ and } \mathbf{buttons}$
1: Screen1 🔺	screen
65535: Common	
60001: Password	Duringt
60002: SetRTC	Froject
60004: VC lenut C	
60004: XC Input P	
65532: PickSave	
65533: Print	
65534: Alarm	
Window	screen edit area
60001: Commu N	Sereen een wet
60003: password	
60004: password	
60005: password	
60009: password	
60011: XC Input F	
60012: XC Output	
60021: KeyBoard	
60022: KeyBoard_	P
60024: KeyBoard	
60024: KeyBoard	status
60025: KeyBoard	
- over neyboard_	
60028: KeyBoard 🔻	

- Project area about the basic operations, such as the creation, delete, copy, cut of screen and window.
- Screen editing area project screen editing platform
- Menu bar It has seven teams of menu. It contains file, edit, check, component, tool, window and help.
- Parts and buttons it contains tools such as standard, picture, operate, zoom, picture adjustment, display, status, parts, etc.
- Status bar display HMI type, PLC port connection equipment, display informations of download port connection equipment, etc.

## 3-2. Project area

Insert, cut, copy, paste and delete the screen, window.

## 3-2-1. Insert

Choose the project bar "screen" and click the right key of mouse. Please choose "insert" or click "'a" icon. The following attributes catalogue box will appear.

Screen		×
ID	2	
Name	Screen2	
Back Color		<b>_</b>
Message		
	I	
ОК		Cancel

- Screen number add the screen serial number and click ok, then the screen number can not be changed.
- Screen name project screen define name.
- Screen background the background color of project screen.
- Prompt message input relevant screen note informations.

Please click "<sup>1</sup>Conto change the screen attributes.

## 3-2-2. Cut copy paste

- 1. Choose screen2, click the right mouse and choose "cut" or "copy".
- 2. Choose project bar "screen", and click the right mouse to choose "paste" to finish the operation.

⊡	Scre
🚊 📶 Screen	
- 🛃 1: Scree	n1
2: Scre-	Cut
60001:	Сору
60002:	Delete
60003	Template
60005:	Property

### 3-2-3. Delete

Choose the screen which you want to delete and click the right mouse, then choose the "delete" or click " $\times$ " icon to delete the screen.

The insert, cut, copy, paste, delete of window are the same.

#### 3-3. Menu bar

## 3-3-1. File

File contains different kinds of operation such as create, open, close, save, download project data, simulation, export project, etc.

File	Edit	View	Part	Tool	Win
	New			Ctrl+	N
	Open			Ctrl+	0
	Close			Ctrl+	Q
	Save			Ctrl	+S
	Save A	As		Ctrl+	A
	Down	load		Ctrl+	D
	Export	t Projec	t		
	RunO	nLine(B	)	Ctrl+	ьB
	RunO	ffLine(N	/I)	Ctrl+	М
	PFW S	Set(P)		Ctrl+	۰P
	Settin	g		Ctrl+	۰T
	Build	SCADA			
	Last				
	Exit				

1. New



#### 2. Open

Click "file/open" or " icon to open project.

#### 3. Close

Click "file/close" to close current project. But it doesn't mean to exit TouchWin editing software.

#### 4. Save

Click "file/save" or " 🖬 " icon to save the project.

You need to save at all times to prevent losing data at the process of editing screen.

#### 5. Save as

This operaton is different from "save". "Save" uses new file to replace the old file based on the project. "Save as" save the current project at the form of new project. After the "save" catalogue box appears, please choose the saved path and input the file name and click "save" button.

### 6. Download

Download the project in the HMI, click " do or do not perform the same function.

Please refer to chapter 2-5.

7. Export project



Please refer to chapter 2-5-3.

#### 8. Run online

This function is similar to SCADA. Connect the PLC with the software; simulate the project functions in the software.



Please refer to chapter 2-4.

#### 9. Run offline

Simulate the project functions in Autowin software without connecting the PLC.

Please refer to chapter 2-3.

#### 10. PFW set

Initialize the PFW data after downloading program again. Click "file/PFW set", and following catalogue box will appear.

PFW Dat	а				23
Start					End
		Datata	1	Martin Barran	H-R D-L
A		Delete		Modify Hange	Modiry Data

set the address range of PFW 

- Start PFW set the start address of PFW register.
- > End PFW set the end address of PFW register.
- Add click "add" after setting the start and end addresses. Then the set data range will be listed in the data set list.
- Modify range when the start and end address need to modified, please change the start or end address, then click modify range, the following message will appear, please click ok.

TWin	×
<u> </u>	The pre-setting data beyond the range will be lost ,while the data in the same range will be held ,continue?
	Yes No

> Modify data modify the register data in the set range.

## ■ Set the data of PFW.

Choose the PFW register address range and click "modify data" or double click the PFW address range. Then the following window will appear.

PFW[00000400]       0       <		+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	
PFW[00000410]       0       0       0       0       0       0       0       0       0         PFW[000000420]       0 <td< td=""><td>PFW[000000400]</td><td>0</td><td>0 (</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td></td></td<>	PFW[000000400]	0	0 (	0	0	0	0	0	0	0	0	
PFW[000000420]       0       0       0       0       0       0       0       0       0       0         PFW[000000430]       0 <t< td=""><td>PFW[000000410]</td><td>0</td><td>0 (</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td></td></t<>	PFW[000000410]	0	0 (	0	0	0	0	0	0	0	0	
PFW[000000430]       0       0       0       0       0       0       0       0       0       0         PFW[000000440]       0 <t< td=""><td>PFW[000000420]</td><td>0</td><td>0 (</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td></td></t<>	PFW[000000420]	0	0 (	0	0	0	0	0	0	0	0	
PFW[000000440]       0       0       0       0       0       0       0       0       0       0         PFW[000000450]       0       0       0       0       0       0       0       0       0       0	PFW[000000430]	0	0 (	0	0	0	0	0	0	0	0	
PFW[00000450] 0 0 0 0 0 0 0 0	PFW[000000440]	0	0 (	0	0	0	0	0	0	0	0	
	PFW[000000450]	0	0 (	0	0	0	0	0				

Display data can be decimal or hex format.

Reset 0: set all the data to 0.

Set FF: set all the data to 65535(HFF).

The first address of data begins with PFW256, and PFW0~PFW255 is internal system data which is not allowed to modify. Specific content please refer to the chapter 5.

11. Setting

#### Parameter

Project Set			×
Device Para	Expand Device Alternation	Font Clock	Project Panel
Screen Start Screer	n No.		
Passowr	d		
Level Le	evel1 💌	Password 0	
-Screen Save			
Latency Tim	ne After 3 Minu	ute 💌	
Close LC	CD C Show So	creen 0	

- Screen Define the start screen No. when the HMI start. When downloading and repowering, the first sreen is generally the main screen or the most used screen.
- > Password password has the function of protecting data to improve security of program.

Project password has nine levels. The range is from level 1 to 9. The first level is the lowest priority, and the 9th level is the highest priority). Level 9 password can open all the password from level 1 to 9. Level 1 only can open its own password. Level 2 can open level 1 and 2 password...

Screen save When there is no operation for a long time, the HMI will close the backlight or jump into the assigned screen.

Latency time you can choose the waiting time according to your request or you can also choose no screen protection.

Close LCDwhen time is up to your waiting time, the backlight will be closed.Show screenwhen the time is over, it will jump to the certain screen.

Alternation

Device	Expand Device Font	Project
Para	Alternation Clock	Panel
Change	Screen Control	
Station -		
Device	PLC Port 👻	
VirStaNO	0 Station	1
_Object	, ,	
Object		
00,000		
	Indirect	
- Report (	urrent Screen ID	
Station -		
Device	PLC Port	
Mar Sta NIO	Station	
VIISLaIVO		1
Object		
Object		

 $\geq$ Change screen control jump screen according to the data of register; for example, the register data is 10, it means to jump to screen ID10. System will clear the data of register to 0 after jumping screen.

Device current equipment port of communicating

Virstano communication equipment address No.

set the object style and address No. of register controlling screen transform. Object

Station No. Connected equipment No.

Indirect current register address changes by the data of indirect designated register.

Dx[Dy]=D[x+Dy data], (x, y=0, 1, 2, 3....)

report current screen ID display the number of current screen. for example, if the current ⋟ screen is 7, the register will display 7.

Device current equipment port of communicating Virstano communication equipment address No. Object set the object style and address No. of reporting current screen number register. Station No. Connected equipment No.

Indirect current register address changes by the data of indirect designated register. Dx[Dy]=D[x+Dy data], (x, y=0, 1, 2, 3....)



## virtual station: it is not open to use for all components. Follow-up no longer need.

clock

		1
Device	Expand Device Font	Projec
Para	Alternation Clock	Panel
Device VirStaN	0 0 Station	1
-Object -		
Object	D 🚽 0	

Use RTC this function will export current time to related equipment for saving data.
 Device current equipment port of communicating

Virstano communication equipment address No.

object set the object style and first address No. of exporting clock register; if the address is set to D0, D0~D6 will display year, month, day, hour, minute, second and week. They occupy seven register addresses

station connected equipment No.

indirect current register address will change by the data of indirect designated register. Dx[Dy]=D[x+Dy data], (x, y=0, 1, 2, 3.....)



Time display is in hex format.

Panel

Project Set					×
Device Para	Expand De Alternatio	evice	Font Clock	) Pr Pa	roject anel
Model	B/TH765-N	I/MT/UT	-		
Description	800*480, 65	536 colors			
Zoom					
Same Size	e O S	Same Ratio			
C Small Ra	tio O I	Big Ratio			
The size of unchanged	the value of the	e compone	ents is		
		Set parar	meter		

- Model display current HMI types. If you want to modify the display type and choose new display type, please click "ok" to make it effective.
- description display current screen size and pixel;

Set parameter set the internal spaces of HMI and you can modify the number of PFW register and PSW register.

Set	
PFW Num	4096
PSB Num	1024
VisPSW Num	4096
PriPSW Num	4096
Cache Num	1
ок	Cancel

PFW number set the total number of PFW in storage area

PSB number set the total number of PSB in storage area

Visible PSW number normal PSW number. Such as data area of data input and display, and so on.

Invisible PSW number internal storage number of data. Such as the automatic data storage area of historial trend diagram and real-time trend diagram.

Cache number number of PFW data cache register

## Specific contents of PSW, PFW, PSB, please refer to the fifth chapter.

Zoom when you are changing display type. Proportional relationship of component's width and height size and display size in the screen.

Same size width and height value of components unchanged

Same ratio zoom the width and height value of components according to aspect ratio of display.

Small ratio zoom the width and height value of component according to the lowest aspect ratio of display.

Big ratio zoom the width and height value of component according to the highest aspect ratio of display.



26

Project Set		X
Para Device	Alternation Clock Expand Device Font	Panel Project
Single	C Host Net C Slav	e Net
PLC Port		
Model	Thinget XC Series	•
Param	19200, 8, Even, 1	
Download Po	ort	
Model	None device linked	-

- Single control system is one screen one machine or one screen many machines. Adjust HMI to unit mode.
- Host net control system is many screens one machine or many screens many machines. This HMI is in the master mode.
- Slave net control system is many screens one machine or many screens many machines. This HMI is in the slave mode.
- PLC port
   Model
   PLC port connected equipment type

Parameter bit rate, data bit, verification mode, stop bit display. Click "…" to

modify parameters.

Download port

Model Download port connected equipment type. "Don't use Download port" in default situation. It means that Download doesn't participate in communication of external equipment.

Parameters bit rate, data bit, verification mode, stop bit display. Click "…" to modify

parameter.

#### Expand device

This content is mainly related to system attribute of HMI and equipment which is connected with HMI by expanded port.





TH765-NT3 and TH765-NU3 have expand port.

Font

This function is used to set input font of project screen. The font can be modified by "settings".

Proje	ect Set				×
	Para Device	Alternation Expand De	n   vice	Clock Font	Panel Project
		String	Se	atting	

This setting is only effective for input real-time event display and historical event display of components.

## project

This attribute records project informations, such as name, writer and remarks of this project.

Project Set		×
Para	Alternation Clock	Panel
Device	Expand Device Font	Project
Name Proje	et	
Author		
Remark		

#### 12. Build SCADA

Its function is the same to on-line simulation.

Steps:

Open "file/build SCADA". Please choose saving path. The AutoWin file will be generated.

Double click " AutoWin.exe ", then you can simulate the HMI project in the software.

blease refer to chapter 2-4 for details.

## 13. Last

If you have opened or edited some projects recently, software will save names of these projects automatically. It will help you find them faster and you don't need to check their paths any more. Please you can click the editing project name to edit.

## 14. Exit

This function is used to exit TouchWin editing software, but it is different from the "close" operation. If you don't save the project, the saving window wil appear to prevent losing operation.

## 3-3-2. Edit

Editing menu is used for editing component. "cut, copy, paste and cancel" is corresponding to shortcuts of standard tool bar. As the following picture:

Edit	View Par	t	Tool	Windo	
	Cut		Ct	rl+X	
	Сору		Ctr	·l+C	
	Paste		Ctrl+V		
	Undo		Ctrl+Z		
	Replace		Ctr	l+H	
	Public Unit				
	Private Unit				

👗 🗈 💼 📨 from left to right: cut, copy, paste and cancel

😳 📀 from left to right: public unit, private unit



Replacement

Replace		X
Object	Bit 💌	
Find what	MO	Replace
Replace with	MO	Cancel
Object Num	1	
	Replace In Current Screen Whole Screen	

- > Object the replaced object type: bit, register, nregister
- > Find what the first address of primary object that you want to replace.
- Replace with replace first address of new object
- Object number replace the number of "bit" or "register"
- Replace in

Current screenreplace only in the scape of current screenWhole screenreplace all the screens of this project

For example: replace D5 with D0 of current screen. Please set as following picture. Click "replace" and then click "finish".

Replace		×
Object	Register	
Find what	D0	Replace
Replace with	D5	Cancel
Object Num	1	
	Replace In Current Screen Whole Screen	

## 3-3-3. View

It is used for displaying tools and columns. It contains standard bar, status bar, project area, drawing, zoom, status change, operate, part, align, advance, advance2, panel and CAD. Advance and advance2 display grayish white. It indicates that it is not activated. Only when the TouchWin editing software is in the status of advance function, it can be activated. CAD instructions please refer to "intelligent flexible manufacture system manual based on CAD".



## 3-3-4. Part

Part menu is used to edit part. It is corresponding to icons in tool bar.

Part	] Tool Window Help	
	Text	•
	Operate	►
	Display	►
	Input	•
	Keyboard	•
	Bar	•
	Dynamic Map	
	Window	•
	Scheme	•
	Function	•
	Tool	•
	Device	•
	Inverter Alram Information	
	Picture Display	+
	Sample Save	





Please refer to chapter 4-3 for details.

## 3-3-5. Tool

This content contains basic tool segment, rectangle, ellipse, fold, map and options. The front five options are corresponding to tools in drawing bar. You can make the frame, polygon block and so on by cutshorts in drawing bar.

Tool Window H	lelp					
Line						
Rectangle						
Ellipse						
Fold						
Map						
Option		$  \setminus \cap \Box$	000	) 🖕 🗖	2	۹

#### Option

This content refers to special settings, such as displaying, downloading data and uploading data, etc.

Option		×
Grid Size Move Grid Auto Save 1 (M)	Zoom Ratio(%) Grid Radio	100 10
DownLoad Port COM1 💌	Station Com Period	300000
TW Display Mouse Cursor	Hit Key Errors	10
Print Top to bottom	C Bottom to top	
Print Undo 🔽 Optimistic	Build and Exit	User Mode
ОК		Cancel

grid size  $\geq$ 

move grid

least grid number when moving object.

set density of grid in screen. The smaller values are, the denser they will be. Grid ratio

For	example: wh	en th	e "d	lispla	ıy gr	id" i	s ch	ang	ged from "20" to "5", difference is as follow::
		•	•			•	•	•	
		•							
				Dis	splay	gric	1: 20	)	display grid: 5
	Auto save	yoı opt	ı ca ion.	n set . You	the a	auto also	mat sav	ic sa ve pi	aving time to prevent losing data when launching this roject data manually without lauching this option.
$\triangleright$	Download p	ort							
	default com	muni	cati	n poi	rt	fir	st cl	hoic	e when you are downloading data.
	TW								
	Display mo	use o	curs	or	chec	k if d	disp	lav	mouse in the screen according to TW series.
	Hit key erro	rs	t	touch	sen	sitiv	itv		
	nrint	10		louen	. Sem	5101 (	it y		
	ton to botto	m/ho	tton	n to t	on	54	et m	rinti	ing direction
	other	11/00	uon		op	50	et pi	mu	ing uncertoin
			1 1	.1	1				
	Undo	eı	iabl	e the	und	o op	erat	ions	S
	optimize	ena	able	optiı	niza	tion	ope	rati	on for download serial port
	build and ex	kit ei	nabl	e cor	npili	ng fi	unc	tion	block when exiting.
	User mode	oj	ben	or cl	ose a	dva	nce	fun	ction.

## 3-3-6. window

Window menu is mainly used to edit screen window. It contains create window, cascade, tile and arrange icon.

Window Help								
	New							
	Cascade							
	Tile							
Arrange Icon								

- ➢ New creat a new screen
- > cascade arrange all the opening screen in the mode of cascade
- ➢ tile arrange all the opening screen in the mode of tile
- arrange icons arrange the icons

## 3-3-7. Help

Version and copyright information of software or click "?" icon.

## 3-4. Screen editing area

You can right click the part in the screen editing area.



- Property part setting, such as "display", "font", "color" and "location", etc.
- Lock relative position lock. After operation, this component can not be moved. You can realize the moving function by "unlock".
- Public unit the unit can be used in all the screen
- ➢ cut cut the part
- $\triangleright$  copy copy the part
- deletedelete the part
- save save current part into material store, and you can directly use it from material store.

#### 3-5. Tool bar

Tool bar refers to all the operations about parts and screen. Relative font will appear when you move the mouse to relative component in operation. The specific distribution is as follows:



Drawing tool bar: line, animation, webpage, etc. webpage can only operate simulation or configuration.

			- 1
	 -	_	- 1
- 1		2	- 1
			- 1
		~	

Material store: add and save materials which are manufactured at the time of editing project.
| A 🔏 🚜 | 👻 🌭 🔕 🎀 💷 🎟 🗰 😰 | 23 🗔 123 | 📾 🎬 💵 | 🗄 | 🖓 | 🖓 🖓 | 🗆 🕸 | 🗆 22 | 144, 144,

Parts tool bar: it contains font, operation key, display, input, keypad, bar, dynamic map, window, recipe, function, continue column map, etc.



specific content about parts tool bar please refer to the fourth chapter.

		Θ	<b>4</b> 6	※	212		Û	11111	Q	Q		•			<b>1</b> 22	M		A	<u> </u>	а	Ð	ţ		ĬĬ			<b>4</b> 2	4
--	--	---	------------	---	-----	--	---	-------	---	---	--	---	--	--	-------------	---	--	---	----------	---	---	---	--	----	--	--	------------	---

Display tool bar: it contains basic tool, equipment, inverter alarm information, picture display, saving collected data, etc.



Standard tool bar: it contains new, open, save, cut, copy, paste, cancel, about, etc.



Status tool bar: it contains button status, animation status, etc.



Picture adjustment tool bar: it contains align left, align centre, align right, align top, align middle, align bottom, etc.



Operation tool bar: it contains public unit, private unit, create screen, screen attribute, delete, off-line simulation, on-line simulation, download, upload, complete download, etc.



Zoom tool bar: it contains zoom out screen, display proportion selection, zoom in screen, grid display, etc.

#### 3-6. Status bar

Display current HMI type, PLC port communication device; coordinate position of the mouse in the editing screen, etc.

# 4 Parts

### 4-1. Overall operation

Overall operation will main refer to the following tool bar.



### 4-1-1. Standard tool bar

1. cut " 👗 "

Choose target object and cut it to shear plate. Choose target element or many elements at operation, then click " $\overset{\bullet}{\overset{\bullet}{\overset{\bullet}{\overset{\bullet}{\overset{\bullet}}}}$ ".

2. copy" 🗎"

Choose target element and copy it. Choose target element or many elements at operation, then click " <sup>1</sup>

The difference with cut is: the cut operation makes the original component not exist, but the original component still exists after copy operation.

3. paste" 🛍 "

It is the operation of "cut" and "copy". When you do "paste" operation after cutting or coping object element, you have moved or copied successfully.

4. cancel"∽"

Recover historical operation by "cancel" button. This operation can not be used aquiescently. You need to choose "cancel" of "option" in the "tool" manually.

Specific content about " D 🗃 🗐" and "?", please refer to chapter 3-3-1 and 3-3-7.

### 4-1-2. Operation tool bar



1. Public unit " 🔽"

The part can be used to all project screens. It is the same to copying part to all screens.

2. Private unit "😵"

This part is only effective for current screen. It is the same to deleting the same part which is copied to other page.

3. Create screen"<sup>1</sup>

Specific content please refer to chapter 3-2-1

4. Screen attribute " 🗳 "

Choose the screen name which is needed to be modified in project bar. Click "<sup>1</sup>" icon in the overall tool bar to open catalogue box of screen attribute, then you can modify screen attribute in it.

	Screen	×
	ID	1
	Name	Screen1
⊡	Back Color	<b></b>
Screen	Message	
1: Screen1		
60001: Password		
60002: SetRTC		
60003: Password	ОК	Cancel
Project bar		screen attribute

For the built screen, its number can not be modified.

5. delete screen" ×"

Specific content please refer to chapter 3-2-3.

# 4-1-3. Picture adjustment

It is mainly used to arrange globality of chosed elements.

**Constant** "Align tool bar" can only be used when two or more than two elements are chosed at the same time. If not, the tool bar will be grey. It means that it can not be used.

For example: as the following picture, elements don't arrange in a line in the screen. You can choose all of them and click align midde "<sup>[]</sup>.

#### Before align



### 4-1-4. Zoom tool bar



### 4-1-5. Status tool bar

"" can reverse the status.
 For example: indicator light "" in the screen. Choose this element to reverse the status of ON and OFF by "".



2, "**0** " can choose the status of dynamic picture. There are 32 kinds of status display.

For example: it is dynamic picture "" in the screen. You can display relative status in the screen by choosing status number. Below is the display of "0" status and "20" status.



#### 4-2. Drawing tool bar



Drawing tool bar contains line, arc, rectangle, round rectangle, ellipse, fold, polygon block, frame, map, web, move animal, rotate animal. Web is used in configuration to log in a website or open a designated path. Here we don't describe detailly. Move animal and rotate animal is refered to the application of advance function. Specific instructions please refer to "HMI advance function manual".

#### 4-2-1. Line

1. Click the "```" icon in the drawing tool bar, and drag the left mouse. Then move the cursor to the end to release the left mouse. If you need to cancel this operation, please press "ESC" or click the right mouse.





This line can move location, change the size, rotate angle, etc.

2. Double click "line" or choose "line", then click right mouse. Choose "attribute" or set the attribute by " " button.

line

Line	
Line Color	Position
Pattern	Real line 💌
Thick	1
Light	0

- > Pattern "real line", it can not be modified.
- Thick change thick of line according to the value. The greater the value, the greater the width. (integer between 0 and 255)
- light without this function now
- color



- $\succ$  kind choose the color type which is need to be modified.
- $\succ$  color set the color of the kind.
- position

Line		×			
Line Color Position					
Position	Size				
X 355	Width	-155			
Y 180	Height	-40			
Animal					
Horizontal					
T Vertical					
Lock Zoom Ratio					

- position use the upper-left point as origin of coordinates(0, 0), and set the X, Y coordinate values
- X position set the coordinate value of X axle
  Y position set the coordinate value of Y axle
  > size set the width and height of line
  width (W) set the width of line
  height (H) set the height of line
  > animal set if the line can be moved

horizontal set horizontal display position of line according to the value of register. Modify the coordinate value of X axle.

X axle coordinate value = X position+current value of register.

vertical set the vertical display position of line according to the value of register. Modify the coordinate value of Y axle.

Y axle coordinate value=Y position+current value of register

- lock set if the line can be moved when you are editing.
- Zoom ratio set if it can be zoomed according to its proportion when you are changing the size.

### 4-2-2. Arc



- Start point, end point move this point to change length of arc
- > Boundary point move boundary point to change the width and length of arc
- 2、 double click "arc" or click right mouse, and choose "attribute" or set the attribute by "

button.

line

Arc	
Line Port	Pie Color Position
Pattern	Real line 💌
Thick	1

- ▶ pattern "real line", it can not be modified.
- thick change the width of line according to the value. The greater the value, the greater the width(integer between 0 and 255).

Port

Arc	X
Line Port Pie	Color Position
X X	End X (P) 262 35 Y (Q) 194
Angle Start End 2	90 274

- start point
- ➢ End point
- set to display the horizontal and vertical coordinate position of arc. set to display the horizontal and vertical coordinate position of arc.
- > Angle

Starting angle the central point of arc is the basic point. Make the direction of

set the angle of arc.

horizontal line crossing the basic point as the horizontal 0°. The angle cross the horizontal line and connect line of starting point and basic point.

Ending angle the ending angle is the angle crossing the horizontal 0 and connection line of basic point and ending point.

As the following picture, you can measure angles of the starting point and ending point which are 90  $^{\circ}$  and 180  $^{\circ}$ .



pie

Arc		
Line Port	Pie	Color Position
🗖 Pie		

pie connect starting point, ending point and central point of arc to be a closed graph which is named pie.



fill

After choose the "pie", choose this component again and right click it to choose "attribute". you can also double click this component, and you will find that the title of attribute catalogue box has changed from "arc" to "pie" and add the opion of "fill". As the following picture.



- > None the interior of pie is performed as transparent.
- Solid choose the target tone from the pull-down list and you can choose the tone you need or customer color from "more".
- Dot fill the internal of pie in the form of punctiform pattern. The greater the points, the greater the intensive degree;
- Meek choose target tone and the desalt proportion of starting tone should be 0%. When the desalt proportion is positive value, the tone will be desalted. When the proportion is negative value, the tone will be deepening.

➢ Hatch the internal of pie is filled in the form of pattern.

Origin point coordinate the origin point position of pattern contains X ordinate and Y ordinate.

Foreground colorchoose the own tone of patternBackground colorchoose the filled bottom color of pattern.

➤ Linear

First color the tone choosing of starting point of graph

Last color the tone choosing of ending point of graph

Direction of gradual change you can choose the gradual change type and direction of color. You can also set the angle value of "angle setting".

style color the tone of color is as same as starting color

- style type choose the filling mode of tone
- > Centerar
  - Central colorchoose the central tone of filling objectBorder colorchoose the border color of filling objectCentral point X-%the relative position of central point X axleCentral point Y-%the relative position of central point Y axleRatio X-%X direction proportion occupied by central pointRatioY-%Y direction proportion occupied by central point

color

Pie	
Line Port Pie	Fill Color Position
Kind	Color
Frame Color	
	More

- ➢ kind choose the color type which need to be modified
- color set the type color which is chosed by you
- position

ie	
Line Port Pie Fill	Color Position
Position	Size
X 26(	Width 170
Y 135	Height 59
Animal	
Horizontal	
Vertical	
	m Ratio

position make the upper left point to be the origin point coordinate (0, 0), and set the coordinate value of arc X and Y.

X position set the axle coordinate value of arc X

Y position set the axle coordinate value of arc Y

- ➢ size set the width and height of arc
  - width (W) set the width of arc
  - height (H) set the height of arc

> animal set if the arc can be moved

Horizontal set the horizontal position of arc according to the register value. Modify the X axle coordinate value. X axle coordinate value=X position+current value of register

Vertical set the vertical position of arc according to register value. Modify the Y axle coordinate value. Y axle coordinate value=Y position+current value of register

- Lock set if the arc can be moved when editing.
- > Zoom ratio set if it can be zoomed when editing its size.

### 4-2-3. Rectangle

1. Click the " $\square$ " icon in the drawing tool bar. Drag the left mouse at the starting point. Move the curser to the end and release the left mouse to finish it.



- Starting point and ending point move this point to change the length and width of rectangle by equal proportion.
- > Boundary point move this point to change the width or height of rectangle.
- 2. Double click"rectangle" or choose "rectangle" and click the right mouse. Choose "attribute"
- or set the attribute by " 📴" button.
- line

Rectangle		
Line Color	Fill Position	
Pattem	Real line	Ŧ
Thick		1

- > Pattern it is "real line". It can not be modified
- Thick change the line thick according to the value. The greater the value, the greater the width. (integer between 0~255)
- color

Rectangl	e		
Line	Color	Fill	Position
Kind			Color
F	rame Cok	or	
			More

- $\succ$  kind choose the color type which need to be modified.
- ➢ color set the color of the chosed type

■ fill



- None the interior of pie is performed as transparent.
- Solid choose the target tone from the pull-down list and you can choose the tone you need or customer color from "more".
- Dot fill the internal of pie in the form of punctiform pattern. The greater the points, the greater the intensive degree;
- Meek choose target tone and the desalt proportion of starting tone should be 0%. When the desalt proportion is positive value, the tone will be desalted. When the proportion is negative value, the tone will be deepening.
- Hatch choose target tone and the desalt proportion of starting tone should be 0%. When the desalt proportion is positive value, the tone will be desalted. When the proportion is negative value, the tone will be deepen.
- ➤ Linear

Starting color the tone choosing of starting point of graph

Ending color the tone choosing of ending point of graph

Direction of gradual change you can choose the gradual change type and direction of color. You can also set the angle value of "angle setting".

style color the tone of color is as same as starting color

- style type choose the filling mode of tone
- > Centerar

Central color	choose the central tone of filling object
Border color	choose the border color of filling object
Central point X-9	6 the relative position of central point X axle
Central point Y-%	the relative position of central point Y axle
Ratio X-%	X direction proportion occupied by central point
RatioY-%	Y direction proportion occupied by central point

position

Rectangle		
Line Color Fill Pos	sition	
Position	Size	
X 165	Width	90
Y 80	Height	45
Animal		
T Horizontal		
Vertical		
🗆 Lock 🗆 Zo	om Ratio	

- position make the upper left point to be the origin point coordinate (0, 0), and set the coordinate value of arc X and Y.
  X position set the axle coordinate value of arc X
  - Y position set the axle coordinate value of arc Y
- ➢ size set the width and height of arc
  - width (W) set the width of arc
  - height (H) set the height of arc
- ➤ animation set if the arc can be moved

Horizontalset the horizontal position of arc according to the register value. Modify theX axle coordinate value. X axle coordinate value=X position+current value of registerVerticalset the vertical position of arc according to register value. Modify the Y axlecoordinate value. Y axle coordinate value=Y position+current value of register

- $\blacktriangleright$  Lock set if the arc can be moved when editing.
- $\blacktriangleright$  Zoom ratio set if it can be zoomed when editing its size.

#### 4-2-4. Round rectangle

1. Click the " C "icon in the drawing tool bar. Drag the left mouse at the starting point. Move the cursor to the ending point and release the left mouse to finish it.



- Starting point and ending point move this point to change the length and width of rectangle by equal proportion.
- Boundary point move this point to change the width or height of round rectangle.

2. Double click the "round rectangle" or choose "round rectangle" and click right mouse to choose "attribute" or set the attribute by " " button.

■ line

Round Rect				
Line	Round	l rectangle   Color	Fill	Position
Patte	em	Real line	Ţ	
Thick	k		1	

- ▶ pattern It is "real line" and can not be modified
- thick change the width of line according to value. The greater the value, the greater the width. (integer between 0~255)
- round rectangle

Round Rect					
Line	Round rect	angle	Color	Fill	Position
Rour	nd Diameter			11	

- Round diameter modify by inputing value. Greater the value, greater the round diameter.
- color



- ➢ kind choose the type of color which need to modify
- $\triangleright$  color set the color of kind

■ fill



- none graph's inside will lucidly display
- solid choose the target color by pull-down list. You can choose the color which you chose by "more".
- > dot fill the graph's inside with dots. Dot's value decides the dot density.
- meek choose the target color. Desalt proportion of original color is 0%. When the proportion is positive value, the color will be desalted. When it is negative value, the color will be deepening.

➢ hatch fill round rectangle's inside with hatch.

Origin coordinate graph's origin coordinate. It contains positions of horizontal and vertical coordinate.

Fore color	choose the graph's color
Back color	choose the graph's back color

➤ linear

first color choose the graph's first color

last color choose the graph's last color

linear direction you can choose the linear type and direction of color and also can set agle value by "set angle".

Style color color tone is as same as first color.

- Style kind choose the filling mode.
- ➤ centerar

center color	choose the center color of filling object
brink color	choose the brink color of filling object
center pointX-percentage	e relative position of center point X
center pointY- percentag	e relative position of center point Y
ratioX- percentage X	K direction ratio occupied by center point
ratioY- percentage Y	direction ratio occupied by center point

position

Round Rect			
Line Round rectangle Co	olor Fill	Position	
Position	Size		
X 25.	Width		130
Y 100	Height		65
Animal			
Horizontal			
Vertical			
🗆 Lock 🗖 Zo	om Ratio		

- position make the upper left point in screen as the origin point (0, 0) and set X, Y coordinate value of round rectangle.
  - X position set X coordinate value of round rectangle.
  - Y position set Y coordinate value of round rectangle.
- $\blacktriangleright$  size set the width and height of round rectangle.
  - width (W) set the width of round rectangle
  - height (H) set the height of round rectangle
- ➤ animal set if the round rectangle can be moved

Horizontal set the horizontal position of round rectangle according to register value, modifing the X coordinate value.

X coordinate value=X position+current value of register

vertical set the vertical position of round rectangle according to register value, modifying the Y coordinate value.

Y coordinate value=Y position+current register value

- ➢ lock set if round rectangle can be moved when editing it.
- Zoom proportion set if it can be zoomed when changing its size. Now this function can not work.

### 4-2-5. Ellipse

1. Click "O" icon in drawing tool bar. Drag the left mouse at the first point. Move the cursor to the end and release left mouse to finish it.



First point, boundary point, last point edit width or height of ellipse by these points

2. Double click "ellipse", or choose "ellipse" and right click the mouse. Then choose "attribute" or set attribute by " 🗳" button.

line

color

Ellipse		
Line Color	Fill Position	
Pattern	Real line	Ŧ
Thick		1

- > Pattern it is "real line" which can not be modified.
- Thick change width of line according to value. Greater the value, greater the width. (integer between 0~255)
  - Ellipse
- $\succ$  kind choose the color kind which need to be modified.
- $\succ$  color set the color of the kind
- ➢ fill set if ellipse need to be filled with fill color.

fill



- none graph's inside will lucidly display
- solid choose the target color by pull-down list. You can choose the color which you chose by "more".
- > dot fill the graph's inside with dots. Dot's value decide the dot density.
- meek choose the target color. Desalt proportion of original color is 0%. When the proportion is positive value, the color will be desalted. When it is negative value, the color will be deepen.
- ➢ hatch fill round rectangle's inside with hatch.

Origin coordinate graph's origin coordinate. It contains positions of horizontal and vertical coordinate.

Fore color	choose the graph's color
Back color	choose the graph's back color

linear

~ .		-		~	
first color	choose	the	oranh's	first	color
	CHOOSE	unc	graph 5	mot	COIOI

last color choose the graph's last color

linear direction you can choose the linear type and direction of color and also can set agle value by "set angle".

Style color color tone is as same as first color.
---

- Style kind choose the filling mode.
- ➤ centerar

center color	choose the center color of filling object
brink color	choose the brink color of filling object
center pointX-percentage	e relative position of center point X
center pointY- percentag	relative position of center point Y
ratioX- percentage	X direction ratio occupied by center point
ratioY- percentage Y	direction ratio occupied by center point

position

Ellipse	
Line Color Fill Po	sition
Position	Size
X 23(	Width 135
Y 210	Height 65
Animal	
T Horizontal	
C Vertical	
🗆 Lock 🗖 Z	oom Ratio

- position make the upper left point in screen as the origin point (0, 0) and set X, Y coordinate value of round rectangle.
  - X position set X coordinate value of round rectangle.
  - Y position set Y coordinate value of round rectangle.
- $\blacktriangleright$  size set the width and height of round rectangle.
  - width (W) set the width of round rectangle
  - height (H) set the height of round rectangle
- ➤ animal set if the round rectangle can be moved

Horizontal set the horizontal position of round rectangle according to register value, modifing the X coordinate value.

X coordinate value=X position+current value of register

vertical set the vertical position of round rectangle according to register value, modifying the Y coordinate value.

Y coordinate value=Y position+current register value

- ➢ Lock set if round rectangle can be moved when editing it.
- Zoom proportion set if it can be zoomed when changing its size. Now this function can not work.

### 4-2-6. Fold - polygon

The difference between fold and polygon is whether it is closed.

1. Click " $\bigcirc$ " icon in the drawing tool bar and press left mouse at the first point. Move the cursor and confirm positions of endpoints. When it is the last endpoint, please click left mouse to finish it.



2. Double click "fold" or choose "fold", then click right mouse to choose "attribute or set the attribute by " " button.

■ line

Fold	
Line Color	Polygon Position
Pattern	Real line 💌
Thick	1

- > Pattern it is "real line" which can not be modified.
- Thick change the width of line according to its value. Greater the width, greater the value. (integer between 0~255)
- color

Fold			
Line	Color	Polyg	gon Position
Kind			Color
	olor		
			More

- kind choose the kind of color you want to modify
- $\triangleright$  color set the kind of color
- polygon

Fold	
Line Color	Polygon Position
Polyline Revolve	P1=[0,0] P2=[230,109] P3=[89,139] P4=[19,185]
	X Y

polyline its mode is polyline. When you don't choose it, the polyline will connect first point and last point to be a polygon. Then it will fill the polygon area in default filling pattern.



- modify coordinate set the first point as the starting point. List the coordinates in the form in the order according to paths. Choose the coordinate of object point. Input relative X, Y coordinates and press "enter" key to be effective.
- revolve click this button to set the revolve angle of polyline click the "revolve" button in "polyline". Following catalogue box will appear

Line Col	or Polygon Position
I Polylin	e P1=[0,0] P2=[230,109]
Revolve	Angle
	Angle
	OK Cancel

Input the value of target angle. (positive value is anticlockwise revolve and negative value is clockwise revolve) then you can click "confirm".

■ fill

Don't choose "fold" and confirm it. Then choose this component to click right mouse to choose "attribute" or double click this component directly. Then you will find that the title of catalogue box has been changed from fold to polygon. Add the "fill" option.



- none polygon's inside will lucidly display
- solid choose the target color by pull-down list. You can choose the color which you chose by "more".
- > dot fill the graph's inside with dots. Dot's value decide the dot density.
- meek choose the target color. Desalt proportion of original color is 0%. When the proportion is positive value, the color will be desalted. When it is negative value, the color will be deepen.
- ▶ hatch fill round rectangle's inside with hatch.

Origin coordinate graph's origin coordinate. It contains positions of horizontal and vertical coordinate.

Fore color	choose the graph's color
Back color	choose the graph's back color

linear

last color choose the graph's last color

linear direction you can choose the linear type and direction of color and also can set agle value by "set angle".

- Style color color tone is as same as first color.
- Style kind choose the filling mode.
- ➤ centerar

center color	choose the center color of filling object
brink color	choose the brink color of filling object
center pointX-percentage	e relative position of center point X
center pointY- percentage	e relative position of center point Y
ratioX- percentage X	direction ratio occupied by center point
ratioY- percentage Y	direction ratio occupied by center point

position

Polygon			
Line Color Polygon Fill	Position		
Position	Size		
X 22(	Width 140		
Y 55	Height 105		
Animal			
Horizontal			
C Vertical			
Lock Zoom Ratio			

position set the upper left point in the screen to coordinate point (0, 0), and set the X and Y coordinate value of fold and polygon.

X position set the X coordinate value of fold and polygon.

Y position set the Y coordinate value of fold and polygon.

- ➢ size set the width and height of fold and polygon.
  - width (W) set the width of fold and polygon
  - height (H) set the height of fold and polygon

> animal0 set if the fold and polygon can be moved.

Horizontal set the horizontal position of fold and polygon according to register value, modifying X coordinate value.

X coordinate value X position+current value of register

Vertical set the vertical position of fold and polygon according to the register value, modifying Y coordinate value.

Y coordinate value=Y position+current value of register

- lock set if the fold and polygon can be moved when editing.
- Zoom proportion set if it can be zoomed when editing its size. This function can not work.

#### 4-2-7. Block

Change the area size occupied by color block in the polygon by setting the block value.

1. Click " $\bigcirc$ " icon in the drawing tool bar. Press left mouse at the first point and confirm the position of top point. Then loosen the left mouse and confirm the position of second point. According to top point number, do this operation repeatedly. Please double click left mouse at the end. At this time the end and the first point will connect automatically to finish the drawing of "block".



- 2. Double click "block" or choose "block" and click the right mouse to choose "attribute" or set the attribute by "<sup>1</sup>" button.
- Polygon block

Block	٢	
Po	lygon Block Co	lor Position
ſ	Direction	
	Up->Dowr	n O Down->Up
	C Left->Righ	t C Right->Left
	Block	0

- Direction choose the filling direction of block.
- $\blacktriangleright$  Block the value of block

For example: choose the direction "from up to down" and set the block value to "50".



color

Block	
Polygon Block Color	Position
Kind	Color
Frame Color Back Color Block Color	
	More

- $\blacktriangleright$  kind choose the kind of color
- $\succ$  color set the color of the kind

position

Block			-×
Polygon Block Color Pos	ition		
Position	Size		
X 295	Width		180
Y 240	Height		110
Animal			
Horizontal			
Vertical			
🗆 Lock 🔲 Za	oom Ratio		

- position set the upper left point in the screen as the coordinate point (0, 0), and set the X and Y coordinate value of block.
  - X position set the block X coordinate value.

Y position set the block Y coordinate value.

- ➢ size set the width and height of block
  - width (W) set the width of block
  - height (H) set the height of block
- > animal set if the block can be moved

Horizontal movement set the horizontal position of block according to register value, modifying X coordinate value.

X coordinate value=X position+current value of register

Vertical movement set the vertical position of block according to register value, modifying Y coordinate value.

Y coordinate value=Y position+current value of register

- $\blacktriangleright$  set if the block can be moved when editing .
- Zoom proportion set if the size can be zoomed when editing its size. This function can not work.

# 4-2-8. Frame

1. Click the "□" icon in the drawing tool bar. Keep pressing the left mouse at the first point andmove the mouse to make a path of rectangle. Then loosen the left mouseassess at the end point. No the frame has been finished.



Edit the length, width and other attributes according to the modification of first point, boundary point and end point.

- 2. doubel click "frame" or choose "frame" and click right mouse to choose "attribute" or set theattribute by " " button.
- color



- $\succ$  kind choose the type of color which need to be modified.
- $\triangleright$  color set the color of the kind.
- Fill set if the frame needs to be filled with color.
- position

Frame		×
Color Position		
Position	Size	
X 215	Width	140
Y 100	Height	80
Animal		
Horizontal		
C Vertical		
🗆 Lock 🗖 Zo	oom Ratio	

≻	position	set the upper left point as the coordinate point (0, 0). Set the X and Y
	coordinate val	ues of frame.
	X position	set the X coordinate value of frame
	Y position	set the Y coordinate value of frame
≻	size	set the width and height of frame
	width (W)	set the width of frame
	height (H)	set the height of frame
$\triangleright$	animal	set if the frame can be moved.
	Horizontal	set the horizontal position of frame according to register value, modifying
	the X coordina	ite value.
		X coordinate value=X position+current value of register.
	Vertical	set the vertical position of frame according to register value, modifying the Y
	coordina	ate value.
		Y coordinate value=Y position+current value of rigster
≻	lock	set if the frame can be moved
$\triangleright$	zoom proporti	on se if it can be zoomed when editing its size. This function can not

#### 4-2-9. Insert map

work now.

Realize the insert function of screen in HMI by this function.

1. Click "🛃" icon in the drawing tool bar. When the cursor is cross-shaped, please press the left

mouse to open the window of inserting paths.

2. Choose the goal display picture. (Now it support pictures of BMP and JPG form) Click "open" or double click the goal picture. Then it will be added to current screen automatically and its size and position can be moved freely as the following picture.



3. Double click the 'picture" or choose "picture" and click right mouse. Then set the attribute by "attribute" or "

picture



It is "display picture". If you choose "transparency", you need to add "mask".

Add mask: after clicking "mask", please click "changing" to appear a window. Then you can choose the picture. (Mask picture should be black and white picture which is the same size) Please see the following example to understand easily.



In the above picture, first picture is the original picture. It is the display picture. Now you need to do transparent processing for this picture.

Second picture is the same size as first picture and it is black and white mask picture.

Third picture is the final picture which is done transparency.

You can find something from picture 1, picture 2 and picture 3. transparency add picture 1 and picture 2. The white area in picture 2 will be transparent and the black area will be display.

position

Map		
Map Position		
- Position	Size	
X 12	Width	160
Y 90	Height	140
Animal		
Horizontal		
C Vertical		
🗆 Lock 🗖 Z	oom Ratio	

- position set the upper left point in the screen as coordinate point (0, 0). Set the X and Y coordinate value of picture.
  - X position set the X coordinate value of picture.
  - Y position set the Y coordinate value of picture.
- ➢ size set the width and height of picture.
- width (W) set the width of picture
- height (H) set the height of picture
- animal set if the picture can be moved
- horizontal set the horizontal position of picture according to register value, modifying X coordinate value.

X coordinate value=X position+current value of register

- vertical set the vertical position of picture according to register value.
  - Y coordinate value=Y position+current value of register.
- $\triangleright$  lock set if the picture can be moved when editing it.
- $\blacktriangleright$  Zoom ratio set if it can be zoomed when editing its size. This function can not work now.

# 4-2-10. Move animation

This function can make animation with other parts.

1. Click  $\checkmark$  icon in the menu, draw the animation track. Left click mouse to draw the track, left click mouse again to draw the second track, double click mouse to finish the drawing.

2. Double click move animation to open the attribute window. Coordinate

Move Ar	nimal		23
Coord	Control		
×	130	Key Point: X=130;Y=100 Escape Time:20.5Second	
Y	100	Key Point: X=323;Y=169 Escape Time:18.8Second Key Point: X=142;Y=220	
		OK Cancel	Apply

- $\blacktriangleright$  coordinate the coordinate of animation
  - X the position of X-axis
  - Y the position of Y-axis
- Escape time the time from one position to another, the unit is second.
- Control

Move Animal			×
Coord Cor	ntrol		
Enable	Ctrl	MO	
Reset	Ctrl	MO	
📝 Repea	t		
	0	OK Cancel	Apply

- Enable the animation is activated by the coil. When the coil is on, the animation starts to move.
- $\blacktriangleright$  Reset when the coil is on, the animation will move from the starting position.
- > Repeat repeat moving the animation

### 4-2-11. Rotate animation

1. Click  $\widehat{\mathbf{A}}$  and put it in the screen. Right click it or press ESC to cancel.



- 2. Double click the rotate animation to open the attribute window.
- Animation clip



- > Material the pictures of animation, it can contain many pictures
- > Add open material library to add new picture and set the picture position
- Delete delete the pictures
- Modify open the material library, change the picture and the position
- Move up move up the picture
- Move down move down the picture
- Preview display the picture

#### Animation

nimation clip	Animation	Position
Period		
	8	00 ms
	DO	Register controls
🗹 Enable 🏾 🌘	MO	Register controls
Reset	MO	Register controls
Mode		
O Random		
💿 Continue		
	💿 Sing	gle
🗹 Repeat	<mark>◯</mark> Trip	,
Coil Contr	ol	
16	MO	

- > Period the time to finish the animation, the time can be set through register or constant
- Enable please always choose this item to ensure the animation can work. Register control means the animation can work when the coil is ON.
- > Reset when the rising edge of signal is coming, the animation will start again.
- Random switch the pictures as the order defined by user
- > Continue switch the pictures as the default order
- Single switch the pictures from first to final one, then from first to final one again.
- Trip switch the pictures from first to final one, then from the final to first one, then from the first to final one...
- Repeat repeat the switching picture operation
- Coil control when the coil is ON, the animation is visible. When the coil is OFF, the animation is invisible.

### Position

Animation cl	ip Animation	Position	
Position-		Size	
<u>x</u>	110	<u>W</u> idth	129
Y	100	<u>H</u> eight	136
Horizo	ntal al		

- Position set the coordinate of animation according to the origin on the upper left corner
  X the X-axis coordinate
  - Y the Y-axis coordinate
- Size set the width and height of animation
  - Width the width of animation
  - Height the height of animation
- Animal the move direction of animation
  Horizontal horizontal moving the animation. Set the X-axis position through register.
  X coordinate = X position + current register value
  Vertical vertical moving the animation. Set the Y-axis position through register.
  Y coordinate = Y position + current register value
- Lock lock the animation, it cannot move

#### 4-2-12 Material library

Click "**II**" icon in the drawing tool bar. Then the dialogue box of choosing picture will appear. It is as follow.

Adobe					Â	Transpare
App		7 3	1 4	1.4		
Aqua	Butterfly01.jpg	Butterfly02.jpg	Butterfly03.jpg	Butterfly04.jpg		
Bomb	D.A	The state				
Cartoon	X	NY S				
Dockort ⊨	401.04	7 3				
	Butterfly05.jpg	Butterfly06.jpg	Butterfly07.jpg	Butterfly08.jpg	=	Add Mate
						Aug Mate
gHard		Ch				Del Mate
Glasz	414		-	( Sector		
	Butterfly09.jpg	Butterfly10.jpg	Butterfly11.jpg	Butterfly12.jpg		
Home			6 1			Upen
Monsters T	The second					Cance

- > You can click "add file" or "delete file" to add or delete folder.
- Choose the picture in the right side, click open to insert it in the screen. Click "add material" or "delete material" to add or delete the picture.

### 4-3. Component tool bar

Component tool bar contains all basic buttons of data processing.

From left to right: text, dynamic text, variational text, lamp, button, lamp button, screen jump, digital display, alarm display, tet display, digital input, text input, set data, digital keyboard, ASCII keyboard, user input, bar, dynamic map, call window, window button, down recipe, up recipe, function button, function field, discrete column map and continue column map.

# 4-3-1. Text

1. Click "A" icon in the component tool bar. Move the cursor to the screen and click left mouse to place it. Then click right mouse or ESC button to cancel it. Modify the height and width of text by boundary point.



2. Double click "text" or choose "text" and click right mouse. Then set the attribute by choosing "attribute" or " "" button.

display

Text			x
Display Font Color	Position		
Content			
Text		*	
		Ŧ	
Aspect	Align Hor	Align Ver	
Text	C Left	С Тор	
	Center	Middle	
Changing	C Right	C Bottom	

- ➢ content input content of text
- aspect choose if you need text frame. When you want to use it, you can modify the aspect by "changing" button.
- > Align hor it contains three kinds of align which are left, centre and right.
- > Align ver it contains three kinds of align which are top, middle and bottom.
- font

Set the content form of text

Text	
Display Font Color	Position
Font	-
	Setting
<b>C</b> . 1	
String	Art
	-

> settings set informations of font, type and size in instrument.
| Font   |   |  |      |   |   | ×            |
|--|---|--|------|---|---|--------------|
| Font:<br>Times New Roman<br>Times New Roman<br>Trebuchet MS<br>Verdana<br>Viner Hand ITC<br>OFinaldi | * | Font style:<br>Regular<br>Regular<br>Italic<br>Bold<br>Bold Italic | *    | Size:<br>12<br>14<br>16<br>18<br>20<br>22<br>24 | • | OK<br>Cancel |
| Effects<br>Strikeout<br>Underline<br>Color:<br>Black   | ] | Sample<br>AaBb<br>Script:<br>Western                               | oYy2 | Zz  | • |              |

 $\succ$  art set the art type of displaying font in instrument.

Style			X
Projection			
💿 Shadov	Angle	• •	
C Solid	Dis	0 PX	(
C Relief			
C Carve	Color		
□ Brink V	Vidth	1 Color	<b>_</b>
Normal			
C Hatch		Fill in with text's color!	
C Linear			

Text	
Display Font Cold	or Position
Kind	Color
Aspect Color Back Color	
Text Color	
	More

- $\blacktriangleright$  kind choose the type of color in text.
- $\triangleright$  color modify the color according to the kind.
- position

Text		
Display Font Color Po	osition	
Position	Size	 
X 13(	Width	40
Y 70	Height	20
Animal		
Horizontal		
Vertical		 
🗆 Lock 🔽 Za	oom Ratio	

position set the upper left point in screen as coordinate point (0, 0). Set the X and Y coordinate value of text.

X position set the X coordinate value of text.

Y position set the Y coordinate value of text.

- Size set the width and height of text.
  - width (W) set the width of text
  - height (H) set the height of text
  - animal set if text can be moved

```
horizontal set the horizontal position of text in screen according to register value, modifying X coordinate value.
```

X coordinate value=X position+current value of register

vertical set the vertical position of text in screen according to register value, modifying Y coordinate value.

Y coordinate value=Y position+current value of register.

- $\blacktriangleright$  lock set if the text can be moved in screen.
- zoom ratio set if it can be zoomed when editing its size. This function can not work now.

#### 4-3-2. Dynamic text

 $\triangleright$ 

Dynamic text can transfer the displaying content by values of relative link register.

1. Click "A "icon in component tool bar. Move the cursor to the screen and click the left mouse to place it. Please click right mouse or ESC button to cancel it. You can modify the height and width of text area by boundary points.



2. Double click "dynamic text" or choose "dynamic text" and click right mouse. Then set the attribute by choosing "attribute" or "''P'' button.

object

Dynamic Text
Object Display Font Color Position
Station Device PLC Port v
Object Object Object
Data
Data Type Word

## $\succ$ station

device current device port which is communicating.

- station address number of communication equipment.
- > object set the object type and address number of dynamic text.
- > indirect set the offset of current address as following picture.

-Object -			
Object	D	-	0
			PSW256

Current address of dynamic text changed with register PSW256. D0[PSW256]= D[0+PSW256 value].

> value set the data type as separate or double words.

We suggest using internal address of HMI for indirect specified address. (PSW, PFW) if not, the communication will be slow.

#### ■ display

The display content of register is determined by object register value. It contains 16 kinds of display content of dynamic text.

Dynamic Text			×
Object Display Font	Color Position		
Content Text 0 Text 1 Text 2 Text 3 Text 4 Text 5 Text 6 Text 7 Text 9	Text0		~
Aspect	Align Hor	Align Ver	
Text	C Left	C Top	
	Center	Middle	
Changing	C Right	C Bottom	

- ➢ content input the content of text
- aspect choose if you need text frame. When you are choosing, you can modify the appearance by "change" button.
- > Align hor it contains three kinds of align type which are left, centre and right.
- > Align ver it contains three kinds of align type which are top, middle and bottom.
- For example: when the register value is 0, it will display the content of text 0. When the value is 1, it will display content of text 1 and so on.

When the object register value is above 15, the text content will not appear.

# ■ font

Set the content form of dynamic text.

ynamic Text	
Object Display Font	Color Position
Font	
	Setting
String	
	Art

set it contains font, type, size, effect, example, color and character set. You can set for your requirement.

Font			
Font: Times New Roman Times New Roman Trebuchet MS Verdana Viner Hand ITC Studt	Font style: Regular <i>Regular</i> <i>Italic</i> <b>Bold</b> <i>Bold Italic</i>	Size: 12 12 14 16 18 20 22 24 T	OK Cancel
Effects Strikeout Underline	Sample AaBb?	YyZz	
Black	Script: Western	•	

art it contains projection, brink, fill and angle and so on. You can set for your requirement.

Style				×
Projection				
💿 Shadov	Angle		0	o
C Solid	Dis		0	PX
C Relief C Carve	Color	<b>_</b>		
Brink W Fill	'idth	1 Color		<b>_</b>
© Normal C Hatch C Linear		Fill in with text's co	olor!	



- $\blacktriangleright$  kind choose dynamic text to modify the kind of color.
- $\blacktriangleright$  color modify the color according to the kind.
- position

 $\triangleright$ 

Dynamic Text		
Object Display Font Co	olor Position	n
Position	Size	
X 15(	Width	40
Y 100	Height	20
Animal		
Horizontal		
Vertical		
🗆 Lock 🔽 Zo	om Ratio	

position set the upper left point in screen as coordinate point (0, 0). Set the X and Y coordinate value of dynamic text.

X position set the X coordinate value of dynamic text.

Y position set the Y coordinate value of dynamic text.

size set the width and height of dynamic text

- wdth (W) set the width of dynamic text
- height (H) set the height of dynamic text

animal set if the dynamic text need to be moved.

horizontal set the dynamic text in the horizontal position of HMI according to register value, modifying X coordinate value.

X coordinate value=X position+current value of regster

vertical set the dynamic text in the vertical position of HMI according to register value, modifying Y coordinate value.

Y coordinate=Y position+current value of register

- $\blacktriangleright$  lock set if the dynamic text can be move in screen.
- zoom ratio set if it can be zoomed when editing its size. But this function can not work now.

We will explain the using process. Object register is PSW300. Change the value of PSW register by input data. When PSW300 is 1, it will display "temperature over warning value. When PSW300 is 5, it will display "temperature over alarming value". The interface is as follow:

Dynamic Text	
Object Display Font Color Position	
Station       Device     PLC Port       VirStaNO     0	
Object Object 300	
Data Data Type Word	
Dynamic Text	
Object Display Font Color Position Content Text 0 Text 1 Text 2 Text 3 Text 4 Text 5 Text 6 Text 7 Text 0 Text 7 Text 7 Text 0 Text 7 T	*
Dynamic Text	
Object Display Font Color Position	
Text 0 Text 1 Text 2 Text 3 Text 4 Text 5 Text 6 Text 7 Text 9	*

#### 4-3-3. Variational text

1. Click "<sup>\*</sup> icon in component tool bar. Move the cursor to screen and click left mouse to set it. Then cancel it by clicking right mouse or ESC button. Modify the length and height of variational text by boundary point.

2. Double click "variational text" or click "variational text" and click right mouse. Then set attribute by choosing "attribute" or " <sup>(1)</sup>" button.

#### Object

 $\triangleright$ 

Variational Text	
Object Display Font Color Position	
Station	
Device PLC Port -	
VirStaNO 0 Station	1
Object	
Object D 🗸 0	
Indirect	
Data	
Data Type Word 💌	

- device current device port which is communicating.
   station address number of communication device.
  - object set the object type and address number of dynamic text.
- ➢ Indirect set offset off current address as follow.

/ariational Text
Object Display Font Color Position
Station
Device PLC Port -
VirStaNO 0 Station 1
-Object
Object D V 0
I▼ PSW256
Data
Data Type Word

Current address of variational text will change with the value of register PSW256. It is D0[PSW256] = D[0+PSW256 value].

> value set the data type to separate or double characters.

We suggest using internal address of HMI(internal address PSW and PFW) for indirect address. If not, it will make communication be slow.

■ display

Variational Text			
Object Displa	Y Font	Color Position	
Data	String Des	script	Add
0	TextEx		Delete
Aspect		Align Hor	Align Ver
Text		C Left	С Тор
,		Center	Middle
Changing	(U)	C Right	C Bottom

- content input display content of text
   data display the content number of text
   string descipt edit content of text
- > add add the project number of variational text by this button.
- > delete delete the project of variational text by this button.
- aspect choose if you need text frame. When you are choosing, please modify the aspect by "changing" button.
- Align hor it contains three kinds of align type which are left, centre, right.
- Align ver it contains three kinds of align type which are top, middle, bottom.
- font

set the content form of variational text.

Variational Text	
Object Display Font	Color Position
Font	
	Setting
String	Art

settings it contains font, type, size, effect, example, color, character set and son on. You can set it freely.

	Font style:		Size:		
_	Regular	_	12	_	ОК
*	Regular	*	12	*	Cancel
	Italic		16		
	Bold		18	=	
	Bold Italic		20		
Ŧ		Ŧ	24	Ŧ	
	Sample				
	AaBb	YyZ	z		
	•	Font style: Regular Acceleration Regular Italic Bold Bold Italic Sample AaBb	Font style: Regular Action Regular Regular Action Regular Action Regular	Font style: Size: Regular 12 12 14 14 16 16 18 20 22 24 Sample AaBbYyZz	Font style: Size: Regular Italic Bold Bold Italic Sample Sample Sample Size: Si

> art it contains projection, brink, fill, angle and so on. You can set it freely.

Style				×
Projection				
💿 Shadov	Angle		0	o
C Solid	Dis	J	0	PX
C Relief C Carve	Color			
E Brink W	/idth	1 Color		<b>_</b>
<ul> <li>Normal</li> <li>Hatch</li> <li>Linear</li> </ul>		Fill in with text's co	blor!	

■ color

Variational Text		x
Object Display Fon	t Color Position	
Kind Aspect Color Back Color Text Color	Color	
	More	

- ➢ kind choose the kind of color
- > color modify the color according to the kind
- position

Variational Text			×
Object Display Font Co	lor Position	ı]	
Position	Size		
X 23.	Width		50
Y 75	Height		20
Animal			
F Horizontal			
Vertical			
🗆 Lock 🔽 Zo	om Ratio		

- position set the upper left point to be coordinate point (0, 0). Set the X and Y coordinate value of variational text.
  - X position set the X coordinate value of variational text
  - Y position set the Y coordinate value of variational text
  - size set the width and height of variational text
  - width (W) set the width of variational text
  - height (H) set the height of variational text
  - animal set if variational text can be moved
  - horizontal set the variational text in the horizontal position of HMI according to register value, modifying X coordinate value.

X coordinate value=X position+current value of register

vertical set the variational text in vertical position of HMI according to register, modifying Y coordinate value.

Y coordinate value=Y position+current value of register

- lock set if the variational text can be moved in screen.
- zoom ratio set if it can be zoomed when editing its size. But now this function can not work.

the differences of functions between "variational text" and "dynamic text" is as

follow:

 $\triangleright$ 

 $\triangleright$ 

(1) variation of variational text can be added manually. It has not only 16 kinds of display content.

(2) variational text can not use newline. But dynamic text can use newline to edit.

## 4-3-4. Lamp

You can display object status by this button.

1. Click "②" icon in component tool bar. Move the cursor to screen and click left mouse to set. Cancel it by clicking right mouse or ESC button. You can realize to adjust the boundary size of object lamp button by boundary point.



2. Double click "lamp" or click "lamp" and click right mouse. Then set attribute by choosing "attribute" or " " " button.

object

Lamp	
Object Lam	p Twinkle Color Position
Station Device VirStaN	O O Station
Object	M  Indirect

stationdevice

 $\geq$ 

station

current device port which is communicating

set the offset of current address as follow

n the address of communication device

- object set address and trigger signal object type of lamp
- ➢ indirect

Lamp	
Object Lan	np Twinkle Color Position
Station Device VirStaN	IO 0 Station 1
Object	

Current trigger signal address of lamp will change with D0 value of register. It is M0[D0]=M[0+D0 value]

Click the pull-down box of object type. Change the relative object by choosing type in the pull-down menu. Because lamp is double state component, so relative object type can only be relay types or a bit of register. We suggest using internal address of HMI (PSW, PFW) for indirect address. If not, the communication will be slow.

lamp

Lamp		
Object Lamp Twin	nkle Color Po	sition
Aspect	<b></b>	
ON	H	Change Aspect
O OFF	HMI	User Defined
Visible	мі мі	Save Aspect
Use Text		
C Left	С Тор	Font
Center	🖲 Middle	On 🔺
C Right	C Bottom	-
		,

- > ON right frame display lamp when object cable is ON.
- > OFF right frame display lamp when object cable is OFF.
- Change aspect modify the aspect of lamp. Because it has own material library, so you can choose freely.
- > User defined modify the aspect of lamp. It has user defined material library.
- Save aspect save the aspect of lamp. It is convenient when you are programming.
- Use text modify the content, font, align type of lamp text.
  - content set the display content of text
  - font set the size, font, type of text.
    - align user can choose align type freely according to your requirement.
    - (1) change aspect: choose relative pictures in lamp library to display.

Click "change aspect". Following editing screen will appear.



choose the lamp icon in material library and press "confirm".

(2) User defined: you can define displaying picture freely from material library.

Click "use defined", then the following editing screen will appear.



Choose target icon in material library and click "open". Then the target icon will be added into lamp.

(3) save aspect: you can put user defined lamp into lamp library. If you want to use it next time, you can call it directly.

twinkle

choose the twinkle status of lamp.

Lamp			
Object Lamp	Twinkle Color	Position	
Status			
<ul> <li>Stop</li> </ul>	C ON	O OFF	
Speed			
Slow	C Fast		

➤ status

stop

it will stop twinkling whenever the lamp is ON or OFF.

ON lamp will twinkle when it is ON.

- OFF lamp will twinkle when it is OFF.
- > speed choose the twinkle speed when lamp is triwkling. Slow or fast
- color

Lamp	
Object Lamp Twir	nkle Color Position
Kind OFF Text Color OFF Text Color ON Color OFF Color Lamp Color Back Color	Color

- $\succ$  kind choose the kind of color for lamp.
- $\succ$  color modify the color according to the kind.
- position

Lamp		
Object Lamp Twinkle Co	olor Position	
Position	Size	
X 14	Width	60
Y 110	Height	60
Animal		
F Horizontal		
C Vertical		
🗆 Lock 🗆 Zo	om Ratio	

- position set the upper left point to be coordinate point (0, 0). Set the X and Y coordinate value of lamp.
  - X position set the X coordinate value of lamp

Y position set the Y coordinate value of lamp

- Size set the width and height of lamp
  - width (W) set the width of lamp
  - height (H) set the height of lamp
- animal set if the lamp can be moved

horizontal set the lamp in the horizontal position of HMI according to register value, modifying X coordinate value.

X coordinate value=X position+current value of register

Vertical set the lamp in the vertical position of HMI according to register value, modifying Y coordinate value.

Y coordinate value=Y position+current value of register

- $\blacktriangleright$  lock set if the lap in the screen can be moved.
- Zoom ratio set if it can be zoomed when editing its size. But this function can not work now.

# 4-3-5. Button

Realize the bit operation of relative switching value.

1. Click "��" icon in component tool bar. Move the cursor in screen and click left mouse to set. Then cancel it by clicking right mouse or ESC button. You can adjust the size of button by eight small boundary points.



2. Click "button" or choose "button" and click right mouse to choose "attribute". you can set attribute by " 🗳" button.

object

Button	
Object Operat	e Button Color Position
Station Device VirStaNO	PLC Port 0 Station 1
Object Object	M

- $\succ$  station
  - device current device port which is communicating
- station address of communication device
- > object set the object type and address of button.
- ➤ indirect set the offset of current address as follow

Bu	utto	n	
	Obj	ect Operat	e Button Color Position
		- Station	PLC Port  O Station 1
		Object Object	M V 0

Trigger signal address of current button changes with D0 value of register. M0[D0]=M[0+D0 value]

We suggest using internal address of HMI (PSW, PFW) for indirect address. If not, communication will be slow.

	operate
_	operate

Bu	tton	
	Object	Operate Button Color Position
	Butte	on
	œ	Set ON O Set OFF O Reverse O On Instant

➢ button

set ON	set the control cable to be ON
set OFF	set the control cable to be OFF
reverse	set the control cable to be reverse

ON instant when the button is pressed, the cable is ON at the moment. If the button is pressed again, the cable will be OFF.



Object Operate Button Color Key Type © Touch © Enter Code	Position	Password rel Level1 _
Hide Button     Normal Change Aspect     User Defined     Save Aspect	✓     Use Text       Content     ON       Font	×
ON	<ul> <li>Align Left</li> <li>Align Center</li> <li>Align Right</li> </ul>	C Align Top Align Middle Align Bottom

Key type define the button code of touch or enter. Enter key is only for OP560, MP360, MP760, XMP, XMH.

Button		X
Object       Operate       Button       Color         Key Type <ul> <li>Touch</li> <li>Enter</li> <li>Code</li> <li>Up</li> <li>Hide Button</li> <li>Up</li> <li>Object</li> <li>Operate</li> <li>Button</li> <li>Up</li> <li>Operate</li> <li>Up</li> <li>Operate</li> <li>Code</li> <li>Up</li> <li>Up</li> <li>Operate</li> <li>Code</li> <li>Up</li> <li>Operate</li> <li>Operate</li> <li>Operate</li> <li>Operate</li> <li>Operate</li> </ul> <li>Operate</li> <li>Operate<td>Position</td><td>Password</td></li>	Position	Password
	<ul> <li>Align Center</li> <li>Align Right</li> </ul>	<ul> <li>Align Middle</li> <li>Align Bottom</li> </ul>
	ОК	Cancel Apply

hide button if you want the button visible or invisible when it is operating, please choose this option. The aspect and text of button can no be operated.

utton			
Object Operate Button Color	Position		
Кеу Туре		Password	
Touch		level Level1	Ŧ
C Enter Code Up	<b>T</b>		
Hide Button			
Normal Change Aspect	🔽 Use Text		_
User Defined	Content	ON	^
O Press Save Aspect	Font	]	Ŧ
	C Alian Left	<b>A</b> 11 <b>A</b>	
ON	<ul> <li>Alighteet</li> </ul>	C Align Lop	
	Align Center	r 💿 Align Middle	
	C Align Right	C Align Bottom	
		-	

- Normal the status picture when the button display normally or after the button was released.
- $\blacktriangleright$  Press the status picture when the button is pressed.
- Change aspect modify the aspect of button. It has its own material library. You can choose it freely.
- > User defined modify the button aspect. It has its own material library.

- Save aspect save the button aspect. It is convenient when you are programming.
- Use text modify the content, font, align of button text.
   content set the content of button
   font set the size, font, type of button text.

align you can choose align type according to your requirement.



- Password set if the button needs to be protected by password. If you choose "password", please use password protection function and choose the password level.
- color

Button	
Object Operate Bu	utton Color Position
Kind Text Color Key Color Back Color	
	More

- $\blacktriangleright$  kind choose the kind of color which neef to be modified.
- $\succ$  color modify the color according to the kind.



Button			
Object Operate Button Co	olor Position		
Position	Size		
X 205	Width 75		
Y 70	Height 42		
Animal			
Horizontal			
C Vertical			
🗆 Lock 🗖 Zoc	om Ratio		

- position set the upper left point to be the coordinate point (0, 0). Set the X and Y of button.
  - X position set the X coordinate value
  - Y position set the Y coordinate value
- size set the wdth and height of button
- width (W) set the width of button
- height (H) set the height of button
- > animal set if the button can be moved

horizontal set the button in the horizontal position according to register value, modifying X coordinate value.

X coordinate value=X position+current value of register

vertical set the button in the vertical position according t register value, modifying Y coordinate value.

Y coordinate value=Y position+current value of register

- $\blacktriangleright$  lock set if the button in screen can be moved.
- Zoom ratio set if it can be zoomed when editing its size. But this function can not work now.

# 4-3-6. Lamp button

Lamp button can control and display the object status.

1. Click "'O" icon in component tool bar. Move the cursort to screen and click left mouse to set. Click right mouse or ESC button to cancel it. You can modify the size of lamp button by pulling boundary points.



- 2. double "lamp button" or choose "lamp button" and click right mouse. Choose "attribute" or " " button to set the attribute.
- object

(1) Operate object object controlled by button

utton With Lan	q
Object Gener	al Aspect Color Position
Operate Obj	ect
Station	
Device	PLC Port 🔻
VirStaNO	0 Station
-Object	
Object	M - 0
	Indirect
Watch O	bject
Station —	
Device	PLC Port 🔻
VirStaNO	0 Station 1
-Object	
Object	M - 0
	Indirect

> station

	device
	station
>	object

indirect

current device port which is communicating address of communication device set the object type and address of lamp button set the offset of current address as follow.

Bu	utton With Lamp	
	Object General Aspect Color Position	
	Operate Object Station Device PLC Port VirStaNO 0 Station 1	
	Object Object Object Object Object	

Current signal address of lamp button changed as register D0 value. M0[D0]=M[0+D0 value]

We suggest using the internal address of HMI (PSW, PFW) for indirect address. If not, the communication will be slow.

(2) Watch object

display object of lamp button

Vatch C	)bject
Device	PLC Port 👻
VirStaNO	0 Station 1
Object Object	M v 0 Indirect

When you don't choose it, the display object is as same as operate object and they can not be modified. When you choose it, you can choose the device station number and object type of watch target.

 $\succ$  station

device current device port which is communicating.

- station address of communication device
- > object set the watching object type and address of lamp button.
- ➢ Indirect set the offset of current address as follow.

Vatch C Station Device VirStaNO	PLC Port
Object Object	

Current watch object address of lamp button changes with register D0 value. M0[D0]=M[0+D0 value].

We suggest using internal address of HMI (PSW, PFW) for indirect address. If not, the communication will be slow.

general

Button Wit	th Lamp	)			
Object	Object General Aspect Color Position				
Butto	on Opera Set ON	te O Set OFF	C Reverse	C ON Instant	
Twin	kle Statu	JS			
۰	Stop	C ON	C OFF		
Twin	kle Spee	ed			
C	Slow	O Fast			
	Passwor	d			
Le	vel	Level1		~	

- Button operate it is used for "operate object" of "object" option. You can choose set ON, set OFF, reverse and ON instant
- set ON set the control cable to be ON
  - set OFF set the control cable to be OFF
  - reverse reverse the status of control cable

ON instant When you press it, the cable will be ON. When you release it, the cable wil be OFF.

- Twinkle status it is used for "watch object" of "object" option. You can choose stop, ON and OFF. When you choose twinkle, you can use "twinkle speed" to decide its speed.
  - Stop it will stop twinkling whenever the lamp is ON or OFF.
  - ON it will twinkle when the lamp is ON.
  - OFF it will twinkle when the lamp is OFF.
- password set if the "operate object" in "object" option need to protected by password. If you choose "password", please use password protection function and choose the relative password level.
- aspect

Object General Aspect Color Position				
Aspect				
⊙ ON	H	л	Change	Aspect
O OFF			User D	efined
Pressing     Release	мі амі		Save A	spect
Use Text				
C Left	C Top		Font	
💿 Center	Middle	On		~
	_			

- ON the lamp will display when the "watch object" is ON in the right box "object".
- OFF the lamp will display when the "watch object" is OFF in the right box "object".
- pressing it is used for "operate object" in "object" option, displaying aspect when pressing.
- release it is used for "operate object" in "object" option, displaying aspect when releasing.
- Change aspect modify the aspect of lamp button. It has its own material library. Customers can choose from it freely.
- ▶ User defined modify aspect of lamp button. It has user defined material library.
- Save aspect save aspect of lamp button. It is convenient when programming.
- > Use text modify the content, font align type of lamp button.
- color

Button With Lamp		23
Object General As	spect Color Position	
Kind OFF Text Color OFF Text Color ON Color OFF Color Key Color Back Color	Color	

- kind choose the type of color for lamp button
- $\succ$  color modify the color according to the kind.

position

Button With Lamp		
Object General Aspect C	olor Position	
Position	Size	
X 23(	Width 6	ō
Y 20	Height 6	ō
Animal		
Horizontal		
☐ Vertical		
Lock Zoo	om Ratio	

- position set the upper left point to be coordinate point (0, 0). Set the X and Y coordinate value of lamp button
  - X position set the X coordinate value of lamp button.
  - Y position set the Y coordinate value of lamp button.
- $\blacktriangleright$  size se the width and height of lamp button.
  - width (W) set the width of lamp button.
  - height (H) set the height of lamp button
- $\succ$  aniaml set if the lamp button can be moved.

horizontal set the lamp button in the horizontal position of HMI according to register value, modifying the X coordinate value.

X coordinate value=X position+current value of register

- vertical set the lamp button in the vertical position of HMI according to register value.
  - Y coordinate value=Y position+current value of register
- $\succ$  lock set if the lamp button in screen can be moved.
- Zoom ratio set if it can be zoomed when editing its size. But this function can not work now.

### 4-3-7. Screen jump

This component will realize the jump function between different screens. At the same time, you can set the limits of authority.

1. Click "P" icon in the component tool bar. Move the cursor to the screen and click left mouse to set. Click right mouse or ESC button to cancel it.



- 2. Double click "screen jump" or choose "screen jump" to click right mouse. Set the attribute by choosing "attribute" or "''" button.
- operate

Screen Jump	×
Operate Button Color Position	
Screen ID	
Mode	
Con	
O Validate	
KeyBoard	
KeyBoard_1 💌	

- ➢ screen ID input screen ID
- ➢ mode log on

in this mode you need't set the limit of authority and it can jump screen directly.

validate in this mode, it operate password protection. You can jump the screen only when you input correct password. It is as same as "password function" in the "button" option.

button

reen Jump			Σ
Operate Button Color Position	1		
Кеу Туре		Password	
Touch	le	vel Level1 💌	
C Enter Code Up	~	,	
Hide Button			_
Normal Change Aspect	✓ Use Text		
User Defined	Content Sc	r1 🔺	
O Press Save Aspect	Font	Ŧ	
S-ml	C Align Left	C Align Top	
Stri	Align Center	Align Middle	
	C Align Right	C Align Bottom	

key type define the button code of touch key or enter key. Enter key is only for MP, XMP, XMH.

Screen Jump		X
Operate Button Color Position	n	
C Touch		Vel Level1
Enter Code F1     Hide Button		
Normal     Change Aspect     User Defined	Use Text Content F1	*
Press _ Save Aspect	C Align Left	C Align Top
	<ul> <li>Align Center</li> <li>Align Bight</li> </ul>	Align Middle     Align Batters
		Align Bottom

hide button set if the button is visible when operating it. If you choose this option, screen jump and text can not be operated.

Hide Button		
Normal Change Aspect	🗹 Use Text	
User Defined	Content F1	<u>^</u>
C Press Save Aspect	Font	Ŧ
F1	C Align Left	C Align Top
	🖸 Align Center	🖸 Align Middle
	C Align Right	C Align Bottom

- normal screen jump button display normally or the status picture after releasing button.
- ➢ press the status picture when pressing screen jump button.
- Change aspect modify the aspect of screen jump button. It has its own material library. Customers can choose from it freely.
- User defined modify the aspect of screen jump button. It belongs to the user defined material library.
- Save aspect save the aspect of screen jump button. It is convenient for programming.
- Use text modify the text content, font and align type of screen jump button.
   set the displaying content of screen jump button.
   font set the size, font, type of screen jump button.
   align customers can choose align type according to requirement.

	sword	
level	Level1	-

password set if the screen jump button need to be protected by password. If you choose "password", please use password protection function and choose the relative password level.

#### color

Screen Jump	
Operate Button C	olor Position
Kind	Color
Text Color Key Color Back Color	
	More

 $\blacktriangleright$  kind choose the screen jump to the kind of color.

- color modify the color according the kind.
- position

Screen Jump		
Operate Button Color P	osition	
Position	Size	 
X 21(	Width	75
Y 45	Height	42
Animal		
Horizontal		
C Vertical		
🗆 Lock 🗖 Zo	oom Ratio	

- position set the upper left point as coordinate point (0, 0). Set the X and Y coordinate value of screen jump.
  - X position set the X coordinate value of screen jump.
  - Y position set the Y coordinate value of screen jump.

size set the width and height of screen jump.

width (W) set the width of screen jump.

height (H) set the height of screen jump.

 $\blacktriangleright$  animal set if the screen jump need to be moved.

horizontal set the screen jump in the horizontal position of HMI according to register value, modifying the X coordinate value.

X coordinate value=X position+current value of register

vertical set the screen jump in the vertical position of HMI according to register value,根据 modifying Y coordinate value.

Y coordinate value=Y position+current value of register;

- $\blacktriangleright$  lock set if the screen jump in screen can be moved.
- Zoom ratio set if it can be zoomed when editing its size. But this function can not work now.

### 4-3-8. Digital display

Display the register value.

1. Click the "  $\square$  " icon in the component tool bar. Move the cursor to the screen and click left mouse to set. Click right mouse or ESC button to cancel it. The size of difital box can be edited by boundary points.

# 00000

2. Double click "digital display" or choose "digital display" and click right mouse. Set the attribute by "attribute" or "<sup>(1)</sup>" button.

object

Display Digital	23
Object Display Font Color Position	
Station	
VirStaNO Station	
Object	
Object D 🗾 0	
Indirect	
Data	
Data Type Word	

➤ station

device current device port which is communicating

- station address of communication device
- > object set the object type and address of digital display.
- ➢ indirect set the offset of current address as follow

Display Digital	x
Object Display Font Color Position	
Station       Device     PLC Port       VirStaNO     0     Station       1	
Object D O PSW256	
Data Data Type Word	

Current address of digital display will change with register PSW256 value. D0[PSW256]=D[0+PSW256 value]

> data set the data type to separate word or double words.

We suggest using the internal address of HMI (PSW, PFW) for indirect address. If not, the communication will be slow.

display

Display Digital				23
Object Display Font	Color Po	sition		
Format		Bit Leng	gth	
C Dec C Hex	c	Total		5
C Float 🔍 Uns	signed	Float		0
Aspect	Align Hor		Align Ver	
00000	C Left		О Тор	
	C Cente	er	Middle	
Changing	Right	t	C Bottom	
🗌 0 Lead				

- type choose the form of digital display. It can be decimal, hexadecimal, floating number and unsigned number.
- > length total bit of digital display and length setting of decimal place.
- aspect choose if it need digital display frame and modify the aspect by "changing" button.
- Align hor it contains left, centre and right.
- > Align ver it contains top, middle and bottom.
- $\triangleright$  0 lead add 0 when the data digits fails to meet figures.

For example: the register value is 23. The setting bits of digital display are 5 and decimal place is 0. When you choose 0 lead, the digital display will be 00023.

font

Display Digital		×
Object Display Font	Color Position	1
Font		
	Setting	
String	Art	

- setting it contains font, type, size, effect, example, color, character set and so on. You can set it freely.
- > art it contains projection, brink, fill and angle. You can set it freely.

color



- ▶ kind choose digital display to modify the kind of color.
- $\triangleright$  color modify the color according to the kind.
- position

Display Digital	×
Object Display Font Co	olor Position
Position	Size
X 16(	Width 75
Y 50	Height 30
Animal	
Horizontal	
Vertical	
🗆 Lock 🔽 Zo	oom Ratio

position set the upper left point as the coordinate point(0, 0). Se the X and Y coordinate value of digital display.

X position set the X coordinate value of digital display.

Y position set the Y coordinate value of digital display.

- $\blacktriangleright$  size set the width and height of digital display.
  - width (W) set the width of digital display
  - height (H) set the height of digital display
- > animal set if the digital display need to be moved.

horizontal set the digital display in the horizontal position of HMI according to register value, modifying X coordinate value.

X coordinate value = X position+current value of register

vertical set the digital display in the vertical position of HMI according to register value, modifying Y coordinate value.

- Y coordinate value=Y position+current value of register
- > lock set if the digital display in screen can be moved.
- > Zoom ratio set if it can be zoomed when editing its size. But it can not work now.

# 4-3-9. Alarm display

Realize the limit function of data. It will twinkling when the data is over limit.

1. Click " IIII" icon in the component tool bar. Move the cursor to screen and click left mouse to set. Click the right mouse or ESC button to cancel it. The size of digital frame can be adjusted by boundary points.



2. Double click "alarm digital display" or choose "alarm digital display" and click right mouse. Set the attribute by choosing "attribute" or " "" button.

object

Display Alarm
Object Display Range Font Color Position
Station Device PLC Port v VirStaNO 0 Station
Object Object Indirect
Data Data Type Word ▼

 $\succ$  station

 $\geq$ 

device

current device port	which is c	communicating.
---------------------	------------	----------------

- station address of communication device
- object set the object type and address of alarm display
- $\blacktriangleright$  indirect set the offset of current address as follow.

Display Alarm
Object Display Range Font Color Position
Station Device PLC Port  VirStaNO 0 Station 1
Object Object D V 0 V PSW256
Data Data Type Word

Current address of alarm display will change with register value PSW256.

- D0[PSW256]=D[0+PSW256 value]
  - set the data type to separate word or double word

We suggest using internal address of HMI (PSW, PFW) for indirect address. If not, the communication will be slow.

display

data

 $\triangleright$ 

Display Alarm				×		
Object Display Range Font Color Position						
- Format		Bit Leng	gth	[		
C Dec C He	x	Total		5		
C Float 🔍 Un	signed	Float		0		
Aspect	Align Hor		Align Ver			
00020	C Left		С Тор			
	C Center		Middle			
Changing	Right		C Bottom			
🗌 0 Lead						

- format choose the form of digital display. It can be decimal, hexadecimal, floating number and unsigned number.
- > Bit length total length of digital display and length setting of decimal place.
- aspect choose if it need alarm digital display frame. You can modify the aspect by "changing" button.
- Align hor it contains left, centre and right.
- > Align ver it contains top, middle and bottom.
- $\triangleright$  0 lead add 0 when the data digital fails to meet figures

Range

Display Alarm	×
Object Display Range Font Color	Position
Max Check Value 100	
Min Check Value	

> Max

check set the alarm max of digital display. When the data is over the max, it will alarm by twinkling.

> Min

check set the alarm min of digital display. When the data is over Min, it will twinkling.

■ font

Display A	larm		<b>_</b> X
Object	Display Range	Font Color Position	
Font			
String	Setting		
	Art		
L			

- setting it contains font, type, size, effect, example, color and character set. You can set it freely.
- > art it contains projection, brink, fill and angle. You can set it freely.
color



- ➢ kind choose the alarm digital display to modify the kind of color.
- color modify the color according to the kind.
- position

 $\triangleright$ 

Display Alarm			X
Object   Display   Range   Font	Color	Position	
Position	Size		
X 31(	Width	75	
Y 20	Height	30	
Animal			
T Horizontal			
C Vertical			
🗆 Lock 🔽 Zoon	n Ratio		

position set the upper left point as the coordinate point(0, 0). Set the X and Y coordinate value of alarm digital display.

X position set the X coordinate value of alarm digital display.

Y position set the Y coordinate value of alarm digital display.

size set the width and height of alarm digital display.

width (W) set the width of alarm digital display.

height (H) set the height of alarm digital display.

➤ animal set if the alarm digital display need to be moved.

horizontal set the alarm digital display in the horizontal position of HMI according to register value, modifying X coordinate value.

X coordinate value=X position+current value of register

Vertical set the alarm figital display in the vertical position of HMI according to register value, modifying Y coordinate value.

Y coordinate value=Y position+current value of register

- lock set if the alarm digital display in screen can be moved.
- Zoom ratio set if it can be zoomed when editing its size. But this function can not work now.

#### 4-3-10. Text display

Display the texts of register.

1. Click the "**ED**" icon in the component tool bar. Move the cursor in screen and click left mouse to set. Click right mouse or ESC button to cancel it. The size of data frame can be adjusted by boundary points.



2. Double click "text display" or choose "text display" and click right mouse. Set the attribute by choosing "attribute" or " " button.

One word (WORD) is consisted of two characters. One character occupies a bit. One register is a character. So you can change the displaying content of character by setting register number (displaying length). For example, register number is set to be one. It will display two characters. Character is showed by ASCII code and one character ASCII code is two bits hexadecimal.

#### object

Display Text	23
Object Display Font Color Position	
Station Device PLC Port VirStaNO 0 Station 1	
Object D V Object Object Object	
Data Register 1	

➤ station

device current device port which is communicating.

- station address of communication device
- > object set the object type and address of text display.
- ➢ indirect set the offset of current address as follow.

Display Text	X
Object Display Font Color Position	
Station Device PLC Port v VirStaNO 0 Station 1	
Object Object D V 0 V PSW256	
Data Register 1	

Current address of text display will change with register value PSW256. D0[PSW256]= D[0+PSW256 value]

data set the length of text display. One register will display two characters

We suggest using internal address of HMI (PSW and PFW) for indirect address. If not, the communication will be slow.

■ display

 $\triangleright$ 

 $\triangleright$ 

isplay Text	<b>X</b>
Object Display For	Color Position
Aspect	Change
Align Hor	Align Ver
C Left	С Тор
Center	• Middle
C Right	C Bottom

- aspect choose the aspect of text display frame and you can modify the aspect by "changing" button.
- > Align hor it contains left, centre and right.
- Align ver it contains top, middle and bottom.

■ font

Display Text	×
Object Display Font	Color Position
- Font	
	Setting
String	
	Art

- setting it contains font, type, size, effect, example, color, character set and so on. You can set it freely.
- > art it contains projection, brink, fill, angle and so on. You can set it freely.
- color

Display Text		x
Object Display Font	Color Position	,
Kind Aspect Color Back Color Fore Color	Color	
	More	

- $\succ$  kind choose the text display to mdify the kind of color.
- $\succ$  color modify the color according to the kind.
- position

Display Text			×
Object Display Font Colo	Position	]	
Position	Size		
X 15(	Width		75
Y 105	Height		30
Animal			
Horizontal			
C Vertical			
🗆 Lock 🔽 Zoon	m Ratio		

- position set the upper left point to be coordinate point(0, 0). Set the X and Y coordinate value of text display.
  - X position set the X coordinate value of text display.
  - Y position set the Y coordinate value of text display.
- size set the width and height of text display
  - width (W) set the width of text display
  - height (H) set the height of text display
- $\triangleright$  animal set if the text display need to be moved.

horizontal set the text display in the horizontal position of HMI according to register value, modifying X coordinate value.

X coordinate value=X position+current value of register

vertical set the text display in the vertical position of HMI according to register value, modifying Y coordinate value.

Y coordinate value=Y position+current value of register

- lock set if the text display in screen can be moved.
- Zoom ratio set if it can be zoomed when editing its size. But this function can not work now.

#### 4-3-11. Digital input

Input digital value through digital keyboard.

1. Click "23" icon in the component tool bar. Move the cursor to screen and click left mouse to set. Click right mouse or ESC button to cancel it. You can also set many components of digital input. You can adjust the size of input frame by boundary points.

Temperature	00000	Ĉ
Pressure	00000	MPa

- 2. Double click "digital input" or choose "digital input" and click right mouse. Set the attribute by choosing "attribute" or "🗳" button.
- object
- (1) operate object object register of digital input

Digital Input	X
Object Display Input Font Color Position	
Operate Object       Station       Device       PLC Port       VirStaNO       Object       Object       Indirect	
Data Data Type Word	
Watch Object       Station       Device       PLC Port       VirStaNO       0       Station       1	
Object Object D Indirect	

- $\succ$  station
  - device current device port which is ommunicating
- station address of communication device
- ➢ object set the object type and address of digital input
- ➢ indirect set the offset of current address as follow

Digital In	put
Object	Display Input Font Color Position
	erate Object
	tation
	Device PLC Port -
	/irStaNO 0 Station 1
	bject
	)bject D V 0
	PSW256

Current address of digital input will change with register value PSW256. D0[PSW256]= D[0+PSW256 value].

> data set the data type to be WORD or D WORD.

# We suggest using internal address of HMI (PSW and PFW) for indirect address. If not, the communication will be slow.

(2) watch object when you are choosing, the digital input box will display the data of register.

Station -	Dbject
VirStaNO	O Station 1
Object —	
Object	D • 0

➤ station

device

current device port which is communicating

- station address of communication device
- ➢ object set the watch object type and address of digital input
- > indirect set the offset of current address as follow

Vatch C	Dbject
Device	PLC Port 👻
VirStaNO	0 Station 1
-Object	
Object	D 🔻 0
	PSW256

Current watch object address of digital input will change with register value PSW256 D0[PSW256]=D[0+PSW256 value].



We suggest using internal address of HMI (PSW and PFW) for indirect address. If not, the communication will be slow.

display

Digital Input				×
Object Display Input	Font Colo	r Positio	n	
Format		-Bit Lengtł	ı———	
C Dec C Hex	c	Total		5
C Float 🔍 Uns	signed	Float		0
Aspect	Align Hor		Align Ver	
88888	C Left		○ Тор	
	C Center		• Middle	
Changing	Right		C Bottom	
🗌 0 Lead	Password	ł		

- ۶ format choose the format of digital display. It can be Dec, Hex, float and unsigned.
- Bit length total bit of digital display and the length setting of float.  $\triangleright$
- ≻ aspect choose if you need digital input frame and you can modify the aspect by "changing" button.
- $\triangleright$ Align hori it contains left, centre and right.
- ≻ Align vert it contains top, middle and bottom.
- 0 lead ≻ add 0 when data digits fails to meet figures
- data is in the form of password. It will display "\*" ⊳ password
- input

Digital Input	X
Object Display Input Password Level Level1	Font Color Position
Max Check	Min Check
▼ Popup KeyBoard KeyBoard_1 ▼	$\begin{array}{c c c c c c c c c c c c c c c c c c c $

 $\succ$  password set if the digital input need to be protected by password. If you choose "password", please use the password protection function. At the same time, please choose the relative password level.

> Notify make the target relay to be on after inputting. You can reset it manually.

Setting of the range the limit data of digital input.

> Popup keyboard when you choose it, a small keyboard will appear. If not, the keyboard will not appear.

■ font

Digital Input	
Object Display Input	Font Color Position
Font	
	Setting
String	
	Art
	]

setting it contains font, type, size, effect, example, color, character set and so on. You can set it freely.

- > art it contains projection, brink, fill and angle, etc. you can set it freely.
- color

Digital Input	×
Object     Display     Input     Font     Color       Kind     Color       Aspect Color     Back Color       Text Color     More	

- ➢ kind choose digital input to modify the kind of color
- $\triangleright$  color modify the color according to the kind.
- position

 $\triangleright$ 

Digital Input			×
Object Display Input For	nt Color	Position	
Position	Size		
X 245	Width	75	
Y 50	Height	30	
Animal			
Horizontal			
Vertical			
🗆 Lock 🔽 Zoo	om Ratio		

- kind set the upper left point to be coordinate point (0, 0). Set the X and Y coordinate value of digital input.
  - X position set the X coordinate value of digital input.
  - Y position set the Y coordinate value of digital input
  - size set the width and height of digital input.
- width (W) set the width of digital input
  - height (H) set the height of digital input
- $\succ$  animal set if the digital input need to be moved.
  - horizontal set the digital input in the horizontal position of HMI according to register value, modifying the X coordinate value.

X coordinate value=X position+current value of register

vertical set the digital input in the vertical position of HMI according to register value, modifying Y coordinate value.

Y coordinate value=Y position+current value of register

Lock set if the digital input in screen can be moved.

Zoom ratio set if it can be zoomed when editing its size. But this function can not work now.

3. Enter the off-line status by component "<sup>20</sup>". When you don't set password level in the processing, please press he digital input component and small keyboard will appear. The simulation operating is as follow.



After inputting data, please press "ENT" to confirm. If you need to input data again, press"CLR" to clear inputting box. If you don't need to modify and you want to exit, please press "ESC".

#### 4-3-12. ASCII code input

Input ASCII code for target register by small keyboard. It is corresponded with character.

1. Click " AB" icon in the component tool bar. Move the cursor to the screen and click left mouse to set. You can click right mouse or ESC button to cancel it. You can set many ASCII input component. You can also adjust the size of input frame by boundary points.



- 2. Double click "ASCII input" or choose the "ASCII input" and click right mouse. Set the attribute by choosing "attribute" or " "" button.
- object

ASCII Input	×
Object Display Font Color Po Station Device PLC Port 💌	usition
VirStaNO 0 Statio	
Data Register 1	lirect

station  $\triangleright$ 

 $\triangleright$ 

device	current port which is communicating.
station	address of communication device.

- object set the object type and address of text input set the offset of current address as follow.
- indirect  $\triangleright$

ASCII	Input	
Obj	ect Displa	y Font Color Position
	Station Device VirStaNO	PLC Port 0 Station 1
	Object Object	D PSW256
	Data Register	1

Current address of text input will change with register value PSW256 D0[PSW256]=D[0+PSW256 value]

set the length of text input. One register can display two characters  $\triangleright$ data

We suggest using the internal address of HMI (PSW and PFW) for indirect address. If not, the communication will be slow.

display

ASCII Input				
Object Display Font	Object Display Font Color Position			
Aspect	Align Hor	Align Ver		
Text	• Center	Middle		
Change	C Right	C Bottom		
Password Level Level1	<u> </u>	Notify		
Popup KeyBoard KeyBoard_1				

- Aspect choose if you need text input frame and you can modify the aspect by "changing" button.
- > Align hor it contains left, centre and right.
- Align ver it contains top, middle and bottom.
- password set if the text input need to be protected by password. If you choose "password", you need to use password protection. At the same time choose the relative password level.
- > notify trigger the target relay to be on after inputting. You can reset it manually.
- Popup keyboard when you choose it, small keyboard will appear. If not, the keyboard will not appear.



ASCII Input	
Object Display Font	Color Position
Font	
	Setting
String	
	Art

- setting it contains font, type, size, effect, example, color and character set. You can set it freely.
- > art it contains projection, brink, fill, angle and so on. You can set it freely.
- color

ASCII Input		×
Object Display For	nt Color Position	
Kind Aspect Color Back Color Text Color	Color	

- $\succ$  kind choose the text input to modify the kind of color
  - color modify the color according to the kind.
- position

 $\triangleright$ 

ASCII Input			×
Object Display Font Colo	or Position	1	
Position	Size		- I
X 33	Width	75	
Y 85	Height	30	
Animal			
Horizontal			
C Vertical			
🗆 Lock 🔽 Zoon	m Ratio		

 $\succ$  position set the upper left point to be coordinate point(0, 0). Set the X and Y

coordinate value of text input.

 $\triangleright$ 

 $\geq$ 

- X position set the X coordinate value of text input.
- Y position set the Y coordinate value of text input.
- Size set the width and height of text input.
  - width (W) set the width of text input.
- height (H) set the height of text input.
- animal set if the text input need to be moved.

horizontal set the text input in the horizontal position of HMI according to register value, modifying the X coordinate value.

X coordinate value=X position+current value of register

vertical set the text input in the vertical position of HMI according to register value, modifying the Y coordinate value.

Y coordinate value=Y position+current value of register

- $\blacktriangleright$  lock set if the text input in screen can be moved.
- > Zoom ratio set if it can be zoomed when editing its size. But this function can not work.
- 3. Enter the off-line simulation by the component "<sup>3</sup>". If you don't set password level, please press the component of text input. Then the keyboard of text input will appear as follow.



Input character directly by keyboard button. Press "ESC" button to exit. Press "<-" to cancel it. Press "ENT" to confirm.

#### 4-3-14. Set data

Do arithmetic calculation for register data.

1. Click "<sup>123</sup>" icon in the component tool bar. Move the cursor to screen and click left mouse to set. You can click right mouse or ESC button to cancel it.



2. Double click "set data" or choose "set data" and click right mouse. You can set attribute by choosing "attribute" or "<sup>1</sup>" button.

object

et Data
Object Operate Button Color Position
Station
Device PLC Port -
VirStaNO 0 Station
Object
Object D 🔽 0
☐ Indirect
Data
Data Type Word 💌

station
 device

current device port which is communicating. address of communiation device set the object type and address of setting data.

objectIndirect

station

set the offset of current address as follow.

Set Da	ata				
Obje	ect Operat	e Button C	Color   Positi	on	
	Station Device VirStaNO	PLC Port	0 Station	1	
	Object	D	► ▼ _PSW	0	
	Data Data Type	Word	•		]

Current address of set data changed with register value PSW256. D0[PSW256]= D[0+PSW256 value]

data set the word or D word of data type

We suggest using internal address of HMI (PSW and PFW) for indirect address. If not, the communication will be slow.

operate

⊳

Set Data	
Object Operate Button Color Position	
- Function	
0+ 0- 0* 0/	Constant
Operand 0	
Format	
• Dec O Hex O Float	C Unsigned

- $\triangleright$ function data operation of object register add object register value + operand= object register value object register value - operand= object register value substract object register data X operand=register data multiply division object register data -operand=register data constant operand is the data of current object register  $\triangleright$ format it contains decimal, hexadecimal, float and unsigned.

button

- X Set Data Object Operate Button Color Position Кеу Туре Password Touch level Level1 ÷  $\overline{\mathbf{v}}$ C Enter Code Hide Button Normal Change Aspect Use Text Content Set æ. User Defined Font Save Aspect Press O Align Left Align Top Set Align Center Align Middle Align Right Align Bottom
- Key type define the button code of touch key or enter key. Enter key is only for OP560, MP360, MP760, XMP, XMH.
- Hide button set if the button can be visible when it is operating. Choose this option. The aspect and text cannot be operated.

→ Hide Button		
Normal Change Aspect	Use Text	
User Defined	Content Set	*
C Press Save Aspect	Font	Ŧ
Set	C Align Left	C Align Top
	Align Center	💿 Align Middle
	C Align Right	C Align Bottom

- > normal set the normal display or the status picture after releasing the button.
- $\blacktriangleright$  press set the status picture when pressing the button.
- Change aspect set the aspect. It belongs to software's material library. You can choose from it freely.
- > User defined modify the data to set aspect. It belongs to user defined material library.
- Save aspect save data to set aspect. It is convenient when you are programming.
- ➢ font modify data to set the content, font and align type of text.
  - content set the displaying content
  - font set the size, font and type of text.
  - align choose the align type according to your requirement.
- password set if it need to be protected by password. If you choose password, please use password pretection. At the same time choose the password level.
- color



- $\blacktriangleright$  kind modify the kind of color.
- $\succ$  color modify the color according to the kind.
- position

Set Data	
Object Operate Button Co	olor Position
Position	Size
X 21(	Width 75
Y 100	Height 42
Animal	
Horizontal	
Vertical	
🗆 Lock 🗖 Zoo	om Ratio

- position set the X and Y coordinate value.
   X position set the X coordinate value.
   Y position set the Y coordinate value.
- $\succ$  size modify the data to set the width and height.
- width (W) modify data to set width
- height (H) modify data to set height
- ➤ animal set if it can be moved.

horizontal set in the horizontal position of HMI according to register value, modifying X coordinate value.

X coordinate value=X position+value of current register

vertical set in the vertical position of HMI according to register value, modifying Y coordinate value.

Y coordinate value=Y position+value of current register

- $\succ$  lock set if the set data in the screen can be moved.
- Zoom ratio set if it can be zoomed when editing its size. But this function can not work now.

#### 4-3-15. Digital keyboard

It is related to digital input component. When you don't choose "pop-up keyboard", digital keyboard will not appear in the process of input number and you need to add digital keyboard manually.

Click " " con in the component tool bar. Move the cursor in the screen and click left mouse to set. Click right mouse or ESC button to cancel it.



The digital keyboard will connect to digital input button automatically. Press "ENT" key will finish the digital input. You only need to set one digital keyboard for all the digital input buttons.

Only one digital input component can be used when there are many digital input buttons. Digital keyboard will connect to them automatically.



Group		×
Position		
Position	Size	
X 15(	Width	116
Y 125	Height	186
Animal		
T Horizontal		
☐ Vertical		
🗆 Lock 🗖 Zo	oom Ratio	

position set the upper left point in screen to be coordinate point(0, 0). Set the X and Y coordinate value.

X position set the X coordinate of digital keyboard.

Y position set the Y coordinate value of digital keyboard.

size set the width and height of digital keyboard

- width (W) set the width of digital keyboard
- height (H) set the height of digital keyboard
- > animal set if the digital keyboard need to be moved

horizontal set the digital keyboard in the horizontal position of HMI according to register value, modifying X coordinate value.

X coordinate value=X position+current value of register

vertical set the digital keyboard in the vertical position of HMI according to register value, modifying Y coordinate value.

Y coordinate value=Y position+current value of register

- lock set if the digital keyboard in screen can be moved.  $\triangleright$
- Zoom ratio set if it can be zoomed when editing its size. but this function can not work now.

## 4-3-16. ASCII keyboard

position

ASCII keyboard is corresponded to ASCII input component. When you don't choose "pop-up keyboard", ASCII keyboard will not appear. You need to add ASCII keyboard manually. Click the "main icon in the component tool bar. Move the cursor in screen and click left mouse to set. Click right mouse or ESC button to cancel it.



Only one ASCII input component can be used when there are many text input boxes

Group			23
Position			
Position	Size		
X 45	Width	3	11
Y 50	Height	10	51
Animal			
Horizontal			
C Vertical			
🗆 Lock 🗖 Z	oom Ratio		

set the upper left point to be coordinate point(0, 0). Set the X and Y coordinate value of  $\triangleright$ ASCII keyboard.

X position set the X coordinate value of ASCII keyboard.

in editing screen. ASCII keyboard will connect to it automatically.

	Y position	set the Y coordinate value of ASCII keyboard.
$\triangleright$	size	set the width and height of ASCII keyboard.
	width (W)	set the width of ASCII keyboard
	height (H)	set the height of ASCII keyboard
$\triangleright$	animal	set if the ASCII keyboard need to be moved.
	horizontal	set the ASCII keyboard in the horizontal position of HMI according to register
	value, modif	ying the X coordinate value.
		X coordinate value=X position+current value of register
vert	ical set	the ASCII keyboard in the vertical position of HMI according to register value,
ma	odifying the Y	coordinate value.
		Y coordinate value=Y position+current value of register
$\triangleright$	lock	set if the ASCII keyboard in screen can be moved.

Zoom ratio se if it can be zoomed when editing its size. But this function can not work now.

#### 4-3-17. User input

The keyboard is formed by user input components. Every button value is corresponded to an ASCII code. Then the input data will be separated. Customer can use defined input keyboard of this component.

1. Click "**1**" icon in component tool bar. Move the cursor in the screen and click left mouse to set. Click right mouse or ESC button to cancel it.



2. Double click the "user input" or choose "user input" and click right mouse. Set the attribute by choosing "attribute" or "<sup>1</sup>" button.

operate

User Input	
Operate Button Color Position	
ASCII Code 0x 31	

➢ input input relative ASCII code of button

The following are common ASCII code value of buttons.

1 - 0X31	2 - 0X32	3 - 0X33	4 - 0X34	5 - 0X35
6 — 0X36	7 - 0X37	8 - 0X38	9 — 0X39	0 - 0X30
ESC – 0X1D	CLR - 0X7F	ENT - 0XD		

button

User Input		<u> </u>
Operate Button Color Position	ן ו	
Key Type       Image: Touch       Image: Touch <td>lev</td> <td>Password</td>	lev	Password
Hide Button		
Normal Change Aspect     User Defined     O Press _ Save Aspect	I Use Text Content 1 Font	*
1	O Align Left	C Align Top
	Align Center	Align Middle
	C Align Right	C Align Bottom
© Press _ Save Aspect	Content 1 Font C Align Left Align Center C Align Right	C Align Top Align Middle Align Bottom

- Key type define the key code of touch or enter key. Enter key is only for OP560, MP360, MP760, XMP, XMH.
- hide button if it is visible when the button is operating. Choose this option. User input aspect and text cannot be operated.

Normal Change Aspect     User Defined     Save Aspect	✓ Use Text     Content     1	۸ ۳
	C Align Left	C Align Top
	C Align Center	🖸 Align Middle
	C Align Right	C Align Bottom

- > normal the status picture after normal display or releasing button of user input.
- > press displaying status picture when pressing the user button.
- Change aspect modify the aspect of user input.it belongs to its own material library. You can choose from it freely.
- ▶ User defined modify the aspect of user input. It belongs to user defined material library.
- Save aspect save the aspect of user input. It is convenient for programming.
- ➢ Use text modify the content, font and align type of user input.
  - content set the displaying content of user input.
    - font set the size, font and type of user input text.
    - align you can choose align type according to your requirement.

- password if the user input need to be protected by password. If you choose "password", please use password protection. At the same time choose the relative password level.
- color

User Input		×
Operate Button	Color Position	
Kind Text Color Key Color Back Color		
	More	

- ➢ kind choose the user input to modify the kind of color
- $\triangleright$  color modify the color according to the kind.
- position

User Input		×
Operate Button Color	Position	
- Position	Size	1
X 17(	Width 35	
Y 80	Height 35	
Animal		
Horizontal		
Vertical		
🗆 Lock 🗖	Zoom Ratio	

- position set the upper left point in screen to be coordinate point (0, 0). Set the X and Y coordinate value of user input.
  - X position set the X coordinate value of user input
  - Y position set the Y coordinate value of user input
- ➢ size set the width and height of user input
  - width (W) set the width of user input
  - height (H) set the height of user input
- $\succ$  animal set if the user input need to be moved.

horizontal set the user input in the horizontal position according to register value, modifying X coordinate value.

X coordinate value=X position+current value of register

vertical set the user input in the vertical position according to register value, modifying Y coordinate value.

Y coordinate value=Y position+current value of register

- $\blacktriangleright$  lock set if the user input in screen can be moved.
- Zoom ratio set if it can be zoomed when editing its size. But this function can not work now.

# 4-3-18. Bar

This function will display the bar of object data. It is direct to show it. It is usually for analog quantity such as pressure change, level change and temperature change. As the following picture, it shows the relation between current value and full scale value.



1. Click the " $\blacksquare$ " icon in component tool bar. Move the cursor to screen and click left mouse to set. Click right mouse or ESC button to cancel it. You can also edit the size by adjusting boundary points.



2. double click "bar" or choose "bar" and click right mouse. Set the attribute by choosing "attribute" or " " button.

#### object

Bar	×
Object Stick Color Position	
- Station	- II
Device PLC Port -	
VirStaNO 0 Station	
-Object	-
Object D 🗸 0	
Indirect	
Data	-
Data Type Word	

- station
   device current device port which is communicating.
   station
   address of communiation device
   object set the object type and address of bar
- object set the object type and address of balance
   indirect set the offset of current address as for
  - indirect set the offset of current address as follow.

Bar Object Stick	Color Position
Station Device VirStaNO	PLC Port
Object Object	D PSW256
Data Data Type	Word

Current address of bar will change with register PSW256. D0[PSW256]=

D[0+PSW256 value]

 $\succ$  data set the data type to be word or D word.

We suggest using internal address of HMI (PSW, PFW internal address type) for indirect address. If not, the communication will be slow.

bar

Bar	×
Object Stick Color Positi	ion ✓ Scale Upper Limit% 90 Lower Limit% 10 Main Scale 3 Slave Scale 1
Aspect	Data
Top/Right	Format Dec 💌
O Bottom/Left	Max 100
Mode	Min 0

- previewaspect
- display simple picture of current bar aspect setting of bar

For vertical bar, choose top or bottom type. For horizontal bar, choose the left or right type.

Transform the horizontal and vertical display direction by "mode" button. You can also choose aspect of bar.

- Scale set the centigrade of upper limit and lower limit. Set the main scale and slave scale.
- Data set the data format, max and min value.
- color



 $\blacktriangleright$  kind choose the bar to modify the kind of color.

color modify the color according to the kind.

position

Bar			×
Object Stick Color Po	sition		
Position	Size		_
X 2	Width	30	
Y 215	Height	125	
Animal			
Horizontal			
Vertical			
🗆 Lock 🗖 Za	oom Ratio		

position set the upper left point to be coordinate point (0, 0). Set the X and Y coordinate value of bar.

X position set the X coordinate value of bar

- Y position set the Y coordinate value of bar
- size set the width and height of bar
  - width (W) set the width of bar
  - height (H) set the height of bar
- $\succ$  animal set if the bar need to be moved.

horizontal set the bar in the horizontal position of HMI according to register value, modifying X coordinate value.

X coordinate value=X position+current value of register

vertical set the bar in the vertical position of HMI according to register value, modifying Y coordinate value.

Y coordinate value=Y position+current value of register

- $\blacktriangleright$  lock set if the bar in screen can be moved.
- Zoom ratio set if it can be zoomed when editing its size. But this function can not work now.

#### 4-3-19. Dynamic map

Switch the pictures according to register value. The range of register value and the status of picture are 0 to 15.



1. Click the "" icon in the component tool bar. Move the cursor to the screen and click left mouse to set. Click right mouse or ESC button to cancel it. You can edit its size by adjusting the boundary points.



2. Double click "dynamic map" or choose "dynamic map" and click right mouse. Set the attribute by choosing "attribute" or """ button.

object

Dynamic Map
Object Map Position
Station Device PLC Port VirStaNO 0 Station
Object D V O
Data Data Type Word

 $\succ$  station

 $\triangleright$ 

device current device port which is communicating.

- station address of communication device.
  - object set the object type and address of dynamic map.
- ➢ indirect

rect set the offset of current address as follo	W.
---	----

Dynamic Map	x
Object Map Position	
Station Device PLC Port v VirStaNO 0 Station 1	
Object D V 0 PSW256	
Data Type Word	

Current address of dynamic map change with register PSW256.

D0[PSW256]= D[0+PSW256 value]

> data set the data format to be word or D word.

We suggest using internal address of HMI (PSW and PFW internal address type) for indirect address. If not, the communication will be slow.

picture

Dynamic Map		X
Object Map	Position	1
Picture0 Picture1 Picture2 Picture3 Picture4 Picture5 Picture6 Picture7 Picture8 Picture9 Picture10 Picture11 Picture12		Changing

From picture 0 to picture 15. It is corresponed to "object" register value.  $(0\sim15)$  choose the object picture number. You can choose the object picture by "changing" (bmp and jpg picture).

#### position

 $\geq$ 

Dynamic Map		×
Object Map Position		,
Position	Size	
X 25(	Width	32
Y 55	Height	32
Animal		
T Horizontal		
Vertical		
🗆 Lock 🗖 Zoo	om Ratio	

position set the upper left point to be the coordinate point (0, 0). Set the X and Y coordinate value of dynamic map.

X position	set the X coordinate value of dynamic map.
Y position	set the Y coordinate value of dynamic map.

size set the width and height of dynamic map.

width (W) set the width of dynamic map

height (H) set the height of dynamic map

> animal set if the dynamic map need to be moved.

horizontal set the dynamic map in the horizontal position of HMI according to register value, modifying the X coordinate value.

X coordinate value=X position+current value of register

vertical set the dynamic map in the vertical position of HMI according to register value, modifying the Y coordinate value.

Y coordinate value=Y position+current value of register

- lock set if the dynamic map in screen can be moved.
- Zoom ratio set if it can be zoomed when editing its size. But this function can not work now.

# 4-3-20. Call window

 $\geq$ 

Object window is called by controlling the ON/OFF of auxiliary relay.



M0=1, call window ID60001

1. Click "<sup>[]</sup>" icon in the component tool bar. Move the cursor to the screen and click left mouse to set. Click right mouse or ESC button to cancel it. Pop-up window will be based on its position.



2. Double click "call window" or choose "call window" and click right mouse. Set the attribute by choosing "attribute" or " "" button.

object

Call Window	x
Object Window Position	
Station Device PLC Port v VirStaNO 0 Station	
Object Object M V O Indirect	

#### $\succ$ station

device	current device por	t which is co	ommunicating
--------	--------------------	---------------	--------------

- station address of communication device
- > object set the trigger signal object type and address of call window.
- > indirect set the offset of current address as follow.

Call Window	×
Object Windo	w Position
Station	PLC Port 0 Station 1
Object	

Current trigger signal address of call window will change with register D0. M0[D0]=M[0+D0 value]

When the auxiliary relay is ON, the called window will appear in screen. When it is OFF, this window will be closed. We suggest using internal address of HMI (PSW and PFW internal address type) for indirect address. If not, the communication will be slow.

window	
	Call Window
	Object Window Position
	Window Window ID: 60001
window	set the call window ID

position

Call Window			×
Object Window Position			
Position	Size		_
X 18(	Width	80	
Y 90	Height	16	
Animal			
Horizontal			
C Vertical			
🗌 Lock 🔲 Zoom Ratio			

- Position set the upper left point to be the coordinate point (0, 0). Set the X and Y coordinate value of call window.
  - X position set the X coordinate value of call window

Y position set the Y coordinate value of call window

Call window component is invisible after downloading to the HMI. So its size can not be edited.

Animal set if the call window in screen can be moved.

horizontal set the call window in the horizontal position of HMI according to register value, modifying the X coordinate value

X coordinate value=X position+current value of register

vertical set the call window in the vertical position of HMI according to register value, modifying the Y coordinate value.

Y coordinate value=Y position+current value of register

- $\blacktriangleright$  lock set if the call window in screen can be moved.
- Zoom ratio set if it can be zoomed when editing its size. But this function can not work now.

# 4-3-21. Window button

Direct close or open the window without the controlling of auxiliary relay.

1. Click "□" icon in the component tool bar. Move the cursor to screen and click left mouse to set. Click right mouse or ESC button to cancel it. You can eidt its size by boundary points.



2. Double click the "window button" or choose "window button" and click right mouse. Set the attribute by choosing "attribute" or "'<sup>1</sup>)" button.

operate

Window	Button		
Operat	e Buttor	n Color	Position
r⊟ C Wi	Current W indow ID	indow —	60001
- Fun Ty	ction — pe	Open Wind	ow 💌
		C Hide	Show
Pos	ition		
X:		150	
Y:		60	

- Current window when you are choosing, please aim at theoperation of current window.
   Window ID object window ID of inputting target.
- function choose the function for window operation
   type choose the current function to open window, close window or window

status. You can choose the window status as hide or show.

- > Position pop-up window is in the coordinate position of editing screen.
  - X set the X coordinate value of pop-up window
  - Y set the Y coordinate value of pop-up window

Button

Operate Button Color Position	1		
Кеу Туре	<b>_</b>	Password	
🖸 Touch	le	evel Level1	-
C Enter Code	<b>_</b>	,	_
Hide Button			
Normal Change Aspect User Defined      Press _ Save Aspect	Use Text Content Font	pen	*
Open	O Align Left	C Align Top	
Open	Align Center	Align Middle	
	C Alian Right	C Alian Bottom	

- Key type define the code of touch key or enter key. The enter key is only for OP560, MP360, MP760, XMP, XMH.
- Hide button set if it can be visible when button is operating. If you choose this option, the operation of window button aspect and text will be forbidden.

Hide Button		
Normal Change Aspect	🔽 Use Text	
User Defined	Content Ope	n 🔺
C Press _ Save Aspect	Font	$\overline{\mathbf{v}}$
Open	C Align Left	C Align Top C Align Middle
	C Align Right	C Align Bottom

- normal displaying status picture after the window button display normal or releasing window button.
- > press the displaying status picture when the window button is pressed.
- Change aspect modify the aspect of window buton. It belongs to its own material library. You can choose from it freely.
- User defined modify the aspect of window button. It belongs to user defined material library.
- Save aspect save the aspect of window button. It is convenient for programming.
- > Text modify the content, font and align type of window button text.
  - content set the display content of window button.
  - font set the size, font and type of window button font.
  - align you can choose the align type according to your requirement.

- Password set if the window button can be protected by password. If you choose "password", use password protection. At the same time choose the relative password level.
- color

Window Button		×
Operate Button Kind Text Color Key Color Back Color	Color Position	
1		

- $\blacktriangleright$  kind choose the window button to modify the kind of color.
- color modify the color according to the kind.
- position

 $\triangleright$ 

Window Button		×
Operate Button Color	Position	
Position	Size	_
X 15(	Width 50	
Y 60	Height 30	
Animal		
🔲 Horizontal		
C Vertical		
🗆 Lock 🗖 Z	oom Ratio	

- position set the upper left point to be the coordinate point (0, 0). Set the X and Y coordinate value of window button.
  - X position set the X coordinate value of window button.
  - Y position set the Y coordinate value of window button.
- ➢ size set the width and height of window button
  - width (W) set the width of window button
  - height (H) set the height of window button
  - animal set if the window button need to be moved.

horizontal set the window button in the horizontal position of HMI according to register
value, modifying the X coordinate value.

X coordinate value=X position+current value of register

vertical set the window button in the vertical position of HMI according to register value, modifying the Y coordinate value.

Y coordinate value=Y position+current value of register

- $\blacktriangleright$  lock set if the window button in the screen can be moved.
- Zoom ratio set if it can be zoomed when editing its size. But this function can not work now.

For example: open and close window ID60001.

Open window 60001



Open	Close



#### 4-3-22. Down recipe

Recipe is consisted of a group of similar type material. Because these materials are similar, you can edit them to be a group of recipe. It is convenient to deliver to object device. It will control it effectly. So when users find a group of similar materials, you can use this function to deliver the materials effectly and correctly.

In the pratical application, because the HMI has large data storage space and at the same time it has the conveniences of displaying, users can use the recipe of HMI to control PLC. You can control the read and save function of PLC materials by the recipe function. They are upload and download function as the following picture.

Recipe group	Download	Object device such as PLC
Group 1 XXX XXX XXX		Group 1 XXX XXX XXX
Group 2 XXX XXX XXX	Unload	Group 2 XXX XXX XXX
Group 3 XXX XXX XXX		Group 3 XXX XXX XXX

So the recipe function meets the requirement of industry control, transfer the data between device data and recipe data library. Down recipe function can transfer from recipe data library to device data section.

1. Click the "��" icon in the component tool bar. Move the cursor to the screen and click left mouse to set. Click right mo use or ESC button to cancel it. You can also edit its size by adjusting boundary points.



2. Double click "Down recipe" or choose the "Down recipe" and click right mouse. Set the attribute by choosing "attribute" or "🖆" button.

object

Down Recipe	x
Object Recipe Button Color Position	
Device Data       Station       Device       PLC Port       VirStaNO       Object	
Object D Indirect	
Recipe Data       Object       Object       PFW       256	
Data Recipe 1	

> device data the address information of data download object register.

- > station set the connecting device and station
  - device current device port which is communiating
- station address of communication device
- ➢ object address and serial number of download object register.
- $\succ$  indirect set the offset of current address as follow.

Down Recipe		×
Object Recipe	Button Color Position	
Device Data	PLC Port	
Object Object	D V 0 PSW256	

Device data address of current recipe download will change with register PSW256. D0[PSW256]=D[0+PSW256data]

### We suggest using internal address (PSW and PFW internal address type) for indirect

#### address. If not, the communication will be slow.

- > Recipe data address and serial number of HMI internal data register.
- data set the recipe of recipe data according to actual data capacity.
- recipe

Down Recip	
Object R	Recipe Button Color Position
Count	

count the total group of recipe data.

HMI has PSW and PFW registers. PSW is not power-loss retentive register and the PFW is power-loss retentive register. PFW is suitable for recipe data. Save the recipe data in a group of registers, then choose the recipe by reference number PSW40. It can be input only after PSW40 have been opened in advanced function.



#### button

Down Recipe		x
Object Recipe Button Color	Position	
Кеу Туре		Password
C Touch		level Level1 💌
C Enter Code	<b>_</b>	
Hide Button		
Normal Change Aspect User Defined      Press _ Save Aspect	Use Text Content Font	Down
Down	<ul> <li>Align Left</li> <li>Align Center</li> <li>Align Right</li> </ul>	C Align Top Align Middle Align Bottom

- key type define the key code of touch key or enter key. Enter key is only for OP560, MP360, MP760, XMP, XMH.
- hide button set if it can be visible when button is operating. Choose this option. Aspect of recipe download and character forbidden operation.

✓ Hide Butt	on			
🖲 Normal	Change Aspect	🔽 Use Text		_
	User Defined	Content	Down	*
O Press _	Save Aspect	Font		Ŧ
Do	own	C Align Left	C Align Top	
		C Align Right	C Align Bottom	

- normal displaying status picture when the recipe download button display normally or after releasing recipe download button.
- > press displaying status picture when the recipe download button is pressed.
- Change aspect modify the aspect of recipe download button. It belongs to its own material library. You can choose from it freely.
- User defined modify the aspect of recipe download button. It belongs to user defined material library.
- Save aspect save the asoect of recipe download button. It is convenient for programming.
- ➢ text modify the content, font and align type of recipe download button.
  - content set the displaying content of recipe download button.

font set the size, font and type of rrcipe download button.

align you can choose the relative align type according to your requirement.

- Password if the recipe download button need to be protected by password. If you choose "password" and use password protection. At the same time choose the relative password level.
- color

Down Recipe		x
Object Recipe But	ton Color Position	
Kind Text Color Key Color Back Color	Color	
	More	

➤ kind

- choose the recipe download button to modify the kind of color.
- color modify the color according to the kind.

Down Recipe		X
Object Recipe Button	Color Position	
Position	Size	
X 293	Width 75	
Y 40	Height 42	
Animal		
Horizontal		
☐ Vertical		
Lock I	Zoom Ratio	

- position set the upper left point to be the coordinate point(0, 0). Set the X and Y coordinate value.
  - X position set the X coordinate value of recipe download button.
  - Y position set the Y coordinate value of recipe download button.
  - size set the width and height of recipe download button.
- width (W) set the width of recipe download button.
- height (H) set the height of recipe download button.
- > animal set if the recipe download button can be moved.

horizontal set the recipe download button in the horizontal position according to register value, modifying X coordinate value.

X coordinate value=X position+current value of register

vertical set the recipe download button in the vertical position according to register value, modifying the Y coordinate value.

Y coordinate value=Y position+current value of register

- lock set if the recipe download button in the screen can be moved.
- Zoom ratio set if it can be zoomed when editing its size. But this function can not work now.

#### 4-3-23. Up recipe

 $\triangleright$ 

 $\triangleright$ 

It is corresponded to download recipe function. This function transfers the device data to internal register of HMI.

1. Click the "Sa" icon in the component tool bar. Move the cursor to the screen and click left mouse to set. Click right mouse or ESC button to cancel it. You can modify its size by boundary points.



2. Double click "up recipe" or choose "up recipe" and click right mouse. Set the attribute by choosing "attribute" or "<sup>(1)</sup>" button.

#### object

cipe 📃
ect Recipe Button Color Position
- Device Data
Station
Device PLC Port -
VirStaNO 0 Station
Object
Object D  Indirect
Recipe Data
Object PFW 256
Data
Recipe 1
set the connected device and station. current device port which is communicating. address of communication device. address and serial number of upload source register set the offset of current address as follow.
cipe 📃
ect Recipe Button Color Position
Device Data
_ Station
Device PLC Port -
VirStaNO 0 Station 1
VirStaNO 0 Station 1

Current data address of up recipe will change with register value PSW256. D0[PSW256]=D[0+PSW256 value]

## We suggest using internal address of HMI (PSW and PFW) for indirect address. If not, the communication will be slow.

> Recipe data the address and serial number of HMI internal data register.

- data set the recipe of recipe data and confirm the recipe according to actual data capacity.
- recipe

Up Recipe		23
Object Recipe	Button Color Position	
Count	1	

➢ count total group of recipe data

button

Up Recipe		le l	X
Object Recipe Button Color	Position		
Кеу Туре	[ <sup>1</sup>	Password	
C Touch		level Level1 -	
C Enter Code	<b>_</b>		
Hide Button			
Normal Change Aspect	Use Text		.
User Defined	Content U	Jp ^	
C Press _ Save Aspect	Font	Ŧ	
Un	C Align Left	C Align Top	
	Align Center	Align Middle	
	C Align Right	C Align Bottom	
Hide Button  Normal Change Aspect User Defined  Press Save Aspect  Up	<ul> <li>✓ Use Text Content</li> <li>✓ Font</li> <li>✓ Align Left</li> <li>✓ Align Center</li> <li>✓ Align Right</li> </ul>	Jp C Align Top C Align Middle C Align Bottom	

- key type define the key code of touch key or enter key. Enter key is only for OP560, MP360, MP760, XMP, XMH.
- > Hide button hide the button when operating

Hide Button —					
Normal Change	Aspect	🔽 Use Text			
User D	efined	Content	Up		*
C Press Save A	spect	Font			Ŧ
Up		C Align Left Align Center C Align Right	(	○ Align Top ● Align Middle ○ Align Bottom	

- normal displaying status picture when the button of up recipe display normally or after releasing the button of up recipe.
- ➢ press displaying status picture when the button of up recipe is pressed.
- Change aspect modify the button aspect of up recipe. It belongs to its own material library. You can choose from it freely.
- ▶ User defined modify the button aspect of up recipe. It belongs to user defined library.
- Save aspec save the button aspect of up recipe. It is convenient for programming.
- text modify the content, font and align type of up recipe button text.
   content set the displaying content of up recipe button.
  - font set the size, font and type of up recipe button text.
  - align you can choose align type according to requirement.
- Password set if the button of up recipe need to be protected by password. If you choose "password", please use password protection.at the same time choose the password level.

color

Up Recipe		x
Object Recipe B	utton Color Position	
Kind Text Color Key Color Back Color	Color	

- $\blacktriangleright$  kind choose the up recipe button to modify the kind of color
- $\succ$  color modify the color according to the kind.
- position

Up Recipe		×
Object Recipe Button C	olor Position	
Position	Size	
X 173	Width 75	
Y 70	Height 42	
Animal		
Horizontal		
Vertical		
🗆 Lock 🗖 Za	oom Ratio	

 $\succ$  position set the upper left point to be the coordinate point(0, 0). Set the X and Y

	coordinate val	lue of up recipe button.
	X position	set the X coordinate value of up recipe button.
	Y position	set the Y coordinate value of up recipe button.
$\triangleright$	size	set the width and height of up recipe button.
	width (W)	set the width of up recipe button
	height (H)	set the height of up recipe button
۶	animal	set if the up recipe button need to be moved.
	horizontal	set the up recipe button in the horizontal position of HMI according to
	register value	modifying X coordinate value.
		X coordinate value=X position+current value of register
vert	tical set t	he up recipe button in the vertical position of HMI according to register value,
mo	odifying the Y of	coordinate value.
		Y coordinate value=Y position+current value of register
►	lock	set if the up recipe button in screen can be moved.

Zoom ratio set if it can be zoomed when editing its size. But this function can not work now.

#### 4-3-24. Function button

Function button contains many functions such as set ON/OFF the coil, copy register, import/export csv file, arithmetic and so on.

1. Click "□" icon in the component tool bar. Mov the cursor to the screen and click left mouse to set. Click right mouse or ESC key to cancel it. You can also edit its size by boundary points.



2. Double click "function button" or choose "function button" and click right mouse. Set the attribute by choosing "attribute" or ""

■ function

nction Button Limit	Color Position		
nction Pressing	•	All	
	Add	Set Coil Reset Coil Reverse Coil	<b>^</b>
	Modify	Copy Coil Screen Jump Set Data	
	Delete	Open Window	
	Move Down	Down Scheme Up Scheme Data Block Transmit	E
	Move Up	Arithmetic Import CSV Data Export CSV Data	
	Password	Write DataBase Copy File Delete File	
		Down File Call Function	-

function set the operation type. It contains released, pressed, releasing, pressing. Pressed: ON



➢ function options

add add the selectable functions.

- modify modify the relative function attribute
- delete clear the relative optional function

move up move the object option up a physical location.

move down move the object option down a physical location.

Limit	×
Password	
Level1	•
Limited By Coil	MO
ОК	Cancel

password operate the password protection function and choose the password level. At the same time please set the relative level in "system setting".

Limited by coil when it is ON, the function button can be used.

Selectable function choose the relative function. It contains 21 functions. Now the write data base, copy file, delete file and download file are in research. They can be used in the programming software of following version.

(1) set coil

Set ON the coil.

Choose the "set coil" and click "add" button to add this function to the left list. In the left list, please double click this option or click "modify" to enter the setting window. Then you can modify the relative coil address.

Function Button	l	23
Function Button Limit Color Position		
Function Pressing	All	
Set CoilM0 Add	Set Coil	
Function-Set Coil	Revers Col	
Object		
Station		
VirStaNO	E	
Object M V		
☐ Indirect		

 $\succ$  station

- device device port which is communicating
- station address of communication device
- ➢ object set the coil address
- Indirect set the offset of current address

Function-Set Coi		X
Object		
Station Device VirStaNO	PLC Port 0 Station 1	
Object Object		

The object address is M0[D0]=M[0+D0 value]

We suggest using internal address of HMI(PSW and PFW) for indirect address. If not, the communication will be slow.

(2) reset coil Set OFF the coil

Function Pressing  All	
Add Set Coil Reset Coil Reset Coil	Â
nction-Reset Coil	
Object	
Station Device PLC Port v VirStaNO 0 Station 1	Ξ
Object Object M C O Indirect	
OK Cancel Apply	-

 $\succ$  station

device device port which is communicating

station address of communication device

- ➢ object set the coil address
- > indirect set the offset of current address

Function-Reset (	Coil	×
Object		
Station Device VirStaNO	PLC Port 0 Station 1	
Object Object		

Object address: M0[D0]=M[0+D0 value]

We suggest using intern al address of HMI (PSW and PFW) for indirect address. If not, the communication will be slow.

#### (3) reverse coil

Set the relay or coil to be reverse status. If the coil is ON, set to OFF. If it is OFF, set to ON. Function Button

23

Function Press Reverse Coil MO	sing 🔽 Ada	All Set Coil Beset Coil	<b>A</b>
unction-Reverse	Coil	Bayarra Coi	×
Object Station Device VirStaNO	PLC Port v Station		E
Object Object	M	0	

 $\succ$  station

device device port which is communicating

- address of communication device station
- object set the coil address  $\triangleright$
- indirect set the offset of current address  $\triangleright$

Function-Revers	e Coil
Object	
Station — Device VirStaNO	PLC Port 0 Station 1
Object Object	

The object address: M0[D0]=M[0+D0 value]

We suggest using internal address of HMI(PSW and PFW) for indirect address. If not, the communication will be slow.

(4) copy coil

Copy the status of source coil to target coil.

Function-Copy Co	il 📃 🔀	
Object Source Coil Station Device VirStaNO Object Object	PLC Port O Station M I Indirect	
Target Coil - Station Device VirStaNO  Object  Object	PLC Port O Station M Indirect	

 $\succ$  source coil

the address information of readed relay or bit

➤ target coil

device

the address information of readed relay or bit

➤ station

device port which is communicating

- station address number of communication device
- ➢ object set the coil address

> indirect set the offset of current address

unction-Co	by Coil	x
Object Source Stat Dev VirS Object	e Coil on ice PLC Port v aNO 0 Station 1 ct ct ct M v 0	
Targe Stat Dev VirS	Coil	
Obj	ct M V O FSW256	

The object address: D0[PSW256]=D[0+PSW256 value].

# We suggest using internal address of HMI (PSW and PFW) for indirect address. If not, the communication will be slow.

#### (5) screen jump

Jump to target screen. Click "modify" button, then you can set the target screen ID.

Screen ID	×
Jump to	
C Start Screen	
C Previous Screen	
Screen ID	1
ОК	Cancel

- $\succ$  start screen the screen when system is starting up.
- Previous screen jump to original screen
- Screen ID input the jumping screen number

## (6) set dataSet the object value

Function-Set Da	ta	<b></b> >
Object		
Station	PLC Port	
Object		
Data Data Type Set Data	• Word •	

 $\succ$  station

device	device port which is communicating
station	address of communication device

- > object set the object address
- > indirect

set the offset of current address

Funct	tion-Set Data	~
Obj	Station Device PLC Port v VirStaNO 0 Station 1 Object Object 0 V PSW256	
	Data Data Type Word Set Data 0	

The object address: D0[PSW256]=D[0+PSW256 value]

➤ data

data type	set if the data type is Word or DWord
set data	set the assigned data

We suggest using internal address of HMI (PSW and PFW) for indirect address. If not, the communication will be slow.

#### (7) copy register

Copy the source register data to the target register

Function-Copy Register
Object
Source Register       Station       Device       PLC Port       VirStaNO       0       Station
Object D V Object Object Object
Data Data Type Word
Target Register
VirStaNO 0 Station
Object Object D Indirect
Data Data Type Word

- > source register read the address information of register
  - target register write the address information of register
- stationdevice

⊳

device port which is communicating

- station address of communication device
- ➢ object set the object address
- indirect set the offset of current address

Function-Copy Register	x
Object	
Source Register          Station         Device       PLC Port          VirStaNO       0         Station       1         Object       0         Object       0         VIRCE       0         VirStaNO       0         Device       0         VirStaNO       0         Station       1	
Data Data Type Word Target Register	
Station       Device     PLC Port       VirStaNO     0     Station       1	
Object D  PSW256	
Data Data Type Word	

The object address: D0[PSW256]=D[0+PSW256 value]

> data set the data type to be Word or Dword.

We suggest using the internal address of HMI (PSW and PFW) for indirect address. If not, the communication will be slow.

#### (8) user input

Set the ASCII code of input button.

Key Code	×
Input Key Code(0x)	
ОК	Cancel

➢ input key code

the corresponding ASCII code of input button

#### (9) open window

Open the target window ID

Window Position		
Window ID	1	
Open Mode		
C Hide C Show	C Indepand	

window ID set the target pop-up window ID

> open mode choose the target window to be hide or show

hide the opened window is not visible, but the component in window can still be effective.

show the opened window is visible in project screen.

Open Window	×
Window Position	
Position	
X 165	
Y 85	
🗆 Lock 🔽 Visible	

- position set the upper left corner of pop-up window in the coordinate position of programming screen.
- > lock set if the function button-open window in the screen can be moved.

#### (10) close window

Close the target window.

window	23
Current window Window ID	0
ОК	Cancel

- ➢ current window
- the window will be closed. target closed window ID
- Window ID

#### (11) down recipe

Download the recipe data saved in HMI to relative device.

Function-Down Recipe	×
Object Groups	
Device Data Station Device PLC Port	
VirStaNO 0 Station	
Object	
Recipe Data	
Object	_
Object PFW 256	
Data	_
Recipe 1	
OK Cancel Ap	ply

- > Device data address information of down recipe object register
- stationdevice

-	8

- station address of communication device
- > object address and serial number of download target register
- > indirect set the offset of current address as follow.

Function-Down	Recipe
Object Group	os
Device D Station Device VirStaN Object Object	PLC Port D Indirect
Recipe D Object Object Data Recipe	PFW 256

Current address will change with the register value PSW256.

Object address: D0[PSW256]=D[0+PSW256 value]

> recipe data address and serial number of internal data register of HMI.

> recipe set the recipe data according to actual data capacity.

We suggest using the internal address of HMI (PSW and PFW interna address type) for indirect address. If not, the communication will be slow.

(12) up recipe

Upload the recipe data from relative device to the HMI.

Functio	on-Up Recip	pe			23
Obje	ct Groups				
	Device Data Station Device VirStaNO	PLC Por	t 💌 0 Stati	on	1
	Object Object	D	•	0 direct	
	Recipe Data Object Object	PFW	•	256	
	Data Recipe		1		

> device data address information of up recipe object register

### > station

device device port which is communicating

- station address of communication device
- > object address and serial number of upload target register
- > indirect set the offset of current address as follow.

oject Groups	]
Device Dat	a
Station -	
Device	PLC Port 👻
VirStaNO	0 Station
Object -	
Object	
	I▼ PSW256
Recipe Dat	ta
Object -	
Object	PFW 💌 256
Data	

Current address will change with register value PSW256. Object address: D0[PSW256]=D[0+PSW256 value] > recipe data address and serial number of HMI internal digital register

> recipe set the recipe data according to actual data capacity.

We suggest using internal address of HMI (PSW and PFW internal address type) for indirect address. If not, the communication will be slow.

(13) data block transmit

Transmit the register data group from source address to the target address.

Function-Data Block Transmitted	x
Object	
Source Address Station Device PLC Port VirStaNO 0 Station 1 Object Object D Indirect	
Target Address       Station       Device       PLC Port       VirStaNO       0       Station	
Object D Indirect	
Data Register 1	

- > source address read register first address
- ➢ target register write register first address
- ➤ station

device device port which is communicating

station address of communication device

- > object set the object type and address of function button-data block transmit
- > indirect set the offset of current address as follow.

Function-Data Block Transmitted	23
Object	
Source Address       Station       Device       PLC Port       VirStaNO       Object       Object       Object       PSW256	
Target Address Station Device PLC Port VirStaNO 0 Station 1	
Object D V 0 PSW256	
Data Register 1	

Current object address will change with register PSW256.

Object address: D0[PSW256]=D[0+PSW256 value]

> data set the register number of data block transmit

We suggest using internal address of HMI(PSW and PFW internal address type) for indirect address. If not, the communication will be slow.

#### (14) arithmetic

Operate arithmetic for target register data and save the value to target register. The object of arithmetic can be constant or variable.

Function-Arithmetic	x
Object Operand Control Operand Control Operand Control Operand Control Operand Control Operation Contr	
Data Data Type Word	

station
 device
 station

device port which is communicating address of communication device

object

set the object type and address of function button-arithmetic storage.

➢ indirect

set the offset of current address as follow.

Function-Arithmetic	x
Object Operand	
Station       Device     PLC Port       VirStaNO     0	
Object D V 0 PSW256	
Data Type Word	

Current object address will change with register PSW256. Object address: D0[PSW256]=D[0+PSW256 value]

> data set the data type to be Word or DWord.

We suggest using internal address of HMI(PSW and PFW internal address type) for indirect address. If not, the communication will be slow.

unction-Arithmetic		×
Object Operand		
Operate Kind		
• • · ·	o• o/	
Left Operand		
C Use Variable	(A)	
Right Operand		
Use Constant	0 Dec 💌	
C Use Variable	(B)	

- > operate kind plus, substract, multiply and divide
- > Left operand it contains the setting of constant and variable
- Right operand it contains setting of constant and variable

When you choose constant, you can set the variable by "\_\_\_\_\_" button.

Left Operate Object	23
Object Station Device PLC Port	
Object Object PFW I 300	
Data Data Type Word	

(15) import CSV data

Importing the CSV format file from U disk to XINJE TH (-U), TG (-U), TG (-E) series HMI. You can use the saved data to consult or update the data in HMI.

(1) The title contents of CSV file can not import.

(2) CSV file is produced when HMI exported CSV file data.

port CSV da	ta	in these	
Source Path	Data Save 0	Control Date Time	
Device ID			
	Dynamic set	DO	
	Import Ctrl	MO	
Path/File	CE.csv		
Fix Nam     Add ID	e After Name		
	0		
	🔲 Dynamic set	DO	
start ID	0		
	Dynamic set	DO	

- Device ID U disk number. To mark up different U disk (in order to mark up different disk in SCADA function, C disk no. is 0, D disk is 1, E disk is 2...)
- Import ctrl the bit to control the import operation.when this bit is ON, the import is allowed.
- > Path/file the CSV file name need to import
- ➢ Fix name only use the name in path/file
- Add ID after name choose the file by name and number mode. number can be inputted manually or set through register
- Start ID CSV file has many rows. Start ID defines importing from which rows.
   0 means the first row. The row no. can be set through register or input directly.

Import CSV data	23
Source Path Data Save C	ontrol Date Time
Register capacity	100
Register mode C Loo	p 🖲 Line
Data Add Delete	Title Data Format
Move up	Data type Word 💌
Move down	Bit length(G) 4 Float length(C) 0

- > Register capacity import data group quantity
- Register mode data storage mode. You need to choose the mode same to CSV file. First confirm if the import data address contains "covered buffer". If yes, you need to choose "loop". If not, please choose "line"(real trend map, history data map, time trend control and sample save have covered buffer).
  - Loop when the data reach the max group quantity, it will cover the original data and store from the first address again

line when the data reach the max group quantity, it stop store.

- Add/delete add/delete the import column
- Move up/move down change the column order
- $\blacktriangleright$  title set the title
- ➢ format please set the same format to CSV file
- > Data type please set the same data type to CSV file
- ▶ Bit length/float length choose the same bit length and float length in CSV file

Import CSV data	23
Source Path Data Save Control Date Time Object Object PSW <b>v</b> 256	

Object the import data will store in HMI register PSW or PFW. Please set the PSW or PFW register address.

Import CSV data	×
Source Path Data Save	e Control Date Time
Execute status	MO
Execute result	DO
Execute process	DO

- > Execute status When the bit is ON, the data is importing
- Execute result it shows the execute result through the data in register execute result:
  - 0-import successful
  - 1-import device doesn't exist
  - 2-the memory is low
  - 3-the file name is wrong
  - 4-failed to read/write the file
- $\blacktriangleright$  Execute process it show the importing percent. The percent range is  $0\sim100$ .

Import CSV data	1	x		
Source Path Data Save Control Date Time				
🗖 Date Tim	e			
Date format	YYYY-M-D			
Example	2012-10-9			
Time format	H:MM:SS			
Example	15:44:59			

- Data time import the time of CSV file.
   Date format/time format the date format displayed in HMI
- (16) Export CSV data

Export CSV data function can export the HMI register data to U disk. CSV is the file format which support EXCEL. You can use EXCEL to open and edit the CSV file.

The memory of HMI will extend after using this function. It is convenient for production and maintenance of device.



Export CSV Data	23
Destination Data Save Control Date Time	
Device ID 0	
Dynamic set	
Path/File TW.csv	
Fix Name     □     Re-export title	
C Name add automatic	
O add number after name	
0	
Dynamic set D0	
O named by date	

- Device ID the number of U disk. If there are many U disks, it can distinguish different disk (when in the configuration, it is hard disk partition number. C disk is 0. D disk is 1 and so on. The no. can be input by manual or register).
- > Path/file set the name of saved CSV file
- ➢ Fix name only save file by the name set in "path/file"
- > Re-export title export the title everytime
- Name add automatic generate file by the mode of name and serial number. The serial number will be added every time.(range: 000~999). The generated file is as following picture.



- Add number after name you can set the serial number after file manually or use a register to set dynamically.
- Named by date use the current date (year, month and day) to name the file. (Now the file name written in "path/file" is invalid) the generated file is as following picture.



xport CSV Data	X		
Destination Data Save Control Date Time			
Register capacity	100		
Register mode			
Temperature			
remperatore	Add The Temperature		
	Format		
	Delete		
	Move up Data type Word 👻		
	Bit length(G)		
	Move down		
I	Float length(C) 0		
	OK Cancel Apply		

Register capacity
data group quantity which need to be exported every time

Register mode data storage mode. You need to choose the mode as same as CSV file. You need to confirm if the exported data address has "ring buffer". If it has, please choose "loop". If not, please choose "line"(normally the data range which save "real trend map", "history trend data map", "time trend" and "data storage" all has "ring buffer").

Loop: continue to export data after exporting the setting groups. The new data will cover the original data.

Line: finish an exporting process according to the group quantity. Then the export process end.

$\triangleright$	Add/delete	add/delete the list title which is contained in CSV file
$\triangleright$	Move up/move down	move up/down the generated list title
≻	Title	modify the current list title (displaying list)
≻	Data format	define the data format (decimal, hex, float number, unsigned
	number)	
$\triangleright$	Data type	define the data type (Bool, word, dword, byte, string)
$\triangleright$	Bit length/float length	the data bit length and the bit length after decimal point

Export CSV Data	X
Destination Data Save Control Date Time	1
Object Down - 250	

$\triangleright$	object

choose the object type and first address number of data source.

Export CSV Data		23
Destination Data Save	Control Date Time	
Execute status	MO	
Execute result	DO	
Execute process	DO	

> Execute status the bit show the exporting status. When it is ON, the file is exporting

Execute result the register value will show the result of exporting

Execute result:

- 0-export successfully
- 1-no exporting device
- 2—low RAM
- 3—path and file name is wrong
- 4—reading and writing file failed
- $\blacktriangleright$  Execute process show the export process by percent  $0\sim100$

Export CSV Data	×
Destination Da	ata Save Control Date Time
🗖 Date Time	•
Date format	YYYY-M-D
Example	2012-10-23
Time format	H:MM:SS
Example	17:01:50

➢ Date time

#### export the date time information

Date format/time format

choose the date/time format which is displayed in CSV file.

#### (17) call function

Call the C function to do more complicated operation and communication.

Call Function	23
Function	1
Name:	•
Exec Mode	
Parallel	
C Serial	

- ➢ Name choose C function name
- Exec mode the execute environment of function can operate many tasks at the same time.

parallel call the task of this function and create new task to execute function. Caller can continue to deal with it.

serial call the task of this function. Only by finishing this function, then you can continue to deal with it. So this function must contain suitable exiting conditions.

About the relation introduction and instructions of function please refer to "HMI C function manual".

Button

nction Button			
Function Button Limit Color	Position		
Кеу Туре		Password	
Touch		level Level1	Ŧ
C Enter Code	<b>_</b>	120000	_
Hide Button			
Normal Change Aspect User Defined      Press _ Save Aspect	Use Text Content Font	Func	*
Func	C Align Left	C Align Top	
	<ul> <li>Align Center</li> <li>Align Right</li> </ul>	<ul> <li>Align Middle</li> <li>Align Bottom</li> </ul>	

➢ Key type

define the key code of touch key or enter key. It is only for OP560, MP360,

Function Doctor   Limit   Color	Position	
Кеу Туре		Password
C Touch	lev	vel Level1 🚽
Enter Code Up	<b>-</b>	
Hide Button Down	ÂĽ.	
Normal Change Aspe Enter	e E	
User Define	UP	*
Stop Run		-
O PressSave Aspec	+	
	C Align Left	C Align Top
UP	Align Center	Align Middle
	C Align Right	C Align Bottom

MP760, XMP, XMH. The operation of TP, TH, TG HMI is forbidden.

Hide button set if the button is visible. After choose hide button, text and button aspect can not be changed.

-Key Type ◯ Touch ⓒ Enter Code Up		evel Level1	<b>–</b>
Hide Button			
Normal Change Aspect     User Defined     Save Aspect	Vse Text Content Font	JP	*
UP	C Align Left © Align Center	C Align Top © Align Middle	
	C Align Right	C Align Bottom	

- normal the button appearance
- $\triangleright$  press the button appearance when the button is pressed
- > Change aspect modify the aspect of function button. You can choose the pictures in default

library

- User defined aspect modify the aspect of function button. The picture library is from user.
- Save aspect save the aspect of function button. It is convenient for programming.
- > Use text modify the content, font and align type of function button.
  - content set the displaying content of function button.
    - font set the size, font and type of function button
  - align you can choose the align type freely according to your requirement.

#### limit

Support the limit function. The function button will be effective when the control bit is ON. Otherwise, the hide button function cannot be operated.

Function Button		23
Function Button Limit	Color Position	
Limit Button	MO	

color

Function Button		x
Function Button I	imit Color Position	
Kind Text Color Key Color Back Color		
	More	

- $\blacktriangleright$  kind choose the button color type
- $\triangleright$  color modify the color according to the kind.
position

 $\triangleright$ 

lock

Function Button	×
Function Button Limit	Color Position
X 253 Y 80	Width 75 Height 42
Animal	
	Zoom Batio

- position set the upper left point to be the coordinate point (0, 0). Set the X and Y coordinate value of function button
  - X position set the X coordinate value of function button.
  - Y position set the Y coordinate value of function button.
  - size set the width and height of function button.
  - width (W) set the width of function button
    - height (H) set the height of function button
- $\blacktriangleright$  animal set if the function button need to be moved.

Animal		
✓ Horizontal	D0	
Vertical	D0	

horizontal set the function button in the horizontal position of HMI according to register value, modifying X coordinate value.

X coordinate value=X position+current value of register

vertical set the function button in the vertical position of HMI according to register value, modifying Y coordinate value.

Y coordinate value =Y position+current value of register

- if choose this item, the button cannot be moved in the screen
- Zoom proportion set if it can be zoomed when editing its size. But this function can not work now.

### 4-3-25. Function field

The operation is activated by internal system or logical conditions. This is similar to function button. But the differences are as below.

The difference is: function field will activate automatically when the condition is satisfied. But the function field button is invisible in the screen.

1. click the "🖾" icon in component tool bar. Move the cursor to the screen and click left mouse to confirm. Click right mouse or ESC button to cancel it. "Function field" component is invisible button and it will be invisible in HMI.

2. Double click "function field" or choose "function field" and click right mouse. Set the attributes by choosing "attribute" or "<sup>1</sup> button.

Mode

Function	Field	23
Mode	Function Position	
Act	Mode	
•	Start Screen	
0	Coil Spring	
0	Time(Sec.)	
C	Continue	
C	First Scan After Down	
0	First Scan After Power	

- Start screen when the screen of function field is called, the relative function will be executed once.
- Coil spring when the coil change from OFF to ON, the relative function will be executed once.
- Time(sec.) it will execute relative function when the screen is called. It will execute function by certain time (it can be set).



Time (sec) the time, the unit is second

Run immediately execute the function immediately every certain time. If not choose "run immediately", it will execute the function every certain time from the second period.



Continue when the screen is called, every scan will execute relative function. When you choose "time" or "continue", you can choose

Time/Continue Coil Limit M0 to set control coil. This function can be executed

only when this coil is ON.

- First scan after down this function will be executed when the screen is scanned first time after downloading.
- First scan after power this function will be executed when the system is scanned after power on.

Only one of the act modes can be choosed.

function

Node Function Position			
Function	,	All	
	Add	Set Coil Reset Coil Reverse Coil Copy Coil	
	Modify	Screen Jump Set Data Copy Register	
	Delete	User Input Open Window Close Window	E
	Move Down	Up Scheme Data Block Transmit	
	Move Up	Import CSV Data Export CSV Data Write DataBase	
		Copy File Delete File Down File	

The setting of this function is the same to "function button". Please refer to "function button".

position

Function Field	X
Mode Function Position	
Position	
X 220	
Y 110	
🗆 Lock 🔽 Visible	

- position set the upper left point to be the coordinate point (0, 0). Set the X and Y coordinate value of function field.
  - X position set the X coordinate value of function field.
  - Y position set the Y coordinate value of function field.
- lock set if the function field in screen can be moved.
- visible set if the function field is visible when editing it. This function is canceled in Touchwin 2012.

### 4-3-26. Discrete column map

Show the data of the discrete register in the form of column map or line graph



X axis is register no., the Y axis is the value in register.

The serial number 1~4 from left to right stand for PFW300, PFW302, PFW304, PFW306.

1. Click "Imal" icon in component tool bar. Move the cursor to screen and click left mouse to confirm. Click right mouse or ESC button to cancel it. You can edit the size by the boundary points.



Double click "discrete column map" or choose "discrete column map" and click right mouse.
 Set the attribute by choosing "attribute" or " " button.

### object

Discrete Fold Map		23
Object Display Color Po Display Object Table: D0 D0 D0	Add Modify Delete Move Up Move Down	

- Add/delete add/delete data reigster
- Move up/move down change the order of register
- > modify modify the attribute of corresponded register
- display

Discrete Fold Map	×
Object Display Color Position Degree Full Zero 0	Format O Dec O Hex O Float O Unsigned
Pattem C Fold C Dot	Column

- Degree set the max and min value of Y axis.
- Format it contains decimal, hex, float and unsigned.
- > Pattern data is showed in the pattern of fold, dot and column.

color

Discrete Fold Map	x
Object Display Col	or Position
Kind	Color
Coordinate Colo Fold Color	
	More

- > kind choose the discrete column map to modify the kind of color.
- > color modify the color according to the kind.
- position

Discrete Fold Map	×
Object Display Color Posit	tion
Position	Size
X 185	Width 215
Y 120	Height 115
Animal	
Horizontal	
☐ Vertical	
🗆 Lock 🗖 Zoor	n Ratio

- position set the upper left point to be the coordinate point (0, 0) and set the X and Y coordinate value of discrete column map.
  - X position set the X coordinate value of discrete column map.
  - Y position set the Y coordinate value of discrete column map.
- $\succ$  size set the width and height of discrete column map.
- width (W) set the width of discrete column map
- height (H) set the height of discrete column map
- $\succ$  animal set if the discrete column map need to be moved.

Animal		
✓ Horizontal	D0	
Vertical	D0	

horizontal set the discrete column map in the horizontal position of HMI according to register value, modifying the X coordinate value.

X coordinate value=X position+current value of register

vertical set the discrete column map in the vertical position of HMI according to register value, modifying the Y coordinate value.

Y coordinate value=Y position+current value of register

- > lock lock the column map in the screen, then it cannot move
- Zoom proportion set if it can be zommed by proportion when editing the size. But this function can not work now. This function is canceled in Touchwin 2012.

### 4-3-27. Continue column map

Display the value of continuous register in column map.



The four columns are PFW300, PFW301, PFW302, PFW303.

1. Click "hat" in the software menu, move the cursor in the screen, click left mouse to confirm, click ESC to cancel. Modify the map size through the boundary point.



2. Double click the continue column map or right click the mouse then choose property or " """ to set the parameters.

### Object

The differences from discrete column map: continue column map only needs to set the start register address.

Continue Fold Map	×
Object Display Color Position	
Station Device PLC Port  VirStaNO 0 Station 1	
Object D V 0 PSW256	
Data Data Type Word	

### ➤ Station

- Device the device port
- station device station no.
- object set the register type and adress
- ➢ indirect set the address offset

The object address is D0[PSW256] = D[0+PSW256 value].

- Data set the data type: word or Dword
- Display

Continue Fold Map			23
Object Display ( Data Number Range Max Min	Color   Position   5 100 0	Format C Dec C Hex C Float C Unsigned	
Pattem	C Dot	Column	

### > Data the register quantity

For example, the object is PFW300, data number is 5. The continue column map will display the value of PFW300, PFW301, PFW302, PFW303, PFW304.

Range, format, pattern please refer to discrete column map.

Color

Continue Fold Map	x
Object Display Color Position	
Kind Color	
Fold Color	
More	

- $\blacktriangleright$  kind choose the color type
- ➢ color choose the colors of column map
- Position

Continue Fold Map			×	
Object Display Color Pos	ition			
Position	Size			
X 225	Width		215	
Y 90	Height		115	
Animal				
Horizontal				
Vertical				
Cock Coom Ratio				

- position set the upper left point to be the coordinate point (0, 0) and set the X and Y coordinate value of continue column map.
- $\succ$  X position set the X coordinate value of continue column map.
- Y position set the Y coordinate value of continue column map.
- $\blacktriangleright$  size set the width and height of continue column map.
  - width (W) set the width of continue column map
  - height (H) set the height of continue column map
- > animal set if the continue column map need to be moved.

Animal		
✓ Horizontal	D0	
Vertical	D0	

horizontal set the continue column map in the horizontal position of HMI according to register value, modifying the X coordinate value.

X coordinate value=X position+current value of register

vertical set the continue column map in the vertical position of HMI according to register value, modifying the Y coordinate value.

Y coordinate value=Y position+current value of register

- > lock lock the continue column map in the screen, then it cannot move
- Zoom proportion set if it can be zommed by proportion when editing the size. But this function can not work now. This function is canceled in Touchwin 2012.

### 4-4. Display tool bar



The buttons from left to right are: date, clock, buzzer, backlight, scale, meter, valve, pipe, pump, fan, motor, retort, inverter alarm information, scroll text, real time trend map, history trend map, XY trend map, time trend map, event button, alarm list, real time event, history event, common grid control, data grid control, sample save, sample export.

### 4-4-1. Date

Display the date.

1. click  $\mathbb{P}$  and move the cursor in the screen, click left mouse to confirm, click ESC to cancel.



2. Double click date button or right click mouse then choose property to modify the parameters.

■ display



Manner the date display mode

■ Font

Date	×
Display Font Color Position	
String	

- $\succ$  setting set the font of date
- color

Date	x
Display Font Color Position Kind Digital Color Digital Back Col Text Back Color Text Back Color	
Transparent Back	

- $\succ$  kind choose the color type
- $\succ$  color set the colors
- ➢ transparent back the background of date is transparent

Digital back color and text back color are valid when the transparent back is not choosen.

Position

Date		X
Display Font Color Po	osition	
Position	Size	
X 173	Width	96
Y 110	Height	19
Animal		
Horizontal		
Vertical		
🗆 Lock 🗖 Za	oom Ratio	

position set the upper left point to be the coordinate point (0, 0) and set the X and Y coordinate value of date

X position	set the X	coordinate	value of	f date
1				

- Y position set the Y coordinate value of date
- ➢ size set the width and height of date
  - width (W) set the width of date
  - height (H) set the height of date
- $\succ$  animal set if the date need to be moved.

Animal		
✓ Horizontal	D0	
Vertical	D0	

horizontal set the date in the horizontal position of HMI according to register value, modifying the X coordinate value.

X coordinate value=X position+current value of register

- vertical set the date in the vertical position of HMI according to register value, modifying the Y coordinate value.
  - Y coordinate value=Y position+current value of register
- ➢ lock lock the date in the screen, then it cannot move
- Zoom proportion set if it can be zommed by proportion when editing the size. But this function can not work now. This function is canceled in Touchwin 2012.

### 4-4-2. Clock

Display the time.

1. Click ③ and move the cursor in the screen. Click left mouse to confirm and click ESC to

cancel.

# FFFF / FF / FF

2. Double click clock or right click mouse then choose property to modify the parameters.

Clock		<u> </u>
Display Font Cold	or Position	.
Manner	Second	1
• 12/34/56	Display	
C 12 : 34 : 56	C Hide	

- > Sample preview the clock display format
  - Manner set the clock display format
- ➢ second display the second
- Font

≻

Clock			23
Display Demo	Font Color Po	psition	
	String	Setting	

- Setting set the font of time
- Color

Clock	×
Display Font Color Position	1
Kind Color	
Digital Color Digital Back Col Text Color Text Back Color More.	
Transparent Back	

- $\blacktriangleright$  kind choose the color type
- $\succ$  color set the colors
- transparent back the background of date is transparent

Digital back color and text back color are valid when the transparent back is not choosen.

Position

Clock	×
Display Font Color Posit	ion
Position	Size
X 30(	Width 78
Y 105	Height 19
Animal	
Horizontal	
Vertical	
🗆 Lock 🗖 Zoon	n Ratio

Position set the upper left point to be the coordinate point (0, 0) and set the X and Y coordinate value of clock

X position set the X coordinate value of clock

- Y position set the Y coordinate value of clock
- Size set the width and height of clock
  - width (W) set the width of clock
  - height (H) set the height of clock

 $\blacktriangleright$  Animal set if the clock needs to be moved.

Animal		
V Horizontal	D0	
Vertical	D0	

Horizontal set the clock in the horizontal position of HMI according to register value, modifying the X coordinate value.

X coordinate value=X position+current value of register

Vertical set the clock in the vertical position of HMI according to register value, modifying the Y coordinate value.

Y coordinate value=Y position+current value of register

- ➢ lock lock the clock in the screen, then it cannot move
- ➤ Zoom proportion set if it can be zommed by proportion when editing the size. But this

function can not work now. This function is canceled in Touchwin 2012.

### 4-4-3. Buzzer

The Buzzer will ring when the activate condition is satisfied.

1. Click " **(**, move the cursor in the screen, click left mouse to confirm, click ESC to cancel.

Buzzer is invisible in the screen.



- 2. Double click buzzer or right click mouse then choose property to modify the parameters.
- Object

Buzzer	X
Object Buzzer Position	
Station Device PLC Port v VirStaNO 0 Station	
Object M V O Indirect	

 $\triangleright$ Station

Device

- the HMI port no. communicate to the device
- Station the device station no.
- Object the buzzer object address  $\triangleright$
- Indirect set the address offset

Buzzer	X
Object Buzzer Positi	on
Station Device PLC P VirStaNO	ort v 0 Station 1
Object M	

The object address is M0[D0]=M[0+D0 value]



Please choose HMI internal register for indirect address (PSW, PFW).

Buzzer

	Buzzer	)
	Object Buzzer Position	
	Bell Mode	
	C Continue	
Bell mode	set the ring mode	

- One ring once Continue continue ring
- Position

 $\triangleright$ 

Buzzer	×
Object Buzzer Position	
Position	
X 235	
Y 90	
🗌 Lock 🔽 Visible	

- Position set the upper left point to be the coordinate point (0, 0) and set the X and Y coordinate value of buzzer
  - X position set the X coordinate value of buzzer
  - Y position set the Y coordinate value of buzzer
- ➢ Lock lock the buzzer in the screen, it cannot be moved
- > Visible the buzzer is visible when editing

### 4-4-4. Backlight

Turn on the backlight.

1. Click "\*, move the cursor in the screen. Click left mouse to confirm, click ESC to cancel.

Backlight is invisible in the screen.

# LCD Light Control

- 2. Double click backlight or click right mouse then choose property to modify the parameters.
- Object

LCD Light Control	23
Object Position Station	
Object Object M  Indirect	

# > Station

Devicethe port no. communicate with devicestationdevice station no.

- Object the backlight object address
- > Indirect set the offset of object address

LCD Light Control	23
Object Position	
Station Device PLC Port v VirStaNO 0 Station 1	
Object Object M V D0	

The object address is, M0[D0] = M[0+D0 value]

Please choose HMI internal register for indirect address. (PSW, PFW)

Position

LCD Light Control	x
Object Position	_
Position	
X 17(	
Y 100	
🗖 Lock 🔽 Visible	

Position set the upper left point to be the coordinate point (0, 0) and set the X and Y coordinate value of backlight

X position set the X coordinate value of backlight

- Y position set the Y coordinate value of backlight
- > Lock lock the backlight in the screen, it cannot be moved
- Visible the backlight is visible when editing

### 4-4-5. Scale

1. Click "<sup>1/2</sup>" and move the cursor in the screen. Click left mouse to confirm and click ESC to cancel. Modify the scale size through the boundary point.



2. Double click scale or right click scale then choose property to modify the parameters.

Scale



Style the scale style: vertical, horizontal, round, <sup>3</sup>/<sub>4</sub> round, etc.

Parameter	display mode, main and slave scale display, scale colors
Left	the scale display on the left
Right	the scale display on the right
Hide border	hide the boundary of scale
Main	the segments of main scale
Slave	the segments of vice scale
Color	the colors of scale

Position

 $\triangleright$ 

Scale		-2	ζ
Scale Position			
Position	Size		
X 203	Width	40	
Y 60	Height	140	
Animal	<u></u>		
🔲 Horizontal			
Vertical			
🗆 Lock 🥅 Zo	om Ratio		

Position set the upper left point to be the coordinate point (0, 0) and set the X and Y coordinate value of scale

X position set the X coordinate value of scale

Y position set the Y coordinate value of scale

- Size set the width and height of scale
  - width (W) set the width of scale
  - height (H) set the height of scale
- > Animal set if the scale needs to be moved.

Animal		
	D0	
Vertical	D0	

Horizontal set the scale in the horizontal position of HMI according to register value, modifying the X coordinate value.

X coordinate value=X position+current value of register

Vertical set the scale in the vertical position of HMI according to register value, modifying the Y coordinate value.

Y coordinate value=Y position+current value of register

- > lock lock the scale in the screen, then it cannot move
- Zoom proportion set if it can be zommed by proportion when editing the size. But this function can not work now. This function is canceled in Touchwin 2012.

### 4-4-6. Instrument

The register value will show in the instrument.

1. Click i and move the cursor in the screen, right click mouse to confirm, click ESC to cancel. Drag the boundary to change the size.



- 2. Double click the instrument, it will show the attribute window.
- Object

Station
Device PLC Port
VirStaNO 0 Station
Object
ObjType D V 0
indirect
Value
Data Type Word 👻

- ≻ Station
  - Device
  - Virstano
- Object the instrument object address  $\triangleright$ set the offset of object address
- Indirect ۶

Object —			
ObjType	D	•	0
			PSW256

The object address = D [0+ the value of PSW256]

Value set the value format (Dword or word)

We suggest using internal register for indirect address (PSW, PFW), otherwise the communication speed will be slow.

Display 

ect Display S	et Color Positi	ion
✓ Text		
More Langu	age	
Instrument		*
		~
	Font	Art Font Text Library
Align		Aspect
Align Horizontal	Vertical	Aspect
Align Horizontal © Left	Vertical	Aspect
Align Horizontal C Left Middle	Vertical Top Center	Aspect

- > Text the text on the instrument, user can set many language
- > Horizontal align horizontal align the text
- Vertical alignvertical align the text
- > Aspect change the appearance of instrument
- Set

Instrument			×
Object Display S	et Color F	osition	
Direction		Graphics	
© Order	Reverse	Pointer Thick	1
Format			
Dec	─ Hex	Main Scale	3
Float	O Unsigned	Slave Scale	2
Data Set			
Max	100	Min	0
✓ Down Alarm	20	Vp Danger	90
Vp Alarm	80	Down Danger	10

> Direction the instrument pointer rotating direction

Graphics the pointer width and the scale quantity
 Data set set the range of scale, alarm value, danger value
 Up danger between setting value and max scale,
 Up alarm between setting value and up danger
 Down alarm between down danger and setting value
 Down danger between min scale and setting value

W Up danger value is larger than up alarm value, down alarm value is larger than down danger.

Color



- ➢ Kind the color type
  - Color set the color
- Position

 $\triangleright$ 

Instrument						
Object Display Set C	olor Position					
Position	Size					
X 150	Width	170				
Y 90	Height	170				
Animal						
Horizontal						
Vertical						
Cock						

Position set the upper left point to be the coordinate point (0, 0) and set the X and Y coordinate
 X position set the X coordinate of instrument

Y position set the Y coordinate of instrument

	Sizeset the width and height of instrumentwidth (W)set the width of instrumentheight (H)set the height of instrumentAnimalthe instrument can move						
	Ammai						
		✓ Horizontal	D0				
		Vertical	D0				
	Horizontal	the instrument can horizontal move acc	ording	to register	r value,		
		X coordinate value =X position+current	X coordinate value =X position+current value of register				
	Vertical t	ne instrument can vertical move according to register value,					
		Y coordinate value=Y position+current	value c	of register			
$\triangleright$	Lock	lock the instrument in the screen, then	it cann	ot move			

### 4-4-7. Valve

Simulate the valve status in process control system. For example: the following valve is in close status and open status.





Close status

open status

1. Click 🗑 and move the cursor in the screen, right click mouse to confirm, click ESC to cancel. Drag the boundary to change the size.



- 2. Double click the valve, it will show the attribute window.
- Object
  - (1) Valve object set the trigger signal. When the signal is ON, the valve open; when the signal is OFF, the valve close.

	Object Valve Speed Color Position
	Valve object Station Device PLC Port VirStaNO 0 Station 1 Object
	ObjType M
	Flow of objects
	Device         PLC Port           VirStaNO         0         Station         1
	Object ObjType M 0
	Indirect
ation	
ation	the communication port connect the HMI
ation evice irstano	the communication port connect the HMI the station no. of the communication device

Object —				
ObjType	Μ	•	0	
			PSW256	

The object address = M [0+ the value of PSW256]

We suggest using internal register for indirect address (PSW, PFW), otherwise the communication speed will be slow.

### (2) Flow object

Control the liquid flowing in the valve. When the flow object is ON, the liquid is flowing. When the flow object is OFF, the liquid stop flowing.

> Station

۶

۵ ۱

Device	the communication port connect the HMI
Virstano	the station no. of the communication device

- Object the flow object address
- > Indirect set the offset of flow object address

Object				
ObjType	Μ	•	0	
			PSW256	

The object address = M [0+ the value of PSW256]

We suggest using internal register for indirect address (PSW, PFW), otherwise the communication speed will be slow.

■ Valve

Object	Valve	Speed	Color	Position
Manne	r			
				Close State 🔹
	ھے	<u>م</u> 2		Change Aspect
				User Defined
				Save Aspect
Directi	on			
N	omal		Reve	arse
Act				
S S	et On	Set O	ff 🍥 F	Reverse 🔘 Instant

- $\triangleright$ Manner preview the appearance of valve Change aspect change the appearance of valve User defined user can define the appearance of valve Save aspect save the appearance of valve ≻ Direction the liquid flowing direction in the valve  $\triangleright$ the action of valve Act Set on the valve always open when trigger signal is ON Set off the valve always close when trigger signal is ON Reverse the valve status will reverse when trigger signal is ON Instant the valve open when keep pressing the trigger signal
  - Speed

- Constant the flowing speed in the valve is constant value, the value should be in the range of max and min value
- Register the flowing speed is controlled through the register, the speed should be in the range of max and min value
  - Min the min speed
  - Max the max speed
- Color



- ➢ Kind set the color type
- $\triangleright$  Color set the color
- Position

Valve			<u> </u>		
Object Valve	Speed Cold	or Position			
Position		Size			
X	100	Width	60		
Y	110	Height	40		
Animal					
Horizon	tal				
Vertical					
Cock					

- Position set the upper left point to be the coordinate point (0, 0) and set the X and Y coordinate
   X position set the X coordinate of valve
- Y position set the Y coordinate of valve
- Size set the width and height of valve
- Width (W) set the width of valve

	Height (H) Animal	<ul> <li>set the height of valve the valve can move</li> </ul>		
		- Animal		
		I Horizontal	DO	
		J     ✓ Vertical	DO	
	Horizontal	the valve can horizontal move accordin	g to re	gister value,
		X coordinate value =X position+current value of register the valve can vertical move according to register value,		
	Vertical			
		Y coordinate value=Y position+current	value c	of register
$\triangleright$	Lock	lock the valve in the screen, then it car	not me	ove

## 4-4-8. Pipe

Simulate the pipe function in process control system.

1. Click and move the cursor in the screen, right click mouse to confirm, click ESC to cancel. Drag the boundary to change the size.



2. Double click the pipe, it will show the attribute window.

### Object

When the coil is ON, the liquid is flowing in the pipe. When the coil is OFF, the liquid stops flowing in the pipe.

P	ipe			
	Object	Aspect	Speed Color Position	
	Sta De Vir	ation evice StaNO	PLC Port O Station	<b>▼</b>
	Ob	oject ojType	M	

> Station

Device	the communication port connect the HMI
Virstano	the station no. of the communication device

- Object the pipe object address
- Indirect set the offset of object address

Object			
ObjType	M	-	0
		V PSW25	6

The object address = M [0+ the value of PSW256]

We suggest using internal register for indirect address (PSW, PFW), otherwise the communication speed will be slow.

Aspect

Pipe				
Object	Aspect	Speed	Color	Position
Aspe	ect			
Γ				State1 🔹
			Change Aspect	
· ·				User Defined
				Save Aspect
Dies				
	Cl Order			Reverse
	Under			- Neveise

- Aspect preview the appearance of pipe
   Change aspect User defined user can define the appearance of pipe
   Save aspect save the appearance of pipe
   Direction the liquid flowing direction in the pipe
- Speed

Pipe				
Object Asp	ect Speed	Color	Position	
Cons	tant		50	
Regis	ster			
Min		0		
Max		100		

> Constant the flowing speed in the pipe is constant value, the value should be in the

range of max and min value

Register the flowing speed is controlled through the register, the speed should be in the range of max and min value

Min	the min speed
Max	the max speed

Color

 $\triangleright$ 



- $\blacktriangleright$  Kind set the color type
- $\triangleright$  Color set the color
- Position

Pipe		×
Object Aspect Speed	Color Position	
Position	Size	
X 110	Width	80
Y 90	Height	20
Animal		
Horizontal		
Vertical		
Cock		

- Position set the upper left point to be the coordinate point (0, 0) and set the X and Y coordinate
   X position set the X coordinate of pipe
- Y position set the Y coordinate of pipe
   Size set the width and height of pipe
   Width (W) set the width of pipe
   United (U) set the bright of pipe
  - Height (H) set the height of pipe

	Animal	the pipe can move		
		Animal		
		✓ Horizontal	D0	
		Vertical	D0	
	Horizontal the pipe can horizontal move according to register va		gister value,	
	X coordinate value =X position+current value of regi			of register
	Vertical	the pipe can vertical move according to register value, Y coordinate value=Y position+current value of register lock the pipe in the screen, then it cannot move		
	Lock			

### 4-4-9. Pump

Simulate the running status of pump.

1. Click  $\square$  and move the cursor in the screen, right click mouse to confirm, click ESC to cancel. Drag the boundary to change the size.



2. Double click the pump, it will show the attribute window.

### Object

When the coil is ON, the liquid is flowing in the pump. When the coil is OFF, the liquid stops flowing in the pump.

P	ump
	Object Aspect Speed Color Position
	Station Device PLC Port VirStaNO 0 Station 1
	Object ObjType M 0 indirect

> Station

Device the communication port connect the HMI

Virstano the station no. of the communication device

- Object the pump object address
- Indirect set the offset of object address

Object —			
ObjType	M	· 0	
		V (PSW256)	

The object address = M [0+ the value of PSW256]

We suggest using internal register for indirect address (PSW, PFW), otherwise the communication speed will be slow.

Aspect
Aspect

Object Aspect	Speed Cold	or Position
Aspect		
		State1
		Change Aspect
		User Defined
		Save Aspect
Direct		
Direct		
Order		Reverse

- Aspect preview the appearance of pump Change aspect change the appearance of pump User defined user can define the appearance of pump Save aspect save the appearance of pump
   Direction the liquid flowing direction in the pump
- Speed

Pump			
Object Aspect	Speed	Color	Position
Constant			50
Register			
Min		0	
Max		100	

Constant the flowing speed in the pump is constant value, the value should be in the range of max and min value

Register the flowing speed is controlled through the register, the speed should be in the range of max and min value

Min	the min speed
Max	the max speed

Color



- $\succ$  Kind set the color type
- Color set the color
- Position

Pump		×				
Object Aspect Speed C	olor Position					
Position	Size					
X 300	Width	75				
Y 100	Height	45				
Animal	Animal					
Horizontal						
Vertical						
Lock						

Position set the upper left point to be the coordinate point (0, 0) and set the X and Y coordinate
 X position set the X accordinate of pump

	X position	set the X coordinate of pump
	Y position	set the Y coordinate of pump
$\triangleright$	Size	set the width and height of pump
	Width (W)	set the width of pump
	Height (H)	set the height of pump
≻	Animal	the pump can move

	Animal		
	✓ Horizontal	D0	
	Vertical	D0	
Horizontal	the pump can horizontal mo	ve according to re	egister value,
Vertical	X coordinate value =X positi the pump can vertical move acc	ion+current value cording to registe	of register r value,
Lock	Y coordinate value=Y position+current value of register lock the pump in the screen, then it cannot move		

### 4-4-10. Fan

Simulate the running status of fan.

1. Click Q and move the cursor in the screen, right click mouse to confirm, click ESC to cancel. Drag the boundary to change the size.



2. Double click the fan, it will show the attribute window.

### Object

When the coil is ON, the fan is running. When the coil is OFF, the fan stops running.

Autowind
Object Aspect Speed Color Position
Station
Device PLC Port
VirStaNO 0 Station 1
Object
ObjType M 🔹 0
indirect

Station

Device the communication port connect the HMI

Virstano the station no. of the communication device

- Object the fan object address
- Indirect set the offset of object address

Object			
ObjType	M -	0	
		PSW256	

The object address = M [0+ the value of PSW256]

We suggest using internal register for indirect address (PSW, PFW), otherwise the communication speed will be slow.

Aspect

Autowind	
Object Aspect Speed	Color Position
Aspect	
	State 1 🗸
	Change Aspect
	User Defined
	Save Aspect
Direct	
Order	Reverse

- Aspect preview the appearance of fan
   Change aspect change the appearance of fan
   User defined user can define the appearance of fan
   Save aspect save the appearance of fan
   Direction the running direction of fan
- Speed

A	Autowind			
	Object Aspect	Speed	Color	Position
	Constant			50
	Register			
	Min		0	
	Max		100	

- Constant the running speed of fan is constant value, the value should be in the range of max and min value
- Register the running speed is controlled through the register, the speed should be in the range of max and min value
  - Min the min speed
  - Max the max speed

Color

Autowind
Object Aspect Speed Color Position
Kind Color
Appearance co Background Co AutowindColor
More

- $\succ$  Kind set the color type
- $\succ$  Color set the color
- Position

Autowind			×	
Object Aspe	ct Speed Co	olor Position		
Position		Size		
X	220	Width	60	
Y _	230	Height	60	
Animal				
Horizon	ital			
Vertical				
Cock				

- Position set the upper left point to be the coordinate point (0, 0) and set the X and Y coordinate
   X position set the X coordinate of fan
  - Y position set the Y coordinate of fan
- ➢ Size set the width and height of fan
- Width (W) set the width of fan
- Height (H) set the height of fan
- ➢ Animal the fan can move
|            | Animal  |  |                               |
|------------|---|--|-------------------------------|
|            | Horizontal  | D0   |                               |
|            | Vertical  | D0   |                               |
| Horizontal | the fan can horizontal mov<br>X coordinate value =X pos | e according to reg                         | ister value,<br>e of register |
| Vertical   | the fan can vertical move accordinate value=Y posit     | ording to register v<br>tion+current value | value,<br>of register         |
| Lock       | lock the fan in the screen,                             | then it cannot more                        | ve                            |

### 4-4-11. Motor

Simulate the running status of motor.

1. Click 🗳 and move the cursor in the screen, right click mouse to confirm, click ESC to cancel. Drag the boundary to change the size.



2. Double click the motor, it will show the attribute window.

#### Object

When the coil is ON, the motor is running. When the coil is OFF, the motor stops running.

ľ	Notor	
	Object Map	Color Position
	Station Device VirStaNO	PLC Port
	Object ObjType	M indirect

### ➤ Station

Device the communication port connect the HMI

- Virstano the station no. of the communication device
- Object the motor object address
- Indirect set the offset of object address

Object —			
ObjType	м 👻	0	
		V (PSW256)	

The object address = M [0+ the value of PSW256]

We suggest using internal register for indirect address (PSW, PFW), otherwise the communication speed will be slow.

#### Map

١	Notor
	Object Map Color Position
	OFF Map
	User Defined
	Save Aspect

- > ON Map Preview the running image of motor
- > OFF Map Preview the stop status image of motor
- Change aspect change the appearance of motor
- ➢ User defined user define the motor appearance
- Save aspect save the appearance of motor
- Color



- ➢ Kind choose the color type
- $\triangleright$  Color set the color
- Position



- Position  $\triangleright$ set the upper left point to be the coordinate point (0, 0) and set the X and Y coordinate X position set the X coordinate of motor Y position set the Y coordinate of motor ⊳ Size set the width and height of motor Width (W) set the width of motor Height (H) set the height of motor Animal the motor can move  $\triangleright$ Animal Horizontal D0 Vertical D0 Horizontal the motor can horizontal move according to register value, X coordinate value =X position+current value of register
  - Vertical the motor can vertical move according to register value,
  - Y coordinate value =Y position+current value of register
  - Lock lock the motor in the screen, then it cannot move

### 4-4-12. Retort

Simulate the running status of retort.

1. Click  $\blacksquare$  and move the cursor in the screen, right click mouse to confirm, click ESC to cancel. Drag the boundary to change the size.



- 2. Double click the retort, it will show the attribute window.
- Object

Object	Range	manner	Scale	Color	Position
Sta	ation				
De	evice	PLC Port			
Vir	StaNO	[	0 St	ation	
Ob	ject				
Ob	jType	D			0
				indirect	
Va	lue				
Da	ata Type	Word	-		

## ➢ Station

Device	the communication port connect the HMI
Virstano	the station no. of the communication device

- Object the retort object address
- Indirect set the offset of object address

Object			
ObjType	D	-	0
			PSW256

The object address = D [0+ the value of PSW256]

Value set the value format (Dword or word)

We suggest using internal register for indirect address (PSW, PFW), otherwise the communication speed will be slow.

Range

Retort			×
Object Range	manner Scale	Color Position	ı
Max	100	Min	0
Variable	DO	Variable	DO
🔽 Alam			
Check	Max	Check I	Min
Max	100	Min	0
🔲 Variable	DO	Variable	DO
) Alarm F	ast	Alarm Slow	

- > Max the max value of retort, it can be set through the register
- Min the min value of retort, it can be set through the register
- Alarm display the liquid level in the retort according to the alarm information Upper limit value < max value</li>
   Upper limit alarm: in the range of upper limit to max value
   Lower limit value > min value

Lower limit alarm: in the range of min value and lower limit value

Alrm mode: fast mode and slow mode

Manner



- > User defined user define the retort appearance
- > Changing change the appearance of retort
- Scale

Retort					
Object	Range	manner	Scale	Color	Position
- <b>U</b> s	se Scale				
Mair	n Scale		3		
Slav	ve Scale		3		

#### ➢ Use scale

Main scaleset the main scale of retortSlave scaleset the vice scale of retort

Color



- $\succ$  Kind set the color type
- $\triangleright$  Color set the color
- Position



Position set the upper left point to be the coordinate point (0, 0) and set the X and Y coordinate

	X position	set the X coordinate of retort	
	Y position	set the Y coordinate of retort	
≻	Size	set the width and height of retort	
	Width (W)	set the width of retort	
	Height (H)	set the height of retort	
$\triangleright$	Animal	the retort can move	
		- Animal	_
		I Horizontal D0	
		Vertical D0	
	Horizontal	the retort can horizontal move according to register y	alue
	Homzontar	X coordinate value $=$ X position+current value of register	ater
	Vertical	the retort can vertical move according to register value	
	vertieal	V coordinate value –V position±current value of regis	ter
		r coordinate value = r position+current value of regis	ici
$\triangleright$	Lock	lock the retort in the screen, then it cannot move	

### 4-4-13. Inverter alarm information

This function can show the string contents according to the register value when the PLC port device is frequency inverter.

1. Click and move the cursor in the screen, right click mouse to confirm, click ESC to cancel. Drag the boundary to change the size.



- 2. Double click the variable string, it will show the attribute window.
- Object

Variable string
Object Display Font Color Position
Station
Device PLC Port
VirStaNO 0 Station 1
Object
ObjType D V 0
indirect
Value
Data Type Word 👻

#### ➤ Station

Device	the communication port connect the HMI
Virstano	the station no. of the communication device

- Object the object address
- Indirect set the offset of object address

Object		
ObjType	D	 0
		PSW256

The object address = D [0+ the value of PSW256]

Value set the value format (Dword or word)

We suggest using internal register for indirect address (PSW, PFW), otherwise the communication speed will be slow.

Display

Variak	ole string			×
Obje	ect Displ	ay Font Co	olor Position	
	Content			_
	Value	Text descripti	on of string	Add
	0	TextEx		Modify
				Delete
				Doloto
	Aspect		Alignment	
			© Left	🔘 Тор
	Г	lext	Center	Middle
			Right	Bottom
	Chang	jing(U)	Coil control	

- Content the contents of variable string
   Value the value to show the string
- Text des... the string contents
- > Add add one text
- Delete delete one text
- Aspect the background of text
- Alignment the alignment mode of text
- Font

Variable string			
Object	Display Font	Color Position	
Font	t		
		Setting	
	String	Art	
		]	

- > Setting set the font, size of string
- Art set art style of string
- Color

٧	ariable string			
	Object Display Font	Color	Position	
	Kind	Color		
	Aspect Color Background Col Text color			
		Mon	e	

- $\succ$  Kind set the color type
- ➢ Color set the color
- Position

Variable string		
Object Display Font Co	olor Position	
Position	Size	
X [110]	Width	50
Y 80	Height	20
Animal		
Horizontal		
Vertical		
Lock		

	Desition	set the upper left point to be th	a acordinata n	aint (0, 0)	and sat the V and V
	coordinate	set the upper left point to be the	e coordinate p	$\operatorname{form}\left(0,0\right)$	and set the A and h
	V position	act the V according to of string			
	A position	set the X coordinate of string			
	Y position	set the Y coordinate of string			
$\triangleright$	Size	set the width and height of strin	g		
	Width (W)	set the width of string			
	Height (H)	set the height of string			
≻	Animal	the string can move			
		Animal			
		V Horizontal	D0		
		✓ Vertical	D0		
	Horizontal	the string can berizontal move	according to m	aister volu	
	Horizontai	the string can nonzontar move a			ie,
		X coordinate value =X position-	+current value	of register	
	Vertical t	he string can vertical move accord	ling to register	r value,	
		Y coordinate value =Y position+	-current value	of register	
$\triangleright$	Lock	lock the string in the screen, th	en it cannot m	ove	

### 4-4-14. Scroll text

The text can move from left to right.

1. Click mouse to confirm, click ESC to cancel.

- 2. Double click the scroll text, it will show the attribute window.
- Message

Scroll Text			X
Message	Common		
	Control	Content	
1	Show Always	Thank you very much !	

- Control it includes show always and limited by coil
   Show always input the contents in it
   Limited by coil the contents will display when the coil is ON
- Content right click the text to copy, delete and build new text, double click the text to change the contents

Right click the content number to add new message.

Scroll Text			
Message	Common		
	Control	Content	
	New Message	you very much !	
	Delete		

#### Common

Scroll Text	
Message Comm	non
Y	140
Margin	20
Scroll speed	1 /0.1s

- ➢ Y the text coordinate of Y-axis
- Margin the space between message, the unit is pixel
- Scroll speed the moving speed of text

#### 4-4-15. Real trend map

The real trend map can collect the data and display on the trend map. The data include temperature, pressure, and liquid level.

For the following application, it collects the value of register D0, value quantity is 20, collection period is 1 second, storage address starts from PSW301. The real-time trend map is shown as below:



the first value is stored in PSW301~302, the second value is stored in PSW303~304.....

1. Click  $\boxed{1}$  and move the cursor in the screen, right click mouse to confirm, click ESC to cancel. Drag the boundary to change the size.



- 2. Double click the real trend map, it will show the attribute window.
- Trend map

Real Trend	×
Trend Map Color Position	1
0 D0	Add
	Batch Add
	Modify
	Delete

- Add add the collection object
- > Delete delete the collection object
- > Modify modify the collection object

(1) Object

F	Real Trend				
ſ	Trend Map Color Position				
	Add 0 D0				
	Trend Map				
	Object Trend Map Pick Save Color				
	Station				
	VirStaNO 0 Station 1				
	Object				
	ObjType D				
	Value Data Type Word				
Station					
Device	the communication port connect the HMI				
Virstano	the station no. of the communication device				
Object	the object address				
Indirect	set the offset of object address				
	Object ObjType D 🗸 0				

		V	PSW256
D = D [0]	the value of <b>DSW256</b> ]		

The object address = D [0+ the value of PSW256] Value set the value format (Dword or word)

We suggest using internal register for indirect address (PSW, PFW), otherwise the communication speed will be slow.

(2) Trend map

≻

 $\triangleright$ 

⊳

Trend Map	
Object Trend Map Pick Save	Color
Data	Display
Count 100	Map Mode
Pick Period 5 Sec	Fold
Format	O Dot
🔘 Dec 🛛 Hex	Column
Float Oursigned	
Range	Move Mode
Max 100	Move Pen
Min 0	Move Paper

## Data

	Count	the collection data quantity
	Pick period	the collection period
$\triangleright$	Format	decimal, hex, float, unsigned value
$\triangleright$	Range	max and min value of Y-axis coordinate
$\triangleright$	Display	the display mode of map: fold, dot. column
$\triangleright$	Move mode	
	Move pen	the curve will move according to the value
	Move paper	the coordinate axis will move according to the value

# (3) Pick



> Control when the coil is ON, the map starts collecting data

### (4) Save

Trend Map	
Object Trend Map Pick Sav	e Color
Object ObjType PSW ▼	256
Auto locate	

- > Object the storage address of collection data
- > Auto locate the system will auto store the collection data in the HMI

(5) Color

Set the the color of curve in the map

#### ■ Color

Set the coordinate axis color

R	eal Trend					
	Trend Map	Color	Position			
	Kind		Color			
	Color					
				More		

Position

	Real Trend		×	
	Trend Map Color Position	1		
	Position	Size		
	X 140	Width	215	
	Y 90	Height	115	
	Animal			
	Horizontal			
	Vertical			
	Cock			
Position coordinate	set the upper left point to	be the coordinate j	point (0, 0) and set	the X and Y
X position	set the X coordinate of real	trend map		
Y position	set the Y coordinate of real	trend map		
Size	set the width and height of	real trend map		
Width (W)	set the height of real trend	map		
Animal	the real trend map can mo	ve		
	Horizontal	D0		
	Vertical	D0		

Horizontal	the real trend map can horizontal move according to register value,
	X coordinate value =X position+current value of register
Vertical	the real trend map can vertical move according to register value,
	Y coordinate value =Y position+current value of register
Lock	lock the real trend map in the screen, then it cannot move
	Horizontal Vertical Lock

# 4-4-16. History trend map

۶

≻

 $\triangleright$ 

The history trend map can display the history data and real-time data at the same time. The history data can be seen through event button.



1. Click  $\bowtie$  and move the cursor in the screen, right click mouse to confirm, click ESC to cancel. Drag the boundary to change the size.



- 2. Double click the history trend map, it will show the attribute window.
- Trend source

listroy Tre	nd					
Trend Sou	urce Displ	ay Object Color	Font Position			
Add Batch Add Modify Delete						
NO	Object	Lower limit	Upper limit			
1	D0	0	1024			

- > Add add the collection object
- Delete delete the collection object
- > Modify modify the collection object, double click the object to modify

### Register

⊳

Histroy Trend	
Trend Source Disp	Histroy Trend Source
Add NO Object 1 D0	Register       Trend Data       Color         Station       Device       PLC Port <ul> <li>VirStaNO</li> <li>O Station</li> <li>Object</li> <li>ObjType</li> <li>O</li> <li>indirect</li> </ul> Value           Data         Type         Vord
Station	
Device the commu	inication port connect the HMI
Virstano the station	no. of the communication device
Object the object a	ddress
Indirect set the offse	et of object address
O	bject bjType D v 0

The object address = D [0+ the value of PSW256] Value set the value format (Dword or word)

We suggest using internal register for indirect address (PSW, PFW), otherwise the communication speed will be slow.

PSW256

(2) Trend data

Histroy Trend Source				
Register Trend	d Data Color			
Format				
Oec	⊚ Hex			
Float	Unsigned			
Range				
Max	1024			
Min	0			

> Format the data format: decimal, hex, float, unsigned value

- $\triangleright$  Range the max and min value of value, the default value is 1024 and 0
- (3) Color

Histroy Trend Source	(Table)
Register Trend Data	Color
Kind	Color
Color	
	More

Set the curve color

Display

Histroy Trend				
Trend Source Dis	play Object	Color	Font	Position
Data			Time —	
Page Data		5	© T	ор
Total Data		10	💿 B	ottom
Pick Period	1	Sec	() N	one
Control	This Regist	was used t	to control	Pick!
Current Data	The current PSW500 to	value will   PSW506	be placed register	in from

Page data the data quantity displayed in the map, for example the following map displayed 5 page data



> Total data the total collection data quantity. For example total data is 10, Each collection value occupied register quantity = (collection data quantity n + collection time 6)\*data capacity

- Pick period the collection period
- Time the time display format
- > Control control the collection action through coil
- Current data store the first group of data on every page. Occupied registers = current collection objects n + collection time 6



Object

Histroy Trend					
Trend Source	Display	Object	Color	Font	Position
Object ObjType	PFW	•		256	
Auto loca	ate				

- Object type the register address to store the data
- > Auto locate the HMI will auto-store the data in registers
- Color



- ➢ Kind set the color type
- $\triangleright$  Color set the colors

Font

Trend Source Display Object Color Fort Position	F	listroy T	rend					
Demo Setting		Trend	Source	Display	Object	Color	Font	Position
Setting		Dem	0					
String						Settir	ng	
			S	String				

- Setting set the font and size
- Position

Histroy Trend		
Trend Source Display Obj	ect Color Font	Position
Position	Size	
X 455	Width	215
Y 104	Height	153
Animal		
Horizontal		
Vertical		
Cock		

- Position
   coordinate
   X position
   Y position
- set the upper left point to be the coordinate point (0, 0) and set the X and Y set the X coordinate of history trend map set the Y coordinate of history trend map
- SizeWidth (W)

 $\triangleright$ 

Height (H) Animal

- Animal		
✓ Horizontal	D0	
Vertical	D0	

set the width and height of history trend map

set the width of history trend map

set the height of history trend map

the history trend map can move

#### Horizontal

the history trend map can horizontal move according to register value, X coordinate value =X position+current value of register

Vertical	the history trend map can vertical move according to register value,
	Y coordinate value =Y position+current value of register
Lock	lock history trend map in the screen, then it cannot move

### 4-4-17. Event button

Event button has page up and page down function for data storage function. This button is used together with history trend map, history event, time trend map, XY trend map.

1. Click  $\blacksquare$  and move the cursor in the screen, right click mouse to confirm, click ESC to cancel. Drag the boundary to change the size.



2. Double click the event button, it will show the attribute window.

Event

Event Button			
Event Button Color	Position		
Trend Type	Function		
Trend/Event	Prev Page		•
Time Trend			
Time Axis	Left (Thin)	Pete 20 /	10
O Y Axis	Up (Thin)		10
	ID All Trends	-	
XY Poly Trend	Clear		-

- Trend type choose trend/event, time trend or XY poly trend according to the requirements
- (1) Trend/event

This item is for history event and all the trend maps

E	vent Button	×
	Event Button Color	Position
	Trend Type	Function
	Trend/Event	Prev Page 🔹
	Time Trend	Prev Page Next Page Prev Item
	Time Axis	Lef OK
	Y Axis	Up Move Up
		ID Move Left Move Bight
	XY Poly Trend	Zoom Out Zoom In

- Prev page page up (this function is also fit for common grid and data grid)
- Next page page down (this function is also fit for common grid and data grid)
- Prev item last item (this function is also fit for common grid and data grid)
- ➢ Next item next item (this function is also fit for common grid and data grid)
- Ok confirm the current value and record the current time (only fit for history event)
- Reset content clear all the collection data
- Move up move up the current coordinate scale (only fit for trend map)
- Move down move down the current coordinate scale (only fit for trend map)
- > Move left move left the current coordinate scale (only fit for trend map)
- Move right move right the current coordinate scale (only fit for trend map)
- ➢ Zoom out zoom out the current coordinate scale (only fit for trend map)
- Zoom in zoom in the current coordinate scale (only fit for trend map)

(2) Time trend

Event Bu	itton		
Event	Button Color	Position	
Tren	d Type	Function	
<b>™</b>	rend/Event	Prev Page	-
🛛 💿 Ti	ime Trend		
	Time Axis	Left (Thin) 🔻	
	O Y Axis	Left (Thin) Left (Wide)	Rate 20 /10
		Right (Thin) Right (Wide) Zeem Out(Thin)	
© X	(Y Poly Trend	Zoom Out(Wide) Zoom In(Thin)	
		Zoom In(Wide) Reset Zoom Out(Rate) Zoom In(Rate)	

- Left (Thin/wide) move left the current coordinate scale (thin/wide means the move distance)
- Right (Thin/wide) move right the current coordinate scale (thin/wide means the move distance)
- Zoom out (Thin/wide) zoom out the current coordinate scale (thin/wide means the zoom rate)
- Zoom in (Thin/wide) zoom in the current coordinate scale (thin/wide means the zoom rate)
- ➤ Show show the curve
- ➢ Hide hide the curve
- > Reset reset the curve
- > Zoom out/in (rate) zoom out/in the current coordinate scale according to the rate

(3) XY poly trend

Event But	tton	
Event	Button Color	Position
Trend	Туре	Function
© Tr	end/Event	Prev Page 👻
🔘 Tir	ne Trend	
	<ul> <li>Time Axis</li> <li>Y Axis</li> </ul>	Left (Thin)
@ X	Y Poly Trend	Clear Clear Clear&&Draw Reserve&&Draw Repete&&Draw

- Clear
- clear all the fold line
- Clear&draw clear the fold line, and draw new fold line
- ➢ Reserve&draw reserve the old fold line and draw the new fold line
- Repeat&draw draw new line and cover the old fold line once the data coordinate changed
- Button

Event Button	22
Event Button Color Position	
Text More Language Prev	
Coil Control	Font Art Font Text Library Password Level Level1
E Key Hide	Key Type       Image: Touch       Membrane       Code
<ul> <li>Released Change</li> <li>Pressed Custom</li> <li>Save</li> </ul>	Align Left © Top Middle © Center Right © Bottom

- More language the text showing on the button can be set to multi-language, click "text library" to add language
- > Coil control when the coil is ON, the button is functional
- Password the button will be protected by password. Please choose the password level. Please refer to "Touchwin special function component" manual
- Key type touch key(for TP, TH and TG series) or membrane key(for OP560, MP360, MP760, XMH, XMP)
- ➢ Key hide hide the button
- Released/pressed set the released and pressed button appearance Change: change the appearance; custom: user defines the appearance; save: save the appearance
- Align choose the button alignment mode
- Color



- ➢ Kind set the color type
- Color set the colors
- Position

Event Button		
Event Button Color Po	sition	
Position	Size	
X [197]	Width	50
Y 52	Height	30
Animal		
Horizontal		
Vertical		
Lock		

Position set the upper left point to be the coordinate point (0, 0) and set the X and Y coordinate
 X position set the X coordinate of event button

Y position➢ Size

- Width (W) set the width of event button
- Height (H) Animal

the event button can move		
Animal		
✓ Horizontal	D0	
Vertical	D0	

set the Y coordinate of event button

set the height of event button

set the width and height of event button

#### Horizontal

the event button can horizontal move according to register value, X coordinate value =X position+current value of register

	Vertical	the event button can vertical move according to register value,
		Y coordinate value =Y position+current value of register
$\triangleright$	Lock	lock event button in the screen, then it cannot move

### 4-4-18. XY trend map

User sets the reference curve in advance and compares it to the actual curve to analysis the stability of actual curve.

For example:

X-axis object is PSW300, Y-axis object is PSW301. This curve compares to the reference curve. Reference curve: Y = X;



1. Click  $\stackrel{\text{lin}}{=}$  and move the cursor in the screen, right click mouse to confirm, click ESC to cancel. Drag the boundary to change the size.



- 2. Double click the XY trend map, it will show the attribute window.
- Coordinates

oordinates Set Cu	rve Pick Curv	ve Position	
Hor		Ver	
Data Type Uns	igned 🔹	Data Type	Insigned 🔹
Segment	2	Segment	2
Value		Value	
Up	100	Up	100
Low	0	Low	0
Total	5	Total	5
Float	0	Float	0
Color			
Coord	-	Background	
Scale	•	Color	
Value			

### ➢ Horizontal

Data type	the data type include unsigned, decimal, hex, float number
Segment	the X-axis scale
Value	show the X-axis scale value
Up	the max X-axis scale
Low	the min X-axis scale
Total	the total bit of data
Float	the decimal bit of data
Vertical	please refer to horizontal settings
Color	
Coordinate	the color of X-axis and Y-axis
Scale	the color of scale
Value	the color of the coordinate value
Background	the color of background

■ Set curve

A A

Coordinates	Set Curve	Pick Curve	Position
			Curve
		Up	Curve
			Color 🖉
		Down	Curve Mode
			Fold
			Dot
			Coordinates

- Add/delete add or delete the curve
- ➢ Color the curve color
- ➢ Curve mode fold line or dot
- > Coordinates add coordinate for curve

Curve Coordinates			×
Coordinates	1	Set	
T OINL.(0,0)	Up	X:	0
	Down	Y:	0
Add Del		ОК	Cancel

Choose the coordinate point and set the X, Y coordinates.

Pick curve

Coord	linates S	et Curve	Pick Cur	ve	osition	
		et cuive			USILIOIT	
Cu	irve				Set	
					Curve	
				op	X Object	)
					Y Object	
				own		D
					Set	Param
					Auto Save —	
					Control Pick	
	Add	Del				
1/1-1-4-		1-1-4-41	L			
d/delete	add or	· delete ti	ne curve	•		
		motor to	store the	vv	avis acordinatas	
narameter	the na	gister to s	store the	e XY	axis coordinates	
parameter	the pa	gister to surameters	store the include	e XY e upć	axis coordinates ate mode, color	
parameter	the pa	gister to s irameters rameter	store the	e XY e upc	axis coordinates ate mode, color	
parameter	the pa	gister to s irameters rameter Paramet	store the s include	e XY e upc	axis coordinates ate mode, color	
parameter	the pa	rameter rameter Paramet Update	store the include ter Mode	e XY e upc	axis coordinates ate mode, color	
parameter	the pa	Parameter Update	store the include ter Mode	e XY e upc	axis coordinates ate mode, color	
parameter	the pa	rameter Parameter Update	store the s include ter Mode	E XY E upc	axis coordinates ate mode, color	
parameter	the pa	Parameter Parameter Update Interva Color	store the s include ter Mode	E XY	axis coordinates ate mode, color	
parameter	the pa	Parameter Parameter Update Interva Color Total D	store the s include ter Mode	Tim	axis coordinates ate mode, color	
parameter	the pa	Parameter Parameter Update Interva Color Total D	store the s include ter Mode	E XY	axis coordinates ate mode, color	
parameter	the pa	Parameter Parameter Update Interva Color Total D	store the s include ter Mode	E XY	axis coordinates ate mode, color	
parameter	the pa	Parameter Parameter Update Interva Color Total D Curve	store the s include ter Mode I Pata e Mode Fold	E XY	axis coordinates ate mode, color	
parameter	the pa	rameter Parameter Update Interva Color Total D Curve	store the s include ter Mode I Data Fold Dot	E XY	axis coordinates ate mode, color	
date mode	the pa	rameter Parameter Update Interva Color Total D Curve	store the s include ter Mode I Data Fold Dot	E XY E upo	axis coordinates ate mode, color	
date mode	the part of the pa	Parameter Parameter Update Interva Color Total D Curve O updating	store the s include ter Mode I Data Fold Dot curve mo	EXY Eupone Tim	axis coordinates ate mode, color	
parameter date mode erval	the part of the pa	rameter rameter Parameter Update Interval Color Total D Curve © Irawing C updating curve color	store the s include ter Mode I Data Fold Dot curve mo period lor	e XY e upo Tim	axis coordinates ate mode, color	
parameter date mode erval lor al data	the part of the pa	Parameter Parameter Update Interva Color Total D Curve @ updating curve color max coo	store the s include ter Mode Mode Fold Dot curve mo period lor ordinates	E XY E upc	axis coordinates ate mode, color	
parameter date mode erval lor al data rve mode	the part part the d the d the u the d the u the fold	Parameter Parameter Update Interval Color Total D Curve @ updating curve col max coo I line anc	store the s include ter Mode I Data Fold Dot curve mo period lor ordinates I dot	e XY e upo Tim	axis coordinates ate mode, color	
date mode erval lor al data rve mode to save	the pa Par the d the d the d the u the d the t fold the H	Parameter Parameter Update Interva Color Total D Curve © Irawing C updating curve col max coo I line and HMI will	store the s include ter Mode l Data Fold Dot curve mo period lor ordinates I dot	e XY e upc Tim	axis coordinates ate mode, color	

Position

A A

AAA

ordinates Set Curve Pie	ck Curve Position	
Position	Size	
X 42	Width	255
Y 185	Height	148
Animal Horizontal Vertical		
lock		

	Position coordinate	set the upper left point to be the	coordinate p	point $(0, 0)$ and set the X and Y			
	X position	set the X coordinate of XY trend map					
	Y position	set the Y coordinate of XY trend i	nap				
≻	Size	set the width and height of XY trend map					
	Width (W)	set the width of XY trend map					
	Height (H)	set the height of XY trend map					
≻	Animal the XY trend map can move						
		Animal					
		✓ Horizontal	D0				
		Vertical	D0				
	Horizontal	the XY trend map can horizontal move according to register value, X according to register value, $-X$ position to unrepet value of register					
	Vartical	the VV trend man can vertical move according to register value					
	vertical	Ventical une A i trend map can ventical move according to register value,					
	Lock	lock XV trend man in the screen	then it con	not move			
-	Lock lock XY trend map in the screen, then it cannot move						

### 4-4-19. XY fold map

Note: only fit for TH, TG series HMI

The XY fold map can collect two groups of register and draw the curve in point, line mode. For example: the two groups of register are PSW300~PSW309, PSW310~PSW319. PSW256 is drawing mode. PSW256=1 clear and re-draw; PSW256=2 save and re-draw; PSW256=3 clear; PSW256=4 repeat re-draw.



1. Click i and move the cursor in the screen, right click mouse to confirm, click ESC to cancel. Drag the boundary to change the size.



- 2. Double click the XY fold map, it will show the attribute window.
- Graph

raph Pick Po	osition	
Aspect		
	Frame:	<b>•</b>
	Background:	<b></b>
Trend		
Style		
C Line	Point	Point-Line
Line		Point
Color:	•	Color:
Width: 1	•	Width: 4
Style		Style
Solid		Rect
@ Daub		Dound

> Aspect set the frame and background color of curve

## > Trend

Style the curve display mode: point, line, point-line

Line the color/width/curve style

Style solid line and dash line

Point the color/width/curve style

Style rectangle point, round point

Pick

23
- I
- I

> Share buffer the X/Y axis data are from the same register

- If share buffer is effective, the (X, Y) coordinates are the value starting from PSW300. First coordinate is (PSW300, PSW300), the second is (PSW301, PSW301)....
- (2) If share buffer is not effective, the coordinates of X and Y are from different register groups.

Share buffer		
X Data	D0	X Parameter Set
Y Pick Add	DO	Y Parameter Set

X data set the X-axis data type, min and max value

Y pick add set the Y-axis data type, min and max value

- Dynamic set this function is selected: set the coordinates quantity through register This function is not selected: set the coordinates quantity directly
- Draw mode

First status set the drawing mode at the beginning. The modes can be never draw, draw once, and repeat drawing

- Register control set the drawing mode through the register
- Register value=1 clear the drawing and draw the new one
- Register value=2 reserve the old one and continue drawing behind the old fold line
- Register value=3 clear the current fold line
- Register value=4 repeat drawing

The drawing mode can be set through event button, please refer to chapter 4-4-17.

Position

≻

≻

≻

 $\triangleright$ 

Graph Pick Position
Position
X 139 Width 220
Y 122 Height 185
Animal
Horizontal
Vertical
- Lock
Desition set the upmen left point to be the coordinate point (0, 0) and set
coordinate
X position set the X coordinate of XY fold map
Y position set the Y coordinate of XY fold map
Size set the width and height of XY fold map
Width (W) set the width of XY fold map
Height (H) set the height of XY fold map
Animai the XY fold map can move
Animai
I → Horizontal D0
Vertical D0
Horizontal the XY fold map can horizontal move according to register value
X coordinate value =X position+current value of register
Vertical the XY fold map can vertical move according to register value,
I cock I lock XX fold map in the screen, then it cannot move

# 4-4-20. Time trend map

The curve collects the data according to the time. For example, the collection period of the following curve is 1s. The storage mode is continuous storing until full.


The collection period of following curve is 3s; the storage mode is cyclic covering.



1. Click 🔤 and move the cursor in the screen, right click mouse to confirm, click ESC to cancel. Drag the boundary to change the size.

2. Double click the time trend map, it will show the attribute window.

Common

ommon View	Object Trend Color	Position
Storge Size		10
otorge Mode	🔘 rotate overwrite	I full stop
ick Mode	Pick Period	
	Period	1 Secc 💌
	Pick Ctrl	MO
	Variable Mode	MO
	Fix Mode	@ CI-
	- Stop	Circle
	Pick Feel	MO

Storage size the data quantity. For example: the storage size 10 means 10 groups of data. Each group of data occupies some registers.

Rotate overwriteregisters=curve quantity n+time 6(year/month/day/hour/minute/second)Full stopregisters=curve quantity n+ time (according to time axis)

 $\succ$  Storage mode the mode to store the data

Rotate overwrite store from the beginning address when the data is full and cover the original data. If the fix mode is stop or the variable mode coil is OFF, it will stop collecting when the data is full.

Full stop storing when the data is full

Pick mode the data collection mode, this mode is effective when the storage mode is rotate overwrite

Pick period the data collection period, the unit is 1s; if the pick control is effective, it starts to collect data when the coil is ON

Variable mode and fix mode

If variable mode coil is ON or fix mode is circle, the storage mode will be rotate overwrite If variable mode coil is OFF or fix mode is stop, the storage mode will be full stop



> Pick feel when the rising edge of coil is coming, it will collect the data once

View

≻

T	ime Trend	
	Common View	Object Trend Color Position
	Grid Style	Time Grid 5 Y Grid 5
	Time Info	Year Month Day
		Hour Minute Second
	Init Time	30 Secon 💌
	Time Section	6
	Scale Section	2 Font
	Y Section	6
	Scale Section	2

- ➢ Grid style display the grid for time axis and Y axis
- > Time info the time type displaying on the time axis
  - Init time the range of time axis, the min unit is second
- $\blacktriangleright$  Time section divide the time axis in sections
- > Scale section display the scale value for each time axis section
- Y section divide the Y axis in sections
- Scale section display the scale value for each Y axis section



#### Object

The object registers are used to store the collection data. The storage data type depends on the storage mode.

(1) Storage mode is rotate overwrite: store the collection data and time

nmon View	V Object Trend Color Position
Station	
Device	Local registers 🗸
VirStaNO	0 Station 0
Object	
ObiType	PSW - 256

- Object type the register type and first address  $\triangleright$
- Auto locate ۶ auto-allocate the register address according to the object type
- (2) Storage mode is full stop: set the collection data register address

Common Viev	v Object	Trend	Color	Position	
Station					
Device	Local regis	sters			•
VirStaNO		0 Sta	ation		0
Object					
ObjType	PSW	•	25	6	







the register type and address



The auto locate is unavailable in full stop mode.

Trend

Time Trend	Trend City During	
Common View Obje	ct Trend Color Position Map Mode	n D0 Format
	Data Type	Word
Add Batch Add	Delete Init Max	100

- > Add/delete add or delete the curve
- > Batch add add the curve in batch
- Map mode
  Fold/dot/oolum

Pick

⊳

Fold/dot/column display the data in the mode of fold line, dot, or column curve

23

- ➢ Color the color of curve
  - the collection data register

Time Trend





set the address offset

Control	Eductor (Sec.	×
Object		
Station Device VirStaNO	PLC Port	
Object ObjType	D ▼ 0	

The object address changed with PSW256. The address = D[0+PSW256 value]

We suggest using the internal register of HMI for indirect address (PSW, PFW), otherwise the communication speed will be slow.





Note: (1) The first curve cannot set another group

(2) If "another group" is not selected, the initial max and min value will refer to the last curve

- Show scale set the scale value format
- > Data type the data type: byte, word, Dword
- ➢ Initial min the min value of curve
- $\succ$  Initial max the max value of curve

Color

Common	View	Object	Trend	Color	Position
Kind Back Grid Time	e Color ground C Color Label Co		or	-	

- $\succ$  Kind the color type
- > Color the color of frame, background, grid or time label

The color of background and grid is effective if "display grid" is selected.

Position

Time Trend			×
Common View Object	Trend Color P	osition	
Position	Size		
X 78	Width	295	
Y 93	Height	184	
Animal			
Horizontal			
Vertical			
Lock			

- Position set the upper left point to be the coordinate point (0, 0) and set the X and Y coordinate
- X positionset the X coordinate of Time trend mapY positionset the Y coordinate of Time trend map
- > Size set the width and height of Time trend map
- Width (W) set the width of Time trend map
- Height (H) set the height of Time trend map
- > Animal the Time trend map can move

	Animal			
	I Horizontal	D0		
	Vertical	D0		
Horizontal	the Time trend map can horizon	ntal move acco	rding to re	gister value,
Vertical	the Time trend map can vertical me	ove according	to register	value,
Lock	Y coordinate value =Y position+ lock Time trend map in the scre	current value	of register nnot move	

#### 4-4-21. Alarm list

The alarm list will show the alarm information when there is trigger signal of controller. 1. Click I and move the cursor in the screen, right click mouse to confirm, click ESC to cancel. Drag the boundary to change the size.

<sup>M0</sup> Alarm List
<b>^</b>
<b>↓</b>
<b></b>

2. Double click the alarm list, it will show the attribute window.

#### ■ Common

Data Logger
Common Alarm Position
Title
Caption More Language
Alarm List
Font Art Font Text Library
Title Height 20 Align
Alarm Width 100   Center
Row Count 5
Cell Height 20 Sorder Bold

- ➢ Title display the alarm title
- More language the title can be set to 8 different languages Title height the size of title
   Alarm width the row width of alarm information
   Row count the row quantity of alarm information
- > Cell height the row height of alarm information
- ➢ Align the alignment mode of alarm information
- Border bold the frame of list is bold
- Alarm

Dat	a Logge	er				23
C	ommon	Alarm	Position			
			Control	Content		
	1	MO		Alarm Content		

- > Control set the coil to control the alarm information
- > Content the contents of alarm infomation
- (1) Add, delete alarm information

Right click the information number to add or delete information.

Data Logge	r		x
Common	Alarm Position		
	Control	Content	
	New Message	ent	
	Delete		

(2) Modify the control coil

Double click the coil to modify the information

Data Logger
Common Alarm Position
Control Content
2 M0
Object
Station
Device PLC Port
ObjType M V 0
indirect

### (3) Modify the alarm information

Double click the alarm content to modify the information

Data Logger	L			
Common Alarm Position				
Control	Content			
1 M0	Alarm Content			
2 M0				
Text				
Text Font Color				
Content				
More Language				
Alarm Content				

#### (4) Add alarm contents

Right click the alarm contents to add new text, variational text and data.

1	Data	a Logge	r					X
	С	ommon	Alarm	Position				
				Control		Conte	ent	
		1	MO		Alarm Cont	ent		1
		2	MO				N T .	1
		3	MO				New Text	
							New Variatio	onal Text
							New Data	

## 1 Text

Double click the text to modify the contents, font and color.

Text			x
Text	Font Color		
Con	tent		
	More Language		
Te	ext	*	

### 2 Variable text

It displays the text according to the register value.

arial	le string	
Obj	ect Display Font Color Position	
	Station	
	Device PLC Port	-
	VirStaNO 0 Station	1
	Object	
	ObjType D V 0	
	indirect	
	Value	
	Data Type Word 👻	

## 3 Data

It will display the register value when the alarm occurs.

alue	
Object Text For	nt Color
Station	
Device PI (	Port 🔹
VirStaNO	a Station 1
Object	
ObjType D	- 0
	indirect
Value	
Data Type Wo	rd 🔻

#### (5) Copy, delete the contents

Right click the alarm contents to copy and delete the contents.

Dat	a Logger						x
C	Common	Alarm	Position				
			Control	Co	ntent		
	1	MO		Alarm Content			
	2	MO				Copy Co	ntent
	3	M0				New Text	t
						New Vari	iational Text
						New Data	a
						Delete	

Each piece of contents can add different kinds of information including text, variable text, and data.

Position

Data Logger	×
Common Alarm Position	]
Position	
X 231	
Y 92	
Cock	

Position set the upper left point to be the coordinate point (0, 0) and set the X and Y coordinate

Lock	the alarm list cannot move
Y position	set the Y coordinate of alarm list
X position	set the X coordinate of alarm list

### 4-4-22. Display real time event

This function is to real-time show the information.

1. Click  $\square$  and move the cursor in the screen, right click mouse to confirm, click ESC to cancel. Drag the boundary to change the size.



- 2. Double click the real time event, it will show the attribute window.
- Aspect

Real Event		X
Aspect Event Color	Position	
More Language		
Information		*
		-
Fe	ont	Font Text Library
Setting		Align
Rows	3	Left
Width	195	Center
Height	25	Right

- > More language the title can be set to 8 languages
- ► Rows the row number
- > Width the width of information
- Height the height of information
- ➢ Align the alignment mode of information
- Event



- ➢ Add add information
- Batch add batch add information

Modify modify the information

Note: double click the information to modify the contents

- > Delete delete the information
- (1) Coil

Event	Source	and the same	X
Coil	Infomat Station Device VirStaNO Object ObjType	tion PLC Port ▼ ① Station 1 M ▼ 0 ☐ indirect	

> Station

 $\triangleright$ 

- Device the communication port
- Station the device station
- Object the coil address
- Indirect the offset of address

Coil	Infomat	ion	
	Station Device VirStaNO	PLC Port	
	Object ObjType	M ▼ 0 Ø (PSW256)	

Object address=M[0+PSW256]

We suggest using internal register of HMI (PSW, PFW) for indirect address otherwise the communication speed will be slow.

(2) Information

Event Source	×
Coil Infomation	
Event	
More Language	
Over volt	*
	-
	Text Library

> Event add or modify the contents displayed in the real time event

#### Color

Real Event	
Aspect Event Color	Position
Kind	Color
Title Color Frame Color Color Message	
	More

- $\succ$  Kind the color kind
- > Color the color of title, frame, message
- Position

Real Event	X
Aspect Event Color	Position
Position	
X 📑	
Y 34	
Cock	

- Position set the upper left point to be the coordinate point (0, 0) and set the X and Y coordinate
  - X positionset the X coordinate of real-time eventY positionset the Y coordinate of real-time event
- ➢ Lock the real-time event cannot move

#### 4-4-23. Display history event

History event will real-time show the event information and store the state and data.

1. Click and move the cursor in the screen, right click mouse to confirm, click ESC to cancel. Drag the boundary to change the size.

PFW256 PFW <b>29gring Time</b>	Info	Affirm Time
M0		
	_	

- 2. Double click the history event, it will show the attribute window.
- Aspect

spect Event Pick	Save Colo	r Position	
Column			
Column 1 ()	Column2	Column3	
Title			
Spring Time			*
		Font Text I	Library
Align ×ó¶ÔÆë	- Colur	mn Width	118
Row Height	25 Rows	per page	2

Column set each column title, alignment mode and column width
 Title set the title name

More language the title can be set to 8 kinds of language

Align the alignment mode of title

Column width change the column width

- Row height change the row height
- Rows per page set the row numbers on each page
- Show year display the year behind information
- Event capacity the total event numbers

The event will occupy register numbers = [event capacity n+start end code 1]\* Every event occupied register numbers 13 + start end pointer 4 Which is (n+1)\*13+4 Each event occupied register numbers =trigger time 6+event information 1+confirm time 6=13

Event

pect	Event P	ick Save	Color	Position	
		Add Batcl	h Add	Modify	Delete
NO	Object	Alarm messa	ge		Trigger
1	MO	Over volt			Up Edge

Add/batch add/modify/ delete add/batch add/modify or delete the event information Double click the information in the event list to modify the objects:

Histroy Event	Event Source
Aspect Event Pick Save Co	Coil Event
Add Batch Ad NO Object Alarm message 1 M0 Over volt	Station Device PLC Port  VirStaNO  O Station 1 Object ObjType M O indirect

- Station set the communication port device and station no.
- > Object the coil address to trigger the history event

oil Event	
Descript	
More Language	
Over volt	-
	Text Library
Spring	

- > Descript the contents of history event
- > Spring the event will be activated by rising edge or falling edge of coil signal

### Pick

The history event will collect data when this item is choosen. When the coil is ON, the data will be collected.

Н	Histroy Event						
	Aspect Event	Pick	Save	Color	Position		
	Control						
	MO	This Pick	Regist v !!	vas used	to control		

Save

Histroy Event	
Aspect Event Pick Save Color Position	
Object ObjType PFW    256	
Auto locate	

- Object
- bject the object address to store the history event data
- > Auto locate the system will auto-assign the registers to store the data

Color

Histroy Event							
Aspect Event Pick Save Color Position							
Kind Color							
Title colors							
More							

- ➢ Kind choose the kind of color
- $\succ$  Color set the color
- Position

Histroy Ev	ent	_	-	-		
Aspect	Event	Pick	Save	Color	Position	
Pos	ition					
x		267				
Y		101				
Lo	ck					

Position set the upper left point to be the coordinate point (0, 0) and set the X and Y coordinate

X position	set the X coordinate of history event
Y position	set the Y coordinate of history event
Lock	the history event cannot move

4-4-24. Common grid

 $\triangleright$ 

Common grid can display and input data in the table. It can be used together with column map, XY fold map for data input function. For display function, it is used together with sample save and sample export.

**Note:** please use event button to make the operations including prev item, next item, prev page, next page. Please refer to chapter 4-4-17.

1. Click is and move the cursor in the screen, right click mouse to confirm, click ESC to cancel.

Pro	Name	year	month	day	hour	minute	second	quantity	amount
000	A	000	000	000	000	000	000	000	000
000	В	000	000	000	000	000	000	000	000
000	С	000	000	000	000	000	000	000	000
000	D	000	000	000	000	000	000	000	000
000	E	000	000	000	000	000	000	000	000

**Note:** don't change the table size by dragging the boundary of table. Otherwise the table cannot be touched correctly. Please modify the column width and row height in the grid control property.

- 2. Double click the common grid, it will show the property window.
- Object

0	rid Control
	Object Common Column Position
	Station Device PLC Port VirStaNO 0 Station 1
	Object ObjType D V 0

- Station communication port device and station no.
- > Object the first address of the common grid

The address arrangement of grid object





Common

Object Common	Column Posit	lion	
Total Rows	3	Title Height	20
Visible lines	3	Cell Height	2
🗸 Title 🛛	Bold border	Title Font	Cell Font
Auto-increme Title NO	uage	V Static colo Title More La	umn nguage
Te	▼ xt Library		Text Library
Width	30	Width	80
Static column na	me uage xt Library	Worker1 worker2 worker3	

- $\blacktriangleright$  Total rows the total rows of table
- $\blacktriangleright$  Visible lines visible lines  $\leq$  total rows
- > Title height the height of title row
- > Cell height the height of each row
- ➢ Title display the title row
- > Bold border the frame of grid is bold line
- $\succ$  Title font the font of title words
- > Cell font the font of each word in the row
- Auto-increment column display the number of column
- Title(more language)set the number title, support 8 kinds of language
- Width the width of number column
- ➢ Static column the name of column
  - Title(more language)set the title of static column, support 8 kinds of languageWidththe width of static column
- Static column name set the name column contents

Column

bject Common	Column	Position		
V modifiable		Add	Modify	/ Dele
Title	Width	Data	Format	Alignment
point	50	WORD	UINT	Align Ri
KeyBoard				
KeyBoard_60		на нд 7 	8	9 +/-
		4	5	6 CLF
	1			

- > Modifiable the data in the table can be changed
- ➢ Add add a new column
- > Modify modify the data in the grid
- Delete delete one column
- > Keyboard choose the keyboard type which is used to change the data

Grid Control					23
Object Common C	Column Pa	sition			
🔽 modifiable	Add		Modify	De	lete
Title	<u>Wid</u> th D	ata	Format	Alignment	
point	50 V	/ORD	UINT	Align Ri	$\geq$
Column information		/			×
Title More Language point Width	51	В	itLength	Text	Library 3
Type Word	•	D	otLength		0
Format Dec(D) Hex(U) Float(F) Unsigned(X)			Align Hor C Left C Center	er :	

Double click the data in the list to modify the details:

- $\succ$  Title the title of the column
- $\succ$  Width the width of column
- > Bitlength the data bit length before decimal point
- > Dotlength the data bit length after decimal point
- Type the data type (word, Dword)
- $\succ$  Format the data format

#### Note: the time is in hex format

Position

Grid Cont	rol		
Object	Common	Column	Position
Pos	ition		
X		174	
Y		83	
C La	ock		

- Position set the common grid position and size
- > X position set the X coordinate of common grid
- Y position set the Y coordinate of common grid
- ➢ Lock the common grid cannot move

#### 4-4-25. Data grid

#### Note: this function is only suitable for TH and TG series HMI.

Data grid can display continuous register data. It is used together with sample save and sample export. Data grid has circular buffer and time displaying. Common grid is suitable for mass data monitoring and modifying.

The following example shows the data of sample save function. The purpose is to display the data collected by sample save function.

NO	Name	Data 1	Data 2	Data 3	Data 4	Time
0	A1	25	50	100	150	2011-09-20 13:46:07
1	A2	20	40	80	120	2011-09-20 13:46:05
2	A3	15	30	60	90	2011-09-20 13:46:03
3	B3	10	20	40	60	2011-09-20 13:46:01
4	В4	5	10	20	30	2011-09-20 13:45:59

**Note:** please use event button to make the operations including prev item, next item, prev page, next page. Please refer to chapter 4-4-17.

1. Click and move the cursor in the screen, right click mouse to confirm, click ESC to

cancel.

<b>D∦i</b> o	Name	Data1	Data 2	Data 3	Data 4	Time
000	A1	000	000	000	000	000
000	A2	000	000	000	000	000
000	A3	000	000	000	000	000
000	B3	000	000	000	000	000
000	В4	000	000	000	000	000

2. Double click the data grid, it will show the property window.

Object

	Data Grid
	Object Common Column Position
	Station       Device     PLC Port       VirStaNO     0       Station     1
	Object
	Obj lype D V 0
Station	the communication port and station no.
<ul><li>Object</li></ul>	the first object address of the grid
The address arran	agement of grid object
Column 1	Column 2 Column 3 Column 4 Column 5
first address firs Row 1	t address+1 first address+2 first address+3 first address+6 (year/month/day hour/minute/second)
Row 2	
Row 3	

■ Common

Data Grid	-	×
Object Common Column Posit	ion	
Total Rowa	Title Height	20
	nue neight	20
Visible lines 5	Cell Height	20
📝 Title 🛛 📝 Bold border	Title Font	Cell Font
Auto-increment column	V Static colu	mn
Title	Title	guage
NO	Name	*
~		~
Text Library	(	Text Library
Width 30	Width	80
Static column name		
More Language	A1	
A1	A2 A3	
	B3 B4	
Text Library		

- $\succ$  Total rows the total rows of table
- > Visible lines visible lines  $\leq$  total rows
- > Title height the height of title row
- ➢ Cell height the height of each row
- ➤ Title display the title row
- > Bold border the frame of grid is bold line
- $\succ$  Title font the font of title words
- > Cell font the font of each word in the row
- > Auto-increment column display the number of column
- Title(more language)set the number title, support 8 kinds of languageWidththe width of number column
- Static column the name of column
- Title(more language)set the title of static column, support 8 kinds of languageWidththe width of static column
- Static column name set the name column contents

Column

Data Grid	Column	Position	-		×
Circle Buffer		Add	Modify	De	lete
Title	Width	Data	Format	Alignment	
Data 1	60	WORD	UINT	Align Ri	
Data 2	60	WORD	UINT	Align Ri	
Data 3	60	WORD	UINT	Align Ri	
Data 4	60	WORD	UINT	Align Ri	
Time	60	WORD	UINT	Align Ri	

- > Circle buffer auto-allocation the head and tail pointer
- Add anew column
- > Modify modify the data in the table
- Delete delete one column

Double click the data in the list to modify the details:

Data Gr	id		-			-		Σ
Object	t Comr	mon	Column	Posit	ion			
<b>v</b> (	Circle But	ffer		Add	]	Modify	,	Delete
Tit	le		Width	Data	a	Format	Alignmer	nt
Da	ita1		60	WO	RD	UINT	Align Ri.	
Col	umn inf	ormat	ion	-	_	-		23
T d	itle More Data 1	Langu	age					*
				<u></u>	Bi⊬l	enath	Text Lib	rary
<sup>w</sup>	/idth			60	DKE	ongar		
T <u>-</u>	ype	Word		•	Dotl	_ength		U
lli r	Format				A	ign Hor		
	<ul> <li>Dec</li> <li>Hex</li> <li>Floa</li> <li>Uns</li> </ul>	(D) (U) It(F) igned(>	()		0	) Left ) Center ) Right		
	E Time Format	H:	M:S					-

- $\succ$  Title the title of the column
- $\succ$  Width the width of column
- > Bitlength the data bit length before decimal point
- > Dotlength the data bit length after decimal point
- ➢ Type the data type (word, Dword)
- ➢ Format the data format
- > Time to display the time and set the time format

Position

Data	Grid
Ob	bject Common Column Position
	Position
	X 📴
	Y 72
[	Lock

- Position set the data grid position and size
- > X position set the X coordinate of data grid
- Y position set the Y coordinate of data grid
- Lock the data grid cannot move

#### 4-4-26. Sample save

Sample save can collect the local data and store in the HMI. The data can be displayed in data grid and export to U-disk in csv format.

The following is the application of sample save and data grid. The sample save button collects the data from PSW256 to PSW259 and store in the address beginning with PSW300 then show in the data grid.

NO	Name	Data 1	Data 2	Data 3	Data 4	Time
0	A1	25	50	100	150	2011-09-20 13:46:07
1	A2	20	40	80	120	2011-09-20 13:46:05
2	A3	15	30	60	90	2011-09-20 13:46:03
3	B3	10	20	40	60	2011-09-20 13:46:01
4	В4	5	10	20	30	2011-09-20 13:45:59

**Note:** please use event button to make the operations including prev item, next item, prev page, next page. Please refer to chapter 4-4-17.

1. Click  $\stackrel{4}{\sim}$  and move the cursor in the screen, right click mouse to confirm, click ESC to cancel. This button is invisible after downloading in the HMI.

#### Pick Save Data

2. Double click the sample save button, it will show the property window.

Object

Vick Save Data
Object Pick Save Position
Display Object Table:           0         D[0]         Add
Batch Add
Modify
Delete
Move Up
Move Down

- Add add collection object
- Batch add add more objects at once
- Modify modify the collection object
- Move up move up the object
- Move down move down the object
- Pick

Pick Save Data	22
Object Pick	Save Position
Count	10
Period	1 Sec
Manner	ymrhms 💌
Control	
	This Regist was used to control Pick!

➢ Count the collection data amount

The registers occupied by data collection function=every piece of data information \* data amount n

The registers occupied by every piece of data information=collection object (m) + time (year/month/day/hour/minute/second=6)

### If there is no collection time, the registers = m

- Period the data collection period, the min unit is 1s
- Manner the time format

- Control the collection process is controlled by the coil, when the coil is ON, it is collecting data.
- Pick save data

Pick Save Data			×
Object Pick	Save	Position	
Object			
Objitype	PFW	▼ 256	

- Object the storage register address of collection data, the default address is PFW or PSW register
- Position

Pick Save Data	×
Object Pick Save Position	
Position	
X	
Y 152	
Lock	

- Position set the sample save position and size
- X position set the X coordinate of sample save
   Y position set the Y coordinate of sample save
- Lock the sample save cannot move

### 4-4-27. Sample export

The sample save function cannot store mass real-time data in actual project. Sample export can solve the problem. It can export the data in U-disk and backup in PC.

1. Click <sup>4</sup> and move the cursor in the screen, right click mouse to confirm, click ESC to cancel. This button is invisible after downloading in the HMI.

### Export sample data

2. Double click the sample export button, it will show the property window.

#### Common

Export Co	ontrol		Date Time		Position
Common	Samp	ole	Destinatio	n	Save
torge Size			100		
ick Mode	Period Pic	k			
	Period	ĸ	1 Secc -		
	Pick (	Ctrl	MO		
	Dyna	nic Pic	k MO		
	⊂Fix Moo ⊚ Si	de top (	Recycle		

Storage size the export data amount

The registers occupied by sample export =every piece of data information \* data amount n The registers occupied by every piece of data information=collection object (m) + time (year/month/day/hour/minute/second=6)

Pick mode period pick and feel pick

Period the collection data period, the min unit is 1s

Pick control when the coil is ON, it starts to collect data

Dynamic pick when the coil is ON, circular store the data; otherwise it will stop collecting when the memory is full.

Fix mode recycle: circular store the data; stop: when the memory is full, stop storing data

\_

**Dynamic pick and fix mode can not work at the same time. User can choose one of them to work.** 

Feel pick it will collect data when the rising edge of signal is coming.

■ Sample

Export sample data	а		23
Export Contr Common	rol Sample	Date Time Destination	Position Save
Temperature	Add	Title Ten	nperature
	Batch Add	Sample	D0
	Delete	Data Type Wo	ord 🔻
		Format Dec(D) Float(F)	○ Hex(U) ○ Unsigned(X)
	Move up	Bit Length(G)	4
	Move down	Float length(C)	0

- Add add one piece of collection data
- > Batch add add many pieces of collection data at once
- Delete delete the collection data
- Move up move up the collection data
- Move down move down the collection data
- > Title the title of collected data
- Sample the collected data address, click the address to modify the details

Obje	ect	
	Station Device VirStaNO	PLC Port
	Object ObjType	D

- Data type word, Dword (32 bits), string
- > Data format the data format: decimal, hex, float, unsigned number
- > Bit length the bit length before decimal point
- > Float length the bit length after decimal point

Destination

Export Control	Date Time	Position
Common Sa	ample Destination	n Save
evice ID		
Depenie		
Dynamic	DO	
Path/File		
CE.csv		
Dynamic set		
Dynamic set		
@ F. N		
Fix Name	Re-export title	
Name add automat	ic	
add number after n	ame	
U		
Dynamic	c set D0	
named by date		
Chamber by date		

> Device ID the storage route of export data. 0 means C: $\$  in PC.

# The device ID must be 0 when it is used in the HMI.

- Path/file export file name and export mode
- ➢ Fix name export to the same file
- Re-export title export the data title every time
- Name add automatic auto-increase the export file name number, for example the name is 002, the next file name is 0020001, 0020002, 0020003.... The mex number is 0029999

Add number after name add fix number after file name, the number can be set through register, the max number is 9999

Named by date name the file by date

Save
Save

Export Co	ntrol	D	ate Time	Position
Common	Sam	nple	Destination	Save

- Object the collection register address
- Export control

Export sample data				×
Common	Sample	Destinatio	n	Save
Export Contro	1	Date Time	Pos	sition
After export fir	nish reset register	data		
Control export	ing 🚺	10		
🔲 Real time exp	ort 🛛 🔊	10		
Export status	N	10		
Export result		00		
Export proces	s	00		

> After export finish reset register data

Clear all the data after the export is successful

- Control exporting when the memory is full, the coil is ON, the data will be exported
- Real time export it will export data when the rising edge of signal is coming
- ➢ Export status when the coil is ON, it means exporting status;
- Export result the register will show different exporting result

Register = 0, exporting is successful

Register = 1, the export device doesn't exist

Register = 2, U-disk memory is low

Register = 3, the file name or route is wrong

Register = 4, read write file failed

- > Export process the register will show the exporting process percentage
- Date time

Export sample dat	a			X	
Common	Sample		Destination	Save	
Export Cont	trol	Date	Time	Position	4
🔽 Date Time					
Date format	YYYY-MM-DD	•	]		
Example	2013-01-1	0			
Time format (	HH:MM:SS	•	]		
Example	14:22:07	,			

- Date time export the collection data time
   Date format the date display format
   Time format the time display format
- Position

Common	Sample	Destination	Save	
Export Control		Date Time	Position	
Desition				
FOSILION				
X	198			
<b>v</b>	02			
•	82			

Position set the sample export position and size

set the X coordinate of sample export

- > X position
  - Y position set the Y coordinate of sample export
- Lock the sample export cannot move

### 4-4-28. Process orbit

With the new Xinje precise cutting technology, CAD file can be sent from U-disk to HMI. Then CAD file can be sent from HMI to PLC. PLC can send the cutting parameter file to HMI and show the cutting image.


1. Click 🖻 to put it in the screen, click ESC to cancel.



- 2. Double click the process orbit, it will show attribute window.
- Orbit

Process Orbit	1.8.1		X
Orbit Position			
Label		-Y	
Bit Len Float Len	5 2 Font	Bit Len Float Len	5 2 Font
Color Aspect Frame		Back	
Processing Processed Unprocess		Raised knife Processed Unprocess	
File path File name			
Units	m 🔻		

≻ Label

	Bit Length	the value bit length showing on X/Y axis
	Float lengt	h the value decimal bit length showing on X/Y axis
	Font	the value font showing on X/Y axis
	Color	the value color showing on X/Y axis
$\triangleright$	Aspect	
	Frame	the frame color
	Back	the background color
$\triangleright$	Processing	
	Processed	the color of processed orbit
	Unprocess	the color of unprocessed orbit
$\triangleright$	Set path	read file from specified path
	File path	the path of the file
	File name	the name of the file
$\triangleright$	Unit	the unit of the orbit, the default unit is meter
	Position	

Process Orbit		
Orbit Position		
Position	Size	
X 150	Width	298
Y 100	Height	237
Animal		
Horizontal		
Vertical		
Lock		

- Position set the coordinate of orbit according to the origin on the upper left corner
   X the X-axis coordinate
  - Y the Y-axis coordinate
- ➢ Size set the width and height of orbit
  - Width the width of orbit
  - Height the height of orbit
- ➢ Animal the move direction of orbit

Horizontal horizontal moving the orbit. Set the X-axis position through register.

X coordinate = X position + current register value

Vertical vertical moving the orbit. Set the Y-axis position through register.

Y coordinate = Y position + current register value

➢ Lock lock the orbit, it cannot move

# 5 HMI internal register

### 5-1. HMI internal registers

The internal register of TH series HMI include PSB, PSW, PFW, PRW, PHW

Register	Note
PSB	Bit object
PSW	Word object
PFW	Power-off retentive word object
PRW	Power-off retentive word object (for TH)
PHW	Power-off retentive word object (for TH)

Note: PHW only exist when it is required in order, TH465 doesn't have PHW.

The register range:

Model Register	TH465	TH765/TH865/THA62/THA65	TG series
PSB	256~1023		
PSW	256~4095		
PFW	8M-occupied by screen-occupied by system	256~246015	256~4000255
PRW	0-999	I	-
PHW	-	-	-

PSB, PSW, PFW amount and range can be set in File/setting/panel/set parameters.

Set	×
PFW Num	4096
PSB Num	1024
VisPSW Num	4096
	4000
PRPSVV Num	4056
Cache Num	1
ОК	Cancel

# **5-2.** Special internal registers

PSW, PFW, PSB address 0~255 are used by system.

Register	Function	Explanation
PSB0	Always close coil	
PSB1	Always open coil	
PSB2	First start scanning ON coil	
PSB3	100ms pulse coil	ON OFF 50ms OFF 50ms
PSB4	1s pulse coil	ON OFF 500ms 500ms
PSB5	1minute pulse coil	ON OFF 30s
PSB6	300ms pulse coil	ON OFF
PSB15	Communication flag	0: successful 1: failed
PSB16	Scan the screen first time successful	
PSB30	First scan after download	
PSB31	First scan after power on	
PSB39	Shut down the touch screen	
PSB60	Level 1 password flag	1: password open 0: password close
PSB61	Level 2 password flag	1: password open 0: password close
PSB62	Level 3 password flag	1: password open 0: password close
PSB63	Level 4 password flag	1: password open 0: password close
PSB64	Level 5 password flag	1: password open 0: password close
PSB65	Level 6 password flag	1: password open 0: password close
PSB66	Level 7 password flag	1: password open 0: password close
PSB67	Level 8 password flag	1: password open 0: password close
PSB68	Level 9 password flag	1: password open 0: password close

1. Bit object PSB

### 2. Word object PSW

Register	Function	Explanation
PSW0	Start screen number	
PSW1	Present screen number	
PSW20	Screen width	Read only
PSW21	Screen height	Read only
PSW26	PSB amounts	Read only
PSW27	PSW amounts	Read only
PSW28	PFW amounts	Occupy PSW28, PSW29 (read only)
PSW30	Year	Hex format, read only
PSW31	Month	Hex format, read only
PSW32	Day	Hex format, read only
PSW33	Hour	Hex format, read only
PSW34	Minute	Hex format, read only
PSW35	Second	Hex format, read only
PSW36	Week	Hex format, read only
PSW40	Recipe index	
PSW54	Device amounts	
DSW60	COM 1 (Download) communication	
P5 w 00	successful times	
DSW61	COM 1 (Download) communication failed	
F3W01	times	
DSW62	COM 1 (Download) communication	
15002	overtime times	
PSW63	COM 1 (Download) communication data	
15005	error times	
PSW64	COM 1 (Download) device version	
PSW65	COM 1 (Download) device model	
PSW70	COM 2 (PLC) communication successful	
	times	
PSW71	COM 2 (PLC) communication failed times	
PSW72	COM 2 (PLC) communication overtime	
15072	times	
PSW73	COM 2 (PLC) communication data error	
	times	
PSW74	COM 2 (PLC) device version	
PSW75	COM 2 (PLC) device model	
PSW80	COM3 (extension port) communication	
	successful times	
PSW81	COM3 (extension port) communication	
	failed times	
PSW82	COM3 (extension port) communication	
	overtime times	
PSW83	COM3 (extension port) communication	

	data error times	
PSW84	COM3 (extension port) device version	
PSW85	COM3 (extension port) device model	

# 3. Word object PFW

Register	function	Explanation
PFW1	Start screen number	
PFW2	Background color	0~255 (256 colors)
PFW10	Screen save wait time	
PFW11	screen number for screen save	
PFW20	COM 1 (Download) baud rate	4800, 9600, 19200, 38400, 115200, 187500
PFW21	COM 1 (Download) data bit	7, 8
PFW22	COM 1 (Download) stop bit	0-1 bit, 1-1.5 bits, 2-2 bits
PFW23	COM 1 (Download) parity	0-None, 1-Odd, 2-Even
PFW24	COM 1 (Download) station no.	
PFW25	COM 1 (Download) sending delay	Unit: ms
PFW30	COM 2 (PLC) baud rate	4800, 9600, 19200, 38400, 115200, 187500
PFW31	COM 2 (PLC) data bit	7, 8
PFW32	COM 2 (PLC) stop bit	0-1 bit, 1-1.5 bits, 2-2 bits
PFW33	COM 2 (PLC) parity	0-None, 1-Odd, 2-Even
PFW34	COM 2 (PLC) station no.	
PFW35	COM 2 (PLC) sending delay	Unit: ms
	Modbus Rtu 协议写单字和写多字	PFW36.2=0 时发 0x06 功能码;
PFW36.2		PFW36.2=1 时发 0x10 功能码。
	功能妈切探	PFW36.2 的状态需要重新上电才会生效。
PFW40	通讯口3(扩展口)波特率	4800、9600、19200、38400、115200、187500
PFW41	通讯口3(扩展口)数据位	0-8, 1-7
PFW42	通讯口3(扩展口)停止位	0-2 bit, 1-1.5bits, 2-1 bit
PFW43	通讯口3(扩展口)校验	0-None, 1-Odd, 2-Even
PFW44	通讯口3(扩展口)站号	
PFW45	通讯口3(扩展口)发送延时	单位: ms
PFW60	Password level 1	Occupy PFW60, PFW61
PFW62	Password level 2	Occupy PFW62, PFW63
PFW64	Password level 3	Occupy PFW64, PFW65
PFW66	Password level 4	Occupy PFW66, PFW67
PFW68	Password level 5	Occupy PFW68, PFW69
PFW70	Password level 6	Occupy PFW70, PFW71
PFW72	Password level 7	Occupy PFW72, PFW73
PFW74	Password level 8	Occupy PFW74, PFW75
PFW76	Password level 9	Occupy PFW76, PFW77
DEW/100	A direct the healtlight	Only TH765-N(V 1.0), TG series (except TGC65)
PFW100	Aujust the backlight	have this function
PFW101	Multi-language switching	Touchwin v2.D and higher versions support this

function		function

# 6 Q&A

## Q1 How to choose the software according to the hardware version of the HMI?

### TP series:

	Software version
Hardware version	Visible in the "HELP" menu of the
Visible on the label at the back cover of HMI	software
V2.6, V2.7	V2.78/V2.99
V2.C and above	V2.C.6i

### TH series:

	Software version
Hardware version	Visible in the "HELP" menu of the
Visible on the label at the back cover of HMI	software
V2.C and above	V2.C.6i

### TG series:

	Software version
Hardware version	Visible in the "HELP" menu of the
Visible on the label at the back cover of HMI	software
New version	V2.D and above

# Q2 How to install two or more versions of software in PC?

1. Change the path of the software as following in the installation process.

🛃 Setup - TouchWin Edit Tool	ter-radius ign in	
Select Destination Locat: Where should TouchWin Edit	ion Tool be installed?	
	Setup will install TouchWin Edit Tool into the follow To continue, click Next. If you would like to select click Browse. At least 1,298.0 MB of free disk space is - required. C:\Program Files\Xinje\TouchWin Edit Tool	wing folder. a different folder, <u>Browse</u>
Setup	< Back Next >	Cance1

2. According to the above, the default path for software installation is as "C:\Program Files\Thinget\TouchWin editing tool". Click the "VIEW" button to change the installation path manually to "C:\Program Files\Thinget\16\TouchWin editing tool". Then click the "OK". As following,

👸 Setup - TouchWin Edit Tool	
Select Destination Loc	ation
Where should TouchWin E	lit Tool be installed?
	Browse For Folder
	C:\Program Files\Xinje\TouchWin Edit Tool
	Windows Mail         Windows Media Components         Windows Media Player         Windows NT         Windows Photo Viewer         Windows Portable Devices         Windows Sidebar         WINRAR         XC System Download         Xrije         OK         Cancel
Setup	< Back Next > Cancel

### Q3 Why the software can not be installed or used normally?

1. Please close the anti-virus software and the system optimization tools before the installation;

2. Double click the shortcut of the software on the desktop after the success of the installation. then the following picture will pop up:



Reason: the current color mode is too low.

Method: right click the desktop, then choose the "attribute". Please change the color quality to the "highest (32 bit)" in the "settings" option.

💭 💬 🖷 🕨 Control Panel 🕨 All Control Panel Items 🕨 Display 🕨 Screen Res	solution
File Edit View Tools Help         Change the appearance of your display         Image: Image the appearance of your display         Display:       1. DELL EL78WFP •         Resolution:       1440 × 900 (recommended) •         Orientation:       Iandscape •         Make text and other items larger or smaller         What display settings should I choose?	Generic PnP Monitor and Intel(R) G33/G31 Express Chipset Family         Monitor         Monitor         Troubleshoot         Color Managem         Monitor Type         Generic PnP Monitor         @ Properties         Monitor Settings         Screen refresh rate:         60 Hertz         @ Hide modes that this monitor cannot display         Clearing this check box allows you to select display modes that this monitor cannot display correctly. This may lead to an unusable display and/or damaged hardware.         Colors:         True Color (32 bit)
	OK Cancel Ap

# Q4 Does the software have tradional version? Does it support Tradional Chinese input?

There is no traditional version of the installation software. But in the simplified Chinese system, you can input traditional Chinese, Spanish, Japanese, German, French, etc.

At present, our company supports four software version such as simplified Chinese version, English version, German version and Korean version.

# Q5 What shall we do when the HMI program of TH series and TG series can not be downloaded?

You need to use the USB download line to download the programs of TH and TG series HMI, and you can also buy or borrow the USB printer communication line. But the printer communication line must be complied with USB2.0 standards, and it should have the shielding layer, one side of the line is square, and the other side is flat.



1. Check whether the computer is installed with the USB driver

Get the USB driver from XINJE CD. Please give the power to the HMI again after the success of the driver's installation.

Note: Please read the installation instructions in the driver package before installation.

2. Please check whether the driver is abnormal if it is already installed.

Connect the USB download cable to the USB port of computer and the HMI, then give the power to the HMI again. Right click the "my computer" button on the desktop of computer, then choose the "attribute", and choose the "device manager" in the "hardware", If the computer is installed the USB driver, there will be red marked information in the "Device Manager/Universal Serial Bus Controller ".



(1) If there is no information, you need to install the USB driver again.

(2) If there is red marked information, please confirm whether there is a yellow exclamation mark before it. If so, you need to update the driver program again.

- 3. The USB driver can not be installed
- (1) Please close the anti-virus software and the system optimization tool.
- (2) Please check which operating system your computer belongs to. If your operating system isWin7 64 bit, you need to use the special driver of Win7 64 bit to update your driver.
- (3) There are two kinds of installation methods for the USB driver. The instructions are in the driver package, so you can have a try in turn.
- (4) If the USB driver still can not be installed, you should contact us to get the technical support.
- 4. Cannot download program through the USB driver is installed normally
- (1) Check whether the display model is in accodance with the HMI model;

Reason: customers may replace the TP screen with TH and TG screen, but they forgot to convert the model in the program and downloaded the program of TP to the TH and TG screen.

Solution: Check the display model in the "document/system settings/display".

(2) The USB download cables are not qualified;

You can replace a new cable if it is not confirmed. Now some USB download cables on market are not shielding wires, and the anti-interference ability is poor. We suggest you to use the shielding cable within 1.2m.

(3) Try to pull up and insert the USB download cable or restart the HMI;

(4) If the program still can not be downloaded, you should set on DIP switch 2 which is on the back of the TH and TG series HMI and resume the power. Then you can forced download from USB and serial port.

(5) Check whether there is interference;

We suggest you to use the independent 24V power supply. The power can not be connected with other devices at the same time. Don't put the high interference equipment around HMI, such as frequency inverter and so on. If the conditions allows, you should put the HMI to the place without high interference, such as office.

(6) the USB Port anti-interference ability of some computers is poor, or the USB port is easily damaged;

We suggest change another PC to try again. Then you can check if the program is downloaded successfully.

(7) Charging powers of some notebook computers are not very stable.

We suggest you to disconnect the power supply of the computer before downloading the programs.

# Q6 What shall we do when the programs of TP series HMI can not be downloaded?

1. Is the hardware version matched the software version?

According to the configuration table of hardware and software, you can check whether current software version is matched the hardware version that you can find from the back cover of the TP HMI.(you can click the "help/about")

### TP series

	Software version
Hardware version	Visible in the"HELP" menu of the
Visible on the label at the back cover of HMI	software
V2.6, V2.7	V2.78/V2.99
V2.C and above	V2.C.6i

2. Please use the multimeter to check whether the download cable is damaged or the contact of it is undesirable.

### PC serial port (COM)

# Dowload port of TP

			<u> </u>
Pin	Name	Pin	Name
1		1	NC
2	RXD	2	RXD
3	TXD	3	TXD
4		4	A
5	GND	5	GND
6		6	BUSY
7	RTS	7	В
8		8	NC
9		9	NC

3. Check the serial port of the computer

(1) Change a serial port or a computer to try again if you are using the computer with serial port;

- (2) If you are using a USB convertor:
  - a. check whether the USB convertor driver is installed;
  - b. If the system of computer is win7 system, please use V2.C.6i. If the system of computer is XP system, please check the port number of the convertor. If it is more than COM10, please change the number to COM1 or COM2 manually, and then give the power to download again.

Note: If the program of the HMI can be downloaded by serial port card and can not be downloaded by the USB convertor, you should change the USB convertor. You can buy the USB convertor from us. The reason is that the USB convertor of other companies can not be connected with the 7 pin of download cable of the HMI.

4. If all of the above is ok, you may connect the pin5 and the pin8 of the download port. Then you should give the power again and forced download.

Note: The pin5 and pin8 must be connected in the process of cut power and power on again.

# Q7 Why does it show the error HMI capacity is not enough when downloading the program?

Reason: the capacity of the program is larger than HMI capacity.

Methods: simplify the picture content

1. In the "tool/option" of the software version before V2.C.6b, we suggest you to cancel this fuction if you choose the "Encryption Download".

2. If you don't use download port communication, we suggest you to choose the "not use Download port". Otherwise the download port will occupy the resources.

3. Don't choose "automatical save" and "redo" in "tool/option"

### Q8 How to choose the download cable of HMI?

Choose the right cables according to the series of HMI

**TH and TG series screen download cable:** It supports the USB2.0 standard and has the shielding layer. One side of it is square and the other side is flat.



Dowload port of TP

TP series screen download cable:

	I mant (C		Jowroad	Pontor 1
PC sena	pon (C	SOM) s	eries HN	ſI
Pin	Name		Pin	Name
1			1	NC
2	RXD	└─── <u>─</u>	2	RXD
3	TXD	<b>├</b> ───	3	TXD
4			4	А
5	GND		5	GND
6			6	BUSY
7	RTS		7	В
8			8	NC
9			9	NC

### Q9 Why the program can not be uploaded? How to set to upload the program?

Reason: has not choosed the "full download" in the "tool/option", so programs can not b e uploaded.

Phenomenon: "there is no project" will be prompted when the programs are being upload ed.

Programs of HMI can be uploaded if you do the following operations before downloading.

1. For software version before the V2.c.6b, you should choose the "full download" or "upload" in the "tool/option".

#### Q10 how to choose the right communication cable?

Please refer to "HMI and PLC connection manual"; If the instructions can not explain the

connection of communication cable, customers can make their own communication cable referring to the definition of our HMI pin.

PLC communication port support: RS232/RS485/RS422

Download communication port support: RS232/RS485

Download port:



Pin number	definition	description
1	NC	Empty signal pin terminal
2	RXD	RS232 communication recieve data
3	TXD	RS232 communicaiton send data
4	А	RS485 communication"+"signal
5	GND	Signal ground
6	NC	Empty signal pin terminal
7	В	RS485 communication"—"signal
8	NC	Empty signal pin terminal
9	NC	Empty signal pin terminal

PLC port:



Pin number	definition	Description	
1	TD+	RS422 communication send "+" signal	
2	RXD	RS232 communication receive data	
3	TXD	RS232 communication send data	
4	А	RS485 communication "+" signal	
5	GND	Signal ground	
6	TD-	RS422 communication send"—" signal	
7	В	RS485 communication "—" signal	
8	RDD-	RS422 communication "—" signal	
9	RDD+	RS422 communication receive "+" signal	

# Q11 Why the screen can not communicate normally and it displayed error "communicating"?

1. Refer to HMI and PLC connection manual;

you can find the related device connection diagram and refer to some special communication tips.

2. Check whether the connection of communication cable is correct

Check whether connection of the screen and equipment is correct.

3. Please use the multimeter to check whether the communication cable is damaged;

4. Check whether the type of project PLC is suitable with the type of actual connection;

5. Check the settings of communication parameters;

The communication parameters must fit for the communication equipment. For example: equipment model, modbus number, bit rate, stop bit, data bit, odd and even parity.

Generally, PLC needs to power on again after the PLC parameters downloading.

6. You may set up a program to have a test for finding the reason.

If the new program is normal, you need to check the content of the project. Especially the button, data input and some parts related with communication equipment. For example: HMI is communicated with XINJE PLC. The modbus number is 1. Then connect with the PLC port of the screen by using the cable. Add a button for setting the soft component M0 in PLC. The modbus number of this button need to be set to 1, the "equipment" must be chosen PLC port.

Button	
Object Operate Button Color	Position
Device PLC Port	Station 1
Object M 🔽	0 Indirect

7. Check the current communication port of HMI:

HMI has two communication ports which are PLC port and Download port. Check which port is used for communication of HMI. Don't use the wrong communication port. Every part of equipment should be "PLC port" if you are using the PLC port.

8. Check the station number in communication window:

Customers should confirm the station number of communication equipment. If the number is 1 and the communication window that the screen pop up is "communicating, the PLC station number is 0.....", The station number of some part in HMI program may be 0. Please change the station number to 1.

9. Field interference:

Check whether there is interference. Please take some anti-interference measures, such as putting the shielding layer on the communication cable, using independent power and isolate the high frequency equipment with HMI.

# Q12 Why the communication speed between TP, TH series HMIs and communication equipments is so slow?

Following stituations may cause the communication speed between TP, TH series HMIs and communication equipments to be slow:

1. Many indirect parts are used in the program (the indirect address is communication device address):

Solutions: set the address to the internal address of HMI.

2. using the curve chart, and the collection period is within 1 minute.

Solutions: Change the number of "Cache" to 2 in the "File/setting/panel/set paraemter".

roject Set		X
Color   Para   Alternation	Font   I   Clock Panel	Project Device
Model TP460-L	•	
Description 240*128, m	nonochromatic	
	Set parameter	
Set		22
PFW Num	1024	
VisPSW Num	1024	
PriPSW Num	1024	
Cache Num	2	
ок	Cancel	

Note: If the collection period is within 1 minute, please use TG series HMI.

# Q13 How to change the download mode of HMI to communication mode?

### Software editing:

1. Please choose download port device:

Device		×
	Please select port Download Device: Unuse Downlad Port Thinget XC Series Thinget FC Series Thinget V5 Series Inverter Mitsubishi FX Series Mitsubishi Q Series Omron CP//CJ/CS Series Siemens S7-200 Series Siemens S7-300/400 Koyo S Series Schneider (Micro/Neza/Twido) Matsushita (FP0/FP1) Com Para: 19200, 8, Even, 1 Setting	
< Back	Next > Finish (	Cancel

2. Please choose the "download port" in the device options and set the right station number.

Bu	tton
(	Object Operate Button Color Position
	Station Device Download VirStaNO O Station 1 Object Object O
	Indirect

#### hardware connection:

TH, TG: the Download port of TH and TG series HMI can communicate with device directly.

TP: You need to connect pin 5 with pin 6 of download port. The method is like this .

1. connect pin 5 with pin 6 directly on the communication cable, then insert it into the download port of HMI. At last you must give the HMI power again;

2. Please connect the pin 5 with pin 6 by wire when HMI has no electricity. Then you need to give the power again and move the wire.

**Note:** This method will be ineffective after you give the HMI power again, then you need to connect again.

#### Q14 How to use the broadcasting function of HMI?

The boardcasting station number of HMI is 0, so you can not use readable components such as indicator light, button indicator light, data input and data display, etc. If not, the screen will be

white.

#### Q15 How to set when the screen is slave station?

Customers can choose the "Modbus slave(panel is slave)" or "free type"(panel is slave)". The former is used to Modbus protocol, and the latter is used to free communication protocol.
 Please get the free format protocol manual from XINIE CD.

2. Please get the free format protocol manual from XINJE CD.

### Q16 What shall we do if HMI does not support the current equipment model?

1. If the devices that the HMI supports are the same brand and different series, but the device communication protocol are same and they have the same device address, you can choose the device type matched with the screen.

2. Please confirm the communication protocol of the device. If it support Modbus, "Modbus RTU" or "Modbus ASCII" can be chosen.

3. If the communication protocol of the device can not meet the two coditions above, please use the following methods.

(1) You can write the communication protocol by yourself. Refer to HMI user defined protocol manual.

(2) You can use C language function if the device has few variables such as meters. Please refer to Touchwin C language manual.

# Q17 Why the HMI only can read the data but cannot write when communicating with Omron PLC?

1. The old version Omron editing tools can change the settings of DM6600 directly, then it can change the former default-value to Monitor.

2. The new version Omron editing tools: "tools/internet settings/PLC settings". You need to change the startup conditions of PLC to monitor state.

After changing the Omron settings, repower on the PLC. Then the HMI can read/write the data of Omron PLC.

#### Q18 Cannot print the whole contents when using microprinter.

Solutions: increase the width and length of the print window.

#### Q19 How to calibrate the screen of HMI?

TP series HMI is matrix screen. Touch drift doesn't exist, and it can't do touch calibration. If it

can not be touched, please confirm reasons referring to the method of Q47.

The calibration method of TH and TG HMI:

- 1. Turn on DIP switch 3 and give the power to HMI again;
- 2. Click the cross-shaped centre according to the order;

3. It shows the calibration success if the centre appears a " $\circ$ ". Click it into the screen of customers, and then turn off the DIP switch 3. If the centre appears a "X", you need to calibrate again till the centre appears the circle.

### Q20 How to calibrate the system time in the HMI?

- 1. Set a screen jump button in the screen. Set the screen ID to 60002.
- 2. Download the program in the HMI. Press this button to jump to time/date setting screen.

### Q21 How to modify the password in the HMI?

1. Set a screen jump button and set the screen ID to 60003;

2. Download the program to the HMI. Press this button to jump to password changing screen. **Note:** the current password should be opened before changing the password.

### Q22 which model support U-disk data import and export?

- 1. TH-UT/NU/NU3, TG (-U) or TG (-E) series HMI;
- 2. The U-disk capacity should less than 32G;
- 3. It doesn't support the mobile hard disk.

### Q23 Can the mouse connect to the USB-A port of HMI?

No, it can not.

# Q24 Can the register in the keeping area without electricity in the HMI be expanded?

It is expandable.

TH series HMI can add two kinds of power loss retentive registers. They are PHW(0.52 million registers) and PRW (one thousand registers). PHW will be provided when you indicate specially when ordering, and the TH465 don't have PHW. Only the initial address of PRW and PHE start from 0.

### Q25 What is the function of the HMI dail switch?

TP765:

Number 1 is ON. Change the download port to communication port; Number 2 is ON. Forced Download; Number 3 and 4 are not defined TH, TG series: Number 1 and 4 are not defined; Number 2 is ON, forced download;

Number 3 is ON, system menu: clock calibration, touch calibration and the USB-disk data import.

### Q26 How to open the advanced functions of HMI?

V2.C version and above:

- 1. Open the programming software, and create or open any program;
- 2. Click the "tool/option", and click the "user mode".



3. and then open the programme software again.

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		🧶 🗾 🔻	N2 10						
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- <b>50002</b> : Se	tKIL								
- <b>24</b> 60003: Pa	ssword								
- 60004: XC	Input								
60005 VC	Outru								
arroo n	outpu .								
65532: Pi	ckoave .								
- 65533: Pr	int 🕐								
- 🛃 65534: Al	arm 🚺 📋								

V2.C version and below:

If the software is installed, please do from the first step. If the software has been used for a long time, please do from the second step.

1. Create a file after opening the software. Then save it. After that, a system file named Option.dat will be generated automatically in the root directory of the system.

2. Open the file by using the text file;

3. Add two lines in the end like this: [software]

usermode=1

**Note:** please confirm that whether the [software] is in the file at first. If it exists, please cancle them first and add the two lines above. If not, the advanced functions will not be opened.



4. Please open the HMI software again after saving the file of "Option.dat". Then the advanced function will open.

# Q27 How to modify the Chinese input and the font size of historical events in the software?

Modify in the "File/ settings/font".

### Q28 How to display the time and the week in HMI?

1. Click the "date" and the "clock" component, and place them in the screen;

File Edit View	Part Tool	Window	Help		
🗅 😂 🖬   🐰	B 🖪 😡	<b>?</b> A	👬 👬 🛛	) 🍪 🧿	Pt 🚥
$\land \land \Box \Box$	$\bigcirc \bigcirc \bigcirc \bigcirc \blacksquare$	] 🛃 🥔	🍠 🖗 🛛	la 📷	M 🕝

- 2. Display the week: set a data display. The address is PSW36, and the type of display is hex.
- 3. Download to the screen or do the off-line simulation.

### Q29 Is the HMI password functional again after open?

- 1. Screen jump will make the password functional again.
- 2. The other parts: after the screen saver lighten again, the password will be functional again.

### Q30 How to clear the data in trend map and data grid?

### 1. time trend

If the saved address of the historical data of the time trend is PFW256.

Time Trend
Common View Object Trend Color Position
Station Device PLC Port VirStaNO 0 Station 0
Object 256

Clear method:

- a. place a function button.
- b. add "set data".
- c. set the PFW256 (Dword) to 260, and also set the PFW258 (Dword) to 260 (the formula is "PFWm =m+4, PFW(m+2)=m+4")

Function Button	
Function Button Limit Color Position	
Function Pressing All	
Set Data     Address:D0     Add     Set Coil       Value:0     Add     Reset Coil	
Function-Set Data	<b>N</b>
Object Station Device PLC Port  VirStaNO O Station Object Object PFW 256 Indirect	
Data Type DWord Set Data 260	Apply
OK Cancel Apply	

d. At last, modify the button content to clear.

2. clear the data grid, common grid

Refer to the steps in item 1.

3. clear real time trend map

Refer to the steps in item 1.

4. clear the history data map/XY trend/display history event

Clear method:

a. click the event button

b. choose reset content in trend/event item

Event Button		
Event Button Color	Position	
Trend Type	Function	
Trend/Event	ResetContent	
C Time Trend		
© Time Axis C Y Axis	Left (Thin) Up (Thin)	▼ Rate 20 /10
	ID All Trends	-
C XY Poly Trend	Clear	V

c. At last, modify the button content to clear.

### 5. Clear XY curve

Similar to clear trend/event, choose reset content in XY poly trend item.

Event Button		1	
Event Button Color	Position		
Trend Type	Function		
C Trend/Event	Prev Page		-
C Time Trend			
© Time Axis C Y Axis	Left (Thin) Up (Thin) ID All Trends	▼ Rate 20	/10
<ul> <li>XY Poly Trend</li> </ul>	Clear		•

## Q31 How to make the scroll texts in the screen?

1. **THIN** scroll text: the text can move from right to left of the screen, and it will disappear when it moves to the end of left. Then it will come out from right.

- 2. so move animation: you can draw the moving line, and also can control the speed of it. (the best choice)
- 3. The animation function in the text button.

Text			U
Display Font Color F	osition		
Position	Size		
X 160	Width		40
Y 80	Height		20
Animal			
Horizontal		D0	
Vertical		D0	
🗆 Lock 🔽 Z	Coom Ratio		

To move the text in different direction by changing the register value.

### Q32 How to set password for HMI components?

1. For example, we use button. Please choose the password function and choose the password level.

Button					
Object	Operat	e Button Color	Position		
Key	у Туре —			Password	
0	Touch			level Leve	
0	Enter	Code	<b>–</b>		
	Hide But	ton			
G	Normal	Change Aspect	✓ Use Text		
		User Defined	Content	ON	*

2. Open the "File/setting/para, choose password function and choose the password level.

Proj	ject Set		
	Device Para	Expand Device Font	Projec Panel
	Screen Start Screen	No. 1	
(	l✓ Passowrd Level Lev	rel1  Password 0	
	-Screen Save -		
	Latency Time	e After 3 Minute 💌	
	Close LCE	O Show Screen	

3. Set the screen jump button, the screen ID is 60001(the screen to input password).

4. Download the program to the HMI. Press screen jump button to input the password. Then you can operate the button which has password.

### Q33 How to switch I/O terminals of PLC in the HMI?

If the PLC terminal is broken, you can switch the terminal through HMI without changing the PLC program.

- 1. Use a screen jump button, set the screen ID to 60004.
- 2. Download the program to the HMI, press the screen jump button.
- 3. Click output port.





Note: HMI only support XINJE PLC terminal switching.

Common problems:

1. the I/O switching screen is not functional, all the register become D0.

Your PLC program is from other brands of PLC. Then change the model to XINJE PLC.

It is not useful.

2. The I/O switching screen is not functional.

The I/O switch screen button size cannot be changed. If changed, the function will not useful. After switching the terminal, the PLC must restart again.

### Q34 How to make a keyboard in the software?

Set the ASCII code in user input button. Then arrange these buttons as the keyboard order.

$\sim$
2 🏀 🗢 🎀 🚥 🎟 1 🛛 🛛 🖓 🗛 🖄 📾 🚔 🗊 🖓 🖓 🖓 🖓
☷ 👆 0 👻 😳 😕 🖄 📽 🗙 🐄 🕷 🚔 🚔
_ 🗝 ⊼ ≷ 几 🗆 🔋 D 💥 🐼   FW 🛒 💷 🔳 rtc 👹 舌 舌 🔅 CT
sin sīn X' /   🐌 🄏 🖑 🔆 🌾 💕 🗄 🗒 🖕 🖳 🚔 🚔 🔄
· · · · · · · · · · · · · · · · · · ·
User Input
Operate Button Color Position

### Q35 Why the software cannot operate the off-line simulation?

1. More than one versions of Touchwin software are installed in the computer, and the

### current one is not the one installed at last.

There are two kinds of solutions:

a. Uninstall all the versions. Then install only one version in the PC.

b. you just need to modify the contents of registry without uninstalling the software.

Click start/run in the PC, input "regedit" to open the registry editor. Click

HKEY\_LOCAL\_MACHINE/SOFTWARE/THINGET/TouchWin. Double click AutowinPath. Input the software installation route (the software version you want to off-line simulation) in the value data item.

Registry Editor	r Favoriter Help	1			
File         Edit         View	mozilla.org MozillaPlugins MSNProject Netscape ODBC Opera Software Policies Prolific Prolific Technolog RegisteredApplica roxbeam Skype Softland SogouExtension SogouInput	Na ab ab	ame (Default) AutoWinPath Language Edit String Value name: AutoWinPath Value data: C:\Program File	Type REG_SZ REG_SZ REG_SZ	Data (value not set) C:\Program Files\Xinje\Touch English Edit Tool\AutoWin OK Cancel

2. The type of HMI is OP series or XP/XMP/XMH series.

### Q36 Why the on-line simulation shows communicating?

1. Check whether the PLC model is XINJE XC series or Modbus RTU. Now the on-line simulation function can only support the device of Modbus protocol.

2. Choose the wrong COM port connecting with PC

Right click the mouse on the screen of "on-line simulation". Choose the correct COM port then close the on-line simulation screen and open again.

3. Check whether the communication wire is connected between equipment and computer and the connection is correct.

4. More than one versions of software are installed in the computer. The current one is not the one installed at last. If you want to know the solution, please refer to the Q35.

### Q37 Which software does the OP560 use?

OP560-L and OP560-T use Touchwin software.



# Q38 Can the program of MP series be converted to the program of TP, TH, TG series?

No. The programs cannot copy and paste. If not, the program will has error.

Reason: MP series have both touch buttons and normal buttons. The properties of many parts are different from that of the TP, TH and TG series. If paste or copy the program, the project cannot open anymore.

### Q39 Can the HMI programs of different types be converted to each other?

Yes.

1. The resolution of each model are different. After changing the model, the buttons will mix up in the sceen. Before changing the model, please choose all the buttons in the screen and right click the mouse, then choose group.

2. Then change the model of HMI in the software menu "file/setting/panel".

### Q40 How many functions can be added in function button or function field?

The max is 126.

### Q41 How to calculate the PFW quantity used in the program?

### 1. PFW quantity of data sample export

a. the storage size is m.



b. sample data quantity is n.



c. the time and date occupy six PFW registers.

Export sample da	ta		
Common	Sample	Destination	
Export Cor	ntrol	Date Time	P
✓ Date Time			
Date format	YYYY-MM-DD	•	

ThePFW quantity:

If exporting the clock, the quantity of PFW is:  $m \times (n+6)$ If not exporting the clock, the quantity of the PFW is:  $m \times n$ 

### 2. The PFW quantity of sample save.

The same method of item 1.

### 3. The PFW quantity of history trend map

a. the trend source is n

ł	list	roy data	i map			
	Т	rend Sou	rce Disp	lay   Object   Color	Font	Position
				Add	Modify	D
l		Order	Object	Min Value	Max Valu	Je
		1	D0	0	1024	

### b. the total data is m

Histroy data ma	p	
Trend Source	Display Object Colo	r Font
Data		Time —
Page Data		01
Total Data	10	ΘE
		_

c. The history trend map can save the time and date. The date and time will occupy 6 registers. The quantity of PFW is:  $m \times (n+6)$ 

### 4. The PFW quantity of time trend map.

a. the storage size is m

Time Trend			
Common	View	Object Trend Color	Position
Storge Si	ize		10

b. the line quantity is n

Tim	e Trend			
С	ommon View	Object	Trend	Color
	Line5		Map M	ode —
	Temperature			
	Line1 Line2		Color	
	Line3		🔽 Anotł	ner Gro
	Line5			<b>V</b>
			D. 1	

c. The time trend map can save the time and date. The date and time will occupy 6 registers. The quantity of PFW is:  $m \times (n+6)$ 

### 5. The PFW quantity of history event.

a. the event capacity is m

Histroy Event		
Aspect Event Pick	Save	Font Color
Column		
First	Title	Spring Time
C Second	Align	Left 💌
C Third	Width	118
Line Height		25
Lines / page		2
Event Capacity		100
Show Year		

b. every event contains: spring time (occupy six registers) and informations (occupy one register) and affirm time (occupy six registers). Every event will occupy 13 PFW registers.

:	•	Ş	Ŋ	pj	ri	n	ġ	]	ľį	m	ė	:	•	:	I	nf	Ó	:	:		:	Ą	ff	fir	'n	ı,"	Ţ	iņ	ie	•	
÷	Γ.																			I.											

The PFW quantity is: (m+1)\*13+4

### Q42 What's the meaning of PSW/PFW/PSB/PRW/PHW?

There are 5 kinds of internal registers: PSB, PSW, PFW, PRW, PHW

Register	Notes
PSB	Bit object
PSW	Word object

PFW	Power loss retentive Word object
PRW	Power loss retentive Word object
PHW	Power loss retentive Word object (selectable)

**Note:** PHW will be provided when you indicate specially, and the TH465 has no PHW. It only has PRW.

The range of internal registers:

Modle Object	TH465	TH765/TH865/THA62/THA65	TG865/TGA62
PSB	256~1024		
PSW	256~4096		
PFW	256~ (8M-occupied by screen-occupied by system)	256~24, 6016	256~410,0000
PRW	0-1000		None
PHW (selectable)	None	0~52,0000	None

PSB, PSW, PFW: the registers address from 0~255 are occupied by the system.

Note: refer to chapter 5 for internal registers details.

### Q43 Why does the HMI screen show chip picture?

Create a easy program at first, and download it to the HMI to confirm whether it is the program problem or the hardware problem. If the new program has no problem, you need to check the program.

The chip number is in the top left corner. The following situations may cause the chip picture.

1. There are contents or components which can not be read in the screen. You can find the problem by the exclusive method.

2. chip number 01:cannot write in because there are too many screen contents. You can simplify the contents in the screen.

For example: (1) choose "not use Download port". Because the download may occupy some capability.

2 Please cancel "complete downloal" in the "tool/option".

- 3. Chip number 04: We suggest you to use the desktop computer and the direct serial port if you use the notebook computer and the USB converter.
- 4. the software installation has problem. The old software is not uninstalled completely or cleared when you are installing the new software. We suggest you to install the software again. (you must change the installation path manually)
- 5. If customers use the user-defined protocol and the chip appears when you insert the communication wire, it indicates that the receiving description of user-defined protocol has some problems.
- 6. Try forced download.

7. if the problem still cannot be solved, please contact us.

### Q44 Why does the HMI screen become white?

1. some project has many screens and much communication data. The screen will become white if the PLC communication cable is not inserted in the screen. If you insert the communication cable, the white screen will disappear immediately.

2. The power supply voltage of HMI is low.

3. short connect pin 5 and pin 8 of TP com port. Turn on DIP switch 2 of TG, TH series. Then power on the HMI again.

If it shows loading screen, it is not the reason of hardware. Some system address, such as PFW0~256 or PSW0~256 and so on, may be used by the program. If the screen is still white, the hardware may have some problems.

### Q45 The HMI touch screen has problem?

#### 1. The HMI mounting problem

Take off the HMI from the control cabinet, and operate it. If the operation has no problem, it indicates that it is caused by mounting problem. You need to measure the installation size. Don't mount too tight, otherwise the pressure of the touch panel will be too high.

#### 2. The communication is not well

#### 3. Make a program and test

Set a light button PSB300, and download it to the HMI to test the touch situation. If the touch function is not good, turn on DIP switch 3 to calibrate the touch screen for TH and TG series.

If the new program has no problem, you need to check according to the following steps:

a. indirect address is used (the indirect address is from communication device)

b. when you use the event buttons, please don't set two or more trend maps or common grid at the same time.

c. When adjust the size of common grid, it will have offset after downlosading to the HMI. You can click each attribute in the softwre and download again.

### Q46 What is the operating temperature and the storage temperature of HMI?

Operating temperature: 0 ℃~ 50 ℃ Storage temperature: -10 ℃~ 60 ℃

# 7 Touchwin v2.d new functions

### 7-1. Multi-language

The button text can show 8 kinds of language.

For example: we make two kinds of language for lamp button.

1. Choose more language in lamp button window (lamp button state is ON).

LampButton	Σ
Object General Aspect Color Position	
Aspect	
ON     Change	
OFF Customer	
Pressed	
Released     Save	
Text	
V More Language	
On .	<u> </u>
	Ψ.
Font Art Font Text Library	

2. Click text library, set the language count to 2, and input the text in each language window:

Label set	· internet	ter (m.)ten		X
Language Count 2	•	Language settings	Font applied to all	Font Setting
Language1 Font On	Language1	Font	guage1 Font	Language1 Font
<b></b>		•	Ŧ	-

If the entire text fonts are the same, please choose font applied to all.

Label set

Language Count	2	-	Language settings 📝 Font applied to all	Font Setting

Sand Street, Name Line, Party
3. Repeat step 1 and 2 when LampButton	n lamp button state is OFI	₹. <b>■</b>	
Object General Aspect	Color Position		
Aspect			
O ON	Chang	e	
OFF	Ofi	er	
Pressed	Save		
More Language			
Off		A	
		-	
	Font Art Font Text	Library	
Label set	ter lines we it	a Tana	
Language Count 2	✓ Languag	e settings 📝 Font applied to all	Font Setting
Language1	Language1	Language 1	Language1
Off	关闭	*	·
			Ŧ

4. Then make a data input button, the address is PFW101. This button is used to choose the language.

PFW101=0, it shows English. PFW101=1, it shows Chinese.

ut					
Display	Convert	Inputs	Font	Color	Position
perate Obj	ect				
Station Device	Local red	isters			•
VirStaNO		0 S	tation		0
Object					
ObjType	PFW	<b>_</b>	indirect	101	
	Display perate Obj Station Device VirStaNO Object ObjType	Display Convert perate Object Station Device Local reg VirStaNO Object ObjType PFW	Display Convert Inputs perate Object Station Device Local registers VirStaNO 0 S Object ObjType PFW	Display Convert Inputs Font perate Object Station Device Local registers VirStaNO 0 Station Object ObjType PFW  indirect	Display Convert Inputs Font Color perate Object Station Device Local registers VirStaNO 0 Station Object ObjType PFW  101 indirect



### 7-2. Ethernet function

There are two modes for Ethernet connection:

- 1. RJ45 straight through cable with hub;
- 2. RJ45 crossover cable without hub, but only for one to one connection (HMI-HMI, PLC-HMI, HMI-PC).

Ethernet can make multiple networks: one to many, many to one, many to many.

### 7-2-1. Make Ethernet operation

TG765-ET, TG865-ET and TGA62-ET support Ethernet function.





TG765-ET TGA62-ET



TG865-ET

Please use Touchwin software version 2.D and later. (1) Open Touchwin software, select HMI type



(2) Select Net device. The IP address of own devices is HMI IP.

Device							
Device	Own devices						
COM Device	IP Address	192 .	168	•	0	•	1
DownLoad Port	Subnet Mask	255 .	255	•	255		0
Net Device	Gateway	192 .	168	•	0	•	1
	Port (						502

(3) Right click Net device/New to make a new project.

Device									
Device - CO	e M Device • PLC Port • DownLoad Port New	Own devices IP Address Subnet Mask Gateway Port	192 255 192	•	168 255 168	•	0 255 0	•	1 0 1 502
Name			×						
Name	Device 1								
		OK Ca	ncel						

(4) Right click the project name, there are delete and rename menu.

Device	
Device COM Device PLC Pot DownLoad Pot Net Device	modbus_Tcp Siemens S7-1200 Series
Delet Rena	me

(5) Select Modbus\_Tcp, the IP is PC IP address. Protocol is TCP.

Device	_
Device COM Device PLC Pot DownLoad Port Net Device Device1	modbus_Tcp       Siemens S7-1200 Series       IP     192       168     0       1     Port     502
	Protocol
	● TCP ◎ UDP
	Communicate Parameters
	Timeout 1500 ms
	Communicate status register
	PSV 256
	Communication status information is not exported!

(6) Communication status register

If choose this item, PSW set to 256, PSW256 is communication successful times, PSW257 is communication failure times, PSW258 is communication overtime times, PSW259 is error times.

Com	nmunicate status register	
PSV	256	
Communic PSW/1259	cation state occupies add	Iress PSW[256] ~

(7) after doing these steps, click next to finish the new project building.

(8) use a data input button on the screen, choose device 1 in the station device item.

۵	)ata Inp	out							×	
ſ	Object	Display	Inputs	Font	Color	Position				
		Operate Obje	ect							
		Device	PLC Po	rt			-			
		VirStaNO	Local re PLC Por	gisters t						
		Object ObiTvpe	Device	<u> </u>		0				
			0	•	indirec	t U				

(9) after choosing device 1, the object is modbus address: 4x, 3x

C	ata Inpu	ıt						×
	Object	Display	Inputs	Font	Color	Position		
	Op	erate Obj	ect					
		Station — Device	<b>_</b>					
	1	VirStaNO	Device	1	Station		1	
		Dbject						
	(	ObjType	4x	•		0		
				[		t		

(10) HMI is Modbus\_TCP master station in this project. HMI also can be slave station.

### 7-2-2. Communicate with Siemens S7-1200 PLC

We use TG865-ET and S7-1200 CPU1211C 6ES7 211-1BD30-0XB0 for this application.



(1) choose HMI type in Touchwin software



(2) Choose net device. The own device IP address is TG865-ET IP

evice					
Device	Own devices				
COM Device	IP Address	192	168	0	1
	Subnet Mask	255	255	255	0
Net Device	Gateway	192	168	0	1
	Port				 502

(3) Right click net device, build a new project.

Device								
Device	Own devices							
	IP Address	192		168		0		1
PLC Port DownLoad Port	Subnet Mask	255	•	255	•	255	•	0
New	Gateway	192		168	•	0		1
	Port [							502

(4) Choose Siemens S7-1200 series in the device list. The IP is S7-1200 IP address. Port no. 102 cannot be changed. The IP address can be changed in PLC software.

Device			
De 	vice COM Device PLC Port DownLoad Port Net Device Device1	modbus_Tcp Siemens S7-1200 Series	
		IP 192 . 168 . 0 . 1 Port	102

(5) Set the communication parameters. The timeout time cannot be larger than 3000ms. Retries time is 1.

Communicate Parameters							
Waiting time	0	ms	Retries	1			
Timeout	3000	ms					

#### (6) Communication status register

If choose this item, PSW set to 256, PSW256 is communication successful times, PSW257 is communication failure times, PSW258 is communication overtime times, PSW259 is error times.

Con	Communicate status register				
PSV	256				
Communication state occupies address PSW[256] ~ PSW[259]					

- (7) Click next to finish the process. Then enter the editing screen.
- (8) Use data input button on the screen. The device is S7-1200 (device 1)

0	)ata Inpu	ıt						×
	Object	Display	Inputs	Font	Color	Position		
	_Op	erate Obj	ect					
	- S	Station						
	1	Device	PLC Po	rt			-	
	\ \	VirStaNO	Local re PLC Por	gisters t				
		Dbject —	Device1	1				
	(	ObjType	D			0		
				[	indirea	ct		

(9) S7-1200 object M and DB must be defined in the PLC. Otherwise, it cannot communicate with HMI.

#### Data Input

_							
	Object	Display	Inputs	Font	Color	Position	
	-Op	perate Obje	ect				
	- I C <sup>2</sup>	station					
	[	Device	Device	1			•
	1	VirStaNO		0	Station		0
	-0	Object					
	0	ObjType	1	-		0	
			1 0		indirec	t	
	-1	/alue	М				
			DB0				
	1	Data Type	DB1				
			DB2 DB3				

#### Note:

(a) Siemens S7-1200 doesn't have station no. It only has IP address. The S7-1200 PLC and TG series HMI can make different networks: multi-HMI one PLC, one HMI multi-PLC, multi-HMI multi-PLC.

#### One HMI to many PLCs



#### Many HMIs to one PLC



#### Many HMIs to many PLCs



- (b) The RX/TX LED light when the communication is successful. The RX/TX shining means the PLC is finding network.
- (c) S7-1200 can connect the entire Siemens Ethernet device. Modbus\_Tcp can connect to TBOX and XINJE PLC.

### 7-2-3. Communicate with TBOX

This application uses TG865-ET and XINJE PLC XC3-24R-E, Ethernet module TBOX. (1) Material XINJE HMI: TG865-ET XINJE XC series PLC: XC3-24R-E XINJE Ethernet module: TBOX Ethernet switch and Ethernet cables

(2) Network diagram



- (3) TBOX setting please refer to Ethernet module TBOX manual.
- (4) Touchwin software setting:
- a. choose TG865 in the type list:



b. choose net device, the TG865-ET IP address cannot be conflict with other device in the network.

)evice					
Device	Own devices				
COM Device	IP Address	192	168	0	100
	Subnet Mask	255	255	255	0
	Gateway	192	168	0	1
	Port				502

c. right click net device, build a new project.

Device	1 1. 1. 1. 1.
Device 	Own devices IP Address 192 . 168 . 0 . 100
PLC Port	Subnet Mask 255 . 255 . 255 . 0
Net Device New	192 . 168 . 0 . 1
	302
	Name
	Name Device1
	OK Cancel

d. choose modbus\_Tcp device

Device	
Device COM Device PLC Port DownLoad Port Net Device Device1	modbus_Tcp Siemens S7-1200 Series
	IP         192         168         0         14         Port         502           Protocol         Image: CP         Image: UDP         Image: Word exchange         Image: Word exchange
	Communicate Parameters
	Waiting time     0     ms     Retries     3       Timeout     1500     ms
	Communicate status register  PSV 256  Communication state occupies address PSW[256] ~  PSW(259)

The IP 192.168.0.14 is TBOX IP address. It can be set through XCPpro software. Port 502 cannot be changed.

e. click next to finish and enter the editing screen.

f. for example: use data input button. Choose device 1 in device list.

D	ata Inpu	ıt						
	Object	Display	Convert	Inputs	Font	Color	Position	
	Ор	erate Obj	ect					
		Station						
	(	Device	Device1				-	
	١	VirStaNO		0 S	tation		1	
	-0	Dbject						
	(	ObjType	4x	•		0		
					indirect	1		

Note: please fill in the object address as the Modbus address list in XC series PLC manual.

g. after making the program, download it to the TG865-ET. Then the TG865-ET can control the remote device through Ethernet.

Note: TBOX can connect many PLCs through RS485. The PLC station no. can be set through XCPpro software.

Edit TBOX Device			
Communication Master/Client TBOX C	Comment		
Master Mode		Client Mode	
Protocol: TCP -		Send Delay(ms): 0	<u>▲</u> ▼
Station-IP Table	Shield Table	Station Table	
Station IP Num IP	Station 1	Station Num	
	2	2	

Please see above window from XCPpro software. If there are many PLC stations, the send delay time should be set to improve the communication speed.



#### 7-3. Show the button address

to show the button address.



R

Click

## 7-4. Save encrypt

Sometime, users have to send the program to their customers to download. But users don't like the customer to know the program contents. Users can use save encrypt function in this case. If the program is saved in encrypt mode, this program can download in HMI. But the program contents cannot be seen in the software.

How to use save encrypt function:

1. After making the program, click File/save encrypt to save the file.



2. Then when you open the encrypt file in Touchwin software, you cannot see the program contents anymore. But you still can download the file to HMI.

## 7-5. Batch copy

If user needs to make many buttons, the button address is increasing by one, other settings are the same. Batch copy function is easy to do this.

For example, user makes many lamp buttons, the addresses are M0~M9.

1. Make the first lamp button, the address is M0.

La	ampButt	on					
	Object	General	Aspect	Color	Position		
	Operate Object						
	Sta	tion					
	De	vice F	LC Port				-
	Vir	StaNO		0 Sta	tion		1
	Ob	ject					
	Ob	jType 🛛	1	•	0		
				ir 📃	ndirect		

2. Right click the button, choose batch copy.



3. In the batch copy window:

Batch Copy	23
Layout	
Rows	2
Columns	5 👤
Row distance	5
Column distance	5
Address	
O Hor Add	Seg First 👻
⊘ Ver Add	Interval 1 👻
ОК	Cancel

Layout settings: set the row, column quantity and the distance between them.

Hor add: the address increases in horizontal direction. For example, the buttons have 2 rows, 5 columns. The buttons are as the following:



Ver add: the address increases in vertical direction.



Seg: for some devices such as Omron CP series PLC, the address has two segments. This setting can decide which segment address is increased.

Interval: the address cumulative value. For example: interval=1, the addresses are M0, M1, M2....

Interval=5, the addresses are M0, M5, M10....

## 7-6. Font batch setting

If there are many buttons and texts in the screen, this function can set all the fonts together at the same time.

1. choose all the texts or buttons (press shift to choose more buttons)



2. click font setting **F**, set the font in the following window:

Font		×
Font: Times New Roman Times New Roman Trebuchet MS Verdana Viner Hand ITC	Font style: Bold Regular <i>Italic</i> Bold Bold Italic	Size: 16 0K 8 9 10 11 12 14 16 V
Effects Strikeout Underline Color: Black	Sample AaBbYy Script: Western	vZz

3. These texts will have the same font settings.



### **7-7.** Hide the button

The buttons support hide function: text, dynamic text, variable text, button, lamp, lamp button, data display, alarm display, text display, data input, text input, Chinese input, set data, user input, window button, down recipe, up recipe, function button, clock button.

For example, hide the lamp button.

1. Choose coil control in the lamp button setting window.

LampBut	ton			
Object	General	Aspect C	olor Positi	ion
Bư	tton Opera ) Set ON	ate	Reversion	e 🔘 ON Instant
Ти	inkle Stat	us		
•	) Stop	ON (	OFF 🔘	
Ти	inkle Spe	ed		
0	) Slow	Fast		
	Passwor	d		
L	.evel	Level1		•
	Coil Con	trol		
		M0		

2. When M0=1, the lamp button will hide.

## 7-8. Hex keyboard

When data input type is hex:

Data Input			
Object Display	Convert Inputs	Font Color	Position
Format		Bit Length	
© Dec	Hex	Total	5
Float	Unsigned	Float	0

Please choose keyboard\_8 (hex input keyboard):

Data Input	X
Object Display Convert Inputs	Font Color Position
Password Level Level1 -	Notice
Up Limit	Lower Limit
Register	Register
Pop-up keyt KeyBoard_8	
	OK Cancel Apply

## 7-9. Picture rotation

Picture rotation function only support the pictures import from material library or map. For example, import one picture from material library. Choose 11.bmp and click open to add it in the screen.

Material library					X
Map C_circle C_circle2 C_jump C_jump1 C_jamp	01.bmp	02.bmp	03.bmp	04.bmp	Transparent
c_Lamp1 c_Others c_pipe1_60x60 c_pipe2_60x60 c_pipe3_30x30 c_pipe4_30x30 c_pipe5_30x	05.bmp	06.bmp	07.bmp	08.bmp	Add Material
	09.bmp	10.bmp	11.bmp	12.bmp	Del Material
c_rotary c_Touch c_Touch1 ▼ Add File Del File			Г		Cancel

Click rotate 90 degree (clockwise/counterclockwise) button \_\_\_\_\_, the picture will rotate as

required.



# 7-10. Set limit through register for data input button

For example, up limit = D0, lower limit = D10. If D0=100, D10=10, the data input range is from 10 to 100.

Data Input	
Object Display Convert Inputs Font	Color Position
Password Level Level1 -	Notice
Up Limit	Lower Limit
Register D0	Register D10
✓ Pop-up keyt	1.47 TIKAT TIKAT TIKAT TIKAT TIKAT
KeyBoard_1	Max: AAAAAAAA Min: AAAAAAAA HIMI HIMI HIMI HIMI HIMI HIMI HIMI HIMI
VI - Tim	Vision Content Vision

## 7-11. Button alignment

If the buttons in the screen is messy, please use alignent function to make them in order. The alignment modes include left-aligned, middle-aligned, right-aligned, up-aligned, down-aligned, etc.

## 7-12. Undo



## 7-13. Variable string

Compared to version v2.c.6, new version v2.d.1 supports row change of text label.

Variable string						
Object Display Font Color Position						
Content						
Value Text description of string Add						
0 TextExggggmm Modify						
More Language						
More Language						
test may						
Text Library						
OK Cancel						
TextEx <sup>D0</sup> test may						

# 7-14. Import/export data type

For v2.d.1 and higher version, the data type of sample export support string.

Export sample data	9					<u></u>
Export Contr	ol		Date Time			Position
Common	Sample		Destination		_	Save
Temperature	Add	1	Title	Tem	peratu	ıre
	Batch	Add	Sample			DO
	Delet	te	Data Type	Strir	ng	•
			Format			
			Dec(E	))		Hex(U)
			Float(	F)		Unsigned(X)
	Move	up	Number of			4
	Move d	own	Float length	n(C)		0

Data grid also can support string.

Data Grid						<u>83</u> ]::::	
Object Common	Column	Positio	Column in	formation			<b>x</b>
Circle Buffer		Add	Title	e Language			
Title	Width	Data	Point				*
Point	50	WOR					Text Library
			Width		50	Number of	3
		-	Туре	String	•	DotLength	0
			Format			Align Hor	
			De De	c(D)			

## 7-15. Print function

The print function only supports micro-printer.

User can set the print function in File/setting. The print modes include 8 lattice and 24 lattice.

System Settings
Para Interactive Panel Device Project Clock Font
Screen Start Screen No. 1
Passowrd Level Level1
Screen Save
Latency Time After 3 minute
Close LCD     Show Screen
Printer
Points 24 Point
Horizontal
Left to Right O Top to bottom
Right to Left     O bottom to top

The print directions include horizontal and vertical direction. User needs to test the best print direction; otherwise, the print contents will be garbled.

Right click print window to add new print window.



The print setting window has two tabs: object and print window.

Print

Object Print V	/indow
Station Device	PLC Port
Object ObjType	0 Station 1 M ▼ 0 □ indirect

The object will trigger the print function. For PLC address, the object should be ON for 3s at least. For HMI internal address, the object should be instant ON.

Object Print Window		
Min days		
window		
Name print page		
Size		Paper
Width	160	O Hor
Height	120	⊚ Ver
		Cut
Tip		

Print window tab: set the window name, size. If the micro-printer support cutter, please choose cut function.

The print direction can be horizontal or vertical.

## 7-16. Proportion function

Proportion function is Double word calculation; please use Dword data type in PLC.

# 7-16-1. Proportion function of data input

For example, HMI data input range is 4~20 (float), PLC data range is 0~18432. When user input 4 in HMI, the real data in PLC D0 is 0.

1. Click data input button<sup>23</sup>, set the object address to D0, data type is Dword.

Data	Input					
Obj	ect Display	Convert	Inputs	Font	Color	Position
	Operate Ob	ject				
	Station					
Device PLC Port -						-
	VirStaNO		0 5	tation		1
	Object -					
	ObjType	D	•		0	
				indirect	t	
	Value					
	Data Typ	e DWord				

2. The display tab defines the input data format and bit length.

0	Data Input							
	Object Display	Convert Inputs	Font	Color	Position			
	Format		Bit	Length				
	O Dec	─ Hex	То	otal		5		
	Float	Unsigned	Fle	oat		2		

#### 3. Convert tab

Input convert: source data range is 4~20 (HMI); result data range is 0~18432 (PLC).

Show convert: make the calculation result 0~18432 as data source, then change them to float value 4~20.

After setting, when user input 4 in HMI, the HMI will show 4, but in PLC D0, the value is 0 in fact.

▼ 18432 …
▼ 18432 …
<ul> <li>▼</li> <li>18432</li> <li>…</li> </ul>
▼ 18432
18432
0
U
20.000000
4.000000

### 7-16-2. Proportion function of data display

For example, PLC data range is 0~18432, HMI data display range is 4~20. 1. Click data display button, set the object address to D0, data type to Dword.

Display Data	
Object Display	Font Color Position
Station	
Device	PLC Port
VirStaNO	0 Station 1
Object	
ObjType	D 🔻 0
	indirect
Value	
Data Type	DWord -

2. As the proportion of 18432/20, the result is float value. Please choose float type data in data display button.

Display Data					
Object Display	Font Color	Position			
Format		Bit Length			
O Dec	⊘ Hex	Total	5		
Float	Ounsigned	Float	2		

3. In convert item, please enter the source and result value range.

Convert Source	Result
Type Dec 💌	
Upper 18432	Upper 20.000
Register	Register
Lower 0	Lower 4.0000
Register	Register

4. Then when the D0 in PLC is 18432, the data displayed in HMI is 20.00.

### 7-17. Upper/lower limit for calculation result

The calculation result of set data, function button, function field support upper and lower limit. For example, use two set data buttons. One button is auto plus one, another button is auto minus one. The result range is 0-5.

1. Click set data button	123	, the object address is D0, the data type is word.
--------------------------	-----	--

Setting d	ata				
Object	Operate	Button Co	olor Positio	n	
St	ation				
D	evice P	LC Port			-
Vi	rStaNO	0	Station		1
-0	bject				
0	bjType D	•		0	
			indirect		
Va	alue				
D	ata Type 🛛	/ord 🔻	]		

2. The function is plus operation, the operand is 1. The upper limit is 5, the lower limit is 0. Setting data

Object Operate	Button	Color	Position		
Function					
• +	◎ -	$\bigcirc$	•	© /	Constant
Operand		1			
Format					
Oec	─ Hex	) FI	oat	Unsigned	
Up Limit				Lower Limit	
		5			0
Register	U	p Limit		Register	Lower Limit

- 3. The button name is +1.
- 4. Repeat the step 1-3 to make button -1.

Then download the program in the HMI. Press +1 and -1 button to change the D0 value. When D0=5, +1 button cannot increase the D0 value. When D0=0, -1 button cannot decrease the D0 value.

Function button and function field also have upper limit and lower limit for calculation result.

	Function Button	2
	Function Button Color Position	
Function-Arithmetic		All
Object Operand Operate Kind  + O-	O /	Set Coil Reset Coil Reverse Coil Copy Coil Screen Jump Set Data Copy, Register
■ Left Operand	0 Dec  Move Down	User Input Open Window Close Window Down Scheme Up Scheme
Right Operand	0 Dec  (B) Move Up Password	Arithmetic Import CSV Data Export CSV Data Copy File Delete File
Up Limit 100 Register Up Limit	Cower Limit 0 Register Lower Limit	Down File Call Function

### 7-18.Scrolling text

This function can set the scrolling speed.

The pixels that the text has walked in 0.1s are the scrolling speed value. The larger the value, the faster the scrolling speed.

Scroll Text	
Message Common	
<u>¥</u>	210
Margin	20
Scroll	1 /0.1:

#### 7-19.Dynamic specified file name for data import and export function

1. For "import CSV data", "export CSV data" in function field or function button and sample export; the csv file name can be set dynamically.

For example: open "import csv data" function, please see the following window.

The "dynamic set" choice is in source path tab. Please select this item and set the register address.

Then user can input the csv file name in this address through character input button or data input button.

Function Field Mode Function Position	All Set Coil
Source Path Data Save Control Date Time Device ID 0 Dynamic set D0 Import Ctrl M0 Path/File CE. csv Dynamic set PSW300 Fix Name	Reset Coil Reverse Coil Copy Coil Screen Jump Set Data Copy Register User Input Open Window Close Window Down Scheme Up Scheme Data Block Transmit Arithmetic Import CSV Data Export CSV Data Copy File Delete File Down File
Add ID After Name O Dynamic set DO start ID O Dynamic set DO	Call Function 取消 应用

2. Dynamic-specified file name can only specify 8 characters which occupied four registers.

Station	
Device	Local registers 🗸 🗸
VirStaNO	0 Station 0
Object-	
ОbјТуре	PSW 300
-Value	
Data Typ	e nBeas 🗸 Number of 🛛 4

### 7.20 Rotate animation

1. Place a rotate animation component.

Animation clip	Animation Position
Material	Preview
Picture0 Picture1 Picture2	Add
	Modify
	Delete Abil Amile F
	Move Up
	Move Down

- 2. Click 'add' or 'modify' and select your picture from the material library;
- 3. You can double click the picture and modify the picture size, position.

mation clip Animation	Position	
osition	Size	
<u>X</u> 240	<u>W</u> idth	129
<u>Y</u> 200	Height	136

4. Animation attribute

Period: the animation running time, can be set to constant or specified by register.

Enable and reset: If only select 'enable' option and unselect the 'register controls' option, then the animation will always be running. If select the 'register controls' option at the same time, the animation will run only when corresponding coil is on. So does the reset function.

Mode: animation have random and continue mode. In continue mode, the picture will switch according to the default sequence. In random mode, the picture will switch according to your setting. For example, if write 1, 3 after random, picture will change between picture 1 and 3, picture 2 is not included.

Animation moving mode: single mode and trip mode. It also can set repeat the animation or not. Coil control: when coil is on, the animation is visible; otherwise it is invisible.

mimation clip	Animation	Position
Period		
	8	oo ms
	DO	Register controls
Enable	MO	Register controls
Reset	MO	
-Mode		
🚫 Random		
⊙ Continue		
	💽 Sing	gle
🗹 Repeat	🔵 Trip	p
Coil Contr	ol	
	MO	

## 7-21. Modbus function code switching

Some Modbus devices send 0x06 function code when write single word while others send 0x10 function code. The HMI register PFW36.2 can switch them in this software. When PFW36.2=0, send 0x06 function code. When PFW36.2=1, send 0x10 function code. After changing the value of PFW36.2, please restart the HMI to activate the function.



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