

HTP Designer Configuration Software User Manual (HT2600 Series HMI)

HNC Electric Limited

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1 Introduction

The software "HTP Designer" you are using is a new configuration software product developed by our R&D team for three years. It was produced with more than ten years of technical experience and accumulation based on sufficient practices on man-machine interface product development and field actualization. We believe you will feel our specialization and concentration when you use this software. Thank you!

2 Quick start

2.1 Electrical connection of the screen

2.1.1 Connect to the power supply

The rated voltage of the screen is DC18~28V, and DC24V power supply is recommended. The interface is at the back, as shown in Fig. 1, the "24V+" is connected to "DC24V", the "24V-" (or "0V") is connected to "GND". If the field is involved with a high interference, a highly reliable earth must be connected to the "FG" port. (Note: FG- Frame Ground, the reference grounding for the metal shell frame and the DC end.)



Fig. 1

2.1.2 Connect to the computer

The screen can be connected to the computer only via a USB data cable for project uploading and downloading, as shown in Fig. 2.The communication with computer can be realized when it is connected to the "USB SLAVE" end. The USB communication drive can be installed by the system in default during software installation, or the drive can be manually saved installed if it is damaged.The drive file is in the installation directory: "C:\ProgramFiles(x86)\HNC\HTP Designer 1.0\Driver".



Fig. 2

2.1.3 Serial port connection

The serial port of the screen is a standard DB 9-pin port supporting communication modes RS232/485/422, as shown in Fig. 3.Different screen types are integrated with different quantities of serial ports, and please refer to the <u>Description for Communication Connection</u> for the detailed connecting method.





2.1.4 USB Host connection

The screen is integrated with a USB Host device interface. This interface makes it easy to upload or download the project and the prescript by using the U disk. The sampling or warning data can also be saved in the U disk via this interface. A mouse or a keyboard with USB interface can be connected via the USB interface. A set of wireless mouse and keyboard is also usable. As shown in Fig. 4, a U disk can be directly inserted into the "USB HOST" port and be used.



Fig. 4

2.1.5 Network port using

The standard RJ-45 network interface is used in the screen for communication with any down unit, as shown in Fig. 5. An RJ-45 plug can be directly inserted into the "Ethernet" port and used.



Fig. 5

2.2 Software downloading and installing

2.2.1 Software downloading

The software "HTP Designer" can be downloaded from <u>www.hncelectric.com</u>.

2.2.2 Software installing

Double click the "SETUP.exe" to install the software "HTP Designer", as shown in Fig. 7. Click the left button to start installation.

C:\Program Files		
	Click here to	
	start installation	
	Install	Cancel

Fig. 7

2.2.3 Installation is completed.

Click the button to complete the software installation, as shown in Fig. 8.

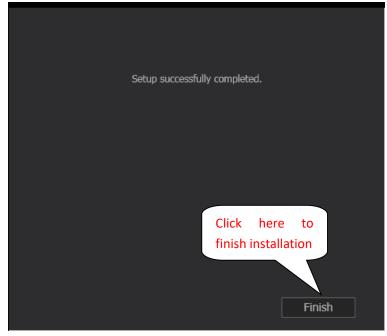


Fig.8

2.3 First use

File	View Edit Window	w Drawing	Component	Library	Macro	Recipe	Setup	Tools	Help
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2	Open Project	Ctrl+C			-		116		
	Close Project	Step 2	-	9 - 123	* 80	Ø - 🖬	- 100 -	666 ÷ [0
	Save Project	Ctrl+S	í						
	Save Project As								
	Transform Project		•						
	Project Used Recently		•						
×	Exit	Alt+X							

(1) Click the menu "File"—"New", or click the shortcut "____", as shown in Fig. 9.

(a)

File Vie	ew Edit	Window	Drawing	Component	Library	Macro	Recipe	Setup	Tools	Help
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5 7				10						



Fig. 9

(2) Enter the project name and select the project saving path. The project name can be Chinese, as shown in Fig. 10.

Create New	w Project	
Category(C)	6	
HM	I Project	
	The project r	name
		The saving path
Name(N):		
Location(L):	E:\2015-2016-1\project-fe	•
		OK Cancel

Fig. 10

(3) Select the touch screen type, as shown in Fig. 11.

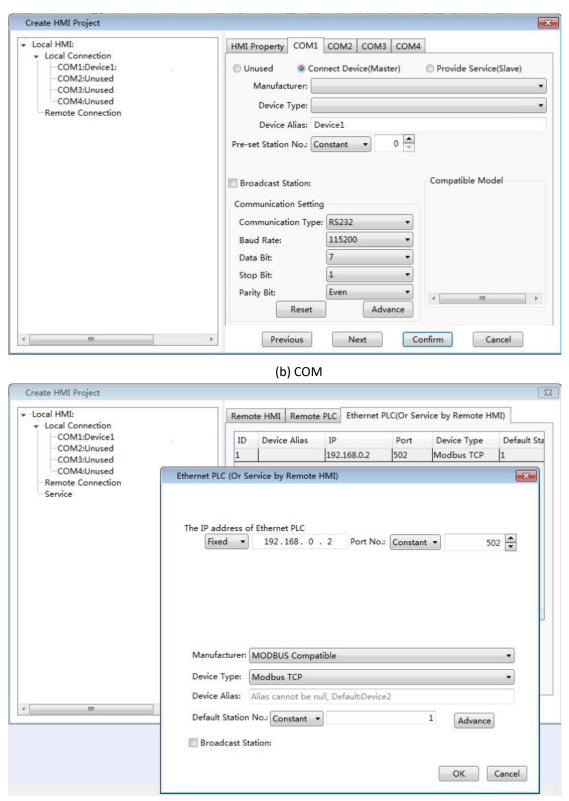
are not sure. LCD Size(Inch): All Screen Resolution(Pixel): All HMI Device Type: Product Description Model: FE4070 LCD Size: 7 Color: 24BIT Color Button: None USB Host:1 COM1: RS232\RS485-2 COM3: RS232	elect type
Vedio: None	Confirm
	Select appropriate HMI model by screen are not sure. LCD Size(Inch): All Screen Resolution(Pixel): All HMI Device Type: Product Description Model: FE4070 LCD Size: 7 Color: 24BIT Color Button: None USB Host:1 COM1: RS232\RS485-2' COM3: RS232 CAN: None

Fig. 11

(4) Click the button "Next" and set the bus line communication mode for the touch screen, as shown in Fig. 12.

-COM1:Device1: -COM2:Unused -COM3:Unused -COM4:Unused -Remote Connection	 Auto IP Address IP Address: Subnet Mask: 	s (DHCP)	0	Static IP Address						
-COM4:Unused		102 168 0								
	Subnet Mack	152.100.0	. 200	SRW10010~13						
	Sublict Mask.	255.255.255	5.0	SRW10014~17						
	Gateway:	192.168.0	. 1	SRW10018~21						
	DNS1:	0.0.0	. 0	SRW10022~25						
	DNS2:	SRW10026~29								
	Use system bit register SRB10000 to select IP address assigning metho (Auto-allocate or static) Rotation Display									
	Normal (Horizo	ntal Display)		Preview						
	 Vertical (Rotate 90 degrees Cloc Vertical(Rotate 90 Degree count Upside Down(Rotate 180 Degree 									

(a) HMI Property



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(c) Ethernet PLC (Or Service by Remote HMI)



(5) After the project is initialized, click the button "Confirm" and the project is created, as shown in Fig. 13.

le	Vie	ew	E	dit	Wir	do	W	Dra	awi	ng	С	om	po	ner	nt	Lil	ora	ry	N	laci	ro	R	eci	pe	S	etu	р	To	ols		Hel	р					
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(6) Add an "Input" variable and a "Display" variable into the picture and set the properties, as shown in Fig. 14.

E:\2015-2016-1\project-fe\FirstP\FirstP.f	sprj		
File View Edit Window Drawing	Component Library	Macro Recipe Setup	Tools Help
i 🗋 📂 🖬 🌒 🐰 🖬 🖓 🖏 🗶 🗡 🛸	Undo 🔻 🍽 Redo 💌 🖾		홍 릐 ㅠ ㅎ @
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B_1:Basic Window(1)* X	123	Numeric Value Display	
Project	12]	Numeric Value Input	
		Character Display	
2		Character Input	
Ta 1234			
and P			
1234			
⁸ <i>▶</i>			



	1				[
eneral	Number Format	Keyboard Setting	Font	Graphics	Dynamic Graphics	Control Settings	Display
Operati	on Attribute: 🔘 N	lumeric Display 🍥	Numer	ic Input	Characters Display	Characters Inp	ut
Read	ling And Writing Ac	ddress Is Different		Passwo	rd		
Read A	Ad <mark>d</mark> ress:						
Use	Address Tag						
Deivce:	LOCAL:[Local Reg	ister]		•			
Addres Formati	is Type: LW is: 0 \$ (Range) DDDDDD((ress Index	System R 0 Occupy: 1	egister Wor	-			
		Set t	he va	ariable a	address		

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(b) Fig. 14

(7) Click "Offline simulating" button and wait till engineering is completed, as shown in Fig.

15.

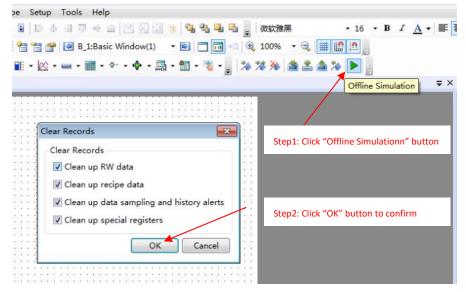
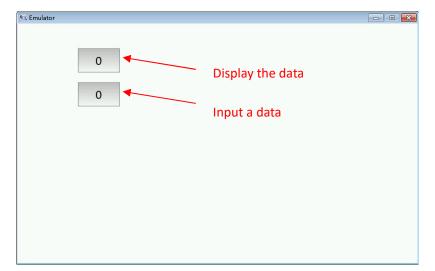


Fig. 15

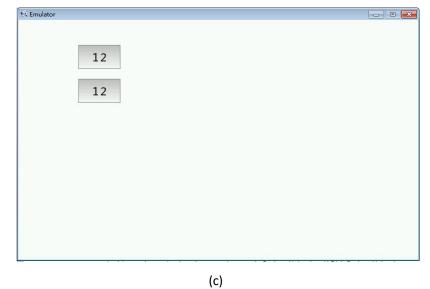
(8) Debug with the simulator to view the design effect, as shown in Fig. 16.



(a)



(b)





2.4 Project download and upload

2.4.1 Project downloading

①Switch on the power supply to the touch screen, select "Download" in the software, and wait till downloading is completed, as shown in Fig. 25.

Tools Help	
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B_1:Basic Window(1) → 💌 🗖 🖬 →= 🔍 100% → 🔍 🏢 🏥 🥼	
····· • 📰 • • • • • • • 📾 • 🛅 • 🕲 • 🕛 🏂 🏇 🚵 📥 🏇 🕨	
Click here to download	
Downloading	:
Packaging Project	• • • • • •
	:

Fig. 25

(2) Select the project downloading mode, USB or network, and click OK to download, as shown in Fig. 26. If "Communication failure" appears, please check if the downloading line is correctly connected (USB line or network line). If the downloading operation is failed, please cut off the power supply to restart the HMI and try again.

Protocol VSB Ethernet 192 . 168 . 0 . 200 Scan	Delete Option(Project Valid) Ø Delete RW Data Ø Delete Recipe Data Ø Delete Sampling and Alarm History
Data Source Project Fpg File RW Data Recipe E: \project\FS\ss\bin	Data Delete HMI Memory Block Delete User's Info Download Option(Project Valid) Batch Mode Force Mode
	Click here

Fig. 26

(3) Wait till downloading is completed, and then click "OK", as shown in Fig. 27.

Protocol © USB © Ethernet 192 . 168 . 0 . 200 Scan	Delete Option(Project Valid) V Delete RW Data V Delete Recipe Data V Delete Sampling and Alarm History Data
Data Source Project Fpg File RW Data Recipe E:\project\FS\ss\bin	Data Delete HMI Memory Block Delete User's Info Download Option(Project Valid) Batch Mode Force Mode
Download fgui:84%	Download
Download: Check20151106143844145.cfg Download: Bin/fcs Download: Bin/fds Download: Bin/fgui	

ownload Upload System		
Protocol © USB © Ethernet 192 . 168 . 0 . 20	✓ D ✓ D Scan ✓ D	e Option(Project Valid) elete RW Data elete Recipe Data elete Sampling and Alarm History
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Download Setup succe Download: Bin/Images/e3507661.png Download: Bin/Images/e42a923e.png Download: Bin/Images/e4862780.png Download: Bin/Images/eff dlb1e.png Download: Bin/Images/f7b70040.png Download: Bin/info.dat Bownload: Bin/Setup	ОК	Download

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2.4.2 Project downloading from USB disk

1Pack the project in the software and save it into the Usb disk, as shown in Fig. 28.

⁽b) Fig. 27

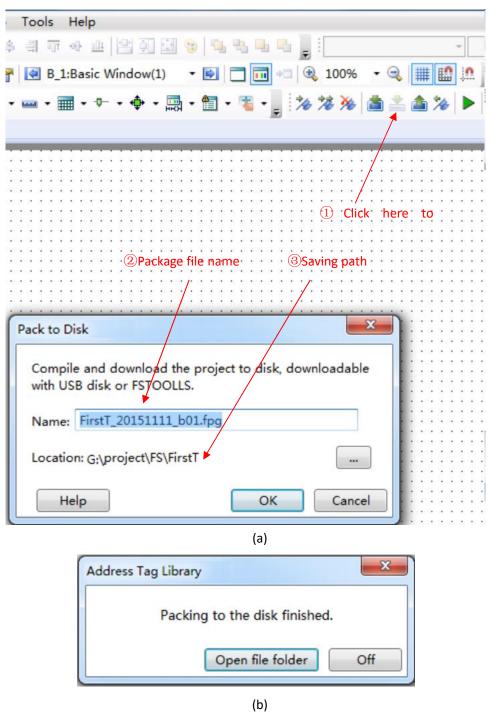


Fig. 28

(2) Insert the USB disk into the touch screen. When the touch screen is activated, press and hold at any point on the screen with a finger, as shown in Fig. 29.

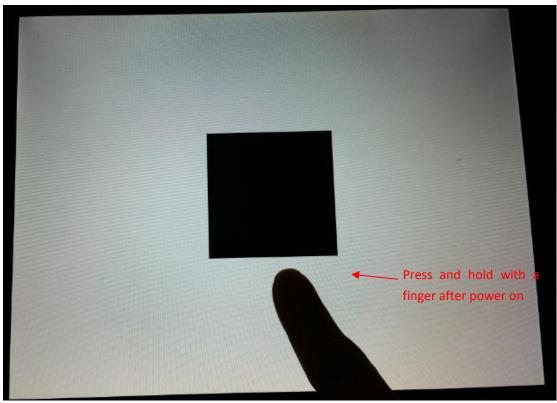


Fig. 29

③Press the button "Setup" for uploading, as shown in Fig. 30. Select "Project" and enter the password, as shown in Fig. 31. The default password for project management is "888888" which can be modified in the "Global Setting" of the software.

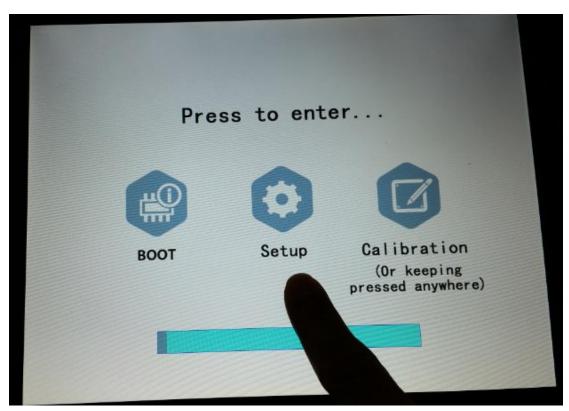


Fig. 30



General	Brightness: + 100%
Network	Time: 2015/1 MAX
Project	User level · · · · · · · · · · · · · · · · · · ·
Information ①Clie	ck here
Advanced	Backlight Timeout: 4 5 6 CLR
Security	Screen Dim Timeout: 7 8 9 Enter

Fig. 31

④Select the package file in the USB disk on the tab page "Import" (if project uploading to a USB disk is needed, please select the tab page "Export". The path for uploading the project file needs to be given), and wait till data transmission is completed, as shown in Fig. 32.

General	Import	Export	Clear Data
Network	Path:	/disk/usb	1 / F s /
Project	ï_20151113_	b01.fpg	1
Information			Project
Advanced			Project
Security			Recipe

(a)

General	Import Export	Clear Data
General		×
Network	Clear RW	Fs/
Project	Clear Recipe	
Information	Clear SFR	
Advanced	Clear sample data and event	
Security		OK / Recipe

16



(c)

Fig. 32

2.4.3 Project uploading

(1)Click the "Upload" icon on the tool bar, set the communication mode, select to upload the project, and start to upload the project, as shown in Fig. 20.

ponent Library Macro Recipe Setup Tools Help
▼ (* Redo ▼ 🖧 💼 三田 田 田 田 田 田 田 田 田 田 田 田 田 田 田 田 田 田 田
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Tools v1.4.4 Step 1: click here
Download Upload System
Protocol Step 2: select the commucation protocol Bthernet Scan Upload Data Source Step 3: select the type of upload data source
Project RW Data Recipe Logs Step 4: click here to start uploading Upload
Decompile Choose a file to be decompiled (*. fpg) Choose a folder to save decompiled files Decompile

Fig. 20

(2) Enter the password for uploading, as shown in Fig. 21. The default password is "888888" which can be modified in "Global Settings", as shown in Fig. 22.

Tools v1.4.4		
Jownload Vpload System		
Protocol		
O USB		
Ethernet 0 .	0.0.0 Scan	
-Upload Data Source	Please enter a Upload Pass	word!
Project	•••••	
	OK	cel
Decompile		
Choose a file to be	decompiled(*.fpg)	
		* * *
Choose a folder to :	save decompiled files	
		Decompile
	Fig. 21	
	P\FirstP.fsprj	
View Edit Window Drawing Cor	-	
View Edit Window Drawing Cor	۲.FirstP.fsprj moonent Library Macro Recipe Setup Tools Help o ▼ (*Redo ▼ گيو) (الله الله الله الله الله الله الله الل	= ° 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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S S Status0 L Cocal HMI FE4070 HMI Settings L Cocal HMI FE4070 HMI Settings C Communication Con L Step1: click here C COM3: Unuse C COM4: Unuse S swap Serial Pi Remote HMI Remote HMI Remote PIC Remote PIC Printer Keyboard Keyboard Keyboa	AfirstP.fsprj mponent Library Macro Recipe Setup Tools Help * * * Redo * * * * * * * * * * * * * * * * * * *	a window(1) a window(1) a window(1) a window(1) b window(1) a window(1) a window(1) b window(1) a window(1) a window(1) b window(1) a window(1) b window(1) b window(1) a window(1) b window(1) b window(1) b window(1) c window(1) b window or not? b window or not? Note: Only for capacitive screen. c lock b window(1) c lock source: HMI Internal Clock b window
View Edit Window Drawing Cor Sector Status Communication Con Communication Con Communication Con Communication Con Communication Con Communication Con Communication Con Step1: click here Com3: Unuse Com4: Unuse Swap Serial Pi Remote PLC Ethen Service Step2: doubl Printer Keyboard Step1: click here Com4: Unuse Swap Serial Pi Remote PLC Ethen Service Step2: doubl Printer Keyboard Step1: click here Step1: click here Step2: click here Step3: click here Step3	AfirstP.fsprj mponent Library Macro Recipe Setup Tools Help * * * Redo * * * * * * * * * * * * * * * * * * *	a a a a a a a a a a a a a a a a a a a
View Edit Window Drawing Cor Step 1: Click here COM3: Unuse Communication Con Local HMI FE4070 HMI Settings Local HMI FE4070 HMI Settings COM3: Unuse COM3: Unuse CO	AfirstP.fsprj mponent Library Macro Recipe Setup Tools Help * * * Redo * * * * * * * * * * * * * * * * * * *	c Window(1) Image: Control Alarm And Event ge > • • · · · · · · · · · · · · · · · · ·
View Edit Window Drawing Cor View Edit Window Drawing Cor Status0 Undo S S Status0 Undo S S S Status0 Undo Diget S Status0 Undo Diget S Status0 Undo Diget S Status0 S Status0 Undo Diget S Status0 Undo Diget S Status0 Undo Diget S Status0 S Status0 Undo Diget S Status0 S Stat	AfirstP.fsprj mponent Library Macro Recipe Setup Tools Help * * * Redo * * * * * * * * * * * * * * * * * * *	a a a a a a a a a a a a a a a a a a a
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View Edit Window Drawing Cor Sector 2015 Construction Con Construction Con Construction Con Communication Con Communicati	AfrictP.fspij mponent Library Macro Recipe Setup Tools Help Project Properties System Settings User Privilege Task Schedule Data Global Settings Extended Settings Laguan Project Properties Vulpload Password: 888888 Backlight And Screensaver Dim the brightness: Lowest Dim the brightness: Lowest Step3: modify e click here 1 and wait for Screensaver:	a a a a a a a a a a a a a a a a a a a

HTP Designer Configuration Software User Manual

3Select the project uploading path and save the file name, and click "Save".

④If the screen is correctly connected to the computer, the packaging operation will be started for uploading. Select the "Project" option, and click the "Upload" button, as shown in Fig.

23. When the uploading operation is finished, the "Uploading Success!" dialog box pops up, as shown in Fig. 24. Then click the "OK" button.

wnload Upload System				
Protocol				
ISB				
Ethernet 0 .	0.0.19 Scan			
-Upload Data Source				
	🔵 RW Data 💿 Recipe	C Logs		
	42%	Upload		
Decompile				
Choose a file to be	decompiled(*.fpg)			
Choose a folder to :	ave decompiled files			
			Decompile	

Fig. 23

Protocol		
ISB		
Ethernet 0 . 0 . 0 .	FSTools	
Upload Data Source	Uploading Sucess !	
100%	OK	
Decompile		
Choose a file to be decompiled (*. fpg)	
Choose a folder to save decompil	led files	
	Deco	ompile

Fig. 24

2.4.4 Project uploading to USB disk.

The uploading to USB disk is similar to the downloading from USB disk. Please see the details in the <u>Quick start/Project download and upload/Project Downloading from USB disk</u>. Select "Export the Project" in the 4th step.

2.4.5 Project decompiling

The project upload package file is operated for the project decompiling. The file type is fpg. Decompiling can create a project package. The function of project package can be seen in <u>Quick</u> <u>start/Project download and upload/Project uploading</u> or <u>Quick start/Project download and upload/Project uploading</u> or <u>Quick start/Project download and upload/Project uploading</u>.

①Firstly, click the tool button "Decompile", select the package fpg file, set the project saving path, and click the "Decompile" button, as shown in Fig. 17.

ponent Library Macro Recipe Setup Tools Help
• (*Redo • Lac = = = = = = = = = = = = = = = = = = =
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🞬
= ×
Decompile
Tools v1.4.4
Download Upload System Step1: click here
Frotocol
● USB
Ethernet Scan
Upload Data Source
© Project © RW Data © Recipe © Logs
Stop2: soloct a file
Step2: select a file
Decompile Step4: start decompiling
Choose a file to be decompiled (*. fpg)
Choose a folder to save decompiled files
Decompile

Fig. 17

(2) Enter the password for decompiling. The default password is "888888" which can be modified can viewed in the "General Setting" of the software, as shown in Fig. 18.

Please enter a De	compile password!
••••••	
ОК	Cancel



③After the "Decompile Success!" dialog box appears, click "OK" to complete the decompiling, as shown in Fig. 19.





3 Description for communication connection

DELTA

DELTA DVP series RS232 cable



HMI	Controller	
2 RX	5 TXD	
3 TX	4 RXD	
5 GND	8 GND	



DELTA DVP series RS485-2 cable



U				
Device	Bit Address	Word Address	Format	Notes
External output node	Y0-9999		0000	
External input node	X0-9999		0000	
Internal auxiliary node	M0-9999		DDDD	
Sequence control node	SO-9999		DDDD	
Timer node	то-9999		DDDD	
Counter node	CO-9999		DDDD	
Timer buffer		TV0-9999	DDDD	
Counter buffer		CV0-127	DDD	
Counter buffer (32 bit)		CV2 232-255	DDD	
Data register		D0-65535	DDDDD	

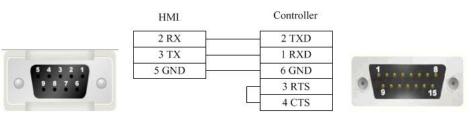
• Registers supported by DELTA DVP:

FATEK

FATEK FB series RS232 cable



FATEK FB special series RS232 cable



• FATEK FB series CB module RS232 cable



L.		Λ.	л	
г	ъ.	IV	11	

Controller

	2 RX	2 TXD
2	3 TX	3 RXD
	5 GND	5 GND

FATEK FB series R485-2 cable

	HMI	Controller
5 4 3 2 1	1 RX-	D-
9876 🔘	6 RX+	D+
	5 GND	G

registers supported by FATEK FB •

Device	Bit Address	Word Address	Format	Notes
External output node	Y0-9999		DDDD	
External inputnode	X0-9999		DDDD	
Internal auxiliary node	M0-9999		DDDD	
Sequence control node	SO-9999		DDDD	
Timer node	T0-9999		DDDD	
Counter node	C0-9999		DDDD	
Data register		R0-9999	DDDD	
Data register	——	D0-9999	DDDD	
Timer buffer	——	то-9999	DDDD	
Counter buffer		CO-199	DDD	
Counter buffer (32bit)		DRC200-255	DDD	

Flexem

1 flexem_fl2n_mistubishi_fx2n_compatable

Flexem(MISTUBISHI FX2N COMPATIBLE)

Flexem FL2N series RS232 cable

1.0	-		
4 3	2 1		
98	7 6	0	
		-	
	43 98	4321 9876	4321 9876

HMI	Controller
2 RX	3 TXD
3 TX	2 RXD
5 GND	5 GND

Flexem FL2N series RS485-2 cable

HMI

Controller

Controller

1 RX-	
6 RX+	+
5 GND	GND

Registers supported by Flexem FL2N(MISTUBISHI FX2N CON	MPATIBLE)
--	-----------

Device	Bit Address	Word Address	Format	Notes
External input node	X000-571		000	
External output node	Y000-571		000	

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Internal auxiliary node	S0000-9999		DDDD
Special auxiliary node	SM8000-9999		DDDD
Timer node	T_bit000-255		DDD
Counter node	C_bit000-255		DDD
Timer buffer		T_word000-255	DDD
Counter buffer		C_word000-255	DDD
Counter buffer (32 bit)		C_dword200-255	DDD
Data register		D0000-7999	DDDD
Special data register		SD8000-9999	DDDD

2 flexem_fl2n_modbus

FLEXEM FL2N (Modbus compatible protocol)

Flexem FL2N series RS232 cable

	6	4	3 2		
0			• •		0
0				°	0

Controller
 3 TXD
 2 RXD

5 GND

Controller

Flexem FL2N series RS485-2 cable

	-	
~	5 4 3 2 1	-
0	9876	0

1 RX-	
6 RX+	+
5 GND	GND

Registers supported by Flexem Fl2N (Modbus)

HMI

2 RX 3 TX

5 GND

HMI

Bit Address	Word Address	Format	Notes
X0-571		000	
Y00-571		000	
S0-999		DDD	
M0-2047		DDDD	
SM0-511		DDD	
T_bit0-255		DDD	
C_bit0-255		DDD	
	AQ0-255	DDD	
	AI0-255	DDD	
	T_word0-255	DDD	
	C_word0-255	DDD	
	C_dword200-255	DDD	
	D0-4095	DDDD	
	SD0-511	DDDD	
	X0-571 Y00-571 S0-999 M0-2047 SM0-511 T_bit0-255	X0-571 Y00-571 S0-999 M0-2047 SM0-511 T_bit0-255 C_bit0-255 AQ0-255 T_word0-255 C_word0-255 C_dword200-255 D0-4095	X0-571 OOO Y00-571 OOO S0-999 DDD M0-2047 DDD SM0-511 DDD T_bit0-255 DDD C_bit0-255 DDD AQ0-255 DDD Al0-255 DDD C_word0-255 DDD C_word0-255 DDD C_dword200-255 DDD D0-4095 DDDD

3 Differences between Flexem FL2N(Mistubishi FX2N Compatable) and Flexem FL2N(Modbus)

Differences between FLEXEM FL2N(MISTUBISHI FX2N COMPATIBLE) and FLEXEM FL2N(modbus): FLEXEM FL2N(MISTUBISHI FX2N COMPATIBLE) is compatible with Mitsubishi, while FLEXEM FL2N(modbus) is compatible with MODBUS.

Additional description:

1 If modbus applies PLC Addresses (Base 1), please refer to the table below for the address correspondence

Device	Туре	Address	Protocol address	Function code
Y	Bit	Y0-377	0001-0256	1,5,15
х	Bit	x0-377	1201-1456	1,5,15
				2
м	Bit	M0-M2047	2001-4048	1,5,15
SM	Bit	SM0-SM511	4401-4912	1,5,15
S	Bit	S0-S999	6001-7000	1,5,15
Т	Bit	T0-T255	8001-8256	1,5,15
С	Bit	C0-C255	9201-9456	1,5,15
D	Word	D0-D4095	0001-4096	3,6,16
SD	Word	SD0-SD511	8001-8512	3,6,16
т	Word	T0-T255	9001-9256	3,6,16
С	Word	C0-C199	9501-9700	3,6,16
С	Double word	C200-C255	9701-9756	3,16

2 $\,$ If modbus applies Protocol Addresses (Base 0), please refer to the table below for the address correspondence

Device	Туре	Address	Protocol address	Function code
Y	Bit	Y0-377	0000-0255	1,5,15
x	Bit	x0-377	1200-1455	1,5,15
				2
М	Bit	M0-M2047	2000-4047	1,5,15
SM	Bit	SM0-SM511	4400-4911	1,5,15
S	Bit	SO-S999	6000-6999	1,5,15
Т	Bit	T0-T255	8000-8255	1,5,15
С	Bit	C0-C255	9200-9455	1,5,15
D	Word	D0-D4095	0000-4095	3,6,16
SD	Word	SD0-SD511	8000-8511	3,6,16
Т	Word	T0-T255	9000-9255	3,6,16

С	Word	C0-C199	9500-9699	3,6,16
С	Double word	C200-C255	9700-9755	3,16

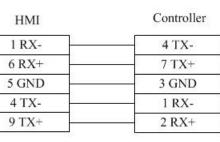
HCFA

HC series PLC series CPU port RS232 cable

HC serial port programming cable is used to communicate with the HMI device.

HC series PLC circular 8-pin RS485-4 cable







Registers supported by HCFA HCA2s_HCA2c_HCA2_LX1N_LX1S

	-			
Device	Bit Address	Word Address	Format	Notes
Output relay	Y0-571		000	
Input relay	X0-571		000	
Internal relay	M0-7999		DDDD	
Timer contact	T_bit0-255		DDD	
Counter contact	C_bit0-255		DDD	
Stepping relay	SO-9999		DDDD	
Special internal relay	SM8000-9999		DDDD	
Data register		D_word0-7999	DDDD	
Special data register		SD8000-9999	DDDD	
Timer current value		T_word0-255	DDD	
Counter current value		C_word0-255	DDD	

Registers supported by HCFA HCA4

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Device	Bit Address	Word Address	Format	Notes
Hold Relay	HR_bit 00.00-99.15		DD.DD	
Data Relay	DM_bit 0000.00-6655.15		DDDD.DD	
Link Relay	LR_bit 00.00-63.15		DD.DD	
Auxiliary Relay	AR_bit 00.00-959.15		DD.DD	
Channel I/O	CIO_IR_bit 000.00-511.15		DDD.DD	
Counter Relay		CNT_word 000-511	DDD	
Timer Relay		TIM_word 000-511	DDD	
Hold Register		HR_word 00-99	DD	
Data Register		DM_word 0000-6655	DDDD	
Link Register		LR_word 00-63	DD	
Auxiliary Register		AR_word 000-959	DDD	
Channel I/O Register		CIO_IR_word 000-511	DDD	

• Registers supported by HCFA HCA8s_HCA8c_HCA8

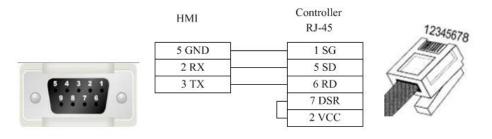
Device	Bit Address	Word Address	Format	Notes
Output relay	Y0-764		000	
Input relay	X0-764		000	
Internal relay	M0-7999		DDDD	
Timer contact	T_bit0-511		DDD	
Counter contact	C_bit0-511		DDD	
Stepping relay	S0-4095		DDDD	
Special internal relay	SM8000-9999		DDDD	
Data register bit	D_bit0.0-7999.F		DDDD.H	
Data register		D_word0-7999	DDDD	
Special data register		SD8000-9999	DDDD	
Timer current value		T_word0-255	DDD	
File register		R0-32767	DDDDD	
Counter current value		C_word0-199	DDD	
Counter current value		C_dword200-255	DDD	

Hitachi

	HMI			Controller RJ-45	
ſ	5 GND	6		1 SG]
1	2 RD			5 SD	
Ī	3 SD			6 RD	
	8 TXD			8 RTS	12
Ī	1 RX-			7 DSR	
Ī	4 TX-			2 VCC	
t	6 RX+		0		

EHV-CPU_APPLICATION series programming cable

• EHV-CPU_APPLICATION series RS232 cable



EHV-CPU_APPLICATION series RS485-4 cable



HMI	Controller 15pin
1 RX-	12 SDN
6 RX+	13 SDP
5 GND	11 SG
9 TX+	7 RDP
4 TX-	9 RT
	10 RDN



12345678

Registers supported by EHV-CPU_APPLICATION

Device	Bit Address	Word Address	Format	Notes
Input	X_bit0-FFFF		нннн	
Output	Y_bit0-FFFF		нннн	
Internal Output	R_bit0-FFFF		нннн	
CPU Link	L_bit0-FFFF		нннн	
Data Area	M_bit0-FFFF		нннн	
Timer	T_C_bit0-FFFF		нннн	
Counter	C_L_bit0-FFFF		нннн	
Input		WX0-FFFF	нннн	
Output		WY0-FFFF	ннн	
Internal Output		WR0-FFFF	нннн	
CPU Link		WL0-FFFF	нннн	
Data Area		WM0-FFFF	НННН	
Timer Counter		TC0-FFFF	нннн	
Data		DIF0-FFFF	НННН	
Data		DFN0-FFFF	нннн	

Notice (Similar for other address types)

PLC(Format)	HMI(Format)
WY100(HDD)	WY100(HHH)
WY101(HDD)	WY101(HHH)
WY102(HDD)	WY102(HHH)
WY114(HDD)	WY10E(HHH)
WY1 <mark>15(HDD)</mark>	WY10F10F(HHH)

HollySys

•

•

HollySys LM series RS232 cable

	HMI	Controller
5 4 3 2 1	2 RX	3 TXD
9876 🔾	3 TX	2 RXD
	5 GND	5 GND

HollySys LM series RS485-2 cable

	HMI	Controller
5 4 3 2 1	1 RX-	8
9876	6 RX+	3
	5 GND	5

Registers supported by HollySys LM:

0 11				
Device	Bit Address	Word Address	Format	Notes
External output node	Q0.0-4095.7		DDDD.O	
External inputnode	10.0-4095.7		DDDD.O	
Intermediate auxiliary register bit	M100.0-62535.7		DDDDD.O	M0-99(Used by
				systematic diagnoses)
Analog output register		QW0-510	DDDD	
Analog input register		IW0-4095	DDDD	
Intermediate register		MW0-8188	DDDD	
Intermediate register(32 bit)		MD0-8186	DDDD	

Inovance

Inovance_H2u series CPU port RS232 cable

Inovance serial port programming cable is used to communicate with the HMI device.

Inovance_H2U series communication port RS232 cable

HMI

54321	
	0
9 9 8 7 8	0

2 RX	3 TXD
3 TX	2 RXD
5 GND	5 GND

Inovance_H2u series RS485-4 cable

HMI

1 RX-

6 RX+

5 GND

4 TX-

9 TX+



4 TX-

7 TX+

3 GND

1 RX-

2 RX+

Controller



	5	4 3	2	
0			7 6	0
~		• •		-

	Inovance_	_H2u series	module	RS485-4	cable
--	-----------	-------------	--------	---------	-------

HMI

Controller

100 100 10

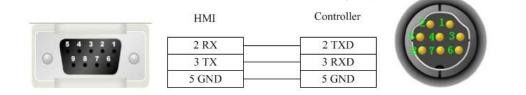
	1 RX-	SDB	
	6 RX+	SDA	
5 4 3 2 1 9 8 7 6	5 GND	SG	RDA R
	4 TX-	RDB	
	9 TX+	RDA	

Registers supported by Inovance_H2U

Device	Bit Address	Word Address	Format	Notes
			000	
Output relay	Y0-571		000	
Input relay	X0-571		000	
Internal relay	M0-7999		DDDD	
Timer contact	T_bit0-255		DDD	
Counter contact	C_bit0-255		DDD	
Stepping relay	S0-9999		DDDD	
Special internal relay	SM8000-9999		DDDD	
Data register	——	D_word0-7999	DDDD	
Special data register	——	SD8000-9999	DDDD	
Timer current value		T_word0-255	DDD	
Counter current value		C_word0-199	DDD	
Counter current value		C_dword200-255	DDD	

Kewei

Kewei cable



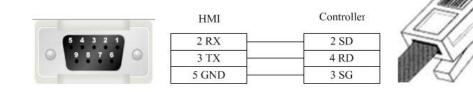
Registers supported by Kewei

Device	Bit Address	Word Address	Format	Notes
Output relay	Y0-377		000	
Input relay	X0-377		000	
Internal relay	M0-7999		DDDD	
Timer contact	T_bit0-255		DDD	
Counter contact	C_bit0-255		DDD	
Stepping relay	S0-9999		DDDD	
Special internal relay	SM8000-9999		DDDD	

Data register	 D_word0-7999	DDDD	
Special data register	 SD8000-9999	DDDD	
Timer current value	 T_word0-255	DDD	
Counter current value	 C_word0-199	DDD	
Counter current value	 C_dword200-255	DDD	

KEYENCE

KEYENCE KV-1000-3000 series CPU port RS232 cable



123456

Registers supported by KEYENCE KV-1000-3000:

Device	Bit Address	Word Address	Format	Notes
Latch relay	LR0.0-15999.15		DDDDD.DD	
Internal auxiliary relay	MR0.0-15999.15		DDDDD.DD	
Control relay	CR0.0-639.15		DDD.DD	
relay	R0.0-15999.15		DDDDD.DD	
Extended data memory		FM0-32767	DDDDD	
Extended data memory		EM0-65534	DDDDD	
High speed counter comparator		TC0-3999	DDDD	
Timer		TM0-511	DDD	
Counter		СМ0-9999	DDDD	
Variable address register		Z0-12	DD	
Data memory		DM0-65534	DDDDD	

Kinco

Kinco series RS232 cable

	HMI	Controller
5 4 3 2 1	2 RX	3 TXD
9876 🔘	3 TX	2 RXD
	5 GND	5 GND

Kinco series RS485-2 cable

5 4 3 2 1	HMI	Controller
9876	1 RX-	В
	6 RX+	A

Registers supported by Kinco

Device	Bit Address	Word Address	Format	Notes
System internal/external input node	10.0-31.7		DD.O	
System internal/external output node	Q0.0-31.7		DD.O	
Intermediate auxiliary register	M0.0-31.7		DD.O	
Intermediate bit register	VW0.0-4094.7		DDDD.O	
Analog input register		AIW0-62	DD	
Analog output register		AQW0-62	DD	
Intermediate register		VW0-4094	DDDD	
Intermediate register		VD0-4092	DDDD	

LS

1 ls_mster_cpu_serial

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LS Master_K CPU Serial S232 cable

	HMI	Controller
5 4 3 2 1	2 RX	3 TXD
9876	3 TX	2 RXD
	5 GND	5 GND

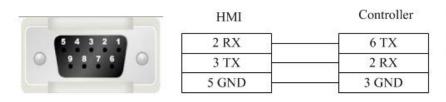
Registers supported by LS Master_K CPU Serial

Device	Bit Address	Word Address	Format	Notes
Auxiliary Relay	M0.0-4096.F		DDDD.F	
I/O Relay	P0.0-4096.F		DDDD.F	
Link Relay	L0.0-4096.F		DDDD.F	
Keep Relay	K0.0-4096.F		DDDD.F	
Special Relay	F0.0-4096.F		DDDD.F	
Data Register Bit	D_bit0.0-4096.F		DDDD.F	
Timer Bit	T_bit0.0-4096.F		DDDD.F	
Counter Bit	C_bit0.0-4096.F		DDDD.F	
Data Register		D0-9999	DDDD	
Timer		T0-4096	DDDD	
Counter		C0-4096	DDDD	
Auxiliary Relay		M_Word0-4096	DDDD	
Special Relay		F_Word0-4096	DDDD	
Link Relay		L_Word0-4096	DDDD	

2 ls_xgt_cpu_serial

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LS XGT CPU Serial RS232 cable





Registers supported by LS XGT CPU Serial

Device	Bit Address	Word Address	Format	Notes
Auxiliary Relay	M_Bit0.0-16383.F		DDDDD.F	
I/O Relay	P_Bit0.0-16383.F		DDDDD.F	
Keep Relay	K_Bit0.0-65535.F		DDDDD.F	
Special Relay	F_Bit0.0-16383.F		DDDDD.F	
Timer Bit	T_Bit0.0-9999.F		DDDD.F	
Counter Bit	C_Bit0.0-9999.F		DDDD.F	
Index Relay	Z_Bit0.0-9999.F		DDDD.F	
Index Relay	ZR_Bit0.0-163839.F		DDDDDD.F	
Link Relay	L_Bit0.0-32767.F		DDDDD.F	
Communication Relay	N_Bit0.0-81819.F		DDDDD.F	
Data Relay	D_Bit0.0-163839.F		DDDDDD.F	
File Relay	R_Bit0.0-163839.F		DDDDDD.F	

Data Register	 D0-10239	DDDDD	
I/O Relay	 P0-9999	DDDD	
Auxiliary Relay	 M0-9999	DDDD	
Keep Register	 K0-9999	DDDD	
Special Register	 F0-9999	DDDD	
Timer	 T_SV0-9999	DDDD	
Counter	 C_SV0-9999	DDDD	
Timer	 T_CV0-9999	DDDD	
Counter	 C_CV0-9999	DDDD	
Index Register	 Z0-9999	DDDD	
Step Control Register	 S0-9999	DDDD	
Link Register	 L0-9999	DDDD	
Communication Register	 N0-9999	DDDD	
File Register	 R0-10239	DDDDD	
Index Register	 R0-10239	DDDDD	

MEGMEET

MEGMEET M280 series CPU port RS232 cable



HMI	Controller
2 RX	5 TXD
3 TX	4 RXD
5 GND	3 GND



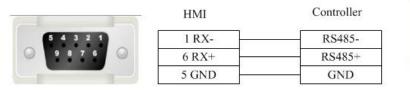
MEGMEET M280 series communication port RS232 cable



HMI	Controller	
2 RX	TXD	
3 TX	RXD	
5 GND	GND	



MEGMEET M280 series RS485-2 cable





Device	Bit Address	Word Address	Format	Notes
Output relay	Y0-571		000	
Input relay	X0-571		000	
Internal relay	M0-10239		DDDDD	
Timer contact	T_bit0-511		DDD	
Counter contact	C_bit0-511		DDD	
Stepping relay	S0-4096		DDDD	
Special internal relay	SM0-511		DDD	
Auxiliary register		R0-32767	DDDDD	
Data register		D_word0-7999	DDDD	
Special data register		SD0-511	DDD	
Variable address register		Z0-15	DD	
Timer current value		T_word0-511	DDD	
Counter current value		C_word0-199	DDD	
Counter current value		C_dword200-255	DDD	

Registers supported by MEGMEET M280

ΜΙΚΟΜ

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MIKOM MX1H series CPU port RS232 cable



HMI	Controller		
2 RX	5 TXD		
3 TX	4 RXD		
5 GND	3 GND		



MIKOM MX1H series RS485-2 cable



HMI	Controller	
1 RX-	RS485-	
6 RX+	RS485+	
5 GND	GND	

Registers supported by MIKOM MX1H

Device	Bit Address	Word Address	Format	Notes
Output relay	Y0-777		000	
Input relay	X0-777		000	
Internal relay	M0-4095		DDDD	
Timer contact	T_bit0-511		DDD	

HTP Designer Configuration Software User Manual

Counter contact	C_bit0-511		DDD	
Stepping relay	S0-1535		DDDD	
Special internal relay	SM0-511		DDD	
Auxiliary register		Un 0-199	DDD	n: 0-7
Data register		D0-32767	DDDDD	
Special data register		SD0-511	DDD	
Variable address register		Z0-255	DDD	
Timer current value		T_word0-511	DDD	
Counter current value		C_word0-199	DDD	
Counter current value		C_dword200-255	DDD	

Mitsubishi

1 Mitsubishi_FX0S_FX0N_FX1S_FX1N_FX2

Mitsubishi FX series CPU port RS232 cable

Mitsubishi serial programming cable is used to communicate with the HMI device.

Mitsubishi FX series communication port RS232 cable



HMI	Controller	
2 RX	3 TXD	
3 TX	2 RXD	
5 GND	5 GND	

Mitsubishi FX series RS485-4 cable



HMI	Controller	
1 RX-	4 TX-	
6 RX+	7 TX+	
5 GND	3 GND	
4 TX-	1 RX-	
9 TX+	2 RX+	



Registers supported by Mitsubishi FXOS_FXON_FX1S_FX1N_FX2

Device	Bit Address	Word Address	Format	Notes
Output relay	Y0-571		000	
Input relay	X0-571		000	
Internal relay	M0-7999		DDDD	
Timer contact	T_bit0-255		DDD	

Counter contact	C_bit0-255		DDD	
Stepping relay	SO-9999		DDDD	
Special internal relay	SM8000-9999		DDDD	
Data register		D_word0-7999	DDDD	
Special data register		SD8000-9999	DDDD	
Timer current value		T_word0-255	DDD	
Counter current value		C_word0-255	DDD	

2 Mitsubishi FX2N

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Mitsubishi FX series CPU port RS232 cable

Mitsubishi serial port programming cable is used to communicate wiht the HMI device.

Mitsubishi FX series communication port RS232 cable



HMI	Controller
2 RX	3 TXD
3 TX	2 RXD
5 GND	5 GND

Mitsubishi FX series RS485-4 cable

HMI		
1 RX-		

6 RX+

5 GND

4 TX-

9 TX+

Controller

4 TX-

7 TX+

3 GND

1 RX-

2 RX+



Registers supported by Mitsubishi FX2N:

Device	Bit Address	Word Address	Format	Notes	
Output relay	Y0-571		000		
Input relay	X0-571		000		
Internal relay	M0-7999		DDDD		
Timer contact	T_bit0-255		DDD		
Counter contact	C_bit0-255		DDD		
Stepping relay	SO-9999		DDDD		
Special internal relay	SM8000-9999		DDDD		
Data register		D_word0-7999	DDDD		
Special data register		SD8000-9999	DDDD		
Timer current value		T_word0-255	DDD		

Counter current value	 C_word0-199	DDD	
Counter current value	 C_dword200-255	DDD	

3 Mitsubishi FX3U_FX3G

Mitsubishi FX series CPU port RS232 cable

The Mitsubishi serial port cable is used to communicate between the HMI device and the programming device.

Mitsubishi FX series communication port RS232 cable



HMI	Controller
2 RX	3 TXD
3 TX	2 RXD
5 GND	5 GND

Mitsubishi FX series RS485-4 cable

HMI

Controller



1 RX-	4 TX-
5 RX+	7 TX+
5 GND	3 GND
4 TX-	1 RX-
9 TX+	2 RX+



Registers supported by Mitsubishi FX3U_FX3G

Device	Bit Address	Word Address	Format	Notes
Output relay	Y0-764		000	
Input relay	X0-764		000	
Internal relay	M0-7999		DDDD	
Timer contact	T_bit0-511		DDD	
Counter contact	C_bit0-255		DDD	
Stepping relay	S0-4095		DDDD	
Special internal relay	SM8000-9999		DDDD	
Data register bit	D_bit0.0-127999.F		DDDDDD.H	
Data register		D_word0-17999	DDDDD	
Special data register		SD8000-9999	DDDD	
Timer current value		T_word0-511	DDD	
File register		R0-32767	DDDDD	
Counter current value		C_word0-199	DDD	
Counter current value		C_dword200-255	DDD	

4 Mitsubishi Melsec Q

Mitsubishi Melsec Series Q RS232 cable .

	HMI	Controller	
5 4 3 2 1	2 RX	2 TXD	
9876	3 TX	1 RXD	
	5 GND	3 GND	

Mitsubishi Melsec Series Q (Special) RS232 cable



HMI	Controller
2 RX	2 TXD
3 TX	1 RXD
5 GND	3 GND
	5 CTS
	6 RTS
	100 C

Controller



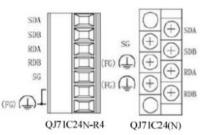
Mitsubishi MelsecSeries Q C24 communication module RS232 cable

	HMI	Controller	
	2 RX -	3 TXD	
	3 TX	2 RXD	
	5 GND	5 GND	
		1 DCD	
		4 DTR	
		6 DSR	1111
0		7 RTS	
		8 CTS	

Mitsubishi Melsec Series Q C24 communication module RS485-4 cable



Controller HMI 1 RX-SDB 6 RX+ SDA 5 GND SG 4 TX-RDB 9 TX+ RDA



Registers supported by Mitsubishi Melsec Q:

Device	Bit Address	Word Address	Format	Notes
Data output relay	DDY0-7FF	——	ннн	
Data input relay	DX0-7FF		ннн	
Stepping relay	S0-2047		DDDD	

			ı
Special link relay	SB0-3FF		ннн
Counter coil	CC0-511		DDD
Counter contact	CS0-511		DDD
Accumulative timer coil	SC0-511		DDD
Accumulative timer contact	SSO-511		DDD
Timer coil	TC0-511		DDD
Link relay	B0-7FF		ннн
Variable address relay	V0-1023		DDDD
Alarm	F0-1023		DDDD
Latch relay	L0-2047		DDDD
Internal relay	M0-8191		DDDD
Output relay	Y0-7FF		ннн
Input relay	X0-7FF		ннн
Timer contact	TS0-511		DDD
Data register		D0-11135	DDDDD
File register		ZR0-65535	DDDDD
Variable address register		Z0-9	D
Stepping register		SW0-3FF	ннн
File register		R0-32767	DDDDD
Counter current value		CN0-511	DDD
Accumulative timer current		SN0-511	DDD
value			
Timer current value		TN0-511	DDD
Link register		W0-7FF	ннн

HTP Designer Configuration Software User Manual

5 Mitsubishi_FX3U_ENET_L

Mitsubishi_FX3U_ENET_L cable

Across connection



HMI	Controller
1 TX+	3 RX+
2 TX-	6 RX-
3 RX+	1 TX+
4 BD4+	4 BD4+
5 BD4-	5 BD4-
6 RX-	2 TX-
7 BD3+	7 BD3+
8 BD3-	8 BD3-

12345678

1 Orange White

2 Orange

3 Green White 4 Blue

5 Blue White

6 Green

7 Brown White 8 Brown

Direct connection



HMI	Controller
1 TX+	1 RX+
2 TX-	2 RX-
3 RX+	3 TX+
4 BD4+	4 BD4+
5 BD4-	5 BD4-
6 RX-	6 TX-
7 BD3+	7 BD3+
8 BD3-	8 BD3-



1 Orange White 2 Orange 3 Green White 4 Blue 5 Blue White 6 Green 7 Brown White

8 Brown

Registers supported by Mitsubishi_FX3U_ENET_L

Device	Bit Address	Word Address	Format	Notes
Output relay	Y0-377		000	
Input relay	X0-377		000	
Internal relay	M0-7999		DDDD	
Special internal relay	SM8000-8511		DDDD	
Stepping relay	S0-4095		DDDD	
Timer	T0-511		DDD	
Counter	C0-255		DDD	
Data relay	D_bit0-17999.15		DDDDD.DD	
Data register		D0-7999	DDDD	
Special register		SD8000-8511	DDDD	
File register		R0-32767	DDDDD	
Timer current value		TV0-511	DDD	
Counter current value		CV0-199	DDD	
Counter current value		CV2 200-255	DDD	

6 Mitsubishi_melsec_ethernet

Mitsubishi Melsec Ethernet (Ascii/Bin)

Mitsubishi_Melsec_Ethernet (Ascii/Bin) cable

Across connection



HMI	Controller
1 TX+	3 RX+
2 TX-	6 RX-
3 RX+	1 TX+
4 BD4+	4 BD4+
5 BD4-	5 BD4-
6 RX-	2 TX-
7 BD3+	7 BD3+
8 BD3-	8 BD3-



1 Orange White

- 2 Orange 3 Green White
- 4 Blue
- 5 Blue White
- 6 Green
- 7 Brown White
- 8 Brown

Direct connection



HMI	Controller
1 TX+	1 RX+
2 TX-	2 RX-
3 RX+	3 TX+
4 BD4+	4 BD4+
5 BD4-	5 BD4-
6 RX-	6 TX-
7 BD3+	7 BD3+
8 BD3-	8 BD3-



1 Orange White 2 Orange 3 Green White 4 Blue 5 Blue White 6 Green 7 Brown White

8 Brown

Registers supported by Mitsubishi_Melsec_Ethernet (Ascii/Bin)

Device	Bit Address	Word Address	Format	Notes
Output relay	YO-FFFF		нннн	
Input relay	X0-FFFF		нннн	
Internal relay	M0-65535		DDDDD	
Special internal relay	SM0-65535		DDDDD	
Latch relay	L0-65535		DDDDD	
Alarm	F0-65535		DDDDD	
Variable address relay	V0-65535		DDDDD	
Link relay	BO-FFFF		нннн	
Timer contact	TS0-65535		DDDDD	
Timer coil	TC0-65535		DDDDD	
Accumulative timer contact	SS0-65535		DDDDD	
Accumulative timer coil	SC0-65535		DDDDD	
Counter contact	CS0-65535		DDDDD	
Counter coil	CC0-65535		DDDDD	
Special link relay	SB0-FFFF		нннн	
Stepping relay	S0-65535		DDDDD	
Data output relay	DY0-FFFF		нннн	
Data input relay	DX0-FFFF		нннн	
Data register		D0-65535	DDDDD	
Special register		SD0-65535		
Link register		W0-FFFF	нннн	
Stepping register		SW0-FFFF	нннн	
Timer current value		TN0-65535	DDDDD	
Accumulative timer current value		SN0-65535	DDDDD	
Counter current value		CN0-65535	DDDDD	
Variable address register		Z0-65535	DDDDD	
File register		R0-65535	DDDDD	
File register		ZR0-393216	DDDDDD	

Modbus

1 Modbus_RTU

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Modbus RTU series RS232 cable



HMI		Controller
2 RX	}	3 TXD
3 TX		2 RXD
5 GND]	5 GND

Modbus RTU series RS485-2 cable



HMI	Controller
1 RX-	
6 RX+	+
5 GND	GND

Modbus RTU series RS485-4 cable

HMI

Controller



1 RX-	TX-
5 RX+	TX+
5 GND	GND
4 TX-	RX-
9 TX+	RX+

Registers supported by RTU:

Device	Bit Address	Word Address	Format	Notes
System internal/external output node	0X1-65535	——	DDDDD	
System internal/external input node	1X1-65535	——	DDDDD	
Analog input data register		3X1-65535	DDDDD	
Data register		4X1-65535	DDDDD	

2 Modbus_ RTU _Extend

Modbus RTU Extend

Modbus RTU Extend series RS232 cable

HMI 2 RX 3 TX

5 GND

	4 3	2 1		
0	98	76	0	

	Controller
	3 TXD
	2 RXD

Modbus RTU Extend series RS485-2 cable

		4 3	2 1	
A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- E			-
9 8 7 6 0	0	7	6	0

•

HMI	Controller
1 RX-	
6 RX+	+
5 GND	GND

Modbus RTU Extend series RS485-4 cable

HMI

Controller

5 GND



1 RX-	TX-
6 RX+	TX+
5 GND	GND
4 TX-	RX-
9 TX+	RX+

Registers supported by Modbus RTU Extend:

Bit Address	Word Address	Format	Notes
0X1-65535		DDDDD	
1X1-65535		DDDDD	
3X1_BIT1.0-		DDDDD.DD	
65535.15			
4X1_BIT1.0-		DDDDD.DD	
65535.15			
	3X1-65535	DDDDD	
	4X1-65535	DDDDD	
	5X1-65535	DDDDD	
	6X1-65535	DDDDD	
	3X-DINV1-65535	DDDDD	
	4X-DINV1-65535	DDDDD	
	0X1-65535 1X1-65535 3X1_BIT1.0- 65535.15 4X1_BIT1.0-	0X1-65535 1X1-65535 3X1_BIT1.0- 65535.15 4X1_BIT1.0- 65535.15 5535.15 3X1-65535 3X1-65535 5X1-65535 6X1-65535 6X1-65535 3X-DINV1-65535	OX1-65535 DDDDD 1X1-65535 DDDDD 3X1_BIT1.0- DDDDD.DD 65535.15 DDDDD.DD 4X1_BIT1.0- DDDDD.DD 65535.15 DDDDD.DD 3X1-65535 DDDDD 3X1-65535 DDDDD 5X1-65535 DDDDD 6X1-65535 DDDDD 3X-DINV1-65535 DDDDD

Notice:

4X_DINV and 3X_DINV are the big end format of double word 4X, and it is a word type address. For example, 4X3 is the hexadecimal 1234, 4X4 is the hexadecimal 5678, and 4X_DINV is the hexadecimal 12345678.

3 Differences between Modbus_RTU and Modbus_RTU_Extend

Many data memory such as analog input data bit, data register bit and function code data register are added into Modbus_RTU_Extend on the base of Modbus_RTU.

4 Modbus_TCP

Modbus TCP cable

Across connection



HMI	Controller
1 TX+	3 RX+
2 TX-	6 RX-
3 RX+	1 TX+
4 BD4+	4 BD4+
5 BD4-	5 BD4-
6 RX-	2 TX-
7 BD3+	7 BD3+
8 BD3-	8 BD3-



1 Orange White 2 Orange 3 Green White 4 Blue 5 Blue White 6 Green 7 Brown White 8 Brown

Direct connection



HMI	Controller
1 TX+	1 RX+
2 TX-	2 RX-
3 RX+	3 TX+
4 BD4+	4 BD4+
5 BD4-	5 BD4-
6 RX-	6 TX-
7 BD3+	7 BD3+
8 BD3-	8 BD3-



1 Orange White 2 Orange 3 Green White 4 Blue 5 Blue White 6 Green 7 Brown White 8 Brown

Registers supported by TCP

Device	Bit Address	Word Address	Format	Notes
System internal/external output node	0X1-65535		DDDDD	
System internal/external input node	1X1-65535		DDDDD	
Analog input data register		3X1-65535	DDDDD	
Data register		4X1-65535	DDDDD	

Controller

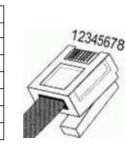
5 Modbus_ UDP

Modbus UDP cable

. Across connection



HMI	Controller
1 TX+	3 RX+
2 TX-	6 RX-
3 RX+	1 TX+
4 BD4+	4 BD4+
5 BD4-	5 BD4-
6 RX-	2 TX-
7 BD3+	7 BD3+
8 BD3-	8 BD3-



1 Orange White

2 Orange

3 Green White

4 Blue

5 Blue White

6 Green

8 Brown

7 Brown White

Direct connection



.

HMI	Controller
1 TX+	1 RX+
2 TX-	2 RX-
3 RX+	3 TX+
4 BD4+	4 BD4+
5 BD4-	5 BD4-
6 RX-	6 TX-
7 BD3+	7 BD3+
8 BD3-	8 BD3-



1 Orange White 2 Orange

3 Green White 4 Blue

5 Blue White

6 Green

7 Brown White

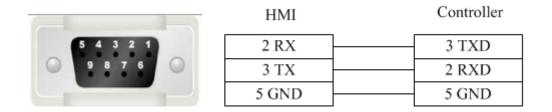
8 Brown

Registers supported by Modbus UDP:

Device	Bit Address	Word Address	Format	Notes
System internal/external output node	0X1-65535		DDDDD	
System internal/external input node	1X1-65535		DDDDD	
Analog input data register		3X1-65535	DDDDD	
Data register		4X1-65535	DDDDD	

Modbus RTU Server - Serial port service

Modbus RTU Server series RS232 cable



Modbus RTU Server series RS485-2 cable

	HMI	Controller
5 4 3 2 1	1 RX-	-
9876	6 RX+	+
	5 GND	GND

Modbus RTU Server series RS485-4 cable

	HMI	Controller
	1 RX-	TX-
	6 RX+	TX+
5 4 3 2 1	5 GND	GND
9876	4 TX-	RX-
	9 TX+	RX+

Registers supported by Modbus RTU Server:

Device	Bit Address	Word Address	Format	Notes
System internal/external output node	LB0-65535		DDDDD	LBn: 0X(n+1) n: 0-65535
				Fox example: LB0 = 0X1
System internal/external input node	LB0-65535		DDDDD	LBn: 1X(n+1) n: 0-65535
				Fox example: LB0 = 1X1
Analog input data relay		LW0-9998	DDDDD	LWn: 3X(n+1) n: 0-9998
				Fox example: LW0 = 3X1
Analog input data relay		RW0-55535	DDDDD	RWn: 3X(n+10000)
				n: 0-55535
				Fox example: RW0 =
				3X10000
Data register		LW0-9998	DDDDD	LWn: 4X(n+1) n: 0-9998
				Fox example: LW0 = 4X1
Data register		RW0-55535	DDDDD	RWn: 4X(n+10000)
				n: 0-55535
				Fox example: RW0 =
				4X10000

Modbus TCP Server– Ethernet service

Modbus TCP Server cable

Across connection



HMI	Controller
1 TX+	3 RX+
2 TX-	6 RX-
3 RX+	1 TX+
4 BD4+	4 BD4+
5 BD4-	5 BD4-
6 RX-	2 TX-
7 BD3+	7 BD3+
8 BD3-	8 BD3-



1 Orange White 2 Orange 3 Green White 4 Blue 5 Blue White 6 Green 7 Brown White

8 Brown

Direct connection



HMI	Controller
1 TX+	1 RX+
2 TX-	2 RX-
3 RX+	3 TX+
4 BD4+	4 BD4+
5 BD4-	5 BD4-
6 RX-	6 TX-
7 BD3+	7 BD3+
8 BD3-	8 BD3-



2 Orange 3 Green White 4 Blue 5 Blue White 6 Green

1 Orange White

7 Brown White

8 Brown

Registers supported by Modbus TCP Server

Device	Bit Address	Word Address	Format	Notes
System internal/external output node	LB0-65535		DDDDD	LBn: 0X(n+1) n: 0-65535
				Fox example: LB0 = 0X1
System internal/external input node	LB0-65535		DDDDD	LBn: 1X(n+1) n: 0-65535
				Fox example: LB0 = 1X1
Analog input data relay		LW0-9998	DDDDD	LWn: 3X(n+1) n: 0-9998
				Fox example: LW0 = 3X1
Analog input data relay		RW0-55535	DDDDD	RWn: 3X(n+10000)
				n: 0-55535
				Fox example: RW0 =
				3X10000
Data register		LW0-9998	DDDDD	LWn: 4X(n+1) n: 0-9998
				Fox example: LW0 = 4X1
Data register		RW0-55535	DDDDD	RWn: 4X(n+10000)
				n: 0-55535
				Fox example: RW0 =
				4X10000

OMRON

Omron CP1H_CP1L

OMRON CP1H_CP1L series RS232 cable •

HMI	Controller	
2 RX	2 SD	
3 TX	3 RD	
5 GND	9 GND	1 2 2 4 5
	4 RTS	· 1111 ·
	5 CTS	
	2 RX 3 TX	2 RX 2 SD 3 TX 3 RD 5 GND 9 GND 4 RTS

OMRON CP1H_CP11 series (communication module) RS485-2 cable

HMI

Controller



SDA-
RDA-
FG
SDB+
RDB+

R	DA-RO	B+ SL	DA- SD	B+ F	6
					1

OMRON CP1H_CP1L series RS485-4 cable

HMI

Controller



1 RX-	1 SDA-
6 RX+	2 SDB+
5 GND	5 FG
4 TX-	6 RDA-
9 TX+	8 RDB+



OMRON CP1H_CP1L series (communication module) RS485-4 cable



HMI	Controlle
1 RX-	SDA-
6 RX+	SDB+
5 GND	FG
4 TX-	RDA-
9 TX+	RDB+

RDA-I	RDB+	SDA	SDB	+ FI
-1		1		

Device	Bit Address	Word Address	Format	Notes
Work Relay	W_bit 0.0-8191.15		DDDD.DD	
Hold Relay	H_bit 0.0-24576.15		DDDDD.DD	
Data Relay	D_bit 0.0-524288.15		DDDDDD.DD	
Counter Relay	C_bit 0.0-65535.15		DDDDD.DD	
Timer Relay	T_bit 0.0-65535.15		DDDDD.DD	
Auxiliary Relay	A_bit 0.0-15360.15		DDDDD.DD	
Channel I/O	CIO_bit 0.0-98304.15		DDDDD.DD	
Work Register		W_word 0-511	DDD	
Hold Register		H_word 0-1535	DDDD	
Data Register		D_word 0-32767	DDDDD	
Counter Register		C_word 0-4095	DDDD	
Timer Register		T_word 0-4095	DDDD	
Auxiliary Register		A_word 0-959	DDD	
Channel I/O Register		CIO_word 0-6143	DDDD	

Registers supported by OMRON CP1H_CP1L

Panasonic

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Panasonic FP series RS232 cable .



11	Controller	
ex	2 TXD	
TX	3 RXD	
ND	1 GND	



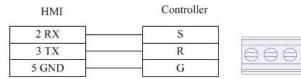
Panasonic FP series CPU terminal RS232 cable



	HMI	Controller
ſ	2 RX	S
Ī	3 TX	R
	5 GND	G

Panasonic FP series communication card RS232 cable.







Panasonic FP2/3 series RS232 cable •

	HMI	Controller
	2 RX	2 TXD
	3 TX	3 RXD
	5 GND	7 GND
		4 RTS
5 4 3 2 1		5 CTS
9876 🔘		8 CD
		9 ER

• Panasonic FP series RS485-2 cable



HMI	Controller	
1 RX-		
6 RX+	+	
5 GND	GND	

Panasonic FP3 series RS485-4 programming port cable

6 RX+
5 GND
4 TX-
9 TX+

HMI	Controller 15pin
1 RX-	9 TXDA
6 RX+	2 TXDB
5 GND	7 GND
4 TX-	10 RXDA
9 TX+	3 RXDB
8	4 RTA+
	5 CTS+
	11 RTS-
	12 CTS-



Panasonic FP series (other modules) RS485-4 cable



HMI	Controller
1 RX-	4 SD-
6 RX+	2 SD+
4 TX-	5 RD-
9 TX+	3 R D+

Registers supported by Panasonic FPO/FPX:

Device	Bit Address	Word Address	Format	Notes
External output node	Y0-9999.F		DDDD.H	
External input node	X0-9999.F		DDDD.H	
Timer bit	T0-9999		DDDD	
Counter bit	C0-9999		DDDD	

Link auxiliary node	L0-9999.F		DDDD.H
	10-3333.1		
Internal auxiliary node	R0-9999.F		DDDD.H
T/C current value		EV0-65535	DDDDD
T/C set value		SV0-9999	DDDD
Data register		DT0-99999	DDDDD
Output register		WY0-32767	DDDDD
Input register		WX0-32767	DDDDD
Internal auxiliary register		WR0-32767	DDDDD
Link data register		LD0-99999	DDDDD
Link register		WL0-32767	DDDDD
File register		FL0-99999	DDDDD

Siemens

1 Siemens S7_200

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Siemens S7-200 series RS232 cable

Siemens serial port programming cable is used to communicate with HMI device.

Siemens S7-200 series RS485-2 cable

HMI

Controller



1 RX-	8 D-
6 RX+	3 D+
5 GND	5 GND

Registers supported by Siemens S7-200

Device	Bit Address	Word Address	Format	Notes
Digital output and Peripheral image register node	Q.B0.0-127.7		DDD.O	
Internal memory bit	M.B0.0-255.7		DDD.O	
Digital input and Peripheral image register node	I.B0.0-127.7		DDD.O	
Special memory bit	SM.B0.0-4399.7		DDDD.O	
Variable memory node	V.B0.0-81919.7		DDDDD.O	
Timer bit	Tim0-255		DDD	
Counter bit	Cnt0-255		DDD	
SCR node	S.B0.0-255.7		DDD.O	
Digital output and Peripheral image register		QW0-14	DD	
Digital output and Peripheral image register (32 bit)		QD0-12	DD	
Digital input and Peripheral image register		IW0-14	DD	
Digital input and Peripheral image register (32 bit)		ID0-12	DD	
Internal memory		MW0-30	DD	

HTP Designer Configuration Software User Manual

Internal memory (32 bit)	 MD0-28	DD	
Analog output	 AQW0-62	DD	
Analog input	 AIW0-62	DD	
SCR	 SW0-30	DD	
SCR (32 bit)	 SD0-28	DD	
Special memory register	 SMW0-548	DDD	
Special memory register (32 bit)	 SMD0-546	DDD	
Variable memory	 VW0-10238	DDDDD	
Variable memory (32 bit)	 VD0-10236	DDDDD	
Timer current value	 Tim0-255	DDD	
Counter current value	 Cnt0-255	DDD	

2 Siemens S7_200 Network

Siemens S7-200 Network Cable

Across connection



HMI	Controller
1 TX+	3 RX+
2 TX-	6 RX-
3 RX+	1 TX+
4 BD4+	4 BD4+
5 BD4-	5 BD4-
6 RX-	2 TX-
7 BD3+	7 BD3+
8 BD3-	8 BD3-



1 Orange White

- 2 Orange
- 3 Green White
- 4 Blue
- 5 Blue White 6 Green
- 7 Brown White
- 8 Brown

Direct connection



.

HMI	Controller
1 TX+	1 RX+
2 TX-	2 RX-
3 RX+	3 TX+
4 BD4+	4 BD4+
5 BD4-	5 BD4-
6 RX-	6 TX-
7 BD3+	7 BD3+
8 BD3-	8 BD3-



- 1 Orange White
- 2 Orange 3 Green White
- 4 Blue
- 5 Blue White
- 6 Green
- 7 Brown White
- 8 Brown

Registers supported by siemens S7-200 Network:

Device	Bit Address	Word Address	Format	Notes
Digital output and Peripheral image register node	Q.B0.0-127.7		DDD.O	
Internal memory bit	M.B0.0-255.7		DDD.O	
Digital input and Peripheral image register node	I.B0.0-127.7		DDD.O	
Variable memory node	V.B0.0-65535.7		DDDDD.O	
Digital output and Peripheral image register		QW0-14	DD	
Digital output and Peripheral image register (32 bit)		QD0-12	DD	

Digital input and Peripheral image register	 IW0-14	DD	
Digital input and Peripheral image register (32 bit)	 ID0-12	DD	
Internal memory	 MW0-30	DD	
Internal memory (32 bit)	 MD0-28	DD	
Variable memory	 VW0-8190	DDDDD	
Variable memory (32 bit)	 VD0-8188	DDDDD	

3 Siemens S7_200 Network Module

Siemens S7-200 Network Module cable

Across connection

•



HMI	Controller
1 TX+	3 RX+
2 TX-	6 RX-
3 RX+	1 TX+
4 BD4+	4 BD4+
5 BD4-	5 BD4-
6 RX-	2 TX-
7 BD3+	7 BD3+
8 BD3-	8 BD3-



1 Orange White 2 Orange

3 Green White

4 Blue 5 Blue White

6 Green

7 Brown White 8 Brown

Direct connection



HMI	Controller
1 TX+	1 RX+
2 TX-	2 RX-
3 RX+	3 TX+
4 BD4+	4 BD4+
5 BD4-	5 BD4-
6 RX-	6 TX-
7 BD3+	7 BD3+
8 BD3-	8 BD3-



1 Orange White 2 Orange 3 Green White 4 Blue 5 Blue White 6 Green 7 Brown White 8 Brown

Registers supported by Siemens S7-200 Network Module

Device	Bit Address	Word Address	Format	Notes
Digital output and Peripheral image register node	Q.B0.0-127.7		DDD.O	
Internal memory bit	M.B0.0-255.7		DDD.O	
Digital input and Peripheral image register node	I.B0.0-127.7		DDD.O	
Variable memory node	V.B0.0-65535.7		DDDDD.O	
Digital output and Peripheral image register		QW0-14	DD	
Digital output and Peripheral image register (32 bit)		QD0-12	DD	
Digital input and Peripheral image register		IW0-14	DD	
Digital input and Peripheral image register (32 bit)		ID0-12	DD	
Internal memory		MW0-30	DD	
Internal memory (32 bit)		MD0-28	DD	
Variable memory		VW0-8190	DDDD	
Variable memory (32 bit)		VD0-8188	DDDD	

Controller

8 D-3 D+ 5 GND

4 Siemens S7_300 MPI

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Siemens S7-300 MPI series RS232 cable

SIEMENS serial port programming cable is used to communicate with HMI device.

Siemens S7-300 MPI series RS485-2 cable

	HMI	
54321	1 RX-	
9876	6 RX+	
	5 GND	

	orted by Sterneris 37			
Device	Bit Address	Word Address	Format	Notes
External output node	Q.B0.0-511.7		DDD.O	
External input node	I.B0.0-511.7		DDD.O	
Internal auxiliary node	M.B0.0-4095.7		DDDD.O	
Data register node	DBn_DBX0.0-9999.7		DDDD.O	The main address
				can be set during
				the hardware
				configuration.
External output register		QW0-126	DDD	
External output register (32 bit)		QD0-124	DDD	
External input register		IW0-126	DDD	
External input register (32 bit)		ID0-124	DDD	
Internal register		MW0-2046	DDDD	
Internal register (32 bit)		MD0-2044	DDDD	
Data register		DBn_DBW0-65534	DDDDD	The main address
				can be set during
				the hardware
				configuration.
Data register (32 bit)		DBn_DBD0-65532	DDDDD	The main address
				can be set during
				the hardware
				configuration.

Registers supported by Siemens S7-300 MPI

5 Siemens S7_300_network

- Siemens S7-300 Network cable
- Across connection

.



HMI	Controlle
1 TX+	3 RX+
2 TX-	6 RX-
3 RX+	1 TX+
4 BD4+	4 BD4+
5 BD4-	5 BD4-
6 RX-	2 TX-
7 BD3+	7 BD3+
8 BD3-	8 BD3-



1 Orange White 2 Orange 3 Green White 4 Blue 5 Blue White

6 Green

7 Brown White

8 Brown

Direct connection



HMI	Controller
1 TX+	1 RX+
2 TX-	2 RX-
3 RX+	3 TX+
4 BD4+	4 BD4+
5 BD4-	5 BD4-
6 RX-	6 TX-
7 BD3+	7 BD3+
8 BD3-	8 BD3-



1 Orange White 2 Orange 3 Green White 4 Blue 5 Blue White 6 Green

7 Brown White 8 Brown

Registers supported by S7-300 Network

Device	Bit Address	Word Address	Format	Notes
		Word Address		NOLES
External output node	Q.B0.0-2047.7		DDDD.O	
External input node	I.B0.0-2047.7		DDDD.O	
Data register node	DBn_DBX0.0-9999.7		DDDD.O	The main address
				can be set during
				the hardware
				configuration.
External output register		QW0-2046	DDDD	
External output register (32 bit)		QD0-2044	DDDD	
External input register		IW0-2046	DDDD	
External input register (32 bit)		ID0-2044	DDDD	
Internal register		MW0-2046	DDDD	
Internal register (32 bit)		MD0-2044	DDDD	
Data register		DBn_DBW0-65534	DDDDD	The main address
				can be set during
				the hardware
				configuration.
Data register (32 bit)		DBn_DBD0-65532	DDDDD	The main address
				can be set during
				the hardware
				configuration.

6 Siemens S7_1200_network

- Siemens S7-1200 Network cable
- Across connection

.



Controller
3 RX+
6 RX-
1 TX+
4 BD4+
5 BD4-
2 TX-
7 BD3+
8 BD3-



1 Orange White 2 Orange 3 Green White

4 Blue 5 Blue White

6 Green

7 Brown White

8 Brown

Direct connection



HMI	Controller
1 TX+	1 RX+
2 TX-	2 RX-
3 RX+	3 TX+
4 BD4+	4 BD4+
5 BD4-	5 BD4-
6 RX-	6 TX-
7 BD3+	7 BD3+
8 BD3-	8 BD3-



1 Orange White 2 Orange 3 Green White 4 Blue 5 Blue White 6 Green 7 Brown White 8 Brown

Registers supported by S7-1200

Device	Bit Address	Word Address	Format	Notes
External output node	Q.B0.0-127.7		DDD.O	
External input node	I.B0.0-127.7		DDD.O	
Internal auxiliary node	M.B0.0-2047.7		DDDD.O	
Data register node	DBn_DBX0.0-6553 5.7		DDDDD.O	The main address can be set during the hardware configuration.
External output register		QW0-126	DDD	
External output register (32 bit)		QD0-124	DDD	
External input register		IW0-126	DDD	
External input register (32 bit)		ID0-124	DDD	
Internal register		MW0-2046	DDDD	
Internal register (32 bit)		MD0-2044	DDDD	
Data register		DBn_DBW0-65534	DDDDD	The main address can be set during the hardware configuration.
Data register (32 bit)		DBn_DBD0-65532	DDDDD	The main address can be set during the hardware configuration.

THINGET

THINGET Controller series RS232 cable



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HMI	Controller
2 RX	5 TXD
3 TX	4 RXD
5 GND	8 GND



THINGET Controller Series RS485-2 cable

	HMI	Controller
5 4 3 2 1	1 RX-	
9876 🔘	6 RX+	+
	5 GND	GND

Registers supported by THINGET Controller:

Device	Bit Address	Word Address	Format	Notes
Status node	SO-99999		DDDDD	
Counter node	C0-99999		DDDDD	
Timer node	T0-99999		DDDDD	
Interal relay node	M0-99999		DDDDD	
Output relay node	Y0.0-303237.7		000000.0	
Input relay node	X0.0-303237.7		000000.0	
FlashROM register		FD0-9999	DDDD	
Data register		D0-9999	DDDD	
Timer		TD0-9999	DDDD	
Counter		CD0-9999	DDDD	

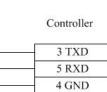
TRIO

1 TRIO _modbus

.

TRIO_modbus series RS232 cables





Controller

1 RX+



TRIO_modbus series RS485-4 cable

HMI

9 TX+

	-	
5432 987	1	0

1 RX-	7 TX-
6 RX+	8 TX+
5 GND	4 GND
4 TX-	2 RX-



Registers supported by TRIO_modbus

Device	Bit Address	Word Address	Format	Notes
System internal/external output node	0X1-65535		DDDDD	
System internal/external input node	1X1-65535		DDDDD	
Analog input data register		3X1-65535	DDDDD	
Data register		4X1-65535	DDDDD	

2 TRIO _modbus_extend

TRIO_modbus_extend series RS232 cable



11	Controller
ex —	3 TXD
X	5 RXD
ND	4 GND



TRIO_modbus_extend series RS485-4 cable

	HMI	Controller	
	1 RX-	7 TX-	
	6 RX+	8 TX+	
5 4 3 2 1	5 GND	4 GND	
9876	4 TX-	2 RX-	
	9 TX+	1 RX+	

Registers supported by TRIO_modbus_extend

Device	Bit Address	Word Address	Format	Notes
System internal/external output node	0X1-65535		DDDDD	
System internal/external input node	1X1-65535		DDDDD	
Analog input data bit	3X_BIT1.0-65535.15		DDDDD.DD	
Data register bit	4X_BIT1.0-65535.15		DDDDD.DD	
Analog input data register		3X1-65535	DDDDD	
Data register		4X1-65535	DDDDD	
Data register		5X1-65535	DDDDD	
Data register		6X1-65535	DDDDD	
Data register		3X-DINV1-65535	DDDDD	
Data register		4X-DINV1-65535	DDDDD	

3 Differences between TRIO _modbus and TRIO _modbus_extend

Many data memory such as analog input data bit, data register bit and data register are added into TRIO_modbus_extend on the base of TRIO_modbus.

Yaskawa

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1 Yaskawa

Yaskawa MP Series SIO (Extension) cable

	HMI	Controller
	2 RX	2 TXD
	3 TX	3 RXD
4 3 2 1	5 GND	7 GND
9876 🔘		5 CTS
		4 RTS

0 11		•	,	
Device	Bit Address	Word Address	Format	Notes
Coil	MB0.0-65534.F		DDDDD.H	
Inputrelay	IBO.O-FFFF.F		нннн.н	
Hold register		MW0-65534	DDDDD	
Input register		IW0-FFFF	нннн	

Registers supported by Yaskawa MP Series SIO (Extension):

2 Yaskawa network device

Yaskawa UDP Slave cable •

Across connection

•



HMI	Controller
1 TX+	3 RX+
2 TX-	6 RX-
3 RX+	1 TX+
4 BD4+	4 BD4+
5 BD4-	5 BD4-
6 RX-	2 TX-
7 BD3+	7 BD3+
8 BD3-	8 BD3-



1 Orange White

2 Orange

3 Green White

4 Blue 5 Blue White

6 Green

7 Brown White

8 Brown

Direct connection

	12345678
1	
T	\leq
	e la

HMI	Controller
1 TX+	1 RX+
2 TX-	2 RX-
3 RX+	3 TX+
4 BD4+	4 BD4+
5 BD4-	5 BD4-
6 RX-	6 TX-
7 BD3+	7 BD3+
8 BD3-	8 BD3-
	2



1 Orange White 2 Orange 3 Green White 4 Blue 5 Blue White

6 Green 7 Brown White

8 Brown

Registers supported by Yaskawa UDP slave:

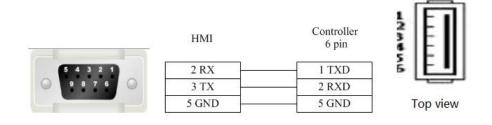
Device	Bit Address	Word Address	Format	Notes
Coil	MB0.0-65534.F		DDDDD.H	
Inputrelay	IBO.O-FFFF.F		нннн.н	
Output relay	QB0.0-FFFF.F		нннн.н	
Hold register		MW0-65534	DDDDD	
Inputregister		IW0-FFFF	нннн	
Output register		QW0-FFFF	нннн	
Hold register		ML0-65534	DDDDD	

Yokogawa

Yokogawa FA-M3 series RS232 cable

Yokogawa serial port programming cable is used to communicate with the HMI device.

Yokogawa FA-M3 series RS232 cable



Yokogawa FA-M3 series RS485-4 cable



Controller	
SDA-	
SDB+	
FG	
RDA-	
RDB+	

Yokogawa FA-M3 series RS4852 cable

HMI

Controller



	SDA-
1 RX-	RDA-
5 GND	FG
6 RX+	SDB+
	RDB+

Registers supported by Yokogawa FA-M3:

Device	Bit Address	Word Address	Format	Notes
Input Relay	X1-65535		DDDDD	
Output Relay	Y1-65535		DDDDD	
Internal Relay	11-65535		DDDDD	
Special Relay	M1-65535		DDDDD	
Link Relay	L1-65535		DDDDD	
Data Register		D_word1-65535	DDDDD	
File Register		B_word1-65535	DDDDD	
Index Register		V_word1-65535	DDDDD	
Link Register		W_word1-65535	DDDDD	
Special Register		Z_Word1-65535	DDDDD	

4 Detailed manual

4.1 File

1 Save Project

Shortcut key: <Ctrl>+<S>. Save the project being edited.

2 Close Project

Close the current project without exiting the software, usually used for switching among projects.

3 Save Project As

Use a new path or new name to save the current project (without deleting the previous project).

4 Project Used Recently

Display the paths of no more than 10 projects opened recently and each one can be directly opened by clicking.

5 Open Project

Shortcut key: <Ctrl>+<O>. It is used to open an existing project other than any project repeatedly.

After the software is opened, any project with the file suffix name "*.fsprj" can be opened by clicking it on the project name.

Remark: if the software is correctly installed, the user can directly open the project by clicking the corresponding file with the postfix *.fsprj in the Windows Explorer.

6 Create New Project

Shortcut key: <Ctrl>+<N>. It is used to create a new project.

After the project is correctly created, a file folder with the same name will be created to save the project files related.

Category(C):	
HMI Project	
	Project name
Name/Nit	Project name Project path
Name(N): Location(L): E:\project\FS	/

Please refer to the "First Use" for the following settings.

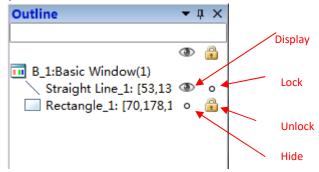
7 Exit

Shortcut key: <Alt>+<X>. It is used to close the project and exit the software.

4.2 View

1 Outline

Open/close the outline view, and list all available components on the current window. One or all components can be quickly hidden or locked.



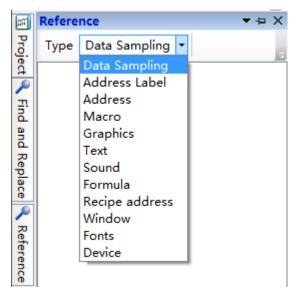
2 Project

Open/close project view which the tree structure facilitates the operation such as "HMI setting", "window", "communication connection", "system setting", "library", "macro", and "prescription", and so on. Details can be seen in <u>Detailed manual /Setup</u>.

3 Reference

Open/close the Reference view. The reference information is collected and displayed here.

The information used by the current project such as address, macro and prescription can be viewed quickly.



4 Current language

Select the current displaying language and the checked language is the current displaying language.

Note: the language refers to the content edited well by the current project other than translated by the system automatically!

5 Current Status

The checked Status is the current status. It is used to display the components displaying effect quickly in different status.

6 Find and Replace

Open/close the Find and Replace view, used to search or replace any word address, bit address or text used in the current project.

Find and Replace		▼ ⇔ X
🔘 Bit Address 🔘 V	Vord Address	Text
Search Range 🔽 Text Library 🛛	Label 👿 Co	mponent De:
Search settings		
Case-sensitive	Full Text M	atching
Search Text:		Search
Replace Text:	Replace	Replace All
Position to check und	· ·	stion by double
Serial No. Location	Content	

7 Restore to the Default View

Restore to the Default View– readjust the view arrangement of the software and restore the default arrangement.

8 Window

Open/close the window view and use the tree structure facilitates modifying the Power-on Screen, Public Window, Basic Window, Keyboard Window and System Window.

1 Power-on Screen

It is the window displayed at startup. Any picture expected to be used by the user, such as the company Logo, can be displayed. But it will disappear after a while before entering the configuration screen. The picture formats supported are BMP, JPG, GIF and PNG.

2 Common window

The common window always exists and all common window attributes are effective no matter the configuration screen is on a basic window or a pop-up window. The general effective components such as t macro and timer can be set in this window.

3 Drop-down Window

The Drop-down Window can be operated to edit the content of the drop down list when the configuration screen is running. But this function is only effective for a capacitor screen.

4 Basic Window

The attribute of basic window can be viewed or modified here. The window of number 29001~29006 is provided to log on with the user's authority for the user. It can be directly used in the software.

(5) Create Basic Window

A new basic window can be created by clicking "Create Basic Window" in the software picture. The window name, size and other attributes need to be set. The new basic window can also be created in the default attributes.

6 Keyboard Window

The keyboard window attributes can be viewed or modified after clicking here. And a customized keyboard can be created which used in the software.

7 System window

The system window can be viewed (it can also be modified under direction) after clicking here, for example, the system window of "communication information".

9 Output

Open/close the output view. The compiling information can be output and displayed here.

10 Error

Open/close the error view. All errors collected during compiling are recorded here.

4.3 Edit

1 Cancel

Cancel the operation and go back to the previous one.

2 Recovery

Recover the last action canceled.

3 Find/Replace

Set the designated searching range and search the bit address/ word address/ text or replace with a new bit address/ word address/ text.

4 Cut

Cut away the selected component and temporarily save it on the clipboard.

5 Copy

Copy the selected component and temporarily save it on the clipboard

6 Multi-Copy

Set the copy range, quantity, interval and direction, and make the addresses change in any rule to obtain more components (many components can be copies and pasted integrally, and the addresses will change orderly).

7 Paste

Paste the content of the clipboard onto the project.

8 Delete

Delete the selected components from the project.

9 Inching

Move left/right/up/down for one unit.

10 Alignment

It is effective only when many components are selected. It is used to align these components on the left, on the vertical middle line, on the right, on the up, on the horizontal middle line, or on the bottom.

11 Size

It is effective only when many components are selected. It is used to set these components to the same width, height or same size.

12 Layer

It is effective only when the component is selected. It is used to set the component to the top, to the bottom, to the previous layer, to the next layer, or set many components in the same horizontal space or in the same vertical space.

13 Same Color

It is effective only when many components are selected. It is used to set all components in the same color.

14 Group

Integrate many components.

15 Ungroup

Make the components of group to restore into individuals.

16 Center horizontally

Center all selected components horizontally in the window.

17 Center vertically

Center all selected components vertically in the window.

18 Lock

Lock the position of the component and stop it from size adjusting or position adjusting.

19 Unlock

Unlock a locked component and restore it to the state that its size or position can be adjusted.

4.4 Window

1 Create New Window

Create a new window and allow the user to set the window number, width, height and any other basic attribute or function.

2 Delete Window

Delete the selected window

3 Current Window Properties

Set the current window attributes and allow the user to set he window number, width, height and any other basic attribute or function.

1 Basic

asic	Background and Border	Action and Function	Timer	Timing Data Transmission
Winde	ow Description: Basic Wind	low		Print Page
Winde	ow No. (By Type):		1 🗘	Window number (used for window switching)1
Nidth	n: 1024 ♀ Height:	600 🗘		Window Type: Base Window
Ninde	ow Orientation: 🖲 Horizon	tal 🔘 Vertical		
P	opup Window			Safety
				User Level: 0:
Ove	erlapped Window Bottom Layer: None		•	Window Effect
	Middle Layer None		•	E Fade in
	Top Layer: None		•	Tade out
	And the second se			

2 Background and Border

Modify Window		
Basic Background and Border Action and Function	n Timer Timing Data Transmission	
Pure Color: Select Color Select Color Pattern Filling:	Image:	
Gradient Filling:		
Border Width: 0 🗘 Border Color: 📕 Border Color 👻 🖉		
Window Transparency: 0%(Opacity) •		
Help		OK Cancel

3 Action and Function

The action to open or close a window can be used to activate a bit, a word, a macro command or switch among windows.

Action/Condition	Execute	Operation Target	
Slide to the left			
Slide to the right	Add Action And Funct	ion 🗾	_
Window Initialize	Action Or Condition	Window I 🔹	
	Execute		
	Bit Settings		
		Set On Set Off	
	Word Settings		Add
		Set Constant 0 🐥	
			Move Up
	Execute Macro	Macro Code Edit	
	Switch Page	Next Window +	Move Down
		OK	Delete
			Edit

(4) Timer

It is used to set an executing cycle. You can execute a macro or directly set a word or a bit according to the trigger conditions.

Basic Background and Border Action and Function Serial No. Trigger Condition Stop Condition Timir		1
igger and Stop) Timer Function)		×-
iming and Execution Execution Period: 10 🗭 x 0.1S		
rigger Condition: Bit Word Condition Trigger when the window is open Trigger Address: Trigger Address: Trigger Mode: OFF -> ON Auto Reset	Condition for stop Timer will stop when the window closed. If need to end, please choose the end condition. Stop when specified count value reached Condition Judgement	Add Delete Clear Edit
		OK Cancel

Serial No. Trigger Condition Stop Condition Timir	ng Cycle Timing Function	
r	-7- <mark>-</mark> 7-	
gger and Stop () (Timer Function)) ming and Execution xecution Period: 10 🔹 x 0.1S Delay		
igger Condition: 9 Bit © Word © Condition	Condition for stop Timer will stop when the window closed.	Add
Trigger when the window is open Trigger when the window is closed	If need to end, please choose the end condition. Stop when specified count value reached Condition Judgement	Clear
rigger Address: 🛛 🗐 🧿 Trigger Mode: OFF -> ON 🔹 🗌 Auto Reset		Edit
		OK Cancel

(5) Timer Data Transmission

It is used to transmit words or bits in batches. And an action can be set before or after write-in.

Serial No. Trigger Type Repeating Per Transmission Item	Transmission I Source Addres Target Addres DataType Word(Bit)Nc	
rigger and Stop Data Transmission Notification Timing and Execution Execution Period: 10 🗘 x 0.15 Delay		
Trigger Condition: Bit Word Condition Trigger when the window is open Trigger when the window is closed	Condition for stop Timer will stop when the window closed. If need to end, please choose the end condition. Stop when specified count value reached Condition Judgement	Add Items Delete Clear Items Edit
Help	OK Cancel	OK Cance

	and the second second second	
Serial No. Trigger Type Repeating Per Tran	ismission I Source Addre: Target Addres DataType Word(Bit)Nc	
ransmission Item	8 💌	
ger and Stop Data Transmission Notification		
nsfer Direction: One Way 💌		
ta Transmission		
Data Type: 🔘 Word 🔘 Bit 🛛 Transmission word:	s Constant • 1	
		Add Items
Source Address	Target Address	
🔲 Use Address Tag	Use Address Tag	Delete
Deivce: LOCAL:[Local Register]	Deivce: LOCAL:[Local Register] -	
		Clear Items
		Edit
Address Type: LW 🔹	Address Type: LW	
Address: 0 System Register	Address: 0 System Register	
Format(Range) DDDDDD(0 Occupy: 1 + Word	Format(Range) DDDDDD(0 Occupy: 1 + Word	
Address Index	Address Index	
EL POULOS INCO		

	Basic	Background and B	order Ac	tion and Function	Timer	Timing Data 1	Transmission	n			
	Serial	No. Trigger Type	Repeating	g Per Transmissio	on I Sou	rce Addre: Ta	rget Addres	DataType	Word(Bit)No		
Transmi	ssion Item	D.							? <mark>.</mark>		
		ata Transmission	Notificati	on							
909401000	n Settings	_									
Before \	Writing A	fter Writing									
Noti	fy Bit Add	ress:									
											Add Items
Noti	fy Byte Ad	dress:									
											Delete
										(Clear Items
Trigg	ger Macro	e									
											Edít
										OK	Cancel

4 Edit Starting LOGO Window

The user can set the properties of the Power-on Screen window (double click the window after open the Power-on Screen)

5 Show the Public Window

Display/hide the Public Window and facilitate the user to view the effect of the Public Window displayed/hidden in the Basic Window.

6 Show the Lower Layer Window

Display/hide the lower layer window (the three lower layer windows are effective at the same time) and facilitate the user to view the effect of lower layer window displayed/hidden in the basic window.

7 Jump to the Target Window

When the selected component is integrated with a paging function, it is used to jump to the target screen window.

8 Show Grid

Display the grid and facilitate the user to view the position of components.

9 Grid alignment

Facilitate components aligning by the grid alignment function.

10 Align to alignment line

Activate the function of aligning the components in a line.

11 Grid Setting

Pop up the Grid Setting window. The user can customize the grid color and space here.

Grid Setting
Show Grid
Grid Color Set Grid Point Co V Select the reverse color of current background
Interval Width: 10 🔷 Height: 10 🗘
OK Cancel

12 Window Zoom

Resize the window in a proportion including 50%, 75%, 100%, 125%, 150%, 175%, or 200%.

4.5 Drawing

4.5.1 Straight Line

A	rbitrarilyLine 🔘 H	lorizontal 🔘 V	/ertical					
🔽 Li	ne		Position					
	Line Color 💌 🍠		Fixed Point:	X :	130 🗘	Y :	131	\$
L	e Width	 •]	Locked	Width:	154 🗘	Height:	1	*
Line	е Туре		Rotation Fix Point		ç—0			
A	rrow					_		
			RotationAng	e 0	NonRo	tation		

1 General

• Arbitrarily Line

The user can draw a straight line at will.

Horizontal

Rotate the straight line drawn by the user to the horizontal position around the center point.

Vertical

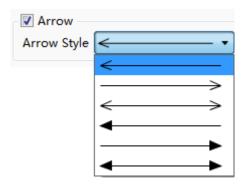
Rotate the straight line drawn by the user to the vertical position around the center point.

Line

See Detailed manual/General functions/Drawing/Bordersettings.

Arrow

The user can set the arrow pattern in the combo box, see the figure below.



Position

See <u>Detailed manual/General functions/Drawing/Position</u>.

Rotate

See <u>Detailed manual/General functions/Drawing/Rotation</u>.

(2) Dynamic Graphics

See <u>Detailed manual/General functions/Drawing/Dynamic Graphics</u> for the details.

③ Indicator Light

See <u>Detailed manual/Component/Indicator Light</u> for the details.

4 Display

See <u>Detailed manual/General functions/Drawing/Display</u> for the details.

4.5.2 Fold Line

ieneral	Dynamic Graphics	Indicator Light	Display					
- 🔽 Li	ne		Position					
	Line Color 💌 🍠		Fixed Point:	X :	196 🗘	Y :	403	\$
	Width		Locked	Width:	234 🗘	Height:	107	\$
Line	Туре		Rotation					
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	row				• •	ø		
					<u> </u>	©		
		RotationAngle	e 0 🍨	NonRot	tation			

Click the left key to fix the fold line point in drawing. And click the right key to finish drawing. See details in: <u>Detailed Manual/ Drawing/ Straight Line</u>.

4.5.3 Rectangle

General	Dynamic Graphics	Indicator Light	Display						
Rec	tangle 💿 Squar	e							
Bo	order			Position					
	Line Color 💌 🗾			Fixed Point:	X :	132 🗘	Y :	200	*
Line	Width			V Locked	Width:	125 🗘	Height:	45	*
Line	Туре			Rotation					
				Fix Point		<u>о</u>	—		
Ch	amfer					¢ ©	Ó		
- 🔲 Ch	amfer								
Ch	amfer			RotationAngle	0	O O NonRa	tation		
- 🔲 Ch	amfer			RotationAngle	0	O O	tation		
				RotationAngle	0	O O	tation		
Ch				RotationAngle	0	O O	tation		
Fill				RotationAngle	0	O O	tation		
Fill				RotationAngle	0	O NonRo	tation		
Fill				RotationAngle	0	O O	tation		

1 General

Rectangle ۲

A rectangle is set to be drawn by the user.

Square

Make the rectangle width equal to its length, and thus it is set into a square.

Border •

See <u>Detailed manual/General functions/Drawing/Border settings</u>.

Chamfer •

After it is checked, edges of the rectangle drawn by the user can be chamfered in Line type (as shown in Fig. a) or in Fillet type (as shown in Fig. b). The maximum chamfering length cannot be larger than 1/2 of the shortest side length.

	Chamfer						
	Chamfer Type Line Cutting Angle 0						
a.							
	Line						
	Chamfer						
L	Chamfer Type Line Cutting Angle 0						
b.							
	Fillet						
 Position 							
	General functions/Drawing/Position.						
Rotate							
 Fill 	See <u>Detailed manual/General functions/Drawing/Rotation</u> .						
	General functions/Drawing/Filling settings.						
Fill							
	ound Color 👻 Fill Type SolidColor 🔹						
 Shadow Effect 							
See Detailed manual/	General functions/Drawing/Shadow Effect.						

2 Dynamic Graphics

See <u>Detailed manual/General functions/Drawing/Dynamic Graphics</u> for the details.

3 Indicator Light

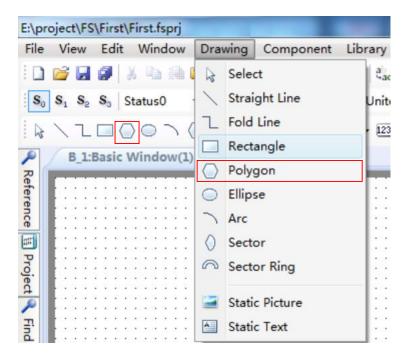
See <u>Detailed manual/Component/Indicator Light</u> for the details.

(4) Display

See <u>Detailed manual/General functions/Drawing/Display</u> for the details.

4.5.4 Polygon

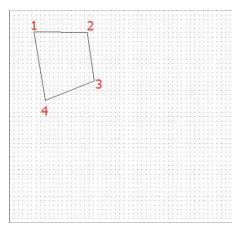
Draw a polygon by click the polygon tool. You can find the polygon tool in the shortcut tool bar, the shortcut menu and the pull-down menu.





*	Paste Ctrl+V Select All Ctrl+A		
	Add Vector Graphics	$\langle \rangle$	Straight Line
	Add Components	1	Fold Line
	Grid		Rectangle
	Grid	\bigcirc	Polygon
	Window Properties	\bigcirc	Ellipse
		\sim	Arc
		0	Sector
· · ·		6	Sector Ring
			Static Picture
· · · · · ·	· · · · · · · · · · · · · · · · · · ·	A	Static Text

A side will be added every time when the left key is clicked. After all sides are obtained, a polygon can be obtained by clicking the left key and then clicking the right key.

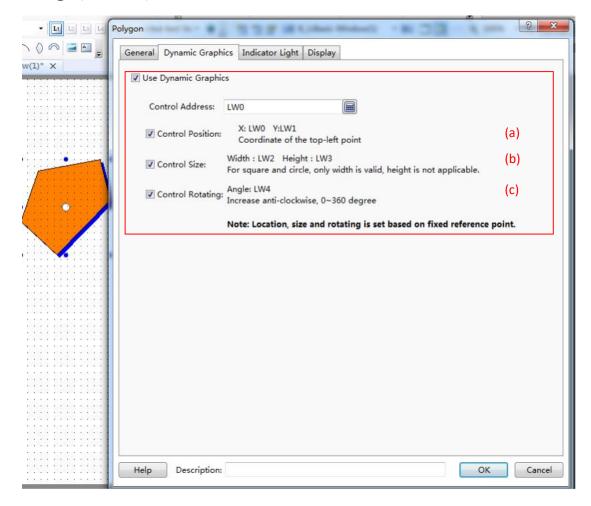


1 General

tus0 • Li Li Li Li Polygon		(And Minkows) > Bit [3]	2 X
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Line Width	•		neight 144 V
Line Type	· · ·	Rotation	
		Fix Point	°
		0	• •
		6	00
		RotationAngle 0 🔶 NonRo	otation
. Fill		(b)	
Bac	kground Color 💌 📝 🛛 Fill T	ype SolidColor •	
▼ Shadow	Effect		(c)
	ShadowColor 👻 🍠	Shadow Excursion X	4 ♣ Y 4 ♣
Color:	snadowcolor 2	Shadow Excursion X	4 v 1 4 v
Help	Description:		OK Cancel
Tiep			Carler

(a)Frame line pattern and frame line width (b)Polygon filling color (c)Polygon shadow effect

Please see details for the using method of polygon drawing.



(2) Dynamic Graphics

(a) Position control (b) Size control (c) Rotation control

Please see <u>Detailed manual/General functions/Drawing/Dynamic Graphics</u> for the details.

50 · LI LI LI LI	Polygon and a second	8 ×
$\neg \land \land \land \blacksquare \blacksquare$	General Dynamic Graphics Indicator Light Display	
low(1)* X	Vse As Bit Light	
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	🗹 Change Color: 🗾 Stroke Color 👻 🌌	(a)
	✓ Flick: Frequency: 1 → X 0.1 Second	(b)
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••••••		
1111111111111111		
11111111111111111		
	Help Description:	OK Cancel

③ Indicator Light

(a) Modify the frame color (b) Control the frequency of flickering (c) Modify the filling color

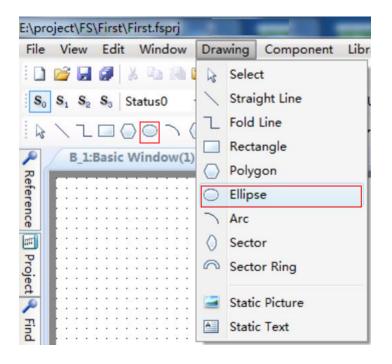
See <u>Detailed manual/Component/Indicator Light</u> for the details.

(4) Display

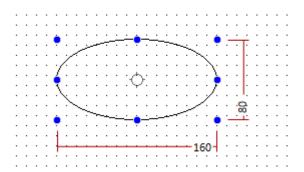
See <u>Detailed manual/General functions/Drawing/Display</u> for the details.

4.5.5 Ellipse

Click the ellipse icon on the tool bar by the left key, or select "Ellipse" command from the menu of Drawing.



Click and hold the editing area in the window, and drag the mouse to modify the ellipse size and shape.

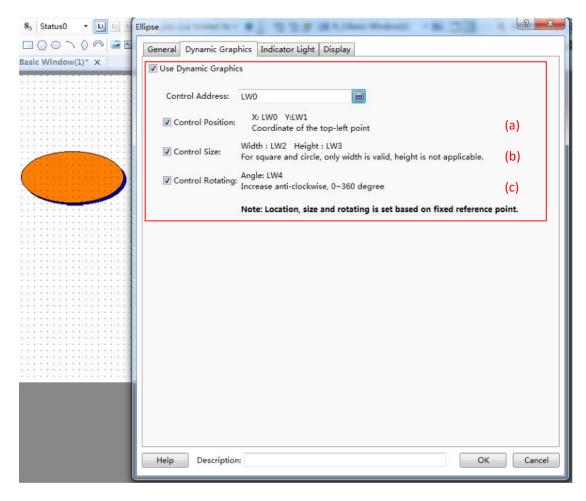


1 General

8. Status0 • 🖪 🗠 🛛	Ellipse 🥄 💌
	General Dynamic Graphics Indicator Light Display
:Basic Window(1)* ×	Ellipse Circle
	Border Position
	Line Width Locked Width: 160 Height: 80
	Line Type Rotation
	Fix Point
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	RotationAngle 0 🗢 NonRotation
	Rotationinge V V
	Background Color V Fill Type SolidColor V
	(b)
	(c)
	Shadow Effect
	Color: ShadowColor Shadow Excursion X 4 🗘 Y 4 💭
	Help Description: OK Cancel

(a) Ellipse border color, width and pattern (b) Ellipse filling color (c) Ellipse shadow effect.

(2) Dynamic Graphics



(a) Position control (b) Size control (c) Rotation control

See <u>Detailed manual/General functions/Drawing/Dynamic Graphics</u> for the details.

s Status0 • Li Li Li E		? ×
	General Dynamic Graphics Indicator Light Display	
:Basic Window(1)* X	💟 Use As Bit Light	
	Control Address: LBO	
	When The Address Is On:	
	🕼 Change Color: 📰 Stroke Color 🔹 📝	(a)
	✓ Flick: Frequency: 1 X 0.1 Second	(b)
	I Fil	
	Background Color V Fill Type SolidColor V	(c)
	Help Description: OK	Cancel
		Cancel

③ Indicator Light

(a) Modify the frame color (b) Control flickering frequency (c) Modify the filling color

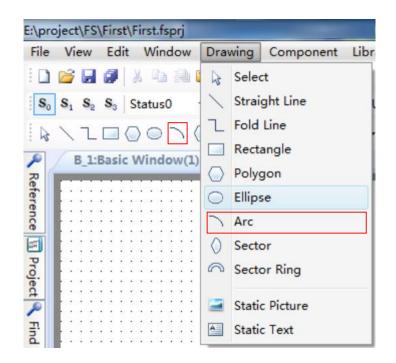
See<u>Detailed manual/Component/Indicator Light</u> for the details.

(4) Display

See <u>Detailed manual/General functions/Drawing/ Display</u> for the details.

4.5.6 Arc

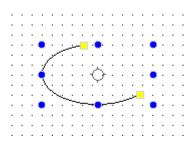
An arc can be drawn in a designated area. The arc component command can be found on the tool bar or from the menu of Drawing.



Select the arc component, designate any area to draw, and double click to set the arc properties.

Arc								? ×
General	Dynamic Graphics	Indicator Light	Display					
	ne Line Color 🔹 📝			Position Fixed Point:	X : Width:	169 \$ 111 \$	Y : Height:	200 \$ 96 \$
Line	Туре			Rotation Fix Point		0 —0		
Angle		End Angle 1	80 🔹	RotationAngle	. 0	NonRot	ation	
Help	Description:						OK	Cancel

An arc can be got by setting the properties such as line color, width, type, starting angle, end angle, position and rotation. It can be freely drawn by dragging the yellow and blue areas.



4.5.7 Sector

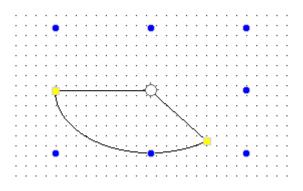
A sector can be drawn in a designated area. The sector component command can be found on the tool bar or from the menu of Drawing.

	Drav	wing	Component	Library	Macro	o Red	tipe	Setup	Tools	; Helj	р
C	$\overline{\mathbf{b}}$	Sele	ct	ab Seac				lē 4	4 4 T	-(lo- †[]	001 4
	\mathbf{i}	Strai	ght Line	Unite	ed Sta •	۹.	1	1 🙆	× 🔄 E	3_1:Bas	ic Wir
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	6	Secto	or Ring		· · · ·						
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	A	Stati	c Text		· · · · ·	· · · · ·	· · · · ·	· · · · ·	• • • • •	· · · ·	· · · · ·

Select the sector component, designate any area to draw, and double click to set the sector properties.

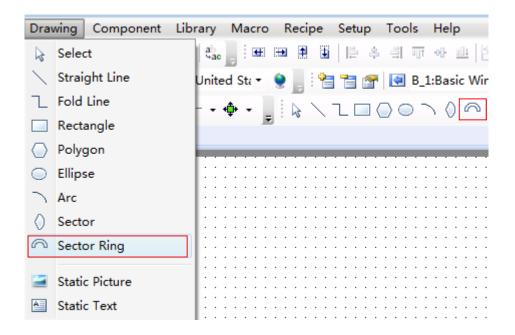
16-1\project-fe\1\1	Sector	-?- -
dow Drawing Co		
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0 • LI LI LI	✓ Border	Position
• 🕗 • 📰 • 🗠 •	Line Color 👻 🍠	Fixed Point: X: 170 C Y: 195 C
ow(l)* ×	Line Width	Locked Width: 100 C Height: 125 C
	Line Type	Rotation Fix Point O-O
	Angle	
	Starting Angle 0 🖉 End Angle 180 💌	6
••::•		RotationAngle 0 💌 NonRotation
	₹ Fill	
	Background Color Fill Type	SolidColor •
* * * * * * * * * * * * * *	Shadow Effect	
	Color: ShadowColor Shad	ow Excursion X 4 🖨 Y 4 🛋
ut	Help Description:	OK. Cancel

A sector can be got by setting the properties such as line color, width, type, starting angle, end angle, position, rotation, fill color, fill type and shadow effect. It can be freely drawn by dragging the yellow and blue areas.



4.5.8 Sector Ring

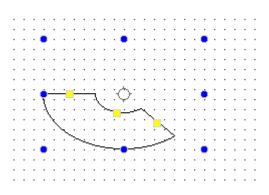
A sector ring can be drawn in a designated area. The sector ring component command can be found on the tool bar or from the menu of Drawing.



Select the sector ring component, designate any area to draw, and double click to set the sector ring properties.

\project-fe\1\1.fsprj	Sector Ring	7
Drawing Component		
📇 🗙 🍠 Undo 🕶 🔍 Re	General Dynamic Graphics Indicator Light Display	
• L1 L2 L3 L4 1-Eng	✓ Border	Position
	Line Color V	Fixed Point: X : 208 🗘 Y : 174 🗘
) • 📰 • 🖄 • 📾 • 📰		
L)* ×	Line Width	Locked Width: 137 C Height: 109 C
	Line Type	Rotation
		Fix Point O-O
	Sector Ring	
	Inside and Outside Ring Scale (%) : 50 🗢	Ĭ Ő Ĭ
		0-0-0
	Start Angle 0 🐥 End Angle 180 🖨	RotationAngle 0 🔷 NonRotation
•••••••••••••••••		
	V Fill	
	Background Color 🕶 📝 Fill Type Soli	idColor 🔻
	Shadow Effect	
	Color: Shadow Color • Shadow Exc	cursion X 4 🗙 Y 4
	Sind of Color	
	Help Description:	OK Cancel
		Cancer

A sector ring can be got by setting the properties such as line color, line width, line type, starting angle, end angle, position, rotation, fill color, fill type and shadow effect. It can be freely drawn by dragging the yellow and blue areas.



4.5.9 Static Picture

In this software, the "Static Picture" function will be used frequently. This function can make the whole project more clear and beautiful. The static picture command can be found from the shortcut tool bar or the pull-down menu of Drawing.

Library Drawing Component Macro Recipe Setup Tools Help Select | 🖹 후 릐 패 애 🏨 🔛 🔛 a⊳ ≌ac + + ÷ Straight Line 늘 🚰 🚺 B_1:Basic Window(1) United Sta 🕶 Fold Line 2 A 🕅 Rectangle Polygon Ellipse \bigcirc Arc Sector ()Sector Ring Static Picture Static Text A

HTP Designer Configuration Software User Manual

After the static picture component is selected, drag by the left key of the mouse, and then the corresponding properties window will pop up.

File	File View Edit Window Drawing Static Picture						
ID	🞯 🔲 🖉 🗼 🖏 🕮 🙈 🗙 🔊						
1		General 🬖 Dynamic Gra	phics Display				
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E MHO	- 💡 - 🖾 - 🔛 - 🕗 - 🏢 - 😰	Position			Rotation		
		Fixed Point: X :	77 🗘 Y :	141 🗘	Fix Point O-O		
-	B_1:Basic Window(1)* X	Fixed Point: A :	// • • • •	141 🗸			
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bu		Import from File	Import from Lib.)			
an	•••••••••••••••••••••••••••••••••••••••						
Project 🔍 Find and Replace 🔍 Reference		Image Preview			Scaling		
ep					Lock Aspect Ratio		
lace	••••••••••••••••••••••••••••••••••••••						
9					Use original size		
70							
efe	• • • • • • • • • • • • • • • • • • • •				-		
ren	121				Transparent Color		
ce	1				Use PNG image transparent channel		
					Use Designated Color		
		Shadow Effect					
		Liele Deserietien			OK Cancel		
		Help Description:			OK Cancel		

Local picture in the computer or in the software picture library can be imported by clicking the "Import from File" button or the "Import from Lib" button. And the picture will be put into the window by clicking the "OK" button.

	atic Picture	x
	General Dynamic Graphics Display	
S₀ S₁ S₂ S₀ Status0 • 🖬 🖬	Position Rotation	
B_1:Basic Window(1)* X	Fixed Point: X: 77 V: 141	
Ojert A	Locked Width: 131 C Height: 109 C RotationAngle 0 NonRotation	
Find	Import from File Import from Lib.	
E Project Find and Replace	Image Preview Scaling Lock Aspect Ratio Use original size Transparent Color Use PNG image transparent channel Use Designated Color	
	Shadow Effect	
	Help Description: OK Can	icel

The static picture position can be modified. You can change the position by manually dragging or by setting the coordinates in the static picture properties window. The static picture size can be modified, too.

File View Edit Window Drawing St	atic Picture	? 💌
🗄 🗋 🥁 🛃 🖉 🐰 🛍 🕮 📉 🗡 🕤	General Dynamic Graphics Display	
S. S. S. S. Status0 - L	General Dynamic Graphics Display	
🞬 • 💡 • 123 • 🔛 • 🕖 • 🏢 • 🖉	Position	Rotation
	Fixed Point: X: 77 \$ Y: 141 \$	Fix Point O-O
B_1:Basic Window(1)* X	11xed Point: X. 7/ - 1. 141 -	
Project	□ Locked Width: 131 🗘 Height: 109 🗘	6
E Project	Import from File Import from Lib.	RotationAngle 0 💭 NonRotation
and the second se	Image Preview	Scaling
		Lock Aspect Ratio
		Use original size
Re OLA	1 1	
ere		Transparent Color
1311		Use PNG image transparent channel
		Use Designated Color
		1
	Shadow Effect	
	Shadow Effect	
	Help Description:	OK Cancel

The static picture size and position can be fixed if the "Locked" is checked. And the static picture can be rotated around a fixed point. The fixed point and rotation angle can be set. The picture can be manually rotated (in any angle) after the fixing angle is set.

E:\2015-2016-1\project-fe\1\1.fsprj		
File View Edit Window Drawing	Static Picture	
	General Dynamic Graphics Display	
S₀ S₁ S₂ S₀ Status0 - [] S₀ S₂ S₁ S₂ S₀ Status0 - [] S₀ S₂ S₁ S₂ S₀ Status0 - [] S₀ S₂ S₂ S₀ Status0 - [] S₀ S₂		Rotation
B_1:Basic Window(1)* X	Fixed Point: X : 12 ⁺ Y : 196 ⁺	
oject	Vecked Width: 131 Cecked Height: 109 Cecked	RotationAngle 15 😴 NonRotation
Find	Import from File Import from Lib.	
E Project P Find and Replace Reference	Image Preview	Scaling Lock Aspect Ratio Use original size Transparent Color Use PNG image transparent channel Use Designated Color
	- 🔲 Shadow Effect	
	Help Description:	OK Cancel

The static picture size can be set in the properties window by the Scaling function. It can be set either by checking "Lock Aspect Ratio" (the fixed horizontal/vertical ratio) or by checking "Use original size" (keeping the original size).

ieneral	Dynamic Graph	nics Display		
Positic	on			Rotation
Fixed	Point: X :	12 🗘	Y: 196 🗘	Fix Point
🔽 Los	cked Width:	131 Û H	eight: 109 🗘	
Imp	ort from File	Import fr	om Lib.	RotationAngle 15 😴 NonRotation
Image	Preview	The		Scaling Lock Aspect Ratio Use original size
		N		Transparent Color Use PNG image transparent channel Use Designated Color
Sha	adow Effect	X		Use PNG image transparent channel

The picture effect can be beautified by the Shadow Effect function so that it can be differentiated from the background.

ieneral	Dynamic Graph	ics Disp	lay		
Positio	on				Rotation
Fixed	Point: X :	116 🗘	Υ:	220 🗘	Fix Point
Loo	cked Width:	125 🗘	Height:	89 🗘	
Imp	oort from File	Impo	rt from Lib		RotationAngle 15 😴 NonRotation
mage	Preview				Scaling
	1.	N	7		Lock Aspect Ratio Use original size Transparent Color Use PNG image transparent channel Use Designated Color

The static picture can be set to display only when the corresponding conditions are satisfied. The user can choose that the static picture is displayed all the time or displayed in conditions by setting the Display properties. The conditional display type includes Level User, Privilege User and Logic Control.

Level User: The static picture will be displayed only in the corresponding user level. It can be activated by checking it.

Static Picture	? X
General Dynamic Graphics Display Visibility Control Image: Control state	
Image: Win Level: 0: Image: Win Level: Image: Win Level: <th></th>	
Help Description: OK	Cancel

Privilege User: The static picture visibility control needs an authority. The authority system

settings dialog can be opened by clicking the button "[...]".

tic Picture	System Se	ettings					-8-
General Dynamic Graphics Display 🧿	Glob	al Settings	Extended Settings	Laguange Settings	Favorite Font Tem	plates	User Leve
Visibility Control	Use	r Privilege	Task Schedule	Data Sampling	PLC Control	Alarm	And Event
Always Display	No.	User Nam			Permission		
Conditional Display	1	Admin	888888	10	16:Admin		
🔲 Level User							
✓ Privilege User Privilege: 0:Select User ▼							
Logic Control							
Help Description:							
Help Description:							52
Help Description:					Delete	Add	Modif

Logic Control: The static picture visibility can be controlled by the address conditions. The conditions include bit control (address ON and OFF) and word control (word address value conditions).

	Display	
Visibility Control		
Always Display		
Conditional Display		
Level User		
Privilege User		Condition Setting
✓ Logic Control		Module: O Bit Register O Word Register
Condition		Address:
> 1		Condition:
		Read Value > A(1) None
		Read Value > + A(1) None +
Add Modify	Delete	
Add Modify	Delete	A Constant • 1
		ОК Салсе

General Dynamic Graphics Display 🧿	
Visibility Control Always Display Conditional Display Level User Privilege User Logic Control	Condition Setting Module: O Bit Register
Condition	Address:
Add Modify Delete	Read Value > ▼ A(1) None ▼ A Constant ▼ 1 ▼ OK Cancel

The static picture can be converted into a dynamic one by logic control. Static pictures can be quickly switched by picture stacking and the control address.

Static Picture
General Dynamic Graphics 🕖 Display 🕖
Use Dynamic Graphics
Control Address:
Control Position:
Control Size:
Control Rotating:
Note: Location, size and rotating is set based on fixed reference point.
Help Description: OK Cancel

When the control address is fixed, the position, size and rotation can be controlled. E.g.: when there are many sector pictures, they can be set to display rotating effect by setting the Control Rotating.

Static Pi	cture		8
General	Dynamic Graphi	cs 🥥 Display 🧿	
🔽 Use	Dynamic Graphic	5	
Control Address:			
	Control Position:	X: Y: Coordinate of the top-left point	
	Control Size:	Width : Height : For square and circle, only width is valid, height is not applicable.	
	Control Rotating:	Angle: Increase anti-clockwise, 0~360 degree	
		Note: Location, size and rotating is set based on fixed reference	e point.
	4		
Help	Description:	OK	Cancel

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4.5.10 Static Text

When editing in the software, a lot of texts will be used for marking, displaying and describing, and thus the project edited can be easy to understand. The Static Text command can be found from the shortcut tool bar or the menu of Drawing.

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Dra	wing Compo	nent Library Macro Recipe Setup Tools Help
B	Select	🔹 🛃 😳 🗄 🖽 🖽 🗷 🗄 📄 📮 속 🗐 📅 💀 些 🔛 🗊 🔝 🥞
$\langle \ \rangle$	Straight Line	United Sta 👻 🍨 📑 🚰 🎦 🚰 🗷 B_1:Basic Window(1)
L	Fold Line	- • • •
	Rectangle	
\bigcirc	Polygon	
\bigcirc	Ellipse	
	Arc	
\bigcirc	Sector	
6	Sector Ring	
-		
-	Static Picture	
A	Static Text	

When click the Static Text command, the properties dialog will pop up. The content of the static text to be displayed can be written into the Tag Contents. The font, size, color and alignment mode can be set here.

ic Text	2
General Display	
□ Language Independent Languages: 1-English (United S ▼) O Use Text Library Text Library	Position Fixed Point: X : 0 ♀ Y : 0 ♀ □ Locked Width: 50 ♀ Height: 50 ♀
Ose Labels	Marquee
Tag Contents	
Copy Current Text to All Languages Import from Favorite Font Templates.(I) Vector Font @ Graphic Font Font: Microsoft Sans Serif • Size: 16 • B I • I Multi-line Alignment:	Set label position by language state separately. Left Right: Top Bottom:
Microsoft Sans Serif Copy Current Properties to All Languages	
Copy current Properties to All Languages	
Help Description:	OK Cance

These properties such as the current text font, size, color and the alignment mode can be copied to make future texts uniform.

tic Text	8
General Display	
□ Language Independent Languages: 1-English (United S ▼) O Use Text Library Text Library	Position Fixed Point: X : 0 \$ Y : 0 \$ □ Locked Width: 50 \$ Height: 50 \$
• Use Labels Tag Contents	Marquee
Test Copy Current Text to All Languages Import from Favorite Font Templates.(I) Vector Font @ Graphic Font Font: Microsoft Sans Serif • Size: 16 • B I • • Multi-line Alignment: I • • Microsoft Sans Serif	Set label position by language state separately. Left Right: Top Bottom:
Copy Current Properties to All Languages	
Help Description:	OK Cance

The function "Language Independent" can be checked to make sure the text is not influenced by other languages.

	Position
Language Independent	Fixed Point: X: 0 ♀ Y: 0 ♀
Languages: 1-English (United S • Use Text Library Text Library	Locked Width: 50 \div Height: 50 \div
	Marquee
Ose Labels	
Tag Contents	1
Test	
	🔲 Carlabel and You be been seen at the second state
	Set label position by language state separately.
•	Left Right:
Copy Current Text to All Languages	Top Bottom:
Import from Favorite Font Templates.(I)	
Vector Font () Graphic Font	
ont: Microsoft Sans Serif •	
Size: 16 • B I •	
Multi-line Alignment:	
Mi	
Microsoft Sans Serif	
Microsoft Sans Serif	

Sometimes, the project is provided to the users in different countries. You can set the different contents by switching Languages. Thus different texts can be displayed in different languages.

ic Text	8
ieneral Display	
🔲 Language Independent	Position
Languages: 1-English (United S 🔹 💽	Fixed Point: X : 0 \$ Y : 0 \$
Use Text Library Use Text Library 2-Chinese (Simplified, PRC)	□ Locked Width: 50
Ose Labels	Marquee
Tag Contents	
Test	
	Set label position by language state separately.
	Left Right:
Copy Current Text to All Languages	Top Bottom:
Import from Favorite Font Templates.(I)	
Vector Font (Graphic Font	
Font: Microsoft Sans Serif 🔹	
Size: 16 • B I • I Multi-line Alignment:	
Microsoft Sans Serif	
Copy Current Properties to All Languages	
Help Description:	OK Cance

Multi languages can be set in System Settings dialog which is opened by clicking the button

" to satisfy the different languages requirement.

tic Text	System Se	ttings						8
Seneral Display	Use	r Privilege	Task Schedule	Data San	npling	PLC Control	Alarr	n And Event
	Glob	al Settings	Extended Settings	Laguange 9	lettings	Favorite Font Terr	plates	User Leve
Use Labels Use Contents Test	csition ixed P Langue Mari SMari SMari Set le Defai Switc SRWJ	uage Count: No. Langua English I Chinese Chinese ult Language NO. 10050. When the	(United States) (Simplified, PRC) itates) by using system regis	•	Default F Imp • Vector Font (Size: [ont ort from Favorite Fo or Font @ Graphic F Microsoft Sans Serif	nt Temple ont 	rif
Copy Current Properties to All Languages	Gerau	ilt language will	be restored.					
Help Description:	Help					Π	ОК	Canc

When you check the "Set label position by language state separately" function, different texts can be aligned in different effects.

atic Text	
General Display	
 Language Independent Languages: 1-English (United S •) Use Text Library Text Library 	Position Fixed Point: X : 0 ♀ Y : 0 ♀ □ Locked Width: 50 ♀ Height: 50 ♀
Ouse Labels Tag Contents	Marquee
Copy Current Text to All Languages	Set label position by language state separately. Left Right:
 Vector Font Graphic Font Font: Microsoft Sans Serif Size: 16 ▼ B I B I T Advanced 	
Microsoft Sans Serif	
Copy Current Properties to All Languages	
Help Description:	OK Cancel

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The static textcan be used which is saved in the text library. The text library dialog can pop up by clicking the "Text Library" button. You can enter the text in the text library dialog in advanced and select it to use.

tic Text	8 3	
Seneral Display □ Language Independent Languages: 2-Chinese (Simplifit • ● ● Use Text Library Ack • 別式 •	Text Library Search Language Display Sort by Name Display All Language ABCDEFGHIJKLMNOPQRSTUVWXYZ	5
Use Labels Text Library Contents	Name Status Number Reference	0.0.00600
Rist ·	Status 1-English (United States) 2-Chinese (Simplified, PRC) 0 Test 题記	
Import from Favorite Font Templates.(1) Vector Font © Graphic Font Font: Stitler • Size: 16 • B Z • Z Multi-line Alignment = = TgAdvanced		
微软雅黑		
Copy Current Properties to All Languages	New Delete Confirm	Cancel
Help Description:	OK Cancel	

The static text can be set to a designated position, and the text can be locked to prevent any displaying defect caused by moving.

ieneral Display	
□ Language Independent Languages: 1-English (United S ▼) ③ Use Text Library Text Library Ack ▼ Test ▼ ○ Use Labels Text Library Contents Text	Position Fixed Point: X: 0 ♀ Y: 0 ♀ Locked Width: 50 ♀ Height: 50 ♀
Test Import from Favorite Font Templates.(I) Vector Font Graphic Font Font: Microsoft Sans Serif Size: 16 • B Z Multi-line Alignment: Size: 16 • B Z Multi-line Alignment: Copy Current Properties to All Languages	Set label position by language state separately. Left Right: Top Bottom:

When the text includes a lot of words and characters, the revolving displaying function can be used to save the space. The revolving displaying function can be used by checking the "Marquee" function. The moving direction and the revolving displaying speed can be set in the properties dialog of the static text.

ic Text	-?-
ieneral Display Language Independent Languages: 1-English (United S •) Use Text Library Text Library Ack • Test • Use Labels Text Library Contents Test •	Position Fixed Point: X : 0 ♀ Y : 0 ♀ Locked Width: 50 ♀ Height: 50 ♀ ✓ Marquee Moving Direction RightToLeft Step Length LeftToRight RightToLeft 10 ♀ x0.1S TopToBottom Set label position BottomToTop reparately. Left Right: ► ► ► ►
Import from Favorite Font Templates.(I) Vector Font Graphic Font Font: Microsoft Sans Serif Size: 16 B I Multi-line Alignment: T Advanced Microsoft Sans Serif	Top Bottom:
Copy Current Properties to All Languages	
Help Description:	OK Cance

Similar to static picture functions, the static text can be also set to display only if necessary. The user can choose that the static text is displayed all the time or displayed in conditions by setting the Display properties. The conditional display type includes Level User, Privilege User and Logic Control.

Level User: The static text will be displayed only in the corresponding user level. It can be activated by checking it. The user level system settings dialog can be opened by clicking the

button "🔊".

	System Settings			8
eneral Display	User Privilege Task Schedule	Data Sampling	PLC Control	Alarm And Event
Visibility Control	Global Settings Extended Settings	Laguange Settings	Favorite Font Templat	tes User Leve
 Always Display Conditional Display 	User Level Count: 3		40 Ab	
V Level User Min Level: 0:	Password Level Predefined Password	d Grade Description		
C Privilege User	OLEVEL Password Indile			
Logic Control	1Level Password 888888 2Level Password 888888	Level1 Level2		
	Please use system register SRW to realize th	e operation like passwor	d input and modification	etc.

Privilege User: The static text visibility control needs an authority. The authority system settings dialog can be opened by clicking the button "……".

System Settings
Global Settings Extended Settings Laguange Settings Favorite Font Templates User Level User Privilege Task Schedule Data Sampling PLC Control Alarm And Event
No. User Name Predefined Password Logout Time(min) Permission 1 Admin 888888 10 16:Admin
Delete Add Modify

Logic Control: The static text visibility can be controlled by the address conditions. The conditions include bit control (address ON and OFF) and word control (word address value conditions).

c Text eneral Display 🥥	
visibility Control	
Always Display	
Conditional Display	
Level User	
Privilege User	🖪 Condition Setting
Logic Control	Module: 🔘 Bit Register 💿 Word Register
Condition	Address:
> 1	Condition:
	Read Value > A(1) None
Add Modify D	Delete
	A Constant • 1
	OK Cancel
Help Description:	OK Cance

4.6 Component

4.6.1 Switch

The Switch component includes Bit Set, Word Set, Window Operation, Function Key, Data Transferring and Recipe Transmission.

Tools Help	tup	Recipe	Macro	Library	nponent	Com	ĺ
Bit Set	,				Switch		
• 🏥 Word Set	,			Light	Indicator	.	
🛛 🗔 🛛 Window Oper	,	ter Displa	d Charac	Value an	Numeric	123	2
Function Key	,	Toggle Switch and menu					
👌 📑 Data Tranferin	,	on	ransmissi	d Data T	Timer an	Ø	
Recipe Transi	,			Meter	Bar And		:
	,			aphs	Curve Gr		
•	,				Scale	had	:
	,				Table		:
	,				Slider	-0	
•	,		ent	Compone	Moving (.	:
	,				Window	E HOH	
•	,				List	<u>e</u>	:
•	,				Tools	R	:
	,				Pipeline	÷	
	,				Tools	×	•

4.6.1.1Bit Set

"Bit Set" is a component by which the internal bit address of HMI or the bit address of each controller connected to HMI is operated. The type of "Execute Setting" includes "On", "Off", "Inverse", "Reset", "On Pulse" and "Off Pulse".

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t Setting Property			
Action:	Press •]	
Execute Setting:		Pulse Wid	dth 0.2 🔹 Seconds
Address			
Deivce: LOCA	On Pulse Off Pulse		•
Bit-index w	ithin a Byte Registe	er	
Address Type	: LB	•	
Address: 0	×		System Register
Format(Range) DDDDDD(0~799	999)	
Address In	dex		
Help(H)		OI	K Cancel

• On

Set the bit address to ON.

• Off

Set the bit address to OFF.

Inverse

It is set a "Switch" by which the current state can be conversed. If the current bit address is ON, after it is operated, the bit address will be conversed to OFF. If the current bit address is OFF, after it is operated, the bit address will be conversed to ON.

Reset

When it is operated and kept being held, the bit address is set at the ON state all the time. When it is released, the state of the bit address will be immediately switched to OFF.

• On Pulse

A rising edge pulse is produced which the bit address keeps the pulse "on" in a designated time width. The pulse width range is $0.1^{-1.5}$ seconds.

Action: Press 🔹			
Execute Setting: On Pulse Pulse Width	0.2	•	Seconds
	0.1		1
Address	0.2		
Use Address Tag	0.3		
Deivce: LOCAL:[Local Register]	0.5		-
	0.6		
Bit-index within a Byte Register	0.7	Ξ	
Address Type: LB	0.8		
Address: 0 🔶 Sy	10		aister
	1.1		Ister
Format(Range) DDDDDD(0~799999)	1.2		
	1.3		
Address Index	1.5	•	
	_		

Off Pulse

A falling edge pulse is produced which the bit address keeps the pulse "off" in a designated time width. The pulse width range is 0.1~1.5 second.

For the "On Pulse", if the pulse width is set to 1 second and the current bit state is OFF, a 1 second ON pulse signal will be produced and then it goes back to the OFF state. If the current bit state is ON, a 1 second ON time will be still set because the bit state is already ON, and then the bit state will turn OFF.

Similar to the "Off Pulse", if the pulse width is set to 1 second and the current bit state is ON, a 1 second OFF pulse signal will be produced and then it goes back to the ON state. if the current state is OFF, a 1 second OFF time will be still set because the bit state is already OFF, and then the bit state will turn ON.

There is an "Action" attribute for the Bit Set component. It includes two options, "Press" and "Release". When the "Bit Set" component is pressed down, the bit set function will be executed immediately. When the "Release" attribute is selected and the "Bit set" component is pressed, the bit set function will not be executed. And when it is released, the "Bit set" function will be executed immediately. But the action is not valid when the "Execute Setting" is "Reset".

The "Bit Set" component has other property pages. For example, in the "Indicator Light" property page, it is recommended to check the "Use Indicator" option and set an address

to monitor the "Bit set" component state if the "Use Graphics" option is checked in the "Graphics" property page. The details can be seen in the "System Manual/ Component/ Indicator Light".

witch Inc	dicator Light	Jable G	aphics Dy	namic Graphics	Control Settings	Display		
Use Indi	_							
	· · · · · ·	gister Control		ined Bits				
A	ddress:			I				
	o.: 2	e state conditio			Cor	ndition:	eLogic	NegativeLogic
Status	Condition	Tag Content	Blink	Frequency(0				
0	OFF		None					
1	ON		None					
						sh Mode: sh Freq.:	None	▼ 5 ☆ x0.1S

The following brief example introduces the process for setting the HMI internal address LB100 into the "Inverse" attribute.

• In the software menu, click "Component/ Switch/ Bit Set" to open the following dialog.

Switch	Indicator Light	Lable	Graphics	Dynamic Graphics	Control Setting	s Display		
V Swite	h Function							
Action		Bit Set	ing Propert	y			×	
Press			tion:	Press	•		ł	
Coldre 1	fove Up		Bit-inde Address Ty Address:	dress Tag DCAL:[Local Register x within a Byte Regi ype: LB 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ster •	▼ System Register		Modify
Add Fu	Bit		Help(H)		Ok	Cance		Recipe Transfer
		-	_				_	

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The default action is "Press". The default Execute Setting is "On". The default address is "LB0". They are modified into the required as follows.

Inverse	•		
ess Tag			
AL:[Local Register]			•
e: LB	•	System	Register
idex			
	ess Tag AL:[Local Register] within a Byte Register e: LB LOO e) DDDDDD(0~799999) ndex	AL:[Local Register] within a Byte Register e: LB	AL:[Local Register] within a Byte Register e: LB • LOO • e) DDDDDD(0~799999)

• Click "OK" to add an operation action in the "Switch" list.

Switch Indicator Light	Lable Graphics	Dynamic Graphics	Control Settings	Display	
		41		Display	
Action Press	Execution Bit Setting	Device Ad	dress al Register]:LB100		
		<u> </u>			
Move Up	Move Down	Сору	Delete	Clear	Modify
Add Function: Bit	Word	Window Operation	n Function Key	Data Transfer	Recipe Transfer
Help Descriptio	n:				OK Cancel
	oft Sans Se				

In the list, we can clearly see the execution attribute and the bit address to be operated.

Click "OK" in the Switch dialog to put the component into the window edited. In this way, a simple "Bit Set" component is finished.

4.6.1.2Word Set

"Word Set" is a component by which various attributes of the internal word register of HMI or the word register of any controller connected to HMI are controlled. The Word Set property dialog can be opened by clicking the "Component/ Switch/ Word Set" in the menu. The default settings are shown as follows.

witch Indicator Light	Words Setting Property	
Switch Function	Action: Press •	
Action	Execute Settings: Add Looping Reverse on reaching the end	
Press		
	Add Constant • 1	
	Upper Limit: Constant • 100 🔹	
	Address	
	🖾 Use Address Tag	
	Deivce: LOCAL:[Local Register]	
	Address Type: LW •	
	Address: 0 System Register	
	Format(Range) DDDDDD(0~799999) Occupy: 1 Vord	
Move Up	Data Type: 16-bit Unsigned 🔹	Modify
dd Function:	Address Index	
Bit		Parias Transfer
DIL		Recipe Transfer
	Help(H) OK Cancel	

The type of "Execute Settings" includes "Add", "Subtract", "Increase", "Decrease", "Set Up Constants", "Set Up Character Strings", "Set Up Figures By Bit" and "Logic Operation".

Words Setting Prop	erty 🗾
Action: Press 🔻	
Execute Settings:	Add Looping Reverse on reaching the end
Add	Add 1 Subtract
Upper Limit:	Increase 100 👻
	Set Up Constants Set Up Character Strings Set Up Figures By Bit
Address	Logic Operation
Use Addre	ess Tag
Deivce: LOCA	AL:[Local Register]
Address Type Address: 0 Format(Range	e) DDDDDD(0~799999) Occupy: 1 • Word Data Type: 16-bit Unsigned •
Help(H)	OK Cancel

• Add

A designated data will be added to the value of the designated word register. The "Add" attributes contain the following settings.

witch Indicator Light I	Words Setting Property	
Switch Function	Action: Press 🔹	
Action	Execute Settings: Add	
Press		
	Add Constant • 20 •	
	Upper Limit: Constant • 100	
Move Up Add Function: Bit	Address Use Address Tag Deivce: LOCAL:[Local Register] Address Type: LW Address: 0 Format(Range) DDDDDD(0~799999) Occupy: 1 Vord Data Type: 16-bit Unsigned Address Index	Modify Recipe Transfer
	Help(H) OK Cancel	

➤ Add

At each time of operation, the set data will be added and written into the word register.

Upper Limit

It is the upper limit of the word register operated. When the result reached the upper limit of operation, no further "Add" operation can be done.

Looping

If "Looping" is checked, an option of "Lower limit" will appear. The operation will be continued at the upper limit and the adding operation will be done from the lower limit. For example, if the "Lower limit" is set to "0", the "Add" is set to "1", and the upper limit is set to "100", the Word Set component will be valid when it is added to "100". It will turn to 0, 1, 2, 3,and so on, at the next operations.

Reverse on reaching the end

If "Reverse on reaching the end" is checked, the operation will be continued at the upper limit and the result will change to reduce from the upper limit to the lower limit. When the result reached the lower limit, the operation will change to add. The "Add", "Upper limit" and "Lower limit" are all "Constant" in default. They can also be set into "Variable". It is noted that the data type of variable register must comply with the "Word Set" component address type.

• Subtract

A designated data will be subtracted from the value of the designated word register till the "Lower limit". The "Subtract" attributes contain the following settings.

witch Indicator Light	Words Setting Property	0
Switch Function Action Press	Action: Press Execute Settings: Subtrac Looping Reverse on reaching the end Subtract: Constant Lower Limit: Constant 0	
	Address Use Address Tag Deivce: LOCAL:[Local Register]	
Move Up	Address Type: LW Address: 0 System Register Format(Range) DDDDDDD(0~799999) Occupy: 1 Word Data Type: 16-bit Unsigned Address Index	Modify
Bit	Help(H) OK Cancel	Recipe Transfer

Subtract

At each time of operation, the set data will be subtracted from the word register.

Lower Limit

It is the lower limit of the word register operated. When the result reached the lower limit of operation, no further "Subtract" operation can be done.

Looping

If "Looping" is checked, an option of "Upper limit" will appear. The operation will be continued at the lower limit and the subtraction will be done from the upper limit. For example, if the "Lower limit" is set to "0", the "Subtract" is set to "1", and the upper limit is set to "100", the Word Set component will be valid when it is subtracted to "0". It will turn to 100, 99, 98, 97,and so on, at the next operations.

Reverse on reaching the end

If "Reverse on reaching the end" is checked, the operation will be continued at the lower limit and the result will change to add from the lower limit to the upper limit. When the result reached the upper limit, the operation will change to subtract.

• Increase

The result value will keep increasing if the component of "Increase" is pressed down. The increasing will stop if the component of "Increase" is released or the value reaches the upper limit. The component of "Increase" has attributes of "Immediately Execute Increase/Decrease Action", "Delaying Time" and "Execution Time".

witch Indicator Light	Words Setting Property	
Switch Function	Action: Press 👻 🔲 Immediately Execute "Increase/Decrease" Action	
Action	Execute Settings: Increase Looping Reverse on reaching the end	
Press	Add Constant • 20 • Upper Limit: Constant • 100 • Delaying Time: 0.15 • Execution Time: 0.15 •	
	Address	
	Deivce: LOCAL:[Local Register]	
	Address Type: LW	
	Address: 0 System Register Format(Range) DDDDDD(0~799999) Occupy: 1 + Word	
Move Up	Data Type: 16-bit Unsigned	Modify
Bit	Rec	ipe Transfer
	Help(H) OK Cancel	

Immediately Execute Increase/Decrease Action

"Increase" and "Decrease" all have this attribute. If it is checked, the operation of "Increase" or "Decrease" will be executed immediately without waiting when the component is pressed down.

Delaying Time

When the attribute of "Immediately Execute Increase/Decrease Action" is not checked, the "Delaying time" attribute is valid. The default time is 0.1s and the maximum is 1.5s. If the time is

0.1s, it means the action of "Increase" will be delayed 0.1s to execute after the component is pressed down.

Execution Time

The "Execution Time" means the time to execute the action "Increase" once. The time range is $0.1s \simeq 1.5s$.

• Decrease

The function of "Decrease" is similar to the attribute of "Increase". The result value will keep decreasing if the component of is pressed down. The component of "Decrease" also has attributes of "Immediately Execute Increase/Decrease Action", "Delaying Time" and "Execution Time".

witch Indicator Light	Words Setting Property Action: Press • Immediately Execute "Increase/Decrease" Action	
Action Press	Action: Press • Immediately Execute Increase/Decrease Action Execute Settings: Decreas • Looping Reverse on reaching the end Subtract: Constant • 1	
	Lower Limit: Constant	
Move Up	Address Type: LW Address: 0 Format(Range) DDDDDD(0~799999) Occupy: 1 Data Type: 16-bit Unsigned Mod	lify
Bit	Help(H) OK Cancel	ransfer

• Set Up Constants

A data is written to the designated register. The data (Setting Value) can be a "Constant" or a "Variable".

witch Indicator Light L	Words Setting Property	
Switch Function	Action: Press 💌	
Action	Execute Settings: Set Up + -	
Press	Setting Value: Constant 0	
	Address	
Move Up	Deivce: LOCAL:[Local Register] Address Type: LW Address: 0 Format(Range) DDDDDD(0~799999)Occupy: 1 Word Data Type: 16-bit Unsigned	Modify
Add Function: Bit	Address Index Help(H) OK Cancel	fer Recipe Transfer

In the figure above, a constant "0" is written to the register LW0 of HMI.

• Set Up Character Strings

This function is similar to "Set Up Constants". A character string can be written to the word register. For example, character string "A123" is written to the register LW0 and LW1 of HMI.

witch Indicator Light	Words Setting Property	
Action Press	Action: Press • Execute Settings: Set Up • • Content: Constant • A123 Use UNICODE Swap high and low bytes	W0 A123
	Address Use Address Tag Deivce: LOCAL:[Local Register] Address Type: LW Address: 0 System Register Format(Range) DDDDDD(0~799999)Occupy: 2 Word	
Move Up Add Function: Bit	Data Type: Character String *	Modify sfer Recipe Transfer

"Set Up Character Strings" has two optional attributes "Use UNICODE" and "Swap high and low bytes". When "Use UNICODE" is checked, it means the character string written to registers is coded by UNICODE. The string is normally displayed only in "UNICODE". If "Swap high and low bytes" is checked, the high and low bytes in the character string will be exchanged before written to the word register.

• Set Up Figures By Bit

This function has two modes, "Add" and "Subtract". By this function, each bit of the value can be added or subtracted.

Switch Indicator Light L Switch Function Action Press	Words Setting Property Action: Press • Execute Settings: Set Up I • Mode: @ Add O Subtract Digit Bit: 5 •	LW0 5
Move Up Add Function: Bit	Address Use Address Tag Deivce: LOCAL:[Local Register] Address Type: LW Address: 0 System Register Format(Range) DDDDDD(0~79999)Occupy: 1 + Word Data Type: 16-bit Unsigned + Address Index Help(H) OK Cancel	Fer Recipe Transfer

This function has an attribute "Date type". It can be "16-bit Unsigned" or "32-bit unsigned number". In other words, only unsigned single word and unsigned double word can use this function. If the data type is "16-bit unsigned number", the value range is 0~65535. So the parameter of this function "Digit bit" can be 1~5. That means the number length is 1~5. "1" means units digit, "2" means tens digit, "3" means hundreds digit, "4" means thousands digit, and "5" means ten thousands digit. For example, if the "Digit bit" is 3 and the "Mode" is "Add", it means the hundreds digit is operated for adding. If the hundreds digit of a register is 6 and when this component is pressed down, the hundreds bit will change into 7, and then into 8 if it is pressed down again, and 9 again, 0 again, and 1 again, so the attribute of "Add" is similar to the "Looping" attribute. But, the "Add" or "Subtract" attribute of the "Set up Figures by Bit" function is only valid for one digit, and other digits are not changed.

For example, if "Digit bit" is 3, "Mode" is "Add", and the current register value is 18668, the value will change into 18768 when the component is pressed down, 18868 when it is pressed down again, 18968 again, 18068 again, 18168 again. The maximum value of a single word is 65535. If the "Digit bit" is 5, the ten thousands digit will change in 0~5.

Logic Operation

This function has four modes, "And", "Or", "Exclusive-or" and "Not". The default mode is "Add".

Action Press Execute Settings: Logic O • Mode: And Or Exclusive-or Not Operation Value: Constant • FFFF • (Hex) Address Use Address Tag Deivce: LOCAL:[Local Register] Address: 0 • System Register Format(Range) DDDDDD(0~799999)Occupy: 1 • Word Move Up Address Index	Switch Indicator Light	Words Setting Property	
Image: Second state sta	Action	Mode: And Or Exclusive-or Not	FFFF
Move Up Data Type: 16-bit Unsigned Modify Add Function:		Use Address Tag Deivce: LOCAL:[Local Register] • Address Type: LW • Address: 0 • System Register	
Bit Recipe i ransfe		Data Type: 16-bit Unsigned 🔹	Modify sfer Recipe Transfer

In the figure above, when the component is operated, the value in register LWO will has a logic operation "And" with 0×FFFF. The logic result will be written to register LWO. The operations of otherthree modes are similar to "And" mode but the logic operation.

The attribute "Operation Value" can be "Constant" or "Variables". The default is "Constant" and the data format is hexadecimal. It can be a variable, but the data type must comply with the register data type.

The attribute "Data Type" for logic operation can be "16-bit Unsigned", "32-bit Unsigned", "16-bit BCD" and "32-bit BCD".

Special notice:

In all these functions for "Word Set", the "Action" is "Press" in default. That means the operation will be executed correspondingly when the component is pressed down. The "Action" can also be "Release" but not for the function "Increase" and "Decrease". That means the operation will be executed correspondingly when the component is released.

When use "Variables" for the "Word Set" function, the data type of "Variables" must comply with the data type of word register used. If not, the result may be incorrect.

4.6.1.3Window Operation

Action

The attribute "Action" of "Window Operation" can be "Press" or "Release".

indow O	peration Proper	ty	<u> </u>
Action:	Press	•	
	Press		
Set Up:	Release	Window No.:	B_1:Basic Window -
	Automatic p	op-up password windo	W
	Automatic p	op up password windo	

Press

The corresponding keyboard function will be given out when the component is pressed down, and the macro instructions or system operation instructions will be executed.

Release

The corresponding keyboard function will be given out when the component is released, and the macro instructions or system operation instructions will be executed.

Set Up

The attribute "Set Up" of "Window operation" can be "Switch Window", "Close Pop-up Window", "Pop-up", "Return To Previous Window", "Window Control Bar" or "Return to the main window (HOME)".

Window O	peration Property	x
Action:	Press	
Set Up:	Switch Window Vindow No.: B_1:Basic Window V)
	Switch Window	
	Close Pop-up Window Jow.	
	Pop-up	
	Return To Previous Window OK Cancel	
	Window Control Bar	
	Return to the main window(HOME)	

Switch Window

Close the current window and switch to a designated window.

Close Pop-up Window

Put the button on the pop-up window, click to close it.

Pop-up

Pop up a designated window.

Return To Previous Window

Close the current window and open the window opened last time.

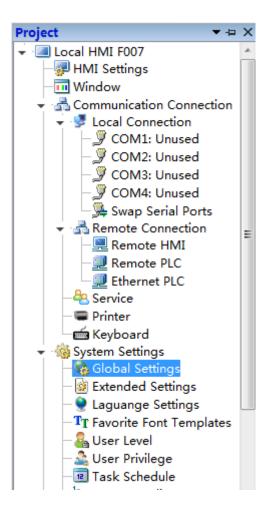
Window Control Bar

Put the component on the pop-up window, press, hold and drag to modify the pop-up window position.

Return to the main window (HOME)

Close the current window and open the preset main window. The main window can be set by the menu command "Setup -> System Setting -> General Setting".

Window O	peration Property		×
Action:	Press	•	
Set Up:	Return to the main	Window No.:	B_1:Basic Window(1) *
	🕢 Automatic pop-u	p password windo	w.
	Help		OK Cancel



User Privilege	Task Schedule	Data Sampling	PLC Control	Alarm And Event
Global Settings	Extended Settings	Laguange Settings	Favorite Font Ten	nplates User Leve
Project Properties		Initializat Initial W Initial	indow: B_1:Basic Wi	ndow(1 🔹
Backlight And Scr Dim the bright Turn off Backl Dim down an	tness: Lowest 🔹 🔅 ight	3 🗢 (min) Main W		:Basic Window(1 ▼
	a wait for 10 acklight upon Alarm/Eve	nts 🔽 Use	wn window the drop-down wind Only for capacitive sc	
		Set u	HMI Internal Clock p the time souce of e ical data etc. SRW0~7: Year/Mon Minute/Second/Mill	th/Day/Hour/
Local Register En 16-bit Integer: 32-bit Integer: 32-bit Float:	dian Order 21 4321 4321	•	Jane on	er Time: <mark>50mS 🔹</mark>
Scrollbar Scrollbar Width	20 🗢		Enable Control:	

Automatic pop-up password window

If "Automatic pop-up password window" is checked and when the window operation is switched to a window in a higher password or authority level, the window to enter password will pop up automatically.

4.6.1.4Function Key

The "Function Key" component provides component executing action, keyboard function, executing macro instructions, and system operation functions.

Action

The attribute "Action" of "Function Key" can be "Press" or "Release".

HTP Designer Configuration Software User Manual

Action:	Press 👻
Function Setting:	Press Release
Keyboard Function	
Execute Macro	Macro Code Edit
Sysem Operation	Touch Panel Calibration
	O Import/Export Import Project to *
	O Save Screenshort to Extended Memory USB1
	Clear Event
	🔘 Clear All Formula
	Clear RW
	Clear All History Data
D Print	Horizontal Print O Print Vertically
Help	OK Cancel

Press

The corresponding keyboard function will be given out when the element is pressed down, and the macro instructions or system operation instructions will be executed.

➢ Release

The corresponding keyboard function will be given out when the component is released, and the macro instructions or system operation instructions will be executed.

• Function Setting

The attribute "Function Setting" of the "Function Key" includes "Keyboard Function", "Execute Macro" and "System Operation".

Keyboard Function

HTP Designer Configuration Software User Manual

Action:	Press	•
Function Setting:		
Keyboard Function	Return •	
 Execute Macro Sysem Operation 	Return Backspace Clear Cancel UNICODE Move the Cursor Select the Text Text Operation Mapping Keyboard	Code Edit ation nport Project to • o Extended Memory USB1 •
	Clear All History	Data
Print	O Horizontal Print	O Print Vertically
Help		OK Cancel

"Return"

It is the same to the "Enter" key on the keyboard.

"Backspace"

It is the same to the "Backspace" key on the keyboard.

"Clear"

Delete the current content which has been inputted for the component "Numeric Value Input" and "Character Input".

"Cancel

Cancel the component operation of "Numeric Value Input" and "Character Input".

"UNICODE"

Set the type of characters which inputted to the component "Character Input". The characters can be number keys (0, 1, 2...), letters of an alphabet (a, b, c...), ASCII code or Unicode characters.

"Move the Cursor"

Move the cursor according to the set modes including up, down, left, right, row beginning, row end, first bit and last bit. This function is effective only for the input component.

"Select the Text"

Set the operation for the selected text content, including "Selection Begin" and "Selection End". This function is effective only for the input component.

"Text Operation"

Set the operation for the text content, including "Copy", "Cut" and "Paste". This function is effective only for the input component.

"Mapping Keyboard"

When this function is activated, corresponding functions can be mapped to F1~F8 of HMI, including forward, backward, Esc, Enter, and so on. This function is effective only for some specified HMI.

Action:	Press
Function Setting:	
Keyboard Function	Text Operation 👻 Copy 👻
Execute Macro	macro_1 🔹 Macro Code 🛛 Edit
	Touch Panel Calibration
	O Import/Export Import Project to *
	O Save Screenshort to Extended Memory USB1
	O Clear Event
	🔘 Clear All Formula
	Clear RW
	Clear All History Data
D Print	Horizontal Print O Print Vertically

If this function is selected, the selected macro will be executed when the component is pressed down or released. The "Macro Instruction" dialog will pop up if you click the button "Macro Code" or "Edit". You can select or create a macro here, or edit the current macro.

System Operation
 "Touch Panel Calibration"

By using this function, the user can enter the touch control calibrating window. Screen touch control calibration for HMI can be realized in this window.

"Import/Export"

When this function is selected, the project or prescription data can be imported or exported. This function must be used together with the file view box, and it only supports the HMI with USB HOST or SD card slot.

unction Key Attributes	
Action:	Press 🔹
Function Setting:	
Keyboard Function	Return 👻
Execute Macro	macro_1 🔻 Macro Code Edit
Sysem Operation	Touch Panel Calibration
	Import/Export Import Project to
	Save Screenshor Import Project to HMI ISB1 -
	Clear Event Export Project from HMI Import Recipe to HMI
	Clear All Formul Export Recipe from HMI
	Clear RW
	Clear All History Data
Print	Horizontal Print O Print Vertically
Help	OK Cancel

"Save Screenshot to Extended Memory"

When this function is selected, the touch screen picture can be captured and saved into an external memory device in the bmp format for printing or viewing HMI picture. And this function only supports the HMI with USB HOST or SD card slot.

HTP Designer Configuration Software User Manual

Action:	Press 🔹
Function Setting:	
Keyboard Function	Return -
Execute Macro	macro_1 - Macro Code Edit
Sysem Operation	Touch Panel Calibration
	◎ Import/Export Import Project to ▼
	Save Screenshort to Extended Memory USB1
	Clear Event
	Clear All Formula
	Clear RW
	Clear All History Data
D Print	Horizontal Print O Print Vertically
Help	OK Cancel

"Clear Event"

This function can be used to clear warning events in groups.

tch/Indi	icator Light							8
Switch	Indicator Light	Lable	Graphics	Dynamic Graphics	Control Sett	ngs Di	splay	
Swite	h Function							
Action	i i i	Fs Fur	nction Key A	Attributes				×
Press								
		Act	ion:	Press		•		
		Fun	ction Settin	g:				
		01	Keyboard F	unction Return	w			
		0	Execute Ma	cro macro_1	Macro Coc	e Edi	t	
		0 9	Sysem Ope	ration Touch Pa	nel Calibration			
			, ,		xport Impor	Project	to *	
				construction of the second	eenshort to Ex			-
					entFrom 1[0]			
					Formula 1[0]	-		
				Clear RW	2[0]			
				Clear All	History 4[0]	E		
		OP	rint		al Print 6[0]	nt Vert	ically	Modify
	Nove Up				7[0]			Modify
add Fu	nction:		Help		8[0] 9[0]	OK	Cancel	
	Bit				10[0]			Recipe Transfer
					11[0] 12[0]			
		-			13[0]			
Help	Description	1:			14[0] 15[0]			OK Cance

"Clear All Formula"

This function can be used to clear all prescription data.

"Clear RW"

This function can be used to clear all RW data saved in power failure.

"Clear All History"

This function can be used to clear all history data. It can be used together with other switch components.

4.6.1.5Data Transferring

The "Data Transferring" component can be used to transmit the data saved in one or more continuous addresses to another one or other more continuous addresses.

ction: Press 🔹 Twoway Tr	ransfer (If Conflicted, Source Address First)
ata Transfer	
Data Type: 💿 Word 🔘 Bit Transmi	ssion words Constant 🔹 1
Source Address:	Destination Address:
Use Address Tag	Use Address Tag
Deivce: LOCAL:[Local Register]	Deivce: LOCAL:[Local Register]
Address Type: LW	Address Type: LW Address: 0 System Register
Address: 0 System Register	Format(Range) DDDDDD(0

Action

The attribute "Action" can be "Press" or "Release". When "Press" is selected, data transmission will be started when the component is pressed down. When "Release" is selected, data transmission will be executed when the component is released.

Data Type

The "Data Type" means the type of data to be transmitted. It can be "Bit" or "Word".

Transmission words

It means the number of data transmitted at one time. It can be set "Constant" or "Variable". If set "Variable", the register address must be designated. The maximum number of words transmitted in this software is 8192.

Source Address

The "Source Address" means the first address of the data to be transmitted. The detailed can be seen in the<u>Detailed manual/General functions/Address editor/Standard Bit Address Input</u> or<u>Detailed manual/General functions/Address editor/Standard Byte Address Input</u>.

Destination address

The "Destination address" means the first address of data transmission target. The detailed can be seen in the <u>Detailed manual/General functions/Address editor/Standard Bit Address</u> Inputor <u>Detailed manual/General functions/Address editor/Standard Byte Address Input</u>.

4.6.1.6Recipe Transmission

The "Recipe Transmission" component includes two transmission directions: "Download recipe to PLC" and "Upload recipe from PLC". "Download recipe to PLC" means transmitting the content of the recipe file to the address of PLC. "Upload recipe from PLC" means transmitting data from the address of PLC to the recipe file.

C SMOCUTI			KOCC.		
Recipe Transfer					×
Action:	Press	•			
Transmission Direction	Download recipe to	PLC	Number of words		
1	Recipe source address:	:	•]0	Open the R	ecipe Settings
	PLC Address				
	O Upload Recipe from	n PLC			
🕅 Notice Bit Addre	ess				
Help(H)				OK	Cancel

Download recipe to PLC

It is the default for the "Transmission Direction".

Recipe source address

When no recipe file is created, the "Recipe source address" will be blank with a red exclamatory mark. You can click the button "Open the Recipe Settings" to create recipe. After the recipe is created, you can select it in "Recipe source address" to download.

Recipe Transfer	
Action: Press	•
Transmission Direction Omega Download recipe to	PLC Number of words 4
Recipe source address:	RP_A
PLC Address.	MW100
O Upload Recipe from	PLC
Votice Bit Address LB10	
Note:During the recipe downloading or u After the transfer is finished, "Notice	
Help(H)	OK Cancel

Notice:

The "Number of words" is determined by the recipe itself, and it always displays automatically.

PLC Address

"PLC Address" means the target address for recipe file data transmission. It can be the address of PLC connected to HMI or an internal address of HMI. The detailed address editing method can be seen in: <u>Detailed manual/General functions/Address editor/ Standard Byte Address Input</u>.

Notice Bit Address

A bit address can be set here to monitor the recipe downloading state. The address editing method can be seen in: <u>Detailed manual/General functions/Address editor/Standard Bit Address</u> <u>Input</u>. This bit address will be kept on during the recipe downloading or uploading, and it will be set to OFF after transmission.

• Upload Recipe from PLC

If the "Upload Recipe from PLC" is selected, the recipe uploading function will be activated.

Recipe Transfer				×
Action: Pres	is .	•		
Transmission Direction	ownload recipe to F	PLC		
© U	pload Recipe from	PLC Numb	er of words 4	
PLO	C Source Address:	MW200		
	Recipe address:	RP_A	•	Open the Recipe Settings
Votice Bit Address	LB10			
Note:During the recipe After the transfer	downloading or up is finished, "Notice			ys be ON.
Help(H)			ſ	OK Cancel

The detailed operation of the recipe uploading can refer to the recipe downloading.

4.6.2 Indicator Light

4.6.2.1Bit Indicator Light

	Indicator Light	Lable Grap	hics Dynamic Graphics Display	1	
Use Ir	ndicator				
		gister Control	er © Combined Bits		
	-	LB0			
				Condition:	
	-	e state condition	ns are met, the	PositiveLogic	NegativeLogic
Statu	us Condition	Tag Content	Blink Frequency(0		
	LOG OFF		None		
0	LB0 OFF				
0	LB0 OFF		None		
				Flash Mode: None	•
				Flash Mode: None	• 5 🚖 x0.15
					• 5 🔦 x0.15
					▼ 5 ▲ ▼ x0.1S
					• 5 🐴 x0.1S

• Display Mode

The "Display Mode" can be "Register Control" or "Automatic looping". The details are referred to: <u>Detailed manual/General functions/Drawing/Display Mode</u>.

Bit Register

The component is a bit indicator when "Bit Register" is selected. The method to input bit address can be seen in: <u>Detailed manual/General functions/Address editor/Standard Bit Address</u> <u>Input</u>.

• Status No.

The status of a bit address can be ON or OFF. So it is 2 here in default and can not be modified.

• Condition

Positive Logic

State 0 is OFF and state 1 is ON.

Negative LogicState 0 is ON and state 1 is OFF.

• Flash Mode

It includes three modes: "None", "Blink Text" and "Blink Picture". You can select each status in left table and then set the flash mode for the status selected.

NoneIt means no flashing.

Blink TextText can flash in a frequency.

Blink Picture
 Picture can flash in a frequency.

• Flash Freq.

Picture or text will flash in a designated frequency. The frequency can be a multiple of 0.1 second.

Detailed attribute information of the current bit indicator light can be seen in the table at the left bottom.

4.6.2.2Word Indicator Light

witch Ind	dicator Light Lable Graph	ics Dynamic Graphics Display	
🛛 Use Indi	cator		
Display	Mode: Register Control •		
0	Bit Register Word Registe	er Combined Bits	
A	ddress: LW0		
			Condition: 💿 Range 🔘 Bit
Status N	lo.: 2 🜩		
	ore than one state condition	s are met, the	Read Value == A(0) None
minimun	n entry valid state.		
Status	Condition Tag Content	Blink Frequency((
0	LW0 == 0	None	A Constant • 0
1	LW0 == 1	None	
2(Error) Other	None	
			Flash Mode: None 🔻
			Flash Freq.: 5 🔹 x0.1S
Illegal In	put: 🔍 Show Error Status 🔘	Keep Current Status	
	put: Show Error Status r Notification	Keep Current Status	

Display Mode

The "Display Mode" can be "Register Control" or "Automatic looping".

• Word Register

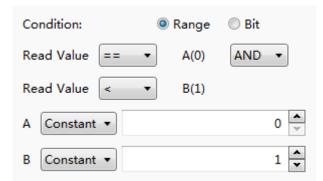
The component is a word indicator when "Word Register" is selected. The method to input bit address can be seen in: <u>Detailed manual/General functions/Address editor/Standard Byte</u> <u>Address Input</u>.

• Status No.

The range of the status number is 1~256. Each status corresponds to the value of the word address. When many statuses satisfy the condition at the same time, only the status with the minimum value will be effective.

- Condition
- Range

The status content (value) will be determined according to the comparison and logic operation result of the word address value. The comparison operation includes ">", "<", ">=", "<=", "==" and "!=". The logic operation can be "AND", "OR" or "None".



≻ Bit

Text or picture can be displayed according to the state of one bit of the word address, e.g.: bit LW0.1 of address LW0.

"Positive Logic" means that State 0 is OFF and state 1 is ON.

"Negative Logic" means that State 0 is ON and state 1 is OFF.

• Flash Mode

It includes three modes: "None", "Blink Text" and "Blink Picture". You can select each status in left table and then set the flash mode for the status selected.

NoneIt means no flashing.

Blink TextText can flash in a frequency.

Blink PicturePicture can flash in a frequency.

• Flash Freq.

Picture or text will flash in a designated frequency. The frequency can be a multiple of 0.1 second.

Detailed attribute information of the current word indicator light can be seen in the table at the left bottom.

	Status	Condition		Tag Content	Blink	Frequen
	0	LW0 Bit0 OFF	:		Text	5
	1	LW0 == 1			Picture	5
	2(Error)	Other			None	
I	legal Inp	ut:	ror Sta	itus 🔘 Keep (Current S	tatus

Illegal Input

The value of word address doesn't satisfy the condition preset.

Show Error Status

The indicator displays the "Error" status when illegal input happened. That is the last status displayed in the table.

Keep Current status

The indicator keeps the current status when illegal input happened.

• Error Notification

You can select a bit address here. It will be set to ON if the word address value doesn't satisfy with the condition. It will be set to OFF when the condition is satisfied.

4.6.2.3 Multi Bit Combination Indicator Light

Switch/Indicato	or Light			2 ×
Switch Indi	icator Light Lable Graphics D	ynamic Graph	nics Displa	y .
🔽 Use Indic	ator	340		
Display N	Node: Register Control 🔹		-	
🔘 E	Bit Register 🔘 Word Register 🖲 C	ombined Bits	Bit No.:	2 🚔 Data Type: Unsigned 👻
Starting	Address: LB0			
	a: 3 ♠ re than one state conditions are entry valid state.	met, the		Condition: Range Read Value > A(1) None
Status	Condition	Tag (Blink	Fre	
0	Multi Bit Combination Value > 1	None		A Constant • 1 •
1	Multi Bit Combination Value > 1	None		
2	Multi Bit Combination Value > 1	None		
3(Error)	Other	None		Flash Mode: None 🔻
				Flash Freq.: 5 🗢 x0.1S
	ut: Show Error Status Keep Notification	Current Statu	s	
Help	Description:			OK Cancel

Display Mode

The "Display Mode" can be "Register Control" or "Automatic looping".

• Combined Bits

The status displayed is determined by a multi bit combination condition.

• Bit No.

The condition can be a combination of 2~32 bits. The "Bit No." means the number of bits.

- Data Type
- Unsigned

If the number of bits is n, the combination value will be 0~2n-1.

Signed

If the number of bit is n, the combination value will be -2n-1~2n-1-1.

• Starting Address

The starting address is closely associated to the number of bits. For example, if the starting address is LBO and the number of bits is 2, a combination will be formed. LB1 will be the high bit and LBO will be the low bit. The range of 2 bits combination value will be 0^{-3} if the data type is unsigned. The range of 2 bits combination value will be -2^{-1} if the data type is signed.

• Status No.

The range of the status number is 1~256. Each status corresponds to the value of the word address. When many statuses satisfy the condition at the same time, only the status with the minimum value will be effective.

- Condition
- Range

The status content (value) will be determined according to the value of the combined bits. The comparison operation includes ">", "<", ">=", "<=", "==" and "!=". The logic operation can be "AND", "OR" or "None".

Condition:	Range		
Read Value == •	A(0)	AND	•
Read Value < 🔻	B(1)		
A Constant •			0
B Constant •			1 🔹

• Flash Mode

It includes three modes: "None", "Blink Text" and "Blink Picture". You can select each status in left table and then set the flash mode for the status selected.

NoneIt means no flashing.

Blink TextText can flash in a frequency.

Blink PicturePicture can flash in a frequency.

• Flash Freq.

Picture or text will flash in a designated frequency. The frequency can be a multiple of 0.1 second.

Detailed attribute information of the current component can be seen in the table at the left bottom.

S	Status	Condition		Tag	Blink	Frec
0		Multi Bit Com	bination Value ==	1	None	
1		Multi Bit Com	2	None		
2		Multi Bit Com	bination Value ==	3	None	
3	(Error)	Other			None	
Illeç	gal Inp	ut: @ Show Er	ror Status 🔘 Keep	o Curre	nt Status	5

Illegal Input

The multi bit combination value doesn't satisfy the condition preset.

Show Error Status

The indicator displays the "Error" status when illegal input happened. That is the last status displayed in the table.

Keep Current status

The indicator keeps the current status when illegal input happened.

• Error Notification

You can select a bit address here. It will be set to ON if the multi bit combination value doesn't satisfy the condition. It will be set to OFF when the condition is satisfied.

4.6.2.4 Display Mode

You can find the "Display Mode" if you check the "Use Indicator" in the property TAB of "Indicator Light". The display modes include "Register Control" and "Automatic looping".

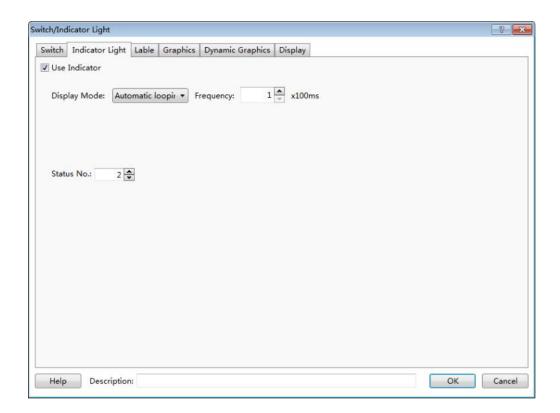
1 Register mode

The "Register Control" mode can be Bit Registers, Word Registers or Combined Bits.

ch/Indicat witch Ind	-	t Lable Graphics	Dynan	nic Graphics	Display			8
	Mode: Re Bit Register	egister Control ▼ ♥ Word Register♥ LB0		ned Bits				
	lo.: 2 ore than on n entry valid	e state conditions a	re met, t	the		Condition: Positiv	veLogic	NegativeLogic
Status	Condition	Tag Content	Blink	Frequency(0]			
123	LB0 OFF		None		1			
1	LB0 ON		None		I			
						Flash Mode:	None	▼ 5 🔷 x0.1S
						Flash Freq.:		5 😴 x0.1S
Help	Descriptio	on:						OK Cancel

2 Automaticlooping

All the status will be cycled to display according to the specified frequency if the display mode is "Automaticlooping". The unit of frequency is 100 milliseconds. The setting is shown as below.



4.6.3 Numeric Value and Character Display

4.6.3.1Numeric Value Display

4.6.3.1.1General

• Operation Attribute

The "Operation Attribute" includes four operation types: "Numeric Display"," Numeric Input"," Character Display" and "Character Input". The operation type of this current component can be modified here. It is highly efficient for the project modifying and maintaining.

neric Dis	piay			
ieneral	Number Format Fo	nt Graphics	Dynamic Graphics Display	
Operatio	on Attribute: 🔘 Num	eric Display 🤘	Numeric Input 🔘 Characters Display 🔘 Character	rs Input
			Password	
10000	Address:			
	Address Tag	NS 1		
Deivce:	LOCAL:[Local Registe	r]	-	
Addres	s Type: LW	•		
Addres		System	Register	
	(Range) DDDDDD(0	Contraction of the local division of the loc	- Word	
🗌 Add	ress Index			

Password

When the "Password" is checked, "*" will be displayed in the component (See the figure below). It is always used for the numeric value input component. The numeric value display component is not used generally.

•		÷.	•	•	•	•	•	•	•	•		•	•	•	•	•	r.															
	•	ł	•	·	·	·	•	·	·	·	•	·	·	·	·	·	ŀ.	·	·	·	·	·	·	·	·	·	·	·	·	·	·	
	•	ł	·	·	·	*	• • •	*	4	ŧ.	*	.,	k.	·	·	·	ŀ.	·	·	·	·	·	·	·	·	·	·	·	·	·	·	
	•	t	•	•	•	•	•	•	•	•	•	•	•	•	•	•	Ŀ.	·	·	·	·	·	·	·	·	·	•	·	·	·	•	
	•	ł	•	•	•	•	·	•	•	•	•	·	·	÷	•	•	Ŀ.	·	·	·	·	·	·	·	·	·	·	·	•	•	·	
	•	÷	•	•	•	•	•	•	•	•	•	•	•	•	•	•		·	·	·	·	·	·	·	·	·	•	•	·	•	•	
	•	·	•	·	·	•	·	•	•	·	•	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	•	•	·	
	•	·	•	·	·	•	·	•	•	·	•	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	•	•	·	
	•	·	•	·	·	•	·	•	•	·	•	·	·	·	·	·	•	·	·	·	•	·	·	·	·	·	·	·	•	•	·	
	•	·	•	·	·	•	·		•	·	•	·	·	·	·	·	·	·	·	·	•	·	·	·	·	·	·	·	•	•	·	
	•	·	•	·	·	•	·		•	·	•	·	·	·	·	·	·	·	·	·	•	·	·	·	·	·	·	·	•	•	·	
	•	·	•	·	·	•	·	•	•	·		·	·	·	·	·	·	·	·	·	•	·	·	·	·	·	·	·	•	•	·	
	•	•	·	·	·	·	·	·	·	·		·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	
	•	•	·	·	·	·	·	·	·	·		·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	

Read Address

Use Address Tag

imeric Di	splay								?
General	Number Format	Font	Graphics	Dynamic Graphics	Display				
Operati	on Attribute: 🔘	Numeric	: Display (🛛 Numeric Input 🏾 🔘	Characters	Display	Character	s Input	
				Passwor	d				
🔽 Use	Address: Address Tag Ru LOCAL:[Local Ru Mo		ime	•					
	s Type: LW		*						
Addres	s: 0	0 00		Register ₩ Word					
	ress Index	(0 00)	copj. 2						

When this function is checked, variables in the address tag library can be directly linked by the component (See address tag library details in:<u>Detailed manual/Library/Address Tag Library</u>). The address tag library can be used to improve the project maintaining efficiency. If many components in the project are linked to a same variable in the address tag library and this address need to be modified, it is only necessary to modify the variable address linked in the tag library without modifying each component.

Address setting

meric Di	splay						-?
General	Number Format	Font G	raphics	Dynamic Graphics Disp	olay		
Operati	on Attribute: 🔘 N	lumeric D	isplay 🤇	Numeric Input Chara	acters Display 🔘 Cha	racters Input	
Use Deivce: Station Addres Formati Rate:	(Range) DDDD(0~2 Normal	ndex	• System	Register • Word			
Help	Description:					ОК	Cancel

The address setting includes the attributes : "Device", "Address Type", "Address", "Format (Range)", "Address Index", and so on. Please see: <u>Detailed manual/ General functions/ Address</u> editor/ Standard Byte Address Input.

4.6.3.1.2Number Format

Data Type

The "Data Type" can be "16-bit Signed", "16-bit Unsigned", "32-bit Signed", "32-bit Unsigned", "16-bit BCD", "32-bit BCD", "16-bit Hexadecimal", "32-bit Hexadecimal", "16-bit Binary", "32-bit Binary" or "Single precision floating point number".

meric Display General Numb	er Format Font Graphics Dyr	namic Graphics Display
Data Type: Integer digi Upper/Lowe Minumum: Maximum:	16-bit Unsigned 16-bit Signed 16-bit Unsigned 32-bit Signed 32-bit Unsigned 16-bit RCD	0 Display Positive Sign Zero Padding Left Below Lower: Over Upper
Help De	scription:	OK Cance

• Data setting

The "Data setting" includes "Integer digits", "Decimal Point", "Display Positive Sign" and "Zero Padding Left".

meric Display						8
General Numb	er Format	Font	Graphics	Dynami	c Graphics Display	
Data Type:	Single pred	ison fl	oating poin	t numbe		
Integer digi	ts 2	÷ -	Decimal Poi	nt:	2 😴 🗹 Display Positive Sign 📝 Zero Padding Left	
Upper/Lowe	er Limit of N	lumber	r			
Minumum:	Constar	•	-9999	.99 🜲	Below Lower:	
Maximum:	Constar	•	9999	.99	Over Upper	

The "Integer digits" means the integer digit number of the data. The "Decimal Point" means the decimal digit number of the data.

Note: when the data type is an integer and the decimal bit is not zero, the value displayed will reduce to satisfy the decimal digit number. For example, if the data is an integer "55" and two decimal bits are set, the value displayed will be "0.55". In fact, only the value and the type of the data displayed can be modified by this function. The actual value and the actual type are not modified. It is still the integer "55".

lumeric Disp	olay				? *
General	Number Format Fo	ont Graphics Dynam	nic Graphics Display	(
Data T	/pe: Single preciso	on floating point numbe	er 🔻		
Intege	r digits 4 🖨	Decimal Point:	2 🗘 🔽 Display	Positive Sign 📝 Zero Padding Let	ft
Upper	/Lower Limit of Num				
Minu	mum: Constar •		Below Lower:	Color for exceedin 💌 🍠 🛽	Flicker
Maxi		-9999.99 🗢	V Over Upper	Color for exceeding	202 C
IVIDAI	ium. Constar •	9999.99	Ver Opper		Flicker
Help	Description:				OK Cancel

• Upper/Lower Limit of Number

You can set the data upper limit in "Minimum" and the data lower limit in "Maximum". And you can set the font color of the data beyond the limit. When the "Flicker" is checked, the text will flash when the data is less than the lower limit or greater than the upper limit.

- Enable Number Operation
- Proportion convert

	r Format Font G	Graphics Dynamic	Graphics Display		
Data Type: S	ingle precison floa	ting point number	•		
Integer digits	4 - De	cimal Point:	2 🗢 🔽 Display P	ositive Sign 👿 Zero Paddir	ng Left
Upper/Lower	Limit of Number				
Minumum:	Constar •	500.00 🗢	Below Lower:	Color for exceedin 💌	📝 🗹 Flicker
Maximum:	Constar 💌	1000.00 🖨	Voer Upper	Color for exceeding 👻	📝 🔽 Flicker
Minimum © Zoom	Constant Explain Constant	0 🔹		Constant • 100	
Gains:			ND - Constant		
Cains:	eration Result Result		ırn Left 🔹 🛛 0	Bit	

HTP Designer Configuration Software User Manual

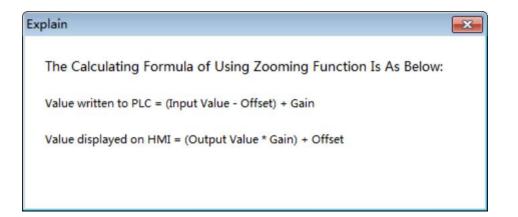
When the function of "Proportion Convert" is activated, the value displayed will be the result after proportional conversion. The proportional conversion formula is displayed when you click the button "Explain".

Explain
The Calculating Formula of Using Proportional Conversion Function is As Below:
Write PLC Value =Minimum Input Value+ (Output Value-Minimum Ratio Value)*(Maximum Output Value-Minimum Input Value)/(Maximum Ratio Value-Minimum Ratio Value)
HMI Indicating Value= Minimum Ratio Value+ (Output Value-Minimum Input Value)* (Maximum Ratio Value-Minimum Ratio Value)/(Maximum Input Value-Minimum Input Value)

Zoom

lumeric Display						-?- X
General Number	Format Font	Graphics Dynami	Graphics Displ	ay		
Data Type: Si	ngle precison flo	ating point number	•			
Integer digits	4 🔦 D	ecimal Point:	2 🗘 📝 Displa	y Positive Sign 👿	Zero Padding Left	
Upper/Lower	Limit of Number					
Minumum:	Constar •	500.00 🜩	Below Lowe	r: Color for ex	ceedin 💌 📝 🗹 Flic	ker
Maximum:	Constar 🔻	1000.00	Vover Upper	Color for ex	ceedin ِ 💌 📝 🔽 Flick	ker
Enable Num	ber Operation					
Minimum © Zoom	Constant *	0 🜩	Maximum	Constant *	100 📩	
Gains:	Constant •	1	Offset:	Constant •	0 🤤	
O Logic Ope	ration Result	= Source A	ND * Const	ant +	(Hex)	
O Shift	Result	= Source	urn Left 👻	0 🐥 Bit		
Help Desc	ription:				0	OK Cancel

When the function of "Zoom" is selected, the value displayed will be the result after zooming conversion. The zooming conversion formula is displayed when you click the button "Explain".



Logic Operation

meric Display	8
General Number Format Font Graphics Dynamic Graphics Display	
Data Type: 32-bit Signed 🔹	
Integer digits 4 🗘 Decimal Point: 0 👻 🗹 Display Positive Sign 📝 Zero Padding Left	
Upper/Lower Limit of Number	
Minumum: Constar • Below Lower: Color for exceedin • 📝 🗹 Flicker	
Maximum: Constar 🔹 9999 🚔 📝 Over Upper 🚺 Color for exceeding 💌 📝 🖓 Flicker	
Inable Number Operation	
Proportion Convert Explain Minimum Constant O A Maximum Constant 100 A	
© Zoom Explain	
Gains: Constant * 1 × Offset: Constant * 0 ×	
Electric Decaration Result = Source AND Constant O (Hex)	
Shift Result = Source Turn Left ▼ 0 → Bit	
Help Description: OK	Cancel

The data can be logically operated by the component which the logic operation can be "And", "Or" or "Exclusive or". And the result of logic operation will be displayed.

> Shift

meric Display	8
General Number Format Font Graphics Dynamic Graphics Display	
Data Type: 32-bit Signed 🔹	
Integer digits 4 🗙 Decimal Point: 0 🐳 🗹 Display Positive Sign 🖉 Zero Padding Left	
Upper/Lower Limit of Number	
opper/cower clinic of Number	
Minumum: Constar 🔹 _9999 🚔 🛛 Below Lower: Color for exceedin 👻 📝 🖉 Flicker	
Maximum: Constar 🔹 9999 👻 🗹 Over Upper 📕 Color for exceeding 👻 📝 Flicker	
Enable Number Operation	
Proportion Convert Explain	
Minimum Constant * 0 × Maximum Constant * 100 ×	
© Zoom Explain	
Gains: Constant * 1 * Offset: Constant * 0 *	
Logic Operation Result = Source AND + Constant + 0 + (Hex)	
Shift Result = Source Turn Left ▼ 3 ♥ Bit	
Help Description: OK	Cancel

The data can be shifted left or right by the component. And the result of shifting operation will be displayed.

4.6.3.1.3Font

The detailed font setting can be seen: <u>Detailed manual/ General functions/ Drawing/</u> <u>Font Settings</u>.

4.6.3.1.4Graphics

The detailed graphics setting can be seen: <u>Detailed manual/ General functions/</u> <u>Drawing/ Graphic edit</u>.

4.6.3.1.5Dynamic Graphics

The detailed graphics setting can be seen: <u>Detailed manual/ General functions/</u> <u>Drawing/ Dynamic Graphics</u>.

4.6.3.1.6Display

The detailed display setting can be seen: <u>Detailed manual/ General functions/</u> <u>Drawing/ Display</u>.

4.6.3.2Numeric Value Input

The attributes setting of the "Numeric Value Input" component is generally same to the "Numeric Value Display" component. The differences are detailed as below.

4.6.3.2.1General

• Password

neric In	put							8
eneral	Number Format	Keyboard Setting	Font	Graphics	Dynamic Graphics	Control Settings	Display	
Operati	on Attribute: 🔘 N	Numeric Display	Numeri	Input C	Characters Display	Characters Inp	ut	
					1			
Read	ling And Writing Ad	ddress Is Different	1	Passwoi	rd			
Pood /	ddress:							
	Address Tag Rur	ning Time	• 📎	ř III				
			<u>_</u>					
)eivce:	LOCAL:[Local Reg	jister]		k. I				
Addres	s Type: LW	w.						
Addres	s: 0	System R	legister					
ormat	(Range) DDDDDD(0 Occupy: 1	Word	le i				
Add	ress Index							
Auu	iess muex							

When the "Password" is checked, "*" will be displayed in the component (See the figure below). It can be checked if the current component is used to input the password.

OK

Cancel

•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	•	•	•		•	•	•	•	·	·	·	·	•	·	·	·	·	·	·	•	•	·	•	•	·	•	•	•	•	•	·	•
															_																	
			- 1																													
•	•	•	- 1																													
•	•	•	·	•	•	*	-	÷-	*	17	k-	*	• •	•	Ŀ.	·	·	·	·	·	·	·	·	·	·	·	·	·	•	·	·	·
•	•	•	·	•	•	•	•	•	•	•	•	•	•	•	Ŀ.	·	·	·	·	·	·	·	•	·	•		•	•	•	•	·	•
															Ŀ.																	
															۰.																	
•	•	•	•	•	•	•	•	•	•	•	•	·	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
•	·	·	•	·	·	·	·	•	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·
•			•	•		1	1	1		1	1	-	-	1	1		1		1	1				1	1		1	1	1	-	1	•

Reading Address" and "Writing Address

Description:

Help

Reading And Writing Address Is Different	sword
Read Address: Use Address Tag Deivce: [LOCAL:[Local Register] Address Type: [LW	Write Address: Use Address Tag Deivce: LOCAL:[Local Register] Address Type: LW Address: 0 System Register
	Format(Range) DDDDDDD(0 Occupy: 1 + Word

The numeric value input component is integrated with functions of reading data from an address and writing data to an address. When the "Reading And Writing Address Is Different" is not checked, the using method is same to the "Numeric Value Display" component. When the "Reading And Writing Address Is Different" is checked, different address can be set in the "Read Address" and in the "Write Address".

4.6.3.2.2Keyboard Setting

See detailed functions in: Detailed manual/ General functions/ Drawing/ Keyboard setting.

4.6.3.3Character Display

4.6.3.3.1General

Operating Attribute

eneral Characters Setting Font Graphics Dynamic Graphics Display	
Dperation Attribute: ONumeric Display ONumeric Input OCharacters Display Characters Input Browse Method: VScrollbar Screen Scrollbar Width 20	
ASCII Password Unicode Swap the High byte and the Low b	yte
Read Address:	
Use Address Tag	
Deivce: LOCAL:[Local Register]	
Address Type: LW	
Address: 0 System Register	
Format(Range) DDDDDD(0 Occupy: 1 v Word	
Address Index	

The "Operation Attribute" includes four operation types: "Numeric Display"," Numeric Input", "Character Display" and "Character Input". If you want the current Character Display component change to the Character Input component or Numeric component, you can modify it here. It is highly efficient for the project modifying and maintaining.

Browse Method

The "Browse Method" includes "Scrollbar" and "Screen". You can select the "Scrollbar" or the "Screen" or both ways to browse the content of the current character component. The scrollbar width can be freely set. The "Screen" browse method is only effective for a capacitive screen.

Display Mode

eneral	Characters Setting	Font	Graphics	Dynamic Graphics	Display				
Operatio	on Attribute: 🔘 Nur	meric [Display 🔘 🛛	Numeric Input 🍥 Cl	h <mark>aracters l</mark>	Display 🔘 Cha	racters Input	i l	
		E	Irowse <mark>Me</mark> t	hod: 🔽 Scrollba	r 🔽 Scr	een Scrollbar	Width 20	*	
				ASCII	Unicode	e 📃 Swap the H	ligh byte and	I the Low byte	
Read A	ddress:		L						
Use	Address Tag								
Deivce:	LOCAL:[Local Regist	ter]		•					
Addres	s Type: LW		-						
Addres	s: 0		System Re	egister					
Format((Range) DDDDDD(0	. Occu	py: 1 -	Word					
				_					
Add	ress Index								

ASCII

If it is checked, characters will be displayed in ASCII format. In this format, only ASCII characters will be displayed, including numbers, symbols and English letters. Chinese characters are not supported to display.

Password

If it is checked, characters will be displayed in "*" mode.

Unicode

If it is checked, characters will be displayed in UNICODE. In the UNICODE mode, each Chinese character or English letter will occupy one character (two bytes).

Swap the High byte and the Low byte

After the "ASCII" is checked, you can select the function "Swap the High byte and the Low byte".

• Read Address

Use Address Tag

an en an		-	- II			1				
eneral	Characters Setting	Font	Graphics	Dynamic Graphics	Display					
Operatio	on Attribute: 🔘 Nur	meric D	isplay 🔘 I	Numeric Input () C	haracters	Display O	Characters	Input		
			• •							
		B	rowse Met	thod: 🔽 Scrollba	r 🗸 Sc	reen Scroll	oar Width	20 🔹		
				ASCII Password	Unicod	e Swan t	he High hu	e and the	Low byte	
					Oncoo	e swap t	ne riigh by	e and the	cow byte	
Read A	ddress:									
Use .	Address Tag Runni	ng Tim	e	- 📎						
Deivce:	LOCAL:[Local Runni			· ·						
	Moto	r Speed	4							
Addres	s Type: LW		*							
Addres	s: 0 *		System Re	egister						
Format	(Range) DDDDDD(0	. Occu		Word						
		5 - 11 6 - 5 - 5 - 5								
Add	ress Index									
-										

When this function is checked, variables in the address tag library can be directly linked by the component (See address tag library details in: <u>Detailed manual/Library/Address Tag Library</u>). The address tag library can be used to improve the project maintaining efficiency. If many components in the project are linked to a same variable in the address tag library and this address need to be modified, it is only necessary to modify the variable address linked in the tag library without modifying each component.

The address setting includes the attributes : "Device", "Address Type", "Address", "Format (Range)", "Address Index", and so on. Please see: <u>Detailed manual/ General functions/ Address</u> editor/ Standard Byte Address Input.

4.6.3.3.2Characters setting

• Row Settings

General Characters Setting Font Graphics Display Row Settings Total Row number 			1		1		
Total Row number Image: Constraint of the second secon	ieneral	Characters Setting	Font	Graphics	Dynamic Graphics	Display	
	Row Set	ttings Total Row numb Show Row numb r of Characters per lin each 2 ASCII cha Chinese characte register. 2. If "Use UNICODI each ASCII chara	er 1 er 1 me 2 E" is no aracter er use E" is se acter o	t selected, r each	Row Space		

The "Row Settings" includes "Total Row number", "Show Row number" and "Number of Characters per line". The "Total Row number" means the number of the rows which the current character component contains. The "Show Row number" sets the number of rows displayed in the current character component. If the number of rows displayed is smaller than the number of total rows, a scrollbar will appear automatically.

• Row Space settings

General	Characters Setting	Font	Graphics	Dynamic Graphics Display	
Row Se		eer 1 ne 2 E" is n aracter er use E" is s acter c	Advance Advance Space Line V Sha Colo	Row Space Settings	
Help	Description:			OK	ancel

A dialog will pop up when you click the "Row Space Settings" button. You can set the attributes such as "Horizontal scaling", "Line space", "Words space", "shadow Effects", and so on.

4.6.3.3.3Font

See detailed font setting in: <u>Detailed manual/ General functions/ Drawing/ Font</u> settings.

4.6.3.3.4Graphics

See detailed Graphics setting in: <u>Detailed manual/General functions/Drawing/Graphic</u> edit.

4.6.3.3.5Dynamic Graphics

See detailed Dynamic Graphics setting in: <u>Detailed manual/ General functions/</u> <u>Drawing/ Dynamic Graphics</u>.

4.6.3.3.6Display

See detailed display setting in: Detailed manual/General functions/Drawing/Display.

4.6.3.4Character Input

4.6.3.4.1General

• Operation Attribute

General	Characters Setting	Keyboard Setting Font	Graphics	Dynamic Graphics	Control Settings	Display	
Operati	on Attribute: 🔘 Nu	meric Display 🔘 Numeric	: Input 🔘 C	haracters Display 🧕	Characters Input	7	
		Browse Method:	Scrollba	r 👿 Screen Scrol	lbar Width 20		
_			-				
Read	ling And Writing Add	ress Is Different 🔽 ASCII	Password	Unicode Swap	the High byte and t	the Low byte	
Read A	Address:						
Use Use	Address Tag						
Deivce:	LOCAL:[Local Regis	ter] •					
	s Type: LW	<u> </u>					
Addres		System Register					
Format	(Range) DDDDDD(0	Occupy: 1 - Word					
	ress Index						
Add	ress Index						

The "Operation Attribute" includes four operation types: "Numeric Display"," Numeric Input"," Character Display" and "Character Input". If you want the current Character Input component change to the Character Display component or Numeric component, you can modify it here. It is highly efficient for the project modifying and maintaining.

Browse Method

The "Browse Method" includes "Scrollbar" and "Screen". You can select the "Scrollbar" or the "Screen" or both ways to browse the content of the current character component. The scrollbar width can be freely set. The "Screen" browse method is only effective for a capacitive screen.

• Display Mode

ieneral	Characters Setting	Keyboard Setting Font	Graphics	Dynamic Graphics	Control Settings	Display	
Operatio	on Attribute: 🔘 Nur	meric Display 🔘 Numeric	Input OC	haracters Display 🧕	Characters Input		
		Browse Method:	🔽 Scrollba	r 👿 Screen Scrol	Ibar Width 20	*	
Read	ing And Writing Add	ress Is Differen <mark>t 🔽</mark> ASCII	Password	🔲 Unicode 🔲 Swap	the High byte and	the Low byte	
Read A	ddress:						
Use	Address Tag						
Deivce:	LOCAL:[Local Regist	ter] •					
Addres: Format(s Type: LW s: 0	System Register Occupy: 1 + Word					

ASCII

If it is checked, characters will be displayed in ASCII format. In this format, only ASCII characters will be displayed, including numbers, symbols and English letters. Chinese characters are not supported to display.

Password

If it is checked, characters will be displayed in "*" mode.

Unicode

If it is checked, characters will be displayed in UNICODE. In the UNICODE mode, each Chinese character or English letter will occupy one character (two bytes).

Swap the High byte and the Low byte

After the "ASCII" is checked, you can select the function "Swap the High byte and the Low byte".

- Read Address
- Reading And Writing Address Is Different

The character input component is integrated with functions of reading data from an address and writing data to an address. When the "Reading And Writing Address Is Different" is not checked, the using method is same to the "Character Display" component. When the "Reading And Writing Address Is Different" is checked, different address can be set in the "Read Address" and in the "Write Address".

ieneral	Characters Setting	Keyboard Setting	Font	Graphics	Dynamic Graphics	Control Settings	Display	
Operati	on Attribute: 🛛 Nur	meric Display 🔘 Nu Browse Metho			haracters Display 🧕 r 🛛 🗑 Screen Scroll		* *	
Read	ing And Writing Add	ress Is Different 🔽 A	SCII	Password	🗌 Unicode 🔝 Swap	the High byte and	the Low byte	
Read A	ddress:			Write	Address:			
Use	Address Tag			📰 Use	Address Tag			
Deivce:	LOCAL:[Local Regist	er]	•	Deivce:	LOCAL:[Local Regis	iter]	•	
Addres Format	s Type: LW s: 0	System Regi	ister Word	Addres Format	s Type: LW s: 0	System R	egister Word	

Use Address Tag

eneral Characters Setting Keyboard Setting Font Graphics Dynamic Graphics Control Settings Display Operation Attribute: Numeric Display Numeric Input Characters Display Characters Input Browse Method: Scrollbar Screen Scrollbar Width 20 Reading And Writing Address Is Different ASCII Password Unicode Swap the High byte and the Low byte Read Address: Use Address Tag Image: System Register Address Type: System Register Format(Range) DDDDDD(0 Occupy: Image: Word	eneral 😡	Characters Setting	Variational Canalog	Fant	Combine	Durante Carabia	Cantural	Cattleres	Display	
Browse Method: Scrollbar Screen Scrollbar Width 20 Reading And Writing Address Is Different ASCII Password Unicode Swap the High byte and the Low byte Read Address: V Use Address Tag Deivce: LOCAL:[Local Running Time Motor Speed Address Type: LW Address: 0 \$ystem Register Format(Range) DDDDDDD(0 Occupy: 1 Word	eneral 😈	characters setting	Reyboard Setting	Pont	Graphics	Dynamic Graphics	Control	settings	Display	
Reading And Writing Address Is Different ASCII Password Unicode Swap the High byte and the Low byte Read Address: Use Address Tag Deivce: LOCAL:[Local Running Time Motor Speed Address Type: LW System Register Format(Range) DDDDDDD(0 Occupy: 1 Word	peration	Attribute: 🔘 Num	eric Display 🔘 Num	eric Inp	out 🔘 Chai	acters Display 🧕 Cl	haracters	Input		
Reading And Writing Address Is Different 🖉 ASCII Password Unicode Swap the High byte and the Low byte Read Address: Use Address Tag Deivce: LOCAL:[Local Running Time Motor Speed Address Type: LW Address: 0 \$ System Register Format(Range) DDDDDDD(0 Occupy: 1 Word			Design Marked	1772	C		145 44	-		
Read Address: Use Address Tag Deivce: LOCAL:[Local Motor Speed Address Type: LW Address: 0 \$ystem Register Format(Range) DDDDDDD(0 Occupy: 1 * Word			browse wiethod:	V	Scrollbar	Screen Scroliba	r width	20 👻		
Vuse Address Tag Deivce: LOCAL:[Local Motor Speed Address Type: LW Address: 0 \$\subset\$ System Register Format(Range) DDDDDDD(0 Occupy: 1 Word	Reading	And Writing Addre	ess Is Different 🔽 ASC		assword	Unicode Swap the	High byt	te and the	Low byte	
Vuse Address Tag Deivce: LOCAL:[Local Running Time Motor Speed Address Type: LW Address: 0 \$\system Register Format(Range) DDDDDDD(0 Occupy: 1 Word	-				-					
Address Type: LW * Address: 0 \$ystem Register Format(Range) DDDDDD(0 Occupy: 1 * Word										
Address Type: LW * Address: 0 ÷ System Register Format(Range) DDDDDD(0 Occupy: 1 * Word				<u>></u>						
Address Type: LW * Address: 0	Deivce: LO	DCAL:[Local Runnin	g Time	*						
Address: 0 🗢 System Register Format(Range) DDDDDD(0 Occupy: 1 👻 Word		Motor	Speed							
Address: 0 🗢 System Register Format(Range) DDDDDD(0 Occupy: 1 👻 Word										
Format(Range) DDDDDD(0 Occupy: 1 Vord	Address T	ype: LW	· · ·							
	Address:	0 *	System Registe	er						
Address Index	ormat(Ra	nge) DDDDDD(0	Occupy: 1 - Wo	ord						
Address Index										
	Addres	s Index								

When this function is checked, variables in the address tag library can be directly linked by the component (See address tag library details in:<u>Detailed manual/Library/Address Tag Library</u>). The address tag library can be used to improve the project maintaining efficiency. If many components in the project are linked to a same variable in the address tag library and this address need to be modified, it is only necessary to modify the variable address linked in the tag library without modifying each component.

The character address setting includes the attributes : "Device", "Address Type", "Adress", "Format (Range)", "Address Index", and so on. Please see: <u>Detailed manual/ General functions/</u> <u>Address editor/Standard Byte Address Input</u>.

4.6.3.4.2Characters Setting

• Row Settings

Row Settings Total Row number Show Row number 1 Show Row number 1 Number of Characters per line 2 Notes: 1. If "Use UNICODE" is not selected, each 2 ASCII characters or each Chinese character use one word register. 2. If "Use UNICODE" is selected, each ASCII character or each Chinese character use one word	Total Row number Image: Constraint of the second secon	eneral	Characters Setting	Keyboard Setting	Font	Graphics	Dynamic Graphics	Control Settings	Display	
Total Row number 1 Show Row number 1 Number of Characters per line 2 Notes: 1. If "Use UNICODE" is not selected, each 2 ASCII characters or each Chinese character use one word register. 2. If "Use UNICODE" is selected, each ASCII character or each	Total Row number 1 Show Row number 1 Number of Characters per line 2 Notes: 1. If "Use UNICODE" is not selected, each 2 ASCII characters or each Chinese character use one word register. 2. If "Use UNICODE" is selected, each ASCII character or each	Row Set	ttings							
Show Kow number 1 Number of Characters per line 2 Notes: 1. If "Use UNICODE" is not selected, each 2 ASCII characters or each Chinese character use one word register. 2. If "Use UNICODE" is selected, each ASCII character or each	Show Now number 1 Number of Characters per line 2 Notes: 1. If "Use UNICODE" is not selected, each 2 ASCII characters or each Chinese character use one word register. 2. If "Use UNICODE" is selected, each ASCII character or each		Total Row numbe	er 🧵 🗘	l	Row Spac	e Settings			
Number of Characters per line 2 Notes: 1. If "Use UNICODE" is not selected, each 2 ASCII characters or each Chinese character use one word register. 2. If "Use UNICODE" is selected, each ASCII character or each	Number of Characters per line 2 Notes: 1. If "Use UNICODE" is not selected, each 2 ASCII characters or each Chinese character use one word register. 2. If "Use UNICODE" is selected, each ASCII character or each		Show Row numbe							
each 2 ASCII characters or each Chinese character use one word register. 2. If "Use UNICODE" is selected, each ASCII character or each	each 2 ASCII characters or each Chinese character use one word register. 2. If "Use UNICODE" is selected, each ASCII character or each	Number	of Characters per lin							
each ASCII character or each	each ASCII character or each	Notes:	each 2 ASCII cha Chinese characte	racters or each						
Chinese character use one word	Chinese character use one word									
			Chinese characte	r use one word	_					

The "Row Settings" includes "Total Row number", "Show Row number" and "Number of Characters per line". The "Total Row number" means the number of the rows which the current character component contains. The "Show Row number" sets the number of rows displayed in the current character component. If the number of rows displayed is smaller than the number of total rows, a scrollbar will appear automatically.

Note:

If "Unicode" is not checked, each two ASCII characters or each one Chinese character occupies one word register.

If "Unicode" is checked, each ASCII character or each Chinese Character occupies one word register.

• Row Space settings

Row Settings Total Row number 1 Show Row number 1 Advanced Number of Characters per line 2 Notes: 1, If "Use UNICODE" is n each 2 ASCII character Chinese character use register. 2, If "Use UNICODE" is s each ASCII character Chinese character use V Shadow Effects Color: Shadow Deviation: X: 0 V: 0 OK	General	Characters Setting	Keyboard Setting	Font	Graphics	Dynamic Graphics	Control Settings	Display	
	Number	Total Row numb Show Row numb of Characters per lii 1. If "Use UNICOD each 2 ASCII cha Chinese character register. 2. If "Use UNICOD each ASCII chard	er 1 Advanced ne 2 E* is n Horizu aracter er use E* is s acter c er use Color	Space: (low Eff	caling: 100%	Vords Space: 0 ShadowColor v Y: 0			

A dialog will pop up when you click the "Row Space Settings" button. You can set the attributes such as "Horizontal scaling", "Line space", "Words space", shadow color and shadow deviation.

4.6.3.4.3Keyboard Setting

See detailed setting in: Detailed manual/ General functions/ Drawing/ Keyboard setting.

4.6.3.4.4Data font

See detailed font setting in: Detailed manual/ General functions/ Drawing/Font settings.

4.6.3.4.5Control Settings

See detailed control setting in: <u>Detailed manual/ General functions/ Drawing/ Control</u> settings.

4.6.3.4.6Display

See detailed display setting in: Detailed manual/General functions/Drawing/Display.

4.6.4 Toggle Switch and menu

4.6.4.1Bit Switch

The "Bit Switch" is used to set the action, switch type and text display of the bit switch which is used to change the bit state.

ggle Swite	ch						8
General	Toggle Switch	Graphics	Dynamic Graphics	Control Settings	Display		
Type:	Bit toggle ding Address a		Word toggle swi Address Are Differen				
	and Write Add						
Use Use	e Address Tag						
Deivce	e: LOCAL:[Loca	Register]	•				
Addre Forma	ess Type: LB ess: 0 at(Range) DDDE dress Index	 DDD(0	System Register				
	-	4					
Help	Description					ОК	Cancel

The "Bit Switch" component can be found on the tool bar or from the menu of Components.

F	ile	View Edit Window Drawing Comp	• (1	е I -Е	Rea ng	do ▼ abas ; i ⊞ ⊞ ∰ lish (United Sta ▼ 🍨 ;
ł		• 🢡 • 🖾 • 🔛 • 🕗 • 🖩 • 🖄 • 🖬	ul 1	-		- -
s		B_1:Basic V 🔛 Bit Switch				
Proj		123 Word Switch				
ect		😳 😳 😳 📰 Check list and select	on	b	oxe	s i.i.i.i
4		The Drop-down List				
Project N Find and		File Browser Box				
and		User Privilege				::::::
Kepla				:		
ſ	Com	nponent Library Macro Recipe Setup	Т	oc	ols	Help
2		Switch	٠	1	Π.	· ·· ·· 🗠 i]] 🖾 🤫 👒 🛰 🖷 🖷 📗
	9	Indicator Light	۲		B	1:Basic Window(1) 🔹 💽 🛅 💷 🤅
10	123	Numeric Value and Character Display	٠	k		
F	ню	Toggle Switch and menu	۲	H	e D	Bit Switch
	0	Timer and Data Transmission	۲	10	23	Word Switch
		Bar And Meter	۲		Ŷ	Check list and selection boxes
-	100	Curve Graphs	۲			The Drop-down List
	hand	Scale	۲	Ī	8	File Browser Box
		Table	۲	-	20	User Privilege
	-0-	Slider	۲	ſ		
	\$	Moving Component	۲	Ŀ	:	
		Window	•			na pana pana pana pana pana pana pana
		List	۲			
:	-	Tools	•		:	DIS EDG EDG EDG EDG EDG EDG
-	÷	Pipeline	•		:	

4.6.4.1.1 General

See details for bit address setting in: <u>Detailed manual/ General functions/ Address editor/</u> <u>Standard Bit Address Input</u>.

4.6.4.1.2 Toggle Switch

On the page of "Toggle Switch", you can set "Press" or "Release" for the action. And the switch type can be "On", "Off", "Inverse" or "Reset".

	aphics Dynamic Graphics Contro	ol Settings [Display	
Action: Press 🔹 Sv	witchType: On 🔹	Im	port from Favorit	e Font Templates.(I)
📃 Language Independent	On	◯ Vect	or Font 🧕 Grap	hic Font
Language: 1-English (Unite	ed S 👻 🔍 Inverse	Font:	Microsoft Sans	Serif 🔹
Use Text Library	Reset Text Library	Size:	16 • B <i>I</i>	
✓ Use Label			ne Alignment:	E I Advanced
Adaptive label size				
		_		
Tag Contents	Save Contents To Text Library		Microsoft	Sans Serif
		Copy Att	tr. to: All St	atus All Languanges All
Copy Text to: All Sta	tus All Languanges All			
Set label position by lang	guage state separately.	Index	Correspond	Tag Contents
Pos.: Left Right:	A A	0	0	
Top Bottom:	à À A	1	1	
Marquee				

Details for "Language" selection can be seen in:<u>Detailed manual/Setup/System Settings/</u> Language Settings.

Details for "Import Favorite Font Template" can be seen in: <u>Detailed manual/Setup/System</u> <u>Settings/Favorite Font Template</u>.

Details for "Text Library" can be seen in: Detailed manual/Library/Text Library.

Details for "Marquee" setting can be seen in: <u>Detailed manual/ General functions/ Drawing/</u> <u>Marquee</u>.

4.6.4.1.3 Graphics

Details for Graphics can be seen in: <u>Detailed manual/General functions/ Drawing/ Graphic</u> <u>edit</u>.

4.6.4.1.4 Control Settings

Details for control settings can be seen in: <u>Detailed manual/ General functions/ Drawing</u> <u>/Control settings</u>.

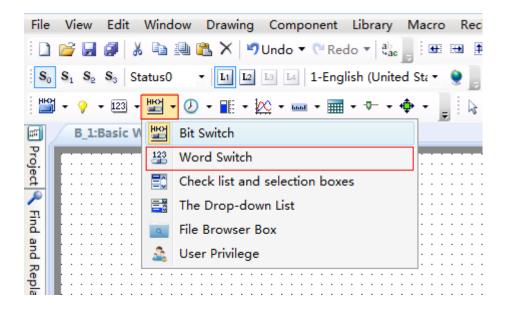
4.6.4.1.5 Display

Details for display setting can be seen in: <u>Detailed manual/ General functions/ Drawing</u> /<u>Display</u>.

4.6.4.2Word Switch

The word switch is used to set the action and text display for word address states.

The "Word Switch" component can be found on the tool bar or from the menu of Components.



Con	nponent Library Macro Recipe Setup	Tools Help						
	Switch	· 〒 🖆 🎒 🖼 🧐 💺 🖳 🐁						
9	Indicator Light	▶ B_1:Basic Window(1)						
123	Numeric Value and Character Display							
ню	Toggle Switch and menu	Bit Switch						
Ø	Timer and Data Transmission	I23 Word Switch						
E	Bar And Meter	Check list and selection boxes						
100	Curve Graphs	 The Drop-down List 						
hand	Scale	File Browser Box						
	Table	🕨 🍰 User Privilege						
-0-	Slider	•						
\$	Moving Component	 ENGLESS STOLENES STOLENES 						
	Window	 NULLINGI NULLIGI NULLIGI NULLIGI 						
8	List	•						
R	Tools	•						
4	Pipeline	• · · · · · · · · · · · · · · · · · · ·						

HTP Designer Configuration Software User Manual

4.6.4.2.1 General

gle Swit	tch					- ?-]
ieneral	Toggle Switch	Graphics	Dynamic Graphics	Control Settings	Display	
Type: Read Us Deivo Addro Addro Form	Bit toggle Bit and Write Add And Write Add And Write Add And Write Add Bit Address Tag Bit LOCAL:[Local Bit Stype: LW Bit Stype	e switch nd Writing A ress I Register]	Word toggle swi Address Are Differen . . System Register	tch	- Cobrad	
Help	Description	:				OK Cancel

See details for word address setting in: <u>Detailed manual/General functions/Address</u> editor/Standard Byte Address Input.

4.6.4.2.2 Toggle Switch

On the page of "Toggle Switch", the action can be set "Press" or "Release". The switch type can be set to "Add" or "Subtract". if "Non-cyclic" is checked and the switch type is "And", it will stop adding when the result exceeds the maximum value. If "Non-cyclic" is not checked for the "Add" switch type, it will start to shift again from the minimum value when the result reaches the maximum value. The "Status" can be set directly or by the Up or Down arrows.

Toggle Switch Graphics Dynamic Graphics Contr	rol Settings Display
Action: Press 🔹 SwitchType: Add 🔹 🗌 Non-cyclic	Import from Favorite Font Templates.(I)
Status: 2 Add Subtract	Vector Font (Graphic Font
Language: 1-English (United S 🔹 💽	Font: Microsoft Sans Serif 💌
Language Independent	Size: 16 • B I
Use Text Library Text Library	Multi-line Alignment:
✔ Use Label	
Adaptive label size	
Tag Contents Save Contents To Text Library	Microsoft Sans Serif
Copy Text to: All Status All Languanges All	Copy Attr. to: All Status All Languanges All
Set label position by language state separately.	Index Correspond Tag Contents
Pos.: Left Right: A	0 0
Top Bottom: 👔 🚵 🕭	1 1 🖍
	2(Error) Other
Marquee	
E Marquee	O Display error status Illegal Input:
	Preserve current state
	Error Notification

Details for "Language" selection can be seen in:<u>Detailed manual/Setup/System Settings/</u> Language Settings.

Details for "Import Favorite Font Template" can be seen in: <u>Detailed manual/Setup/System</u> <u>Settings/Favorite Font Template</u>.

Details for "Text Library" can be seen in: Detailed manual/Library/Text Library.

Details for "Marquee" setting can be seen in: <u>Detailed manual/ General functions/ Drawing/</u> <u>Marquee</u>.

4.6.4.2.3 Graphics

Details for Graphics can be seen in: <u>Detailed manual/General functions/Drawing/Graphic</u> edit.

4.6.4.2.4 Control Settings

Details for control settings can be seen in: <u>Detailed manual/ General functions/ Drawing</u> <u>/Control settings</u>.

4.6.4.2.5 Display

Details for display setting can be seen in: <u>Detailed manual/ General functions/ Drawing</u> /<u>Display</u>.

4.6.4.3Check list and selection boxes

The component of "Check list and selection boxes" is used to operate "Word register". The preset value is written into the register and the preset text is displayed when the current component is operated. The preset text corresponding to the status value which is equal to the word register will display automatically. See the following description for details.

Click the menu command of the "Check list and selection boxes" component and open the property TAB of this component.

4.6.4.3.1 General

	1			Les et	
eneral	Selector Setting	Graphics	Control Settings	Display	
				B	rowse Method:
Type	: 💿 List and Che	rk-Box 🔘 [)ron-down List	5	Scrollbar Scrollbar Width 20
.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	e cist and circ		nop down last		Screen Note: Only for capacitive screen.
Data	Source Compone	ent settings	•		
	eading And Writing	and	_		
	eading And writing	Address Is	Different		
Rea	ad Address:				
	Jse Address Tag				
Dei	vce: LOCAL:[Local	Registerl		•	
Den	LOCALILOCAL	registeri			
Add	Iress Type: LW		•		
		\$	System Re	gister	
For	mat(Range) DDDDI			Word	
1011	inat(inange) bobbe				
		Data Ty	pe: 16-bit Unsign	ed •	
- A	Address Index				

Browse Method

The "Browse Method" includes "Scrollbar" and "Screen". You can select the "Scrollbar" or the "Screen" or both ways to browse the content of the current component. The scrollbar width can be freely set and the default width is 20. The "Screen" browse method is only effective for a capacitive screen.

Data Source

The default is "Component settings". That means the data source is the word register.

• Reading And Writing Address Is Different

The default is not checked. That means the read address and the write address are same. When it is checked, the "Read" register and the "Write" register can be set separately. The value of the "Read" register will be compared with the preset value to determine the corresponding text display. The preset value corresponding to the status selected will be written into the "Write" register when the component is operated.

4.6.4.3.2 Selector Setting

On the page of "Selector Setting", the attributes such as the number of items ("Item Count"), the preset value of each item and the content to be displayed can be set.

eneral S	elector Setting	Graphics Control Settings Display	
Item Co	unt: 6	Selected Color	Language: 1-English (United S 👻 🔵
Line Spa	cing: 5	Background Color	🔲 Language Independent
		Border Color	O Use Text Library
			Use Tag I Adaptive label size.
Index	Correspond	Tag Content	Tag Content Save Tag Content To Text Library
0	0	0	0
1	1 🔹	1	Copy Text To: All Status All Languages All
2	2 🔹	2	Import from Favorite Font Templates.(I)
3	3 🔦	3	O Vector Font Graphic Font
4	4 🔺	4	Font: Microsoft Sans Serif -
5	5 🔺	5	Size: 16 • B I I I Advanced
6(Error)		•	
Error	put Display e Notification Control Addre	error status 🔘 Keep Current Status ess:	Microsoft Sans Serif
			Copy Attr. To: All Status All Languages All

Item Count

The default is 6. The range is 1~255. That means there are 255 items at most.

• Line Spacing

The default is 5. That means the space between rows.

Selected Color

You can modify the color of the item selected in operation. The default is blue.

Background Color

It is the background color of the component excluding the scrollbar. The default is grey.

Border Color

It is the frame color of the selecting list components excluding the rolling bar, and the default is white.

"Index", "Correspond" and "Tag Content"

There is a table for the list components. It includes three columns: "Index", "Correspond" and "Tag Content".

eneral	Selector Setting	Graphics Control Settings Display	
Item (Line S		Selected Color Background Color Border Color	Language: 1-English (United S ▼) ♥ □ Language Independent ○ Use Text Library Text Library ● Use Tag ☑ Adaptive label size.
Inde	x Correspond	Tag Content	Tag Content Save Tag Content To Text Library
0	0	0	÷
1	1	1	Copy Text To: All Status All Languages All
2	2	2	Import from Favorite Font Templates.(I)
3	3 🔺	3	O Vector Font @ Graphic Font
4	4 🔦	4	Font: Microsoft Sans Serif •
5(Erro	or) Other		Size: 16 • B I • · · · · · · · · · · · · · · · · · ·
Err	input Display e or Notification able Control Addre	error status 🔘 Keep Current Status	Microsoft Sans Serif

For example, the "Item Count" is set 5. The value of the "Index" is 0^{5} . Index 0^{4} are corresponding to effective items and item 5 is corresponding to the "Error" one.

The default value of the column "correspond" is equal to the value of the "Index" for the effective items. When the number of items is set to 5, the content of the "correspond" for the index 5 is "Other". The "Other" means any value except "0~4". The "correspond" value can be modified. For example, the "correspond" value of index 0 is modified 100. That means the text of index 0 in the "Tag Content" will be displayed if the value of the word register is equal to 100. And meanwhile, if item 0 is selected, the value 100 will be written into the word register.

The default value of the column "Tag Content" is equal to the value of the "Index" for the effective items. When any item is selected, the text required can be input to the corresponding "Tag Content".

• Illegal input

The "Illegal input" means that the value of word address doesn't equal to any value of the "correspond" for the effective items. The default is "Show Error Status".

Show Error Status

The component displays the "correspond" content of the "Error" item when illegal input happened.

Keep Current status

The component keeps the last correct status when illegal input happened.

Error Notification

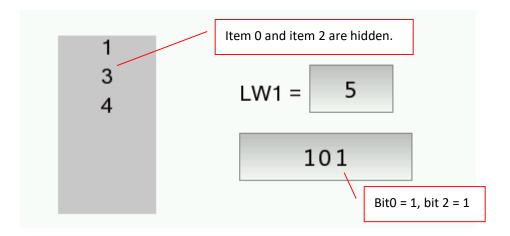
When it is checked, a "Bit register" can be set. The "Bit register" will be set to ON if any error status appears.

• Enable Control Address

If it is checked, a "Word register" can be set. Each bit of the word register is corresponding to an index. That is, bit 0 is corresponding to index 0, and bit 1 is corresponding to index 1, and so on. When there are more than 16 items, the next word register will be occupied automatically. When the corresponded bit of the word register is ON, the item of the corresponding index in the list will be hidden. For example, when the word register value of the "Enable Control Address" is set to 5, the bit 0 and bit 2 of this word register are both ON and the items of the index 0 and the index 2 will be hidden.

eneral	Selector	Setting	Graphics	Control Settings	play
	Count: pacing:	5	 Selected Backgroup Border 		Language 1-English (United S Language Independent Use Text Library S Use Tag
					Adaptive label size.
Inde	ex Corre	spond		Tag Content	Tag Content Save Tag Content To Text Library
0		0 2		0	\$
1		1 🔺		1	Copy Text To: All Status All Languages All
2		2 🔹		2	Import from Favorite Font Templates.(I)
3		3 🔦		3	O Vector Font O Graphic Font
4		4 -		4	Font: Microsoft Sans Serif -
5(Err	or) Ot	her			Size: 16 • B I • J Multi-line Alignment:
Err	or Notific able Cont LW1 : Bi	ation L rol Addre t5Corres	BO ess: LW1	Keep Current Stat	Microsoft Sans Serif
	Disabled	1			Copy Attr. To: All Status All Languages All

In the figure above, when there is any wrong status, LBO will be set to ON. When LW1=5, index 0 and index 2 will be hidden.



4.6.4.4The Drop-down List

The attributes of "The Drop-down list" are almost same to the attributes of "Check list and selection box". The main difference is that "The Drop-down list" is withdrawn when it is not operated or after it is operated. The "Drop-down list" will be unfolded when it is clicked, and then it can be viewed and operated by the scrollbar or by screen method.

4.6.4.4.1 General

The property TAB of "The Drop-down list" can be opened by clicking the command "Component/ Toggle Switch and menu/ The Drop-down List" in the menu, see the figure below.

Menu	? <mark>×</mark>
General Selector Setting Graphics Control Settings Display	
Type: List and Check-Box Image: Drop-down List Image: Comparison of the state o	
Data Source Component settings 🔻	
Reading And Writing Address Is Different	
Read Address:	
Use Address Tag	
Deivce: LOCAL:[Local Register]	
Address Type: LW	
Address: 0 🗢 System Register	
Format(Range) DDDDDD(0~7999 Occupy: 1 Vord	
Data Type: 16-bit Unsigned 💌	
Address Index	
	-
Help Description: OK	Cancel

The figure above shows that the "General" property TAB is same to the "Check list and selection boxes", it is not introduced here, and details can be seen in <u>Detailed</u> <u>manual/Commponent/Toggle Switch and menu/Check list and selection boxes</u>.

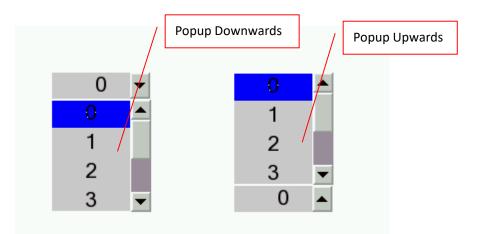
4.6.4.4.2 Selector Setting

Click the "Selector Setting" property TAB, it can be opened, see the figure below.

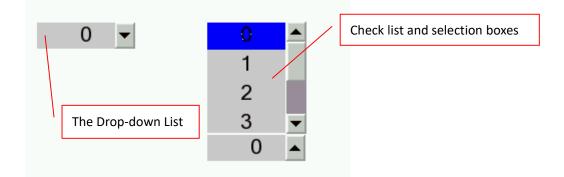
eneral S	elector Setting G	raphics Control Settings	Display
Item Co	unt: 6 🗘	Selected Color	📝 Language: 1-English (United S 🔹 🌒
Line Spa	acing: 5 🗘	Background Color	Language Independent
Pop-up	style: Popup Dc 💌	Border Color	Use Text Library Text Library
	Popup Down Popup Upwar		 Use Tag Adaptive label size.
Index	Correspond	Tag Content	Tag Content Save Tag Content To Text Library
0	0	0	<u>ه</u> 0
1	1	1	Copy Text To: All Status All Languages All
2	2	2	Import from Favorite Font Templates.(I)
3	3 🖍	3	Vector Font Graphic Font
4	4	4	Font: Microsoft Sans Serif 🔹
5	5 🔹	5	Size: 16 V B I V Advanced
6/Error	Other		
Error	nput Display erro Notification le Control Address	r status 🔘 Keep Current Sta	Microsoft Sans Serif
			Copy Attr. To: All Status All Languages All

For "The Drop-down List" component, the most settings of the "Selector Setting" property TAB are same to the "Check list and selection boxes". The difference is that there is an additional item of "Pop-up style" for the "The Drop-down List".

The default is "Popup Downwards". The "Pop-up upwards" is optional. And it can be set according to the actual requirement. See the figure below.



The figure below shows the situation when "The Drop-down List" and "Check list and selection boxes" appear on the picture at the same time.



The figure above shows that when the "The Drop-down List" completes operation or has no operation, it is "withdrawn". It will be unfolded only when it is operated, while the "Check list and selection boxes" is always unfolded no matter it is in operation or not, and it can be directly viewed and operated.

The other details can be seen in <u>Detailed manual/Commponent/Toggle Switch and</u> <u>menu/Check list and selection boxes</u>.

4.6.4.5File BrowserBox

File BrowserBox is used to display the file information of the internal and external storage devices.

Font Type	Only Sho	w the File with Designated Suffix.
Font Size: 24	Suff	fix Name
Colors:		Add Items Delete
Date Format:		
Date Format: DD*MM*YY •	1	
Date rollinat.	Separato	
		-
Notes:		
SRW300~349: the absolute path	character string	I for file view.
SRW350~389 : File Name Chara	cter String	
SRW390: execute file browser.		
0-Cancel or No Operation	ı .	3-Import the Formula to HMI
1-Import the Project to HI	IN	4-export recipe to SD Card or U-disk
	disk from HMI	5-Other Files Operation
2-Export to SD Card or U-		
2-Export to SD Card or U		
2-Export to SD Card or U		
2-Export to SD Card or U		
2-Export to SD Card or U		

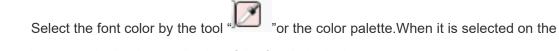
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4.6.4.5.1 General

- Font Type
- Font Size

Select the appropriate font size here.

Colors



touch screen, the background color of the font is in the inverse tone.

• Date Format

There are three optional date formats.

Date Format: -	
Date Format:	DD*MM*YY 🔹
	DD*MM*YY
	MM*DD*YY
	YY*MM*DD

There are three optional separators provided among the day, the month and the year.

Separator:	/ •	
		-
	-	

• Only Show the File with Designated Suffix.

Only Show the File	with Designated Suffix.	
Suffix Name		
fpg	Add Items	
	Delete	

The suffix is blank by default. It represents to display all. You can set the file type you want.

As shown as above, if you add the "fpg" suffix by clicking the button "Add Items", only files with fpg suffix will be displayed in the browser box for easy filtering and viewing. If you want to display all, click the button "Delete" and keep the browser box blank.

4.6.4.5.2 Display

The settings of the "Display" property TAB are referred to: <u>Detailed manual/General</u> <u>functions/Drawing/Display</u>.

4.6.4.6User Privilege

4.6.4.6.1 General

HTP Designer Configuration Software User Manual

	ization Overview Table Search Display]		8
Brows	e Method: Scrollbar Scrollbar Widt Screen Note: Only for ca y The Table			
		J I Display the Title Bar Title Bar for table contents and title.	ar Font Setting	
Use	Display The Project	Title Bar Description		
	Serial No.	Serial No.		
1	User Name	User Name	-	
1	User Privilege	User Privilege	-	
	Automatic Log-out Time	Automatic Log-out Time	Move Up	
	•			
			Down	
			Restore to default	
Pow	Spacing: 5 🗲 Co	lumn Spacing : 5 🜩		
NOW	Spacing: 5 Co	iumin spacing : 5		
D	etailed Info:			

Browse Method

You can view by scroll bar or screen sliding, and screen sliding is only effective for capacitive screen.

- Display The Table
- Language

You can switch between Chinese and English here, and then you can edit the text in the below table in Chinese and in English separately.

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Displa	y The Table					
Lang	Language: 1-English (U 🔻 💽 🗹 Display the Title Bar Title Bar Font Setting					
🔽 U:	Use Label 🖉 Use same font for table contents and title.					
Use	Display The Project					
	Serial No.					
	User Name User Name					
	User Privilege User Privilege					
	Automatic Log-out Time	Automatic Log-out Time	M			

Display the Title Bar

Check this option "Display the Title Bar", you can set the font of the title bar and the list, see details in<u>Detailed manual/General functions/Drawing/Font settings</u>.

t Settin	g 🗾
In	port from Favorite Font Templates.(I)
○ Vec	tor Font () Graphic Font
Font:	Microsoft Sans Serif 💌
Size:	16 • B I
Multi-l	ine Alignment: 📰 🗐 TI Advanced
	Microsoft Sans Serif
	OK Cancel

> Use Lable

Check this option, you can edit the "Title Bar Description" in the below table.Uncheck it, you can edit the "Title Bar Description" by using text library.

Use	Display The Project	Title Bar Description	n		
1	Serial No.				
1	User Name				
J	User Privilege	ext Library	×		
J	Automatic Log-out Ti			Search	Language Di
		Name + Ack	Status Number	Reference Number 0	

> Use same font for table contents and title

This option will be displayed only when you check the option "Display the Title Bar". After checking this option, the font of the list will be consistent with the font of the title bar. If you do not check it, you can edit the font of the list separately.

Move UP and Down

You can adjust the arrangement of the displayed itemsby clicking the button "Move Up" or "Down".

Restore to default

Restore the items to the initial arrangement.

Use	Display The Project	Title Bar Description	
V	Serial No.	Serial No.	
1	User Name	User Name]
V	User Privilege	User Privilege]
1	Automatic Log-out Time	Automatic Log-out Time	Move Up
			Down
			Restore to default

Row Spacing and Column Spacing

Adjust the row spacing by modifying the value of the edit box of "Row Spacing". And adjust the column spacing by modifying the value of the edit box of "Column Spacing".

\triangleright	Detailed Info			
ī			Denver Mindene	
2	Detailed Info:	Single Click •	Popup Window:	B_29001:User privilege(🔹

After check the option "Detailed Info", you can select a trigger mode to pop up the window such as "User privilege" for editing. The trigger mode can be set "Single Click" or "Double Click".

4.6.4.6.2 Table

You can set the appearance of the "User Privilege" component in the "Table" property TAB. The appearance of this component is show as below.

Title Bar Background Color					
Serial No.	User Name	User ['] Privilege	Automatic Log-out	Time 🔺	
0	Admin	16	10		
	1			•	
	/				
Table Back	ground Color	Row Split Line	Column Split Line	Outline	

The "Table" property TAB of the "User Privilege" component is shown as below.

User Authorization Overview	?
General Table Search Display	
Table Background Color: Background 🕶 🍠	
Title Bar Background Color : 🔄 Background 👻 🍠	
Outline Style: Line Width: Outline Boar •	
Split Line Style: 📃 🔹 Line Width: 🔤 🐨 Split Line Co 👻 📝	
Display Grid Line: 🗷 Row Split Line 🕼 Column Split Line	
	Canad
Help Description: OK	Cancel

• Table Background Color and Title Bar Background Color

You can change the background color of the "User Privilege" component. And you can change the title bar background color, too.

Table Background Color:	Background 💌 📝
Title Bar Background Color :	Background 👻 📝

• Outline Style, Split Line Style, Line Width and Line Color

You can change the type of the out line and the split line, the line width and the line color.

Outline Style:	v	Line Width:	📕 Outline Boar 👻 📝
Split Line Style:		Line Width:	Split Line Co 👻 📝

• Display Grid Line

After you check the option "Row Split Line" and the option "Column Split Line", the appearance of the "User Privilege" component is shown as below.

Serial No.	User Name	User Privilege	Automatic Log-out Time	
0	Admin	16	10	
•				

If the option "Row Split Line" and the option "Column Split Line" are unchecked, the appearance is shown below.

Serial No	. User Name L	Jser Privilege	Automatic Log-out Time	
0	Admin	16	10	
•				

4.6.4.6.3 Search

Check the option "Enable search", and you can query the corresponding user privilege.

ser Authorization Overview		? ×
General Table Search Dis	play	
✓ Enable search		
Search by User Name		
Search Trigger Bit	LBO	
	LB0 Value 1, it will display the result after filtering by range. Value 0, it means no filtration.	
Search Register	LWO	
	letters or 8 characters.	
Help Description:	OK	Cancel

• Search Trigger Bit

A bit register needs to be set here. When the value of the bit register is "1", the result of filtering by a range is displayed. When the value of the bit register is "0", the displayed result is not filtered.

• Search Register

You need to specify a starting address of a set continuous 8 word registers here. You can input the corresponding user name to these registers to search. And the inputted user name should be no more than 16 ACSII letters or 8 ACSII characters.

4.6.4.6.4 Display

The settings of the "Display" property TAB are referred to: <u>Detailed manual/General</u> <u>functions/Drawing/Display</u>.

4.6.5 Timer and Data Transmission

4.6.5.1Timer

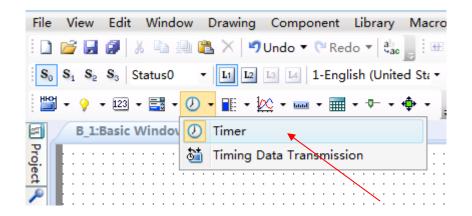
You can use the timer component to accomplish the tasks that need to be periodically executed or triggered under specific conditions.

The timer must be established on a window. When this window is working, the timer will work in accordance with the rules set. If you don't want the timer to be affected by the window switching, you can establish a timer on the common window.

For adding a timer, there are three ways. The first way is clicking the timer command from the "Component" menu. The second way is opening the property TAB of the window, then click the "Timer" property TAB.And the third way is clicking the "Timer" command from the shortcut tool bar.

l	Com	ponent Library Macro Recipe Setup	Tools Help
		Switch	🕨 🖩 🐢 😃 🔛 🏹 🕄 🤫 🐂 🐂 🖷
	9	Indicator Light	▶ B_1:Basic Window(1) - ▶ 📄 🛅 +□
	123	Numeric Value and Character Display	· o > 0 @ 🖃 🗃 🎥 🕻 🕉 🕉 🕅
	ню	Toggle Switch and menu	
	\odot	Timer and Data Transmission	🕨 🕖 Timer 🙀
:		Bar And Meter	 Timing Data Transmission
:	₩.	Curve Graphs	•
:	haad	Scale	•
:		Table	•
:	-0	Slider	•
:	ф	Moving Component	•
:	탱	Window	•
:	<u>*</u>	List	•
:	R	Tools	•
	÷	Pipeline	•

asic	Background and Border	Action and Function	Timer	Timing Data Transmission
Wind	ow Description: Basic Win	dow		Print Page
	ow No. (By Type):	600 🗘	1 🗘	Window number (used for window switching)1 Window Type: Base Window -
Nind	ow Orientation: 🖲 Horizor	ntal 💿 Vertical		
P	Popup Window			Safety User Level: 0: • Switch to user level when window closed:
Ov	erlapped Window Bottom Layer: None Middle Layer None Top Layer: None		•	Window Effect Fade in Fade out



In the "Timer" property TAB, click the button "Add", you can open the detailed settings of the timer.

asic Ba	ckground and Border	Action and Fun	iction Timer	Timing Data Transmission	
Serial No	. Trigger Condition	Stop Condition	Timing Cycle	Timing Function	
					Add
					Clear Edit

4.6.5.1.1 Trigger and Stop

imer		? X
Trigger and Stop () Timer Function () Timing and Execution Execution Period: 10 • x 0.1S Delay		
Trigger Condition: Bit Word Condition Trigger when the window is open Trigger when the window is closed Trigger Address: Trigger Mode: OFF -> ON Auto Reset	Condition for stop Timer will stop when the window closed. If need to end, please choose the end condition. Stop when specified count value reached Condition Judgement	
Help	ОК	Cancel

• Timing and Execution

Set the operation mode of the timer in Timing and Execution.

Timing and Execution	on
Execution Period:	10 🔹 x 0.1S
Delay	1 📥 Execution Period

Execution Period

Set the execution cycle of the timer, in 0.1 S (seconds). If you want to set the execution cycle in 10 seconds, you can set to 100×0.1S.

Delay

In the case of unchecked "Delay" by default, when the trigger condition of the timeris met, the timer will execute immediately for the first time. After an interval of the setting execution cycle, the timer will execute for the second time until the end condition is met. If you want the timer to delay execution for a period of time when the trigger condition is met, you can check the "Delay" option, then delay time can be set to an integer times, such as three execution cycles.

• Trigger conditions

Trigger conditions is used to trigger the execution of the timer. There are many ways to trigger the timer in this software. You can choose according to your actual needs. It is important to note that the timer trigger mode should be edge trigger. After the trigger condition is met, the timer will continue working until the end condition is met.

➢ BIT		
Trigger Condition	n:	
🖲 Bit 🔘 Word	Condition	
	the window is open the window is closed	
Trigger Address	s: LBO	
Trigger Mode:	OFF -> ON 🔹	🔲 Auto Reset
	OFF -> ON	
	ON -> OFF ON <-> OFF	
	ON <-> OFF]

After select the "Bit" option, you can specify a bit register in the "Trigger Address" to control the timer trigger. The "Trigger Mode" can be set "OFF \rightarrow ON", "ON \rightarrow OFF", or "ON $\leftarrow \rightarrow$ OFF". For example, if you set "OFF \rightarrow ON", that means the timer is triggered when the register value changes from 0 to 1.

The "Auto Reset" refers to that the register value is automatically changed to OFF after the timer is triggered (for the "OFF \rightarrow ON" trigger mode). The "ON $\leftarrow \rightarrow$ OFF" trigger mode does not have the "AutoReset" option.

> Word		
Trigger Condition: -		
🔘 Bit 🔘 Word 🔘	Condition	
 Trigger when the Trigger when the 		
Trigger Address:	LW0	

After selecting the "Word" option, you can specify a word register to control the timer trigger. When the value of the specified register is changed, the timer execution will be triggered.

Condition	
-Trigger Condi	tion:
🔘 Bit 🔍 Wo	ord 💿 Condition
	hen the window is open hen the window is closed
Condition	
	•
Add	Modify Delete

If you select "Condition" option, you can use a set of conditions to control the timer trigger. For the logical condition editing, see: <u>Detailed manual/General</u> <u>functions/Drawing/Logic Control</u>.

Triggerwhen the window is open

Trigger Condition:
ingger condition.
Bit Word Condition
Trigger when the window is open
Trigger when the window is closed

When the window in which the timer is located is opened, the timer execution will be directly triggered. Note that if the timer is located in the Public Window, only trigger once when the user project is executed after powering on the HMI, and it will not be triggered when switching to another window.

Trigger when the window is closed

Trigger Condition:
◎ Bit ◎ Word ◎ Condition
 Trigger when the window is open Trigger when the window is closed

When the window in which the timer is located is closed and the other window is opened, the timer execution is triggered.

• Condition for stop

The condition for stop refers to the condition under which the timer stops execution. It is same to the "Trigger Condition". The condition for stop is also edge-triggered.

> Timer will stop when the window closed

- 1		•		
Cond	lition	tor	sto	n
00110			200	۲

O Timer will stop when the window closed.

If need to end, please choose the end condition.

Stop when specified count value reached

Condition Judgement

The "Condition for stop" of the timer is "Timer will stop when the window closed" by default. If you want to end the timer execution in advance, select the other condition for stop:

Stop when specified count value reached

Condition for st	top	
Timer will stop when the window closed.		
If need to end, please choose the end condition.		
Stop when specified count value reached Condition Judgement		
Repeat Times:	Constant ▼ Variable Constant	1 💌

You can use the condition for stopto make the timer end automatically after repeating the specified number of times. Wherein, for the specified number of times, you can directly enter it by Constant, or you can specify a word register to control the timer execution times by Variable.

Note: When the trigger condition is "Trigger when the window is closed," the condition for stop will be directly selected as the "Stop when specified count value

reached" and the number of times is set to 1 and not editable. This kind of timercan only be executed once.

Condition Judgment

Condition for s		indow closed.	
If need to end,			
 Stop when s Condition Ju 	•	value reache	ŧ
Condition			
			•

You can control the timer to end by using a set of conditions. When the conditionsaresatisfied, the timer execution ends. For the logical condition editing, see: <u>Detailed manual/General functions/Drawing/Logic Control</u>.

mer				? ×
Trigger and Stop	Timer Function Q			
Run Macro				
Status Setting				
Audio Play				
Help			OK	Cancel

4.6.5.1.2 Timer Function

Click the "Timer Function" tab and open the "Timer Function" propertyTAB.

• Run Macro	
V Run Macro	▼ Macro Code Edit Q

You can use the timer to trigger the execution of macro instructions. If the macro instruction hasn't been established in the project, you can't check this box. You need to click the "Macro Code" to open the Macro Code Editor Window and add the macro code. If the macro instructionis already exist, you can select the established macro from the drop-down list. Click the "Edit" button, you can directly open the Macro Code Editor Window to edit the currently selected macro instruction.

V Run Macro	Drawingl 🔻	Macro Code Edit
	DrawingPic	1
	InitialSys	

Status Setting

The "StatusSetting" function is used to set a bit register or set the value of a word register.

Whether setting the bit register status or setting the word register value, you first need to set the target address. For the address setting, refer to: <u>Detailed manual/General</u> <u>functions/Address editor</u>.

ner		8
Trigger and	Stop Timer Function	
Run Mac	ro Drawingl 🔹 Macro Code	Edit
✔ Status Se	 Bit Setting Word Setting 	Use Address Tag Deivce: LOCAL:[Local Register]
Mode:	Set ON	☐ Bit-index within a Byte Register Address Type: LB ▼ Address: 0 ♀ System Register
	 Set OFF Perodic Inverse 	Format(Range) DDDDDD(0~799
Microinstruc		taneously, and the precedence is not sure
Help		OK Cancel

mer	8
Trigger and Stop Timer Function	
Run Macro Drawingl	Edit
Bit Setting	Use Address Tag
 Status Setting Word Setting 	Deivce: LOCAL:[Local Register]
Mode: Add 🔻	Address Type: LW
Loop Reverse on reaching the end	Address: 0 System Register
Add/Substract: Constant 🔹 1 🔦	Format(Range) DDDDDD(0~799999) Occupy: 1 - Word Data Type: 16-bit Unsigned -
Lower Limit: Constant	Address Index
Upper Limit: Constant • 100 •	
Microinstruction and Status Setting Run Simu	ultaneously and the precedence is not sure
Audio Play	and cousy, and the precedence is not sure
-	
Help	OK Cancel

 Bit Setting 	
Mode:	Set ON
	Set OFF
	Perodic Inverse

The mode of the Bit Setting includes "Set ON", "Set OFF" and "Periodic Inverse". The "Set ON" means that the bit is set ON when the timer is triggered and the bit remains ON in each execution period. The rules of "Set OFF" are same to the "Set ON". The "Periodic Inverse" refers that when the timer is triggered, the bit is inverted and continues to invert in each execution cycle.For example, the timer executed once per second switches the LB0 bit. LB0 will change the state once per second, 1 second is ON and 1 second is OFF.

Word Setting		
Mode:	Add	•
	Add	
🔲 Loop 📃 Re	Subtract	end
	Constant	
Add/Substract: Constant 🔹 1 🛓		
		_
Lower Limit:	Constant 🔻	0 👻
Linner Linde	Constant -	100 ^
Upper Limit:	Constant 💌	100 🖵

Word setting refers to periodic setting of a word register by timer. The setting modes include "Add", "Subtract" and "Constant".

 Audio Play 		
X Audio Play	Audio Library	Sleep Away 🕟

For the HMI device with an audio output function, you can use the timer to play sound.Click the "Audio Library", and select the audio file to be played from the "Audio Library". This software supports audio files in MP3 and WAV format. Foraddingaudio files, please refer to:<u>Detailed manual/Library/Audio Library</u>. Click the triangle play button

At the back of audiofile, you can hear the audio file. Note:

The "Run Macro", "StatusSetting" and "Audio Play" optionscan be checked at the same time. The timer can simultaneously control the execution of the three. However the execution order is uncertain.

4.6.5.2Timing Data Transmission

A single or batch data can be transmitted by timing. The action can be triggered or executes periodically. This component is similar to the timer. You need to add it to a specified window. If you want a global execution, you can add it to the public window.

rigger and Stop 🥥 Data Transmission Notificat	ion
Timing and Execution Execution Period: 10 🔹 x 0.1S	
Delay	
Trigger Condition:	Condition for stop
Bit OWord Condition	Timer will stop when the window closed. If need to end, please choose the end condition.
Trigger when the window is open	 Stop when specified count value reached
Trigger when the window is closed	Condition Judgement
Trigger Address:	
Trigger Mode: OFF -> ON	to Reset

4.6.5.2.1 Trigger and Stop

The "Trigger and Stop" is used to control the execution modes of components. The modes of "Trigger and Stop" include "Execution Period", "Trigger Condition" and "Condition for stop". The details can be refers to: <u>Detailed manual/Component/Timer and</u> <u>Data Transmissionn/Timer</u>.

4.6.5.2.2 Data Transmission

Data transmission can set the data to be transmitted, including the type and the length of the data to be transmitted, source address and target, and so on.

4.6.5.2.3 Notification

Notification function is similar to the notification function in the "Control Setting" property TABofsome components. It is used for before-writing notification and after-writing notification.For the detailed settings, refer to: <u>Detailed manual/General functions/Drawing/Control settings</u>.

4.6.6 Bar and Meter

4.6.6.1Bar Chart

Apart from the slight difference of "Direction" as shown in the figure below, the other functions of the bar graph are the same as the Sector Chart. The detailed description is referred to: <u>Detailed manual/Component/Bar and Meter/Sector Chart</u>.

ar Graph and Sector Graph	
General Extended Scale and Mark Dynamic Graphics Di	splay
Type: Standard Deviation Type Displa	y upward y upward y downward y leftward y rightward
Minimum Value: Constant O Maximum Value: Constant 100	Upper and lower thresholds of Alarm
Read Address:	
Deivce: LOCAL:[Local Register]	
Address Type: LW 🔹	
Address: 0 System Register	
Format(Range) DDDDDD(0~799999)Occupy: 1 + Word	
Data Type: 16-bit Unsigned 🔻	
Help Description:	OK Cancel

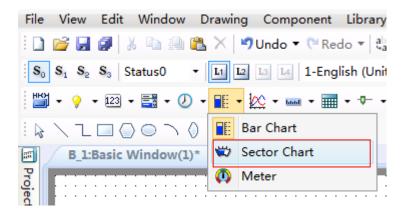
4.6.6.2SectorChart

Add a Sector Chart component by clicking the menu command "Component/Bar and Meter". It is shown as below.

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ĺ	Com	ponent Library Macro Recipe Setup	Т	ools	Help
2		Switch	۲	1 1	f 🐠 💷 🔛 🗐 🔝 🤫
	9	Indicator Light	۲	B	1:Basic Window(1) 🔹 🖪
k	123	Numeric Value and Character Display	۲		** ** ** 🚵 📥 **
F.	ню	Toggle Switch and menu	۲	P :	
	$\textcircled{\baselinetwidth}$	Timer and Data Transmission	۲		
		Bar And Meter	۲	E	Bar Chart
:	₩	Curve Graphs	۲	4	Sector Chart
:	haad	Scale	۲	Ø	Meter
		Table	۲	1	
:	-0	Slider	۲	11	· · · · · · · · · · · · · · · · · · ·
:	ф	Moving Component	۲		· · · · · · · · · · · · · · · · · · ·
:	нон Конч	Window	۲	11	
:		List	۲	11	
	R	Tools	۲		· · · · · · · · · · · · · · · · · · ·
:	÷	Pipeline	٠	:: ::	

You can add the Sector Chart by clicking the correspondingshortcut button. It is shown as below.



4.6.6.2.1 General

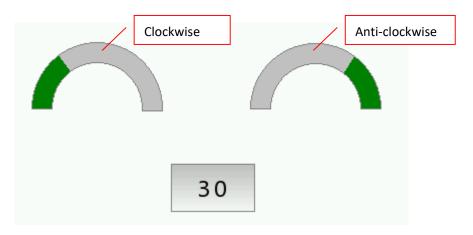
ar Graph and Sector Graph	?
General Extended Scale and Mark Dynamic Graphics Display	
Shape: O Bar Graph Fan-shaped Graph Direction: Clockwise Type: Standard O Deviation Type	Angle: Inside and outside ring ratio(%) 70 ▼ Start Angle 180 ▼ End Angle 360 ▼
Minimum Value: Constant O Uppe Maximum Value: Constant Uppe	er and lower thresholds of Alarm
Read Address:	
Use Address Tag	
Address Type: LW	
Address: 0 System Register	
Format(Range) DDDDDD(0~799999)Occupy: 1 - Word	
Data Type: 16-bit Unsigned 🔹	
Help Description:	OK Cancel

• Direction

The option "Direction" is used to set the starting point direction which refers to the fill direction of the sector chart.

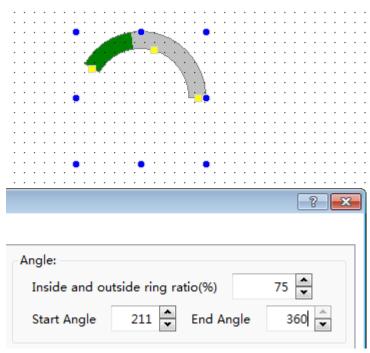
Shape:	🔘 Bar Graph	Fan-shaped Graph	Direction:	Clockwise 🔻
				Clockwise
				Anti-clockwise
Type	Standard	Deviation Type		

As shown below, the left Sector Chart is filled by Clockwise, and the right Sector Chart is filled by Anti-clockwise.



• Angle

The "Inside and outside ring ratio (%)" is set to a percentage of the inner ring radius to the outer ring raduis. The "Start Angle" of the sector chart can be set at will. The effect is shown as below.



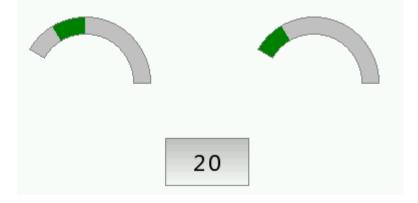
• Туре

The types of the sector chart include "Standard" and "DeviationType". The filling origin position of the standard sector chart is not adjustable. The origin position of the deviation type is adjustable. Here introduces the usage of biastype pie chart.

As shown as below, after selecting the Deviation Type, the "OriginPos." can be freely set.

Type:	Standard	Deviation Type	Origin Pos.:	39 🔹

The running effects of the "Deviation Type" and the "Standard"are contrasted as shown as below (the left is deviation type, the right is standard type).



Read Address

The detailed information is referred to: <u>Detailed manual/General functions/Address</u> <u>editor/Standard Byte Address Input</u>.

4.6.6.2.2 Extended

• Border Color and Background Color

As shown as below, the border color and the background color of the sector chart can be set freely. If the "Border Color" and "Background Color" are not checked, the border and the background color are not visible. The sector chart has three Fill Types: "Solid Color", "Pattern" and "Gradient". The Bar Color can be set freely.

ar Graph and Sector Graph	
General Extended Scale and Mark Dynamic Graphics Display Image: Source Color Bar Color Image: Source Color Bar Color Image: Source Color	kground Color 👻 🍠
Background Color Fill Type SolidColor SolidColor Pattern Gradient	
Alarm Limit:	Mark Target Area
Help Description:	OK Cancel

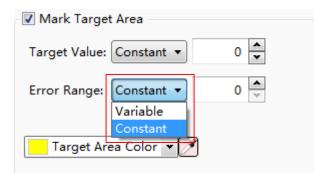
• Alarm Limit

As shown as below, you can set the upper and lower limit for alarm. Except for the "Blink" function, other functions are same to the "Meter". The detailed settings are referred to: Detailed manual/Component/Bar and Meter/Meter.

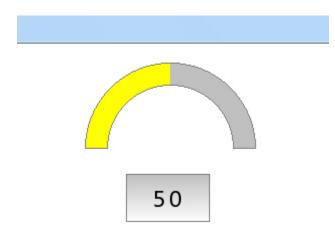
🗹 Alarm Limit: –		
Lower Limit:	Constant 💌	10 🔹
Upper Limit:	Constant 💌	90
Over Top Limit:	Background 💌 📝	🔲 Blink
Over Lower Lim	iit: 🔁 Backgrounc 💌 📝	🔲 Blink
	olor is not pure color, foreg to be set separately.	ground color and background

Mark Target Area

When the value enters into the specified MarkTarget Area, the color of sector chart will be changed to the Target Area Color. The Target Value and Error Range can be set by Constant or byVariable.



The running results are as shown in the figure below. In thiscase, the Target Area Color is set yellow.



4.6.6.2.3 Scale and Mark

• Display the percentage

The function is used to display the total percentage of filling part to the entiresector chart. As shown as below, the display font size, font style and font color can be set freely.

	Bar Graph and Sector Graph
	General Extended Scale and Mark Dynamic Graphics Display
33%	✓ Display the Percentage:
4 2 2 2 2 2 2 2 2 2 2 4 4 2	Display Fonts: Size: 8 🔹 Font: Arial 🔹 🖬 Font Color 💌
	Display Scale
<u>.</u>	

• Display Scale

The "Display scale" usage of the Sector Chart is same tothe Meter but a slightly different, as shown as below. The detailed usage is referred to: <u>Detailed</u> <u>manual/Component/Bar and Meter/Meter</u>.

✓ Display Scale	
↓ Line S	cale Display Location
Line Width	Inside
Line Type	Outside
Scale	
Main Scale Division Number 4	Main Scale Length: 12
Sub Scale Division Number 3	Sub Scale Length: 8
🖉 Axis	
Mark Integer: 3	mal: 0
Font: Size: 8 ▼ Font: 微软雅	謡 🔹 🖬 Font Color 👻 📝

4.6.6.2.4 Display

The settings of the "Display" property TAB are referred to: <u>Detailed manual/General</u> <u>functions/Drawing/Display</u>.

4.6.6.3Meter

As shown as below, the Meter component can be added by clicking the menu command "Component/Bar and Meter".

	Com	ponent Library Macro Recipe Setup	Tools Help
4		Switch	🔸 🕂 🕂 🕂 🛄 🔛 👘
	9	Indicator Light	▶ B_1:Basic Window(1) •
ç	123	Numeric Value and Character Display	* 🛛 🧏 🐐 🐜 📥 🏂
Ť	ню	Toggle Switch and menu	•
	Ø	Timer and Data Transmission	•
	E	Bar And Meter	Bar Chart
:	<u>100</u>	Curve Graphs	🔸 🖏 Sector Chart 🔅
:	haad	Scale	Meter
:		Table	•
:	-0	Slider	•
:		Moving Component	•
:	<u>но</u> н	Window	•
	<u>e</u>	List	•
:	R	Tools	•
:	÷	Pipeline	•

You can add a Meter component by clicking the corresponding tool button in the shortcut tool bar. It is shown as below.



4.6.6.3.1 General

trument Component	8
General Watch Hand and Scale Dynamic Graphics Display	
Meter Plate: Round (Hands Up) 🔹	Maximum Minimum Value Minimum Value: Const. 0 Maximum Value: Const. 100
Read Address: Use Address Tag Deivce: LOCAL:[Local Register] Address Type: LW Address: 0 System Register Format(Range) DDDDDD(0~799999) Occupy: 1 Word Data Type: 16-bit Unsigned Address Index	Display Range Scale:
Help Description:	OK Cance

Meter Plate

As shown as below, the Meter Plate includes five types: "Round (Hands Up)", "Round (Hands down)", "Upper Semi-Circle", "Lower Semi-circle" and "Arc (Set Automatically)".

General	Watch	Hand and Scale	Dynamic Graphics	Display
Meter	r Plate:	Round (Hands		
		Round (Hands		
		Round (Hands Upper Semi-Cir		
		Lower Semi-cire		
		Arc (Set Autom		

The attributes of the "Round (Hands Up)", "Round (Hands down)", "Upper Semi-Circle" and "Lower Semi-circle" are same. For the Arc Meter Plate, you can freely set the starting angle and ending angle, as shown as below.

strument Component General Watch Hand and Scale Dynamic Graphics Display Meter Plate: Arc (Set Automatically)	strument Component General Watch Hand and Scale Dynamic Graphics Display	8			• •	. *			٠			. •	•	1		×			•	•		Χ.	•	÷	•	\mathbf{e}^{i}	•	٠	×	×		\cdot	\mathbf{x}	\mathbf{x}_{i}	6	٠	. •	
strument Component General Watch Hand and Scale Dynamic Graphics Display	strument Component General Watch Hand and Scale Dynamic Graphics Display Meter Plate: Arc (Set Automatically)		50	•	• •	\otimes	•	*		*	÷		22					•	1	•	8	5	*	۰.	•	۰.	:8	٠	•		3	•	*	2	5	٠	ं	
strument Component General Watch Hand and Scale Dynamic Graphics Display	strument Component General Watch Hand and Scale Dynamic Graphics Display Meter Plate: Arc (Set Automatically)	1.5	٠.	•	• •	8	•	•		*	•	•	1	1	1	نہ	~	-	-9	-	-	~	~	•	*	•	•	•	•	÷	•	•	8	•	1	•	•	•
trument Component General Watch Hand and Scale Dynamic Graphics Display	trument Component General Watch Hand and Scale Dynamic Graphics Display Meter Plate: Arc (Set Automatically)	•	•	•	• •			•	*	*	1	•	2	r	-	1.	•	1.	1	•	1	•	ſ	~	5	1	*	•			*	•	*	1	1	•	•	•
trument Component General Watch Hand and Scale Dynamic Graphics Display	trument Component General Watch Hand and Scale Dynamic Graphics Display Meter Plate: Arc (Set Automatically) 🔹	•	•	•	• •	Č.	•	1	1	•		X	^	1	1	1	*	10		•	60	•	•	•	1	~	Ś	•	1	•		1	•	1	1	*	•	•
rrument Component General Watch Hand and Scale Dynamic Graphics Display	Trument Component General Watch Hand and Scale Dynamic Graphics Display Meter Plate: Arc (Set Automatically) 🔹	2	2			2	ŝ.	÷.	÷	5	1.			2	0)	١.	2	20			2	2	80	Y	2		1		2	÷.	÷.	ũ	÷	÷.		÷	÷.
trument Component General Watch Hand and Scale Dynamic Graphics Display	trument Component General Watch Hand and Scale Dynamic Graphics Display Meter Plate: Arc (Set Automatically) 🔹						÷.	2		2	1						Ľ						2		÷.			1	1		-		ŝ					5
General Watch Hand and Scale Dynamic Graphics Display	General Watch Hand and Scale Dynamic Graphics Display Meter Plate: Arc (Set Automatically)	*	e.			2	×	÷	×	÷	2	۰.					١	÷								1	00).		÷.			÷	÷	÷		•	
General Watch Hand and Scale Dynamic Graphics Display	General Watch Hand and Scale Dynamic Graphics Display Meter Plate: Arc (Set Automatically)					æ							12					١.	53	•				•	•	۰.	•3	•	•					2	e	•		
General Watch Hand and Scale Dynamic Graphics Display	General Watch Hand and Scale Dynamic Graphics Display Meter Plate: Arc (Set Automatically)	1	13		1	$^{\circ}$	\mathbb{R}^{2}			5	•	. •	1	3				۱	\mathbf{t}	•	t s	8	*	•	*	5		•		3	1		23	*		•	•	
General Watch Hand and Scale Dynamic Graphics Display	General Watch Hand and Scale Dynamic Graphics Display Meter Plate: Arc (Set Automatically)	•	•	•	• •			•	•	•	1				•		•	٦		٠	•	•	•	•	•	•	1	•	•	•	•	٠	•		5	•	٠	•
General Watch Hand and Scale Dynamic Graphics Display	General Watch Hand and Scale Dynamic Graphics Display Meter Plate: Arc (Set Automatically)	•	•	•	• •		٠	*	*	•	•	•	•	•	•	•	•		Ł	•	•	•	•	•	•	•	•	•	•	•	•	•	٠	*		*	•	•
General Watch Hand and Scale Dynamic Graphics Display	General Watch Hand and Scale Dynamic Graphics Display Meter Plate: Arc (Set Automatically)	•	•	•	• •	14	*				•	•				•		•	L	•		•	•	•	•		•	•		•	•					•	•	
General Watch Hand and Scale Dynamic Graphics Display	General Watch Hand and Scale Dynamic Graphics Display Meter Plate: Arc (Set Automatically)					- 24	•	1	1								1	1	-												1	•	Č				•	
General Watch Hand and Scale Dynamic Graphics Display	General Watch Hand and Scale Dynamic Graphics Display Meter Plate: Arc (Set Automatically)	<u>.</u>														0					1	÷.,	<u>.</u>	÷.		0												
	Meter Plate: Arc (Set Automatically) 🔹	tru	In	ne	nt	0	01	"		,,,,,	C																											
Meter Plate: Arc (Set Automatically) -		_	_	_	_	-			_	_	_					d	C.		la	Т	D				ic	. (2.					Т	D	ic	-	la]
			_	_	_	-			_	_	_					-	6			Т	D					. (24		- 1			т	D		-			1
			en	er	al		W	a	tc	h	н	ar	nd												ic		Gr	a	pł	nic	cs		D	is	p	la	у	
Angle		Ge	n	er Me	al	T	W	a	tc	h	н	ar	nd												·		3r	a	pł	nic	s	I	D	is	p	la	у	
Angle Start Angle 221 - End Angle 319 -	Start Angle 221 A End Angle 210 A	Ge	en N A	er Me	al ete	r	PI	/at	tc	h	н	ar	nd	(9	Se	t			om	na	tic	a	lly	1)	•		Gr	a	pł					_	p	la	у	

Read Address

Read Address:
Use Address Tag
Deivce: LOCAL:[Local Register]
Address Type: LW
Address: 0 System Register
Format(Range) DDDDDD(0~799999) Occupy: 1 - Word
Data Type: 16-bit Unsigned 🔻
Address Index

For details of Read Address, see: <u>Detailed manual/General functions/Address</u> <u>editor/Standard Byte Address Input</u>.

• Maximum Minimum Value

The Maximum Value and the Minimum Value of the Meter can be set by Constant or by Variable.

If you select by Constant, a fixed constant can be set in the position shown in the figure below.

Maximum Minimum Value	
Minimum Value: Const; 🔻	0
Maximum Value: Const: 💌	100 💂

If you select by Variable, you can specify a word register and enter a value to the word register to change meter during running your project, as shown in the figure below.

Maximum Minimum Value	
Minimum Value: Variak	LW2
Maximum Value: Variat	• LW3
	50 80 100

• Display Range Scale

Set the upper and lower limit for alarm on the position shown in the figure below. The limit value can be set by Constant or by Variable. After setting the upper and lower limit value, you can also set the colors for value within limit, below lowerlimit and above upper limit, as shown below.

🔽 Display Ra	nge Scale: -	
Lower Limit:	Const: 🔻	20 🌩
Upper Limit:		80 🗣
Sector Ring W	Constant Variables	10 🌲
	ed Outer Ra	adius
Sector Ring O	uter Radius	48 4
Color for	value within	n limit 👻 🍠
Color for	value belov	w low 👻 🍠
Color for	value abov	e upr 👻 🗾

4.6.6.3.2 Watch Hand and Scale

• Color and Size

As shown in the figure below, the color of the Watch Handand Watch Hand Axis, the length and width of the Watch Hand, and the radius of the Watch Hand Axis can be set.

strument	Component	
General	Watch Hand and Scale Dynamic Graphics Dis	play
w		ch Hand Axis Color: Axis Colc V
	Display Scale Line Line Color Line Width Line Type	Watch Hand Style
- 5		Scale Length: 12 Scale Length: 8
	 ✓ Axis ✓ Mark Integer: 3 ✓ Decimal: Font: Size: 8 Font: Arial Reverse scale order 	0 ← ▼ Font Color ▼ ✓
Help	Description:	OK Cancel

Display Scale

As shown as the figure below, you can modify the color, the width and type of the meter scale line after the "Display Scale" is checked.

Line

📝 Display Scale	
📝 Line —	
Line Cold	or 🕶 🗾
Line Width	
Line Type	

Scale

Main Scale Division Number	5 🗘	Main Scale Length:	12 *	Location:	Incida
Sub Scale Division Number	2	Sub Scale Length:	8	Location:	Inside 🔻
V Axis					
Mark Integer: 3	Dec	cimal: 0			
	Font: Aria		ont Color 💌		

You can set the "Main Scale Division Number", the "Main Scale Length" and the "Sub Scale Length" here. The Location of the scale can be set "Inside", "Outside" and "Center", as shown as below. The "Sub Scale Division Number" and the "Axis" are checked by default. The default sub scale division number is 2. If the "Sub Scale Division Number" and the "Axis" are unchecked, that means the sub scale and axis are not displayed.

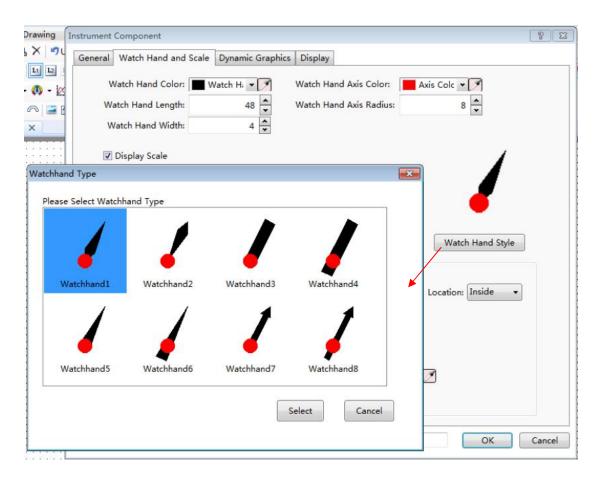
cale								
Main Scale Division Number	5	*	Main Scale Length:	12	*			_
						Location:	Inside	-
Sub Scale Division Number	2	-	Sub Scale Length:	8	*		Inside	
							Outside	8
Axis							Center	

If the "Mark" is not checked, the meter will not display the scale value. After the "Mark" is checked, you can set the number of the integer digits and the decimal digits of the scale value and also can set the font styles of scale value. If you select the "Reverse scale order", then the maximum value and the minimum value will switch their positions.

I Mark	Integer:	3	* *	Decimal:	0	× v
Font:	Size: 8	•	Font:	Arial		▼ Font Color ▼
 R e	verse scale	order				

• Watch Hand Style

Click the button "Watch Hand Style", you can select a style of watch hand for the meter.



4.6.6.3.3 Display

The settings of the "Display" property TAB are referred to: <u>Detailed manual/General</u> <u>functions/Drawing/Display</u>.

4.6.7Curve Graphs

4.6.7.1Trend Curve

The "Trend Graph" component is a curve formed by the sampling data.

4.6.7.1.1 General

eneral 🥑 Channel 🧿 Search Scale Display	
Points per screen: 10	Itime span per screen: Cons ▼ 1440
Direction: Horizontal	Browse Method:
	🕼 Scrollbar Scrollbar Width 20 🖨
Pause:	Slide Note: Only for capacitive screen.
Suspension Of Recovery Time:	
Use Cursor	
Display/Hide the Cursor: LB0	Cursor Color:
LB0=1: Show the Cursor	
LB0=0: Hide the Cursor	
When the cursor is visible, e	nable moving cursor by click or slide actions.
Cursor Data Area: LW0	
LW0 Use 7 registers to defin Hour, Minute, Second a	ne the time represented by the cursor position (Year, Month, Day,
	na mill-second) nat Stores the Current Value of the Curve from Channel 1.
LWV the Pressing Data roth	hat stores the current value of the curve from channel 1.
Zoom	
Two-point Touch Zooming(only for multi-touch)	
	hardware)
Register Control Zooming:	

• Display Points of Each HMI

This option means the number of the displayed sampling data points on the screen. The default is 10.The max number of points can not more than the width of the used HMI resolution. For example, the 7-inch HMI device with the resolution 800*480 is used.Then the max number of points is 799.

• Direction

The option "Direction" is used to set the display direction of the trend curve. It is set "Horizontal" by default. It can be set "Vertical", too.

• Pause

A bit register address can be set here.When the bit register is ON, the trend curve is not refreshed (but the sampling is not paused). When it is OFF, the trend curve is refreshed in real time.

• Time range per screen

You can set the time axis range, there are constants and variablesoptional, variables are controlled through the register, maximum time can be set as1440 minutes.

Browse Method

The methods of "Scrollbar" and "Slide" are all supported to view the trend curve.You can check anyone or two. But the "Slide" is only valid for the capacitive HMI device.

• Use Cursor

You can check the option "Use Cursor". This option is used to view the trend data crossed by the cursor and the data sampling time. The settings are shown as below.

Use Cursor	
Display/Hide the Cursor:	LB1 Eursor Color:
	LB1=1: Show the Cursor
	LB1=0: Hide the Cursor
	When the cursor is visible, enable moving cursor by click or slide actions.
	,
Cursor Data Area:	LWO
	LW0 Use 7 registers to define the time represented by the cursor position (Year, Month, Day Hour, Minute, Second and mili-second)
	LW7 The Pressing Data Format Stores the Current Value of the Curve from Channel 1.

Display/Hide the Cursor

Here you can set a bit register. If the bit register is ON, the cursor is displayed. If it is OFF, the cursor is hidden. When the cursor is visible, you can click or slide to move the cursor.

Cursor Color

The default color of the cursor is red. You can modify it according to the actual needs.

Cursor Data Area

You need to set a starting address of a continuous word registersarea here to save the information of the cursor data. The first 7 word registers save the sampling time of the trend data which is crossed by the cursor. They are year, month, day, hour, minute, second and millisecond. From the eighth register, the sampling data crossed by the cursor is saved. The data format should be consistent with whichdefined in "Data Sampling".

For example, the starting address of the cursor data area is set LW100. Then the registers from LW100 to LW106 save the sampling time information of year, month, day,

hour, minute, second and millisecond. If the "Data Sampling" that you use only defines a data in "16-bit Unsigned" data type and the channel number is 1, then the LW107 register saves the sampled data at this time. If the "Data Sampling" that you use has the data sampled from two channels, the data type of the first channel is "Single precision floating point number" and the second channel is "16-bit Unsigned", then LW107 (Single precision floating point number) saves the data of the first channel and LW109 (16-bit Unsigned) saves the data of the second channel. Other data formats can be done in the same matter.

Use Zoom

This option is optional. After it is checked, the option "Two-point Touch Zooming (only for multi-touch hardware)" can be check. This option is only valid for the capacitive HMI device. After you enable this function, the curve will be zoomed out when two fingers slide outward in the curve zone and the curve will be zoomed in when two fingers slide inward in the curve zone.

The option "Register Control Zooming" is used to zoom by using a word register. After check it, a word register needs to be given here. The value of this word register is the percentage of zooming. For example, the value of the word register is 50. It means that only 50% is displayed and the curve is scaled a half. If the value of the word register is 200, it means 200% is displayed and the curve is zoomed to 2 times. The settings are shown as below.

🔽 Zoo	m
	Two-point Touch Zooming(only for multi-touch hardware)
	Register Control Zooming:
	LW200
	LW200 The zooming value represents the percentage coefficient of the number of points being displayed on the screen. For example, when the zooming value is 50 and data points are 20, 50% of the 20 data points will be displayed on the screen. Zoom value is 0 means
	there is no zoom-in or zoom-out.

4.6.7.1.2 Channel

nd Chart	8	
Seneral Channel 🥑 Search Scale Display		
Data Source:		
Help Description:	OK Can	ncel

In the "Channel" property TAB, you need select a sampling data as the "Data Source". There will be a red exclamation mark here if the "Data Sampling" is not set. You can open the "Data Sampling" settings page to set the required sampling data by click the button

". After the setting is complete, the "Channel" page is shown as below.

ata Source:	1:Temperat	ure_Humidity	• 🛄		
and a second second second	Information				
Trigger Typ	e: Cyclic	1S Upper limits o	of sampling point quantity in ea	ch channel:1	
Pause Contr	rolling:No U	se Clear Mode:		No Use	
	cal Data: Don't save Maximum Item Quantity: 1000		Auto Stop		
Hide Cha	innel Registe	r			
hannel Settir	ng				
Channel	Use	Address	Туре	Word Count	Notes
1		LWO	precision Floating-point N	2	
2	1	LW2	16-bit Unsigned	1	
	tting	ine: Line Color 🚺	▼ ☑ Line Width	- • Line Type	· · · · · · · · · · · · · · · · · · ·

After you selecting a sampling data for the option "Data Source", all channels of this sampling data defined in the "Data Sampling" will be displayed in the "Channel Setting" property box.

For the above figure, the sampling data "Temperature Humidity" is selected as the data source. This sampling data has two channels. The data of channel 1 is from LW0 register and the data type is "Single precision floatingpoint number". The data of channel 2 is from LW2 register and the data type is "16-bit Unsigned".

• Data Source Information

In this area, you can see the various attributes of the selected sampling data defined in the "Data Sampling".

There is an option "Hide Channel Register" here. After it is checked, you need to specify a word register. When the bit0 of this word register is ON, hide the curve of Channel 1. When the bit1 is ON, hide the curve of Channel 2. Other channels can be done in the same matter. The setting is shown as below.

neral Cha	nnel Search	Scale Display			
ata Source	1:Temperatu	re_Humidity	• I.a		
Data Sourc	e Information				
Trigger Ty	pe: Cyclic <mark>1</mark>	S Upper limits o	of sampling point quantity in ea	ch channel:1	
Pause Con	trolling:No Use	e Clear Mode:		No Use	
Historical [Data: Don't s	ave Maximum Iter	n Quantity:	1000	Auto Stop
✓ Hide Ch	annel Register	LW500			
hannel Sett	ing				
Channe	Use	Address	Туре	Word Count	Notes
1		LWO	precision Floating-point N	2	
2	1	LW2	16-bit Unsigned	1	
	k	ne: Line Color	-	Line Type	• • • • • • • • • • • • • • • • • • •

For example, the option "Hide Channel Register" is set LW500. Then the curve of Channel 1 is hidden when the bit 0 of the LW500 is ON. The curve of Channel 2 is hidden when the bit1 of the LW500 is ON.

• Channel Setting

All channels of the data source are displayed here. They are all checked in the "Use" Column by default. It means they are all set to display on the trend curve.

Note:

If one channel is not checked in the "Use" column, that means the data of this channel will not be displayed on the trend curve. So the corresponding bit of the word register specified in the option "Hide Channel Register" cannot control the curve of this channel to display or hide.

Click one channel in the "Channel Setting" area, the relevant attribute settings of this channel will be displayed below. It is shown as below.

ata Source:	1:Temperatu	ire_Humidity 🔹 🔻			
Data Source	Information				
Trigger Type	e: Cyclic1	S Upper limits of	sampling point quantity in	each channel:1	
Pause Contr	olling:No Us	e Clear Mode:		No Use	
Historical Data: Don't save Maximum Item Quantity: 1000		1000	Auto Stop		
J Hide Cha	nnel Register	r LW500			
annel Settin	a				
Channel		Address	Type	Word Count	Notes
1	V	LW0	precision Floating-point		
2		LW2	16-bit Unsigned	1	
IChannel Set	tting		Line Width		•

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Dot Mark

This option is not checked by default. After it is checked, you can set the dot color, the dot size and the dot style for each point of the sampling data.

🔽 Dot Mark:	Dot Color	•	Dot Size	10	•	Dot Style	•	•
					- 70		37	

Drawing Connecting Line

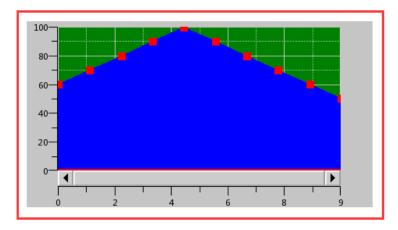
This option is checked by default. If it is checked, you can set the line color, the line width and the line type for the connecting line of the sampling data points.

Drawing Connecting Line:	Line Color		Line Width	 Line Type	
		and the second se			

Projection along X-axis Direction

This option is not checked by default. After it is checked, the trend curve from the first point to the current sampling point will project to the X-axis to form a closed figure.

For example, the option "Dot Mark" and the option "Projectionalong X-axis Direction" are all checked, the display effect is shown as below.



Minimum Value

The minimum value of the trend curve can be set byConstant or by Variable. When set it by Variable, the data type of the specified word registershould be consistent with the data type of the selected sampling data channel.

Maximum Value

The maximum value of the trend curve can be set byConstant or by Variable. When set it by Variable, the data type of the specified word registershould be consistent with the data type of the selected sampling data channel.

4.6.7.1.3 Search

The option "Enable Search Function" is not checked by default in the "Search" property TAB. After it is checked, the settings are shown as below.

Trend Chart	2 2
General Channel Search 🕖 Scale Display	
☑ Enable Search Function	
 Search By Date Search By Time Range Search By Sequence Register Query Mode 	
Search Trigger Bit:	
Search Register:	
Export CSV	
Help Description:	OK Cancel

There are three fixed search modes supported: "Search By Date", "Search By Time Range" and "Search By Sequence". The "Register Query Mode" is a dynamic search mode. The default search mode is "Search By Date".

Search By Date

The settings of "Search By Date" are shown as below.

eral Channel Search	Scale Display	
Enable Search Function	n	
Search By Date	Search By Time Range 🛛 Search By Sequence	
Register Query Mod	le	
Search Trigger Bit:	LB20	
Search Trigger Bit:	LB20 1: show the results filtered by range.	
Search Trigger Bit:		
Search Trigger Bit: Search Register:	LB20 1: show the results filtered by range.	
	LB20 1: show the results filtered by range. 2: no filtering	

"Search Trigger Bit"

The option "Search Trigger Bit" is used to specify a bit register to trigger the search function. When the trigger bit is ON, the filtered results are displayed. When the trigger bit is OFF, the result which is not filtered is displayed.

"Search Register"

The "Search Register" is used to specify word registers to save the information of the search function. The number of the word registers is depending on the search mode. You can get the information of the used word registers according to the text displayed under the specified address.

For example, select the "Search By Date" mode and specify LW300 for the option "Search Register". Then LW300 saves the search year, LW301 saves the search month and LW302 saves the search day. You can use three numeric value input components connected with the three word registers to give the search conditions in your project.

Search By Time Range

For the "Search By Time Range" mode, the function and the setting of the "Search Trigger Bit" are same to the "Search By Date" mode. The difference is the "Search Register."

When selecting the "Search By Time Range" mode, you should specify a start address of a continuous 12 word registers area for the option "Search Register". The first six word registers save the start date of search, including year, month, day, hour, minute and second. The last six word registers save the stop date of search. The setting is shown as below.

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eral Channel Search	Scale Display	
Enable Search Functio	n	
Search By Date	Search By Time Range 💿 Search By Sequence	
Register Query Mod	le	
Search Trigger Bit:	LB20	
Search Trigger Bit:	LB20 1: show the results filtered by range.	
	LB20 1: show the results filtered by range. 2: no filtering	
Search Trigger Bit: Search Register:	LB20 1: show the results filtered by range.	
	LB20 1: show the results filtered by range. 2: no filtering LW300 IIII LW300 ~ LW305: It Shows The search Starting time, in the order of	
	LB20 1: show the results filtered by range. 2: no filtering LW300	

Search By Sequence

For the "Search By Sequence" mode, the function and the setting of the "Search Trigger Bit" are same to the "Search By Date" mode. The difference is the "Search Register."

For example, select the "Search By Sequence" mode and specify LW300 for the option "Search Register". The settings are shown as below. Then when LW300 is 0, the data of the current day is displayed on the curve. When LW300 is 1, the data of the yesterday is displayed on the curve.Other values can be done in the same matter.

Chart		-8
neral Channel Search	Scale Display	
Enable Search Functio	n	
🔘 Search By Date 🛛 🤇	Search By Time Range 🔘 Search By Sequence	
0 n		
Register Query Mod	le	
Search Trigger Bit:	LB20	
Search Trigger Bit:	LB20 I: show the results filtered by range.	
Search Trigger Bit:		
Search Trigger Bit: Search Register:	LB20 1: show the results filtered by range.	
	LB20 1: show the results filtered by range. 2: no filtering	

Register Query Mode

The "Register Query Mode" is a dynamic search mode.When the "Register Query Mode" is selected, you can specify a word register to dynamically adjust the search mode. If the word register is 0, the "Search By Date" mode will be used.If it is 1, the "Search By Time Range" mode will be used. If it is 2, the "Search By Sequence" mode will be used. The settings are shown as below.

neral Channel Search S	cale Display	
Enable Search Function		
Search By Date	earch By Time Range 💿 Search By Sequence	
Register Query Mode	LW350	
	LW350 0:Search by Date ,1:Search by Time Range, 2:Search by Sequence	
Search Trigger Bit:	LB20	
	LB20 1: show the results filtered by range. 2: no filtering	
Search Register:	LW300	
	LW300 ~ LW311: Depending on different search methods, take up to 12 words.	

4.6.7.1.4 Scale

• X-axis Scale

The source of X-axis value can be set "Use Point Scale Value" or "Use Time Scale Value". The default is "Use Point Scale Value". It is shown as below.

ieneral Channel Search Scale Dis	play			
	gro 🔻 🍠 🛛 🔽 Use Scale Aer	a Color	Scale Aera (👻 🍠	
X-axis Scale Main Scale Division Number:	5 Main Scale Length:	12 🗘		
Sub Scale Division Number:	2 🔹 Sub Scale Length:	8 🜩	Axis/Scale Color	•[2
🗹 Display Grid Line 📃 Line Cok 💌				
V Mark				
Font: Size: 8 • F	ont: Arial 🔹 🖬 Font Co	lor 👻 📝		
Use Point Scale Value	O Use Time Scale Value			

The option "Use Point Scale Value" means that the values of the sampling data points are used as the X-axis scale. The option "Use Time Scale Value" means that the time of the data sampling is used as the X-axis scale.

• X-axis Scale

The source of Y-axis value can be set "Use ... Channel Maximum Minimum Value" or "Self-setting". The default is "Use 1 Channel Maximum Minimum Value". It is shown as below.

eneral Channel Search	cale Display				
Vse Background Color	Backgro 👻 🍠	Use Scale Aer	ra Color	Scale Aera (💌 🍠	
X-axis Scale					
Main Scale Division Numbe	r: 5	Main Scale Length:	12 🗘		
Sub Scale Division Num	oer: 2	Sub Scale Length:	8 👻	Axis/Scale Color	<u>·</u> 2
V Display Grid Line	ne Colc 💌 📝				
🔽 Mark					
W IVIGIN					
_					
Font: Size: 8	▼ Font: Arial	▼ Font Co	olor 🕶 📝		
			olor 💌 📝		
	▼ Font: Arial ale Value		olor 💌 📝		
			olor 💌 📝		
Use Point Sca	ale Value 🔘 Use Ti	me Scale Value			
	ale Value 🔍 Use Ti rr: 5 🗲	me Scale Value	12	Axis/Scale Color	•
	ale Value 🔍 Use Ti r: 5 🖨	me Scale Value		Axis/Scale Color	• 2
	ale Value 🔍 Use Ti rr: 5 🗲	me Scale Value	12	Axis/Scale Color	• 2
	ale Value OUse Ti r: 5 - ber: 2 - Line Cok V	Main Scale Length:	12	Axis/Scale Color	• 0
 ♥ Use Point Sca ♥ Y-axis Scale Main Scale Division Numbe ♥ Sub Scale Division Numl ♥ Display Grid Line ♥ Mark Interger: 	ale Value OUse Ti ur: 5 ¢ ber: 2 ¢ Line Colc V Ø 3 ♥ Decimal:	Main Scale Length: Sub Scale Length:	12 🔹 8 👻	Axis/Scale Color	• []
 Use Point Scale Main Scale Division Numbe Sub Scale Division Numl Display Grid Line 	ale Value OUse Ti r: 5 - ber: 2 - Line Cok V	Main Scale Length: Sub Scale Length:	12	Axis/Scale Color	•
 Use Point Scale Main Scale Division Number Sub Scale Division Number Display Grid Line Mark Interger: Font: Size: 8 	ale Value OUse Ti ur: 5 ¢ ber: 2 ¢ Line Colc V Ø 3 ♥ Decimal:	Main Scale Length: Sub Scale Length: 0	12 🔹 8 👻	Axis/Scale Color	• []

After you select the option "Use ... Channel Maximum Minimum Value", you can specify a channel number. And the minimum and the maximum values of this channel will be used as the minimum and the maximum values of the Y axis.

If the option "Self-setting" is selected, you can set the maximum and minimum values by yourself as the source of Y-axis. The minimum and maximum values can be set by Constant or by Variable.The settings are shown as below.

nd Chart					
eneral Channel Search	Scale Display				
🔽 Use Background Color	Backgro 🔻	🖌 🔽 Use Scale Ae	ra Color	Scale Aera (👻 📝	
🔽 X-axis Scale					
Main Scale Division Nur	nber: 5	Main Scale Length:	12 🗘		
Sub Scale Division N	umber: 2	Sub Scale Length:	8 🗘	Axis/Scale Color	× 2
☑ Display Grid Line	Line Colc V				
🔽 Mark					
Font: Size:	8 • Font: Arial	▼ Font Co	olor 👻 📝		
Font: Size:			olor 👻 🍠		
Font: Size:	8 • Font: Arial Scale Value © Use 1		olor 💌 🗾		
Font: Size:			olor 💌 🍠		
Font: Size: Use Point	Scale Value OUse 1	Time Scale Value			
Font: Size: © Use Point V-axis Scale Main Scale Division Nur	Scale Value 🔘 Use T	Time Scale Value	12 🗣	Axis/Scale Color	-2
Font: Size:	Scale Value 🔘 Use T	Time Scale Value		Axis/Scale Color	• 2
Font: Size: © Use Point V-axis Scale Main Scale Division Nur	Scale Value 🔘 Use T	Time Scale Value	12 🗣	Axis/Scale Color	•]2
Font: Size: © Use Point V-axis Scale Main Scale Division Nur Sub Scale Division N Display Grid Line	Scale Value OUse T nber: 5 umber: 2 Line Cok V	Time Scale Value Main Scale Length: Sub Scale Length:	12 🗣	Axis/Scale Color	
Font: Size: © Use Point V-axis Scale Main Scale Division Nur Sub Scale Division N Usplay Grid Line Mark Interger:	Scale Value OUse T nber: 5 umber: 2 Line Colc V 3 V Decimal:	Time Scale Value Imain Scale Length: Sub Scale Length: 0		Axis/Scale Color	•[]
Font: Size: © Use Point V-axis Scale Main Scale Division Nur Sub Scale Division N Display Grid Line	Scale Value OUse T nber: 5 umber: 2 Line Colt V 3 V Decimal:	Time Scale Value Imain Scale Length: Sub Scale Length: 0	12 🗣	Axis/Scale Color	•2
Font: Size: © Use Point V-axis Scale Main Scale Division Nur Sub Scale Division N Display Grid Line Mark Interger: Font: Size:	Scale Value OUse T nber: 5 umber: 2 Line Colc V 3 V Decimal:	Time Scale Value Main Scale Length: Sub Scale Length: 0 Total Font Comparison		Axis/Scale Color	*[2

For more details, please refer to: Detailed manual/Component/Scale.

4.6.7.1.5 Display

The settings of the "Display" property TAB are referred to: <u>Detailed manual/General</u> <u>functions/Drawing/Display</u>.

4.6.7.2XY Chart

The "XY Chart" refers to the curve formed by the corresponding data points which are comprised by a set of data registers or two different sets of data registers. All settings are described below.

4.6.7.2.1 General

		Data Point
efresh Mode		Data Point
Cyclic Cyclic Triggere		
Sampling Cycle	1 🔺 X S 🗸	Constant 🔻 10 🔽
		Control Setting
		Pause Control
		Clear Control
Use Cursor		
Display/Hide the Curso	or: LBO	Cursor Color: 🗖 Cursor Color: 🕶 🍠
	LB0=1:Display the Cursor. LB0=0: Hide the Cursor.	
		noving cursor by click or slide actions.
Cursor Data address:	LWO	
	LW0: Current Cursor Coordinate X LW1: Current Cursor Coordinate Y	

Refresh Mode

The "Refresh Mode" includes two types: "Cyclic" and "Triggered".

> Cyclic

The default refresh mode is "Cyclic". The default sampling cycle period is 1 second. That means the curve is refreshed every 1 second. The minimum sampling cycle period is 0.1 second.

> Triggered

After you select "Triggered" refresh mode, you need to specify a bit register and select the "Trigger Mode". The Trigger Mode can be set "Bit" or "Word".

For the "Bit" trigger mode, there are three "Trigger Condition": "OFF \rightarrow ON", "ON \rightarrow OFF" and "OFF \leftrightarrow ON". You can choose one of them. The settings are shown as below.

/ Chart		
General Channel Scale	Display	
Refresh Mode		Data Point
Cyclic Iriggered		
Address: LB0		Constant 🔹 10 🔦
Trigger Mode: 🖲 Bit	O Word	
Trigger Condition: ON<- ON<- ON->		Control Setting
OFF->	ON	Pause control
		Clear Control
Use Cursor		
Display/Hide the Cursor:	LBO	Cursor Color: 🔳 Cursor Color: 💌 🍠
	LB0=1:Display the Cursor. LB0=0: Hide the Cursor. When the cursor is visible, enable	moving cursor by click or slide actions.
Cursor Data address:	LWO	
	LW0: Current Cursor Coordinate LW1: Current Cursor Coordinate	
Help Description:		OK Cancel

For example, if the trigger condition is set "OFF \rightarrow ON", that means the XY curve will be refreshed when the specified bit register is changed from OFF to ON.

There is an option "Auto Reset" for the trigger condition "OFF \rightarrow ON" and "ON \rightarrow OFF". If you check it, the bit register state will be reset after it is changed.

For the "Word" trigger mode, the details are referred to: <u>Detailed manual/General</u> <u>functions/Drawing/Logical Control</u>.

• Data Point

The default value is 10. The range is from 2 to 4096. The option "Data Point" can be set by constant or by Variable.

Control Setting

Pause control

If you check this option, a bit register needs to be specified to control the Pause function. When the bit register is ON, the XY chart is paused and not be refreshed.

Clear control

If you check this option, a bit register needs to be specified to control the Clear function. When the bit register is ON, the data of the current XY chart is cleared.

• Use Cursor

After this option is checked, some parameters need to be set. The settings are shown as below.

Chart General Channel Scale	Display	?
Refresh Mode Cyclic © Triggered Address: LB0 Trigger Mode: ® Bit Trigger Condition: ON<-	Word	Data Point Constant 10 Control Setting Pause Control Clear Control
Use Cursor		
Display/Hide the Cursor:	LB0=1:Display the Cursor. LB0=0: Hide the Cursor.	Cursor Color: Cursor Color: V
Cursor Data address:	LW0 IIII LW0: Current Cursor Coordinate 2 LW1: Current Cursor Coordinate 2	
Help Description:		OK Cancel

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> Display/Hide the cursor

Same to the Trend Curve, a bit register needs to be specified to control the cursor display or hide.

Cursor Color

The cursor color is set here.

Cursor Data address

Similarly, you need to set a starting address of a continuous word registersarea here to save the coordinate data information of which the cursor is crossed with the XY chart. The data type is depended on the setting in the "Channel" property TAB. For example, the data type is set "16-bit Unsigned in the "Channel" property TAB and the first starting register address is set LW100, then the data of the cursor (X, Y) is (LW100, LW101). If the

data type is "Single-precision Floating-point Number", then the data of the cursor (X, Y) is (LW100, LW102). Other data types can be done in the same matter.

4.6.7.2.2 Channel

The "Channel" property TAB is shown as below.

						8
ieneral	Channel Scale Displa	ау				
Channel	Number: 1					
hannel	Settings					
	X Address	Y Address		Туре	Remark	
1	LW0	LW1		16-bit Unsigne		
L Chann	el Setting					
	Dot Mark:					
_ 030 1	Doctinaria					
Draw	connecting line Line Co	olor Line Colo	r w Cline Widt		D	
Draw	connecting line Line Co					
				· ،	Line Style	
	Designation along X av					
	Projection along X-ax		Projection alc			
	Projection along X-ax					
X-axis:		ile Direction	Projection alc	ong Y-axile Direct	tion	·
X-axis:	Projection along X-ax	ile Direction		ong Y-axile Direct	tion	`
X-axis: Minimu			Projection alc	ong Y-axile Direct		\ •
X-axis: Minimu		ile Direction	Projection alc	ong Y-axile Direct	tion	•
X-axis: Minimu Y-axis:	m Value: Constant 🔻	ile Direction	Projection alc	Constant •	tion 100	
X-axis: Minimu Y-axis:		ile Direction	Projection alc	Constant •	tion	
X-axis: Minimu Y-axis: Minimu	m Value: Constant ▼ m Value: Constant ▼	0 ×	Maximum Value	Constant Constant	tion 100	•
X-axis: Minimu Y-axis: Minimu	m Value: Constant 🔻	0 ×	Maximum Value	Constant •	tion 100	•
X-axis: Minimu Y-axis: Minimu	m Value: Constant ▼ m Value: Constant ▼	0 ×	Maximum Value	Constant Constant	tion 100	•
X-axis: Minimu Y-axis: Minimu Channel	m Value: Constant ▼ m Value: Constant ▼	0 ×	Maximum Value Maximum Value Maximum Value XY address	Constant Constant	tion 100	•
X-axis: Minimu Y-axis: Minimu Channel XY Co	m Value: Constant ▼ m Value: Constant ▼ I address occupation des ntinuous Address	0 ×	Maximum Value Maximum Value Maximum Value XY address X0 : LW0	ong Y-axile Direct : Constant ▼ : Constant ▼ corresponding i	tion 100	•
X-axis: Minimur Y-axis: Minimur Channel XY Co	m Value: Constant • m Value: Constant • I address occupation des	0 ×	Maximum Value Maximum Value Maximum Value XY address X0 : LW0 X1 : LW2	constant ▼ Constant ▼ Constant ▼ corresponding of Y0 : LW1 Y1 : LW3	tion 100	•
X-axis: Minimur Y-axis: Minimur Channel XY Co	m Value: Constant ▼ m Value: Constant ▼ I address occupation des ntinuous Address	0 ×	Maximum Value Maximum Value XY address X0 : LW0 X1 : LW2 X2 : LW4	corresponding voi LW1	tion 100	•
X-axis: Minimur Y-axis: Minimur Channel XY Co	m Value: Constant ▼ m Value: Constant ▼ I address occupation des ntinuous Address	0 ×	Maximum Value Maximum Value Maximum Value XY address X0 : LW0 X1 : LW2	constant ▼ Constant ▼ Constant ▼ corresponding of Y0 : LW1 Y1 : LW3	tion 100	•
X-axis: Minimur Y-axis: Minimur Channel XY Co	m Value: Constant ▼ m Value: Constant ▼ I address occupation des ntinuous Address	0 ×	Maximum Value Maximum Value XY address X0 : LW0 X1 : LW2 X2 : LW4	constant ▼ Constant ▼ Constant ▼ corresponding of Y0 : LW1 Y1 : LW3	tion 100	•
X-axis: Minimu Y-axis: Minimu Channel XY Co	m Value: Constant ▼ m Value: Constant ▼ I address occupation des ntinuous Address	0 ×	Maximum Value Maximum Value XY address X0 : LW0 X1 : LW2 X2 : LW4	constant ▼ Constant ▼ Constant ▼ corresponding of Y0 : LW1 Y1 : LW3	tion 100	•
X-axis: Minimu Y-axis: Minimu Channel XY Co	m Value: Constant ▼ m Value: Constant ▼ I address occupation des ntinuous Address	0 ×	Maximum Value Maximum Value XY address X0 : LW0 X1 : LW2 X2 : LW4	constant ▼ Constant ▼ Constant ▼ corresponding of Y0 : LW1 Y1 : LW3	tion 100	•
X-axis: Minimur Y-axis: Minimur Channel XY Co	m Value: Constant ▼ m Value: Constant ▼ I address occupation des ntinuous Address	0 ×	Maximum Value Maximum Value XY address X0 : LW0 X1 : LW2 X2 : LW4	constant ▼ Constant ▼ Constant ▼ corresponding of Y0 : LW1 Y1 : LW3	tion 100	•

• Channel Number

The default value of the "Channel Number" is 1. The XY chart can display up to 16 channels simultaneously.

• Channel Settings

You can define the channel information in the "Channel Settings" table: the X address and the Y address are continuous by default. As shown as above, the default starting X address is LW0 and the default starting Y address is LW1. They are continuous. If you check the box in front of the Y address, the Y address can be not continuous with the X address. For example, you can set the starting Y address LW100.

≻ Туре

Select the data type for the current channel according to the actual needs.

> Remark

You can note the name of the curve for the current channel in the "Remark" column. For example, channel 1 is noted as "Disc A track".

Same as the Trend Curve, select channel in the "Channel Settings" table, there are many parameters can be set for the selected channel in the following "Channel Setting". The most parameters are same to the settings of the Trend Curve. The option "Projection along Y-axis Direction" is added here. The meaning of this option is same to the "Projection along X-axis Direction" but the direction is different. The Minimum Value and the Maximum Value of the Y-axis can be set different with X-axis. They can be set by Constant or by Variable. The default range of the Minimum Value and the Maximum Value is from 0 to 100. The detailed settings can be referred to the "Channel" property TABof the Trend Curve.

For the information of the occupied addresses by the current channel, it is depended on the data type of this channel. You can view the text which is noted below the "Channel Setting". It is shown as below.

	Channel Scale Display	1				
merai						
hannel	Number: 1					
hannel	Settings					
hannel	X Address	Y Address		Туре	Remark	
L	LW0	ELW1		16-bit Unsigne	•	
			0.	5		
Use Use	el Setting Dot Mark: / connecting line Line Colc	or 📕 Line Colo	r 💌 🍠 Line Widt	th	Line Style	
X-axis:	Projection along X-axile	Direction	Projection al	ong Y-axile Dire	ction	
X-axis:	■ Projection along X-axile m Value: Constant ▼	Direction 0	Projection al		ction 100 🔹	
X-axis: Minimu Y-axis:			-	e: Constant •		_
X-axis: Minimu Y-axis: Minimu	m Value: Constant 🔻		Maximum Value Maximum Value	e: Constant •	100	
X-axis: Minimu Y-axis: Minimu Channe	m Value: Constant ▼ m Value: Constant ▼		Maximum Value Maximum Value XY addres	e: Constant •	100 🖍	
X-axis: Minimu Y-axis: Minimu Channe XY Co	m Value: Constant 🔹 m Value: Constant 🔹 I address occupation descr		Maximum Value Maximum Value XY addres X0 : LW0 X1 : LW2	e: Constant • e: Constant • s corresponding Y0 : LW1 Y1 : LW3	100 🖍	
X-axis: Minimu Y-axis: Minimu Channe XY Co	m Value: Constant m Value: Constant address occupation descr ntinuous Address		Maximum Value Maximum Value XY addres X0 : LW0 X1 : LW2 X2 : LW4	e: Constant • e: Constant • s corresponding v0 : LW1	100 🖍	
X-axis: Minimu Y-axis: Minimu Channe XY Co	m Value: Constant m Value: Constant address occupation descr ntinuous Address		Maximum Value Maximum Value XY addres X0 : LW0 X1 : LW2	e: Constant • e: Constant • s corresponding Y0 : LW1 Y1 : LW3	100 🖍	
X-axis: Minimu Y-axis: Minimu Channe XY Co	m Value: Constant m Value: Constant address occupation descr ntinuous Address		Maximum Value Maximum Value XY addres X0 : LW0 X1 : LW2 X2 : LW4	e: Constant • e: Constant • s corresponding Y0 : LW1 Y1 : LW3	100 🖍	

/ Chart									-8	
General	Channel Scale	Display								
Channel	Number:	1								
Channel										
	X Address		Y Address			Туре		Remark]	
1	LW0		🗸 LW100			16-bit Unsig	jne 🔻			
]	
1.0	10.00									
	el Setting Dot Mark:									
hand to be a set			_		-					
Draw	v connecting line	Line Color	Line Co	or •	Line Wid	th	- •	Line Style		- •
	Projection alon	ig X-axile Di	rection		Projection a	long Y-axile [Direction	n		
X-axis:										
Minimu	m Value: Constan	nt 🔹	0		Maximum Valu	e: Constant	•	100	^	
Y-axis:			•				_			
	N. 1		0	1.		C	_	100		
Minimu	m Value: Constan	it •	0		Maximum Valu	e: Constant	•	100	¥	
Channel	l address occupati	ion descript	ion:		XY addres	s correspond	ling rela	ation of cod	ordinates:	
	drace are est V a	course LMO.	IWO V occu		V0 - 114/					
XY ad	dress are set, X o 0~LW109.	ccupy LW0~	LW9, Y occu	ру		Y0 : LW100				
XY ad		ccupy LW0~	LW9, Y occu	ру	X1 : LW		i i			
XY ad		ccupy LW0-	LW9, Y occu	ру	X1 : LW	1 Y1 : LW101	i i			
XY ad		ccupy LW0-	LW9, Y occu	ру	X1 : LW X2 : LW	1 Y1 : LW101	i i			
XY ad		ccupy LW0-	LW9, Y occu	ру	X1 : LW X2 : LW	1 Y1 : LW101	i i			

4.6.7.2.3 Scale

Refer to the "Scale" property TABof Trend Curve.

4.6.7.2.4 Display

The settings of the "Display" property TAB are referred to: <u>Detailed manual/General</u> <u>functions/Drawing/Display</u>.

4.6.7.3Data Group Chart Display

The "Data Group Chart Display" component is a curve comprising of a set data of specified continuous registers.

4.6.7.3.1 General

ata Block Displaying		? 🗙
General Channel Sca	le Display	
Browse Method:	rection: Left To Right •	Refresh Mode © Cyclic © Triggered Sampling Cycle 1 X S •
Control Setting Stop Control		
Use Cursor		
Display/Hide the Cu	LB0 =1: Show the cursor LB0 =0: Hide the cursor	Cursor Color: 📕 💌 🖍
Cursor Data Area:	LW0 IIII LW0~1: X-axis Points LW2Rise:use the sampling thord data value of the curve through	oughfare data format:Storage the current
	uch zooming (only for multi-touch ol Zoom Function:	
Help Description	n:	OK Cancel

• Each screen sampling points

The default value of this option is 10. The minimum value is 2 and the maximum value is less than the width of the used screen resolution. For example, the used screen resolution is 800*480, and then the maximum value of samples per screen is 799.

• Direction

The "Direction" option is set "Left To Right" by default. You can set it "Up To Down" too. They are corresponding to the "Horizontal" and "Vertical" display modes.

The settings of these parameters such as the "Browse Method", the "Control Setting", the "Refresh Mode" and the "Use Zoom" are same to the "XY Chart". The details can be referred to the settings in the "General" property TAB of XY Chart.

Use Cursor

It is not checked by default. After check it, the parameters are shown as below.

	le Display	Refresh Mode
Each screen sampling	points: 10	Cyclic Triggered
Di	rection: Left To Right 🔹	Sampling Cycle 1 🔦 X S 🔹
Browse Method:		
Scrollbar Scrol	llbar Width 20 💌 y for capacitive screen.	
Control Setting		
Stop Control		
Clear Control		
Display/Hide the Cu	LB0 =1: Show the cursor LB0 =0: Hide the cursor When the cursor is visible, enal	Cursor Color: 🗾 🔹 🖍
Cursor Data Area:	LW0	
		oughfare data format:Storage the current a channel 1.
✔ Use Zoom		
	ich zooming (only for multi-touch ol Zoom Function:	i hardware)

The settings of these options are same to the Trend Curve or the XY Chart, such as the "Display/Hide the Cursor" and the "Cursor Color".

• Cursor Data Area

Similarly, you can set a "Word Register" as the starting address of the continuous registers here. The first two word registers are used to save the point number where the cursor stays. The registers from the specified register address + 2 are used to save the data of which the cursor is crossed with the XY chart.

As shown as above, the starting register is set LW0, and then LW0 and LW1 save the point number where the cursor stays. If there are three channels for the XY chart, the data

type of the Channel 1 is "16-bit Unsigned", the second channel is "Single-precision Floating-point Number", the third channel is "32-bit Unsigned", then LW2 (16-bit Unsigned number) save the Channel 1 data, LW3 (Single-precision Floating-point Number) save the Channel 2 data, LW5 (32-bit Unsigned) save the Channel 3 data. Other channelscan be done in the same matter.

4.6.7.3.2 Channel

Channel Set	ting		✓ From the Start	Address, the Sampling	Address is Continuou
Channe	Sampling N		Start Address	Data Type	Remark
1 U	W100		/101	16-bit Unsigne 🔻	
1 Channel Dot Ma Draw co	rk: onnecting line Lir	ne Color 🚺	Line Wid	th • Lin	е Туре
□ Dot Ma ✓ Draw co	rk: onnecting line Lir	_	Direction		

• Channel No.

There is 1 channel by default.A "Data Group ChartDisplay" component can display up to 16 channels.

• From the Start Address, the Sampling Address is Continuous.

This option is checked by default. If the register of the "Sampling No." for channel 1 in the "Channel Setting" table is set "LW100" and the "Data Type" is "16-bit Unsigned", then LW101 is used to save the first sample data, LW102 is used to save the second, and so on. If the "Data Type" is set "32-bit Unsigned", then LW101 (32-bit Unsigned) saves the first sample data, LW103 (32-bit Unsigned) saves the second sample data. Other data types can be done in the same matter.

If you don't check the option "From the Start Address, the Sampling Address is Continuous.", it means the "Start Address" of the registers to save the sample data can be set independently. The settings are shown as below.

Data Block Displaying			? <mark>- × -</mark>
General Channel Scale Display			
Channel No.: 1			
Channel Setting	From the Start Add	dress, the Sampling /	Address is Continuous.
Channe Sampling No.	Start Address	Data Type	Remark
1 LW100	LW200	16-bit Unsigne 🔻	
1 Channel Setting ☐ Dot Mark: ☑ Draw connecting line Line Color ☐ Projection in X-a Min Value: Constant ▼			Type v
Help Description:			OK Cancel

The below parameters setting for the selected channel is same to the Trend Curve or the XY Chart. Please refer to the settings in the "Channel" property TAB of the Trend Graph or XY Curve.

4.6.7.3.3 Scale

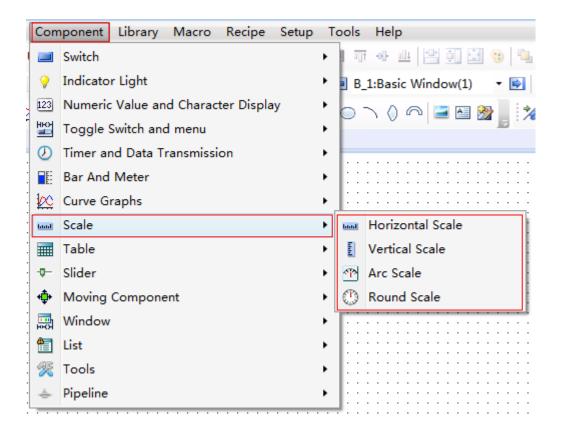
Refer to the settings in the "Scale" property TAB of the Trend Curve.

4.6.7.3.4 Display

The settings of the "Display" property TAB are referred to: <u>Detailed manual/General</u> <u>functions/Drawing/Display</u>.

4.6.8 Scale

The "Scale" includes four types: "Horizontal Scale", "Vertical Scale", "Arc Scale" and "Round Scale". You can add a Scale component by clicking the menu command or by using the shortcut tools bar.



File View Edit Window Drawing Component Library Macro Recip
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S ₀ S ₁ S ₂ S ₃ Status0 ▼ L1 L2 L3 L4 1-English (United St≉ ♥
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B_1:Basic Window(1)* X Horizontal Scale
Image: Second se
P Round Scale

The "Horizontal Scale" is mainly used to display a progress bar. The "Vertical Scale" can be used to display the current liquid level of a tank or the charge state of a battery. The "Arc Scale" can display the value of a fuel meter, a speed meter, and other display devices. The "Round Scale" can display the revolution speed, the angle and other parameters.

4.6.8.1General

4.6.8.1.1 Horizontal Scale

					•	•	•					•	•					•	•	•					•	•	•				•	•	•					•	•			
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First, the option "Horizontal" is selected. Then you can do other settings for the Horizontal Scale component.

Horizontal Vertical Arc Circle	Position			
✓ Line	Position: X :	116 🗘	Y :	73 🗘
Line Color	Locked Width:	150 🗘	Height:	57 🗘
Line Width				
Line Type				
Scale				
Main Scale Bisection: 2			_	
Sub Scale Division Number 2	-	28	Position:	Jp 🔹
✓ Axis		28 🗸		
☑ Mark Integer: 3 ♀ Dec	imal: 0 🗘			
Fonts: Font Size: 8 - Font	s: 微软雅黑 ▼	Fo	nt 🕶 🍠	
Min Value: Constant • 0	\$			
Max Value: Constant • 100	\$			
Scale Is Reverse				

Line

You can set the line color, the line width and the line type to meet the needs of your project.

- Scale
- Main Scale Bisection

Subdivide the scale in the scale range.

Main Scale Bisection:	5 🗘			
Sub Scale Division Number	2 🗘	Sub Scale Length	6 🗘	Position: Up 🔻
Axis				
Mark Integer: 3	Decim	al: 0 🗘		
Fonts: Font Size: 8	Fonts:	Arial	- Fo	nt 💌 🍠
Min Value: Constant 🗸	0	\$		
Max Value: Constant •	100	\$		

> Sub Scale Division Number

The main scale is subdivided singly. The option "Sub Scale Length" can be set to make difference with the main scale.

Nain Scale Bisection:	5 🗘			a 22 Ua
Sub Scale Division Number	2	Sub Scale Length	6 🗘	Position: Up 🔻
] Axis				I
Mark Integer: 3	Decim	nal: 0 🌲		
Fonts: Font Size: 8	 Fonts: 	Arial	Fo	nt 🕶 🍠
Min Value: Constant	• 0	\$		
Max Value: Constant	• 100	÷		

Mark

The option "Mark is used to set the value of the main scale.

The option "Integer" refers to the number of the decimal integer digits. The option "Decimal" refers to the number of the decimal fraction digits.

You can set the font size, the font color and the font type for the main scale here.

The options "Min Value" and "Max Value" are used to set the range of the main scale.

Up 🔸

The options "Min Value" and "Max Value" can be set by Constant or by Variable. If you set them by Variable and specify word registers for them, you can change the range of the main scale by modifying the value of the specified word registers.

Main Scale Bisection:	5 🗘			
Sub Scale Division Number	2 🗘	Sub Scale Length	56 🗘	Position: Up 🔻
Axis				
Mark Integer: 3	Decim	al: 0 🗘		
Fonts: Font Size: 8	 Fonts: 	Arial	For	nt 🕶 🍠
Min Value: Variables 🗸				

Usually, the scale value is displayed increasing from left to right.Sometimes, it needs to be displayed increasing from right to left. To do that, youshould check the option "Scale Is Reverse".

Main Scale Bisection:	5	\$					n	
Sub Scale Division Number	2	\$	Sub Scale	e Length	56	÷	Position	: Up 🔻
Axis								
Mark Integer: 3	\$	Decim	al: 0	\$				
Fonts: Font Size: 8	•	Fonts:	Arial			For	nt 💌 🍠)
Min Value: Constant 🗸	• 0	0	\$					
		00	\$					

> Axis

You can check the option "Axis" to display the axis of the scale. The position of the axis can be set "Up", "Down" or "Center". Of course, you can remove the check tohide the axis of the scale.

1ain Scale Bisection:	5 🗘			Position:	
Sub Scale Division Number	2	Sub Scale Length	56 🗘	Position:	Up 🔻 Up
Axis					Down Center
Mark Integer: 3	Decim	nal: 0 🗘			
Fonts: Font Size: 8	▼ Fonts:	Arial	Fo	nt 🕶 📝	
Min Value: Constant -	0	\$			
Max Value: Constant 🗸	100	\$			

4.6.8.1.2 Vertical Scale

For the "Vertical Scale", the only difference with the "Horizontal Scale" is the option "Position" in the "Scale" property box. It is shown as below.

🔘 Horizontal 🔘 Vertical 🔘 Arc 🔘 Circle	Position			
☑ Line	Position: X :	116 🗘	Υ:	73 🗘
Line Color V	Locked Width:	150 🗘	Height:	30 🗘
Line Width 📃 🔻				
Line Type 🛛 🗸 🗸				
Scale				
Main Scale Bisection: 5		ſ		
	Sub Scale Length	56 🗘		side 🔻
✓ Axis		•	Ri	ght enter
	cimal: 0 🛟			
Factor Factor Que Fac	ts: Arial 🔹	Fon	t 🕶 🍠	
Fonts: Font Size: 8 - For				
Fonts: Font Size: 8 • For Min Value: Constant • 0	\$			
	\$			

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4.6.8.1.3 Arc Scale

For the "Arc Scale", there are three differences with the "Horizontal Scale". The options "Starting Angle" and "End Angle" are added in the "Angle" property box. The option "Main Scale Length" is added in the "Scale" property box. The option "Position" in the "Scale" property box is different.

The option "Main Scale Length" is shown as below.

Window Drawing Component	Library Macro Recipe Setup Tools Help
🔏 🗈 🚇 🎘 🗙 🗐 Undo 🕶 🗎 Re	Scale 🤤 💦
itatus0 🔹 🖬 🖻 🗐 1-Eng	General Display
· ≝ · Ø · ∎ · ½ · · · · ■) ○ ⊃ () < ≅ ≅ 않 ;	○ Horizontal ○ Vertical ○ Arc ○ Circle Position Position Y: 73 ◆
Window(1)* X	☐ Line
	Line Color Z Locked Width: 150 C Height: 150 C
	Line Width Angle
•	Line Type Starting Angle 0 the End Angle 180 to
	Scale
150- 	Main Scale Bisection: 5 🗘 Main Scale Length: 30 🗘
60 40	☑ Sub Scale Division Number 2 ♀ ♀ Sub Scale Length 2 ♀
	V Axis
	Mark Integer: 3 Cecimal: 0
	Fonts: Font Size: 8 • Fonts: Arial • Font •
	Min Value: Constant 🕶 0
	Max Value: Constant - 100
	Scale Is Reverse
	Help Description: OK Cancel

The start angle and the end angle can be set for the arc scale in the "Angle" property box. The settings and the effect are shown as below.

	cale	-9-
	care	
	General Display	
	🔘 Horizontal 🔘 Vertical 🧕 Arc 🔘 Circle	Position
	O Horizontal O Vertical S Arc O Circle	
		Position: X: 50 2 Y: 160 2
		Position: X : 50 C Y : 160 C
	V Line	
	Line Color 💌 📝	🗌 Locked Width: 250 🗘 Height: 250 🗘
		Locked mount 250 y Height 250 y
and the second s		
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		Angle
/		
	Line Type 🚽 🔹	Starting Angle 180 🚔 End Angle 0 🚔
		Starting Angle 180 🛱 End Angle 0 💭
/ 20 80		
\mathcal{A}		12
	Scale	
100		
	Main Scale Bisection: 5	Main Scale Length: 30
· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	
		Position: In 🔻
	Sub Scale Division Number 2	Sub Scale Length 15
		Sub scale Length 15
	✓ Axis	
	AXIS	
······································	Filed to A D.	A
	📝 Mark Integer: 3 🗘 Deci	imal: 0 🗘
· · · • • · · · · · · · · · · · • • • · · · · · · · · · · · · •		
250-	Fonts: Font Size: 8 • Font	ts: Arial 🔹 🖉 Font 💌 🎽
	Min Value: Constant • 0	
	Min Value: Constant • 0	

For the option "Position" in the "Scale" property box, the axis position of the sacle can set "In", "Out" and "Center".

Nain Scale Bisection:	5	\$	Main Scale Length:	30	\$	Position:	In
Sub Scale Division Number	2	\$	Sub Scale Length	15	¢	Position:	In In
Axis							Out Cente
Mark Integer: 3	\$	Decim	nal: 0 🗘				
Fonts: Font Size: 8	•	Fonts:	Arial]	For	nt 💌 🍠	
Min Value: Constant •		0	\$				
Max Value: Constant 🗸	3	100	*				

4.6.8.1.4 Round Scale

For the "Round Scale", the only difference with the "Arc Scale" is that there is not "Angle" settings. It is shown as below.

Scale	8
General Display	
🔘 Horizontal 🔘 Vertical 🔘 Arc 🖲 Circle	Position
V Line	Position: X : 50 \$ Y : 160 \$
Line Color 💌 🍠	□ Locked Width: 250 🗘 Height: 250 🇘
Line Width 📃 💌	
Line Type 📃 💌	
Scale	
Main Scale Bisection: 5	Main Scale Length: 30 Position: In
Sub Scale Division Number 2	
🖉 Axis	
Mark Integer: 3	imal: 0 🗘
Fonts: Font Size: 8 • Fonts	ts: Arial 🔹 🖬 Font 👻
Min Value: Constant • 0	*
Max Value: Constant • 100	÷
Scale Is Reverse	
Help Description:	OK Cancel

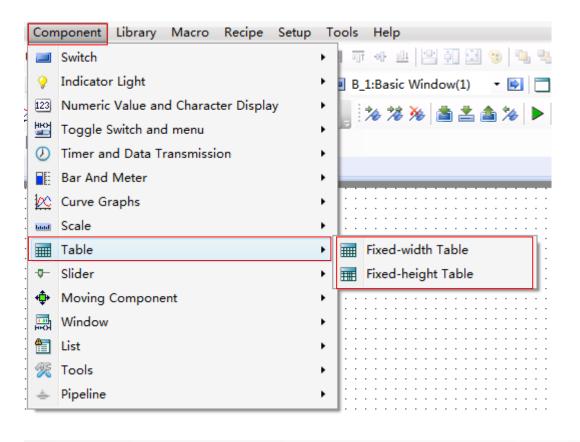
The settings of the "Position" for the Scale component are referred to: <u>Detailed</u> manual/General functions/Drawing/Position.

4.6.8.2Display

The settings of the "Display" property TAB are referred to: <u>Detailed manual/General</u> <u>functions/Drawing/Display</u>.

4.6.9 Table

The "Table" component is used largely in the project. There are two types: "Fixed-width Table" and "Fixed-height Table". You can add a Table component by clicking the menu command "Component/Table/Fixed-width Table" or ""Component/ Table/ Fixed-height Table". Of course, you can add it by using the shortcut tools bar.



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For the fixed-width table, the width of the cells is same and the height of the cells is equal. It is shown as below.

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For the fixed-height table, the width and the height of the cells can be modified by mouse-dragging the split line. It is shown as below.

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4.6.9.1General

The "General" property TAB of the "Fixed-width Table" is shown as below.

General Display		8
Position Position: X : 57 Locked Width: 274 Sheet Background Color: Outline Type: Split Line Type: Row Count: 2	Height: 210 \$ Backgroun Y S Line Width: Out	line Col 💌 🍠 It Line C 💌 🍞
Select Select Mode: Select by F Grid Position:		
Help Description:		OK Cance

The "General	" property T	B of the "Fixed-heigh	t Table" is shown a	as below.
--------------	--------------	-----------------------	---------------------	-----------

General Display Position Position: X :	79 🗘 Y: 68 🗘	
Sheet Background Color Outline Type Split Line Type Row Count: Column No.:	Line Width:	Outline Col 👻 🍠 Split Line C 👻
Grid Position:		

The difference with the "Fixed-width Table" is that the options "Equal Height" and "Equal Width" are not checked. Of course, you can check them and make the Fixed-height Table switch to the Fixed-width Table.

• Position

The option "Position" in the "General" property TAB is referred to: <u>Detailed</u> <u>manual/General functions/Drawing/Position</u>.

Appearance settings

The background color, the outline color, the split line color, the outline type, the split line type, the outline width and the split line width can be set for the table component appearance according to your needs and the project configuration.

Position X : 258	Y : 96 \$	
Locked Width: 317	Backgroun 👻 🍠	
Outline Type: Split Line Type:	Line Width:	
Column No.: Select Select Mode: Select by Grid Position:	2 🛃 Equal Height 🔲 Hide Horiz 2 🛃 🗹 Equal Width 📄 Hide Vertic Row 🔹 💽 Select Colc 👻 🏹	

The option "Row Count" and the option "Column No." are used to set the number of the rows and the columns of the table. The option "Equal Height" and the option "Equal

Width" can be checked. If they are all checked, the table will be a fixed-width table.

ble	8
General Display	
Position	
Position: X : 292 🗘 Y : 250 🗘	
Locked Width: 160 C Height: 100 C	
Sheet Background Color: Backgroun	
Outline Type: • Line Width: • • • • Split Line Type: • • • • • •	
Row Count: 2 V Equal Height Hide Horizontal Split Line	
Column No.: 2 😴 Equal Width 🔲 Hide Vertical Split Line	
Select	
Select Mode: Select by Row - Select Colc -	
Grid Position:	
Help Description:	OK Cancel

The option "Hide Horizontal Split Line" and the option "Hide Vertical Split Line" can be checked. You can check anyone or two to hide the split line of the table according to your needs

For example, only check the option "Hide Vertical Split Line". It is shown as below.

Ta	able
[General Display Position
	Position: X : 60 \$ Y : 100 \$
	■ Locked Width: 160 Height: 100
	Sheet Background Color: Backgroun
	Split Line Type: 📃 🔹 Line Width: 🔤 🔹 🖬 Split Line C 🔹 📝
	Row Count: 3 💌 🛛 Equal Height 🖉 Hide Horizontal Split Line
	Column No.: 3 😴 🛛 Equal Width 🔲 Hide Vertical Split Line

Select

In the "General" property TAB, if you check the option "Select",the "Control Settings" property TAB will display.

Table		8 ×
General () Control Settings Display		
Position: X : 60 🗘 Y : 100 🗘		
Locked Width: 160 🗘 Height: 100 🗘		
Sheet Background Color: Backgroun v Outline Type: V Line Width: Split Line Type: V Line Width: Row Count: 3 V Equal Height V Hide Hori Column No.: 3 V Equal Width Hide Vert Select Select Mode: Select by Row V Select Colc V Grid Position:		
Help Description:	OK .	Cancel
Fs Table		? <mark>x</mark>
General 🕖 Control Settings Display Position		8 💌
General 🧿 Control Settings Display		3
General Control Settings Display Position Position: X : 60 • Y : 100 • Position: X : 60 • Y : 100 • Locked Width: 160 • Height: 100 • Sheet Background Color: Backgroun • • Outline Type: • Line Width: Split Line Type: Row Count: 3 • Ø Equal Height Ø Hide Hori Column No.: 3 • Ø Equal Width Hide Vert	■ ● Outline Col ● ● ● Split Line C ● Zontal Split Line	
General Control Settings Display Position Position: X : 60 • Y : 100 • Position: X : 60 • Y : 100 • Locked Width: 160 • Height: 100 • Sheet Background Color: Backgroun • • • Outline Type: • Line Width: Split Line Type: • Line Width: Row Count: 3 • Equal Height Hide Hori	■ ● Outline Col ● ● ● Split Line C ● Zontal Split Line	
General Control Settings Display Position Position: X : 60 	■ ● Outline Col ● ● ● Split Line C ● Zontal Split Line	

Select Mode and Select Color

After checking the option "Select", you can set the color of the row/column/cell which is selected during running the project. The option "Select Mode" can be set "Select by Row", "Select by Column" or "Select by Cell". It determines that the selected is a row, a column or a cell.

Select	
Select Mode:	Select by Row 🔹 Select Colc 👻 🎢
Grid Position:	Select by Row Select by Column Select by Cell

Grid Position

For the option "Grid Position", you need to give a word register to record the selected row number if the select mode is "Select by Row". The first row number is 0.

Select	
Select Mode:	Select by Row 🔹 Select Colc 👻 📝
Grid Position:	LWO
Ľ	W0:Selected one column, and the up column is 0.

You need to give a word register to record the selected column number if the select mode is "Select by Column". The first column number is 0.

V Select		
Select Mode:	Select by Column 🔻	Select Colc 👻 🍠
Grid Position:	LW0	
L	W0:Selected one colum	n, and the left column is 0.

The effect of the "Select by Row" mode is shown as below.

·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	•
·	•	•	•	•	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	•	·	•	•
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•	•	•	•	•	•	•	•	•	•	·	·	·	·	·	·	·	·	•	•	·	·	•	•	•	•	•	•
·	•	•	•	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	•	·	•	•
								•		·	·	•			·		•				·						

The effect of the "Select by Column" mode is shown as below.

•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
•	•	•	•																	Т	•	•	•	•	•
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·	•	•	•	•			•	•	·		•	•			•	•	•	•	·	•	•	•	•	•	•

When selecting the mode "Select by Cell", two continuous word registers are occupied. You need to give the first address of the two word registers here. The first word register records the selected rownumber and the second records the selected column number. The first row number and the first column number are 0.

Select		
Select Mode:	Select by Cell 🔹	Select Colc 👻 📝
Grid Position:	LW0	
		nn, and the up column is 0. nn, and the left column is 0.
		-

The effect of the "Select by Cell" mode is shown as below.

·	•	•	·	·	·	•	·	·	•	·	·	·	·	·	•	·	·	•	·	•	·	•	·	·	•	·
·	•	•	•	•	•	•	•	•	•	·	•	•	•	•	•	•	•	•	•	•	·	•	•	•	•	·
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4.6.9.2 Control Settings

The settings of the "Control Settings" property TAB are referred to: <u>Detailed</u> <u>manual/General functions/Drawing/Control settings</u>.

4.6.9.3 Display

The settings of the "Display" property TAB are referred to: <u>Detailed manual/General</u> <u>functions/Drawing/Display</u>.

4.6.10 Slider

The "Slider" component can change the value of the specified word register by pressing and moving the slider block.

4.6.10.1 General

der	8
General Scale Background Graphics Slider Graphics Dynar	mic Graphics Control Settings Display
	Direction: Display Rightward 🔻
Minimum Value: Constant 🔹 0 💺	
Aaximum Value: Constant 🔹 100 🔹	Min Scale: 1
	Increase 1 📩 minimum scale per each click
	Writing value change simutaneously while sliding
Read and Write Address:	
Use Address Tag	
Deivce: LOCAL:[Local Register]	
Address Type: LW	
Address: 0 System Register	
Format(Range) DDDDDD(0~799999) Occupy: 1 • Word Data Type: 16-bit Unsigned •	
Address Index	
- Address index	

Minimum Value

The option "Minimum Value" refers to the minimum value of the slider. It can be set by a constant or by a variable. When use a variable to set, the details are referred to:<u>Detailed</u> <u>manual/General functions/Address editor/Standard Byte Address Input</u>.

Maximum Value

The option "Maximum Value" refers to the maximum value of the slider. It can be set by a constant or by a variable. When use a variable to set, the details are referred to:<u>Detailed manual/General functions/Address editor/Standard Byte Address Input</u>.

General 🤮 🛛 Scale 🛛 Ba	ackground Graphics	Slider Graphics	Dynamic Graphi	cs Con	trol Settir	ngs Di	splay
			Direction:	Displ	ay Rightw	vard 🔹	
linimum Value: Varia	ble • LW0						
1aximum Value: Varia	ble 🔹 Standard Byt	e Address Input				5	x
	Use Ad	ddress Tag					ŀ
		OCAL:[Local Regi	ster]			•	1
lead and Write Addre			528353 * 1				
Use Address Tag							
Deivce: LOCAL:[Local	Registe Address	Type: LW		•			
	Address:	0		Sys	tem Regi	ster	
	Format(Ra	ange) DDDDDD(0	~799999) C	ccupy:	1 - \	Nord	
Address Truss 134/			Data Type: 1	6-bit Un	signed	-	
Address Type: LW	Addres	ss Index					
	Addre						
Address Type: LW Address: 0 Format(Range) DDDD							

• Read and Write Address

You should specify a word register to change the value for the slider component. The word register input method is referred to:<u>Detailed manual/General functions/Address</u> editor/Standard Byte Address Input.

• Direction

The option "Direction" is used to set the display direction of the slider. It can be set "Display Upward", "Display Downward", "Display Leftward" and "Display Rightward",.

General	Scale	Background Graphics	Slider Graphics	Dynamic Graphics	Control Settings Display
				Direction:	Display Rightward 👻
Minimum	Value:	Constant 🔹	0 💌		Display Upward Display Downward
Maximum	Value:	Constant •	100	Min Scale:	
				Increas	Display Rightward
					value change simutaneously while sliding

Min Scale

The "Min Scale" refers to the step of the slider block.

Increase

The option "Increase" is used to set the minimum increase or decrease per each click. It should set multiple of the "Min Scale". If this option is not checked, it is set the value of the "Min Scale" by default.

• Writing value change simultaneously while sliding

After this option is checked, the word register which is set in the option "Read and Write Address" will change in real time during sliding the slider component. If it is not checked, the value of the word register will change after the slider block is released.

4.6.10.2 Scale

The settings of the "Scale" property TAB are referred to: <u>Detailed manual/</u> <u>Component/ Scale</u>.

4.6.10.3 Background Graphics

The settings of the "Background Graphics" property TAB are referred to: <u>Detailed</u> <u>manual/General functions/Drawing/Graphic edit</u>.

4.6.10.4 SliderGraphics

The settings of the "Slider Graphics" property TAB are referred to: <u>Detailed</u> manual/General functions/Drawing/Graphic edit.

4.6.10.5 Dynamic Graphics

The settings of the "Dynamic Graphics" property TAB are referred to: <u>Detailed</u> manual/General functions/Drawing/Dynamic Graphics.

4.6.10.6 Control Settings

The settings of the "Control Settings" property TAB are referred to: <u>Detailed</u> <u>manual/General functions/Drawing/Control settings</u>.

4.6.10.7 Display

The settings of the "Display" property TAB are referred to: <u>Detailed manual/General</u> <u>functions/Drawing/Display</u>.

4.6.11 Moving Component

You can click the menu command "Component/Moving Component/Moving Component" to add a moving component in your project.

4.6.11.1 General

eneral	Indicator Light 🕕 La	able Graphics Di	splay			
🔽 Ma	ove in X-Axis Direction					
	Read Address:	LWO				
S	creen Moving Range :	Axis Upper Limit	Constant	•	799 🜩	
		Axis Lower Limit	Constant	•	0	
	Move Proportionally	Input Lower Limit	Constant	•	0	
	Inversely Proportional	Input Upper Limit	Constant	•	799 🔹	
Ma	ove in Y-Axis Direction					
	Read Address:	LW10				
S	creen Moving Range :	Axis Lower Limit	Constant	•	0	
		Axis Upper Limit	Constant	•	479 🖍	
	Move Proportionally	Input Lower Limit	Constant	•	0	
	Inversely Proportional	Input Upper Limit	Constant	•	479	

The option "Move in X-Axis Direction" refers to moving along the horizontal direction. The option "Move in Y-Axis Direction" refers to moving along the vertical direction. These two options can be checked together. That means moving in an oblique line direction. The angle of the oblique line can be computed based on the moving distance along the x-axis and along the y-axis.

4.6.11.1.1 Move in X-Axis Direction

Read Address

For this option, you should set a word register to specify the moving distance of the moving component along the x-axis. The standard word address input method is referred to:<u>Detailed manual/General functions/Address editor/Standard Byte Address Input</u>.

• Screen Moving Range

After check this option, you should set the upper limit and lower limit of the moving range on the screen.

Axis Lower Limit

The option "Axis Lower Limit" refers to the minimum value of x-axis for the moving range. It can be a constant or a variable. When it is a variable, the details are referred to:Detailed manual/General functions/Address editor/Standard Byte Address Input.

> Axis Upper Limit

The option "Axis Upper Limit" refers to the maximum value of x-axis for the moving range. It can be a constant or a variable. When it is a variable, the details are referred to:Detailed manual/General functions/Address editor/Standard Byte Address Input.

Move Proportionally

After check this option, the moving component will move according to the proportion that the "Input Lower Limit" is corresponding to the "Axis Lower Limit" and the "Input Upper Limit" is corresponding to the "Axis Upper Limit".

For example, the "Axis Lower Limit" is 0, the "Axis Upper Limit" is 799, the "Input Lower Limit" is 0, and the "Input Upper Limit" is 7990. When the value of the specified word register is 0, the position is corresponding to the x coordinate: 0. When the value of the specified word register is 7990, it is corresponding to the x coordinate: 799.

Inversely Proportional

This option can be checked when the option "Move Proportionally" is checked. After it is checked, the "Input Lower Limit" is corresponding to the "Axis Upper Limit" and the "Input Upper Limit" is corresponding to the "Axis Lower Limit". The moving component will move in a inverse proportion.

4.6.11.1.2 Move inY-Axis Direction

The settings of the "Move in Y-Axis Direction" are same to the "Move in X-Axis Direction".But the moving component is along the vertical direction.

4.6.11.2 Indicator Light

Display a picture or a text according to the status of the specified address.

The settings of the "Indicator Light" property TAB are referred to: <u>Detailed</u> <u>manual/Component/Indicator Light</u>.

4.6.11.3 Label

The settings of the "Label" property TAB are referred to: <u>Detailed manual/General</u> <u>functions/Drawing/Label</u>.

4.6.11.4 Graphics

The settings of the "Graphics" property TAB are referred to: <u>Detailed manual/General</u> <u>functions/Drawing/Graphic edit</u>.

4.6.11.5 Display

The settings of the "Display" property TAB are referred to: <u>Detailed manual/General</u> <u>functions/Drawing/Display</u>.

4.6.12 Window

4.6.12.1 Bit Control Window

You can click the menu command "Component/Window/Bit Control Window" to add a bit control window component in your project.

(Con	ponent Library Macro Recipe Setup	Tools Help
ſ		Switch	•] 📅 🐠 😃 😫 🗊 🔝 🤫 🖳 🐂 💻
	9	Indicator Light	▶ 🛛 B_1:Basic Window(1) 🔹 💽 🔲
	123	Numeric Value and Character Display	*
1	ню	Toggle Switch and menu	•
	\odot	Timer and Data Transmission	•
		Bar And Meter	•
•	<u>100</u>	Curve Graphs	•
•	had	Scale	•
		Table	•
•	-0	Slider	•
·	ф	Moving Component	•
•	ни нон	Window	Bit Control Window
·		List	Word Control Window
	R	Tools	•
•	÷	Pipeline	•

4.6.12.1.1 General

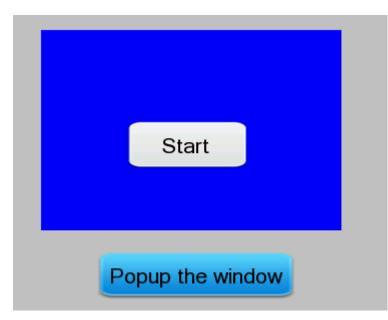
The "Bit Control Window" component is similar to the "WordControl Window" component. The differences with the "WordControl Window" component are pointed out as below. The other details are referred to: <u>Detailed</u> <u>manual/Component/Window/Word Control Window</u>.

• Bit register triggers thepop-up of window

The option "Trigger Bit" is used to specify abit register to trigger a popup window. The popup window is determined by the option "Popup Window ID No.". If you select the option "Popup On", the window will popup when the bit register is ON.If you select the option "Popup Off", the window will popup when the bit register is OFF.

Popup Window	x
General Display	
Bit trigger pop-up the specified window	
Trigger Bit: LB0 🔲 💿 Popup On 💿 Popup Off	
Popup Window ID No.: B_2:Base Window(2)	
Use Variable Window ID number:	
With Window Control Bar:	
Variable pop-up window position	
Variable window size	
Help Description: OK Cance	+ I

For example, a button named "Popup the window" is connected with LB0 and the trigger bit of the popup window component is set LB0. The simulation running result is shown as below. When press the button "Popup the window", the specified window will pop up.

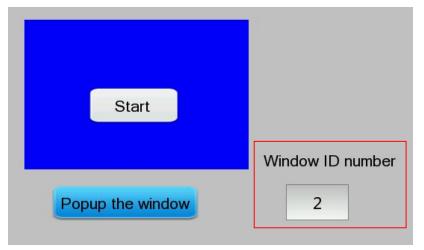


• Use Variable Window ID number

The function of "Use Variable Window ID number" is used to dynamically specify a pop-up window by using a word register.

up Wind	wob	?
ieneral	Display	
Bit triç	gger pop-up the specified window 🔘 Word register	r control the popup window
it regist	ter triggers the pop-up of window	
Trigg	ger Bit: LB0 🗐 Opup	On 🔘 Popup Off
🔽 Us	e Variable Window ID number: LW0	
🔲 Wi	ith Window Control Bar:	
🔲 Va	riable pop-up window position	
🔲 Va	riable window size	

For the above example, the word register is specified LW0 and a numeric value input component is connected with LW0. The simulation running result is shown as below. Enter the corresponding window ID number in the numeric value input component and then click the button"Popup the window", the designated window will pop up.



4.6.12.1.2 Display

The settings of the "Display" property TAB are referred to: <u>Detailed manual/General</u> <u>functions/Drawing/Display</u>.

4.6.12.2 Word Control Window

You can click the menu command "Component/Window/Word Control Window" to add a word control window component in your project.

Con	nponent Library Macro Recipe Setup	T	ools Help
	Switch	۲) 📅 🐠 😃 🔛 🗊 🔝 🤫 🖳 🖳
9	Indicator Light	۲	🛚 B_1:Basic Window(1) 🛛 🔹 🔄 🛅
123	Numeric Value and Character Display	•	****
HEO	Toggle Switch and menu	۲	
Ø	Timer and Data Transmission	۲	
	Bar And Meter	۲	
₩2	Curve Graphs	۲	
hnd	Scale	۲	
	Table	۲	
-0-	Slider	۲	
•	Moving Component	•	
ны	Window	•	Bit Control Window
1	List	•	🔛 Word Control Window
R	Tools	×	
÷	Pipeline	۲	

4.6.12.2.1 General

Popup Window	8 💌							
General Display								
◎ Bit trigger pop-up the s	specified window () Word register control the popup window							
Word register control the	pop-up of window							
Popup Window ID:	LWO							
	LW0: Popup Basic Window of the corresponding Window ID number when the value is not 0.							
With Window Control Bar:								
🔲 Variable pop-up wir	Variable pop-up window position							
🔲 Variable window size	e							
Help Description:	OK Cancel							

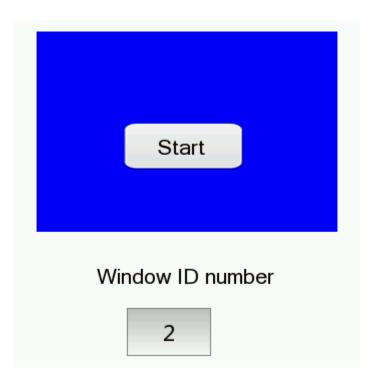
• Word register control the pop-up window

For the option "Popup Window ID", a word register needs to be given to specify the ID number of the popup window.

For example, add a word control window component and a numeric value input component in your project. The word register controlling the pop-up window is set LW0 and it is also connected with the numeric value input component. It is shown as below.

•	•	•	•	•	·	·	·	·	·	·	·	·	•	•	•	•	·	•	•	•	·	·	·	·	·	·	·	·	•	·	•	·	•	•
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•	•	ŀ	•	•	·	·	·	·	·	·	·	·	•	•	•	•	·	•	•	·	·	·	·	·	·	·	·	·	•	·	•	Ŀ	•	•
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•	•	<u>!</u>	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	·	•	•	·	•	•	•	•	i.	•	•
•	•	ŀ	•	•	•	•	·	·	·	•	·	·	•	•	•	•	•	•	•	•	•	•	•	·	•	•	·	·	•	·	•	ŀ	•	•
•	•	÷.	•	•	•	•	·	·	·	·	•	·	·	•	•	•	•	•	•	•	•	•	·	·	·	·	·	·	·	·	•	I.	•	·
•	•	ŀ	•	•	•	•	·	·	·	•	•	·	•	•	•	•	·	•	•	•	•	•	•	·	·	·	·	·	•	·	•	١.	•	·
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		Ξ.															Ξ.																	
	•	•	•	•			•		•	•	•	•		•	•	•	•	•	•	•	•	•	•	•			•	•	•	•		•	•	
•	•	•	•	•	•	•	•	2	÷.,		•	۰.	•	•	•	2	÷	·	•	•	•	۰.	÷	•	•	•	•	•	•	•	•	•	•	•
•	•	•	•	•	•	•	•	N	Λı	11	n,	d	'n	Ŵ	v	1	· ·)	'n	u	ın	nl	h	Þ	r	•	•	•	•	•	•	•	•	•
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•	·	•	•	·	·	·	·	·	1	•	•	•	•	•	•	•		•	•	•		·	·	·	·	·	·	·	·	·	·	·	•	•
•	•	•	•	•	·	·	·	·	•	·	·	·	•	•	•	•	·	•	•	·		·	·	·	·	·	·	·	·	·	•	·	•	·
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The simulation running result is shown as below. When input a positive integer value to the numeric value input component, the window which the ID number of it is equal to the inputted value will pop up.



• With Window Control Bar

After checking the option "With Window Control Bar", you can add the window title by checking the option "Title" and add the window close button by checking the option "Close Button". The font of the window title can be set by clicking the button "Set Title". The details are referred to: <u>Detailed manual/General functions/Drawing/Font settings</u>.

With Window Control Bar:	Close Button V Title Note: If window title is set in the	
Set Title	pop-up window, other title settin	ig will be
Language: 1-English (U O Use Text Library O Use Labels	Inited S 🔹 💽 Text Library	
Title Contents Save Lab	pel Contents To Text Library	
Copy Current Text To	All Languages	
Import from Favorite		K Cance
Font: Microsoft Sans Se		
		THE REPORT OF MELINE AND A REPORT OF MELINE

After set the window control bar, the simulation running result is shown as below.

Start		X
	Start	
Wir	ndow ID num	nber
	2	

• Variable pop-up window position

After check the option "Variable pop-up window position", a first address of continuous two word registers needs to be given to specify the X and Y coordinates of the pop-up window.

Variable pop-up window position	LW2	
	LW2: Initial X coordinates LW3: Initial Y coordinates	

For the above example, check the option "Variable pop-up window position" and the first word register address of the window position control is set LW2. Then add two numeric value input components in your project for inputting the X and Y coordinates of the pop-up window. They are connected with LW2 and LW3 separately.

The simulation running result is shown as below. When change the values of the numeric value input components, the position of the popup window will change.

HTP Designe	r Configuration	Software	User	Manual
--------------------	-----------------	----------	------	--------

🔍 Emulator				
Start		×		
	Start			
		Window ID number	X coordinate	Y coordinate
		2	0	0

Emulator			
	Start	×	
	Start		
	Window ID number	X coordinate	Y coordinate
	2	200	50

• Variable window size

If you check the option "Variable window size", a first address of continuous two word registers needs to be given to specify the width and height of the popup window.

Variable window size	LW4	
	LW4: Window Width LW5: Window Height	

For the above example, check the option "Variable window size" and the first word register address of the window size control is set LW4.Then add two numeric value input components in your project for inputting the width and height of the pop-up window.They are connected with LW4 and LW5 separately.

The simulation running result is shown as below. When change the values of the numeric value input components, the size of the popup window will change.

N Emulator	
Start	
Start	
Window ID num	ber Window Width Window Height
2	200 200

K Emulator		
	Start	
	Start	
	Window ID number	Window Width Window Height
	2	300 250

4.6.12.2.2 Display

The settings of the "Display" property TAB are referred to: <u>Detailed manual/General</u> <u>functions/Drawing/Display</u>.

4.6.13 List

4.6.13.1 Alarm and Event Display

4.6.13.1.1 Current Alarm and Event

The "Current Alarm and Event" function is to display the current triggered alarms and events in a tabular form.Only the trigger state is displayed.

General

The general properties of the "Current Alarm and Event" are basically the same to the "Alarming and Event History". Please refer to: <u>Detailed manual/Component/List/Alarm and</u> <u>Event History</u>.

eral	Table Display		
	arm Bar(Marque armig and Event	History	Show Group: Browse Method: From 1[0] • To 32[0] • ScrollBar Scrollbar Width 20 • Alarm and Events Login Slide Note: Only for capacitive screen.
	urrent Alarming a	and Events	Browser Reg.
show	List		
Dis	play Language:	1-English	▼ 🔮 🕼 Show Title Title Font Setting Sorting Mode: By Date ▼
🔽 L	Jse Labels	Use sar	me font for Title and Table. List Font Setting O Ascending O Descending
Use	Display Item		Title Description
	Serial No.		
1	Alarming Event	Serial No	Confirm Mode: Single Click 🔻
0	Alarming Event	Group	1
	Alarming Event	Emergen	Move Up
1	Date of Alarmin	g Event	Date of Alarming Event Move Down
1	Time of Alarmir	g Event	Time of Alarming Event
1	Count of Alarm	ing Events	Counting
1	Alarming Event	Contents	Content Restore Default
	Trigger Status		*
Alarn	ning Status Disp	lay:	le width: Scroll Interrupt Step: 5 Pixel Speed: 10 × 0.1s Trigger: Trigger Trigger Confirmed: Unconfirmed Unconfirmed Confirmed: Confirmed Confirmed: Confirmed Confirmed: Confirmed Confirmed: Confirmed Confirmed: HH:MM:SS Column Spacing: 10

Note:

The differences with the "Alarming and Event History" are shown as below.

Use	Display Item	Title Description	
1	Count of Alarming Events	Counting	*
	Alarming Event Contents	Content	
	Trigger Status		
	Confirm Status		
	Restore Date		
	Restore Time		
	Confirm Date		-
	Confirm Time		
			*

> The "Current Alarm and Event" includes"Count of Alarming Events". But the "Alarming and Event History" does not include it.

> The "Current Alarm and Event" only displays the trigger status. It does not confirm and restore the status. So the gray color options in the tablecan not be checked.

Table

The settings of "Table" property TAB is referred to: <u>Detailed manual/General</u> <u>functions/Drawing/Table drawing</u>.

• Display

The settings of "Display" property TAB is referred to: <u>Detailed manual/General</u> <u>functions/Drawing/Display</u>.

4.6.13.1.2 Alarming and Event History

The "Alarming and Event History" function is to display all alarms entries in tabular form, including the current and historical alarms and events.

eneral	Table	Search	And Contro	Display							
Al	arm Bar armig a	(Marque nd Event larming a			w Group: m[1[0] + Alarm and E	To 32[0] ►		Bar Scrollb Note: Only	ar Width for capaciti	20 💌 ve screen.	
Show	List										
	splay Lar Use Labe		1-English		Show Title			g Mode: endina	By Date Descendin	•	
-	Display			Title Desc		Listront se	ung o nate		Select Col		
	Serial I	NEW ARROW		The Dese	npaon			-	Select Col	or ·	
			Serial No					Confir	m Mode:	Single Click 🔻	
	0	ng Event	- 40 N 17 N 1990	-				-			
(E)		-	Emergen					=			
		f Alarmin		Date of A	larming Event				Move Up		
		f Alarmir	-		larming Event				Move Down		
100			ing Events	THILE GIT	arent a						
			Contents	Content						-	
1		r Status						-	estore Defa	ult	
Aları Date		itus Disp	lay: 1	rigger: Tr firmed: U Date Se	Scroll O Inter rigger nconfirmed eparator: / Spacing:	Trigger (¥	Recover	Speed: y: Restore d: Confirm HH:MM	med	0.1s Resume 💌 🧷	

- General
- Show Group

You can select some groups of alarms and events to display in the alarm list.

Note:

The alarms and events can be grouped when they are created. The range of groups is from 1 to 32. The alarm and event content can be set by clicking the button "Alarm and Events Login" or by double-clicking the "System Settings/Alarm and Event" in the project tree. The details are referred to:<u>Detailed manual/Setup/System Settings/Alarm and Event</u>.

Browse Method

Browse Method:					
🖉 ScrollBar Scrollbar Width 🛛 20 🚔					
📝 Slide Note: Or	nly for capa	citive screen.			
✓ Browser Reg.	LW0				

There are three browse methods: "Scroll Bar", "Slide" and "Browser".

The scroll bar will display in the alarm list if you check the option "Scroll Bar". You can view the alarms by using the scroll bar. The "Scrollbar Width" needs to be set. The unit of it is pixel.

You can check the option "Slide" in order to view the alarms by sliding the screen. This function is supported by the capacitive screen devices.

The option "Browser" can be checked when you need to view multiple pages. A word register needs to be specified to define the current page. The default isthat 0 represents the records on the current day, 1 represents the records on yesterday, 2 represents the records on the day before yesterday, and so on. The word register input is referred to: Detailed manual/General functions/Address editor/Standard Byer Address Input.

se	Display Item	Title Description
	Serial No.	
5	Alarming Event Serial No	Confirm Mode: Single Click
	Alarming Event Group	=
3	Alarming Event Emergen	Move Up
1	Date of Alarming Event	Date of Alarming Event Move Down
1	Time of Alarming Event	Time of Alarming Event
	Count of Alarming Events	
1	Alarming Event Contents	Content Restore Default
	Trigger Status	-
		e width:
arn	ning Status Display:	Trigger: Trigger 🚺 📕 Trigger (🖌 🖉 Recovery: Restore 🛛 📕 Resume 👻

Show List

"Display Language"

The "Display Language" is selected to switch the current display language for editing the Title Description. The details are referred to: <u>Detailed manual/Setup/System</u> <u>Settings/Language Settings</u>.

"Show Title"

The option "Show Title" is checked by default. If you do not want to display the title bar, you can cancel the check.

"Title Font Setting"

It is used to set the font of the title bar. The details are referred to: <u>Detailed</u> manual/General functions/Drawing/Font settings.

"Sorting Mode"

The "Sorting Mode" set the arrangement order of the alarms and events.

If you set "By Date" and select the option "Descending", the latest event will be displayed on the top.

If you set "By Level" and select the option "Descending", the higher level events are displayed on the top.

If you select the option "Ascending", the display order is inverse.

"Select Color"

The selected alarm entry will display in the color which is set by the option "Select Color".

"Confirm Mode"

When the alarm is triggered, it is in the trigger status. If you want to confirm this alarm, you need to select the "Confirm Mode". It can be "Single Click", "Double Click" or "Press And Hold".

"List settings"

The title bar contents of the alarm list are set in the below table. The contents of the title barcan be set to display by checking it. But the gray Display Items can not be checked.

Use	Display Item	Title Description	Select Color 💌 🖋
	Serial No.		Confirm Mode: Single Click V
	Alarming Event Serial No		Confirm Mode: Single Click 🔻
	Alarming Event Group		=
	Alarming Event Emergen		Move Up
	Date of Alarming Event	Date of Alarming Event	Move Down
V	Time of Alarming Event	Time of Alarming Event	more bown
	Count of Alarming Events		
V	Alarming Event Contents	Content	Restore Default
	Trigger Status		*

For the order of the contents arrangement, you can use the button "Move Up" or "Move Down" to modify it. The content on the to prow will display on the left of the alarm list. You can restore the default arrangement by clicking the button "Restore Default ".

"Display content beyond the table width"

There are two modes, "Scroll" and "Interrupt", to display the title contents when they are more than the alarm list width. You can select one mode to display.

The content will be displayed by scrolling if you select the "Scroll" mode. You need to set the step size (Step: 1 to 255 pixels), and the scrolling speed (Speed: 1 to 255*0.1s).

Display content beyond the table width:	Scroll O Interrupt Step:	5 🔶 Pixel Speed	10 🌨 x 0.1s

The excess contents will be truncated directly if you select the "Interrupt" mode.

"Alarming Status Display"

You can set the text color of the alarms and events in the different status here.

Alarming Status Display:	Trigger:	Trigger	📕 Trigger (💌 🍠	Recovery:	Restore	Resume 🗸 🗸
	Unconfirmed:	Unconfirmed		Confirmed:	Confirmed	Confirme 👻 📝

"Date and Time Format"

The "Date Format" is used to set the sort order of year (YY), month (MM) and day (DD). The "Date Separator" is used to set the separator among year, month and day. The "Time Format" is used to set the time display format.

"Line Spacing and Column Spacing"

The "Line Spacing" and the "Column Spacing" are to set the ranks spacing of the alarm list. The unit is pixel and the range is 0-255.

Table

The settings of the "Table" property page TAB are referred to: <u>Detailed manual/</u> <u>General functions/ Drawing/ Table Drawing</u>.

• Search And Control

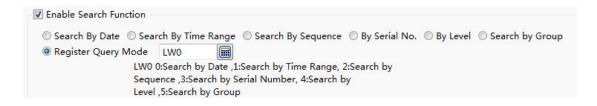
The "Search And Control" property TAB is shown as below.

			2 3 1								
eneral	Table	Search And	Control	Display							
🔽 Ena	ble Sear	rch Function									
00	and D	Data OCa	and Du T	ime Range 🔘	Canada Du Ca		Du Carlal Na	O Pu Laval	@ Casuel	hu Cra	
			-	Ime Kange U:	search by se	quence 🕖 i	by Serial No.	U by Level	Search	by Grou	up
S K	egister (Query Mode		by Date ,1:Sea	reh hu Time I	Panga DiCas	reh hu				
				Search by Serial			arch by				
				h by Group	ritaniber, in	search by					
Sea	rch Trig	ger Bit: LBC									
		LBO	1: show t	he results filter	ed by range.						
			o filtering	(THE R P A P A P A P A P A P A P A P A P A P							
S	earch Re	egister: LW									
		LWI	0~LW21	Use maximum :	12 registers,	depending of	on different :	search metho	ds.		
Use	Contro	Function									
Exp	ort CSV										
											~
Help	Des	cription:							0	ĸ	Cano

Enable Search Function

Check the option "Enable Search Function" to use the search function.

"Search mode"



There are seven search modes: "Search By Date", "Search By Time Range", "Search By Sequence", "By Serial No.", "By Level", "Search by Group" and "Register Query Mode".

The "Register Query Mode" is a dynamic search mode. You can specify a word register to dynamically adjust the search mode. If the word register is 0, the "Search By Date" mode is used. If it is 1, the "Search By Time Range" mode is used. If it is 2, the "Search By Sequence" mode is used. If it is 3, the "By Serial No." mode is used. If it is 4, the "By Level." mode is used. If it is 5, the "Search by Group." mode is used. The word register address input method is referred to: Detailed manual/General functions/Address editor/Standard ByteAddress Input.

"Search Trigger Bit"

The option "Search Trigger Bit" is used to specify a bit register to trigger the search function. Note that the search function is not edge-triggered mode. When setting the trigger bit 1, the alarm list displays the filtered results. After set the trigger bit 0, the list will display the results which are not filtered. The bit address input method is referred to: Detailed manual/General functions/Address editor/Standard Bit Address Input.

"Search Register"

The "Search Register" is used to specify the first word register address for the search function. The number of the word registers is depending on the search mode. The function of the word registers used to search is different for the different search mode. You can get the information of the used word registers according to the text displayed under the first word register address. The word address input method is referred to: <u>Detailed</u> <u>manual/General functions/Address editor/Standard ByteAddress Input</u>.

Search Register:	LW10
	LW10 : Year (Input unsigned number YYYY, e.g. 2015)
	LW11 : Month (Input unsigned number MM between 1 to 12)
	LW12 : Day (Input unsigned number DD between 1 to 31)

Use Control Function

After checking this option, you can use word address registers to control the display of the alarms and events in the alarm list.

Use Control Function			
Control Register:	LW0		
	LW0:0: Display All Alarming Events		
	LW0:2: Hide the Recovered Event	LVVU:3: Hide the	Confirmed and Recovered Event

Export CSV

The option"Export CSV" is referred to:<u>Detailed manual/ General functions/ Drawing/</u> Export CSV.

• Display

The settings of the "Display" property TAB are referred to: <u>Detailed manual/General</u> <u>functions/Drawing/Display</u>.

4.6.13.1.3 Alarm Bar (Marquee)

The "Alarm Bar" function is to display the alarms and events in a single line and in a marquee form. The scrolling direction, step and speed need to be set. A title can be chosen to display.

O Al	arm Bar(Marquee) armig and Event History urrent Alarming and Events	Show Group: From 1[0] To 32[0] Alarm and Events Login
how	List	
Dis	play Language: 1-English	Show Title Sorting Mode: By Date
V L	Jse Labels	List Font Setting O Ascending O Descending
Use	Display Item	Title Description
	Serial No.	
	Alarming Event Serial No	
	Alarming Event Group	E
	Alarming Event Emergen	Move Up
	Date of Alarming Event	Date of Alarming Event Move Down
1	Time of Alarming Event	Time of Alarming Event
	Count of Alarming Events	
<	Alarming Event Contents	Content Restore Default
193	Trigger Status	•
Alarr	ning Status Display: Unco	t To Lef Step: 5 Pixel Speed: 10 X 0.1s Trigger: Trigger Trigger Trigger Confirmed: Unconfirmed Confirmed Confirmed: Confirmed Confirmed
Date	Format: YY*MM*DD •	Date Separator: / Time Format: HH:MM:SS

- General
- Show Group

The specified groups of the alarms and events will display in the Alarm Bar.

The alarms and events can be grouped when they are created. The range of groups is from 1 to 32. The alarm and event content can be set by clicking the button "Alarm and Events Login" or by double-clicking the "System Settings/Alarm and Event" in the project tree. The details are referred to:<u>Detailed manual/Setup/System Settings/Alarm and Event</u>.

Show List

Use	Display Item	Title Description
	Serial No.	A
	Alarming Event Serial No	
	Alarming Event Group	E
	Alarming Event Emergen	Move Up
	Date of Alarming Event	Date of Alarming Event Move Down
	Time of Alarming Event	Time of Alarming Event
	Count of Alarming Events	
1	Alarming Event Contents	Content Restore Default
	Trigger Status	•
Marc	quee moving mode: Righ	t To Lef ▼ Step: 5 ♀ Pixel Speed: 10 ♀ x 0.1s
Alarr	ning Status Display:	Trigger: Trigger 🚺 Trigger 🕻 🗸 🧭 Recovery: Restore 📰 Resume 💌 🍼
		nfirmed: Unconfirmed Confirmed: Confirmed

"Display Language"

The "Display Language" is selected to switch the current display language for editing the Title Description. The details are referred to: <u>Detailed manual/Setup/System</u> <u>Settings/Language Settings</u>.

"Show Title"

The option "Show Title" is checked by default. If you do not want to display the title bar, you can remove the check.

"List Font Setting"

The button "List Font Setting" is used to set the font of the title bar. The details are referred to: <u>Detailed manual/ General functions/ Drawing/ Font settings</u>.

"Sorting Mode"

The "Sorting Mode" sets the arrangement order of the alarms and events.

If you set "By Date" and select the option "Descending", the latest event will be displayed on the top.

If you set "By Level" and select the option "Descending", the higher level events are displayed on the top.

If you select the option "Ascending", the display order is inverse.

"Use Labels"

If you check the option "Use Labels", the contents of the "Title Description" can use the default or you can edit them.

If you don't check the option "Use Labels", the contents of the "Title Description" can

be set by using the text in the text library. It is shown as below.You can click the button "<u></u>" to open the text library and select the required text. The details of the Text Library are referred to:<u>Detailed manual/Library/Text Library</u>.

	Jse Labels		List Font Setting	Ascend	ling
Use	Display Item	Title Description			
	Serial No.			-	
	Alarming Event Serial No				
	Alarming Event Group			=	
	Alarming Event Emergen				
	Date of Alarming Event				
	Time of Alarming Event			•	
	Count of Alarming Events				
	Alarming Event Contents			•	
	Trigger Status			-	

"List settings"

The title bar contents of the alarm bar are set in the below table. The contents of the title barcan be set to display by checking it. But the gray Display Items cannot be checked.

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Use	Display Item	Title Description			
	Serial No.		4		
0	Alarming Event Serial No				
的	Alarming Event Group		E		
	Alarming Event Emergen				Move Up
V	Date of Alarming Event	Date of Alarming Event			Move Down
1	Time of Alarming Event	Time of Alarming Event			more boun
	Count of Alarming Events				
1	Alarming Event Contents	Content			Restore Default
	Trigger Status			-	(Hestere senden

You can use the button "Move Up" or "Move Down" to modify the order of the display items arrangement. The content on the toprow will display on the left of the alarm bar. You can restore the default arrangement by clicking the button "Restore Default ".

"Marquee moving mode"

You can set the scrolling direction of the alarm contents, the step size (Step: 1 to 255 pixels), and the scrolling speed (Speed: 1 to 255*0.1s).

Marquee moving mode:	Right To Lef ▼	Step:	5 🜩	Pixel	Speed:	10 🔷 x 0.1s

"Alarm Status Display"

The alarm bar only displays the triggered alarms and events. So only the Trigger Color can be changed.

"Date Format"

Alarming Status Dis	splay: Trigger:	Trigger	📕 Trigger (👻	Recovery:	Restore	Resume 💌 📝
	Unconfirmed:	Unconfirmed		Confirmed:	Confirmed	Confirme 💌 📝
Date Format: YY	*MM*DD	Separator: /	•	Time Format:	HH:MM:SS	•
Line Spacing:	0 🔶 Colur	nn Spa <mark>ci</mark> ng:	10 🗢			

The "Date Format" is used to set the sort order of year (YY), month (MM) and day (DD). The "Date Separator" is used to set the separator among year, month and day. The "Time Format" is used to set the time display format.

"Line Spacing and Column Spacing"

The "Line Spacing" and the "Column Spacing" are to set the ranks spacing of the alarm bar. The unit is pixel and the range is 0-255.

Table

The settings of the "Table" property TAB are referred to: <u>Detailed manual/General</u> <u>functions/Drawing/Table Drawing</u>.

• Display

The settings of the "Display" property TAB are referred to: <u>Detailed manual/General</u> <u>functions/Drawing/Display</u>.

4.6.13.2 Historical Data Display

The function of the "Historical Data Display" is to display the sampling data in tabular form. The display is continuously refreshed according to the specified sampling frequency.

	use: LBO LBOO: R LBO1: P	mperature_H 🔹 🗽 Refresh the latest sam bause the refreshing.	npling data		owse Method: Scroll Bar Scro Slide Note: Only Browser Reg. Hide Column Reg	for			20 scre	
ow List angua Use I	ge: 1-Engl	ish (Uni ▾) 💽 📝 🛛 e same font for Title	Display Title Bar and Tak		Table Font Settings	0	Asc	ig Mo endin cendi	g	
Use	Display Tl	Title Discription	List Fonts	Co	Data Type	Inte	ger	Deci	mal	Leading Z
	Serial No.	Serial No.		I						
1	Date	Date	-	I						
1	Time	Time	•	I						
1	Channel1	Channel1	-	Ż	Single-precision Flo	4	< >	0	*	
1	Channel2	Channel2	-	I	16-bit Unsigned	4	< >	0	*	
ate Fo	rmat: YY*M	M*DD ▼ Data	Separator:	1	Up I	Dowr	_			set Default
	acing 5	Column Sp			\$					

4.6.13.2.1 General

Data Source

Select a data sampling from the pull-down list. If there is no data sampling, youcan quickly build one by clicking the button " In the details are referred to: <u>Detailed</u> manual/Setup/System Settings/Data Sampling.

• Pause

A bit register address can be set to pause or start the display of the historical data sampling.

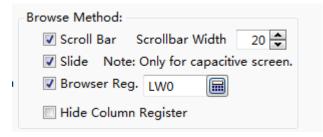
For example: set a bit address LB0 for the option "Pause". Then when LB0 is OFF, the latest data sampling is refreshed. When LB0 is ON, the refreshing is paused.

Note:

The refreshing is paused, but sampling is not stopped. All sampling data will be refreshed.

Browse Method

The "Browse Method" includes "Scroll Bar", "Slide", "Browser" and "Hide Column Register".



Scroll Bar

When checking the option "Scroll Bar", the list will appear scroll bar for viewing. The scroll bar width can be customized. The unit is pixel.

> Slide

You can check the option "Slide" in order to view by sliding the screen. This function is supported by the capacitive screen devices.

> Browser

The option "Browser" can be checked when you need to view multiple pages. A word register needs to be specified to define the current page. The default isthat 0 represents the records on the current day, 1 represents the records on yesterday, 2 represents the records on the day before yesterday, and so on. The word register input is referred to: Detailed manual/General functions/Address editor/Standard Byte Address Input.

Hide Column Register

If you check the option "Hide Column Register", a word register can be set. The value of the word register is used to controlthe display or hiding of each column.

		e same font for Title		Table Font Settings	2	scending	
Jse	Display Tl	Title Discription	List Fonts Co	Data Type	Integer	Decimal	Leading Z
1	Serial No.	Serial No.	<u> </u>				
V	Date	Date	– – /				
	Time	Time	2				
1	Channel1	Channel1	2	Single-precision Flo	4	0	
1	Channel2	Channel2		16-bit Unsigned	4 🚔	0	

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> Language

The "Display Language" is selected to switch the current display language for editing the Title Description. The details are referred to: <u>Detailed manual/ Setup/ System</u> <u>Settings/ Language Settings</u>.

> Display Title Bar

The option "Display Title Bar" is checked by default. If you do not want to display the title bar, you can remove the check.

Table Font Settings

It is used to set the font of the title bar. The details are referred to: <u>Detailed</u> <u>manual/General functions/Drawing/Font settings</u>.

Use Label

By default, the option "Use Label" is checked. The contents of the "Title Description" can use the default or you can edit them. It is shown as below.

Use	Display Tl	Title Discription	List Fonts Co	Data Type	Integer	Decimal	Leading Z
1	Serial No.	Serial No.	- · 🖉				
1	Date	Date	- · Ø				
J	Time	Time	- · Z		2		
V	Channel1	Channel1	- · C	Single-precision Flo	4	0	
1	Channel2	Channel2		16-bit Unsigned	4 🚔	0	

☑ Use Lable ☑ Use same font for Title Bar and Table Table Font Settings ◎ Descending

If you don't check the option "Use Label", the contents of the "Title Description" can be set by using the text in the text library. It is shown as below. You can click the button " to open the text library and select the required text. It is shown as below.

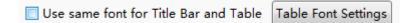
Use Lable 🔽 Use same font for Title Bar and Table Table Font Settings 💿 Descending

Use	Display Tl	Title Discription	List Fonts Co	Data Type	Integer	Decimal	Leading Z
1	Serial No.		- -				
J	Date		-				
V	Time		-				
V	Channel1		-	Single-precision Flo	4	0	
1	Channel2		*	16-bit Unsigned	4	0	

The details of the Text Library are referred to: Detailed manual/Library/Text Library.

Use same font for Title Bar and Table

By default, the font of the contents in the list is same to the font of the title bar. If you want to define the font of the contents in the list, you can remove the check and set the font by clicking the button "Table Font Settings".



The details are referred to: Detailed manual/General functions/Drawing/Font settings.

Sorting Mode

There are two Sorting Modes: Ascending and Descending.When the option "Ascending" is selected, the oldest record is displayed in the first row. When the option "Descending" is selected, the newest record will display on the first row.

Image: Serial No. Image: Serial No. Image: Serial No. Image: Date Image: Serial No. Image: Serial No. Image: Serial No. Image: Date Image: Serial No. Image: Serial No. Image: Serial No. Image: Serial No. Image: Date Image: Serial No. Image: Seria No. Image: Seria No.	Use	Display Tl	Title Discription	List Fonts Co	Data Type	Integer	Decimal	Leading Z
Image: Channel I Image: Channel I <td>J</td> <td>Serial No.</td> <td>Serial No.</td> <td>· · ·</td> <td></td> <td></td> <td></td> <td></td>	J	Serial No.	Serial No.	· · ·				
Channel1 Channel1	V	Date	Date	· · /			5	
	V	Time	Time	· · 2				
Channel2 Channel2 If-bit Unsigned 4 🗘 0 💭	J	Channel1	Channel1	· · ·	Single-precision Flo	4	0	
	1	Channel2	Channel2		16-bit Unsigned	4 🚔	0	
	V	Channel2	Channel2		16-bit Unsigned	4	0	
					Up	Down		eset Default

List Settings

You can select the required contents to display in the title bar by checking in the "Use" column. For the order of the contents arrangement, you can use the button "Move Up" or "Move Down" to modify it. The content on the to prow will display on the left of the Historical Data Display List. You can restore the default arrangement by clicking the button "Restore Default ".

Date and Time Format

The "Date Format" is used to set the sort order of year (YY), month (MM) and day (DD). The "Date Separator" is used to set the separator among year, month and day. The "Time Format" is used to set the time display format.

Line Spacing and Column Space

The "Line Spacing" and the "Column Space" are to set the ranks spacing of the alarm list. The unit is pixel and the range is 0-255. The line space is a unified value, and the column space can be set one by one and can be set to the same value.

4.6.13.2.2 Table

The settings of the "Table" property TAB are referred to: <u>Detailed manual/ General</u> <u>functions/ Drawing/ Table Drawing</u>.

4.6.13.2.3 Search

• Enable Search Function

Check the option "Enable Search Function" to use the search function.

Historical Data Display		? X
General Table Search () Display		
 Enable Search Function Search By Date Search By Time Range Search By Sequence Register Query Mode 		
Search Trigger Bit:		
Search Register:		
Export CSV		
Help Description:	OK	Cancel

Search mode

There are four search modes supported: "Search By Date", "Search By Time Range", "Search By Sequence" and "Register Query Mode".

The "Register Query Mode" is a dynamic search mode. You can specify a word register to dynamically adjust the search mode. If the word register is 0, the "Search by Date" mode is used. If it is 1, the "Search By Time Range" mode is used. If it is 2, the "Search By Sequence" mode is used. The word register address input method is referred to: Detailed manual/General functions/Address editor/Standard Byte Address Input.

■ Enable Search Function	
🔘 Search By Date 🛛 🔘 S	earch By Time Range 🛛 🔘 Search By Sequence
Register Query Mode	LW0
	LW0 0:Search by Date ,1:Search by Time Range, 2:Search by Sequence

Search Trigger Bit

The option "Search Trigger Bit" is used to specify a bit register to trigger the search function. Note that the search function is not edge-triggered mode. When set the trigger bit 1, the alarm list displays the filtered results. After setting the trigger bit 0, the list will display the results which are not filtered. The bit address input method is referred to: Detailed manual/General functions/Address editor/Standard Bit Address Input.

Search Register

Search Register:	LW10	
	LW10 ~ LW2 12 words.	21: Depending on different search methods, take up to

The "Search Register" is used to specify the first word register address for the search function. The number of the word registers is depending on the search mode. The function of the word registers used to searchis different for the different search mode. You can get the information of the used word registers according to the text displayed under the first word register address. The word address input method is referred to: <u>Detailed manual/General functions/Address editor/Standard ByteAddress Input</u>.

Export CSV

The option "Export CSV" is referred to: <u>Detailed manual/ General functions/ Drawing/</u> Export CSV.

4.6.13.2.4 Display

The settings of the "Display" property TAB are referred to: <u>Detailed manual/General</u> <u>functions/Drawing/Display</u>.

4.6.13.3 Operator Log

The function of the "Operation Log" is to record the required detailed operation of the HMI device, such as a button is triggered at a certain time, a value is modified at another certain time, and so on.The "Operation Log component displays the detailed operating records in the list form. You can search the records or export them.

Note 1:

For the created components, the operations are not recorded by default. To record the operation of a component, check the "Records Operation" option in the "Control Settings" property TAB and click the button "Set" to set the operation information. The details are referred to: <u>Detailed manual/General functions/Drawing/Control settings</u> and <u>Detailed manual/General functions/Drawing/Label</u>.

neral Toggle Switch Graphics Dynamic Graphic	cs Control Settings 🥹 Display			
Activation Settings	Security Settings			
Always	Minimum Press Time: 0 🔦 (X0.1S)			
Conditional	Require confirmation prior to execution			
	Waiting Time 100 文 (X0.1S)			
	Records Operation			
	Minimum Operation Interval: 0 😴 (X0.1S)			
	Notification Settings			
	Before Writing After Writing			
	Notify Bit Address:			
	🔲 Notify Byte Address:			
	Trigger Macro:			
Keyboard				
Use Keyboard	Audio			
	Play Audio			

Note 2:

Only when the user privilege is enabled and a user logs in, the operator user name will be recorded and displayed. When the user privilege is not enabled or there is no user to log in, the user name is displayed a blank in the operation records.

4.6.13.3.1 General

The general attributes of the "Operator Log" are set in the "General" property TAB.

		Checking Display		
	e Method	scrollbar Width 20	A	
1993		Note: Only for capacitive s		
3745	Browser F		screen.	
)isplay	y the List			
angu	age: 1-	English (United S 💌 🎈	Display Title Bar Title Font S	Setting Sorting Mode:
		()		 Ascending (Older data are displayed first)
/ Use	e Lable	Use same font for Titl	e Bar and List	Descending(Newer data are displayed firs
	Use	Display the Project	Title Bar Description	
		Serial No.	Serial No.	-
	1	Date	Date	1
	7	Time	Time	Up
	1	User Name	User Name	
	1	Operation Log	Operation Log	Down
				Restore to default sorting
Date	Format:	DD*MM*YY • Date T	ime Split: / 🔹 Time For	rmat: HH:MM:SS •
Row S	Spacing	5 🜩 Colum	n Spacing 5 🜩	
		the second secon	AND THE REPORT OF THE PARTY OF	

Browse Method:	
👿 Scrollbar 🛛 Scrollbar Width	20 牵
📝 Screen 🛛 Note: Only for capac	tive screen.
Browser Reg.	

There are three browse methods: "Scroll bar", "Screen" and "Browser".

The scroll bar will display in the alarm list if you check the option "Scroll bar". You can view the alarms by using the scroll bar. The "Scroll bar Width" needs to be set. The unit of it is pixel.

You can check the option "Screen" in order to view the records by sliding the screen. This function is supported by the capacitive screen devices.

The option "Browser" can be checked when you need to view multiple pages. A word register needs to be specified to define the current page. The default is that 0 represents the records on the current day, 1 represents the records on yesterday, 2 represents the records on the day before yesterday, and so on. The word register input is referred to: Detailed manual/General functions/Address editor/Standard Byte Address Input.

se Lable	Use same font for Titl	e Bar and List	Descending(Newer data are displayed first
Use	Display the Project	Title Bar Description	
V	Serial No.	Serial No.	
J	Date	Date	
	Time	Time	Up
	User Name	User Name	
V	Operation Log	Operation Log	Down
			Restore to default sorting

• Display the list

Language

The "Language" is selected to switch the current display language for editing the Title Description. The details are referred to: <u>Detailed manual/ Setup/ System Settings/</u> Language Settings.

Display Title Bar

The option "Display Title Bar" is checked by default. If you do not want to display the title bar, you can remove the check.

Title Font Setting

It is used to set the font of the title bar. The details are referred to: <u>Detailed</u> <u>manual/General functions/Drawing/Font settings</u>.

Use label

By default, the option "Use Label" is checked. The contents of the "Title Bar Description" can use the default or you can edit them. It is shown as below.

🗸 Use	Lable	Use same font for Title B	ar and List
	Use	Display the Project	Title Bar Description
	Serial No.		Serial No.
	🔽 Date		Date
	Time		Time
	User Name		User Name
	V	Operation Log	Operation Log

If you don't check the option "Use Label", the contents of the "Title Bar Description" can be set by using the text in the text library. It is shown as below. You can click the

button "" to open the text library and select the required text. It is shown as below.

se Lable	✓ Use same font for Titl	e Bar and List	
Use	Display the Project	Title Bar Description	
	Serial No.		
	Date		
	Time		
	User Name		
	Operation Log		

The details of the Text Library are referred to: Detailed manual/Library/Text Library.

Use same font for Title Bar and List

By default, the font of the contents in the list is same to the font of the title bar. If you want to define the font of the contents in the list, you can remove the check and set the font by clicking the button "Table Font Settings".

Use same font for Title Bar and List Table F

Table Font Setting

The details are referred to: Detailed manual/General functions/Drawing/Font settings.

Sorting Mode

There are two Sorting Modes: Ascending and Descending.When the option "Ascending" is selected, the oldest record is displayed in the first row. When the option "Descending" is selected, the newest record will display on the first row.

List Settings

Use	Display the Project	Title Bar Description	
1	Serial No.	Serial No.	
V	Date	Date	
J	Time	Time	Up
1	User Name	User Name	-F
1	Operation Log	Operation Log	Down

You can select the required contents to display in the title bar by checking in the "Use" column. For the order of the contents arrangement, you can use the button "Up" or "Down" to modify it. The content on the to prow will display on the left of the Operator Log List. You can restore the default arrangement by clicking the button "Restore to default sorting".

Date and Time Format

The "Date Format" is used to set the sort order of year (YY), month (MM) and day (DD). The "Date Time Split" is used to set the separator among year, month and day. The "Time Format" is used to set the time display format.

Row Spacing and Column Spacing

The "Row Spacing" and the "Column Spacing" are to set the ranks spacing of the operator log list. The unit is pixel and the range is 0-255.

4.6.13.3.2 Table

The settings of the "Table" property TAB are referred to: <u>Detailed manual/ General</u> <u>functions/ Drawing/ Table Drawing</u>.

4.6.13.3.3 Checking

Enable Search Function

Check the option "Enable Search Function" to use the search function.

erate Log Display	y .				8
General Table ▼ Enable Searc		Display			
◉ Check By D ⊙ Use registe		Check By e search motho	d.	Check By Sequence	Check By User Name
Search trigger	bit				
Search Registe	er		[
Export CSV					
Help	cription:				ОК Салс

> Search mode

There are four fixed search modes supported: "Check By Date", "Check By Time Range", "Check By Sequence" and "Check By User Name".

The "Use register to control the search method" is a dynamic search mode. You can specify a word register to dynamically adjust the search mode. If the word register is 0, the "CheckByDate" mode is used. If it is 1, the "Check By Time Range" mode is used. If it is 2, the "Check By Sequence" mode is used. If it is 3, the "Check By User Name" mode is used. The word register address input method is referred to: Detailed manual/General functions/Address editor/Standard Byte Address Input.

Check By Date	By Time Range	Check By Sequence	Check By User Name
• Use register to control the search mo	thod. LW0		
	LW0 0:Search 1:Search By 2:Search By 3:Search By	Time Range, Sequence,	

Search trigger bit

The option "Search trigger bit" is used to specify a bit register to trigger the search function. Note that the search function is not edge-triggered mode. When set the trigger bit 1, the alarm list displays the filtered results. After set the trigger bit 0, the list will display

the results which are not filtered. The bit address input method is referred to: <u>Detailed</u> manual/General functions/Address editor/Standard Bit Address Input.

Search Register

The "Search Register" is used to specify the first word register address for the search function. The number of the word registers is depending on the search mode. The function of the word registers used to searchis different for the different search mode. You can get the information of the used word registers according to the text displayed under the first word register address. The word address input method is referred to: <u>Detailed manual/General functions/Address editor/Standard ByteAddress Input</u>.

Search Register

LW10 LW10: Year (Input unsigned number YYYY, e.g. 2015) LW11: Month (Input unsigned number MM between 1 to 12)

LW11: Month (Input unsigned number MM between 1 to 12) LW12: Day (Input unsigned number DD between 1 to 31)

Export CSV

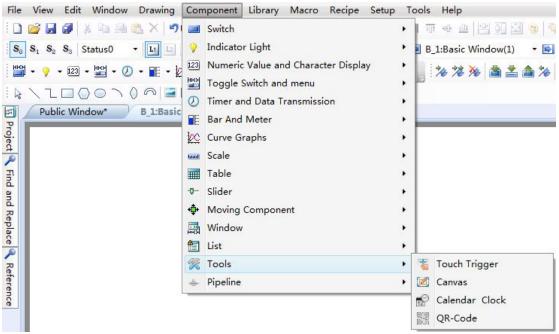
The option"Export CSV" is referred to:<u>Detailed manual/ General functions/ Drawing/</u> <u>Export CSV</u>.

4.6.13.3.4 Display

The settings of the "Display" property TAB are referred to: <u>Detailed manual/General</u> <u>functions/Drawing/Display</u>.

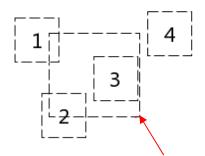
4.6.14 Tools

The "Tools" component includes "Touch Trigger", "Canvas", "Calendar Clock" and "QR-Code".



4.6.14.1 Touch Trigger

The "Touch Trigger" component can be used in the occasions that a component or more components can be triggered not by touching. That is, all components which occupy the active area of the touch trigger component can be triggered when the register specified by the touch trigger component meets the conditions.



The area of a touch trigger component

As shown as above, when the trigger condition of the touch trigger component is met, the components 1,2 and 3 will be triggered, while component 4 will not be triggered.

The property page of the "Touch Trigger" component is shown as below.

ouch Trigger			-?-
Trigger Settings 🥑 Trigger Simulation T	уре	Display ling O Simulation Zoom	
Trigger Address:		Changing Condition	Judgment
Trigger Mode: OFf	->ON	Auto Reset	
Help Descrip	otion:	0	Cancel

4.6.14.1.1 Trigger Simulation Type

The "Trigger Simulation Type" refers to the trigger type of the "Touch Trigger" component. It includes "Simulation Click", "Simulation Sliding" and "Simulation Zoom". They are corresponding to the trigger actions when the trigger conditions of the touch trigger component are met.

 Simulation Click 	
Trigger Simulation Type	
◉ Simulation Click ◎ Simulation Sliding ◎ Simulat	ion Zoom

When the trigger conditions of the touch trigger component are met, the components which occupy the active area of the touch trigger component will execute the click action, such as clicking a switch button.

Simulation Sliding				
Trigger Simulation Type				
\odot Simulation Click $\ @$ Simulation Sliding $\ \bigcirc$ Simulation Zoom				
Touch Control Parameters				
LWO				
The sliding angle, 0 for the right slide, 90 slide up, 180 slide to the left, 270 to decline.				
LW1				
The sliding velocity, unit: pixel per second				

When the trigger conditions of the touch trigger component are met, the components which occupy the active area of the touch trigger component will execute the sliding action within this area. The sliding action is controlled by two word registers. The first word register controls the sliding angle, 0 for sliding to right, 90 for sliding up, 180 for sliding to left, 270 for sliding down. The second word register controls the sliding velocity. The sliding velocity unit is pixel per second. The address input of the word register is referred to: Detailed manual/General functions/Address editor/Standard ByteAddress Input.

Simulation Zoom
Trigger Simulation Type
Simulation Click Simulation Sliding Simulation Zoom
Touch Control Parameters
LW1
Zoom ratio, 0~200, in percent, less than 100 is reduced, with more than 100 amplification.

When the trigger conditions of the touch trigger component are met, the components which occupy the active area of the touch trigger component will execute the zooming action within this area, such as viewing the trend curve by zooming.

The zoom ratio is controlled by a word register. The range of zoom ratio is 0-200, in percent. The value 1-200 is legal. It represents the zoom percentage which less than 100 is corresponding to reducing and more than 100 is corresponding to amplification. The address input of the word register is referred to: <u>Detailed manual/ General functions/</u><u>Address editor/ Standard ByteAddress Input</u>.

4.6.14.1.2 Triggering Condition

Trigger Condition:				
💿 Bit Status Changing 🔘 World Value Changing 🔘 Condition Judgment				
Trigger Address: LB0				
Trigger Mode: OFF->ON 🔹	Auto Reset			

The "Trigger Condition" supports "Bit Status Changing", "Word Value Changing" and "Condition Judgment". The settings are referred to: <u>Detailed manual/Component/Timer</u> and Data Transmission/Timer.

4.6.14.2 Canvas

The property page of the "Canvas" can be opened by clicking the menu command "Component/Tools/Canvas".

4.6.14.2.1 Monochrome Brush

You can control the graphics canvas by bit registers. You can modify the canvas color and the pen color, as shown as below.

Canvas 🤋 🔀
General Dynamic Graphics Display
Brush Type Monochrome Brush Canvas V Pen Co V Multicolor Brush Address Use Address Tag
Deivce: LOCAL:[Local Register]
 Bit-index within a Byte Register Address Type: LB Address: 0 System Register Format(Range) DDDDDD(0~7999 Address Index
The length of occupancy address: 16384
Refresh ◎ Timing Refresh ◎ Trigger Touch Execution Cycle: 10 ♀ x 0.1S
Help Description: OK Cancel

					_		
General		mic Gra	phics	Disp	ay		
Position							
Position	:	X :	0	÷	Y :	0 🗘	
C Lock	ed	Width:	128	\$	Height:	128 🗘	
Alway	s Disp	olay					
Condi							

In the above settings, you can see that the Canvas Width is 128 and the Canvas Height is 128 in the "Display" property page. The size of the canvas is 128*128.So the occupied LB addresses number is 16384. It is displayed in the "General" property page. Ifany of the address LB0 ~ 160000 is 1, the corresponding pixel on the canvas is white.If it is 0, the corresponding pixel on the canvas is black. You can also check the "Bit-index within a Byte Register" to set the canvas. It is easy to program a complex graphic. You can set LW0=65535 (0xFFFF) directly if you want all LW0.0~ LW0.15 to be 1.

4.6.14.2.2 Multicolor Brush

The settings of the "Multicolor Brush" are similar to the monochrome brush. The default canvas color is white. Each pixel of the canvas is controlled by using word register

addresses. The color of pen brush is based on the value of the corresponding word address according to the RGB565 form.

The RGB565 mode is a color mode which a pixel occupies two bytes. The first 5 bits in the low byte are used to indicate B (BLUE). The last 3 bits in the low byte + the first 3 bits in the high byte are used to indicate G (Green). The last 5 bits in the high byte are used to indicate R (RED).

	н	II-BYTE			LO-BYT	E
Bits:	15	11 10	8	7	5 4	0,
	red va	alue	green	value	- blue	value

2000	
2000	
2000	

60000	
50000	

4.6.15 Pipeline

The "Pipeline" component includes three types: Horizontal, Vertical and Elbow.

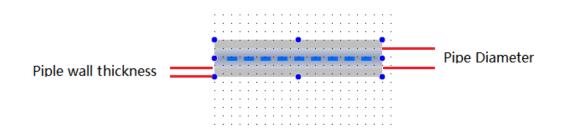
Cor	nponent Library Macro Recipe Setup	Tools Help
	Switch	•] ㅠ • 프 목 패 프 •
9	Indicator Light	B_1:Basic Window(1)
123	Numeric Value and Character Display	* 🛛 🎋 🧏 🚵 🏝
Ню	Toggle Switch and menu	•
0	Timer and Data Transmission	•
	Bar And Meter	•
100	Curve Graphs	•
hand	Scale	•
	Table	•
-0	Slider	•
\$	Moving Component	•
	Window	•
1	List	•
R	Tools	•
÷	Pipeline	 Horizontal
		Vertical

4.6.15.1 Horizontal

4.6.15.1.1 Pipeline

The Pipe Diameter and Pipe wall thickness should be given when you use a horizontal component. It is shown as below.

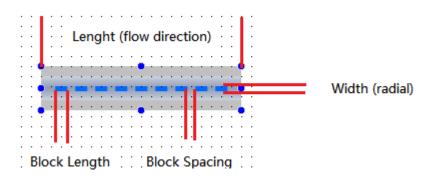
eline	- ? -
Pipeline Flow Block Flow Block Graphics Dynamic Graphics Displ	lay
Pipeline Settings	
Pipe Diameter: 15 🗘 Pixel Piple wall thickness: 1 🗘 Pixe	el
Piple wall color: Piple Wall Color V 🖉 🖲 Horizontal 🛇 Vertic	al
🖉 Fill	
Background Color 🕶 📝 Fill Type Gradient	•
Foreground Color 🕶 🍠 Gradual Approach Horizor	ntal 💌
Gradient Filling Effect	
	_



4.6.15.1.2 Flow Block

The "Flow Block" property page is mainly used to set the width and length of the pipe and the flow block. The flow direction and flow velocity parameters are also set here. It is shown as below.

ne	- ?
eline Flow Block Flow Block Graphics Dynamic Graphics Display	
ow Area Settings	
Width(radial): 5 C Pixel Length(flow direction): 180 C Pixel	
ow Block Settings	
Block Length: 12 C Pixel Block Spacing: 8 C Pixel	
Flow Direction: Left To Right 🔹 Flow Speed: 🛛 Varia 👻 LWO 📰	
-1~-10 indicate the reverse flow, the smaller the value flow faster. 0 indicate stop flowing. 1~10 indicate the forward flow, the greater the value flow faster. LW1 indicate graphics library state LW2 indicate flicker speed 0 indicate no flicker,1~10 control flicker speed, the greater the value of blink faster.	
Flow by condition (Only releate speed if not checked)	
Help Description:	OK Can



Note:

For example, the system will use LW0, LW1 and LW2 to control the flow block of the pipe when the Flow Speed is set LW0.

4.6.15.1.3 Flow Block Graphics

The graphic of the flow block is set here. You can edit the graphic and the display color in different status. It is shown as below.

ipeline Flow Use Graph Current Projec		Block Graphic	s Dynamic G	iraphics Disp		Status Preview	n.
backgro circle dot	backspace	button	button002	button1		Status0	Status1
Import Shadow E	Add a new Gr	raphic			¥	Favorites	Edit Graphics
Help Do	escription:						OK Cance

4.6.15.1.4 Display settings

The overall height and width of the pipeline component are set here. The settings are shown as below. Note that the "Width" of the component should be greater than the length of the flow block and the "Height" of the component should be greater than the diameter of the pipeline.

in all a s	El.	Diasla	Flow Blo	le C	an a binn	Dum		an his	Diam	1			
		BIOCK	FIOW DIG	DCK O	raphics	Dyna	smic (braphic	Disp				
Positio								1201					
Positio	on:	X :	270	÷	Y	:	120	\$					
Loc	ked	Width:	200	\$	Heig	nt:	44	\$					
Alway	ays Dis	splay											
		al Displa	iy										
		1000 T 1000 80/15											

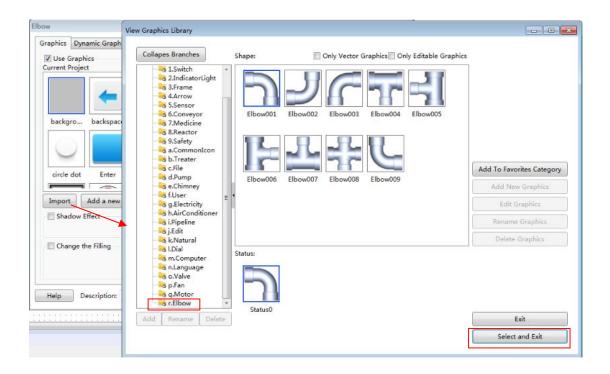
4.6.15.2 Vertical

The settings of a vertical pipeline are similar to a horizontal pipeline. The attribute of vertical or horizontal can be switched directly in the "Pipeline" property page. It is shown as below.

Pipeline	? <mark>×</mark>
Pipeline Flow Block Flow Block Graphics Dynamic Graphics Display	
Pipeline Settings	
Pipe Diameter: 44 🗘 Pixel Piple wall thickness: 10 🗘 Pixel	
Piple wall color: Piple Wall Color 👻 🍼 🔿 Horizontal 🖲 Vertical	
Background Color V Fill Type Gradient V	
Foreground Color V Gradual Approach Horizontal V	
Gradient Filling Effect	
<u>.</u>	
Line Development	OK Cancel
Help Description:	OK Cancel

4.6.15.3 Elbow

It is mainly used to connect the horizontal pipeline and the vertical pipeline. There are many kinds of elbows in the graphics library. You can use it by clicking the button "Import" to select one to use. They are shown as below.

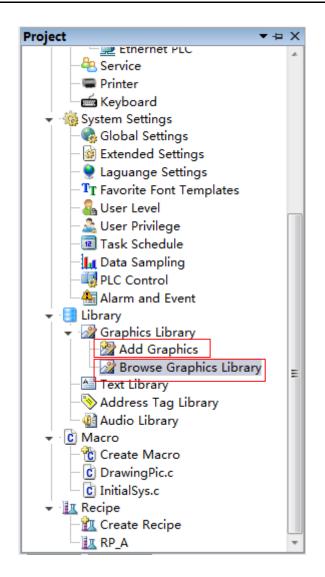


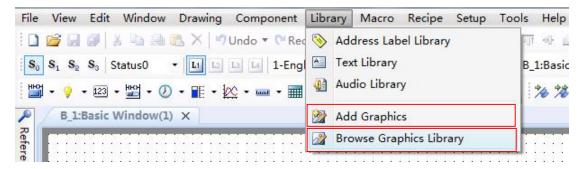
4.7Library

4.7.1GraphicsLibrary

Many graphics need to be used in the project configuration. The HTP Designer software has a graphics library which provides rich graphics. The users can also add their own pictures to the library to use.

The commands of Graphics Library include "Add Graphics" and "Browse Graphics Library". You can use any of these commands by clicking the menu command "Library/Add Graphics" or "Library/Browse Graphics Library". You can also double-click the "Library/ Add Graphics" or "Library/ Browse Graphics Library" in the project tree.





4.7.1.1 Add Graphics

The "Add Graphics" window is shown as below.

Vidth: 300 🗘 Height:	300 \$	ct Graphics	
nics library	Sele	ct Graphics	
			017
			OK
			Cancel

4.7.1.1.1 Name, Status Count, Width and Height

You need to give a name for the new added graphic. A graphic may have many statuses. You should set the number of the statuses for the option "Status Count". And you should also set the Width and the Height for your graphic.

4.7.1.1.2 Modify on current graphics library

Please check the option "Modify on current graphics library" if you want to modify the selected graphic from the graphics library. Then you can click the button "Select Graphics" to select a graphic from the library.

Add New Graphics	×
Name: Test	
Status Count: 1	
Modify on current graphics library	Select Graphics
Preview	
Status0	
	OK Cancel

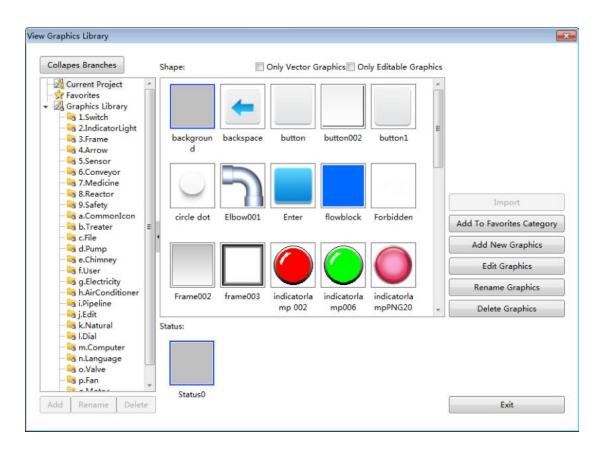
4.7.1.1.3 Edit

Click the button "OK" to confirm. Then the graphic editor window is displayed. The content of the editor window is corresponding to the selected status. It is shown as below.

Z	2		•	_	1						L										L							
						7																						
			St	a	tu	sO)							S	ta	tu	s	L		6								
:		1	100	•	•	:	12	÷		1	100	•	•	:	1	•		1	100	•	•		12	÷	•	1	100	
•	•				•		23		•				•			•	•				•					12		1
:			1	:	1		1	:	1		1	:			1	:	1		1	:			1	:	1		1	
•		•		•				•		•		•				•		•		•				•				
•	•	•		•	•••	•		•	•	•		•	•	•		•	•	•		•	•	•		•	•••			
	1	1	3		1		3		1	1	3	1	1		3	:	1	1	3	1	0	1	3		1	1	3	
•	•				•				•				•								•		2			1		
	1	1	1	•		1	1		1	1	1	•		1	٩,	•	1	1	1	•	1	2	1		1	1	1	
:	:	2	2	:	:	1	1	:	:	2	2	:	:	1	1	:	:	2	2	:	1	1	1	:	:	2	1	
	at)	5	•		at.				at)			•	ar.			•	at l	5	3	•	a.						3	
•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	ł
•	•	1	•	•	•	1	-	•	•	1	1	•	•	1	-	•	•	1	1	•	•	1	-	•	•	1	1	8
																÷												
			2						1		2						1		2								2	
																												9
• •						۰.	2						•	8									2			1		5
			3	•	•	•	3	•			3	•		•	•	•			3	•		•	•	•		•	3	8
•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	2
	•	1		•	•	1		•	•	1		•	•	1	1	•	•	1	1	•	•	1	1	•	•	1	1	8
		1	1				1			1	1							1	1							2	1	
			2		1				1		2		1				1		2			4					2	
							2				2				2				2			1					2	

4.7.1.2 Browse Graphics Library

The menu command "Browse Graphics Library" is used to open the "View Graphics Library". It is shown as below.



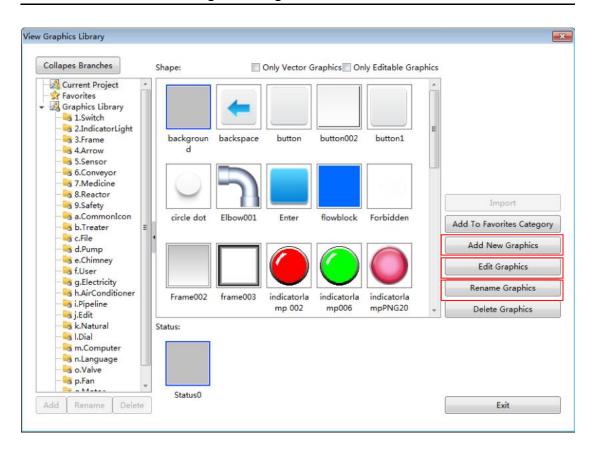
4.7.1.2.1"Only Vector Graphics" and "Only Editable Graphics"

You can filter to display the graphics by check the "Only Vector Graphics" or the "Only Editable Graphics".

ollapes Branches	Shape:	Only Vector Graphics Only Editable Graphics	
Current Project	shape.	in only reads suppressionly catable stapines	
Favorites			
Graphics Library			

4.7.1.2.2 Add, Edit and Rename Graphics

You can add a new graphic to the library by clicking the button "Add New Graphics". After select a graphic in the **library**, you can modify it by clicking the button "Edit Graphics" and rename it by clicking the button "Rename Graphics".



4.7.1.2.3 "Collapse Branches" and "Expand Branches"

There are rich graphics in the Graphics Library, such as Switch, Frame, Arrow, and so on. You can view the directory on the left area of the "View Graphics Library" window by clicking the button "Expand Branches" and select a required graphic from the directory.

Collapes Branches	
-2 Current Project	*
-👷 Favorites	
👻 🔏 Graphics Library	
—🧠 1.Switch	
- 😽 2.IndicatorLight	
- 😽 3.Frame	
- 🔄 4.Arrow	
- 🔄 5.Sensor	
- 🔤 6.Conveyor	
- 😽 7.Medicine	
- 🔤 8.Reactor	
- 🔤 9.Safety	
- 😽 a.CommonIcon	
- 🔤 b.Treater	=
- a c.File	
- 🔤 d.Pump	
- 🔄 e.Chimney	
—🧠 f.User	
- a g.Electricity	
- 😽 h.AirConditioner	
— 😋 i.Pipeline	
— 🔤 j.Edit	
—🧠 k.Natural	
🔤 I.Dial	
- 🔄 m.Computer	
- 🔄 o.Valve	
- 🔤 p.Fan	-
NA_4	

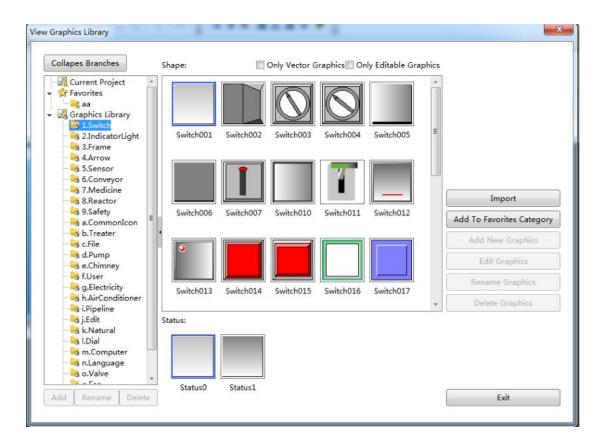
ſ

4.7.1.2.4 Favorites

The users can select favorite or popular graphics into the "Favorites" or a category under the "Favorites".The category under the "Favorites" can be added by clicking the button "Add". It can be renamed by clicking the button "Rename" or deleted by clicking the button "Delete".

Collapes Branches	Shape:	Only Vector Graphics Only Editable Graphics	hics
	Test	AirConditi oner015	Import Add To Favorites Category Add New Graphics Edit Graphics
			Rename Graphics
h.AirConditioner			Delete Graphics
- Sj.Edit - Sk.Natural - Sk.Sk.Natural - Sk.Sk.Sk.Sk.Sk.Sk.Sk.Sk.Sk.Sk.Sk.Sk.Sk.S	Status:	Status1 Status2	

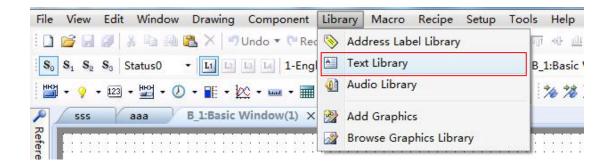
The selected graphic of the Graphics Library can be added to the Favorites or a category of the Favorites by clicking the button "Add To Favorites Category".

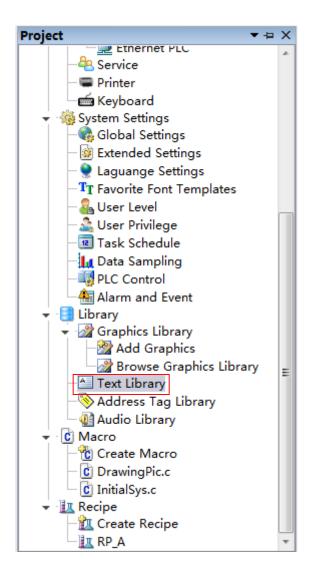


4.7.2Text Library

The text can be saved in the form of multi-languages and multi-statuses by using the function of the Text Library. It can facilitate the users to use the text and modify it together in the project.

The Text Library can be opened by clicking the menu command "Library/ Text Library" or double-click the "Library/ Text Library" in the project tree.





The "Text Library" window will pop up. It is shown as below.

A	в	C D E F G H	Search Language Display		Display All Languag
* 」))))					
٢	Name			Status Number	Reference Number
E	Exampl	e_1		1 🗘	0
5	Status	1-English (United States)	2-Chinese (Simplified, PRC)	4. ¹	
0)	Test	测试		
E	Examp	le_2		1 🗘	0
9	Status	1-English (United States)	2-Chinese (Simplified, PRC)		
C	0	ОК	确定		

4.7.2.1 Search

After enter the name required to find and click the button "Search", all items which match the content will be found out.

Note that only the name is supported to find. The content in different language is not supported to search.

4.7.2.2 Language Display

After click the button "Language Display", the "Language Display"window will pop up. It is shown as below.

Language	Display		×
	nguages ne position.	eded from the list, use "UP" and	"Down" to change the
		/Down operation only changes th vhile it will not change the list seq	
Visible	Serial No.	Language	
	1	1-English (United States)	Language Settings
	2	2-Chinese (Simplified, PRC)	7
			Select All Up Down Restore Order
			Confirm

4.7.2.2.1 Language Settings

After clicking the button "Language Settings", the "Language Settings" property page will be opened. You can add or delete language and set the display color, size and other information here. The details of the "Language Settings" are referred to:<u>Detailed manual/</u><u>Setup/ System Settings/Language Settings</u>.

4.7.2.2.2 Other settings

The checked languages will be displayed in the "Text Library" window. And you can check all the languages by clicking the button "Select All". Meanwhile, you can modify the order of the languages by clicking the button "Up" or "Down" after select a language.

Note:

The settings are valid for the language display effect in the "Text Library" window. It does not change the order of languages.

4.7.2.3 Sort by Name

After clicking the button "Sort by Name", all items in the text library will be sorted in the increasing order by the first letter of the item name.

4.7.2.4 Display All Languages

After checking the button "Display All Language", all the languages will display in the table including which is not checked in the "language display" window.

4.7.2.5 A~Z letters

The A~Z letters are used to locate the desired item.

4.7.2.6 Preview box

The same content to the selected text in the table displayssimultaneously in the preview box. If you modify the content in the preview box, the selected text in the table will be modified to the same content.

Note:

The name of the item is not displayed in the preview box.

Test				
Nam	ie		Status Number	Reference Number
- Exan	nple_1		1 🗘	0
Statu	us 1-English (Unite	ed States) 2-Chinese (Simplified, PRC)		
0	Test	测试		

The item in the table is shown as below.

	Name			Status Number	Reference Number
-	Examp	le_1		2 \$	0
	Status	1-English (United States)	2-Chinese (Simplified, PRC)		
	0	Test	测试		
	1	Act	执行		

Note:

The name of the item cannot be blank and not be duplicated.

4.7.2.7 New

A new item will be created after you click the button "New".

4.7.2.8 Delete

The selected item will be deleted after you click the button "Delete".

4.7.3Address Tag Library

The "Address Tag Library" saves the addresses in the tag form. This makes it easy to use and modify the address for the user.

The Address Tag Library can be opened by clicking the menu command "Library/ Address Label Library" or double-click the "Library/ Address Tag Library" in the project tree.



Project 🔹 🛱	×							
Service	Add	ress Tag I	library					×
- Printer		Reference	Tag Name	Devie	ce Alias	Station No.	Address Type	Address
Keyboard)	Motor Speed	LOCA	L:[Local Register]	0	LW	0
 System Settings Global Settings)	Running Time		L:[Local Register]	0	LW	0
Extended Settings								
👷 Laguange Settings								
-TT Favorite Font Templates								
- 🔏 User Level								
- 🟯 User Privilege								
Task Schedule								
- La Data Sampling								
PLC Control								
Alarm and Event		ѫ						
- Elibrary								
Graphics Library								
- Add Graphics								
- Text Library								
- Address Tag Library								
- Audio Library								
- C Macro								
Create Macro								
- C DrawingPic.c	l r	New Bit	New Word	Delete	Delete All	Edit	Cancel	
- C InitialSys.c		INEW DIL	New Word	Delete	Delete All	EQU	cancer	
- La Recipe								
Create Recipe		_						
LI RP_A	•							

4.7.3.1 Table preview

The table in the "Address Tag Library" displays the information of all the address tags.

Reference	Tag Name	Device Alias	Station No.	Address Type	Address
0	Motor Speed	LOCAL:[Local Register]	0	LW	0
0	Running Time	LOCAL:[Local Register]	0	LW	0

4.7.3.2 New Bit

After click the button "New Bit", the "Create Bit Address" dialog will pop up. You can create a new bit address here. The details to input the bit address are referred to: <u>Detailed</u> <u>manual/General functions/Address editor/Standard Bit Address Input</u>.

Reference	Tag Nar	ne	Device Alias	Station No.	Address Type	Address
0	Motor Sr	and	LOCALILlocal Register	lo	114/	0
0	Running	Create Bit Add	ress		X	0
		Tag Name Deivce: LOC	Bit Adress 1 AL:[Local Register]]	
		Address Typ Address:		▼ System Regi	ster	
				OK Car	cel	
New Bit		w Word	Delete All	Edit	Cancel	

4.7.3.3 New Word

After click the button "New Word", the "Create Byte Address" dialog will pop up. You can create a new word address here. The details to input the bit address are referred to: Detailed manual/General functions/Address editor/Standard ByteAddress Input.

Reference	Tag Nam	e	Device Alias	Station No.	Address Type	Address
0	Bit Addre		LOCALILlocal Register			0
0	Motor S	Create Byte Ad	dress		×	0
0	Running	Tag Name	Word Address 1 AL:[Local Register]			0
		Address: 0 Format(Range	e) DDDDDD(0~799999)	System Reg	ister	

4.7.3.4 Delete

Delete the selected tag.

4.7.3.5 Delete All

Delete all tags.

4.7.3.6 Edit

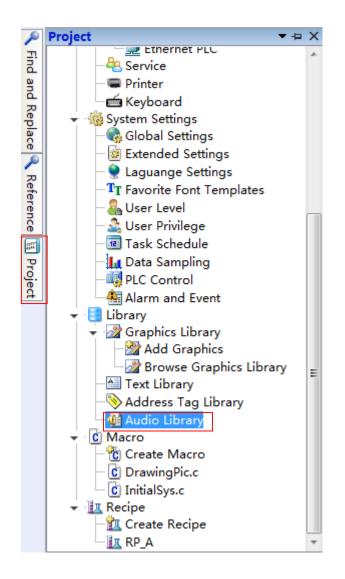
Modify the selected tag.

4.7.4 Audio Library

In the HTP Designer software, you can use some specificaudios. These audios can be selected from the Audio Library or be added from the other devices.

The Audio Library can be opened by clicking the menu command "Library/ Audio Library" or double-click the "Library/ Audio Library" in the project tree.

File View	Edit Window	Drawing	Component	Libra	ary Macro	Recipe	Setup	Tools	Help
	Ø X €5 30			131		el Library	'		아 교 1:Basic
	S ₃ Status0 • 123 • ₩삼 • (2					у			1:Basic
1 & \ L	Basic Window(1	0 🔊 🖾			Add Graphic Browse Grap	s	arv		



The "Audio Library" is opened as below.

Audio Name Sleep Away	File Name Sleep Away.mp3	Reference Times	File Size(KB)	Audio Lengtł 200.6	Import Audio
sicep ring	oncep rindyimpo		1125		Import from System Catalogue
					Export Audio
					Delete Audio
					Play Audio
					Import and Merge Audio Libra
					Export Audio Library
					Clear

4.7.4.1 Import Audio

After click the button "Import Audio" or "Import from System Catalogue", the audio file in the current computer can be imported to the Audio Library.

Audio Name	File Name	Reference Times	File Size(KB)	Audio Lengtł	Import Audio
Sleep Away	Sleep Away.mp3	0	4729	200.6	Import Addio
			· •		Import from System Catalogue
					Export Audio
					Delete Audio
					Play Audio
					Import and Merge Audio Librar
					Export Audio Library
					Clear
Sleep Away	Audio Name	Sleep Away		e:4729KB .ength:200.6s	
00:00/03:20	File Name:Sle	eep Away.mp3		nce Times:0	

4.7.4.2 Export Audio

You can click the button "Export Audio" to export the selected audio. So the other projects can use it.

Audio Name Sleep Away	File Name Sleep Away.mp3	Reference Times	File Size(KB) 4729	Audio Lengtł 200.6	Import Audio
Kalimba	Kalimba.mp3	0	8217	348.1	Import from System Catalogue
					Export Audio
					Delete Audio
					Play Audio
					Import and Merge Audio Libra
					Export Audio Library
					Clear
Kalimba	Audio Nan	ne: Kalimba		e:8217KB Length:348.1s	

4.7.4.3 Play Audio

After you import the audio to the Audio Library andselect it, you can click the button "Play Audio" to listen.

Audio Name	File Name	Reference Times	File Size(KB)	Audio Lengtł	Import Audio
Sleep Away	Sleep Away.mp3 Kalimba.mp3	0	4729 8217	200.6 348.1	Import from System Catalogue
					Export Audio
					Delete Audio
					Play Audio
					Import and Merge Audio Librar
					Export Audio Library
					Export Audio Library Clear
Kalimba	Audio N	ame: Kalimba		e:8217KB Length:348.1s	

4.7.4.4"Delete Audio" and "Clear"

You can delete the selected audio by clicking the button "Delete Audio". And you can delete all the audios of the Audio Library by clicking the button "Clear".

Audio Name	File Name Sleep Away.mp3	Reference Times	File Size(KB)	Audio Lengtł 200.6	Import Audio
Kalimba	Kalimba.mp3	0	8217	348.1	Import from System Catalogue
					Export Audio
					Delete Audio
					Play Audio
					i ny ridulo
					Import and Merge Audio Librar
Kalimba	Audio N	ame: Kalimba		e:8217KB Length:348.1s	Import and Merge Audio Librar Export Audio Library

4.7.4.5 Name

You can change the name of the imported audio in the edit box "Audio Name" for your project.

Audio Name	File Name	Reference Times	File Size(KB)	Audio Lengtł	Import Audio
Sleep Away	Sleep Away.mp3	0	4729	200.6	
Kalimba1	Kalimba.mp3	0	8217	348.1	Import from System Catalogue
					Export Audio
					Delete Audio
					Play Audio
					Import and Merge Audio Library
					Import and Merge Audio Library Export Audio Library
					Import and Merge Audio Library Export Audio Library Clear

4.7.5 Watch Address Table

"Insert Watch Address" button will be used in the alarm content display of the "Alarm and Event Detail Setting". You can set the "Watch Address Table" in the following ways.

Trigger Condition	Audio
Condition	Trigger Buzzer Timeout 10 (5)
	Audio Library 🕨 🗆 Loop
	Action
Add Modify Delete	Triggering Confirming Recovery Action
Add Modely Delete	Macro:
Text and Record	Bit Address:
Description: 🔲 Text Lib.	Text Lib.
Language: 1-English (United S 🔹 💽 Save to Te	xt Lib. Word Address:
	Popup Window:
	Print Information to Printer
	atch Address
Copy Current Text To: All Languages CInsert V	activities

You can click the button as shown in the figure to enter the "Watch Address Table" (path : Alarm and Event Display/Alarm and Events Login/Create/Insert Watch Address), you can also enter it through the tool bar(path: Library /Watch Address Table).

atch Address Table	×
Name	Address
Fire Alarm	LW0
Add Modify Delete Clear Select An	d Quit

The "Watch Address Table" page is shown as below:

Add: You can add new watch address entry. Click "Add", set the watch address name, such as "Fire Alarm", and set the address of the watch entry, such as "local register LW0",set the data format, there are various data types to choose; click "Confirm" after setting finished, you can see the figure as below.

Modify: You can modify the created watch address entry.

Delete: You can delete the selected watch address entry.

Clear: You can delete all watch address entries.

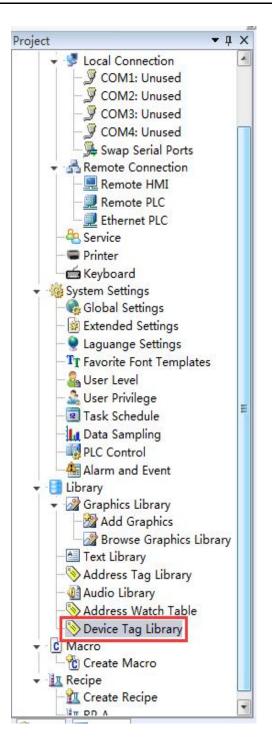
Select and Quit: When you enter the "Watch Address Table" from the "Alarm and Event Detailed Setting" page, select the watch address entry you are using, click the "Select and Quit" button to complete setting.

Watch Address Item					X
Watch Address Name:	Fire Alarm				
Use Address Tag					
Deivce: LOCAL:[Local Re	gister]	•			
Address Type: LW	<u> </u>				
Address: 0	System Regis	ter			
Format(Range) DDDDDD	(0~Occupy: 1 • W	ord			
Address Index					
Data Format					
Data Type: 16-bit Unsi	gned •				
Integer digits	4 Cecimal Point:	0 🌲	Display P	ositive Sign 🔲 Z	ero Pad <mark>d</mark> ing Left
				Confirm	n Cancel

4.7.6 Device Tag Library

The "Device Tag Library" saves the device addresses in the tag form. This makes it easy for the users to use and modify the addresses .

You need add the contents of the tag first when using the devices of tag type. The added tag should be the tags on the tag type devices.



Device Tag Library	×
Serial Ports Ethernet Port	
Add Equipment Delete	Save

Add Equipment: Click the "Add Equipment" button, select the "Serial Port Type", and select the "Manufacturer" and "Device Type". Then click "OK" to finish adding after selecting device, the added device should be the tag type device here, such as the figure shown as below.

Serial Port Type:	Serial Ports	
Manufacturer:	Allen-Bradley	•
Device Type:	AB Micro850_CILTAG	•

PreDefined	Name: abc			
flexem abc	Description:			
	Name	Data Type	Description	Delete
	abc	REAL		

Add Tags

	Name	Data Type	Station No.	Delet
AB Micro850_CIPTAG	ABC	flexem.abc.abc	• 0	Ŵ
		flexem.abc.abc BOOL SINT USINT INT UINT DINT REAL		

Add: You can add tags manually, enter the tag name, select the data type and station number, click "Save" after finishing adding.

Import: You can import the tags directly in the form of file, this will facilitate users to quickly establish a tag library. the tag file format can be imported is CSV file. The CSV format files can be exported by the tag type PLC software, you can also make it with Excel, About the table format, you can refer to "Export the CSV File".

Export: You can export the added contents of the tag library as CSV format files, which you can quickly import to other devices to use.

Data type: You can classify and group the data type of the device tags, this will facilitate users to quickly select the data type they need. Click the "Data Type" button, click the "Add Category", then you can define the category name, click the "Add Data Group", you can add the elements of the group - data type. Click "Close" after the definition.

After defining the data type, you can see the data type just defined in the "Data Type" page, as shown below: you can select the data type for the "HNC / abc.REAL", the nature of this type is "REAL".

Delete Data Type:

Right-click the data category then you can modify category, delete category, and add data group. Right-click data group then you can delete the data group.

ata Type ▶ PreDefi ▼ flexem	ned
a	Update Category Delete Category Add Data Group
ata Type ▶ PreDefi ▼ flexem	ned Name: abc Description:
• PreDefi	Name: abc

4.8Macro

4.8.1Create Macro

Click the menu command "Macro/ Create Macro" or double-click the "Macro/ Create Macro" in the project tree, you can open the "Create Macro" window. It is shown as below.

Macro Instruction	on									
Create Macr		Save All) Undo	C# Redo	SAdd New Address		Help	
Name InitialSys DrawingPic macro_1	Macro Co	ide							Read Write System Func Compuation Operator	
		•		Create N N Descrip	ame:	macro_1	K Cancel			
Create D		Edit								
	ro Code s Statemer	nt						Ir	nput assistant	Find and Replace
Ready								1.1		all a

(1)Name

You need to designate a name for the new macro. It will be displayed in the "Macro" directory of the project tree. When you call and execute a macro, the name is used. It can be in Chinese or English.

(2)Description

The "Description" is used to introduce the macro, which is similar to the "Comments". It can be in Chinese or English.

Click the button "OK" to confirm and the new macro will be displayed in the macro editor as below. You can also click the button "Cancel" to cancel the new macro.

Macro Instruction			
Create Macro Save Save All	Joint Copy Paste Undo Redo	Add New Address Compiling	
Alias Name Address Alias Name Address Create Delete Edit Insert at Cursor Position	TransData.c X 1 #include <macro.h> 3 int MacroMain() 4 { 5 // Here to add macro code. 6 7 return 0; 8 }</macro.h>	* P	Read Write Function System Functions Computation and Convertion Function Operator
Address Statement Macro Code		▶ Ing	out assistant Find and Replace
Ready			

You can edit the macro code in the code editor window. The details are referred to: <u>Use topic/Macro</u>.

4.8.2Edit Macro

Click the menu command "Macro/ Edit Macro", you can open the "Macro Instruction" window. It is shown as below.

Create Macr		Ø			1100		(°		**	۲	
Create Macr	o save	Save All	Cut	Сору	Paste	Undo	Kedo	Add New Address	Compliing	Help	
lame	Macro Co	de								Read Write	
itialSys										System Func	tions and Convertion Functio
rawingPic										Operator	and convertion runcad
ransData											
Create D Import		Edit									
	ro Code										
Address	Statemer	nt L							I	put assistant	Find and Replace

The existing macros are listed on the left side of the "Macro Instruction" window.

After clicking any one of the existing macros, you can delete, modify, import and export it. But the deleted macro will not be recovered.

After double-click any one of the macro, the macro can be opened and display in the code editor window area.

The details are referred to: Use topic/Macro.

4.8.3 Enable Password Verification

You can use the password verification function to protect the macro codes.

Click the menu command "Macro/Enable Password Verification", you can open the "Set Macro Password" window.

Mac	ro	Recipe	Setup	Tools	Help			
1	Create Macro							
	Edi	Edit Macro						
	Enable Password Verification							
	Update Macro Password							
Set	Ma	cro Passw	ord		(x		
		Passwo	rd: 123	456				
Confirm Password: 123456								
			(Ж	Cance	el		

Note the "Confirm Password" needs to be same to the "Password". Otherwise the "OK" button will be unavailable.

After you enable password verification, the "Verify Password" window will pop up when you click the menu command "Create Macro" or "Edit Macro". These two menu commands can be use only after you entering the correct password. The "Verify Password" window is shown as below.

Verify Password	×
Password:	
Verify	Cancel

If you want to cancel the password verification function, you can click the menu command "Macro/Enable Password verification" again and enter the correct password to cancel the password verification function.

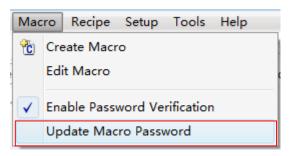
Mad	ro	Recipe	Setup	Tools	Help		
* C	Create Macro						
	Edi	t Macro					
\checkmark	Enable Password Verification 💦						
	Up	date Mac	ro Passv	vord			

If you want to modify the macro password, the details are referred to: <u>Detailed</u> <u>manual/Macro/Update MacroPassword</u>. Note: The macro password is a global password. All macros need to password verification once you enable the password verification function. You can't set a password for a single macro.

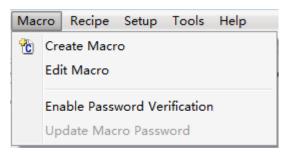
4.8.4 Update Macro Password

If you use the "Enable Password Verification" function, the menu command "Update Macro Password" is available. Otherwise this command is not available.

The menu command "Update Macro Password" is available. It is shown as below.



The menu command "Update Macro Password" is not available. It is shown as below.



After click the "Update Password Verification", the "Update macro password" window will pop up.

Old Password:	100455
Old Password:	125450
New Password:	654321
Confirm Password:	654321
	OK Cancel

Enter the correct old password and valid new password, then **clicking** the button "OK" to confirm the password modification.

If the new password is not valid, the button "OK" is unavailable.

After click the button "OK", a "Warning" window will pop up to message that the old password is error if the old password is not correct.

Warning	—
<u>^</u>	Old password is wrong.
	ОК

4.9 Recipe

Recipe refers to a group of data saved in a continuous registers of the HMI device. The data in this area is resistant after powering off. It can be quickly downloaded to the controller.

Click the menu command "Recipe/ Create Recipe" or double-click the "Recipe/ Create Recipe" in the project tree, you can open the "Recipe" settings page. It is shown as below.

eneral 🜒 Data Information		8
Name: RP Recipe Length	: 1 🗘 Data Entry Array Formula: 1000	\$
Address of Recipe Storage		
Word address range:	RPW_: 0~999	
Word address index range:	RPWI_: 0~0	
Bit address range:	RPB_: 0.0~999.15	
Bit address index range:	RPBI_: 0.0~0.15	
Current recipe ID register:	RPI_: 0	
Use External Address as Recipe index		
_		
Note: Clear all recipe bits addresses		
Help	ОКСС	ance

4.9.1General

4.9.1.1 Name

You need to specify a name for the new recipe for the "Name" option. The name can be English, numbers, letters, and so on. The prefix name "RP_" is fixed and not editable. It represents a "recipe register". For example, if you give a name "coffee" for a recipe, then the whole name of the recipe is "RP_ coffee". The recipeword register name is "RPW_coffee".

4.9.1.2 Recipe Length

The default "Recipe Length" is 1. You can modify it by clicking the button "Data Entry" or clicking the title of the settings page "Data Information". The Recipe Length refers to the number of words occupied by each group of this recipe.

4.9.1.3 Array Formula

The default value of the "Array Formula" is 1000. It ranges from 1 to 65535.

The whole length of the word register addresses occupied by the recipe can be calculated after you set the "Recipe Length" and the "Array Formula". For example, if the "Recipe Length" is 10 and the "Array Formula" is 1000, then the whole length of the word register addresses occupied by the recipe is 10*1000=10000.

4.9.1.4 Address of Recipe Storage

You can view the details of the addresses occupied by the recipe in the "Address of Recipe Storage" area. It is shown as below.

ame: RP_ coffee	Recipe Len	th: 10 🗘 Data Entry Array Formula: 1000 🕻
Address of Recip	be Storage	
	Word address rang	RPW_coffee: 0~9999
	Word address index rang	RPWI_coffee: 0~9
	Bit address rang	RPB_coffee: 0.0~9999.15
	Bit address index rang	RPBI_coffee: 0.0~9.15
Current recipe ID register:		
	earrent recipe to registe	RPI_coffee: 0
	xternal Address as Recipe inde	-
Clear curr	xternal Address as Recipe inde	-

4.9.1.4.1 Word address range

For example, the "Recipe Length" is 10 and the "Array Formula" is 1000, so the whole length of the word register addresses occupied by the recipe is 10*1000=10000. The Recipe name is "RP_Coffee". So the address range of the word registers is "RPW_ Coffee: $0 \sim 9999$ ".

4.9.1.4.2 Word address index range

In the above example, the "Recipe Length" is 10 for each group of the recipe. So the Word address index range is "RPWI__coffee: 0-9."

4.9.1.4.3 Bit address range

The bit address range is determined by the word address range. So the bit address in the above example is "RPB_ coffee: 0.0 to 9999.15."

4.9.1.4.4 Bit address index range

Similarly, the bit address index range is determined by the "Recipe Length". So the "Bit address index range" is "RPBI_ coffee: 0.0 to 9.15."

4.9.1.4.5 Current recipe ID register

The "Current recipe ID register" is used to specify the group number of the recipe. For the above example, the "Current recipe ID register" is "RPI_coffee: 0". It is a unique register for each recipe.

4.9.1.4.6 Use External Address as Recipe index

It is not checked by default. If it is checked, you can specify a word address as a recipe ID register and the "Current recipe ID register" (such as "RPI_ Coffee: 0") is not valid.

4.9.1.5 Clear current recipe bit address

It is not checked by default. If it is checked, you can specify a bit address. If it isset ON, the current data of the recipe group which specified by the recipe ID register will be cleared. After the data is cleared, this bit address will be reset OFF. It is shown as below.

eneral	Data Information			
1				
Name:	RP_ coffee	Recipe Length	h: 10 🗘 Data Entry Array Formula:	1000 🗘
Addre	ess of Recipe Storage			
	Wor	d address range:	RPW_coffee: 0~9999	
	Word add	ress index range:	RPWI_coffee: 0~9	
	B	t address range:	RPB_coffee: 0.0~9999.15	
	Bit add	ress index range:	RPBI_coffee: 0.0~9.15	
	Current re	ecipe ID register:	RPI_coffee: 0	
	Use External Address			
	-			
V	Clear current recipe bit a	ddress. LBO		
N			ON:Current recipe will be cleared, after clearing fir	nished,
N se	ote: Clear current recipe bi etting to OFF.	it address. LB0 is (nished,
N se	ote: Clear current recipe bi	it address. LB0 is (nished,
N se	ote: Clear current recipe bi etting to OFF.	it address. LB0 is (nished,
N se	ote: Clear current recipe bi etting to OFF.	it address. LB0 is (nished,
N se	ote: Clear current recipe bi etting to OFF.	it address. LB0 is (nished,
N se	ote: Clear current recipe bi etting to OFF.	it address. LB0 is (nished,
N se	ote: Clear current recipe bi etting to OFF.	it address. LB0 is (nished,
N se	ote: Clear current recipe bi etting to OFF.	it address. LB0 is (nished,

For example, if the value of the "RPI_ coffee: 0" register is 3, the data of the No. 3 group of the recipe "RP_coffee" will be cleared when the "Clear current recipe bit address" LB0 is set ON. After finish clearing,LB0 will be reset OFF.

4.9.1.6 Note: Clear all recipe bit addresses

It is not checked by default. If it is checked, you can specify a bit address. If it is set ON, the data of all the recipe groups will be cleared. After the data is cleared, this bit address will be reset OFF. It is shown as below.

General	Data Information		
Name:	RP_ coffee	Recipe Length	: 10 ¢ Data Entry Array Formula: 1000 ¢
Addr	ess of Recipe Storage		
	Wor	d address range:	RPW_coffee: 0~9999
	Word add	ress index range:	RPWI_coffee: 0~9
	В	it address range:	RPB_coffee: 0.0~9999.15
	Bit add	ress index range:	RPBI_coffee: 0.0~9.15
	Current r	ecipe ID register:	RPI coffee: 0
	🔲 Use External Address		RFI_COILEE. 0
	Clear current recipe bit a	ddress. LB0	
N St	lote: Clear current recipe b etting to OFF. I Note: Clear all recipe bits	it address. LB0 is (s addresses LB1	ON:Current recipe will be cleared, after clearing finished,
N St	lote: Clear current recipe b etting to OFF. I Note: Clear all recipe bits	it address. LB0 is (s addresses LB1	ON:Current recipe will be cleared, after clearing finished,
N St	lote: Clear current recipe b etting to OFF. Note: Clear all recipe bits lote: Clear all recipe bits ac	it address. LB0 is (s addresses LB1	ON:Current recipe will be cleared, after clearing finished,
N St	lote: Clear current recipe b etting to OFF. Note: Clear all recipe bits lote: Clear all recipe bits ac	it address. LB0 is (s addresses LB1	ON:Current recipe will be cleared, after clearing finished,
N St	lote: Clear current recipe b etting to OFF. Note: Clear all recipe bits lote: Clear all recipe bits ac	it address. LB0 is (s addresses LB1	ON:Current recipe will be cleared, after clearing finished,
N St	lote: Clear current recipe b etting to OFF. Note: Clear all recipe bits lote: Clear all recipe bits ac	it address. LB0 is (s addresses LB1	ON:Current recipe will be cleared, after clearing finished,

For the above example, all the data of the recipe "RP_coffee" will be cleared if the bit register LB1 is ON. After the data is cleared, LB1 will be reset OFF.

4.9.2 Data Information

The default "Data Information" settings page is shown as below.

e neral Data Inforr	nation				8
	Number of Words	Is Data Group	Data Group Length	Data Type	Data Nam
0	1	No		16-bit Unsigned	
Move Up	Move Down	Insert	Add Delete	Modify	
Help				OK	Can

The default recipe length is 1. A 16-bit unsigned data is preset.

4.9.2.1 Modify

After double-click the selected entry, the "Data Setting" dialog will pop up. You can modify the settings for this entry. It is shown as below.

Data Setting	×
Name:	
Address Offset	0
Data Type:	16-bit Unsigned 👻
🔲 Data Grou	q
	OK Cancel

4.9.2.1.1 Name

A description for the data of this entry can be given here.

4.9.2.1.2 Address Offset

It refers to the address offset of this entry in the recipe. The address offset of the first entry starts from 0. It is determined according to the data type and the entry order by system and not be edited.

4.9.2.1.3 Data Type

A data type needs to be sethere. The default is "16-bit Unsigned".

4.9.2.1.4 Data Group

It is not checked by default. You can check it when you need to define a group of the same data type data for this entry.

Data Setting		- • •
Name:		
Address Offset	10	
Data Type:	16-bit Unsigned 🔻	
🔽 Data Grou	p Length 2	
	OK Car	ncel

The "Length" option needs to set for the data group when you check the option" Data Group".

Click the button "OK" to finish the settings for the selected entry.

4.9.2.2 Insert

After select an entry in the list and then click the button "Insert", a new entry will be added before the selected entry.

4.9.2.3 Add

After click the button "Add", a new data entry will be added after the last data entry.

4.9.2.4 Move Up

For many data entry, the selected data entry will be moved up a row after click the button "Move Up".

4.9.2.5 Move Down

For many data entry, the selected data entry will be moved down a row after click the button "Move Down".

4.9.2.6 Delete

The selected data entry will be deleted from the list after click the button "Delete".

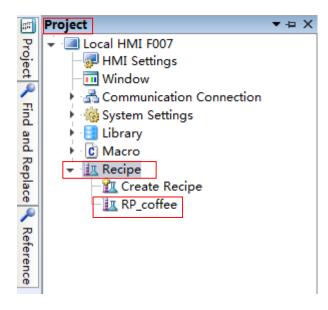
For example, the recipe "RP_coffee" has only one entry and the data type of the entry is "16-bit Unsigned ". The Recipe Length is 10. The data setting of the entry is shown as below.

Data Setting			x
Name:	Coffee Data		
Address Offset	0		
Data Type:	16-bit Unsigned 🔹		
🔽 Data Grou	up Length 1	0 🗢	
	OF	Cancel	

After click the button "OK" to confirm the entry setting, the "Data Information" setting page of this recipe is shown as below.

Recipe					? ×
General Data Inform	nation				
Address Offset	Number of Words	Is Data Group	Data Group Length	Data Type	Data Nam
0	10	Yes	10	16-bit Unsigned	Coffee Data
Move Up	Move Down	Insert	Add Delete	Modify	
Help				ОК	Cancel

Thus, a named "RP_coffee" recipe is created. It will be displayed in the project tree. It is shown as below.



4.10 Setup

4.10.1 HMI settings

You can open the "HMI Settings" property TAB by clicking the menu command "Setup/ HMI Settings ". It is shown as below.

lodel:					
Description		Ethernet Setting	9		
Size:	7	O Auto IP Add	Iress (DHCP)	Static IP Address	
Resolution:	1024 X 600	IP Addres:	192.168. 0 .200	SRW10010~13	
Color:	24BIT Color	Subnet Ma	255.255.255.0	SRW10014~17	
Touch Type:	Capacitive Touch Panel	Gateway:	192.168.0.1	SRW10018~21	
Key:	0	DNS1:	0.0.0.0	SRW10022~25	
Ethernet:	Yes	DNS2:	0.0.0.0	SRW10026~29	
Main USB:	1			elect IP address assigning method	
SD/TF Card:	Yes	(Auto-allocate or static)			
COM1 :	RS232\RS485-2\RS485-4	Use FTP Pro	otocol		
COM2 :	RS485-2	Rotation Displa	N.		
COM3 :	RS232				
COM4 :	RS485-2		rizontal Display)	Preview	
CAN :	None	O Vertical (Rot	tate 90 degrees Cloc	•	
Expansion Po	rt:None	Vertical(Rot)	ate 90 Degree count	A	
Vedio:	None	O Upside Dow	m(Rotate 180 Degre		
Audio:	None	C. L. C. M.			
		© 16 Bit Color	(65535 Color)	24 Bit Color (16777216 Color)	
			Evchar	ge HMI	

4.10.1.1 Model

The "Model" displays the type of the current selected HMI device.

4.10.1.2 Description

The detailed information of the current HMI device is displayed in the "Description" area.

4.10.1.3 Ethernet setting

You can set the Ethernet connection properties for the current HMI device. The setting mode of IP address can be "Auto IP Address (DHCP)" or "Static Address".

If you select a "Static Address" mode, the IP address can be assigned here. Or you can use the SRW registers to set the IP address.

Ethernet Setting				
Auto IP Address (DHCP)		Static IP Address		
IP Addres:	192.168. 0 .200	SRW10010~13		
Subnet Ma	255.255.255.0	SRW10014~17		
Gateway:	192.168. 0 . 1	SRW10018~21		
DNS1:	0.0.0.0	SRW10022~25		
DNS2:	0.0.0.0	SRW10026~29		
Use system bit register SRB10000 to select IP address assigning method (Auto-allocate or static)				
Use FTP Protocol				

When SRB10000=0, the setting mode is DHCP. When SRB10000=1, the "Static Address" mode is used to assign the IP address. You can switch the IP address setting mode by the SRB10000 register.

4.10.1.4 Rotation Display



There are 4 rotation display effect. They are "Normal (Horizontal Display)", Vertical (Rotate 90 degrees Clockwise), "Vertical (counterclockwise)" and "Upside down (Rotate 180 degrees)". You can preview the display effect of the character "A" on the right area.

The rotation display mode should be selected according to the installation direction of the HMI device.

4.10.1.5 Color Setting

You can select "16 Bit Color (65535 Color)" or "24 Bit Color (16777216 Color)" based on your project. This setting will take effect after restarting.

Color Setting	
I6 Bit Color (65535 Color)	24 Bit Color (16777216 Color)

4.10.1.6 Exchange HMI

Model:					
Description		Ethernet Settin	9		
Size:	7	C Auto IP Add	Iress (DHCP)	Static IP Addre	ss
Resolution:	1024 X 600	IP Addres:	192.168. 0 .200	SRW10010~13	
Color:	24BIT Color	Subnet Ma	255.255.255.0	SRW10014~17	
Touch Type:	Capacitive Touch Panel	Gateway:	192.168.0.1	SRW10018~21	
Key:	0	DNS1:	0.0.0.0	SRW10022~25	
Ethernet:	Yes	DNS2:	0.0.0.0	SRW10026~29	
Main USB:	1		register SRB10000 to s	elect IP address ass	igning method
SD/TF Card:	Yes	(Auto-allocate			
COM1 :	RS232\RS485-2\RS485-4	Use FTP Pro	otocol		
COM2 :	RS485-2	Rotation Displa	N/		
COM3 :	RS232	S			11 - 11 - 11 - 11 - 11 - 11 - 11 - 11
COM4 :	RS485-2		rizontal Display)	Pre	view
CAN :	None	O Vertical (Ro	tate 90 degrees Cloc		^
Expansion Po	rt:None	Vertical(Rot	ate 90 Degree count		A
Vedio:	None	O Upside Dov	m(Rotate 180 Degre		
Audio:	None	0 L 0 m			
		Color Setting	(65535 Color)	24 Bit Color (16)	777216 C-l-v)
		 To Bit Color 	(05555 Color)	© 24 Bit Color (10)	77210 Color)
				nge HMI	

If you want to change the HMI device type for your project, you can click the button "Exchange HMI".

The "Change HMI Model" dialog will pop up after you click the button "Exchange HMI".

ource HMI Mod	lel:	Target HMI Mod	el:
Source HMI De	scription	Target HMI Des	scrip
Size:	7	Size:	7
Resolution:	1024 X 600	Resolution:	80
Color:	24BIT Color	Color:	24
Touch Type:	Capacitive Touch Panel	Touch Type:	Re
Key:	0	Key:	0
Ethernet:	Yes	Ethernet:	Ye
Main USB:	1	Main USB:	1
SD/TF Card:	Yes	SD/TF Card:	Ye
COM1 :	RS232\RS485-2\RS485-4	COM1 :	R
COM2 :	RS485-2	COM2 :	RS232\RS485-2\RS485-4
COM3 :	RS232	COM3 :	RS232
COM4 :	RS485-2	COM4 :	RS232
CAN :	None	CAN :	None
Expansion Po	rt:None	Expansion Po	rt:0
Vedio:	None	Vedio:	None
Audio:	None	Audio:	None

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After you select the "Target HMI Model" for your project and click the button "Exchange" to confirm the setting, the project will be converted to adapt the new HMI device.

The resolution and color need to be adjusted by manual after the exchanging operation. Because the resolution and color change may result in the change of the window size and the loss of color.

4.10.2 System Settings

	Setu	p Tools Help		
i		HMI settings	9, 9, 9, 9, 9	
		Communication Settings		🗉 🔍 100% 🛛 🔍 🏢 🏥
		System Settings	👌 Global Se	ettings
		Ontions	Extended	Properties
L	* -	Options	Language	e Settings
			T Favorite	Font Templates
		· · · · · · · · · · · · · · · · · · ·	🔓 User Lev	el .
			🛛 Task Sch	edule 🔡
			🔒 Data San	npling
		· · · · · · · · · · · · · · · · · · ·	🚦 PLC Cont	rol
			🔄 Alarm An	d Event
	• • •			

4.10.2.1 Global Settings

You can set the project properties, backlight and screensaver, initialization, the main window, touch audio and other related attributes in the "Global Settings" property TAB.

Click the menu command "Setup/ System Settings/Global Settings" to open the "Global Settings" property TAB. It is shown as below.

User Privilege	Task Schedule	Data	Sampling	PLC Control	Alarm And Event
Global Settings 🥥	Extended Settings	Laguar	nge Settings	Favorite Font Tem	plates User Leve
Backlight And Screen Dim the brightnes Turn off Backlight Dim down and wa Turn on backli Screensaver:	Password: 888888 Password: 888888 ord Password: 888888 isaver is: Lowest V 3 ait for 10 ght upon Alarm/Events 10 w: B_1:Basic Window(1 V to exit Screensaver	Caguar (min) (min)	Initialization Initial Wind Initial Windo Main Windo Main Windo Drop-down I Use the Note: Only Clock Source: HN Set up th historica	ow: B_1:Basic Window cro → Macro Code w(HOME) ow(HOME) : B_1:Bas	Edit • iic Window(1 • or not?
	screen when Screensaver	is •	Touch Audio Buzzer Is En Touch Au		ime: 50mS 🔹
Scrollbar Scrollbar Width	20				

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4.10.2.1.1 Project Properties

Upload

If you check "Upload" and set the "Password", the project can be allowed to upload when the other user enter the password after it is downloaded to the HMI device. The uploaded project file can be downloaded to the other HMI device by using the HTP Designer software Tools.

Note:

The uploaded project file is a special archive. The project can be opened after decompilation by the HTP Designer software.

Decompilation

If you check "Decompilation" and set the "Password", the project can be allowed to decompile by the HTP Designer Tools after the password is entered.

Note:

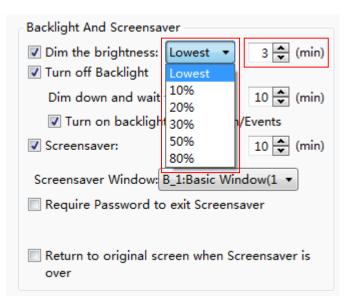
- If only the "Decompilation" is checked, the Fpg file of this project can be decompiled after entering the correct password. But this project can't be uploaded.
- If only the "Upload" is checked, this project can be uploaded after enter the correct password. But the Fpg file of this project can't be decompiled.
- If the "Upload" and the "Decompilation" are not checked, the size of the fileafter compiling is the least. But it cannot be uploaded or decompiled. On the other hand, it is safest way to protect your project.
- Download Password

The HMI projects can be downloaded if the option is not checked. After checking the option, then you need to enter the password every time you want to download projects from the HMI, to avoid the original projects to be replaced.

4.10.2.1.2 Backlight and Screensaver

• Dim the brightness

You can check the option "Dim the brightness" to adjust the backlight lightness after the specified time. The lightness can be set "Lowest", "10%", "20%", "30%", "50%" or "80%". The specified time needs to input in integer.



- Turn off Backlight
- Dim down and wait for

You can set a specified time to turn off the backlight after the lightness is adjusted. The default value is 10. That means it will keep 10 minutes after the backlight lightness is adjusted. Then the backlight will be turned off.

Note:

The configuration screen will be visible after the backlight is turned off.

> Turn on backlight upon Alarm/Events

If you check the option "Turn on backlight upon Alarm/Events", the backlight will be turned on automatically when the alarms or events occur and the backlight is off during the running.

• Screensaver

If you check the option "Screensaver", the Screen saver Window will be switched to display when the time is up. The Screen saver Window must be specified. It is used to display the company LOGO.

• Require Password to exit Screensaver

If you check the option "Require Password to exit Screensaver", a system message window will pop up to prompt you to enter the corresponding level password when you want to exit the screen saver window.

Note:

You need to use the character input component to enter the password to SRW100 \sim 103.

• Return to original screen when Screensavers is over

If you check the option "Return to original screen when Screensavers is over", it will return to the original screen when you click the HMI screen. Of course, if you set a password, the system message window will pop up to prompt you to enter the password before return to the original screen.

Note:

If you don't check the option "Return to original screen when Screensavers is over", it will still stay in the screensaver window when the screensaver is over.

4.10.2.1.3 Local Register EndianOrder

The "Local Register Endian Order" refers to the order of the high byte and the low byte. For example, a 32-bit register LW0=0x12345678. If you select the "4321" mode, then the word register LW0=0x1234 and the word register LW1=0x5678. If you select the "2143" mode, then the word register LW0=0x5678 and the word register LW1=0x1234.

4.10.2.1.4 Scrollbar

For some components without setting the scrollbar width, you can set it in the "Scrollbar Width" option. For example, you set the scrollbar width for the pop up window component here.

4.10.2.1.5 Initialization

Initial Window

The "Initial Window" refers to the first displayed configuration window after the project is downloaded to the HMI or the HMI is powered on.

Initial Macro

After check the "Initial Macro", you can specify a Macro to run before the configuration window is displayed. This function can realize the initial work of your project.

4.10.2.1.6 Main Window(HOME)

The main window can be set here. So you can return to the main window in any configuration window by setting "Return to the main window (HOME)" for the "Window Operation" function of the Bit Set component.

4.10.2.1.7 Drop-down window

If this function is checked, you can specify a window as a pull-down window, where you can put the alarm events and other related components to display. This function is valid only for the capacitive HMI device.

Note:

When you slide the HMI window to more than half the width of the window from the upper edge down during running the project, the Drop-down window will display gradually. Similarly, when you slide to more than half the width of the window from the lower edge up, the Drop-down window will be withdrawn.

4.10.2.1.8 Clock

The "Source" of Clock can be set "HMI Internal Clock" or "External Device".

-Clock		
Source:	HMI Internal Clock 🔻	
	HMI Internal Clock	nts,
histor	External Device	
مططيموه	SRW0~7: Year/Month,	/Day/Hour/
Audress:	Minute/Second/Millise	cond/Week

If you select the "HMI Internal Clock" as the HMI clock, SRW0~7 will be used to save the time source of events, historical data, etc.

Clock
Source: HMI Internal Clock 🔻
Set up the time souce of events,
historical data etc.
Address: SRW0~7: Year/Month/Day/Hour/ Minute/Second/Millisecond/Week

If you select the "External Device", the registers address can be changed.

Clock	
Source: External Device 🔻	
Set up the time souce of events,	
historical data etc.	
Address: SRW0	

4.10.2.1.9 Touch Audio

Buzzer Time: 50mS 🔹			
:			
Enable Control:			

Buzzer is enabled

If only the option "Buzzer Is Enabled" is checked, the buzzer will beep for a specified time when you touch the effective components, such as buttons.

If the option "Enable Control" is also checked, you need to select a bit register. When the bit register is ON, the function of "Buzzer Is Enabled" is allowed to use. For example, the LB0 is set for the "Enable Control". If LB0 is ON, the buzzer will beep when you touch the effective components. When it is OFF, the buzzer will not beep. The option "Buzzer Time" can set 50ms, 75ms, 100ms, 150ms, 200ms, 300ms, 500ms, 800ms, and 1s.

Touch Audio	
✓ Buzzer Is Enabled Buzzer Time: 50mS	•
✓ Enable Control: LB0	
🔽 Touch Audio Enabled.	
✓ Enable Control: LB1	

• Touch Audio Enabled

If the option "Touch Audio Enabled" is checked, all audio play is available. It is selected by default.

If the option "Enable Control" is also checked, you need to select a bit register. When the bit register is ON, the function of "Touch Audio Enabled" is allowed to use. For example, the LB1 is set for the "Enable Control". If LB1 is ON, the audio play is available. If it is OFF, the audio will not be available.

Touch Audio	
✓ Buzzer Is Enabled Buzzer Time: 50mS	•
✓ Enable Control: LB0	
▼ Touch Audio Enabled.	
✓ Enable Control: LB1	

Note:

If the option "Touch Audio Enabled" is not checked in the global settings, the audio will not be available even if the audio is active in the proper TAB of the effective component.

4.10.2.2 Extended Settings

Global Settings Extended Settings Laguange Settings Favorite Font Templates User Leve ublic Window Position: Below Basic Windows • • Window Default Settings • Slow In • Slow Out • • Disable Ipomoea return to the main window • Disable Ipomoea return to the main window • Disable Ipomoea return to the main window • • Don't show • Displays the value 0 or state 0 • If is "Auto Stop", new entries will not be added when the maximum number of entries reached. Or delete old entries and add new entries. • <th>User Privilege</th> <th>Task Schedule</th> <th>Data Sampling</th> <th>PLC Control</th> <th>Alar</th> <th>rm And Event</th>	User Privilege	Task Schedule	Data Sampling	PLC Control	Alar	rm And Event
 Bisable Vector Font Bordline Blurring Processing Slow In Slow Out Switch new Window by Horizontal Sliding Use Swiping Around Disable Ipomoea return to the main window 	Global Settings 🥥	Extended Settings	Laguange Settings	Favorite Font Tem	plates	User Level
 Unsave HMI SD Card USB1 Unsave: Data will lost upon power off or restart. Max Items 1000 A lost op If is "Auto Stop", new entries will not be added when the maximum number of entries reached. Or delete 	Performance:		Slow Slow Slow Use s	In Out h new Window by Ho Swiping Around		
	Unsave HMI Unsave: Data will lost of Max Items 1000 If is "Auto Stop", new of the maximum number	SD Card © USB1 upon power off or restar Auto Stop entries will not be added of entries reached. Or do	t. @ Don't If cor when the ri	show 🔘 Displays the	e value 0	or state 0

4.10.2.2.1 Public Window Position

The attribute of "Public Window Position" can be set "Below Basic Window" or "Above Basic Window". The option "Below Basic Window" is selected by default.

Public Window Position:	Below Basic Windows 👻
	Below Basic Windows
	Above Basic Windows

The effect of the "Below Basic Window" is shown as below.

This is the Basic Window.

The effect of the "Above Basic Window" is shown as below.

This is the Basic Window.

4.10.2.2.2 Performance

If you check the option "Disable Vector Font Borderline Blurring Processing", the display effect of the fonts will have some burr. It does not look smooth and good, but the display speed is faster. You can use this option to get higher display speed when less display quality is demanded.

Note: the speed difference is not obvious for the hardware which the version is above A8. So you need not check this option generally.

If you don't check the option "Disable Vector Font Borderline Blurring Processing", the display effect is shown as below.

Static Text

If you check the option "Disable Vector Font Borderline Blurring Processing", the display effect is shown as below.

Static Text

4.10.2.2.3 Window Default Settings

There are three options for the "Window Default Settings". They are "Slow In", "Slow Out" and "Switch Window by Horizontal Sliding". The three options are valid only for the capacitive screen.

Window Default Settings	
Slow In	
Slow Out	
Switch Window by Horizontal Sliding	
Note: Only for capacitive screen.	

"Slow In" and "Slow Out"

After the "Slow In" or "Slow Out" is checked, the new window will have a fade effect. You can find the "Fade in" option is checked by default in the "Basic" property TAB of the new window. Another window effect is "Fade out". The fade effect is only valid for the capacitive HMI device.

asic Background and	Border Action and	Function Timer	Timing Data Transmission
Window Description: B	ase Window(2)		Print Page
Insert at: 💿 Blank 📀	Last 🔘 User-define	d 🔘 Insert wind	ow serial num(The No. of all the windows after will be added by 1)
Window No. (By Type):		2 \$	Window number (used for window switching)2
Width: 800 🗘 🔰	Height: 480 🤤		Window Type: Base Window 🔹
Window Orientation: @	Horizontal 🛛 🔘 Ve	rtical	
Popup Window			Safety
			User Level: 0:
Overlapped Window			Window Effect
	None	•	☑ Fade in
	None	•	Fade out
Middle Layer	None		

Note:

The fade effect will produce an effect on the speed of switching windows obviously. The economic HMI models are not suggested to be used.

Switch Window by Horizontal Sliding

Window Default Settings
Slow In
Slow Out
Switch Window by Horizontal Sliding

After the "Switch Window by Horizontal Sliding" option is checked, the windows can be switched by horizontal sliding action. This function is only supported by the capacitive HMI devices.

You can set the operation for this function in the "Action and Function" property TAB of the basic window.

dify Wi	indow				
Basic	Background and	d Border Ac	tion and Function	Timer Timing Data Transmission	
Actio	n/Condition	Execute	Operatio	on Target	
	to the left	Switch Pag			
Slide	to the right	Switch Pag	ge Previous	Window	
					Add
					Move Up
					Move Down
					Delete
					Edit
					Luit
Help	>				OK Cancel

If you click the "Use Swiping Around" option, then the function of horizontal sliding will take effect, the function is only valid for the capacitive HMI.

If you click the "Disable Ipomoea return to the main window" option, then the function of "Ipomoea return to the main window" is disabled, the function is enabled by default, you can check the option if you do not need it. It can be controlled by the special register "SRB10012=1", too.

Operate Log Save Settings:

Operate Log Save Settings:
◯ Unsave . ● HMI . ◯ SD Card . ◯ USB1
Power-off sustain.
Subdirectory Name: LOG
Save CSV File meanwhile
Maximum Saving Limit:(No Limit) 0 🛬 Day
On Cache Full: Delete Old Records 🔻
✓ When free space is less than: 512KB
Notify Register: LB0
🔽 Clear Record Register:

This settings is the global settings, the operating steps can be recorded without setting the operate log control, the default is ''unsave'', you can choose to save to the local HMI, SD card, USB1. The address of storing operate log is retained after power down, you can define the subdirectory name by yourself. The files saved is Db files.

Save CSV File meanwhile: The operate log will be saved as Db file and CSV file at the same time. The CSV file can be opened directly and viewed with Excel.

Maximum Saving Limit: there is no limit when it is 0, you can click the option "Delete Old Records" when the cache is full, the new operate log will continue recording, "Discard New Records", it will not record the operate log any more if the cache is full.

You can set the "Notify Register" when the cache is full, as shown below, LB0 is set to 1 when the free space is less than 512KB.

V When free spa	ce is less	than: 512KB	•
Notify Register:	LB0		

You can set a flag bit to clear the historic records of the operate log.

4.10.2.3 Language Settings

User Pri	vilege	Task Schedule	Data Samplin	ng	PLC Control	Alar	m And Event
Global Se	ttings	Extended Settings	Laguange Setti	ngs	Favorite Font Tem	plates	User Level
anguage Language	Count:	2	- De	efault I Imr	Font port from Favorite For	nt Templ	ates.(I)
No.	Langu				or Font () Graphic Fo		
1		h (United States)		ont:	Microsoft Sans Serif	_	
2		e (Simplified, PRC)					
		(empinee, rite)	Si	ze:	16 • B <i>I</i>	*	
Default La	nguage:			Us	e Current Font for All	Languag	ges(F)
	h (United	Ctatas)	-				
Switch lan SRW1005	iguage Ni 0. When t	O, by using system regi the project is download vill be restored.					

4.10.2.3.1 Language

• Language Count

You can select the number of the languages in the list of the "Language Count" option. Then you set the languages in the table. The languages should be different in the table. You can modify the languages by the lists in the table.

User Privi	User Privilege Task Schedule Data		Data Sa	mpling	PLC Control	Aları	m And Event	
Global Settings Extended Settings Laguan				Settings	Favorite Font Tem	plates	User Level	
anguage				Default F	ont			
Language	Count:	8	•	Imp	oort from Favorite Fo	nt Templa	ates.(I)	
No.	Langu	age		C Vecto	or Font 🧕 Graphic F	ont		
1	Englis	h (United States)		Font:	Arial 🔻			
2	Chines	e (Simplified, PRC)		Size:	16 • B <i>I</i>	~ ?		
3	Turkis	h (Turkey)		5120.				
4	Frenc	h (France)	*					
5	Frenc	h (France)			*			
6		(Italy)			Arial			
7		sh (Spain) guese (Portugal)			Allai			
8	-	an (Germany)						
SRW10050	Thai (Bulga Catala Czech Danisl Greek Finnisl Hebre Hunga (United wage No.	umese (Vietnam) Thailand) rian (Bulgaria) un (Catalan) (Czech Republic) h (Denmark) : (Greece) h (Finland) ew (Israel) arian (Hungary) States) O. by using system regi he project is download iill be restored.			rent Font for All	Languag	ies(F)	
Help						OK	Cance	

Default Language

You can select a language from the list as the "Default Language". After downloading the project, the specified default language will be as the display language. You can switch the display language by changing the value of SRW10050. The No.1 language will be displayed when SRW10050 is 0. The No.2 language will be displayed when SRW10050 is 1. The No.3 language will be displayed when SRW10050 is 2. And so on. The display language will be changed to the specified "Default Language" when the project is downloaded again.

4.10.2.3.2 Default Font

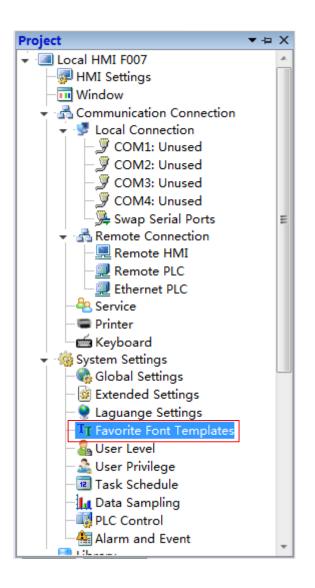
Refer to: Detailed manual/ General functions/ Drawing/ Font settings.

4.10.2.4 Favorite Font Templates

The function is used to save the common font styles as a template. You can use this template when you set the font style.

4.10.2.4.1 Open the "Favorite Font Templates"

You can open the "Favorite Font Templates" settings page in the project tree or by clicking the menu command "Setup/System Settings/Favorite Font Templates".



Set	up Tools Help		
,	HMI settings Communication Settings	•	3 3 4 4 5
	System Settings	•	🍖 Global Settings
55	Options		 Extended Properties Language Settings
		_	TT Favorite Font Templates
			🔒 User Level
			Task Schedule
			🚹 Data Sampling
			PLC Control
			🍇 Alarm And Event

4.10.2.4.2 Add Font Templates

First, click the button "Add(A)". Then give a name for the current font template in the "Description". The font style need to be set, referred to: <u>Detailed manual/General</u> <u>functions/Drawing/Font settings</u>. At last, click the button "OK" to confirm and save the settings

User	Privilege	Task Schedule	Data Sampling	PLC Control	Aları	m And Event
Global	Settings	Extended Settings	Laguange Settings	Favorite Font Ten	nplates	User Leve
ont Ter	nplates List		Font Te	mplates Settings		2
No.	Template	Description	Descrip	otion: Font1		
1	Font1(Gra	phic Arial 16)	○ Vect	or Font 🛛 🖲 Gra	aphic Fon	t
			Font:	Arial		_
			Size:	16 • B		
				Arial		
				3		
		Add(A) De	lete(D)			

4.10.2.4.3 Use a font template

	For example, a	a font template i	s used in	the	property	settings	of a	Static	Text
con	nponent.								

General Display			Z <u>A</u> •
Language Independent	Position Fixed P	oint: X: 0 \$ Y: 0 \$	
O Use Text Library	Import fr	om Favorite Font Templates.	
	Please	select Font Template:	Edit Template(E)
Ose Labels	No.	Template Description	
Tag Contents	1	Font1(Graphic Arial 16)	
Import from Favorite Font Templates.(I) Vector Font Graphic Font Font: Microsoft Sans Serif Size: 16 B	Previ	ew	
Multi-line Alignment		Arial	
Copy Current Properties to All Languages			OK Cancel
Help Description:		ОК Са	ancel

First, click the button "Import from Favorite Font Templates" in the property window of a Static Text component to open the "Import from Favorite Font Templates" dialog. Then select the required font template and click the OK button. The result is shown as below.

	·															·	
·	·	÷	F	ρ	n	n	р	12	af	F	2	·	·	·	·	·	·
·	·	·		Y		4	М					·	·	·	·	·	•
·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·
·	•	·	·	·	·	·	·	·	·	·	·	·	·	·	·	•	•
·	·	·	·	·	·	·	•	·	·	·	·	·	·	·	·	·	•
·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·
·	·	·	·	·	·	·	•	·	·	·	·	·	·	·	·	·	•

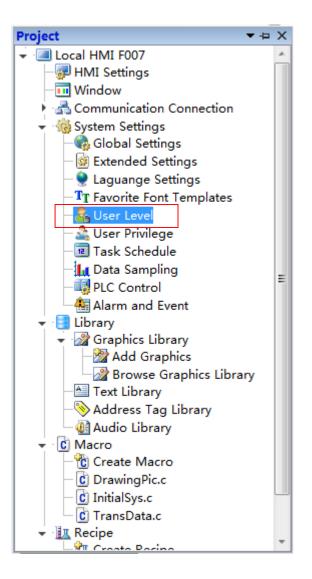
4.10.2.5 User Level

You can set the levels and the level passwords for the users in the "User Level" settings page. The settings of the "User Level" are valid in the whole HMI system. The higher the level is, the greater the range which can be operated is. The higher user level

can access the screen windows which the lower user level can access. But it is not prohibited that the lower user level accesses the higher user level.

4.10.2.5.1 Open

The "User Level" settings page can be opened by double-clicking the "User Level" option in the System Settings of the project tree or click the menu command "Setup/ System Settings /User Level".



Setu	u	р	1	To	00	Is		ł	łe	lp												
P	HMI settings Communication Settings									g	5					•		¶_ □ □ □ □ □ □ □ □ □ □				
		Sy	/st	te	m	S	et	ti	ng	ļs										۲		Global Settings
55		0	pt	ic	n	5	_												_	_	Si Contra	Extended Properties Language Settings Favorite Font Templates
				1	:				:		:	10.000	:	:	•		•	:	:	100	8	User Level
		 		1	: ::		: :	1	832 100	•	•	2	•	•	3 8	12	•	•	1	13	12	Task Schedule
					:	•	•		:	•	• • •		• • •	•	10.00		•	•	• • •		La	Data Sampling
				1	:	ŝ			:	Ľ.		100	:	:	:	1	:	:	;			PLC Control
. : :		: :	:		:	•	•		:	:	•		•	•			•	:			4	Alarm And Event

4.10.2.5.2 Edit

The "User Level" settings page is shown as below.

User Privilege	Task Schedule	Data Sampling	PLC Control	Aları	m And Event
Global Settings	Extended Settings	Laguange Settings	Favorite Font Te	mplates	User Level
Jser Level Count:	3 •				
Password Level	Predefined Password	Grade Description			
OLevel Password	None				
1Level Password	888888	Level1			
2Level Password	888888	Level2			

You can set the number of the user level in the "User Level Count" by using the list. And you can edit the information of every user level in the table, such as the Predefined Password and the Grade Description.

4.10.2.5.3 Use

For example, set the user level function for the "Bit Switch" component.

Open the property window of the "Bit Switch" component and select the option "Conditional" in the property TAB of "Control Settings". Check the option "Level User" and select the level from the list. It is shown as below.

vitch Indicator Light Lable Graphics Dynamic Graphics	Control Settings Display
Activation Settings Always Indicating Invalid Mark Conditional Hide when condition not meet. Non-operable when the part is hidden. Automatic pop-up password window. Level User Min Level: Privilege User Logic Control	Security Settings Minimum Press Time: 0 (X0.1S) Require confirmation prior to execution Waiting Time 100 (X0.1S) Records Operation Minimum Operation Interval: 0 (X0.1S) Notification Settings Before Writing After Writing Notify Bit Address:
	🕅 Notify Byte Address:
Audio	
Audio	Trigger Macro:
	Trigger Macro:

Run the project.A "User level login" window will pop up when you click the component. It is shown as below.You can operate the component only by entering the correct password in the "User level login" window.

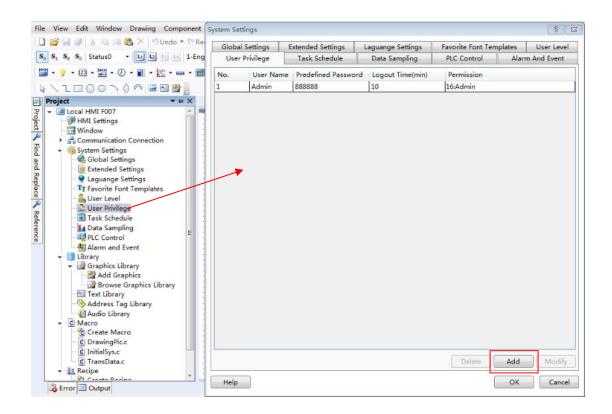


4.10.2.6 User Privilege

The "User Privilege" is used to provide security for the user operations. The different privilege is given when the user enter the different user name and the corresponding password.

4.10.2.6.1 Add

The "User Privilege" settings page can be opened by double-clicking the "User Privilege" option in the System Settings of the project tree or click the menu command "Setup/ System Settings /User Privilege".



After clicking the button "Add", the "User Privilege Settings" dialog will pop up.

User Name:	user2	Initial Password 888888	
Logout Time:	10 🔷 n	nin(0 indicates never logout)	
Check	Permission No.	Description	
	1	Permission1	-
v	2	Permission2	
	3		
	4		
	5		
	6		
	7		
	8		
	9		
	10		
	11		
	12		
	13		
	14		
	15		_
	16	Admin	
	17		
	18		
	19		
	20		
	21		
	22		

4.10.2.6.2 Set

You can set different User names, Initial Password and Logout Time for different privileges in the "User Privilege Settings" dialog. The login state of the current user will exit if the login time is more than the Logoff Time.

User Name:	user2	Initial Password	888888	
Logout Time:	10 🖍 n	nin(0 indicates never logout)		-
Check	Permission No.	Description	-	
1	1	Permission1		
1	2	Permission2		
	3			
	4			
	5			

4.10.2.6.3 Use

You can use the "User Privilege" in many situations, such as the control settings, the window switch, the value input, and so on.

witch Indicator Light Lable Graph	ics Dynamic Graphics	Control Settings Display
Activation Settings Always Indicating Invalid M. Conditional Hide when condition Non-operable when th Level User Privilege User Privilege: 1:Permis: Logic Control	not meet. e part is hidden.	Security Settings Minimum Press Time: 0 (X0.15) Require confirmation prior to execution Waiting Time 100 (X0.15) Records Operation Minimum Operation Interval: 0 (X0.15) Notification Settings Before Writing After Writing Notify Bit Address: Notify Byte Address:
Audio		Trigger Macro:
Keyboard		
Reyboard		

4.10.2.6.4 Call

You can find some windows which the system provides in the project tree, such as the User privilege window, the User login window, and so on.These windows make it easy to use for the users.

Window	• 4 ×
Power-on Screen	
- Public Window	
- Drop-down window	
👻 🥅 Basic Window	
- 🚰 Create Basic Window	
B_1:Basic Window(1)	
B_2:Base Window(2)	
B_29001:User privilege(29001)	7
B_29002:User login(29002)	
B_29003:Add user privilege(29003)	
B_29004:Delete user privilege(29004)	
B_29005:Change password(29005)	
B_29006:Setup privilege(29006)	
Keyboard Window	
System Window	
and a later relation and the second	

4.10.2.7 Task Schedule

The "Task Schedule" is used to execute some operations when time is up.

You can open the "Task Schedule" property TAB by clicking the menu command "Setup/ System Settings/Task Schedule". It is shown as below.

Global Settings	Extende	ed Settings	Laguange	Settings F	avorite Font T	emplates	User Level
User Privilege		c Schedule	Data Sa		g PLC Control Alarm A		n And Event
escription	Enable	Mode	Week	Start Time	End Time	Bit Set	Byte Set
				New(N)	Delete(D)	Clear(C)	Edit(E)

After click the button "New(N)", the "Task Schedule Details" window pop up. It is shown as below.

HTP Designer	^r Configuration	Software	User	Manual
---------------------	----------------------------	----------	------	--------

ask Schedule Details	
Description Schedule-1	
Enable Control	
Mode Week Day Every Other Day HMI Address Start Time Hour Minute Second Week Day Sun Mon Tue Wed Thu Fri Sat	Execution upon Start Execute upon power up Bit Setting
End Time	Word Setting
	Trigger Macro:
	Popup Window
	Use Buzzer:
	Play Audio
	OK Cancel

4.10.2.7.1 Description

You can give a name for the task schedule in the "Description"edit box. This description can facilitate the identification in programming.

4.10.2.7.2 Enable Control

After you check the option "Enable Control", you can select a bit register. When the bit is ON, this Task Scheduler is not allowed to use.

4.10.2.7.3 Mode

• Week Day

The start time and the end time are within a week.

• Every Other Day

The start time and the end time can execute in the adjacent two weeks. The Week Day of the start time is only selected one. You must set the end time.

Mode 🛛 🔘 Week Day 💿 Every Other Day 🔘 HMI Address
Start Time
6 Hour 0 Minute 0 Second
Week Day 💿 Sun 🔘 Mon 🔘 Tue 🔘 Wed 🔘 Thu 🔘 Fri
Sat
End Time
Set End Time
21 Hour 0 Minute 0 Second
Week Day 💿 Sun 🔘 Mon 🔘 Tue 🔘 Wed 🔘 Thu 🔘 Fri 🔘 Sat

HMI Address

Use word registers to set the mode.

Mode 🔘	Week Day	O Ev	ery Other Day	HMI Address
Related to	address va	riable		
Start Addre	ss (9 Regist	ters)	LW0	
Other E Start Ti Start W 7 week End Tin Finish V)ay me:Hour:LV 'eek: LW4 days startin ne:Hour:LW Veek: LW	V1 Mir Bit0~ Ig Froi 5 Min 8 Bit0	d Week Day, = nute:LW2 Secor Bit6 are corres m Sunday To S ute:LW6 Second ~Bit6 are corre m Sunday To S	nd:LW3 sponding to aturday. d:LW7 sponding to

4.10.2.7.4 Execution upon Start and Execute upon End

Only an "Execution upon Start" setting page is displayed by default. The "Execute upon End" setting page is visible if you check the option "Set End Time". They are shown as below.

Execute upon End	Execution upon Start
Execution upon Start	Execute upon End
Execute upon power up	Execute Ending Operation upon Powe
Word Setting	Uvrd Setting
Trigger Macro:	Trigger Macro:
Popup Window	🔲 Popup Window
Use Buzzer:	Use Buzzer:
🔲 Play Audio	🔲 Play Audio

The operations need to be executed are listed in the "Execution upon Start" setting page and the "Execute upon End" setting page.

• Execute upon power up

If you check the option "Execute upon power up", the operations checked in the "Execution upon Start" setting page will be executed in the time range (start time - end time). It will stop outside the time range.

• Execute Ending Operation upon Power Off

If you check the option "Execute Ending Operation upon Power Off", the operations checked in the "Execute upon End" setting page will be executed in the time range (start time - end time). It will stop outside the time range.

• Bit Setting

This operation is to set a bit register ON or OFF.

• Word Setting

This operation is to change the value of a word register.

• Trigger Macro

This operation is totrigger a Macro.

• Popup Window

This operation is topop up a window.

Use Buzzer

This operation is to make the internal buzzer of HMI to ring.

Play Audio

This operation is to play an audio.

4.10.2.8 Data Sampling

The "Data Sampling" is the data source of these components such as the "Trend Curve", the "Historical Data Display", and so on. You must create the "Data Sampling" before using these components. You can open the "Data Sampling" property TAB by clicking the menu command "Setup/ System Settings/Data sampling". It is shown as below.

Glo	bal Settings	Extende	ed Settings	Laguang	e Settings	Favorite I	Font Ten	plates	User Leve	el
U	ser Privilege	Task	Schedule	Data S	Sampling	PLC Cor	ntrol	Alar	m And Event	
No.	Description		Address	Sam	pling Cycle/	Trigger Ac	Pause A	ddress	Clear Addr	F
	Temperature_H	Humidity	LW0	Cycli	c 1S					0
					New	Dele		Clear	Set	

4.10.2.8.1 Property Setting

After clicking the button "New" in the "Data Sampling" property TAB, the "Data Sampling Property" dialog will pop up. It is shown as below.

operty Setting 이	Channel Setting 🕖		
Description:		•	Sampling Mode
Data Sampling Sta	rting Address		Cyclic Triggered
Use Address T	ag		Sampling Cycle 1 🗘 X s 💌
Deivce: LOCAL:[L	ocal Register]	•	
Address Type: L Address: 0 Format(Range) D	W -	System Register	
🔲 Address Index			Data Record ● Unsave ● HMI ● SD Card ● USB1 Unsave: Data will lost upon power off or restart.
Control Setting	C	hannel Setting	Max Items 1000 🔹 🗌 Auto Stop
Pause Control			If is "Auto Stop", new entries will not be added when the maximum number of entries reached. Or delete old entries and add new entries.
Clear Control			
Execute on De	signated Window Openr	ed	

Description

The "Description" is used as the name of the "Data Sampling". It is a required the attribute. If it is null, there will be a red exclamation mark to indicate that a name is needed here. The "Description" can be a text which is easy to understand, such as "Level of Tank 1", "Temperature of Main Motor", and so on.

• Data Sampling Starting Address

A word register is needed to specify as the start address of the data sampling here. It is can be an internal address of the HMI and the register address of the controller which is connected to the HMI.

Control Setting

Three attributes of the Control Setting are optional. They are not be checked by default. You can check or not check them according to the actual needs.

> Pause Control

If the "Pause Control" is checked, you can set a bit address to control the data sampling. When this bit address is ON, the data sampling is paused. When it is OFF, the data sampling will continue.

> Clear Control

If the "Clear Control" is checked, you can set a bit address to clear the sampling data. When this bit address is ON, all the sampling data in the memory is cleared.

> Execute on Designated Window Opened

After checking this attribute, you can specify a window when the window is set to open, the above "Pause control" and "clear control" to be effective.

If the "Execute on Designated Window Opened" is checked, you can specify a window. When this window is opened, the settings of "Pause Control" and "Clear Control" are valid.

• Sampling Mode

The Sampling mode can be "Cyclic" or "Triggered". The default is "Cyclic".

> Cyclic

The unit of the Sampling Cycle can be "s" or "0.1 s". The default is 1 s.

> Triggered

If you select the "Triggered" option, the data sampling will be done according to the "Trigger Condition". The Trigger Mode includes "Bit" and "Word". The "Address" is needed to specify according to the Trigger Mode. The "Trigger Condition" of Bit Trigger Mode can be "OFF \rightarrow ON", "ON \rightarrow OFF" or "OFF \leftrightarrow ON".For WordTrigger Condition, you can refer to:<u>Detailed manual/General functions/Drawing/Logic Control</u>.

Property Setting 🥹	Channel Setting 🥹		
Description: Data Sampling Sta Use Address Deivce: LOCAL:[I Address Type: L Address: 0	ag .ocal Register]	• System Register	Sampling Mode © Cyclic Address: Trigger Mode: © Bit Trigger Condition: ON<->OFF ON->OFF OFF->ON
Control Setting Pause Control	d	nannel Setting	Data Record © Unsave O HMI O SD Card O USB1 Unsave: Data will lost upon power off or restart. Max Items 100 O Auto Stop If is "Auto Stop", new entries will not be added when the maximum number of entries reached. Or delete old entries and add new entries.
	signated Window Openn		

• Data Record

You can save the sampling data to the HMI or other peripherals. The default is "Unsave". That is, the sampling data is not saved.

> Unsave

When you select "Unsave", there will be a "Max Items" setting for the memory occupation. The default is 1000. The maximum is 99,999. The "Auto Stop" is not checked by fault. If the "Auto Stop" is checked, the new items will not be added when the maximum number of items reached. Or delete the oldest items and add the new items. It is shown as below.

Data Record
Unsave: Data will lost upon power off or restart.
Max Items 1000 🚔 🔲 Auto Stop
If is "Auto Stop", new entries will not be added when the maximum number of entries reached. Or delete old entries and add new entries.

Note:

All the sampled data will be lost if you select "Unsave". After powering on, you need to sample the data again.

≻ HMI

When you select "HMI" for the Data Record, the "Subdirectory Name" is required.

Data Record
◯ Unsave 💿 HMI ◯ SD Card ◯ USB1
Power-off sustain.
Subdirectory Name: SAMPLE
Maximum Saving Limit:(No Limit) 0 🚔 Day
On Cache Full: Delete Old Records 🔻
When free space is less than: 128KB
Clear Record Register:

The "Maximum Saving Limit" option is set "0" Day by default. That means that there is no limit to save. However, there is a limit because of the limited capacity of the HMI Flash. It is suggested that the "Maximum Saving Limit" option is set several days when you select HMI to save data, such as 15 days, 30 days, and so on.

The default action is "Delete Old Records" when the Flash memory of the HMI is full. This is a cycle record mode. You can also select "Discard New Records" option. It is a fixed-saving mode which the new records are no longer saved when the Flash memory is full.

Data Record
🔘 Unsave 💿 HMI 🔘 SD Card 🔘 USB1
Power-off sustain.
Subdirectory Name: SAMPLE
Maximum Saving Limit:(No Limit) 0 🚔 Day
On Cache Full: Delete Old Records 🔻
When free sp Delete Old Records
Clear Record Register:

If you check the option "When free space is less than", the action of "Notify Register" will be done when the free space is less than the specified capacity. The capacity range is 16KB ~ 2MB. You can set a bit register to notify. The bit register will be ON when the free Flash capacity is less than the specified.

If you check the option "Clear Record Register", you can specify a "bit register". When the "bit Register" is ON, all the saved history records will be cleared.

For example, you want to save the data record to the "SAMPLE" folder in the HMI. The bit register LB0 will be ON to indicate insufficient space when thefree space is less than 128KB. All saved history records will be deleted when the bit register LB1 is set ON.The settings are shown as below.

> SD Card and USB1

You can choose to save the data records to SD card or USB disk. The settings are referred to the "HMI".

4.10.2.8.2 Channel Setting

The "Channel Settings" property TAB is shown as below.

roperty	y Setting	Channel Setting 🥥				
Chan	Address	Туре	Word Count	Number	Notes	
						Samples Each Time:
						Add
lease	add at lea	ist one channel informatic	on.			Delete

There will be a red exclamation mark here due to no channel.

• Add channel

After clicking the button "Add", an item will be added. It is shown as below.

operty Setti	operty g Channe	el Setting				8
Chan Addr	and the second se	Туре	Word Count	Number	Notes	
L LWO		16-bit Unsigned 🔹	1	1		
						Samples Each Time:
						Add

The "Address" refers to the start address of the data record. The "Type" of data record can be "16-bit Unsigned", "16-bit Signed", "32-bit Unsigned", "32-bit Signed", "16-bit BCD", "32-bit BCD", "Single-precision Floating-point Number" or "Character String". The maximum memory occupied is 64 word registers for the type of "Character String".

ropert	ty Setting Ch	annel Setting				
Chan	Address	Туре	Word Count	Number	Notes	
1	LW0	16-bit Unsigned 🔻	1	1		
		16-bit Unsigned 16-bit Signed 32-bit Unsigned 32-bit BCD 32-bit BCD Single-precision Flo Character String	pating-point Nun	nber		Samples Each Time:

You can create many channels by clicking the button "Add". The addresses of the data record are continuous and specified automatically. It is shown as below.

255 Type 16-bit Unsigned 32-bit Unsigned Single-precision	• 2	Number 1 2 2	THOLES	
32-bit Unsigned	• 2	2		
		2		
				Samples Each Time:
				1 💌
				Add

• Samples Each Time

The default value of "Samples Each Time" is 1. That means that one data is sampled each time. When this parameter is set a value larger than 1, the addresses which each channel occupies will multiply. For example, the option "Samples Each Time" is set 3. Then the number of address occupied by each channel is shown as below.

roper	rty Setting Chan	inel Setting					
Chan	Address	Туре	Word Count	Number	Notes		
1	LWO	16-bit Unsigned 🔻	1	3			
2	LW3	32-bit Unsigned 🔻	2	6			
3	LW9	Single-precision 💌					
						Samples Each Time: 3 🚭	
						Add	
						Add Delete	

In this example, LW0 ~ LW2 is occupied by the first channel, LW3 ~ LW8 is occupied by the second channel, and LW9 ~ LW14 is occupied by the third channel. The number of addresses is three times as the number which the "Samples Each Time" is set 1.

• Delete channel

You can delete the selected channel by clicking the button "Delete ".

Notes

In the "Notes" column of each channel, you can give a description. The "Notes" makes it easy to read and it will display in the "Historical Data" table. For example, the first channel is "Liquid level", the second channel is "Pressure", and the third channel is "Flow". It is shown as below.

Data S	ampling P	roperty				-?
ropert	ty Setting	Channel Setting				
Chan	Address	Туре	Word Count	Number	Notes	
1	LWO	16-bit Unsign	ed 🔻 1	1	Liquid level	
2	LW1	32-bit Unsign	ed 🔻 2	2	Pressure	
3	LW3	Single-precision	on 🔻 2	2	Flow	
						Samples Each Time:
						1
						Add
						Delete
11.1						
Help						OK Cance

• Sample Using Serial Address

You can set the non-serial address sampling channel if the option is not checked.

Property Setting 🥥 Non-Serial	Address Channel 🥥	
escription:	0	Sampling Mode
采样使用连续地址		Ocyclic Sampling Cycle 1 x s ▼
Control Setting	Channel Setting	Data Record © Unsave © HMI © SD Card © USB1 Unsave: Data will lost upon power off or restart. Max Items 1000 © Auto Stop If is "Auto Stop", new entries will not be added when the maximum number of entries reached. Or delete old entries and add new entries.
Clear Control		
	dow Openned	

• Non-Serial Address Channel

Click the "Non-Serial Address Channel" button, then the "Non-Serial Address Channel" page will display.

Property	Setting 🥹	Non-Serial Address Channel 🥹				
amples 8	Each Time:	1				Add Word Channe
Channel	Address	Туре	Word Count	Number of words been used	Notes	
		ne channel information.				
lease ad	d at least o	ne channel information				

Add Word Channel:

Click the "Add Word Channel" button, there will be a entry of data sampling, then you can click the address button to edit the address, then you can choose device and address type. The length of the sampling points can be set by the option of "Samples Each Time". You can click the "Add Word Channel" again, continue to add a channel, the new channel address can be defined by yourself, and it does not need to continue with the last channel address. As shown in the following figure:

Property	setting No					
Samples I	Each Time:	5				
Channel	Address		Туре	Word Count	Number of words been used	Notes
1	LW0		16-bit Unsigned	• 1	1	
2	RW5		Single-precision Floating-point Nu	imber 🔻 2	2	
3	SRW3		32-bit Signed	↓ 2	2	

It can be seen that the sampling addresses of multiple channels could be non-continuous addresses.

Samples Each Time

The default is 1, which means 1 point per sample. When the value is set more than 1, the sampling points of each channel is changed to the set value.

4.10.2.9 PLC Control

The "PLC Control" attribute is used to execute an action according to the change of the address of the local HMI or the controller connected to the local HMI. This is a global Attribute.That is, the action of the "PLC Control" will be executed regardless of which one the current screen window is, as long as the conditions are met.

After clicking the menu command "Setup / System Settings / PLC Control", the "PLC Control" settings page will be opened. It is shown as below.

Glol	bal Settings	Extended Settings	Lagua	inge Settings	Favorite Font Ter	mplates	User Leve
	er Privilege	Task Schedule	and the second s	a Sampling	PLC Control		m And Event
10.	Address		Туре	Content			
				Add	Delete	Clear	Edit

Click the button "Add" in the "PLC Control" settings page, the "PLC Control Details" settings dialog will pop up. It is shown as below.

Control Type: Switch Basic Window 👻	Property
Valid on Window Opened Trigger Address Use Address Tag Deivce: LOCAL:[Local Register] Address Type: LW Address: 0 System Register Format(Range) DDDDDD(0~Occupy: 1 → Word Data Type: 16-bit Unsignt ▼ Address Index	 Turn on Back Light Clear Address on Switched Window
	OK

The "Control Type" refers to the action of the "PLC Control". It includes "Switch Basic Window", "Report Current Window No.", "Back Light Control", "Execute Macro Instruction", "Audio Control", "Sheet Print", and "Force Buzzer off".

PLC Control Details			×
Valid on Wind Re Trigger Address Ba Use Address Au Deivce: LOCALI Sh Fo Address Type: LW Address: 0	vitch Basic Window vitch Basic Window port Current Window No. ick Light Control ecute Macro Instruction ido Control eet Print rce Buzzer off System Register DDDD(0~Occupy: 1 • Word Data Type: 16-bit Unsigne •	Property Turn on Back Light Clear Address on Switched Window	
		ОК	Cancel

4.10.2.9.1 Switch Basic Window

You can switch the basic window of the HMI by changing the value of a register.

PLC Control Details			23
Control Type: Switch Basic Window Valid on Window Opened Trigger Address Use Address Tag Deivce: LOCAL:[Local Register] Address Type: LW Address: 0 Syst Format(Range) DDDDDDD(0~Occupy: 1 Data Type: 16-b Address Index	• em Register • Word	Property Turn on Back Light Clear Address on Switched Window	
		ОК	ancel

• Valid on Window Opened

The "Valid on Window Opened" is a public attribute of the "PLC Control". By default, it is not checked. After checking this attribute, you can select a base window. The action defined in the "PLC control" will be executed when the specified base window is switched to open.

• Trigger Address

You can select a word register to trigger the "Switch Basic Window" action. For example, if the "Trigger Address" is set LW100, the HMI will display the Basic Window(1) when the value of LW100 is 1, and the HMI will automatically switch to the Basic Window(20) when the value of LW100 is 20. And so on.

Property

There are two optional attributes in the "Property"box. They are not checked by default.

♦ Turn on Back Light

If you check the option "Turn on Back Light", the back light will be turned on automatically when the action of "Switch Basic Window" is executed and the back light is closed.

♦ Clear Address on Switched Window

If you check the option "Clear Address on Switched Window", the value of the word register will be cleared to zero automatically after the action of "Switch Basic Window" is finished.

After click the "OK" button, the "PLC Control" action will be added in the "PLC Control" settings page.

ystem S	ettings						? ×
Glob	al Settings	Extended Settings	Lagua	nge Settings	Favorite Font Te	mplates	User Level
Use	er Privilege	Task Schedule		a Sampling	PLC Control	Alar	m And Event
NO.	Address		Туре	Content			
1.	LOCAL:[Loca	l Register]:LW100	Word	Switch Basic V	Vindow		
				Add	Delete	Clear	Edit
Help	p					OK	Cancel

Note:

The "Switch Basic Window" action will be triggered only when the value of the trigger address changes. You can also use a Bit Set component to switch the base window in the HTP Designer software. But the switch basic window action may not be executed if you use the two switch window methods. For example, after you input a value to the trigger address to switch the basic window, you switch another basic window by using the Bit Set component. Then you input the same value to the trigger address to switch the first basic window. But it does not act because the value of the trigger address does not change. To avoid this situation, you should check the option "Clear Address on Switched Window".

4.10.2.9.2 Report Current Window No.

The current window number can be recorded to a register.

PLC Control Details	
Control Type: Report Current Window No. Valid on Window Opened Trigger Address Use Address Tag Deivce: LOCAL:[Local Register]	Property
Address Type: LW Address: 0 System Register Format(Range) DDDDDD(0~Occupy: 1 Word Data Type: 16-bit Unsigne Address Index	
	OK Cancel

• Trigger Address

You can select a word register to trigger the "Report Current Window No." action. For example, if the "Trigger Address" is set LW200, the number of the current basic window will be moved to LW200 when the HMI displays a window. If the HMI device displays the Basic Window (18), then the value of LW200 is equal to 18.

4.10.2.9.3 Back Light Control

You can define a trigger condition to control the state of the back light if you select the "Back Light Control" as the control type.

PLC Control Details	×
Control Type: Back Light Control Valid on Window Opened Trigger Address Use Address Tag Deivce: LOCAL:[Local Register] Bit-index within a Byte Register Address Type: LB Address: 0 System Register Format(Range) DDDDDD(0~ Address Index	Property ● Back Light on ● Back Light off ● Adjust to Lowest Brightness Trigger Condition ● Bit ● Word ● Condition Trigger Mode: OFF->ON ▼ ■ Auto Reset
	OK Cancel

Back Light on

The option "Back Light on" is selected by fault. If this option is selected and the trigger condition is satisfied, the back light will be turned on when the back light is closed or in the lowest lightness.

Back Light off

If the option "Back Light off" is selected and the trigger condition is satisfied, the back light will be turned off.

• Adjust to Lowest Brightness

If the option "Adjust to Lowest Brightness" is selected and the trigger condition is met, the back light of the HMI will be adjusted to the lowest lightness.

• Trigger Address

The "Trigger Address" can be a word or bit register. It depends on the setting of the "Trigger Condition".

• Trigger Condition

You can select "Bit", "Word" or "Condition" for the "Trigger Condition". If you select "Bit" or "Word", the condition is determined by the register which is given in the "Trigger Address". If you select "Condition", the condition needs to be given by the logic control editor box.

Control Type: Ba	ck Light Control •	Property Back Light on Back Light off Adjust to Lowest Brightness Trigger Condition Bit Word Ocondition
		Condition Add Modify Delete

The detailed of "Condition" setting is referred to:<u>Detailed manual/ General functions/</u> <u>Drawing/ Logical Control</u>.

4.10.2.9.4 Execute Macro Instruction

PLC Control Details	
Control Type: Execute Macro Instruction Valid on Window Opened Trigger Address Use Address Tag Deivce: LOCAL:[Local Register] Bit-index within a Byte Register Address Type: LB Address: 0 System Register Format(Range) DDDDDD(0~ Address Index	Property Execute Macro Macro Code Edit Trigger Condition Bit Word Condition Trigger Mode: OFF->ON Auto Reset
	OK

• Execute Macro

You can select a Macro from the list. The selected Macro will be executed when the Trigger Condition is achieved. If you have not created a Macro, there will be a red

exclamation mark to prompt that any one macro has not been established. Click the button "Macro Code", you can open the Edit Macro window.

• Trigger Address

The "Trigger Address" can be a word or bit register. It depends on the setting of the "Trigger Condition".

• Trigger Condition

You can select "Bit", "Word" or "Condition" for the "Trigger Condition". If you select "Bit" or "Word", the condition is determined by the register which is given in the "Trigger Address". If you select "Condition", the condition needs to be given by the logic control editor box.

The detailed of "Condition" setting is referred to:<u>Detailed manual/ General functions/</u> <u>Drawing/ Logical Control</u>.

4.10.2.9.5 Audio Control

You can control the internal buzzer of the HMI or the audio from the "Audio Library" by using the control type of "Audio Control". This function is invalid if the audio output is not supported by the HMI device.

PLC Control Details	
Control Type: Auido Control Valid on Window Opened Trigger Address Use Address Tag Deivce: LOCAL:[Local Register] Bit-index within a Byte Register Address Type: LB Address: 0 System Register Format(Range) DDDDDDD(0~ Address Index	Property Buzzer Buzzer Time: 1 (s) 0 represents buzzer sounds permanently. Use Audio Audio Library (b) Trigger Condition Bit Word Condition Trigger Mode: OFF->ON Auto Reset
	OK Cancel

Buzzer

The option "Buzzer" is selected by default. If it is selected, the internal buzzer of the HMI will ring when the trigger condition is satisfied. The "Buzzer Time" is used to set the time of buzzer ringing. It is 1 second by default. The max value of the "Buzzer Time" is 100 seconds. When the "Buzzer Time" is set "0", the buzzer will continue ringing until the trigger condition is not satisfied.

Use Audio

If the option "Use Audio" is selected, you can select anaudio from the "Audio Library". When the "Trigger condition" is satisfied, the audio will be played.

• Trigger Address

The "Trigger Address" can be a word or bit register. It depends on the setting of the "Trigger Condition".

• Trigger Condition

You can select "Bit", "Word" or "Condition" for the "Trigger Condition". If you select "Bit" or "Word", the condition is determined by the register which is given in the "Trigger Address". If you select "Condition", the condition needs to be given by the logic control editor box.

The detailed of "Condition" setting is referred to:<u>Detailed manual/ General functions/</u> <u>Drawing/ Logical Control</u>.

4.10.2.9.6 Force Buzzer off

You can specify a bit register to force the buzzer off by using the control type of "Force Buzzer off". When the state of the buzzer is ON, it will be forced to OFF if the specified bit register is ON.

PLC Control Details	
Control Type: Force Buzzer off	Property
Valid on Window Opened Trigger Address Use Address Tag	
Deivce: LOCAL:[Local Register]	
🔲 Bit-index within a Byte Register	
Address Type: LB	
Address: 0 System Register	
Format(Range) DDDDDD(0~	
🕅 Address Index	
	OK Cancel

4.10.2.10 Alarm And Event

You can preset the attributes of the alarms or events such as the conditions and contents in the "Alarm And Event" settings page. The "Alarm And Event" settings page can be opened by clicking the menu command "Setup/System Settings/Alarm And Event".

Global Settings	Extended Settings	Laguange Settings	Favorite Fo	ont Templates	User Leve
User Privilege	Task Schedule	Data Sampling	PLC Cont	rol Ala	rm And Event
Group: All[0]	•		Language:	1-English (Un	ited States)
Group ID Urgenc	y Level Trigger Condition	on		Content	
Create	isert Clear Current	Group Delete	Edit	Сору	
Historical Event S	aving Event Count Pri	int			
	AT OCD C. I OUCD				
O Unsave O HI Power-off sustain		1			
	n.	1			
Power-off sustain Subdirectory Na	n.				
Power-off sustain Subdirectory Na Maximum Saving	n. me: EVENT				
Power-off sustain Subdirectory Nat Maximum Saving On Cache Full:	n. me: EVENT g Limit:(No Limit) 0 🚔				
Power-off sustain Subdirectory Nat Maximum Saving On Cache Full:	n. me: EVENT g Limit:(No Limit) 0 🗢 Delete Old Records 🔻				
Power-off sustain Subdirectory Nat Maximum Saving On Cache Full:	n. me: EVENT g Limit:(No Limit) 0 🗢 Delete Old Records 🔹 nce is less than: 128KB				
Power-off sustain Subdirectory Nar Maximum Saving On Cache Full:	n. me: EVENT g Limit:(No Limit) 0 🗢 Delete Old Records 🔹 nce is less than: 128KB				

4.10.2.10.1 Group

The alarms and events can be viewed by groups. The users can customize the groups. Here, the option "Group" can be set any one of "All, 1, 2, 3 …32".

User Privilege	Task Schedule	1			User Leve
	Task Schedule	Data Sampling	PLC Cont	rol Ala	rm And Event
Group: All[0] All[0]	•		Language:	1-English (Un	ited States) 🔹
Group IE 2[0] 3[0] 4[0] 5[0] 6[0] 7[0] 8[0] 9[0] Create 10[0] 11[0] 12[0] Historice 13[0] 14[0] O unsave HM Power-off sustain. Subdirectory Nam Maximum Saving I On Cache Full: De	e: EVENT Limit:(No Limit) 0 e is less than: 128KB	Group Delete (nt	Edit	Copy	

4.10.2.10.2 Language

Global Settings	Extended Settings	Laguange Settings	Favorite Fo	ont Templates	User Leve
User Privilege	Task Schedule	Data Sampling	PLC Cont	rol Aları	m And Even <mark>t</mark>
Group: All[0]	*		Language:	1-English (Unite	ed States)

The alarm content can be displayed in different languages. So you need select a language for the option "Language" to view the alarm content.

4.10.2.10.3 Create and set

After selecting a Group, then click the button "Create", the "Alarm and Event Detailed Setting" window will pop up. It is shown as below.

Global Settings	Extended Settings	Laguange Settings	Favorite Font Temp	alatar I I	User Level				
User Privilege	Task Schedule	Data Sampling	PLC Control		nd Event	• B	I <u>A</u> •	E B ∃	of 0, of 0,
User Privilege Group: 1[0] Group ID Urgenc	Alarm and Even y Leve Group ID: 1 Trigger Cor Condi LWO > sert Ad Iost Description	Data Sampling t Detailed Setting Urgency Le dition 1 d Modify	PLC Control Language: 1-Engli evel: High • Delete	Alarm A		dio Libra Confirm	Buzzer T		10 <u>^</u> (s)
Alarm entry lin		nt Text To: All Languages	1	0	Popup			ir'	

Group ID

If you select "All" for the "Group" in the settings page, the "Group ID" can set any one of 1~32 here. If you select any one of 1~32 for the "Group" in the settings page, the "Group ID" is same to the "Group". It refers to the group of the alarm or event waiting for be set here.

Urgency Level

The "Urgency Level" can be set "High", "Medium" or "Low". You can set it according to the priority level of the alarm or event.

• Trigger Condition

The trigger condition of the alarm or event can be set here by using the button "Add", "Modify" or "Delete". The details can be referred to: <u>Detailed manual/General</u> <u>functions/Address editor/Standard Bit Address Input</u> and <u>Detailed manual/General</u> <u>functions/Address editor/Standard Byte Address Input</u>.

- Text and Record
- Description: Text Lib

You can input the description for the current alarm or event in the edit box here. Or you can check the "Text Lib" and use a text of the Text Lib as the description. The "Text Lib" is referred to:<u>Detailed manual/Libray/Text Library</u>.

Language

You can select a language for the current display language here. If you check the "Text Lib" and use a text in the Text Lib as the description, the content in the edit box will only be viewed and not be edited. It can be viewed in different language by switching the Language.

Text and Record
Description: 🔽 Text Lib. Open 🔹 Open 🔹 Text Lib.
Language: 1-English (United S 🔻 💽
Open
Background Color:

• Insert Watch Address

The display content of the alarm is the contents of the register address, the data type of the address support the 'string' type.

	0: 1 Vrgency Level: High •	
Trigge	er Condition	Audio
(Condition	Trigger Buzzer V Buzzer Timeout 10 (s) Audio Audio Library
	v	Action
	Add Modify Delete	Triggering Confirming Recovery Action
Descr	ind Record iption: Text Lib. Text Lib. age: 1-English (United S •) Save to Text Lib. 1-English (United States)	Macro: Bit Address: Word Address: Popup Window: Print Information to Printer

	h and Event De	etailed Setting	
Group I	ID: 1	B Watch Address Table	23
Trigg	ger Condition	هر	السبيعا
	Condition	B Watch Address Item	Maxabeeree 10 17/10
		Watch Address Name: www	
		Use Address Tag	
	Add	Deivce: LOCAL:[Local Register]	
	Add		
Desc	and Record cription: 🔝 Te uage: 1-Engli	Format(Range) DDDDDD(0~Occupy: 1 Vord	
		Address Index Data Format Data Turon 15. bit Unrigged T	
Сору	/ Current Text	Data Format Data Type: 16-bit Unsigned Integer dig 16-bit Signed 32-bit Signed 32-bit Signed 32-bit Unsigned 32-bit Unsigned	
1.12.53	/ Current Text ackground Co	Data Format Data Type: 16-bit Unsigned Integer dia 16-bit Signed 32-bit Signed 32-bit Unsigned 32-bit Unsigned 16-bit Unsigned 16-bit BCD	

Audio

Audio	
▼ Trigger Buzzer ▼ Buzzer Timeout 10 🔷 (s)	
🛙 Audio 🛛 Audio Library Sleep Away 🕟	

If the option "Trigger Buzzer" is checked, the internal buzzer of HMI will beep when an alarm occurs. If the option "Buzzer Timeout" is checked, you can set the beeping time of the buzzer. If the option "Audio" is checked, you can select an audio from the Audio Library as the sound of the alarm or event.

You can try to hear the audio by Click the button "_____".

Action

There are three kinds of actions according to the status of the alarm or event. They are "Triggering", "Confirming" and "Recovery Action". You can set the actions in different status for the alarm or event by clicking the title of the setting page "Triggering", "Confirming" or "Recovery Action".

Triggering	Confirmin	g Reco	very Action	
✓ Macro:	InitialSys	▼ Maci	ro Code	Edit
📝 Bit Add	ress: 🔘 Ol	N 🖲 OFF		
	LB0			
📝 Word A	ddress:	Value		0
	LW0			
🔽 Popup	Window: [3_2:Base	Window(2)	•
Print In	formation t	o Printer		

The actions of "Triggering" refers to the actions that they will be executed when the alarm or event occurs. The actions of "Confirming" refers to the actions that they will be executed when the alarm or event is acknowledged by manual. The actions of "Recovery Action" refers to the actions that they will be executed when the alarm or event exists.

Macro

Select a Macro to execute as an action.You can also open the Macro Editor by clicking the button "Macro Code" or edit the Macro by clicking the button "Edit".

Bit Address

Set a bit register ON or OFF.

Word Address

Write a value to a specified word register.

Popup Window

Pop up a specified window.

Print Information to Printer

Make the printer to print the corresponding information.

4.10.3Communication Settings

4.10.3.1 Local Connection

The command "Local Connection" in the "Communication Settings" menu is used to set the communication parameters of the COM ports.

Select the corresponding COM port (COM1, COM2, COM3, or COM4) property TAB to set the communication parameters.

COM1 COM2 COM3 COM4 Remote HMI Unused © Connect Device(Master) Provide Service(Slave) Manufacturer: FLEXEM • Device Type: FLEXEM MODBUS • Device Alias: Device1 Pre-set Station No.: Constant • 1 • Broadcast Station: Master Station No.: 1 • Communication Setting Compatible Model Communication Type: RS232 • Baud Rate: 115200 • Data Bit: 8 • Stop Bit: 1 • Parity Bit: None • Reset Advance Instructions Instructions	Remote PLC	Ethernet PLC	Service	Printer	Keyboard
Manufacturer: FLEXEM Device Type: FLEXEM MODBUS Device Alias: pevice1 Pre-set Station No.: Constant I Synchronize Station No. Broadcast Station: Communication Setting Communication Type: RS232 Baud Rate: 115200 Data Bit: 8 Stop Bit: 1 Parity Bit: None Advance	COM1	COM2 C	OM3	COM4	Remote HMI
Device Type: FLEXEM MODBUS Device Alias: pevice1 The -set Station No.: Constant I Synchronize Station No. Broadcast Station: Communication Setting Communication Type: RS232 Baud Rate: 115200 Data Bit: 8 Stop Bit: 1 Parity Bit: None Advance			Device(Master)	O Provide	Service(Slave)
Device Alias: Device1	Manufacture	r: FLEXEM		•	
Pre-set Station No.: Constant I Synchronize Station No. Broadcast Station: Communication Setting Communication Type: RS232 Baud Rate: 115200 Data Bit: 8 Stop Bit: 1 Parity Bit: None Advance	Device Type	e: FLEXEM MODBUS		•	
Broadcast Station: Master Station No.: 1 \$ Communication Setting Compatible Model Communication Type: RS232 • Baud Rate: 115200 • Data Bit: 8 • Stop Bit: 1 • Parity Bit: None • Reset Advance	Device Alia	s: Device1			
Communication Setting Communication Type: RS232 Baud Rate: 115200 Data Bit: 8 Stop Bit: 1 Parity Bit: None Reset Advance	re-set Station No	o.: Constant ▼	1	Synchronize	Station No.
Communication Type: RS232 Baud Rate: 115200 Data Bit: 8 Stop Bit: 1 Parity Bit: None Reset Advance	Broadcast Static	on:	Master Static	on No.: 1	*
	Communication Baud Rate: Data Bit: Stop Bit: Parity Bit: Reset	Type: RS232 115200 8 1 None Advance	FLEXEM M		

4.10.3.1.1 Unused

The option "Unused" is the default. It means the selected COM port is not used to communicate.

4.10.3.1.2 Connect Device (Master)

The option "Connect Device (Master)" needs to be selected when the touch screen is as master device. Then you need to set communication parameters for the corresponding PLC.

Manufacturer

The option "Manufacturer" is used to set the manufacturer of the connected PLC.

Remote PLC	Ethernet P	LC Serv	ice	Printer	Keyboard
COM1	COM2	COM3	COM	4	Remote HMI
Unused	O Co	nnect Device(M	aster)	O Provide	Service(Slave)
Manufacture	r:		-		
Device Type	MODBUS Cor	mpatible	A		
Device Alia	CIENAENIC				
re-set Station No	MITCUPICHI		E	chronize	Station No.
Broadcast Static				1	-
Communication S	DELTA			del	-
Communication	T MEGMEET MIKOM	1		s	
Baud Rate:	KeWei KINCO				
Data Bit:	HCFA				
Stop Bit:	Yaskawa 1	•	*	1	
Parity Bit:	None	•			
Reset	Advar	nce			
Instr	uctions				
Help				_	OK Canc

• Device Type

The Device Type refers to the corresponding type of the connected PLC.

Communication Connect	ion			? 🗙
Remote PLC	Ethernet PLC	Service	Printer	Keyboard
COM1	COM2 C	OM3	COM4	Remote HMI
O Unused	Connect	Device(Master)	O Provide	Service(Slave)
Manufacturer:			•	
Device Type:			•	
Device Alias:	MISTUBISHI FX2N	COMPATIBLE)		
Pre-set Station No.:	Constant 💌	1 🔹	Synchronize	Station No.
Broadcast Station:		Master Statio	n No.: 1	÷
Communication Set	ting	Compatibl	e Model	
Communication T	ype: RS232	•		
Baud Rate:	115200	•		
Data Bit:	8	•		
Stop Bit:	1	•		
Parity Bit:	None	•		
Reset	Advance			
Instruc	tions			
Help				OK Cancel

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Pre-set Station No.

The option "Pre-set Station No." is used to set the PLC station number. You can set it by Constant or Variable.

You can input a fixed station number of the connected PLC by Constant way. It is the default station number for the new address. The station number which is already set will not change if you modify the preset station number. You can use the button "Synchronize Station No." to unify the station number.

You can set the "Pre-set Station No." by variable. It means the preset station number will depend on the value of a variable which you can input by a numeric value input component. The method to input the variable address is referred to:<u>Detailed</u> <u>manual/General functions/Address editor/Standard ByteAddress Input</u>. • Synchronize Station No.

After clicking the button "Synchronize Station No.", the station number will be modified and saved for all addresses of this PLC used in the current project.

- Communication Setting
 - > Communication Type: RS232, RS485-2 and RS485-4 are optional.
 - Baud Rate:

110,300,600,1200,2400,4800,9600,14400,19200,38400,56000,57600,115200 and 187500 are optional.

- > Data Bit: the number 7 and 8 are optional.
- Stop Bit: the number 1 and 2 are optional.
- > Parity Bit: None, Odd andEven are optional.
- > Reset: the default settings will be restored if you click the button "Reset".

> Advance: more communication protocol parameters can be modified if you click the button "Advance". The settings are shown as below.

Es Advanced Communication Se	ettings	×
Timeout And Group Packag	ing Parameters	
Timeout(ms):	300 🚔 Bit Register Interval:	64 🜲
Protocol Timeout1:	30 🜩 Protocol Timeout2:	3 🜲
Word Register Interval:	16 🜩 Max Bit Registers:	128 🜲
Max Word Registers:	60 🚔 Time Interval:	5 🜲
Communication Abnormal -		
Tip Display Time(s):	0 🜩 Retry Count: 10 🔷	
Retry Count Reached:		
Word and Byte Port Order		
16-bit Integer: 21	▼ 32-bit Integer: 4321	•
32-bit Float: 4321	•	
Reset	ОК	Cancel

The parameters in the Advanced Communication Settings should not be modified, unless the professional guidance is given. The optional modification may result in a communication failure or unexpected events occur. You can consult the factory technical staff to modify the advanced parameters based on your needs. In most cases, the default parameters are the best and need not to be changed.

4.10.3.1.3 Provide Service (Slave)

The touch screen is used as the slave device.

Remote PLC	Ethernet PLC	Service	Printer	Keyboard
COM1	COM2 C	OM3	COM4	Remote HMI
Unused	Connect	Device(Master)	Provide	Service(Slave)
Device Typ	e: Barcode		•	
Device Alia	s: Service			
Server Station No	o.: Constant 🔹		1 🜩	
Communication S	-	Compatib Serial Bar	le Model Code Scanner	
Baud Rate:	9600	•		
Data Bit:	8	•		
Stop Bit:	1	•		
Parity Bit:	None	•		
Reset	Advance			
Instr	uctions			

Device Type

The Device Type includes Barcode, SLAVE and Modbus RTU Server. It is shown as below.

Device Type:	Barcode	•
	Barcode	
Device Alias:	SLAVE	
	Modbus RTU Server	
Server Station No.:	Constant •	T A

Device Alias

"Serve" is the default name of the Device Alias.

• Server Station No.

You can set the "Server Station No." by Constant or Variable. It is the station number of the touch screen as a slave device.

Server Station No.:	Constant 🔻	1 😴
(Constant	
	Variable	

> Constant

The user can input a constant as the fixed station number.

> Variable

You can set the "Server Station No." by variable. It means the server station number will depend on the value of a variable which you can input by a numeric value input component. The method to input the variable address is referred to:<u>Detailed manual/General functions/Address editor/Standard ByteAddress Input</u>.

• Communication Setting

Communication Type: RS232, RS485-2 and RS485-4 are optional.

Baud Rate:

110,300,600,1200,2400,4800,9600,14400,19200,38400,56000,57600,115200 and 187500 are optional.

- > Data Bit: the number 7 and 8 are optional.
- Stop Bit: the number 1 and 2 are optional.
- > Parity Bit: None, Odd and Even are optional.
- > Reset: the default settings will be restored if you click the button "Reset".

Advance: more communication protocol parameters can be modified if you click the button "Advance". The settings are shown as below.

	ckaging Parameters	
Timeout(ms): 200 🜩 Bit Register	r Interval: 2
Protocol Timeout	L: 0 🜩 Protocol 1	imeout2: 0
Word Register Interva	l: 2 🗘 Max Bit F	Registers: 32
Max Word Register	s: 64 🗢 Time	Interval: 0
Retry Stress	op	
	rder	
Word and Byte Port O	der	
Word and Byte Port O 16-bit Integer: 21	▼ 32-bit Integ	ger: 4321

The parameters in the Advanced Communication Settings should not be modified. The optional modification may result in a communication failure or unexpected events occur. You can consult the factory technical staff to modify the advanced parameters based on your needs.

4.10.3.2 Remote Connection

The Remote connection contains three connection modes: "Remote HMI", "Remote PLC" and "Ethernet PLC".

4.10.3.2.1 Remote HMI

After click the menu "Setup / Communication Settings / Remote Connection", the "Remote HMI" settings page is opened as the default. It is shown as below.

	nication Conne	ection				-?
Re	emote PLC	Ethernet	PLC	Service	Printer	Keyboard
C	COM1	COM2	CO	M3	COM4	Remote HMI
ID	Device Alias	s IP		Port	Device Type	
Remo	ote HMI can b	e connected vi	a Etherne	t. Using de	vice alias, local HN	1I can easily visit the
		e connected vi of the remote		t. Using de	vice alias, local HN	1I can easily visit the
				t. Using de	vice alias, local HN Add Dele	

For one of the HMI device, anyone of other HMI devices in the same Ethernet network of the LAN is the Remote HMI. For example, there are two HMI: one named HMI1, another one named HMI2. These two HMI devices are connected in an Ethernet network.For HMI1 device, HMI2 is the "remote HMI" of HMI. For HMI2 device, HMI is the "remote HMI" of HMI2.

After clicking the button "Add" in the "Remote HMI" settings page, the "Remote HMI" settings dialog will pop up. It is shown as below.

emote HMI	X
Remote HMI Address:	
Use IP	
Fixed Image: 192.168.0.1 Port No.: Constant 3000 Image: 30000 Image: 3000 Ima	*
Device Type:	-
Device Alias: Alias cannot be null, Default:Device1	
OK Can	cel
	icer

Use IP

You can set the IP address of the remote HMI by Fixed or Variable. The default setting mode is "Fixed". And the default fixed IP address is "192.168.0.1". For example, the IP address of HMI1 is "192.168.0.10" and the IP address of HMI2 is "192.168.0.20". For the project of HMI1, you need set the IP address of the remote HMI "192.168.0.20".

When you set the IP address of the remote HMI by Variable, a word register address needs to be given as the start address. There are 4 word registers which is from the start word register. They are used to save the 4 segments of the IP address. It is shown as below.

Remote HMI		X
Remote HMI Add	ress:	
O Use IP		
Variable	RW0 Port No.: Constant 3000	*
	RW0~RW3: correspond to the 4 segments of IP address	
		_
Device Type:		•
Device Alias:	Alias cannot be null, Default:Device1	
	ОК Сан	ncel

You can input the IP address of the Remote HMI to the4 word registers by the numeric value input component. Then you can access the desired HMI device.

• Port No.

You can set the "Port No." of the remote HMI by Constant or Variable. The default setting mode is "Constant" and the default port number is 3000. You need to set the "Port No." by Variable if you want to change the port number of the remote HMI by a word register. The default port number is suggested usually. It is noted that all the port numbers of the connected HMI devices must be the same. Otherwise, the connection may fail.

• Device Type

The Device Type refers to the type of the remote HMI device which the HMI needs to access.

• Device Alias

The default of the Device Alias is "Device1". It cannot be null. You can set a device alias which is easy to understand, such as "HMI for Machine 3".

Click the button "OK" to confirm the settings. And the "Remote HMI" settings page is shown as below.

	emote PLC	Etherne	t PLC	Servi	ce	Printer	Keyboard
(COM1	COM2	0	OM3	co	DM4	Remote HMI
D	Device Alia	s IP		Port	Devi	се Туре	
	HMI of Dev	ice 3 192.168.	0.20	3000			
				net. Using a	device a	ias, local HN	11 can easily visit
		be connected v of the remote		net. Using a	device a		

Click the button "OK" in the "Remote HMI" settings page to save, and then you can find the remote HMI device in the Device list of the register address. For example, it is shown as below.

	1							
ieneral	Number Format	Keyboard Setting	Font	Graphics	Dynamic Graphics	Control Settings	Display	
		Numeric Display ()		ic Input) Characters Display	Characters Inp	ut	
	Address:							
Use	Address Tag							
Deivce:	LOCAL:[Local Reg	ister]		•				
г	LOCAL:[Local Reg							
		Remote HMI:FE4070	0]					
Addres	RECIPE: recipe re	gister]						
Addres	and the second second	System R	egister					
	(Range) DDDDDD(Wor	9				
			1	-				
Add	ress Index							

After finishing setting the "Remote HMI", the local HMI can access all the registers of the "Remote HMI", including the LW, RW, SRW, LB, SRB and other registers.

If you need to add other remote HMIs, you can add them by referring to the above.

4.10.3.2.2 Remote PLC

The Remote PLC refers to the device which is connected with the remote HMI, including the PLC, the inverter, the servo, the instrument, and so on.

After clicking the menu "Setup / Communication Settings / Remote Connection", the "Remote HMI" settings page is opened as the default. Click the "Remote PLC" tab to open the "remote PLC" settings page. It is shown as below.

	ication Connec	tion					8	2
C	OM1	COM2	C	OM3	CO	M4	Remote HMI	l.
Re	mote PLC	Ethernet	PLC	Serv	ice	Printer	Keyboar	d
ID	Device Alias	IP		Port	COM Po	rt Device T	ype Default	Sta
	te PLC is a devi							bu
acces		registers th	rough th				ocal HMI can r of remote HMI	[by
acces	s to remote PLO	registers th	rough th				r of remote HMI	_

After clicking the button "Add" in the "Remote PLC" settings page, the "Remote PLC" settings dialog will pop up. It is shown as below.

Remote PLC		X
Remote HMI Addre	rss:	
Use IP		
Fixed •	192.168.0.1 Port No.: Constant • 3000 •	
At COM port:	COM1 •	
Manufacturer:	MISTUBISHI Instructions	
Device Type:	MISTUBISHI FX2N COMPAT.	
Device Alias:	Alias cannot be null, Default:Device1	
Default Station	No.: Constant I Synchronize Station No. Advan	nce
		_
	OK Cano	:el

Remote HMI Address

> Use IP

You can set the IP address of the remote HMI by Fixed or Variable. The default setting mode is "Fixed". And the default fixed IP address is "192.168.0.1".

> Port No.

You can set the "Port No." of the remote HMI by Constant or Variable. The default setting mode is "Constant" and the default port number is 3000.

The detailed settings of "Use IP" and "Port No." can be referred to the settings in the "Remote HMI" settings page.

COM

> At COM port

The "At COM port" refers to the number of COM port which the "Remote PLC" device is connected to. The default is COM1. For example, the "At COM port" is set COM2 if the accessed controller is connected to the COM2 port.

> Manufacturer

The "Manufacturer" refers to the manufacturer of the connected "Remote PLC" device.

> Device Type

The Device Type refers to the type of the remote PLC device which is connected to the remote HMI.

Device Alias

The default of the Device Alias is "Device1". It cannot be null. You can set a device alias which is easy to understand, such as "HMI for Machine 3".

> Default Station No.

The "Default Station No."refers to the station number of the Remote PLC device. It must be consistent with the actual station number of the Remote PLC device.

Advance

Please refer to the "Advance" settings of the "Local Connection".

For example, the "Remote PLC" device is connected to the "Remote HMI" which the IP address is "192.168.0.20". The type of the remote PLC is Siemens S7-200 and the COM1 of the remote HMI is used to connect with the PLC. The station number of the PLC is 2. The settings are shown as below.

Use IP Fixed 🔹	192.168.0	. 20 Port No.	Constant •	3000	
					1
At COM port:	COM1	*			
Manufacturer:	SIEMENS		•		
Device Type:	Siemens S7-200	(•	Instructions	
Device Alias:	PLC of Device 3				
Default Station	No.: Constant	•	2 Syne	chronize Station No.	Advar

Click the button "OK" to confirm the settings and the "Remote PLC" device is added to the "Remote PLC" settings page.

0	COM1	C	OM2	C	COM3	CC	M4	Rem	ote HMI
R	emote PLC		Ethernet	PLC	Se	vice	Printer		Keyboard
ID	Device Alia	s	IP		Port	COM Po	ort Device Ty	pe	Default St
1	PLC of Devi	ce 3	192.168.0	.20	3000	COM1	Siemens S	7-200	2
acces	ote PLC is a c ss to remote g the device a	PLC r	egisters th	rough t					

You can find the remote PLC device in the "Device Type" of the component. For example, it is shown as below.

eneral	Number Format	Keyboard Setting	Font	Graphics	Dynamic Graphics	Control Settings	Display	
nerai	Number Format	Reyboard Setting	ron	orapines	bynamic Graphics	control settings	Display	
perati	on Attribute: 🔘 🕅	Numeric Display 🍥	Numer	ric Input 🔘	Characters Display	Characters Inp	ut	
	1° a 1.547.54° a	LL 1. D'(()		— •	X			
	-	ddress Is Different		Passwor	rd			
	Address:							
	Address Tag			_				
)eivce:	LOCAL:[Local Reg	jister]						
	LOCAL:[Local Reg							
		Remote HMI:FE407						
ddres	PLC of Device 3:[RECIPE:[recipe re	Remote PLC:COM1:S	liemen	s S7-200]				
Addres		System R	enister					
	(Range) DDDDDD(Wor	-				
ormat	(Range) DDDDDDD(o occupy.	0001					
Add	ress Index							

After finishing setting the "Remote PLC", the local HMI can access all the registers of the "Remote PLC" which is connected to the "Remote HMI".

If you need to add other remote PLCs, you can add them by referring to the above.

4.10.3.2.3 Ethernet PLC

The "Ethernet PLC" refers to the PLC which is connected with the HMI by the Ethernet communication mode. The network communication protocols which the HMI and the PLC support are used to complete the communication.

After clicking the menu "Setup / Communication Settings / Remote Connection", the "Remote HMI" settings page is opened as the default. Click the "Ethernet PLC" tab to open the "Ethernet PLC" settings page. It is shown as below.

	nication Connec	cuon					·
C	COM1	COM2	COM3	(COM4		Remote HMI
Re	emote PLC	Ethernet Pl	LC Se	rvice	Prin	nter	Keyboard
ID	Device Alias	IP	Port	Device	е Туре	Defa	ult Station No.
		C device which o					
		C device which o ss Ethernet PLC		through I	IP addres	ss and p	port directly.
					IP addres		port directly.

After click the button "Add" in the "Ethernet PLC" settings page, the "Ethernet PLC" settings dialog will pop up. It is shown as below.

Ethernet PLC(Or Servic	e by Remote HMI)	×
The IP address o		
Fixed •	192.168.0.2 Port No.: Constant • 502 •	
Manufacturer:	MODBUS Compatible	
Device Type:	Modbus TCP	
Device Alias:	Alias cannot be null, Default:Device1	
Device Allas.	Allas cannot be hull, belautibevicer	
Default Station	No.: Constan - 1 Synchronize Station No. A	dvance
Broadcast St		
Broadcast St	tation:	
	ОК	Cancel

• The IP address of Ethernet PLC

The IP address of Ethernet PLC refers to the IP address of the PLC which is connected with the HMI through the Ethernet network.

• Port No.

The "Port No." is the number of the communication port between the Ethernet PLC and the HMI. The "Port No." is different for the different network. There is a default "Port No." for your selected network. Generally, it is ok to use the default port number. For example, the default port number is 502 for the "Modbus TCP".

The "Manufacturer", "Device Type", "Device Alias," "Default Station No." are same as the settings in the "Remote PLC".

• Broadcast Station

After checking the "Broadcast Station", you can set a number for the broadcast station. The default is that the "Broadcast Station" is not checked. You can determine to use this function or not according to the actual situation.

Click the button "OK" to confirm the settings and the "Ethernet PLC" device is added to the "Ethernet PLC" settings page. For example, the "Modbus TCP" is selected as the device type. The result of settings is shown as below.

C	COM1	COM2	C	OM3	C	OM4		Remote HMI
R	emote PLC	Ethernet	t PLC	Ser	vice	Prin	nter	Keyboard
D	Device Alias	s IP		Port	Device	Туре	Defau	ult Station No.
	Device1	192.168.0	0.21	502	Modbu	s TCP	1	
		LC device whice						

If you need to add other Ethernet PLCs, you can add them by referring to the above.

You can realize the connections by using the "Ethernet PLC" mode, such as multi HMIs, multi HMIs and one PLC, multi HMIs and multi PLCs, and other connections.

4.10.3.3 Service

Service refers to that the HMI device provides the data requested by other devices. The HMI is a slave device. The port is static. All communication operations should be initiated by other master devices. The type of Service includes Serial Port Service and Network Service.

0	COM1	COM2		COM3	0	COM4		Remote HMI
	emote PLC	and the second second second	rnet PLC		rvice	Printe	er	Keyboard
ID	Protocol Ty	/pe	Service	е Туре	Port/CO	M Port	Slav	e Device NO.
1	Modbus TO		1	rk Service	502		1	
2	Modbus R	U Server	Serial I	Port Service	COM1		1	
Diago								
Pleas	e add the se	rvice of seri	al port f	from corresp	oondent (setting Delete	JS.

Remote PLC	Ethernet PLC	C Servic	ce Printe	r Keyboard
COM1	COM2	COM3	COM4	Remote HMI
Unused	Con	nect Device(Ma	ster) Prov	vide Service(Slave)
Device Type	e: Modbus RTU S	erver	•	
Device Alia	s: Service			
Server Station No	o.: Constant 🔹		1 🔹	
Communication Baud Rate: Data Bit: Stop Bit: Parity Bit: Reset Instr	115200 8 1 None Advance	• • • •		

4.10.3.3.1 Serial Port Service

The Device Type can be Barcode, HNCSLAVE and Modbus RTU Server. The Barcode refers to the bar code gun. It can scan information and display it by using a continuous 100 characters saved in the area which LW8900 is the start address. LB8999,which is as a flag bit, is set ON after scanning is finished (it will not be reset automatically). The HNC SLAVE device is supported and the HMI can work as a slave or a master device. The Modbus RTU Server is referred to:<u>Detailed</u> <u>manual/Setup/Communication Settings/Local Connection/Provide Service (Slave)</u>.

Device Type:	Modbus RTU Server	•
Device Alias:	Barcode Modbus RTU Server	
Server Station No.:	Constant •	1 🗸

4.10.3.3.2 Network service

Modbus TCP Server		•	Instructions
Local IP: 192.168.0.200 (IP is from HMI	settings.)	Port No.:	502 🜩
Server Station No.:	Constant	•	1 🗘

The Service Protocol Type supports Modbus TCP Server. It is referred to:Ethernet Service

4.10.4 Options

The command "Options" in the "Setup" menu opens the Options dialog. You can view and modify some settings such as the HTP Designer software interface display. There are two catalogs: General and HMI.

4.10.4.1 General

The General has only one option: Auto Update. If the "Check for Updates" is checked in the Auto Update sub catalog, the HTP Designer software will be checked for updates automatically when it is opened. A message will be popped up to remind you to update if the software detects update packages.

Options	
General	Auto Update Check for Updates
	OK Cancel

Auto Update: Click this option then the software will update automatically every time you open it, if there is a installation package, it will hint you to install it.

Options						
General Auto Update	UI Langua	UI Language				
⇒ <mark>UI Language</mark> ⊒Hmi	Chinese	English	C• Turkish			
	K orean					
	Current UI langua					
	Click on an icon t	o choose langua	ge.			
			DK Cancel			

UI Language: You can set the UI language of HTP Designer, and it will take effect after completing setting and restarting

4.10.3.2 Hmi

The catalog of "Hmi" includes "General", "Auto Recover" and "Window".

4.10.3.3.1 General

If you check the "Automatically load the previously closed project" option, the last closed project will be opened automatically when the HTP Designer software is opened.

Options	
i⊒General i⊒Hmi	General
➡ General Auto Recover ➡ Window	Automatically load the previously closed project.
- WINGOW	
	OK Cancel

4.10.3.3.2 Auto Recover

You can set the "Recover Time Interval" here. For example, the "Recover Time Interval" is set as 2 minutes means that the project will be saved automatically every two minutes. This setting can reduce the project information losing when the software accidentally shutdown or the power failure is occurred.

E Options	
i⊒General I⊆rHmi	Auto Recover
General ➡ <mark>Auto Recover</mark> ⊒Window	Recover Time Interval: 2 2 Minute
	View backup project
	OK Cancel

You can open the file folder "Backup Projects" by clicking the button "View backup project".

名称 修改日期 英型 大小 Original-2015-04-26-09-57-18-汚水泵 2015/4/26 9:57 文件夹 Original-2015-06-17-22-18-27-007 2015/6/17 22:18 文件夹 Original-2015-06-18-08-44-02-007 2015/6/17 22:18 文件夹 Original-2015-07-16-10-41-17-中 2015/7/16 10:41 文件夹 Original-2015-07-19-20-10-54-中 2015/7/19 20:10 文件夹	合到库中	▼ 共享 ▼ 电子邮件 刻录 新建	这件夹			HH • E	1 0
 ▶ Original-2015-06-17-22-18-27-007 2015/6/17 22:18 文件夹 ▶ Original-2015-06-18-08-44-02-007 2015/6/18 8:44 文件夹 ■ Original-2015-07-16-10-41-17-中 2015/7/16 10:41 文件夹 	-		修改日期	类型	大小		
 ↓ Original-2015-06-18-08-44-02-007 2015/6/18 8:44 文件夹 ■ ↓ Original-2015-07-16-10-41-17-中 2015/7/16 10:41 文件夹 		길 Original-2015-04-26-09-57-18-污水泵	2015/4/26 9:57	文件夹			
■ Driginal-2015-07-16-10-41-17-中 2015/7/16 10:41 文件夹]] Original-2015-06-17-22-18-27-007	2015/6/17 22:18	文件夹			
		길 Original-2015-06-18-08-44-02-007	2015/6/18 8:44	文件夹			
📕 Original-2015-07-19-20-10-54-中 2015/7/19 20:10 文件夹	=	퉬 Original-2015-07-16-10-41-17-中	2015/7/16 10:41	文件夹			
		퉬 Original-2015-07-19-20-10-54-中	2015/7/19 20:10	文件夹			
Original-2015-07-21-10-23-50-中 2015/7/21 10:24 文件夹		퉬 Original-2015-07-21-10-23-50-中	2015/7/21 10:24	文件夹			

4.10.3.3.3 Window

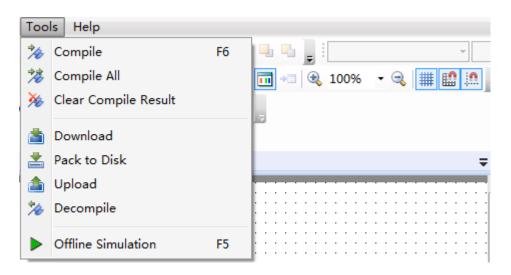
The sub catalog "Window" includes two options: General and the Designer. The option of "General" is blank.

If you check the "Use pipeline animation effect" in the "Designer" option, you can see the dynamic liquid flow effect in the pipeline component during the project editing process.

Options	
General General Auto Recover Window General Designer	Designer Use pipeline animation effect
	OK Cancel

4.11 Tools

In the HTP Designer software, the Tools menu includes many tools in the shortcut tool bar. It includes" Compile, Compile All, Clear Compile Result, Download, Pack to Disk, Upload, Decompile, and Offline Simulation".



1 Compile

The project will be saved automatically and the system will generate a bin directory and other files if no errors.

2 Compile All

The project will be saved automatically andall the files are forced to compile.

3 Download

The system will compile the project automatically and generate a directory of upload and some relevant files for compiling. Then the relevant files are packaged and the download tool dialog is popped up. Before clicking the button "Download", you need to select the communication mode (USB or Ethernet) and the data source (Project or Fpg File). You can check the delete options and check the download options (Batch Mode or Force Mode) according to demands.

4 Pack to Disk

The tool of "Pack to Disk" can realize compiling the project and packaging it to the disk. The package file is named Fpg File. Then you can download it by the USB disk or the HTP Designer software.

Pack to Disk	×
Compile and download the project to disk, downlo with USB disk or FSTOOLLS.	adable
Name: FirstP_20151125_b02.fpg	
Location: E:\2015-2016-1\project-fe\FirstP	
Help	Cancel

5 Upload

If you check "Upload" to enable upload in the Global Settings of the System Settings, the configuration information downloaded in the HMI device can be uploaded by the USB or Ethernet communication mode. The configuration information can be Project, RW Data, Recipe or Logs.

	stem Settings						-8 - X -
	User Privilege	Task Schedule	Data Sa	mpling	PLC Control	A COMPANY OF A COMPANY	And Event
S ₀ S ₁ S ₂ S ₃ Status0 • L L L L L L L L	Global Settings	Extended Settings	Laguange	Settings	Favorite Font Ten	nplates	User Level
🔛 - 💡 - 🖾 - 🕮 - 🕖 - 🏗 - 🖄 - 🚥 - 📰	Project Properties			Initializati	on		
LLOONOR BB	🔽 Upload	Password: 888888		Initial W	indow: B_1:Basic Wi	ndow(1 ·	
Project 🔹 🛪 🗙	Decompilation	Password: 888888		Initial	Macro		
Constant MII FE4070 HMI Settings Window Communication Connection Comsumication Connection Comsumication Connection COM3: Unused COM3: Unused COM3: Unused COM3: Unused Senter Connection Remote HMI Remote HMI Remote PLC Service Printer Freboard	Turn off Backl	tness: Lowest 💌 📑	3 🔹 (min)) 🔹 (min) nts	Main Wi Drop-dov Vuse Note: C Clock Source: [Set up histor	dow(HOME) ndow(HOME) : B_1 wn window the drop-down wind Dnly for capacitive sc HMI Internal Clock the time souce of ical data etc. SRW0~7: Year/Mon Minute/Second/Mill	low or not? reen. • wents, th/Day/Hour	Ę
System Settings	Local Register En	dian Order		Touch Au	dio		
Global Settings	16-bit Integer:	21		Buzzer	Is Enabled Buzz	er Time: 50r	nS •
Extended Settings	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			-	Enable Control:		
Settings	32-bit Integer:	4321	•		Enable Control:		
- TT Favorite Font Templates	32-bit Float:	4321	•	Touch	Audio Enabled.		
User Privilege Task Schedule La Data Sampling Ju C Control	Scrollbar Scrollbar Width	20 💌		D	Enable Control:		
C Tror Output	Help					ОК	* Cancel

6 Decompile

The Fpg File can be decompiled to project if you check "Decompilation" to enable decompile function in the Global Settings of the System Settings

File View Edit Window Drawing Component S	ystem Settings						-8-1
	User Privilege	Task Schedule	Data San	npling	Alarm	arm And Event	
S ₀ S ₁ S ₂ S ₃ Status0 • L U U U U 1-Eng	Global Settings	Extended Settings	Laguange S	Settings	Favorite Font Temp	plates	User Level
	Project Properties	Password: 888888		Initializati Initial W	on indow: B_1:Basic Win	dow(1 •	·
	Decompilation	Password: 888888		🛄 Initial	Macro		Ê
Project A X	Backlight And Scr Dim the bright Turn off Backli Dim down and Turn on ba Turn on ba Screensaver:	ness: Lowest 💌 📑	3 🔹 (min) 0 🔹 (min) nts	Main Wi Drop-dow V Use Note: C Clock Source: Set up	dow(HOME) indow(HOME) : B_1:E wn window the drop-down windo only for capacitive scree HMI Internal Clock • HMI Internal Clock • SRW0~7: Year/Montt Minute/Second/Millis	w or not? een. ents, n/Day/Hou	
System Settings	Local Register End	dian Order		Touch Au	dio		
Global Settings	16-bit Integer:	21	•	Buzze	r Is Enabled Buzze	r Time: 50	mS 🔹
Extended Settings	32-bit Integer:	4321	•	100	Enable Control:		
TT Favorite Font Templates	32-bit Float:	4321	Touch Audio Enabled.				
User Privilege Task Schedule La Data Sampling	Scrollbar Scrollbar Width	20			Enable Control:		
The second	Help				0	ОК	Cancel

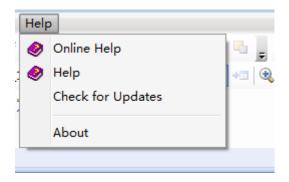
Protocol © USB © Ethernet Scan Upload Data Source © Project © RW Data © Recipe © Logs	
Upload	
Decompile Choose a file to be decompiled(*.fpg)	
Choose a folder to save decompiled files	

7 Offline Simulation

The tool of the "Offline Simulation" is used to simulate the project running in offline.

4.12 Help

In the HTP Designer software, the Help menu includes: Online Help, Help, Check for Updates, and About(software version).



1 Online Help

You can find the online help when you click the command "Online Help".

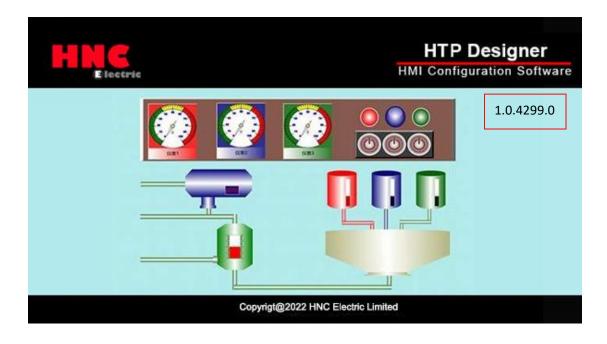
2 Check for Updates

The HTP Designer software will be updated by using the internet when you click the menu command "Check for Updates".

		Information 🛛 🕅
Help		
٢	Online Help	Already up to date.
٢	Help	
	Check for Updates	
	About	ОК

3 About

The current HTP Designer software version information and copyright declaration will be displayed when you click the menu command "About".



4.13 General functions

4.13.1 Address editor

4.13.1.1 Standard Bit Address Input

In the software HTP Designer, the "Standard Bit Address Input" function will be used frequently. By this function, you can input the bit address which is connected with a device, and the value of the bit address will be displayed. The function can easily realize the connection with each PLC. The "Standard Bit Address Input" window is as shown as below.

HTP Designer Configuration Software User Manual

•
ister

In the HTP Designer software, the corresponding bit address symbols are given according to the various connected devices. For the MITSUBISHI FX2N series PLC, X represents the input address, Y represents the output address, M represents the middle register address, SM represents the system special bit address, and S represents the state address. As shown as below.

Use Addres	s Tag	
Deivce: Device	1:[LocalCOM1:MISTUBIS	SHI FX2N •
Station No.: 1	🗘 🔲 Index	
Bit-index wit	hin a Byte Register	
Address Type:	M	•
Address: 0	М	System Register
Format(Range)	Y	
Rate: Normal	S	
Address Ind	C_bit	
	T_bit	
_	SM	

If the address is not connected with the device after you input a specific address number, you should check whether the parameters (such as Device, Station No. and Address) are set correctly. For example, these parameters are set as follows.

andard Bit Address Input 🥃
Use Address Tag
Deivce: Device1:[LocalCOM1:MISTUBISHI FX2N -
Station No.: 1 🚔 🗌 Index
Bit-index within a Byte Register
Address Type: M
Address: 0 System Register
Format(Range) DDDD(0~7999)
Rate: Normal 🔹
Address Index
OK Cancel

If you find the data refresh rate is a little slow, you can change the communication rate as follows.

Standard Bit Address Input	×
 Use Address Tag Deivce: Device1:[LocalCOM1:MISTUBISHI FX2N • Station No.: 1 • Index Bit-index within a Byte Register Address Type: C_bit • Address: 0 • System Register Format(Range) DDD(0~255) Rate: Normal Ad Normal High Speed Low Speed 	
OK Cancel	

Certainly, you can use the address tag library. You need to prepare the data addresses in the address tag library before using them. Check the "Use Address Tag" in

the "Standard Bit Address Tag" window and click the button "No open the "Address

Tag Library" window. Select the bit address you need in the address tag library, as shown as follows.

ndard Bit Address Input	Address Tag L	ibrary				
Use Address Tag - 📎 🧿	Reference	Tag Name	Device Alias	Station No.	Address Type	Address
Deivce:	0	Y10	Device1:[LocalCOM1:	1	×	10
tation No.: + Index Bit-index within a Byte Register address Type: + ddress: + System Register						
Format(Range) Rate:						
OK						
	New Bit	New Word	Delete All	Edit	Cancel	ct and Exit

The "Bit-index within a Byte Register" function can be used. You need to check the "Bit-index within a Byte Register", as shown as below.

Deivce: Device Station No.: 1	1:[LocalCOM1:MISTU	BISHI FX2N	·
Bit-index wit	hin a Byte Register		
Address Type:	D	•	
Address: 0	D	-	System Register
Format(Range)	C_dword		
Rate: Normal	C_word T_word		
Address Ind			
Address ind			

You can use the Address Index function. This function can change the bit address which is connected with the current component according to the value of a word address. For example, the bit address LB0 is connected with the current component. If you check the Address Index and set the address as LW0, as shown as below, the bit address which is connected with the current component will be LB (0 + LW0).

HTP Designer Configuration Software User Manual

eivce: LOCAL:[Lo	ocal Register]	
Bit-index within		
ddress Type: LB		•
Address: 0	DDDDD(0~799999)	System Regist
ormat(Nange) DE	00000(0-755555)	
Address Index	LW0	

In addition, you can use the System Register in the Standard Bit Address Input window. When you click the System Register button, the System Special Function Register window will pop up. There are many system special function register addresses in this window, as shown as follows. You can quickly select one to use.

	ystem Special Function Register	
Image: Second	List Information HMI O PLC Internet SR80/Network connection status SR80/Network connection status SR80/Network connection status SR80/Network static ID/Re-obtain dynamic IB SR8000000tatin ID address automatically Hardware kayboard VVC(renote monitoring)	Description SRB1=1:Reset IP address immediately/Re-obtain dynamic IP address immediately
Execute Setting: On Address Use Address Tag Deivce: LOCAL:[Local Register] Bit-index within a Byte Register Address Type: LB Address Type: LB Address: 0 System Register FormatiRange) DDDDDD(0-799999) Address Index LW0 Help(H) OK Cancel Help Description:	Communication User authority	Select Cancel

Certainly, the screen is connected with multiple slaves at sometime. The station number is varied. At this moment, you need to use the Index function. This function uses a word address to provide a variable station number. The setting process is shown as follows.

HTP Designer Configuration Software User Manual

Use Address Tag Deivce: Device1:[LocalCOM1:MISTUBISHI FX2N Station No.: 0 Bit-index within a Byte Register Address Type: C_bit Address: 0 Format(Range) DDD(0~255) Rate: Normal Address Index OK Cancel Address Tag Device: Device: Use Address Tag Device: Device: Device: Device: Use Address Tag Device: Device: Device:	Standard Bit Address Input	
Station No.: Index Bit-index within a Byte Register Address Type: Address: 0 Format(Range) DDD(0~255) Rate: Normal Address Index OK Cancel dard Bit Address Input Use Address Tag Deivce: Device: Device: </td <td>🔲 Use Address Tag</td> <td></td>	🔲 Use Address Tag	
Bit-index within a Byte Register Address Type: C_bit Address: 0 System Register Format(Range) DDD(0~255) Rate: Normal Address Index OK Cancel OK Cancel Use Address Tag Deivce: Device1:[localCOM1:MISTUBISHI FX2N Bit-index within a Byte Register Address Type: Lit Address Type: Lit System Register Format(Range) DDD(0~255) Rate: Normal	Deivce: Device1:[LocalCOM1:MIST	TUBISHI FX2N •
Address Type: C_bit Address: 0 System Register Format(Range) DDD(0~255) Rate: Normal Address Index OK Cancel OK Cancel Use Address Tag Deivce: Device1:[LocalCOM1:MISTUBISHI FX2N Bit-index within a Byte Register Address Type: C_bit Address Type: W System Register Address Type: W System Register Address: 0 System Register System Register Address System Register Address System Register System Register System Register System Register System Register System Register System Register	Station No.: 0 🚔 🔲 Index	
Address: 0 System Register Format(Range) DDD(0~255) Rate: Normal Address Index OK Cancel OK Cancel dard Bit Address Input Use Address Tag Deivce: Device1;[localCOM1:MISTUBISHI FX2N Bit-index within a byte Register Address Type: Cbit Address Type: Cbit System Register Address Type: Cbit Address Type: Cbit Address Type: Comparison of the system Register Format(Range) DDD(0~255) Rate: Normal	Bit-index within a Byte Register	
Format(Range) DDD(0~255) Rate: Normal Address Index Address Index OK Cancel	Address Type: C_bit	-
Rate: Normal Address Index OK Cancel dard Bit Address Input Standard Byte Address Input Use Address Tag Use Address Tag eivce: Device1:[LocalCOM1:MISTUBISHI FX2N Wise Address Tag Deivce:: LOCAL:[Local Register] Bit-index within a Byte Register Address Type: (LW Bit-index within a Byte Register Address: 0 geivce: System Register ddress: 0 System Register Format(Range) DDDD(0-255) ate: Normal	Address: 0	System Register
Address Index OK Cancel OK Cancel dard Bit Address Input Standard Byte Address Input Use Address Tag Use Address Tag Deivce: Deivce: Use Address Tag Deivce: Deivce: Deivce: Use Address Tag Deivce: Deivce: Deivce: Use Address Tag Deivce: Deivce: LW0 Bit-index within a Byte Register Address Type: address: O System Register Format(Range) DDDDDD(0-799999) Occupy: I Vord Data Type: Data Type: 16-bit Unsigned	Format(Range) DDD(0~255)	
OK Cancel dard Bit Address Input Standard Byte Address Input Use Address Tag Use Address Tag Deivce: Deivce: LOCAL:[Local Register] Ølterss: O Ølterss: O System Register Address: ormat(Range) DDD(0~255) System Register ate: Normal	Rate: Normal 🔻	
Bard Bit Address Input Standard Byte Address Input Use Address Tag Use Address Tag eivce: Device1:[LocalCOM1:MISTUBISHI FX2N Deivce: [LOCAL:[Local Register] Bit-index within a Byte Register Address Type: [LW ddress: 0 System Register ormat(Range) DDD(0-255) System Register ate: Normal Image: 16-bit Unsigned	Address Index	
Jard Bit Address Input Standard Byte Address Input Use Address Tag Use Address Tag eivce: Device1:[LocalCOM1:MISTUBISHI FX2N Device: LOCAL:[Local Register] Ø Index LW0 Address Type: LOCAL:[Local Register] Bit-index within a Byte Register Address Type: LW ddress: 0 System Register ormat(Range) DDD(0-255) System Register ate: Normal Vormal		
dard Bit Address Input Juse Address Tag eivce: Device1:[LocalCOM1:MISTUBISHI FX2N I Use Address Tag Deivce: LOCAL:[Local Register] I Index LW0 Bit-index within a Byte Register ddress Type: C_bit ddress: 0 System Register ormat(Range) DDD(0-255) ate: Normal		
Iard Bit Address Input Standard Byte Address Input Use Address Tag Use Address Tag eivce: Device1:[LocalCOM1:MISTUBISHI FX2N Device: LOCAL:[Local Register] Bit-index within a Byte Register Address Type: LW ddress: 0 System Register rmat(Range) DDD(0~255) System Register ate: Normal Occupy: 1		OK Cancel
Use Address Tag Use Address Tag Use Address Tag Deivce: [LocalCOM1:MISTUBISHI FX2N Index LW0 Bit-index within a Byte Register Idress: 0 System Register Idress: 0 System Register rmat(Range) DDD(0~255) te: Normal DDD(0~255)		
Use Address Tag Device1:[LocalCOM1:MISTUBISHI FX2N Divce: LOCAL:[Local Register] Device: LOCAL:[Local Register] Device: LOCAL:[Local Register] Address Type: C_bit Address Type: LW Address: 0 System Register Format(Range) DDDD(0~255) tet: Normal Data Type: 16-bit Unsigned		
eivce: Device1:[LocalCOM1:MISTUBISHI FX2N Deivce: LOCAL:[Local Register] Deivce: LOCAL:[Local Register] Deivce: LOCAL:[Local Register] Address Type: C_bit Address Type: C_bit Address: 0 System Register Format(Range) DDD(0~255) System Register Format(Range) DDDDDD(0~79999) Occupy: 1 Word Data Type: 16-bit Unsigned	lard Bit Address Input	Standard Byte Address Input
eivce: Device1:[LocalCOM1:MISTUBISHI FX2N Deivce: LOCAL:[Local Register] Deivce: LOCAL:[Local Register] Device: LOCAL:[Local Register] Address Type: C_bit Address Type: C_bit Address: 0 Address: 0 System Register Format(Range) DDDDDD(0~255) ate: Normal Device: LOCAL:[Local Register] Device: LOCAL:[Local Register] Device: LOCAL:[Local Register] Device: LOCAL:[Local Register] Device: LOCAL:[Local Register] Device: LOCAL:[Local Register] Device: LOCAL:[Local Register] Device: LOCAL:[Local Register] Device: LOCAL:[Local Register] Device: LOCAL:[Local Register] Device: LOCAL:[Local Register] Device: LOCAL:[Local Register] Device: LOCAL:[Local Register] Device: LOCAL:[Local Register]	Use Address Tag	Use Address Tag
Bit-index within a Byte Register ddress Type: C_bit ddress: 0 0 System Register Address: 0 Address: 0 System Register Format(Range) DDD(0~255) ate: Normal The second sec	eivce: Device1:[LocalCOM1:MISTUBISHI FX2N •	
Address Type: C_bit address: 0 ormat(Range) DDD(0~255) tate: Normal Address Type: LW Address Type: LW Address: 0 System Register Format(Range) DDDDD(0~799999) Occupy: 1 Word Data Type: 16-bit Unsigned		▶
Format(Range) DDD(0~255) Format(Range) DDDDDDD(0~799999) Occupy: 1 * Word Late: Normal Data Type: 16-bit Unsigned *	ddress Type: C_bit	
ate: Normal Data Type: 16-bit Unsigned		
OK Cancel OK Cancel		

4.13.1.2 Standard Byte Address Input

In the software HTP Designer, the "Standard Byte Address Input" function will be used frequently. By this function, you can input the byte or word address which is connected with a device and the value of this address will be displayed. The function can easily realize the connection with each PLC. The "Standard Byte Address Input" window is as shown as below.

Deivce: LC	OCAL:[Local Regis	ter]		•
Address Ty Address:	vpe: LW		• Surter	n Register
	nge) DDDDDD(0-	~799999)	Occupy: 1	- Word
			16-bit Unsign	ned 🔹
Address	Index			

In the HTP Designer software, the corresponding byte or word addresssymbolsare given according to the various connected devices. For the HNC FL2N series PLC,D represents the data register,SD represents the special address, represents the timer, C_word represents the 16-bits counter which saves the current value, and C_dword represents the 32-bits counter which saves the current value. As shown as below.

	1:[LocalCOM1:MISTU	BISHI FX2N •
Address Type: Address: 0 Format(Range) Rate: Normal Address Inc	D C_dword C_word T_word	▼ System Register upy: 1 → Word it Unsigned ▼

If the address is not connected with the device after you inputting a specific address number, you should check whether the parameters (such as Device, Station No. and Address) are set correctly. For example, these parameters areset as follows.

Station No.: 1 1 Index Address Type: C_word Address: 0 0 System Register Format(Range) DDD(0~255) Occupy: 1 Word	Use Address Tag Deivce: Device1:[LocalCOM1:	MISTUBISHI	FX2N		2
Address: 0 System Register Format(Range) DDD(0~255) Occupy: 1 • Word Rate: Normal • Data Type: 16-bit Unsigned •					
Format(Range) DDD(0~255) Occupy: 1 v Word Rate: Normal v Data Type: 16-bit Unsigned v	Address Type: C_word		•	-	
Rate: Normal Data Type: 16-bit Unsigned	Address: 0			System	Register
	Format(Range) DDD(0~255)		Occup	y: 1	- Wor
Address Index	Rate: Normal 🔹	Data Type:	16-bit	Unsign	ed •
	Address Index				
			Ok		Cance

If you find the data refresh rate is a little slow, you can change the communication rate as follows.

Use Address Tag	
Deivce: Device1:[LocalCOM1	:MISTUBISHI FX2N •
Station No.: 1 🚔 🗌 Inde	ex
Address Type: C_word	•
Address: 0	System Register
Format(Range) DDD(0~255)	Occupy: 1 • Word
Rate: Normal 🔹	Data Type: 16-bit Unsigned 🔹
Ad Normal	
High Speed	
Low Speed	

Certainly, you can use the address tag library. You need to prepare the data addresses in the address tag library before using them. Check the "Use Address Tag" in the "Standard Byte Address Tag" window and click the button "[]" to open the "Address

Tag Library" window. Select the byte or word address you need in the address tag library, as shown as follows.

	X A	ddress Tag Library				
🖸 Use Address Tag	- 🗞 😖	Reference Tag Name	Device Alias	Station No.	Address Type	Address
Deivce:		0 d10	Device1:[LocalCOM1:	1	D	10
Station No.:						
Address Type: *						
	m Register					
Format(Range) Occupy:	- Word					
Rate: Data Type:	word					
Address Index						
<u></u>						
OK	Cancel					
OK	Cancel					
, OK .	Cancel					
OK	Cancel					
OK.	Cancel					
OK	Cancel					
OK	Cancel					
OK.	Cancel					
OK.	Cancel	New Bit	Delete Delete All	Edit	Cancel Sele	ect and Exit

You can use the Address Index function. This function can change the byte or word address which is connected with the current component according to the value of a word address. For example, the word address D0 is connected with the current component. If you check the Address Index and set the address as LW0, as shown as below, the word address which is connected with the current component will be D (0 + LW0).

Station No.: 1 🔹 Index Address Type: D Address: 0 Format(Range) DDDD(0~7999) Occupy: 1 Rate: Normal Data Type: 16-bit Unsigned		Byte Addres					
Address Type: D Address: 0 Format(Range) DDDD(0~7999) Occupy: 1 Word Rate: Normal Data Type: 16-bit Unsigned	Us	e Address Ta	g				
Address: 0 System Register Format(Range) DDDD(0~7999) Occupy: 1 Vord Rate: Normal Data Type: 16-bit Unsigned V	Deivce	e: Device1:[L	ocalCOM1	:MISTUBISHI	FX2N		•
Address Type: D Address: 0 Format(Range) DDDD(0~7999) Occupy: 1 Word Rate: Normal Data Type: 16-bit Unsigned	Statio	n No.: 1	1 Inde	ex			
	Addre	ess: 0	v	9)	Occup		
Address Index LW0	Rate:	Normal	•	Data Type:	16-bit	Unsign	ned •
	🗸 Ad	dress Index	LW0				m
				(0	/	Cancel
OK Cancel					U	N .	Cancel

In addition, there are many system special function register addresses.You can quickly select one by clicking the button "System Register", as shown as follows.

So Status0 - Li ta ta Switch/Indicator Light	System Special Function Register	
123 - 122 - 0 - 1 - 10 - 10 Switch Indicator Light Lable Gr.	aph List Information	Description
acic Window(2)* X. Display Mode: Register Contro Standard Byte Address Input E Use Address Tag Device: Device: Device: Device: Total Device: Device: Device: Device: Total Total Total Station No: 1 1 Index Address System Register Address: 0 1 System Register Occupy: 1 Word Rate: Normatinge: Data Type: 16-bit Unsigned Total OK Cancel	SRW1:Month	System date, Format as: 20xx
Illegal Input: Illegal Show Error Status	•	Select Cancel

Certainly,the screen is connected with multiple slaves at sometime.The station number is varied.At this moment, you need to use the Index function.This function uses a byte or word address to provide a variable station number. The setting process is shown as follows.

Deivce: Device1:[LocalCOM1:MI	STUBISHI F	X2N		•
tation No.: 1 🚔 🔲 Index				
ddress Type: D		•	ystem R	egister
ormat(Range) DDDD(0~7999)		Occupy	-	Word
late: Normal 🔹 Da	ata Type:	16-bit L	Insigned	•
Address Index				

andard Byte Address Input	23	Standard Byte Address Input
© Use Address Tag Deivce: Device1:[LocalCOM1:MISTUBISHI FX2N ▼ ✓ Index D0 Address Type: D ▼ Address: 0 ↓ Format(Range) DDDD(0~7999) Occupy: 1 ▼ Word Rate: Normal ▼ Data Type: 16-bit Unsigned ▼ Address Index		□ Use Address Tag Deivce: Device1:[LocalCOM1:MISTUBISHI FX2N ▼ Station No.: 0 ♀ □ Index Address Type: D ▼ Address: 0 ♀ System Register Format(Range) DDDD(0~7999) Occupy: 1 ▼ Word Rate: Normal ▼ Data Type: 16-bit Unsigned ▼
OK Cancel		OK Cancel

4.13.2 Drawing

4.13.2.1 Border settings

After double-click the figure you have drawn, you can view and select border color and style.

🛛 Border —	
Line Co	or 💌 📝
Line Width	
Line Type	

You can select the line width and the line type from the lists.

You can change the border color by using the list or the button " ".

📝 Border	
📕 Line Color 👻 🍠	
User Defined Color	•

4.13.2.2 Filling settings

After double-click the figure you have drawn, you can view and select the fill type and the fill color.

There are three fill types: SolidColor, Pattern and Gradient.

Fill		
🔳 Background Color 👻 📝	Fill Type	SolidColor 🔹
		SolidColor
		Pattern
		Gradient

1 SolidColor

Fill		
📕 Background Color 💌 🍠	Fill Type	SolidColor 🔹
User Defined Color		

In this fill type, you can select a kind of color for the background of the figure from the



2 Pattern

🖉 Fill		
📕 Background Color 👻 🍠	Fill Type	Pattern 🔹
📃 Foreground Color 👻 📝		
Pattern Filling Effect		
•••••••••••••••••••••••••••••••••••••••		

In this fill type, you can select a kind of color for the background and another kind of color for the foreground. You can set the pattern filling effect, too.

3	Gradi	ent
-	Grade	C

Background Color 💌 📝	Fill Type Gradient •
Foreground Color 💌 🍠	Gradual Approach Vertical 🔹
idient Filling Effect	
	Contract Contract Contract

In the gradient fill type, you can select the background color, the foreground color, gradual approach and gradient filling effect.

4.13.3Font settings

Static Text	8
General 🥑 Display	
 Language Independent Languages: 1-English (United S •) Use Text Library Text Library 	Position Fixed Point: X : 0 ◆ Y : 0 ◆ □ Locked Width: 50 ◆ Height: 50 ◆
Wse Labels Tag Contents	Marquee
Copy Current Text to All Languages Import from Favorite Font Templates.(I) Vector Font Graphic Font Font: Microsoft Sans Serif • Size: 16 • B I • I • I Multi-line Alignment: I • I Advanced	Set label position by language state separately. Left Right: Top Bottom:
Microsoft Sans Serif Copy Current Properties to All Languages	
Help Description:	OK Cancel

1 Vector Font

According to the font attributes setting, change the characters of the text into a True Type font file (ttf format) for HMI.

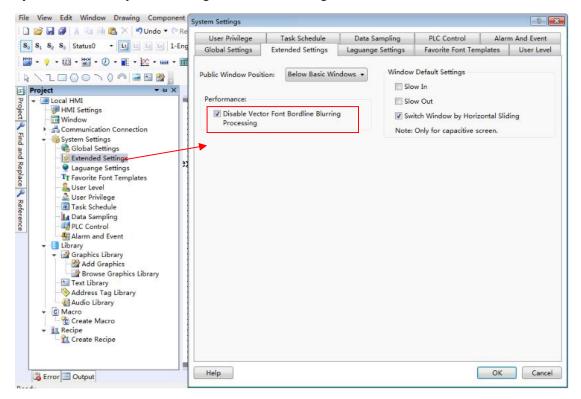
- Disadvantages
- Only support the True Type font type (ttf format) which the current operating system has installed.

 The below is the font effect comparison between the tows that the "Disable Vector Font Bordline Blurring Processing" is not checked and the "Disable Vector Font Bordline Blurring Processing" is checked.

Static Text

Static Text

Note: the "Disable Vector Font Bordline Blurring Processing" can be set in the path: Project/Local HMI/System Settings/Extended Settings.



Advantages

• Occupy Less memory. The same character in the same font type uses one font data regardless of size, color, bold, or italic.

- Full size and can be set freely without distortion.
- Supports multi-line text alignment.
- Text Library supports the use of vector fonts.

2 Graphical Font

Regard the string as a whole and save it as a bitmap to the project.

- Disadvantages
 - Occupy more memory because of the bitmap storage format.
- Advantages
 - Supports all the fonts installed in the current operating system.
 - Display effect is good.

3 Equivalent width

Each single font displays in the max width size. The max width of the font is greater if the font size is greater.

• For example, the max width of a single digit is 17 and the max width of a single character is 22 if the font size is 16,

4 Font

You can set the font type from the list. It supports all font types installed in the current operating system, such as Microsoft Sans Serif.

5 Size

You can set the current font size. The range is from 8 to 144.

The font supports bold and italic, and you can modify the font color from the

list or by using the tool button "

6 Multi-line Alignment

It is only valid for multiple lines text. You can set the multiple lines text align to the left, center or right.

7 Advanced

You can set the Horizontal Scaling, Space, and Shadow Effects after clicking the button "Advanced".

Advanced
Horizontal Scaling: 100% Space Line Space: 2
Shadow Effects Color: ShadowColor V Shadow Deviation: X: 2 V: 2
OK Cancel

8 Position

You can set the font position of the current components.

4.13.4 Graphic edit

✔ Use	Graphi Project		le Graphics	Dynamic Gr	aphics Cor	ntrol Settings		Status Previev	V:
back	gro	backspace	button	button002	button1	circle dot	ſ	Status0	Status1
En	iter	flowblock	forbidden	Frame002	frame003	indicatorl		r	
Impo	adow E	Add a new Gr ffect	aphic					Favorites	Edit Graphics
	-	e border colo e Filling	or:	Frame Cold	or 🕶 🍠 🗌	Reset the Def	fault Color]	
									L

1 The Current Project Graphics Library

For some components, you can find the property TAB of "Graphics". In this TAB, you can view the component graphics in the Current Project Graphics Library.Select one, then you can preview the status of it in the Status Preview window.

2 Import

The system graphics library can be opened by clicking the button "Import". You can select a system graphic into the current project graphics library here.

3 Add a new Graphic

Click the button "Add a new Graphic" to pop up the window "Add New Graphics" (see Figure a). Then you can set the properties of the new graphic, such as "Name", "Status Count", "Width", "Height" and other information. After clicking the button "OK" to confirm it and closing all the pop-up windows, you can see that an editable window with the same name is already opened (see Figure b). You can edit the new graphic in this window. Refer to: **Detailed manual/Library/Graphics Library/Add graphics.**

New Graphics						
Name: Pic						
Status Count: 2	Width: 300	♣ Height: 300 ♣				
Modify on current graphics library Select Graphics						
Preview						
-						
				ОК		
				Cancel		
				Cancel		
		а		Cancel		
E	Pic × B_1:Bas	a ic Window(1)*		Cancel		
E Proje	Pic × B_1:Bas			Cancel		
Project 🔍	Pic × B_1:Bas			Cancel		
🖫 Project 🔍 Find	Pic × B_1:Bas			Cancel		
Project R Find and F		ic Window(1)*		Cancel		
Project 🥄 Find and Repla	Pic × B_1:Bas			Cancel		
Project 🥄 Find and Replace		ic Window(1)*		Cancel		
Project 🔍 Find and Replace 🍳 Ref		ic Window(1)*		Cancel		
Project 🔍 Find and Replace 🍳 Referen		ic Window(1)*		Cancel		
Project 🔍 Find and Replace 🥄 Reference		ic Window(1)*		Cancel		
Project 🔍 Find and Replace 🔍 Reference		ic Window(1)*		Cancel		
Project 🥄 Find and Replace 🔍 Reference		ic Window(1)*		Cancel		
Project 🥄 Find and Replace 🔍 Reference		ic Window(1)*		Cancel		
Project 🥄 Find and Replace 🔍 Reference		ic Window(1)*		Cancel		
Project 🥄 Find and Replace 🔍 Reference		ic Window(1)*		Cancel		
Project 🥄 Find and Replace 🔍 Reference		ic Window(1)*		Cancel		

4 Favorites

After clicking the button "Favorites", you can add the current selected graphic to a specified Favorites Category. The Favorites Category can be selected, added and renamed (see Figure a).Click the button "OK"to confirm the addition to the Favorites Category. You can view the graphics collected in the Favorites Category by the path: **Project/ Library/Graphics Library/Browse Graphics Library** (see Figure b).

▼ Add Category
OK Cancel

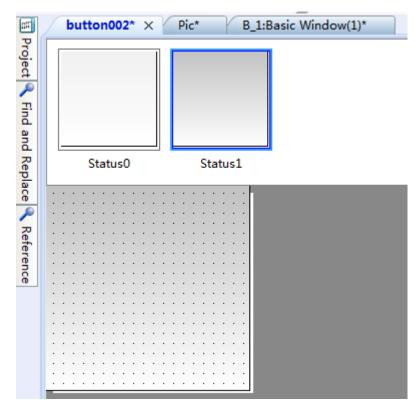
а

Collapes Branches	Shape: Only Vector Graphic	s Only Editable Graphics
Current Project	Test AirConditi oner015	Import
9.Safety		Add To Favorites Category
	•	Add New Graphics
		Edit Graphics
		Rename Graphics
		Delete Graphics
Add Rename Delete	Status: Status0 Status1 Status2	Exit

b

5 Graphics Edit

After clicking the button "Edit Graphics" and closing all the pop-up windows, you can see that an editable window with the same name of the graphic is already opened (see Figure a). The graphic can be edited in this window. Refer to: **Project/Library/Graphics Library/Add graphics.**



6 Shadow Effect

Double click the graphic you have drawn in the Graphics Edit window to modify the properties of it. After checking the Shadow Effect (see Figure a), you can add the shadow effect for the selected graphic (see Figure b).

a.	Color:	w Effect	• 🖍	Shadow Excursion	x	4 🔹 Y	4
b.							

7 Border

You can change the outer border color of the current selected graphic. Note: Only when the elected graphic is vector graphic and this attribute can be modified, this option is valid to change the outer border color (see Figure a)!

Si Se So Status0 + 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	General	-P-
Status0 Status1	Rectangle Square Border Line Color User change Line Width Chamfer Chamfer Fill Background Color Fill Type	Position Fixed Point: X: 140 ¢ Y: 138 ¢ Locked Width: 163 ¢ Height: 130 ¢ Rotation Fix Point RotationAngle 0 ♠ NonRotation ype SolidColor • User changeable Filling
	Shadow Effect	Shadow Excursion X 4 🔦 Y 4 文

8 Fill

You can change the filling effect of the current selected graphic (see Figure a). Note: Only when the elected graphic is vector graphic and this attribute can be modified, this option is valid (see Figure b)!

📕 Background Color 👻 📝	Fill Type 🛛 🐨 🐨 🔽 User changeable Fillin
Foreground Color 👻 📝	Gradual Approach Horizontal 💌
Gradient Filling Effect	

File View Edit Window Drawing Compg	nent Library Macro Recipe Setup Tools Help	
📋 🚅 🛃 🍠 👗 🐏 🍓 🙇 🗙 🌱 Undo 🕇	Rectangle	5 ×
80 S1 S2 S1 Status0 - Li Li Li Li	General	
Image: Status 0 Status 1		Position Fixed Point: X : 140 ♀ Y : 138 ♀ □ Locked Width: 163 ♀ Height: 130 ♀ Rotation
G. Status0 Status1	Chamfer	Fix Point
find and Replace	Fill Fill Fill Type	RotationAngle 0 💮 NonRotation
	Shadow Effect	
	Help Description:	OK Cancel

b

4.13.5 Control settings

For some components, there is a property TAB of "Control Settings".

1 Activation Settings

• Always

The current component can always be operated if you use the option "Always".

witch Indicator Light Lable Graphics Dynamic	Graphics Control Settings Display			
Activation Settings	Security Settings			
Always	Minimum Press Time: 0 (X0.1S)			
Conditional	Require confirmation prior to execution			
	Waiting Time 100 😴 (X0.1S)			
	Records Operation			
	Minimum Operation Interval: 0 🖉 (X0.1S)			
	Notification Settings			
	Before Writing After Writing			
	Notify Bit Address:			
	Notify Byte Address:			
Audio				
Play Audio	Trigger Macro:			
Keyboard				
Use Keyboard				

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- Conditional
 - Indicating Invalid Mark

Switch Indicator Light Lable Graphics Dynamic Graphic Activation Settings Always Indicating Invalid Mark Conditional Hide when condition not meet. Non-operable when the part is hidden. Automatic pop-up password window. Level User Min Level: 1:Level1 • Privilege User Logic Control	Is Control Settings Display Security Settings Minimum Press Time: 0 ♠ (X0.1S) Require confirmation prior to execution Waiting Time 100 ♠ (X0.1S) Records Operation Minimum Operation Interval: 0 ♠ (X0.1S) Notification Settings Before Writing After Writing Notify Bit Address: Notify Byte Address:		
Audio Play Audio Keyboard Use Keyboard	Trigger Macro:		

After checking the option "Indicating Invalid Mark", the prohibited mark will display on the component if the operating conditions are not met. The prohibited mark is shown as below.

🛋 Emulator	
Open	Close

Hide when conditions arenot met.

Activation Settings Always Indicating Invalid Mark Conditional I Hide when condition not meet. Non-operable when the part is hidden. Automatic pop-up password window. Level User Min Level: 1:Level1 •	security Settings Security Settings Minimum Press Time: 0 (X0.1S) Require confirmation prior to execution Waiting Time 100 (X0.1S) Records Operation Minimum Operation Interval: 0 (X0.1S) Notification Settings		
Logic Control	Before Writing After Writing Notify Bit Address: Notify Byte Address:		
Audio Play Audio Keyboard	Trigger Macro:		

When you check the option "Hide when conditions are not met", the component will hide if the operating conditions are not met.

Automatic pop-up password window

Switch Indicator Light Lable Graphics D	namic Graphics Control Settings Display
Activation Settings Always Indicating Invalid Mark Conditional Hide when condition not n Non-operable when the par Vautomatic pop-up passwo Level User Min Level: 1:Level1 Privilege User Logic Control	s hidden. Waiting Time 100 🖨 (X0.1S)
Audio Play Audio Keyboard Use Keyboard	Trigger Macro:

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If you check the option "Automatic pop-up password window", the user login window will pop up when you click the component. It is shown as below.

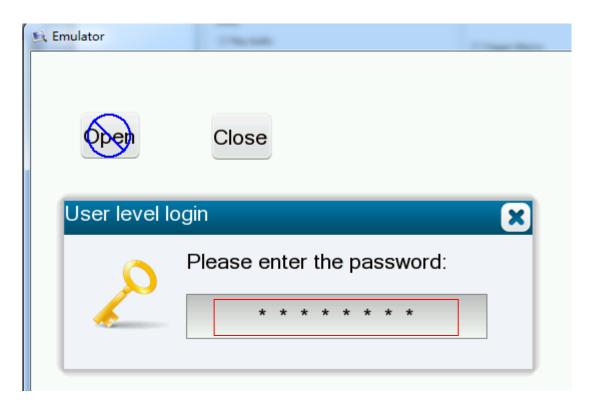
🔍 Emulator	C Parallel	
Open	Close	
User level l	ogin	×
2	Please enter the password:	

HTP	Designer	Configuration	Software	User	Manual
	Designer	Configuration	Solution	0.501	i i i a i i a a i

Level User

witch Indicator Light Lable Graphics Dynamic Graphi	cs Control Settings Display
Activation Settings Always Indicating Invalid Mark Conditional Hide when condition not meet. Non-operable when the part is hidden. Automatic pop-up password window. Level User Privilege User Logic Control Logic Control	Security Settings Minimum Press Time: 0 (X0.1S) Require confirmation prior to execution Waiting Time 100 (X0.1S) Records Operation Minimum Operation Interval: 0 (X0.1S) Notification Settings Before Writing After Writing Notify Bit Address: Notify Byte Address:
Audio	Trigger Macro:
Keyboard	

After checking this function, you need to enter the appropriate user level password to operate the device. It is shown as below.



HTP	Designer	Configuration	Software	User	Manual
	Designer	Conngaration	00101010	000	i i i a i i a a i

• Privilege User

Switch/Indicator Light	8 ×
Switch Indicator Light Lable Graphics Dynamic Graphics	Control Settings Display
Activation Settings Always I Indicating Invalid Mark Conditional Hide when condition not meet. Non-operable when the part is hidden.	Security Settings Minimum Press Time: 0 (X0.1S) Require confirmation prior to execution Waiting Time 100 (X0.1S) Records Operation
Level User	Minimum Operation Interval: 0 🔄 (X0.1S)
✓ Privilege User Privilege: 16:Admin ▼	Notification Settings
Logic Control	Before Writing After Writing Notify Bit Address: Notify Byte Address:
Audio	
🔲 Play Audio	Trigger Macro:
Keyboard	
Use Keyboard	
Help Description:	OK Cancel

After checking this function, you need to login by using the corresponding user privilege to operate the component. It is shown as below.

St Emulator	en ligh (sen) had	in Sparit Staffin, Lawy Long, Staff	
Cic	ose		
Login	User login	×	
	🔓 User:	Admin	
	Password:	888888	
		Cancel	
l			J

HTP	Designer	Configuration) Software	User	Manual
	Designer	Conngaration		0000	

• Logic control

Control Settings Display
Security Settings Minimum Press Time: 0 (X0.1S) Require confirmation prior to execution Waiting Time 100 (X0.1S) Records Operation Minimum Operation Interval: 0 (X0.1S)
Notification Settings
Before Writing Notify Bit Address: Notify Byte Address:
Trigger Macro:

After check this function, the component can be operated when the specified conditions are satisfied. The conditions can be multiple logical operations.

0 Security Settings

Minimum Press Time

HTP Designer Configuration Software User Manu	HTP	Designer	Configuration	Software	User	Manua
---	-----	----------	---------------	----------	------	-------

witch Indicator Light Lable Graphics Dynamic Graph	ics Control Settings Display
Activation Settings	Security Settings
Always	Minimum Press Time: 10 🔷 (X0.1S)
Conditional	Require confirmation prior to execution
	Waiting Time 100 🖨 (X0.1S)
	Records Operation
	Minimum Operation Interval: 0 💭 (X0.1S)
	Notification Settings
	Before Writing After Writing
	Notify Bit Address:
	Notify Byte Address:
Audio	
Play Audio	Trigger Macro:
Keyboard	
🔲 Use Keyboard	

You need to hold the button component for a specified time to perform actions. The function is used to avoid the action due to touching the screen by mistake.

vitch Indicator Light Lable Graphics Dynamic G	raphics Control Settings Display
Activation Settings	Security Settings
lways Always	Minimum Press Time: 10 🔦 (X0.1S)
) Conditional	✓ Require confirmation prior to execution Waiting Time 100
	Records Operation
	Minimum Operation Interval: 0 (X0.1S)
	Notification Settings
	Before Writing After Writing
	Notify Bit Address:
	Notify Byte Address:
Audio	
Play Audio	Trigger Macro:
Keyboard	
Use Keyboard	

• Require confirmation prior to execution

If this function is checked, a confirmation dialog box will pop up automatically. It will keep the display status for the "Waiting Time" if you don't confirm or cancel it. It is shown as below.

🙉 Emulator		
Open	Close	
L	ogin Confirm execution Are you sure to perform the operation? OK Cancel	

Switch	Indicator Light	Lable	Graphics	Dynamic Graphics	Control Settings	Displa	ау		
Alw	ation Settings vays nditional				Security Settings Minimum Press T Require confir Waiting Time	mation	10 prior to execution 0 🔹 (X0.1S)		LS)
					Records Oper	ation	Open the pump	Set	
					Minimum Operat	ion Inte	erval:	0 🍨	(X0.15
					Notification Setting	gs			
					Before Writing	After V	Writing		
					🔲 Notify Bit Ad	dress:			
					🔲 Notify Byte A	ddress			
Audic	0								
PI	lay Audio				Trigger Mac	ro:			
Keybo	oard				L				
U	se Keyboard								

Records Operation

If you check this function, you can record the operations of the component and display the records in the operator Log. It is shown as below.

	Serial No.	Date	Time	User Name	Operation Log	
Open Valve	3	10/01/16	11:32:02		Open the valve	
	2	10/01/16	11:31:33		Open the valve	
	1	10/01/16	11:31:20		Open the valve	
	0	10/01/16	11:31:17		Open the valve	•
	◀					

itch Indicator Light Lable Graphics Dynamic Graph	ics Control Settings Display
uctivation Settings) Always) Conditional	Security Settings Minimum Press Time: 0 (X0.1S) Require confirmation prior to execution Waiting Time 100 (X0.1S) Records Operation
	Minimum Operation Interval: 10 🔪 (X0.1S)
	Notification Settings
	Before Writing After Writing
	Notify Byte Address:
udio	
🗌 Play Audio	Trigger Macro:
eyboard	
Use Keyboard	

Minimum Operation Interval

By using the "Minimum Operating Interval" function, continuous actions can be avoided in a short time due to touching the screen continuously by mistake.

4.13.6 Display

1 Position

vitch Indica	tor Light	Lable	Graphics	Dyna	mic Graphics	Control Settings	Display	
Position								
Position:	X :	85	\$	Y :	170 😴			
Locked	Width:	70	Hei	ght:	50 \$			
Always Di	splay							
Condition	al Display	,						

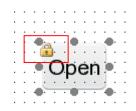
• Position and size

You can set X and Y coordinate values of the component to change the display position of it. You can modify the width and the height of the component to change the size of it.

Locked

witch Ind	icator Light	Lable	Graphics	Dynamic	Graphics	Control Settings	Display	
Position								
Position:	X :	85	\$	Y: 1	70 🗘			
✓ Locke	Width:	70	0 Hei	ight:	50 \$			
Always	Display							
Condit	onal Display							

The position and size of the component cannot be changed if you check the "Locked" function. And there is a small lock icon on the component in the editing window. It is shown as below.



2 Always Display

witch	Indica	tor Light	Labla	Graphics	Dumar	mic Granhice	Control Settings	Display		
vitch	inuica	tor Light	Lable	Graphics	Uynai	nic Graphics	Control settings	Display		
Positi	on									
Positi		X :	85	•	Y :	170 😴				
POSIU	ion;	Λ.	80	*	1:	1/0 🗸				
Lo	cked	Width:	70	Hei	ght:	50 🗘				
	vays Di	solav								
	-									
Co	ndition	al Display								
Help		escription							OK	Cano

If you select the "Always Display" function, the component will always be visible when the project is running. It is the default setting.

③Conditional Display

Level User

witch Indica	tor Light	Lable	Grap	hics 1	Dynamic Gra	phics	Control Settings	Display		
Position										
Position:	X :	85	\$	Y	: 170	\$				
Locked	Width:	70	\$	Heig	ht: 50	\$				
🔿 Always Di	splay									
Condition	al Display	,								
🔽 Level Use	r Min	Level:	1:L	Level1	- 🔒					
Privilege	User									
Logic Cor	trol									
_ •										

If you check this function, the component will be visible after you entering the appropriate user level password.

• Privilege User

vitch					1							
	Indicato	r Light	Lable	Graphics	Dynar	nic Graphics	Control Se	ttings	Display			
Positi	on											
Posit		x :	85	•	Y :	170 🗘						
Lo	ocked V	Vidth:	70	Hei	ight:	50 🗘						
O Alv	vays Disp	lay										
	nditional	Display										
E Le	vel User											
V Pri	ivilege Us	er Privi	ilege:	16:Admin	•							
		1919 - SILO	5 (
Lo												
	aic Contri	ol										
	gic Contr	0										
	gic Contr	01										
	gic Contr	0										
	gic Contr	0										
	gic Contr	01										
	gic Contr	01										
	gic Contr	01										
	gic Contr	01										
	gic Contr	01										
	gic Contr	01										
	gic Contr	01										
	gic Contr	01										
	gic Contr	01										
	gic Contr	01										
	gic Contr	01										
	gic Contr	01										
	gic Contr	01										
	gic Contr	01										
	gic Contr	01										

If you check this function, the component will be visible after you login by using the corresponding user privilege.

witch	Indicator Light	Lable	Graphics	Dyna	mic Graphics	Control Settings	Display	
Posit	ion							
Posit	ion: X :	85	\$	Y :	170 🗘			
🔳 La	ocked Width:	70	\$ Hei	ght:	50 🗘			
E Le	nditional Display vel User ivilege User gic Control ic Condition	'						
ANE	LB0 ON				*			
AND					_			
		dify	Delete					

Logic Control

If you check this function, the component can be controlled to display according to the logic condition. The condition can be multiple logical operations.

4.13.7 Keyboard setting

For some components, there is a property TAB of "Keyboard Setting".

	Number Format	Keyboard Setting	Font	Graphics	Dynamic Graphics	Control Settings	Display
	runberromat	Reyboard Setting	TOR	Graphics	bynamic orapines	control settings	Uspidy
Mode:	Touch Control	Bit control					
Keyboa	ard settings						
O Use	pop-up keyboard						
Keybo	ard Type: K_3:Hex	numeric keyboard	•				
Auto	o adjust position	Pop-up posit	ion		Specified	Position:	
		F - F					
O Dor	n't use pop-up keyk	ooard					
Select *	Don't use pop-up	keyboard" under th	e condi	tions listed	below:		
1. An ex	ternal USB keyboa	rd is used.					
2. Prefe	er to use a user-def	ined keyboard rath	er than	the pop-up	o keyboard.		
	input order functio	10					
Use	input order functio	41					

$\textcircled{1}\mathsf{Mode}$

Touch Control

The keyboard will be popped up if you click the HMI input component.

• Bit control

A bit register is used to control the keyboard to pop up or close.

②Keyboard Settings

• Use pop-up keyboard

You can select the Keyboard Type from the system-provided keyboard types.

	put						?
ieneral	Number Format	Keyboard Setting	Font	Graphics	Dynamic Graphics	Control Settings	Display
Mode:	Touch Control	Bit control					
Keyboa	ard settings						
O Use	pop-up keyboard						
Keybo	Construction of the second second second	numeric keyboard					
Auto	K_2:Dec	imal numeric keybo imal numeric keybo numeric keyboard i keyboard			Specified	Position:	
O Don	't use pop-up keyt						
1. An ex	ternal USB keyboa	keyboard" under the ird is used. ined keyboard rathe					
🔲 Use	input order functio	n					
Help	Description:						OK Cancel

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> Auto adjust position

The position of the pop-up keyboard is adjusted automatically according to the position of the HMI input component.

umeric Inp	out							8 8
General	Number Format	Keyboard Setting	Font	Graphics	Dynamic Graphics	Control Settings	Display	
Mode:	Touch Control	Bit control						
Keyboa	rd settings							
Use	pop-up keyboard							
Keyboa	ard Type: K_3:Hex	numeric keyboard	•					
	200	1						
Auto	adjust position	Pop-up posit	ion		Specified	Position:		
0.0								
	t use pop-up keyt							
	Jon't use pop-up I ternal USB keyboa	keyboard" under the ord is used.	e cond	itions listed	below:			
2. Prefer	to use a user-def	ined keyboard rath	er than	the pop-up	p keyboard.			
Use	input order functio	20 C						
	,							
							01	
Help	Description:						OK	Cancel

Pop-up position

A relative region in HMI is specified to pop up the keyboard.

General	Number Format	Keyboard Setting	Font	Graphics	Dynamic Graphics	Control Settings Di	isplay	
Mode:	Touch Control	Bit control						
Keyboa	rd settings							
🖲 Use	pop-up keyboard							
Keyboa	ard Type: K_3:Hex	numeric keyboard	•					
			(0 0 0	D			
O Auto	adjust position	Pop-up positi	ion		Specified	Position:		
		k	d (000	D			
0.0								
Select "[1. An ex	ternal USB keyboa	keyboard" under the rd is used.						
Select "[1. An ex	Don't use pop-up ternal USB keyboa	keyboard" under the						
Select "I 1. An ex 2. Prefer	Don't use pop-up ternal USB keyboa	keyboard" under the rd is used. ined keyboard rathe						
Select "I 1. An ex 2. Prefer	Don't use pop-up l ternal USB keyboa r to use a user-def	keyboard" under the rd is used. ined keyboard rathe						
Select "I 1. An ex 2. Prefer	Don't use pop-up l ternal USB keyboa r to use a user-def	keyboard" under the rd is used. ined keyboard rathe						
Select "I 1. An ex 2. Prefer	Don't use pop-up l ternal USB keyboa r to use a user-def	keyboard" under the rd is used. ined keyboard rathe						
Select "I 1. An ex 2. Prefer	Don't use pop-up l ternal USB keyboa r to use a user-def	keyboard" under the rd is used. ined keyboard rathe						
Select "I 1. An ex 2. Prefer	Don't use pop-up l ternal USB keyboa r to use a user-def	keyboard" under the rd is used. ined keyboard rathe						
Select "I 1. An ex 2. Prefer	Don't use pop-up l ternal USB keyboa r to use a user-def	keyboard" under the rd is used. ined keyboard rathe						
Select "I 1. An ex 2. Prefe	Don't use pop-up l ternal USB keyboa r to use a user-def	keyboard" under the rd is used. ined keyboard rathe						

Specified Position

The position to pop up the keyboard is specified by the X and Y coordinates.

eneral	Number Format	Keyboard Setting	Font	Graphics	Dynamic Graphics	Control Setting	s Display	
1ode:	Touch Control	Bit control						
Keyboa	rd settings							
🔘 Use	pop-up keyboard							
Keyboa	ard Type: K_3:Hex	numeric keyboard	•			X :	0	
Auto	adjust position	Pop-up posit	ion		Specified	Position: Y :		
O Don	't use pop-up keyb	oard						
	Don't use pop-up	eyboard" under the	e con <mark>d</mark> i	tions listed	below:			
1. An ex	Don't use pop-up l ternal USB keyboa	eyboard" under the						
1. An ex 2. Prefe	Don't use pop-up l ternal USB keyboa	eyboard" under the rd is used. ined keyboard rathe						
1. An ex 2. Prefe	Don't use pop-up l ternal USB keyboa r to use a user-def	eyboard" under the rd is used. ined keyboard rathe						
1. An ex 2. Prefe	Don't use pop-up l ternal USB keyboa r to use a user-def	eyboard" under the rd is used. ined keyboard rathe						
1. An ex 2. Prefe	Don't use pop-up l ternal USB keyboa r to use a user-def	eyboard" under the rd is used. ined keyboard rathe						
1. An ex 2. Prefe	Don't use pop-up l ternal USB keyboa r to use a user-def	eyboard" under the rd is used. ined keyboard rathe						

• Don't use pop-up keyboard:

If you need to use an external keyboard or a keypad which is designed by using the FS software, you should select the option "Don't use pop-up keyboard

③Use input order function

This function can be used to input the values into multiple input components continuously according to a specified order. You can check it when there are many input components.

General	Number Format	Keyboard Setting	Font	Graphics	Dynamic Graphics	Control Se	ettings	Displa	У	
Mode:	Touch Control	Bit control								
Keyboa	ard settings									
🖲 Use	pop-up keyboard									
Keybo	ard Type: K_3:Hex	numeric keyboard	•							
							X :	0	*	
O Auto	adjust position	Pop-up posit	ion		Specified	Position:				
							Υ:	0	*	
O Don	't use pop-up key	board								
	ternal USB keyboa		or than	the popul	n keyboard					
2. Prefe	r to use a user-de	fined keyboard rath	er than	the pop-u	p keyboard.					
2. Prefe		fined keyboard rath	er than	the pop-u	p keyboard.					
2. Prefe Vse	r to use a user-de input order functio	fined keyboard rath on fter input finished	er than	the pop-u	p keyboard.					
2. Prefe Vse	r to use a user-de input order functio out without order a	fined keyboard rath on fter input finished		the pop-u	p keyboard.					
2. Prefe Vse	r to use a user-de input order functio out without order a	fined keyboard rath on fter input finished		the pop-u	p keyboard.					
2. Prefe Vse	r to use a user-de input order functio out without order a	fined keyboard rath on fter input finished		the pop-u	p keyboard.					
2. Prefe Vse	r to use a user-de input order functio out without order a	fined keyboard rath on fter input finished		the pop-u	p keyboard.					

• Input without order after input finished

The function of "Use input order function" will be canceled after you finish the input of multiple input components.

Input Order

You can set the input order for the current input component here. The multiple components in one group can be input according to the order number, from small to large.

• Group

You can divide the input components into several groups and finish the input according to the input order in the current group.

4.13.8 Label

Adding a label for a component can be increased readability. You can setthe properties of the label such as the language, the content, the font type and other settings. The display text will change when the status is switched if you set different text for different status.

Language Independent	Control Settings Display Import from Favorite Font Templates.(I)
anguage: 1-English (United States)	O Vector Font () Graphic Font
Use Text Library Text Library	Font: Microsoft Sans Serif -
Adaptive label size	
ag Content Save Content To Text Lib	Size: 16 • B I
*	Multi-line Alignment:
Copy Text To: All Status All Languages All Set label position by language state separately.	Copy Attr. To: All Status All Languages All Status Content
	0
Pos.: Left Right: A A A	1
Top Bottom: 👔 🔬	
Top Bottom: 👔 🔬	
Top Bottom: 👔 🔬	

1 Language

Select a language for label edit. The settings will only take effect in the selected language.

2 Language Independent

When you change the language, the label content is not affected.

3 Use Text Library

After the "Use Text Library" is checked, the label content will be filled by the selected text entry in the text library. Some common text can be ready in the text library.

4 Use Label

You need to check this option when you want to set a label for the component.

5 Tag Content

You can edit a label for the current status here. So you edit the label in the tag content edit box, you should select the status first on the lower right corner. Then, click the next status to edit the next status label.

Switch Indicator Light Lable Graph	ics Dynamic Graphics	Control Settings	Display	
Language Independent Language: 1-English (United States) Use Text Library ✓ Use Label ✓ Adaptive label size Tag Content Close ✓	5) Text Library Save Content To Text Lib	© Vector Font Font: Micros Size: 16 → 1 Multi-line Align	m Favorite Font Templates.(I) Graphic Font off Sans Serif • B I I I I Advanced osoft Sans Serif	
Copy Text To: All Status All La Set label position by language state Pos.: Left Right: AAA Top Bottom: AAA Marquee	nguages All e separately.	Copy Attr. To: Status Conter 0 Open Close		All
Help Description:			OK	Cance

The text in the Tag Content edit box can be copied to all languages, all status or all languages and all status.

witch Indicator Light Lable Graphics Dynamic Graphics	Control Settings Display
Language Independent Language: 1-English (United States)	Import from Favorite Font Templates.(I) Vector Font Graphic Font
Use Text Library Use Label	Font: Microsoft Sans Serif •
Adaptive label size Tag Content Save Content To Text Lib	Size: 16 • B I • I Multi-line Alignment:
Close	Microsoft Sans Serif
Copy Text To: All Status All Languages All	Copy Attr. To: All Status All Languages All
Set label position by language state separately.	Status Content 0 Open
Pos.: Left Right: (A A)	1 Close
Top Bottom: 👔 🚵 🕭	

6 Label attributes

You can set the attributes for each Tag Content such as the font type, the size, the color, the alignment type, the Advanced Settings (Scaling, Space, and Shadow Effects) and other attributes. The function of "Copy text to" can avoid duplication of work. And you can also import from favorite font template to simplify label attributes editing. It is efficient and convenient.

7 Vector Font and Graphic Font

• Vector Font

According to the font attributes setting, change the characters of the text into a True Type font file (ttf format) for HMI.

- Disadvantages
- Only support the True Type font type (ttf format) which the current operating system has installed.

• The below is the font effect comparison between the tows that the "Disable Vector Font Bordline Blurring Processing" is not checked and the "Disable Vector Font Bordline Blurring Processing" is checked.

Static Text Static Text

Note: the "Disable Vector Font Bordline Blurring Processing" can be set in the path: Project/Local HMI/System Settings/Extended Settings.

- > Advantages
 - Occupy Less memory. The same character in the same font type uses

one font data regardless of size, color, bold, or italic.

- Full size and can be set freely without distortion.
- Supports multi-line text alignment.
- Text Library supports the use of vector fonts.
- Graphical Font

Regard the string as a whole and save it as a bitmap to the project.

- Disadvantages
 - Occupy more memory because of the bitmap storage format.
- Advantages
 - Supports all the fonts installed in the current operating system.
 - Display effect is good.

8 Marquee

In the HTP Designer software, every label of the component can be set to display by scrolling the fonts. The scrolling direction, step length, speed, etc. can be set separately.

vitch/Indicator Light	-8-1
Switch Indicator Light Lable Graphics Dynamic Graphics C	Control Settings Display
□ Language Independent Language: 1-English (United States) □ Use Text Library □ Use Label ☑ Use Label ☑ Adaptive label size Tag Content Save Content To Text Lib Close	Import from Favorite Font Templates.(I) Vector Font @ Graphic Font Font: Microsoft Sans Serif • Size: 16 • B I • I Multi-line Alignment: I Advanced Microsoft Sans Serif
Copy Text To: All Status All Languages All Set label position by language state separately.	Copy Attr. To: All Status All Languages All
	Status Content 0 Open
Pos.: Left Right: A	1 Close
Top Bottom: A A Marguee Moving Direction RightToLeft • Step Length 10 • PixSpeed 10 • x0.1S	
Help Description:	OK Cance

4.13.9 Marquee

The function of "Marquee" is to display text by scrolling the fonts. The components such as "Label" and "Static Text" have the "Marquee" function.

When you check the "Marquee" option for the label or the static text ,the fonts will display by scrolling. You can set the attributes such as the Moving Direction, Step Length and Pixel Speed. The setting is shown as below.

neral Display	
Language Independent	Position
anguages: 1-English (United S 🔻 🌒	Fixed Point: X : 0 ♀ Y : 0 ♀
Use Text Library Text Library	□ Locked Width: 50 \$ Height: 50 \$
	Marquee
Use Labels	Moving Direction RightToLeft
Tag Contents	
/alve	Step Length 10 🗢 PixelSpeed 10 🖨 x0.1S
	Set label position by language state separately.
[Left Right:
Copy Current Text to All Languages	Top Bottom:
Import from Favorite Font Templates.(I)	
Vector Font () Graphic Font	
ont: Microsoft Sans Serif •	
ze: 16 • B I • ·	
Iulti-line Alignment:	
Microsoft Sans Serif	
Copy Current Properties to All Languages	

vitch/Indicator Light Switch Indicator Light Lable Grap	hics Dynamic Graphics	Control Se	ettings Display		-?- -
Language Independent Language: 1-English (United State Use Text Library Use Label Adaptive label size Tag Content Close	es) Text Library Save Content To Text Lib	© Vecto Font: (Size: (oort from Favorite or Font Graphi Microsoft Sans Se 16 B I Me Alignment:	erif 🔹	d
Copy Text To: All Status All La	anguages All	Сору А	Microsoft S		All
Pos.: Left Right: [A[A]A] Top Bottom: A A		0	Open Close		
Marquee Moving Direction LeftToRight Step Length 10 - PixSpeed	▼ 10 🗘 x0.1S				
Help Description:				ОК	Cancel

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1 Moving Direction

There are four moving direction: Left To Right, Right To Left, Top To Bottom and Bottom To Top. Select one to be the moving direction of fonts scrolling.

2 Step Length

The fonts scroll step by step. The distance of two steps is Step Length. The unit of Step Length is pixel. For example, setting Step Length 10 means that the fonts move 10 pixels per second.

3 PixSpeed

The option "PixSpeed" is used to set the moving speed of fonts scrolling. The unit of PixSpeed is 0.1 seconds. The range of PixSpeed is from 1 to 255. For example, setting PixSpeed10 means that the moving speed of fonts scrolling is 1 second. The process will be circulated after all fonts move out in the component size range.

4.13.10 Logic Control

You can find the function of "Logic Control" if you select the option "Conditional" in the "Control Settings" property TAB of some component. Or you can find it if you select the option "Conditional Display" in the "Display" property TAB. You can also find it if you select the option "Condition" in the "Trigger and Stop" property TAB of the Timer component. This function can realize all kinds of logic operations or judgment easily and can reduce using macros.

witch	Indicator Light	Lable	Graphics	Dynamic Graphics	Control Settings	Display		
Alw Cor	nditional 🔲 Hide	when cor		t meet. art is hidden.	Security Settings Minimum Press Require confi Waiting Time Records Ope Minimum Opera	rmation prio 100 🜩 ration	(X0.1S)	(X0.1S)
Priv	ilege User				Notification Settin	ngs		
V Log	gic Control				Before Writing	After Writin	9	
Condition		 Notify Bit Address: Notify Byte Address: 						
A Audio	dd Mod	lify	Delete					
Pl	ay Audio				Trigger Mac	tro:		
Keybo	oard se Keyboard							

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witch In	dicator Light	Lable	Graphics	Dynamic Graphics	Control Settings 🥹	Display 🜒	
Position							
Position	x :	0	\$	Y: 0 🗘			
Lock	ed Width:	50	Hei	ght: 50 🗘			
O Alway	s <mark>Display</mark>						
	tional Display	/					
🔄 Level							
Privile	ge User						
Logic	and see sees to a						
Conditio							
				•			
Add	M	odify	Delete				

Trigger and Stop Timer Function Timing and Execution Execution Period: Delay	
Trigger Condition: Bit Word Condition Trigger when the window is open Trigger when the window is closed Condition Add Modify Delete	Condition for stop Timer will stop when the window closed. If need to end, please choose the end condition. Stop when specified count value reached Condition Judgement Trigger Condition not satisfied
Help	OK Cancel

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There is a red exclamation mark due to no logic condition. Now click the button "Add", you can pop up the Condition Setting dialog.

Condition Setting	9			×
Module: () Address:	Bit Register	O Word I	Register	
Condition:		FF		
			OK	Cancel

There are two address types: Bit Register and Word Register. The default selection is Bit Register. The logic condition judgment for Bit Register is "ON" or "OFF". The default selection is "ON". Click the tool button " I or double-click the "Address" blank box,

you can edit and select a "bit register". For example, set the address of "Bit Register" LB0, and set the Condition "ON". It is shown as below.

Condition Sett	ing		×
Module:	🖲 Bit Register 🔘 Word	Register	
Address:	LBO		
Condition:	ON OFF		
		ОК	Cancel
			cancer

The red exclamation mark will disappear after you select an address for the condition. Click the button "OK" and the condition will be added to the Logic Control list. It is shown as below. It means the current component will be valid when the bit register LB0 is ON.

witch Indicator Light Lable Graphics Dynamic Graphic	s Control Settings Display
Activation Settings Always Indicating Invalid Mark Conditional Hide when condition not meet. Non-operable when the part is hidden. Level User Privilege User Logic Control	Security Settings Minimum Press Time: 0 (X0.1S) Require confirmation prior to execution Waiting Time 100 (X0.1S) Records Operation Minimum Operation Interval: 0 (X0.1S) Notification Settings Before Writing After Writing
Condition LB0 ON Add Modify Delete	Notify Bit Address:
Audio	Trigger Macro:
Keyboard 🔲 Use Keyboard	

If the condition is not enough, you can continue to add. For example, the condition "LW0 > 1" need to be added. You can click the button "Add" to go on the operation. The Word Register is selected and the address is set LW0. The condition is set "LW0 > 1". The setting is shown as below.

Condition Setting	
Module: OBit Register OW	ord Register
Condition:	
Read Value > 💌	A(1) None •
A Constant 💌	1 🛓
	OK Cancel

There are two pop-down lists in the Condition setting area. The first list is used to select the compare relationship. The compare relationship symbols include "<", ">", "<=" ">=", "==" and "! =". The second list is used to add the next condition of the word register LW0. The default of the second list is "None". It means that there is not the next condition any more. You can select "AND" or "OR" in the second list. It means the relationship between the current condition and the next condition.

Condition Setting		×
Module: OBit Regi Address: LW0 Condition:	ster 💿 Wo	ord Register
Read Value	> • < > < = = !=	A(1) None
		OK Cancel

Condition Setting	×
Module: OBit Register (Address: LW0	Word Register
Condition: Read Value >	▼ A(1) None ▼
A Constant V	AND OR I
	OK Cancel

The setting is shown as below if you select "AND" in the second list.

Condition Setting	X
Module: 🔘 Bit Register 🔇	Word Register
Address: LW0	
Condition:	
Read Value >	▼ A(1) AND ▼
Read Value <	▼ B(1)
A Constant •	1 🔺
B Constant -	1
	OK Cancel

If the conditions you need is "LW0> 100" and "LW0 <LW1", then the condition of the second is not "constant" but "variable" and the address is LW1. The setting is shown as below.

ondition Sett	ng 💽
Module:) Bit Register 💿 Word Register
Address:	LWO
Condition:	_
Re	d Value >
Re	d Value < B(LW1)
A	Constant 🔹 100 🛓
В	Variable • LW1
	OK Cancel

After click the button "OK", you can add this condition to the Logic Control list. It is shown as below.

witch Indicator Light Lable Graphics Dynamic Graphics	Control Settings Display
Activation Settings Always Indicating Invalid Mark Conditional Hide when condition not meet. Non-operable when the part is hidden. Level User Privilege User Logic Control Logic Condition LB0 ON AND UW0 > 100 AND LW0 < LW1 Add Modify Delete	Security Settings Minimum Press Time: 0 (X0.1S) Require confirmation prior to execution Waiting Time 100 (X0.1S) Records Operation Minimum Operation Interval: 0 (X0.1S) Notification Settings Before Writing After Writing Notify Bit Address: Notify Byte Address:
Audio	☑ Trigger Macro: macro_3 ▼ Macro Code Edit
Keyboard	

There is a relationship option in front of the second condition in the Logic Control list. The option can be set "AND" or "OR". It means the logic relationship between the previous condition and the following condition. The component can be operated or display only if the result of all the conditions logic operation is true.

HTP Designer Configuration Software User Manua	HTP Desi	gner Con	figuration	Software	User	Manua
--	----------	----------	------------	----------	------	-------

Switch	Indicator Light	Lable (Braphics	Dynamic Graphics	Control Settings Display
 Alw Cor Lev Priv Logic Logic AND OR 	nditional Hide Non-op nel User nilege User gic Control Condition LB0 ON LW0 > 100 A Mod	ND LW0	dition not	t meet. art is hidden.	Security Settings Minimum Press Time: 0 (X0.1S) Require confirmation prior to execution Waiting Time 100 (X0.1S) Records Operation Minimum Operation Interval: 0 (X0.1S) Notification Settings Before Writing After Writing Notify Bit Address: Notify Byte Address:
Audic	ay Audio				☑ Trigger Macro: macro_3 ▼ Macro Code Edit
Keybo	oard se Keyboard				

There are the button "Modify" and the button "Delete" besides the button "Add" in the Logic Control list. After selecting a condition in the Logic Control list, you can click the button "Modify" to edit it again or click the button "Delete" to remove it from the Logic Control list.You can also double-click a condition in the Logic Control list to modify it.

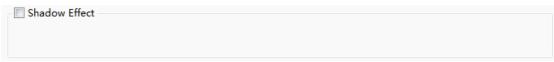
Note: the conditions are executed sequentially from the top to the bottom in the Logic Control list when the conditions are more.

4.13.11 Shadow Effect

You can set the property "Shadow Effect "for the vector graphics, the bitmaps, the graphics, the fonts, and so on. It is shown as below.

Shadow	Effect							
Color: [ShadowColor	*	Shadow Excursion	x	4	Y	4	

After checking the "Shadow Effect", the setting options such as Color and Shadow Excursion will be displayed. Otherwise the options are not visible.



1 Color

You can use the color palette to set the shadow color.



You can also use the tool " to set the shadow color.

2 Shadow Excursion

The Shadow Excursion includes the X-axis (horizontal) direction offset and the Y axis (vertical) direction offset. The unit is pixel.

Shadow	Effect	
Color:	ShadowColor 👻 📝	Shadow Excursion X 4 🗘 Y 4 🗭

Note:

- The coordinates in this software refer to:<u>Detailed manual/General</u> functions/Drawing/ Position.
- The range of Shadow Excursion is: -16 to 16. The positive number for X-axis represents the shadow direction is to the right. The positive number for Y-axis represents the shadow direction is downward. The negative number represents the contrary direction.

The display results are shown as below.



4.13.12 Position

Every component has the property of "Position". You can find it in the "General" property TAB or the "Display" property TAB of the component.

eneral Display	
Language Independent	Position
anguages: 1-English (United S 🔹 🔍	Fixed Point: X : 230 🗘 Y : 320 🗘
Use Text Library Text Library	□ Locked Width: 312 ↓ Height: 312 ↓
	Marquee
Use Labels	
Tag Contents	
Shadow Effect	
	Set label position by language state separately.
*	Left Right:
Copy Current Text to All Languages	Top Bottom:
Import from Favorite Font Templates.(I)	
Vector Font 🔘 Graphic Font	
ont: Microsoft Sans Serif 🔹	
ze: 36 • B I	
Iulti-line Alignment:	
Microsoft Sa	
WILLIUSUIL Sa	
ns Serif	
Copy Current Properties to All Languages	

witch	Indicator	Light	Lable	Graphics	Dynan	nic Graphics	Control Settin	gs Display	
Positio	n								
Positio	on:	X :	85	\$	Y :	170 🗘			
Loc	ked W	lidth:	70	≎ Hei	ght:	50 🗘			
O Alw	ays Displ	ay							
	ditional I								
	el User								
Priv	ilege Use	er							
	ic Contro								
Logic	Con	dition							
	LB0 (N				*			
AND	↓ LW0	> 1				H			
AND		DN				*			
A	dd	Mod	lify	Delete					
					_				

The "X" and "Y" in the Position property are used to set the x coordinate and the y coordinate of the start point of the current component in the window. The title of the "X" and "Y" is "Fixed Point" or "Position". The title of "Fixed Point" decides a fixed point as the start point of the component. The detail is referred to:<u>Detailed manual/General functions/</u> <u>Drawing/ Rotation</u>. The title of "Position" decides the point in the upper left corner of the component as the start point.

Note:

In this software, the coordinate system is shown as below. The origin point is in the upper left corner. The X-axis is horizontal direction. The positive direction of the X-axis is to the right. The Y-axis is vertical direction. The positive direction of the Y axis is downward.

0	X	
¥ Y		

The properties of "Width" and "Height" are used to set the width and the height of the component. If the option is grey and not editable, it represents the attribute is not available. It is shown as below.

Position				
Fixed Point:	Χ:	230 🗘	Y :	320 🗘
Locked	Width:	312 🗘	Height:	312 🇘

If you check the option "Locked", the position of the component will be locked. Its position and size cannot be edited. A lock mark will display in the upper left corner of the component when you select it in the configuration window.

Genera	Dynamic Graphics	Indicator Light	Display				
🔘 Ellip	se 💿 Circle						
🔽 Bor	der		Position				
	der ine Color 🕶 🃝		Position Fixed Point:	X :	126	Y :	351

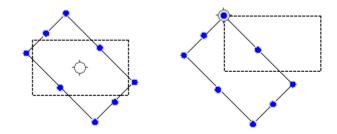
4.13.13 Rotation

Rotation	
Fix Point	QQ
	• • •
	6
RotationAngle	45 🗢 NonRotation

The function of "Rotation" can adjust the display angle of the components such as static graphics, vector graphics and other components. This function is a static function.That is, the display angle is not adjusted in the HMI if you set the display angle in the "Rotation" property. If you want to dynamically adjust the display angle of the graphics, please refer to: <u>Detailed manual/General functions/Dynamic Graphics</u>.

1 Fix Point

Each figure has nine fixed points. The middle fixed point is selected as the default by the system. You can change the fixed point. The result is different after the figure rotates around the different fixed point. For example, a rectangle rotates the center fixed point and another rectangle rotates the upper left fixed point. It is shown as below.



2 Rotation Angle

The Rotation Angle is used to set the clockwise rotation angle of the component. This angle range is 0-360 degrees.

3 Non Rotation

You can quickly set the display angle to zero by clicking the button"Non Rotation".

4.13.14 Dynamic Graphics

There is a property TAB of "Dynamic Graphics" for some component such as the static picture component, the vector graphics, and so on.

eneral Dynamic Grap	hics Indicator Light Display
Use Dynamic Graphic	5
Control Address:	LWO
Control Position:	X: LW0 Y:LW1 Coordinate of the top-left point
Control Size:	Width : LW2 Height : LW3 For square and circle, only width is valid, height is not applicable.
Control Rotating:	Angle: LW4 Increase anti-clockwise, 0~360 degree
	Note: Location, size and rotating is set based on fixed reference point.

You can use the function of "Dynamic Graphics" if you want to adjust the position, the size and the rotation angle of the figure dynamically during running the HMI.

The function of dynamic graphics is realized by using the registers to control the position, the size, and the rotation angle of the figure dynamically.

1 Use Dynamic Graphics

You need to check the option "Use Dynamic Graphics" in the property TAB of "Dynamic Graphics" if you want to use the dynamic graphics function.

②Control Address

The start address of the control registers is selected here. The start control register address editing is referred to: <u>Detailed manual/General function/Address editor/Standard</u> <u>ByteAddress Input</u>.

3Control Position

The option of "Control Position" needs to be checked if you want to adjust the position of the component dynamically. Two registers are used. The addresses will be set and displayed automatically after the "Control Address" is given. These two registers will control the absolute coordinates of the fixed point of the component on the screen window. The touch screen coordinate system is referred to: <u>Detailed manual/General function/Drawing/Position</u>.

④Control Size

The option of "Control Size" needs to be checked if you want to adjust the size of the component dynamically. Two registers are used. The addresses will be set and displayed automatically after the "Control Address" is given. These two registers will control the width and the height of the component. The register to control the width is valid for the components which the width and the height are equal, such as the square and the circle.

5Control Rotating

The option of "Control Rotating" needs to be checked if you want to adjust the rotation angle of the component dynamically. One registers is used. The address will be set and displayed automatically after the "Control Address" is given. The register will control the clockwise rotation angle of the component. This angle range is 0-360 degrees.

Note:

The position, size, and rotating controlare based on the "fixed point" of the component. The fixed point is referred to:<u>Detailed manual/General</u><u>function/Drawing/Rotation</u>.

4.13.15 Table Drawing

You can find the property TAB "Table".

Operate Log Display	? X
General Table Checking Display	
General Table Checking Display Table Background Image: Color	
Help Description: OK	Cancel

Serial No.	Date	Time	User Name	Operation Log	
1	08/12/15	08:40:23	admin	######	
			2		
					- Outline
					-
<u>, (</u>					•
Table Bac	kground Col	or Row Sp	lit Line Colun	nn Split Line Title Bar B	ackground Color

You can change the background color and the title bar background color.

Table Background Color:	Background 👻 📝
Title Bar Background Colo	or : 🔄 Background 💌 🍠

You can change the outline style, the split line style, the line width and the line color.

Outline Style:	 Line Width:	Outline Boar 👻 🍠
Split Line Style:	 Line Width:	Split Line Co 👻 🍠

You can display the grid line after check the "Row Split Line" and the "Column Split Line". It is shown as below.

Date	Time	User Name	
		admin	
			-
	08/12/15	08/12/15 08:40:23	08/12/15 08:40:23 admin

You can hide the grid line if you don't check the "Row Split Line" and the "Column Split Line". It is shown as below.

Serial No.	Date	Time	User Name	
1	08/12/15	5 08:40:23	admin	
	_	_		-
•			F	

4.13.16 Export CSV

You can use the function of "Export CSV" if you want to export the list data to a CSV format file. You can find the option "Export CSV" in the "Search" or "Checking" property TAB of the list component, such as the Historical Data Display component and the Operator Log component.

torical Data Display	- ?
General Table Search Display	
Enable Search Function	
₹ Export CSV	
Lxport csv	
Trigger Registrator: LB0 III LB0 Export records when it is ON.	
Trigger Registrator: LB0 IB0 Export records when it is ON.	
Trigger Registrator: LB0 III LB0 Export records when it is ON. Export to designated location: HMI O SD USB1	
Trigger Registrator: LB0 Export records when it is ON. Export to designated location: HMI SD USB1 Register Setting Location: Sub directory name: CSV_EVENT	
Trigger Registrator: LB0 III LB0 Export records when it is ON.	
Trigger Registrator: LBO Export records when it is ON.	
Trigger Registrator: LB0 III LB0 Export records when it is ON.	query results will
Trigger Registrator: LB0 LB0 Export records when it is ON. Export to designated location: HMI SD USB1 Register Setting Location: Sub directory name: CSV_EVENT Export progress indicator register: Export CSV method : Export by day Single File This operation will all entries are in line with the current condition. If you use a query, the conditioner is a set in line with the current condition. If you use a query, the conditioner is a set in line with the current condition. If you use a query, the conditioner is a set in line with the current condition. If you use a query, the conditioner is a set in line with the current condition. If you use a query, the conditioner is a set in line with the current condition. If you use a query, the conditioner is a set in line with the current condition. If you use a query, the conditioner is a set in line with the current condition. If you use a query, the conditioner is a set in line with the current condition. If you use a query, the conditioner is a set in line with the current condition. If you use a query, the conditioner is a set in line with the current condition.	query results will

inneral	Tabla	Checking	Display					
		h Function	Uspiay					
Expo	ort CSV			Trans.				
		strator: LB0)	LB0 Expo	t records when it	t is ON.		
Trigg	ger Regis oport to o	designated	location: HMI			is ON.		
Trigg Eb Solution	ger Regis oport to o ub direct	designated ory name:	location: HMI			: is ON.	 	
Trigg Eb Solution	ger Regis oport to o ub direct	designated ory name:	location: HMI			is ON.		
Trigg Eb Solution Eb	ger Regis oport to ub direct oport pro	designated ory name:	location: HMI CSV_EVENT cator register:		B1	tis ON.	 	
E E E E E E E E E E E E E E E E E E E	ger Regis oport to ub direct oport pro ort CSV n operatio	designated ory name: ogress indio nethod : on will all en	location: HMI CSV_EVENT cator register: Export by da tries are in line v		B1 ndition. If you us	e		

①Trigger Registrator

A bit register is used to trigger the action of exporting data to a CSV file. Exporting is triggered when the bit register changed from OFF to ON. You can use a bit toggle switch to control the bit register. The method to input the trigger register address is referred to: Detailed manual/General function/Address editor/Standard Bit Address Input.

2 Export to designated location

The function of "Export to designated location" supports exporting the CSV file to HMI, SD card or USB disk.The corresponding options are: HMI, SD, USB1.

③Subdirectory name

You can give a sub directory name for the exportinglocation.

Sub directory name: CSV_EVENT

The contents saved in the designated registers will provide the sub directory name if you check the option "Sub directory name" and give the start register address.

Sub directory name: LW0 Ise 16 charaters specify a file name with maximum 32 ASCII charaters

Note:

Please use the character component to input the sub directory name if you use registers to provide it. The method to input the register is referred to: <u>Detailed</u> <u>manual/General function/Address editor/Standard ByteAddress Input</u>.

④Export progress indicator register

A register can be given to display the exporting progress if the data is large. It is shown as below.

The exporting progress uses the percentage of completion (0-100) to represent. You can use anumeric value display component or a bar graph component to display.

⑤Export CSV method

The Export CSV method can be "Export by day" or "Single File". If you select the "Export by day", the exported data will be saved in different files by date. If you select the "Single File", the exported data will be saved ina single file.

If you select "Single File", you can use the function of "User-defined File Name". The system will name the exported file according to the default name rules when the option

"User-defined File Name" is not checked. A register address needs tobe specified to save the file name which is input when it is needed.

Export CSV method :	Export by day	Single	e File
✓ User-defined File Na	ame: LW100		LW100 Specify a file name with maximum 32 ASCII charaters or 16 Chinese characters, suffix is not

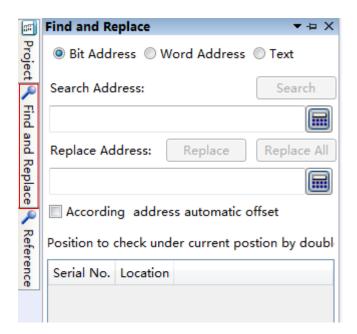
Please use the character input component toinput the user-defined file name. The file name length is limited to 32 ASCII characters or 16 Chinese characters.

Note:

This operation will export all entries in the current condition. If you use the function of "Enable Search Function", the current result of searching will be exported.

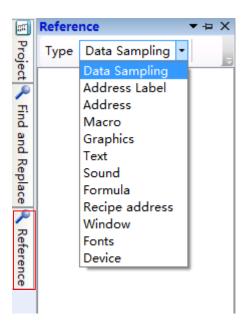
5 Use topic

5.1 Find and Replace

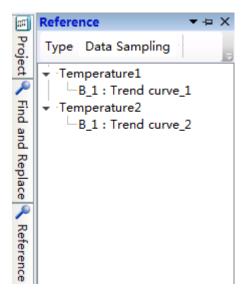


5.2 Reference

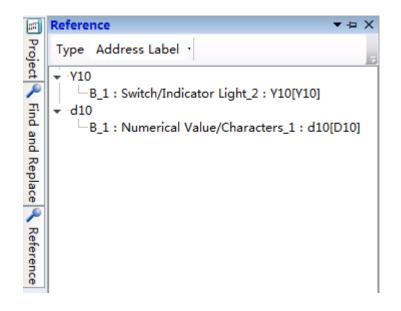
The types of Reference include "Data Sampling", "Address Label", "Address", "Macro", "Graphics", "Text", "Sound", "Formula", "Recipe address", "Window", "Fonts", and "Device".



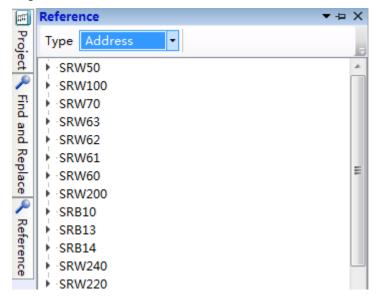
For example, all the uses of "Data Sampling" in the current project are listed in the following after select it.



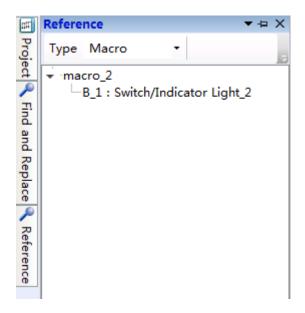
For example, all the uses of "Address Label" in the current project are listed in the following after selecting it.



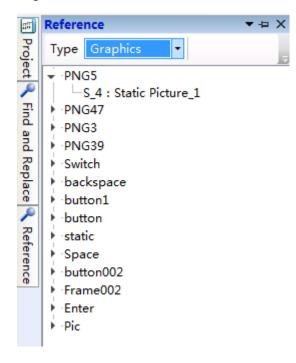
For example, all the uses of "Address" in the current project are listed in the following after selecting it.



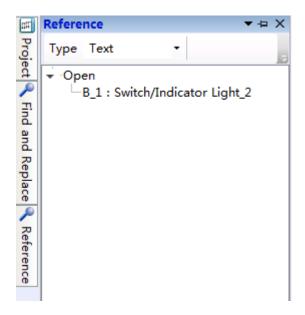
For example, all the uses of "Macro" in the current project are listed in the following after selecting it.



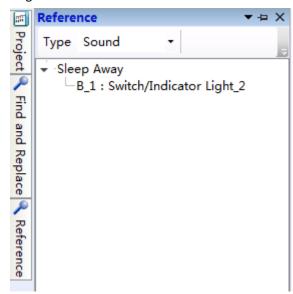
For example, all the uses of "Graphics" in the current project are listed in the following after selecting it.



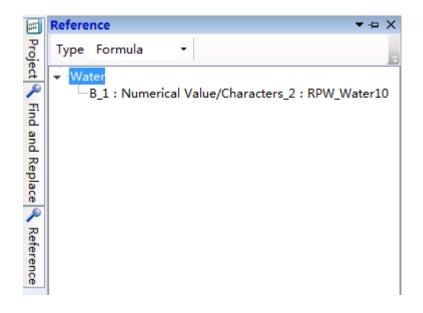
For example,all the uses of "Text" in the current project are listed in the following after selecting it.



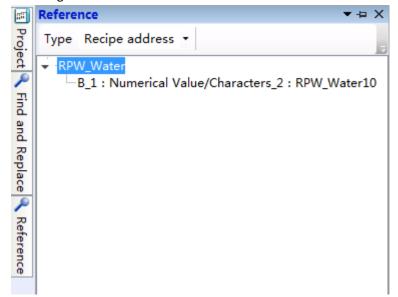
For example, all the uses of "Sound" in the current project are listed in the following after selecting it.



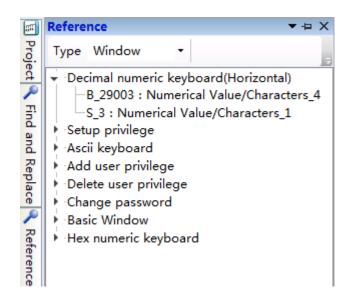
For example, all the uses of "Formula" in the current project are listed in the following after selecting it.



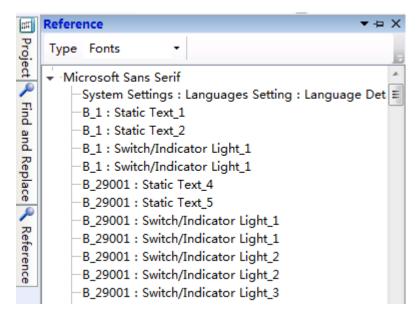
For example, all the uses of "Recipe Address" in the current project are listed in the following after selecting it.



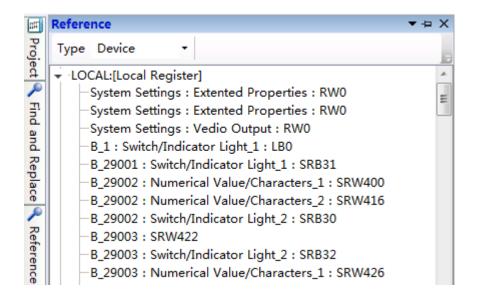
For example, all the uses of "Window" in the current project are listed in the following after selecting it.



For example, all the uses of "Fonts" in the current project are listed in the following after selecting it.

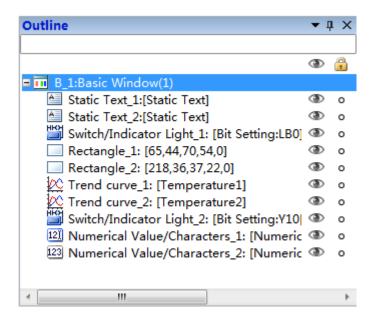


For example, all the uses of "Device" in the current project are listed in the following after selecting it.



5.3 Outline

It will display all components of the current work windowin the "Outline" window.



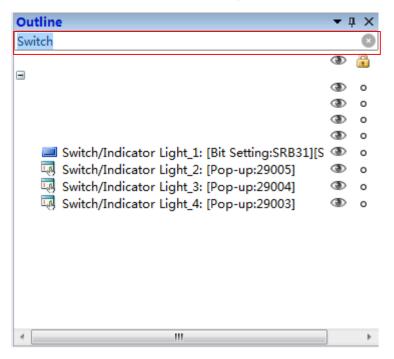
The tool button " \checkmark " on the top right corner which is used to control the display mode of the outline window. The tool button " \P " is used to make the outline window show or auto hide. The tool button " \times " is used to close the outline window.

Outline		тņ	X		
	Float		μ		
- п B 1:Bas	Show				
A Statio	Dock as Tabbed Document		- 1		
Statio	Auto Hide				
Recta	Hide				
Rectangle	_2: [218,36,37,22,0]	۲	0		
📉 Trend cur	ve_1: [Temperature1]	۲	0		
Trend cur	ve_2: [Temperature2]	۲	0		
Switch/Inc	licator Light_2: [Bit Setting:Y10]	۲	0		
12] Numerica	12] Numerical Value/Characters_1: [Numeric @				
123 Numerica	Value/Characters_2: [Numeric	۲	0		
۲ III			•		

Note:

You can check "Outline" from the "View" menu and make the outline window display again after the Outline window is closed.

You can find the component by inputting the component name in the blank text box on the top of the outline window and click the "Enter" key. All the components display can be restored by clear the text box and click the "Enter" key.



When you click the little eye tool " $^{\circ}$ " except the top one, it will change to " $^{\circ}$ " and hide the corresponding component in the window. When you click it again, it will change to " $^{\circ}$ " and make the corresponding component show in the window. The top little eye tool " $^{\circ}$ " will control all components hide or shown by clicking it.

Outline	▼ ₽)
	۵ 🔒
■ 🛄 B_1:Basic Window(1)	Hide or show all
Static Text_1:[Static Text]	components o o
Static Text_2:[Static Text]	۵ ه
🔛 Switch/Indicator Light_1: [Bit Settin	g:LB0] 👁 o
Rectangle_1: [65,44,70,54,0]	· · · ·
Rectangle_2: [218,36,37,22,0]	Hide or show the 🖉 👁 o
🖄 Trend curve_1: [Temperature1]	corresponding component 🔍 👁 💿
💯 Trend curve_2: [Temperature2]	(D) 0
르 Switch/Indicator Light_2: [Bit Settin	g:Y10[Y10]][Function Key:Execute Mac 👁 o
12] Numerical Value/Characters_1: [Nu	umeric Value Input:d10[D10],d10[D10] 👁 o
123 Numerical Value/Characters_2: [Nu	umeric Value Display:RPW_Water10] 🗶 o
▲	

When you click the right tool " \circ ", it will change to " a " and lock the corresponding component in the window. When you click it again, it will change to " \circ " and unlock the corresponding component. The top tool " a " will control all components locked or unlocked by clicking it. The component will not move if it is locked.

Outline	~ ᡎ ;
B_1:Basic Window(1) Static Text_1:[Static Text] Static Text_2:[Static Text] Switch/Indicator Light_1: [Bit Setting:Lf	Lock or unlock all components
 Rectangle_1: [80,41,70,54,0] Rectangle_2: [218,36,37,22,0] Trend curve_1: [Temperature1] Trend curve_2: [Temperature2] Switch/Indicator Light_2: [Bit Setting:Y: Numerical Value/Characters_1: [Nume Numerical Value/Characters_2: [Nume 	ric Value Input:d10[D10],d10[D10] 👁 o
4	

You can right-click to pop up the shortcut menu and cut, copy, paste or delete the selected components. You can look at the components properties by this way.

Outline					•	ф×
B_1:Basic		ndow(1) 1-[Static Text]			•	•
A Static			Ctrl+X		۲	0
Switch	Ep.	Сору	Ctrl+C		۲	0
Rectai	1000				Ð	0
Rectar		Paste	Ctrl+V		۲	0
🖄 Trend	10000	Ser pro	3239		۲	0
🖄 Trend		Delete	Del	and the second state of the second	۲	0
Switch				n Key:Execute Macroinstruction		0
12] Nume		Components Properties		d10[D10],d10[D10]]	۲	0
123 Nume	ricai	value/cnaracters_2: [INumer	ic value Dis	pray:RPW_Water10]	۲	0
						_
-			m			

5.4 Macro

5.4.1 Macro Editor Introduction

The Macro Editor can be opened by clicking "Create Macro" or "Edit Macro" from the "Macro" menu. It is shown as below.

Alias Name Address Alias Name Address macro_3.c X 1 #include (macro.h> 2 int MacroMain() 4 { 5 // Here to add macro code. 6 7 return 0; 8 }	Create Macro Save Save All	👗 🐴 Cut Copy	Paste Undo	C* Redo	😽 Add New Address	🏇 Compiling) Help	
	Create Delete Edit Insert at Cursor Position	1 #include < 2 3 int MacroM 4 { 5 // Her 6	Main() re to add ma	cro code	-	*	 System Func Compution 	tions
Macro Code Input assistant Find and Replace								

5.4.1.1Shortcut Tools Bar

C CH đ X -2 12) 3 *∕∂ ۲ Redo Create Macro Save Save All Cut Copy Paste Undo Add New Address Compiling Help

Shortcut Tools BarcontainsCreateMacro, Save, Save All, Cut, Copy, Paste, Undo, Redo, Add New Address, Compiling and Help buttons.

Create Macro: Create a new macro.

Save: Save the current macro.

Save All: Save all macros.

Cut, Copy, and Paste: Edit the selected macro codes.

Undo, Redo: Undo /Redo the edit of the selected macro codes.

Add New Address: Add a new address alias for the current macro.

Compiling:Compile the current macro.

Help: Open the help file.

Macro Instruction							
		🔏 🗈 Cut Copy P	Paste Undo	℃ Redo	😽 Add New Address	🏇 Compiling	<i>⊗</i> Help
Alias Name Address ModeSwitch X0 Level LW0 Create Delete Insert at Cursor Po Address Statem Macro Code	Edit sistion	int MacroMa { // Here	in() to add mac	ro code.		Operator	
Ready							.tł

5.4.1.2Address Statement

Address Statement is used to create and manage the address aliases in the current macro. The address statement window shows on the left of the macro editor. You can hide



or display it by using " . You can switch to the macro code window by clicking the bottom tab "Macro Code".

Macro Instruction				
Create Macro Save Save All	👗 🗈 🔂 🧐 Cut Copy Paste Undo	Redo Add New Addr	🏇 ress Compiling	⊘ Help
Name Macro Code macro_1 add_c macro_2 sub_c macro_3 mul_c Create Delete Edit Import Export Macro Code Address Statement	<pre>macro_3.c X macro_1.c X 1 #include <macro.h> 2 3 int MacroMain() 4 { 5 // Here to add mac 6 7 return 0; 8 }</macro.h></pre>	ro code.	Derator	
Ready				

5.4.1.3Macro Code

Macro Code window is used to create or manage the macros in the current project.All macros in this project will be listed here.These macros can be edited, deleted, imported and exported. You can simply double-click a macro's name to edit the codes of the macro.

Create M		Save	Save All	∦ Cut	Copy	遇 Paste	5 Undo	C ² Redo	Add New A	ddress	🏇 Compiling	Help
Name macro_1 macro_2 macro_3	Mac add_ sub_ mul_	c	de	1 #i r 2	t Macro	/ <macro. Main() re to a</macro. 		ro code.		Þ	Read Write Fu System Function Compution a Operator	
Create Import	Delete	Exp	: dit ort							•		

5.4.1.4Code Editor Window

Code Editor Window is a code editor which is compatible with C syntax. The detailed macro codes are edited here. Code Editor Window is a multi-tab window. You can open multiple macros and display one macro by clicking the corresponding tab. If a macro code has been edited but not yet saved, it will display "*" in this macro tab. For example, it will display "macro_1.c*" if the codes of this macro are edited and not saved.

Macro Instruction					
Create Macro Save Save All	👗 칠 🙇 🍠 Cut Copy Paste Und	do Redo Add New Addres	≫ s Compiling	Help	
Name Macro Code macro_1 add_c macro_2 sub_c macro_3 mul_c	macro_3.c X macro_1.c 1 #include <macro.h> 2 3 int MacroMain() 4 { 5 // Here to add mathematical 6 // Here to add mathematical 7 return 0; 8 } Use direction unsigned short GetW(* Read one word from : @Address Alias@:Se Address Offset An un</macro.h>			Read Wo Read Do Read Flo Read Flo Set Bit Re Set Word Set Float Set Cons Call Marr Get Erron Delay Fur Set Com Com Dat SQL Data SQL Data	Register: GetBit ord Register: GetWord uble Word Register: GetDWord at Register: GetFloat nsecutive Registers: GetMem egister: SetBit d Register: SetWord rd Register: SetDWord Register: SetFloat ecutive registers: SetMem
Create Delete Edit Import Export Macro Code	Code Preview GetWord(@Level@,0);	Constant Value Data Type: unsigned int	0 🜩	Debug Fi	unction: Debug and Convertion Function
Address Statement	Input assistant Informatic	on List		Input assistant	Find and Replace
Ready					e

5.4.1.5 Input assistant Window

Input assistant Window on the right of the macro editor lists the built-in functions. It will display a detailed description of the function in the Input assistant Window at the lower middle position of the macro editor when you select a built-in function on the right window.

The Input assistant Window at the lower middle position of the macro editor gives the use direction. And you can set the parameters of this function here, too. The function with the parameters you have set will display in the Code Preview edit box. It will be inserted into the current cursor position when you click the "Insert" button.

C		0	* 1	8	5 04	3	***	۲
Create M	acro Save	Save All	Cut Cop	by Paste U	n <mark>do Redo</mark>	Add New Add	tress Compiling	Help
Name	Macro Co	de	macro_3.c	X macro_1.	c X		Search	Replace
nacro_1	add_c		1 #includ	de <macro.h></macro.h>			Range	Direction
nacro_2	sub_c		2	1.			Current Ma	
nacro_3	mul_c		3 int Mac 4 {	roMain()			Current Wa	acro op
							Next Redirect to: Line No.:	1 _ Redirect
		1	•		•	•	Reference:	macro_1 •
				i Read Word		•		
Create	Delete	Edit	Use direct unsigned Read one @Address Address (Detrue V	Address Alia Address Off Parameter T Constant Va	set ype: Constan	0 🗢	Reference: (
Create			unsigned Read one @Addres Address (Address Alia Address Off Parameter T Constant Va Data Type:	set ype: Constan	nt •		
Import			unsigned Read one @Addres Address (Potures (*	Address Alia Address Off Parameter T Constant Va Data Type:	set ype: Constan	nt •	Location	

5.4.1.6 Find and Replace

Find and Replace function can provide a more convenient method of editing the macro codes. It can perform jump between lines and you can view the macro reference here.

5.4.1.7Information List

Macro Instruction			
Create Macro Save Save All	Lut Copy Paste Undo Red	~ ~ ~ ~	<i>⊗</i> Help
Name Macro Code macro_1 add_c macro_2 sub_c macro_3 mul_c	<pre>macro_3.c X macro_1.c* X 1 #include <macro.h> 2 3 int MacroMain() 4 { 5 // Here to add macro co 6 c = a *b 7 8 return 0; 9 } </macro.h></pre>	ode.	Read Write Function Read Bit Register: GetBit Read Word Register: GetWord Read Double Word Register: GetDWord Read Float Register: GetFloat Read Consecutive Registers: GetMem Set Bit Register: SetBit Set Word Register: SetWord Set Float Register: SetDWord Set Float Register: SetMem System Functions Call Marco Get Error Code: GetError Delay Function: Delay
Create Delete Edit Import Export Macro Code	File Content macro_3.c Alias name 'ModeSwi macro_3.c Alias name 'Level' is u		Set Com Parameters: SetComParam Com Data Output: Outport Com Data Import: Inport SQL Database Access command: SqlCmd SQL Database Select: SqlSelect SQL Data Buffer Free: SqlFree Debug Function: Debug © Compution and Convertion Function © Operator
Address Statement Compile Successfully, but there are	Input assistant Information List		Input assistant Find and Replace

Information List window displays prompts and error messages when the macro compile. You can double-click the error message entry in the list if compiling errors occur. It will quickly navigate to the position where this error occurs.

5.4.2 A Macro example

In this example, we use a macro to execute a simple calculation function. The output value (saved in LW1) will be 3 times as much as the input value (saved in LW0) if the output value is less than or equal to 300, or it will be 2 times as much as the input value.

5.4.2.1 Create a new project

Refer to: Detailed manual/File/Create New Project.

Build a new project.

5.4.2.2 Add the components

①Add a numeric value input component.

Refer to: <u>Detailed manual/Component/Numeric Value and Character</u> <u>Display/Numeric Value Input</u>.

Add a numeric value input component in the window and set the address as LW0.

Component	Library	Macro	Recipe	Setup	Tools	Help
Jndo 🔻 🍽 Re	do ▼ ab ⊌ac		🕀 🗎 🗄	≞ \$	i	• 0]- <u>101</u>
IA 1-Eng	lish (Unite	ed Sta≁	🔮 📗 i 智	1 🖀	🔄 B_	1:Basic \
n 🚽 🔤 -	💡 🕶 123	- 🔛 -	0 - 🗈	- 🗠 -		
10	123	Numer	ic Value D	isplay		
	12)	Numer	ic Value In	put 🛌		
	i i i abo	Charac	ter Display	,		
· · · · · · · · · ·	ab)) Charac	ter Input			

eneral	Number Format	Keyboard Setting	Font	Graphics	Dynamic Graphics	Control Settings	Display	
)perati	on Attribute: 🔘 N	Numeric Display 🍥	Numer	ic Input 🔘	Characters Display	Characters Inp	ut	
Read	ing And Writing Ad	ddress Is Different		Passwo	rd			
Read A	ddress:							
Use	Address Tag							
Deivce:	LOCAL:[Local Reg	jister]						
Addres Format	s Type: LW s: 0	System R 0 Occupy: 1	egister Wor					

 $\textcircled{2}\mbox{Add}$ a value display component.

Refer to: <u>Detailed manual/Component/Numeric Value and Character</u> <u>Display/Numeric Value Display</u>.

Add a numeric value display component in the window, and set the address as LW1.

Component	Library	Macro	Recipe	Setup	Tools	Help
Jndo 🔻 🍽 Ree	do ▼		🕀 🗎 🗓	⊫		-o[- <u>uí</u>
3 14 1-Eng	lish (Unite	ed Sta≁	🧕 📗 i 省	1 🖬 🔗	🔄 B_	1:Basic
🗉 📮 🔡 -	💡 👻 🔝	- Hed →	Ø • 📲	- 🙋 -	6001 -	
2	123	Numer	ic Value D	isplay	×	
	<u>12)</u>	Numer	ic Value Ir	nput		
	iii abo	Charac	ter Displa	у		
· · · · · · · · · ·	: : : : : : [ab]	Charac	ter Input			

umeric Display	8
General Number Format Font Graphics Dynamic Graphics Display	
Operation Attribute: Numeric Display Numeric Input Characters Display Characters In 	put
Read Address:	
Deivce: LOCAL:[Local Register] Address Type: LW	
Address: 1 System Register Format(Range) DDDDDD(0 Occupy: 1 - Word	
Help Description:	OK Cancel

 $\textcircled{3}\xspace{3}\xspace{4}$

Refer to: Detailed manual/Drawing/Static Text.

Add text description for the two numeric value components, as shown as below.



5.4.2.3 Create and edit a macro

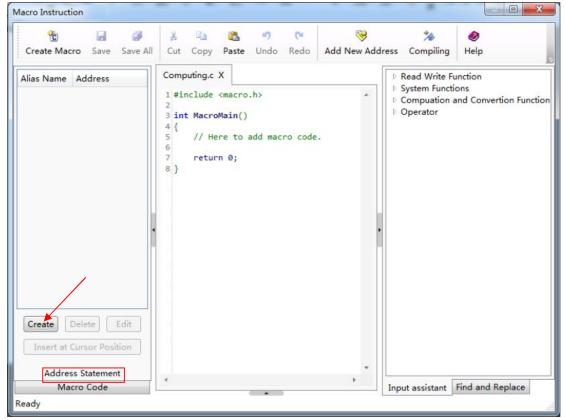
①Create anew macro.

Refer to: <u>Detailed manual/Macro/CreateMacro</u>.

Create a new macro, named "Computing".

②Add an address statement.

Add an address statement.Define the LW starting addressLWO as LW_Start_Addr.



Bit Address Word Address Use Address Tag Deivce: LOCAL:[Local Register] Address Type: LW Address: 0 System Register Format(Range) DDDDDDD(0~799999)Occupy: 1 Word	Address Alias:	Evelocart_Addi		
Address Type: LW Address: 0 System Register	Bit Address	Word Address		
Address Type: LW Address: 0 System Register	Use Addres	s Tag		
Address: 0 System Register	eivce: LOCA	L:[Local Register]		•
ormat(Range) DDDDDD(0~799999)Occupy: 1 Vord	Address Type:		•	
			▼ \$ystem Regi	ster
	Address: 0	×		
	Address: 0	×		

Macro Instruction			
Create Macro Save Save All	🐉 칠 遇 🎝 (2 Cut Copy Paste Undo Red	Add New Address Compi	ing Help
Alias Name Address LW_Start_Addr LW0 Create Delete Edit Insert at Cursor Position Address Statement	Computing.c X 1 #include <macro.h> 2 3 int MacroMain() 4 { 5 // Here to add macro co 6 7 return 0; 8 }</macro.h>	 System F Compute Operator 	ion and Convertion Function
Macro Code	*	► Input assista	ant Find and Replace
Ready			

③Edit the macro codes.

In the macro code editor window, edit the macro codes according to the logic previously defined. The syntax rules follow the C language specification. The final macro codes are as follows.

```
Computing.c* X
1 #include <macro.h>
2
3 int MacroMain()
4 {
      // Here to add macro code.
5
      unsigned short x = 0, y = 0;
6
                                     //define the variables
      x = GetWord(@LW_Start_Addr@,0);GetWord(@LW_Start_Addr@,0);//read LW0 to x
7
8
      if(x <= 300)
                                      //if x <= 300
9
      {
          y = x * 3;
                                      //y = 3x
10
11
      }
      else
                                      //or
12
13
      {
          y = x * 2;
                                      //y = 2x
14
15
      SetWord(@LW_Start_Addr@,1,y); //write the value of y to LW1
16
17
      return 0;
18 }
```

④Compile and save.

Click the Compile button " ² " on the shortcut toolbar to compile after finish editing the macro codes. A message box will pop up to display "Compile Successfully" if no syntax errors; otherwise the message box will display "Compile Failure".

Create Macro Save Save All	👗 칠 🚵 Cut Copy Paste	Undo Redo	😽 Add New Address	🏇 Compiling	lelp
Nias Name Address N_Start_Addr LW0	8 if(x <= 300) 9 { 10 y = x * 11 } 12 else 13 {	3; 2; Compiling _st	اتۇ، 0) ; GetWord (ۇ * //if x + //y = 3، //or Compile Successfully	Read Read Read Set B Set W Et D et F et c im F pua rato	ite Function Bit Register: GetBit Word Register: GetV Double Word Regist Float Register: GetFlo Consecutive Register it Register: SetBit /ord Register: SetFloat onsecutive registers: SetFloat onsecutive registers: Set functions tion and Convertion F r
Address Statement				1. J	nput assistant
Macro Code	Input assistant Infor	mation List		Fir	nd and Replace
					Select And Exit Qui

🔞 🖬 🗐	1 ×	E	2	5	C	3	**	٨
Create Macro Save Save	All Cut	Сору	Paste	Undo	Redo	Add New Address	Compiling	Help
Name Address	7 8 9 10 11	<pre>if(x - { y }</pre>)	art_Áddı	r@,0);GetWord((* //if x //y = 3)	Read Read Read Read Read	rite Function Bit Register: GetBit Word Register: GetV Double Word Regist Float Register: GetFl Consecutive Register
	12 13 14 15 16 17 18 }	} SetWor return		_Start_	Addr@,1	Compiling Comp	ile Failure OK	Register: SetBit Register: SetWo Register: SetVo legister: SetFloa utive registers: ons and Convertion
Create Delete Edit					efore ')' 1	token 15 2		
Address Statement							·	mput assistant

If compiling fails, you should modify the macro codes according to the error messages of the information list until compiling is successful.

Click the Save button "

5.4.2.4 Execute the macro

There are many ways to execute the macro. You can set macros for the buttons, the notification settings in the component control settings and timer function.

Action:	Press 🔹
Function Setting:	
Keyboard Function	Return 👻
Execute Macro	Computi 🔹 Macro Code 🛛 Edit
Sysem Operation	Touch Panel Calibration
	O Import/Export Import Project to 💌
	○ Save Screenshort to Extended Memory USB1 ▼
	O Clear Event
	🔘 Clear All Formula
	Clear RW
	Clear All History Data
D Print	Horizontal Print O Print Vertically

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eneral Toggle Switch Gra	phics Dynamic Graphics	Control Settings Display
Activation Settings Always Conditional		Security Settings Minimum Press Time: 0 (X0.1S) Require confirmation prior to execution
		Waiting Time 100 🔷 (X0.1S) Records Operation Minimum Operation Interval: 0 🚔 (X0.1S)
		Notification Settings Before Writing Notify Bit Address:
Keyboard		 Notify Byte Address: Trigger Macro: Computi Macro Code Edit
Use Keyboard		Audio

rigger and Stop 🧿	Timer Function
Run Macro Cor	nputi 🔹 Macro Code 🛛 Edit
Status Setting	

In this example, execute the "Computing" macro when the input value changes by using the timer function. See settings as shown as below. The detailed using method of the timer component, please refer to: <u>Detailed manual/Component/Timer and Data</u> <u>Transmission/Timer</u>.

mer	8 ×
Trigger and Stop Timer Function Timing and Execution Execution Period: 10 x 0.1S Delay Trigger Condition:	Condition for stop
 Bit Word Condition Trigger when the window is open 	 Timer will stop when the window closed. If need to end, please choose the end condition.
Trigger Address: LW0	 Stop when specified count value reached Condition Judgement Repeat Times: Constant 1
Help	OK Cancel

Timer	8	×
Trigger and Stop Timer Function		
Run Macro Computi Macro Code Edit		
Status Setting		
Audio Play		
Help	Ca	ancel

5.4.2.5 Offline Simulation

Offline simulation can be executed to verify the correction of the function after the above steps are finished.

Click the "Offline Simulation" button" on the shortcut tools bar.

Tools Help
릐 ㅠ ~ ㅛ 알 쥐 왜 % 똑 ኙ 두 두 📕 :
[B_1:Basic Window(1) ▼ ▷ □ □ □ →□
- 🛛 🕉 🕉 🚵 📥 🌤 🕨 📄
Offline Simulation

A "Clear Records" message box will pop up. After clicking the button "OK", the project will compile.

Clear Records -	
Clean up RW	data
Clean up reci	pe data
Clean up data	a sampling and history alerts
Clean up spe	cial registers
	OK Cancel
	-

Offline simulating		
	Build Data	

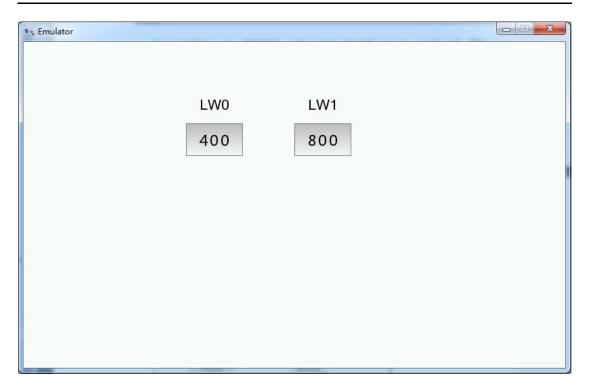
The project compiling needs a little time. There is a progress bar to indicate the compiling progress. The simulator window (Emulator) will open automatically after the compiling is finished.

S Emulator			
	LWO	LW1	
	0	0	

Input the value 100 to LW0. The output value of LW1 will be 300 according to the rules that the output value will be 3 times as much as the input value if the input value is less than or equal to 300.

Emulator	Appendix and a second s	to only a data of the last to be	
	LW0	LW1	
	100	200	
	100	300	

Input the value 400 to LW0. The output value of LW1 will be 800 according to the rules that the output value will be 2 times as much as the input value if the input value is not less than or equal to 300.



5.5 Online software upgrade

If the user can not receive the automatic update reminders, the following solutions are given.

(1) Execute "cmd" in the administrator mode.Please input the following commands.

rmdir /s /q "%userprofile%\wc"

rmdir /s /q "%appdata%\wyUpdate AU"

(2) Reopen the HTP Designer software.

6 Appendix

6.1The Use of Register

The Type of HMI register includes "Word" register and "bit register".

6.1.1 Word Register

LW:An internal "Word Register" in HMI. The data is lost when the power is off.The register address range is 0 - 799,999.

RW: An internal "Word Register" in HMI. The data can be saved if power is off. The register address range is 0 - 524288.

SRW: A special internal "Word Register" in HMI.The register address range is 0 - 11023. You can click the "System Register" button and open the "System Special Function Register" to get the specific function of each SRW register when you use the component such as "Numeric Display". For example, SRW0 ~ 7 saves the system time. The "Description" introduces the function of the selected register.

meric Di	splay			- ?
General	Number Format	Font Graphics	Dynamic Graphics Display	
Operati	on Attribute: 💿 N	Numeric Display (Numeric Input Characters Display Characte	ers Input
Deed 4	ddress:		E Password	
	Address Tag			
	LOCAL:[Local Reg	ister]	•	
Addres Formati	s Type: LW s: 0 \$ (Range) DDDDDD(ress Index		word	
Help	Description:			OK

6.1.2 Bit Register

LB:An internal "Bit Register" in HMI. The data is lost when the power is off. The register address is 0 - 799,999.

SRB: A special internal "Bit Register" in HMI.The register address range is 0 - 11023. You can click the "System register" button and open the "System Special Function Register" to get the specific function of each SRB register when you use the component such as "Bit Set". The "Description" introduces the function of the selected register. For example, SRB16 is ON when the touch screen is pressed.

HTP Designer Configuration Software User Manual

Setting Property				
Action:	Press	•		
Execute Setting:	On	•		
Address				
Use Addres	ss Tag			
Address Type Address: 0	ithin a Byte Regist	•	System Re	egister
🔲 Address In				
Help(H)			ок	Cancel

List Information	Description
IMI O PLC	When pressing the touch, SRB16 is on, simultaneously the X,Y coordinate values of the touch screen will be
 Internet Hardware SRB3:Restart SRB4:restart and enter brush status SRB5:turn off the backlight SRB6:SD card inserting status SRB7~9:U-disc inserting status SRB11:USB downloading line connecting status SRB15:clear off buzzering function compulsively SRB16:Press the touch SRB17:write compulsively SRB18:unmount SD card safely SRB19:unmount U-disk safely SRB10010:buzzer mute SRB10011:audio mute SRB10011:start manu Loading displaying mark keyboard VNC(remote monitoring) Communication User authority 	Indicated between SRW450 and SRW451

Note:"Word Register" and "Bit register" in HMI are two different areas, so the address does not overlap.For example, LW0 and LB0 are two registers that they are not related. SRW0 and SRB0 are also two different special system registers. But each word register can be divided into 16bit registers.For example, LW0 can be divided into 16bit registers: LW0.0 \sim 0.15.

6.2 Built-in Functions

You can find the built-in functions when you create or edit Micros. They can be used by calling directly.

Create Macro Save Save	All Cut Copy Paste Undo Redo	Add New Address Compiling	Help
Alias Name Address	<pre>macro_l.c X 1 #include <macro.h> 2 3 int MacroMain() 4 { 5 // Here to add macro code. 6 7 return 0; 8 } 4 Use direction </macro.h></pre>	, , , , , , , , , , , , , , , , , , ,	Write Function ad Bit Register: GetBit ad Word Register: GetWord ad Double Word Register: GetDWord ad Float Register: GetFloat ad Consecutive Register: GetMem Bit Register: SetBit Word Register: SetWord Float Register: SetFloat consecutive registers: SetMord Float Register: SetFloat consecutive registers: SetMem a Functions I Marco: CallMacro t Error Code: GetError ay Function: Delay Com Parameters: SetComParam m Data Output: Outport m Data Import: Inport L Database Access command: SqlCm L Database Select: SqlSelect L Data Buffer Free: SqlFree bug Function: Debug uation and Convertion Function tor
Create Delete Edit Insert at Cursor Position	Code Preview	Insert	

6.2.1 Read Write Function

6.2.1.1 Read Bit Register: GetBit

boolGetBit(@Address Alias@,Address Offset):

Read one bit from designated register address.

@Address Alias@: Select a bit address register

Address Offset: An unsigned integer, Read Address=The address specified by @Address Alias@+Address Offset

Return Value: BOOL, the value of the bit which was read

Error Information:

Get the error code using GetError() function.

int error=GetError();

Example:

bool power=GetBit(@power_on@,2):

In this example, power_on is the alias of LBO, so the function GetBit will read the bit value from LB2 and return to a BOOL variable power.

6.2.1.2 Read Word Register: GetWord

unsigned short GetWord(@Address Alias@, Address Offset):

Read one word from specified register address.

@Address Alias@: Select a word address register

Address Offset: An unsigned integer, Read Address=The address specified by @Address Alias@+Address Offset

Return Value: Unsigned Short Type, the value of the word which was read

Error Information:Get the error code using GetError() function.

int error=GetError();

Example:

unsigned short speed=GetWord(@Speed@,3):

The Alias @Speed@ represents the register LW0 in this example, so the target word register is LW3 (LW0+3), the value of LW3 is returned to an Unsigned Short variable named "speed".

short speed = (short) GetWord(@Speed@,3): //If use signed number, you can use force conversion.

6.2.1.3 Read Double Word Register: GetDWord

unsignedintGetDWord(@Address Alias@, Address Offset):

Read a double word from a specified register address.

@Address Alias@: Select an address register (word or double word).

Address Offset: An unsigned integer, Read Address=The address specified by @Address Alias@+Address Offset.

Return Value: unsignedint type, the value of the double word which was read. If the address is word type, the function will return two consecutive words.

Error Information:Get the error code using GetError() function.

int error=GetError();

Example:

unsignedint speed=GetDWord(@Speed@,3):

The Alias @Speed@ represents the register LWO in this example, so the target word register is LW3 and LW4, the value of LW3 and LW4 are returned to a Unsigned int variable named "speed".

int speed = (int) GetDWord(@Speed@,3): //If use signed number, you can use force conversion.

6.2.1.4 Read Float Register: GetFloat

floatGetFloat(@Address Alias@,Address Offset):

Read a single precision float number from specified register address.

@Address Alias@: Select a address register (word or double word)

Address Offset: An unsigned integer, Read Address=The address specified by @Address Alias@+Address Offset

Return Value: float type, the value of the float number stored in the Word register or two consecutive word registers which are read.

Error Information:Get the error code using GetError() function.

int error=GetError();

Example:

float speed=GetFloat(@Speed@,3):

The Alias @Speed@ represents the register LW0 in this example, so the target word register is LW3 and LW4, the double word stored in LW3 and LW4 are returned to a float variable named "speed".

6.2.1.5 Read Consecutive Registers: GetMem

intGetMem(Array Pointer,@AddressAlias@,AddressOffset,Byte Number):

Read consecutive words from specified registers.

Array Pointer: pointer type, point to a pre-defined array.

@Address Alias@: select a register as the beginning address, could be a bit type or word type register.

Address Offset: an unsigned int number. The read beginning address=The address specified by @Address Alias@ + Address Offset.

Number of Bytes: an unsigned int number, specifying how many bytes should be read. Please note: Number of Bytes = sizeof (Type of the Array) * (number of elements in the array). The upper limit of Number of Bytes is 20480.

Return Value: int type, 0-Failure, 1-Success.

Example:

unsigned short data[10];

int error = GetMem(data,@Array Data@,2,10*sizeof(unsigned short)):

In this example, @Array Data@ = LW0, so the function will return 10 words from the address starting from LW2.

char data[5];

int error = GetMem(data,@Array Data@,2,5):

@Array Data@ = LW0, so the function will read 3 words (each word contains 2 variables of char type, the higher half of the last word is invalid) and copy to the array named "data"

6.2.1.6 Set Bit Register: SetBit

intSetBit(@Address Alias@,AddressOffset,Set Value):

Write a bool value into one bit of a designated register address.

@Address Alias@: Select a bit address register

Address Offset: An unsigned integer, Target Address=The address specified by @Address Alias@+Address Offset.

Set Value: BOOL, the value to be written into the designated bit register, 0 or 1.

Return Value: int type, 0-Failure, 1-Success.

Example:

int error=SetBit(@power@,2,1)

In this example, power is the alias of LBO, so the function SetBit will write "1" into the bit LB2.

6.2.1.7 Set Word Register: SetWord

intSetWord(@Address Alias@,AddressOffset,Set Value):

Write one 16-bit number into a designated word register.

@Address Alias@: Select a word type address.

Address Offset: unsigned int, TargetAddress=The address represented by @Address Alias@+Offset.

Set Value: short type, the value to be written into the designated register.

Return Value: int type, 0-Failure, 1-Success.

Example:

short speed;

int error=SetWord(@Speed@,3,speed);

In this example, the alias @Speed@ refers to LWO, so the function will write the value of speed into the word register LW3 .

6.2.1.8 Set Double Word Register: SetDWord

boolSetDWord(@Address Alias@,AddressOffset,Set Value):

Write one 32-bit number into a designated word register, the register could be a Dword register or two consecutive word registers.

@Address Alias@: Select a word or dword type address.

Address Offset: unsigned int, TargetAddress=The address represented by @Address Alias@+Offset.

Set Value: int type, the value to be written into the designated register.

Return Value: int type, 0-Failure, 1-Success.

Example:

unsignedint speed;

int error=SetDWord(@Speed@,3,speed):

In this example, the alias @Speed@ refers to LWO, so the function will write the value of speed into the word registers LW3 and LW4.

6.2.1.9 Set Float Register: SetFloat

intSetFloat(@Address Alias@,AddressOffset,Set Value):

Write one single precision float number into a designated word register.

@Address Alias@: Select a word or dword type address.

Address Offset: unsigned int, TargetAddress=The address represented by @Address Alias@+Offset.

Set Value: float type, the float value to be written into the designated register.

Return Value: int type, 0-Failure, 1-Success.

Example:

float speed=3.14;

int error=SetFloat(@Speed@,3,speed):

In this example, the alias @Speed@ refers to LWO, so the function will write the value of speed into the dword registers consist of LW3 and LW4.

6.2.1.10 Set Consecutive Registers: SetMem

intSetMem(Array Pointer,@AddressAlias@,AddressOffset,Byte Number):

Write the array data into consecutive registers.

Array Pointer: pointer type, point to a pre-defined array.

@Address Alias@: A register as the beginning address. It can be a bit type or word type register.

Address Offset: an unsigned int number. The read beginning address=The address specified by @Address Alias@ + Address Offset.

Number of Bytes: an unsigned int number, specifying how many bytes should be read. Please note: Number of Bytes = sizeof (Type of the Array) * (number of elements in the array). The upper limit of Number of Bytes is 20480.

Return Value: int type, 0-Failure, 1-Success.

Example:

unsigned short data[10];

int error = SetMem(data,@Array Data@,2,10*sizeof(unsigned short)):

In this example, @Array Data@ = LW0, so the function will copy 10 words to the 10 word register address starting from LW2.

char data[5];

int error = SetMem(data,@Array Data@,2,5):

@Array Data@ = LW0, so the function will copy the value from the array named "data" to 3 words starting from LW2(each word contains 2 variables of char type, the higher half of the last word is invalid)

6.2.2 System Functions

6.2.2.1 Call Macro: CallMacro

intCallMacro("Macro Name"):

Call Designated Macro.

Macro Name: The content within the double quotes is the name of the macro being called, don't use any file name suffix.

Return Value: int type, the return value of the main function of the macro will be returned.

Example:

int error = CallMacro("Macro_1");

6.2.2.2 Get Error Code: GetError

intGetError():

Get error code.

No input parameters.

Return Value: int type, the corresponding error code.

0-Not executed

1-Success

2-Timeout

3-Error

4-Socket word error

5-Communication failure

Example:

int error =GetError();

6.2.2.3 Delay Function: Delay

Delay(ms):

Delay Function, the input parameter is the number of mili-seconds, unsigned int type.

Return Value: None.

Example:

Delay(1000)://Delay 1000ms.

6.2.2.4 Set Com Parameters: SetComParam

intSetComParam(Port Number,BaudRate,databit,stopbit,checkbit,communication mode);

Port Number: the ID of com port, unsigned int type. 0-COM1, 1-COM2, 2-COM3...

Baud Rate: the speed of communication, int type. e.g. 9600, 115200

Date bit: the number of bits used as data, int type, 7,8

Stop bit: the stop bit, int type, 1,2

Check bit: specify the way of checking, int type, 'n' or 110-no check, 'o' or 111-odd check, 'e' or 101-even check

Communication mode: set the mode of communication, int type, 0-232, 1-485-4w, 2-485-2w.

Return Value: 0-Failed, 1-Success.

Example:

int error=SetComParam(0,115200,8,1,'n',2);//COM1,485-2w, 115200,8,1,N.

6.2.2.5 Com Data Output: Outport

intOutport(Port ID, BufferPointer, Data Quantity);

Please call the SetComParam function to initialize the serial port before call this function.

Port ID:the ID of com port, unsigned int type. 0-COM1, 1-COM2, 2-COM3...

Buffer Pointer: the pointer to the buffer array.

Data Quantity: unsigned short, the number of data to be sent out.

Return Value: the number of bytes of the output data.

Example:

unsigned char send_buff[]="Hello world!";

int error=Outport(1,send_buff,12);

6.2.2.6 Com Data Import: Inport

intInport(Port ID, BufferPointer, BufferSize, Timeout Limit):

Please call the SetComParam function to initialize the serial port before call this function.

Port ID:the ID of com port, unsigned int type. 0-COM1, 1-COM2, 2-COM3...

Buffer Pointer: the pointer to the buffer array

Buffer Size: The length of buffer being read, the size will be returned when read complete, maximum buffer size is 4096.

Timeout Limit: unit mS, if no data is received within nmS, or buffer is full, the receive function will return.

Return Value: the number of data actually be read, return value of -1 indicates error.

Example:

unsigned char recv_buff[];

intdata_count=Inport(1,recv_buff,16,10);

6.2.2.7 SQL Database Access Command: SqlCmd

intSqlCmd(Database file ID, SQL command string pointer);

Database file ID: int type, 0 represents the database for historical and alarm events; 1,2,3...represent the database file corresponding to the data sampling IDs.

SQL command string pointer: char type, pointer to the SQL command strings.

Return Value: int type, 1-Success, 0-Failed.

6.2.2.8 SQL Database Select: SqlSelect

intSqlSelect(Database file ID, SQL command string pointer, Buffer of inquiry results, Number of Rows Returned, Number of Columns Returned);

Database file ID: int type, 0 represents the database for historical and alarm events; 1,2,3...represent the database file corresponding to the data sampling IDs.

SQL command string pointer: char type, pointer to the SQL command strings.

Buffer of inquiry results: char type, pointer.

Number of Rows Returned: int type, the number of rows of the returned results.

Number of Columns Returned: int type, the number of columns of the returned results.

Return Value: int type, 1-Success, 0-Failed.

Example:

char **pResult;

intRow,Col;

int err=SqlSelect(2,"xxx",pResult,Row,Col);

SqlFree(pResult);

6.2.2.9 SQL Data Buffer Free: SqlFree

intSqlFree(Pointer to Database inquiry buffer);

Pointer to database inquiry buffer: Char Array pointer.

Return Value: int type, 1-Success, 0-Failure.

Example:

char **pResult;

intRow,Col;

int err=SqlSelect(2,"xxx",pResult,Row,Col);

SqlFree(pResult);

6.2.2.10 Debug Function: Debug

void Debug(Port ID,Format String,Var1,Var2...);

Please call the SetComParam function to initialize the serial port before call this function. But serial port initialization is not needed if only debug in the simulation window.

Port ID:the ID of com port, unsigned int type. 0-COM1, 1-COM2, 2-COM3...

Format String: the format of output string, usage is same as printf in C language.

Variables: the name of variables corresponding to the output strings, same usage as printffunction in C programming language.

The format is defined below, [] indicates optional elements.

%[Designated Parameter][Identifier][Width][.Precision]Designator

If you want to output '%', please use '%%'. 1- Define the direction of processing. Negative sign means the direction is from backend to the beginning.2- The word element for space filling. 0 means fill 0s to the spaces.3- The width of the character.4- Precision, the number of decimal places.

Character Conversion:

%% Print % sign, no conversion

%c Convert the integer to corresponding ASCII character

%d Convert the integer to decimal number

%f Convert to floating number

%o Convert the integer to Octal numbers

%s Convert the integer to string

%x Convert the integer to lower case hexadecimal number

%X Convert the integer to upper case hexadecimal number

Example:

intitest=12;

floatftest=65.4321;

Debug(0,"itest=%d\n ftest=%2.3f\n",itest,ftest);

Output Result:

itest=12

ftest=65.432

6.2.3 Computation and Conversion Function

6.2.3.1 CRC check function, 16Bit

unsigned short CRC16(Array Pointer, Computation Length);

Array Pointer: point to the array being processed.

Computation Length: the number of bytes being processed.

Return Value: 16-bit CRC check value.

Example:

unsigned char data[]={5,6,3,2,18};

unsigned short crc16=CRC16(data,5);

6.2.4 Operator

6.2.4.1 Assignment Operator

=

Assignment operator for assignment.

Example:

inti;

i=100;

6.3 System Prompts List

There will be some system prompts when an error occurred during the HTP Designer software is running. The error information saves in the internal address SRW70.

SRW70 = 1- Input value exceeds the limit

SRW70 = 2- Being processed

Success SRW70 = 3- Operation is done successfully

SRW70 = 4- Data Range is out

SRW70 = 5- Insufficient memory

SRW70 = 6- Macro execution occurs error

SRW70 = 7- Password input error

SRW70 = 8- Connection server fails

SRW70 = 9- Operation failed

SRW70 = 10- Inconsistent with current user permissions

SRW70 = 11- Logout successfully

SRW70 = 12- Log in repeatedly

SRW70 = 13- No SD card is detected

SRW70 = 14- USB dsik1 was not detected

SRW70 = 15- USB disk 2 was not detected

SRW70 = 16- Database is upgrading, please wait ...

SRW70 = 17- Beingqueried, please wait ...

SRW70= 137- File does not exist

SRW70= 138- File type is error

SRW70= 139- Operation failed

SRW70= 140- File already exists

SRW70= 141- Wrong password.

SRW70=142- Insufficient memory space in the touch screen

SRW70=143-Insufficient memory space in SD card or USB disk

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