

# **TH Series Touch Screen USER MANUAL**

- TH465-M 4.3 inch, TFT True Colour Display, 480x272 Pixels, 8MB Memory, 2 RS232/485 Serial Ports, 3 USB Ports
- TH765-M 7 inch, TFT True Colour Display, 800x448 Pixels, 128MB Memory, 2 RS232/485 Serial Ports, 3 USB Ports
- TH865-M 8 inch, TFT True Colour Display, 800x600 Pixels, 128MB Memory, 2 RS232/485 Serial Ports, 3 USB Ports
- THA61-M 10.4 inch, TFT True Colour Display, 640x480 Pixels, 128MB Memory, 2 RS232/485 Serial Ports, 3 USB Ports



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# 1 Summarize

Xinje new touch screen TH series are based on TP series products. It not only has the language, characters editing, data display, monitor and alarm functions but also has 65536 true color LCD which can bring you brand-new vision enjoyment. It has the advantage of large capability for data duplication and friendly user interface. It provides perfect humanized solution for industrial system, make it easy to control the system.

The function compare between TP and TH:

	Function compare								
Series	Colours	Font setting	3D pictur e librar y	Adju st the touc h area	Animation	Password	Two ports communicat e-on independent ly	USB data downlo ad	USB data duplicate -on
ТР	256	$\checkmark$	0	0	$\checkmark$	$\checkmark$	$\checkmark$	0	0
TH	65536	$\checkmark$	$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$

1-1 Performance and characteristics

1-2 Work flow



### **1-1 Performance and characteristics**

### 1-1-1 Display

- Various models: product size from 4.7" to 10.4".
- Rich colours: 65536 TFT true colour, support BMP, JPG format, display more lively.
- Adjust function for touch screen.
- Support multinational language: simple/traditional Chinese, English, Japanese, Korean. Define the font as you like, support underline, italic, bold, shadow and other art words.
- Large picture library, with preloading mode, no delay for screen motion.

# 1-1-2 Control

- Switch control, dynamic monitor and display data, bar map, real time trend map, time trend map, XY trend map, discrete/continue column map, real time alarm, history alarm record...
- User-defined data collection and saving function
- Set user's authority, 9 levels password protection
- Simulate online/offline, upload/download data, configuration function
- USB port inside, connect flash disk to realize data duplication function, speed 480Mbps
- Special USB-B port for data download, make the data transfer faster
- User-defined animation track design

#### **1-1-3 Communication**

- Two ports communication independently, can connect two different devices at the same time
- Drive the panel printer directly, economical and flexible
- Support free format communication, user edits the driver program



#### 1-2 Work flow

The work flow of using TH:



#### Note:

Please use TouchWin V2.C and later version to edit your TH project.

# 2 General specifications

This chapter will introduce the specification of TH series touch screen. TH series touch screen contains TH465-M, TH765-M, TH856-M and THA61-M.

Series	Туреѕ			
тн	TH465-M	TH765-M	TH865-M	THA61-M

2-1	TH465-M
2-2	TH565-M
2-3	TH665-M
2-4	THA61-M



Item		TH465-M	
	Input voltage	DC20-DC28V	
	Consumption	130mA	
	current		
Flootrical	Momentary power	Less than 10ms	
Electrical	off allowance		
	Withstand voltage	AC1000V-10mA 1 minute (signal and time)	
	Insulated	DC500V- about 10M $\Omega$ ( signal and time )	
	impedance		
	COM1	Support RS-232/RS-485	
	COM2	Support RS-232/RS422/RS485	
Interface	USB1	USB-A (accord with USB2.0)	
	USB2	USB-A (accord with USB2.0)	
	USB3	USB-B (accord with USB2.0)	
	Operation	0-50°C	
	temperature	00.0000	
	Reserve	-20-60°C	
		20.05% (no condensation )	
	Environment	20-85% (no condensation)	
Environmont	Withstand assillation	10.25Hz (X, X, Z apple direction 20 minutes	
Environment		2G)	
	Anti-jamming	Voltage noise: 1000Vp-p, pulse 1us, 1	
		minute	
	Surrounding air	No corrosive gas	
	Protection	IP65	
	construction		
	Туре	65536 true colours	
	Screen size	4.3 inch	
	Use life	More than 50000 hours, 24 hours running	
Screen		when surrounding temperature is 25 °C	
specification	Resolution	80*272	
	Contrast	Non-adjustable	
	Character	Chinese, English, Korean, Japanese	
		Any size and font	
	Touch panel	4-wire resistance mode	
Memory	Screen	8MB	
	Cooling method	Natural air cooling	
Construction	Exterior dimension	150.0*100.0*41.0mm	
	Mounting dimension	144.0*94.0mm	



# 2-2 TH765-M

Item		ТН765-М
	Input voltage	DC20-DC28V
	Consumption current	250mA
Electrical	Momentary power off	Less than 10ms
Electrical	allowance	
	Withstand voltage	AC1000V-10mA 1 minute (signal and time)
	Insulated impedance	DC500V- about $10M\Omega$ ( signal and time )
	COM1	Support RS-232/RS-485
	COM2	Support RS-232/RS422/RS485
Interface	USB1	USB-A (accord with USB2.0)
	USB2	USB-A (accord with USB2.0)
	USB3	USB-B (accord with USB2.0)
	Operation	0-50°C
	temperature	
	Reserve temperature	-20-60°C
	Environment	20-85% (no condensation)
Environmont	temperature	
Environment	Withstand oscillation	10-25Hz (X, Y, Z each direction 30 minutes 2G)
	Anti-jamming	Voltage noise: 1000Vp-p, pulse 1us, 1 minute
	Surrounding air	No corrosive gas
	Protection	IP65
	construction	
	Туре	65536 true colors
	Screen size	7 inch
	Use life	More than 50000 hours, 24 hours running when
Screen		surrounding temperature is 25 °C
specification	Resolution	800*448
specification	Contrast	Non-adjustable
	Character	Chinese, English, Korean, Japanese
	Character size	Any size and font
	Touch panel	4-wire resistance mode
Memory	Screen	128MB
	Cooling method	Natural air cooling
Construction	Exterior dimension	205.0*151.5*48.9mm
	Mounting dimension	192.0*138.5mm



Itom		TH865-M
item		
	Input voltage	DC20-DC28V
	Consumption current	260mA
Fleetrical	Momentary power off	Less than 10ms
Electrical	allowance	
	Withstand voltage	AC1000V-10mA 1 minute (signal and time)
	Insulated impedance	DC500V- about $10M\Omega$ (signal and time)
	COM1	Support RS-232/RS-485
	COM2	Support RS-232/RS422/RS485
Interface	USB1	USB-A (accord with USB2.0)
	USB2	USB-A (accord with USB2.0)
	USB3	USB-B (accord with USB2.0)
	Operation	0-50°C
	temperature	
	Reserve temperature	-20-60°C
	Environment	20-85% (no condensation)
Fusirement	temperature	
Environment	Withstand oscillation	10-25Hz (X, Y, Z each direction 30 minutes 2G)
	Anti-jamming	Voltage noise: 1000Vp-p, pulse 1us, 1 minute
	Surrounding air	No corrosive gas
	Protection	IP65
	construction	
	Туре	65536 true colors
	Screen size	8 inch
	Use life	More than 50000 hours, 24 hours running when
Coroon		surrounding temperature is 25 °C
Screen	Resolution	800*600
specification	Contrast	Non-adjustable
	Character	Chinese, English, Korean, Japanese
	Character size	Any size and font
	Touch panel	4-wire resistance mode
Memory	Screen	128MB
	Cooling method	Natural air cooling
Construction	Cooling method	Natural all cooling
Construction		224.4*170.8*45.5000
	Mounting dimension	211.4*157.8mm



ltem		THA61-M
	Input voltage	DC20-DC28V
	Consumption current	630mA
Fleetrical	Momentary power off	Less than 10ms
Electrical	allowance	
	Withstand voltage	AC1000V-10mA 1 minute (signal and time)
	Insulated impedance	DC500V- about $10M\Omega$ ( signal and time )
	COM1	Support RS-232/RS-485
	COM2	Support RS-232/RS422/RS485
Interface	USB1	USB-A (accord with USB2.0)
	USB2	USB-A (accord with USB2.0)
	USB3	USB-B (accord with USB2.0)
	Operation	0-50°C
	temperature	
	Reserve temperature	-20-60°C
	Environment	20-85% (no condensation)
	temperature	
Environment	Withstand oscillation	10-25Hz ( X, Y, Z each direction 30 minutes 2G )
	Anti-jamming	Voltage noise: 1000Vp-p, pulse 1us, 1 minute
	Surrounding air	No corrosive gas
	Protection	IP65
	construction	
	Туре	65536 true colors
	Screen size	10.4 inch
	Use life	More than 50000 hours, 24 hours running when surrounding temperature is 25 °C
Screen	Resolution	640*480
specification	Contrast	Non-adjustable
	Character	Chinese, English, Korean, Japanese
	Character size	Any size and font
	Touch panel	4-wire resistance mode
Memory	Screen	128MB
	Cooling method	Natural air cooling
Construction	Exterior dimension	311.0*234.0*48.0mm
	Mounting dimension	302.0*225.0mm

# 3 Hardware

3-1 Hardware structure

3-2 Dimensions

3-2 Installation and using environment



# 3-1 Hardware structure

The hardware structure of TH series touch screen includes front and back side. Take TH465-M as an example to explain the structure.





# **3-2 Dimensions**

1. TH465-M exterior dimension:150.0mm×100.0mm×41.0mm, mounting dimension: 144.0mm×94.0mm.



2. TH765-M exterior dimension:205.0mm×151.5mm×48.9mm, mounting dimension: 192.0mm×138.5mm.



3. TH865-M exterior dimension: 211.4mm×157.8mm.



dimension:



4. THA61-M exterior dimension: 311.0mm×234.0mm×48.0mm, mounting dimension: 302.0mm×225.0mm.





# 3-3 Installation and using environment

Installation requirements:

1. TH has four ferric mounting racks when out of factory, there are two square holes on the up, down side of TH, use mounting rack to fix the TH with control cabinet.

In order to avoid TH temperature too high after long time working, please keep 10cm space on the up/down and 5cm on the left/right side of the TH when installing.



2. Installation steps:

a) Refer to the dimension in the former chapter to open a rectangle mounting hole in the control cabinet

b) Add airproof circles in the airproof slot when installing

- c) Insert the bottom of TH into the mounting hole of control cabinet
- d) Insert the install rack into the fix hole of  ${\sf TH}$  then tighten the screw
- e) Connect TH and PLC with communication cable

#### Note:

The communication cable can be offered by the supplier or made by user according to the connection map, input +24V DC power to start working

#### 3. Environment

Please use TH series touch screen indoors.

Do not use TH in below environments:

Inflammable gas, steam, dust, fast vary temperature, high humidity (it may cause moisture inside TH).

#### 4. Power supply requirements:

TH series touch screen use DC +24V power supply only. The permitted voltage range is 20V~28V. The connection is as below:



Besides, if connect high voltage or AC power supply with TH, the TH may be damaged and cause electric shock to human body.

#### Note:

If use the DC +24V output of PLC to drive the TH, make sure the PLC has enough current to drive the TH.

#### 5. Maintenance and cleaning

#### Maintenance:



- Please do not open the back cover by yourself.
- Please do not analyse or change TH by yourself
- Please cut off all the power supply while observing the TH.
- Please do not touch terminals after power on, otherwise it may cause electric shock.
- Do not hot plug the cable or pull the cable when communicating, it may destroy the cable.
- Please periodic check installation and screws to avoid falling off.
- Please use TH series touch screen in the certain conditions according to instructions.
- Keep the cleanness of touch area, in order to keep touch sensitivity.

Cleaning



- Please use clean cloths with little detergent or alcohol to clean the screen.
- Neutral detergent, without acid, alkali is recommended.
- Keep the TH away from thrill or strong corrosive gas
- Never use spray detergent.
- Avoid damage to the screen, please do not touch the screen too hard while wiping.

Disposal



Please dispose the TH as industry waste.

# **4** Interface and switch

4-1	Introduction
4-2	Dip switch
4-3	COM1 port
4-4	COM2 port
4-5	USB-A port
4-6	USB-B port



# **4-1 Introduction**

TH series touch screen has 1 group of DIP switch and 5 communication ports.





# 4-2 Dip switch

TH has one group of DIP switch at the back side; they can set the function of COM1 port.

Switch	Switch1	Switch2	Switch3	Switch4	Function
	ON	OFF	OFF	OFF	Undefined
	OFF	ON	OFF	OFF	Forced download mode of COM1
State	OFF	OFF	ON	OFF	Adjust mode of touch area
	OFF	OFF	OFF	ON	Interior check mode ( not recommend to use)



# 4-3 COM1 port

### 4-3-1 Download function

TH series touch screen COM1 port has these functions:

- Communication function: connect with PLC, printer, frequency inverter, used as communication port.
- Download function: connect with PC, used to download data and screens.



Pin	Name	Meaning
1	NC	Unused terminal
2	RXD	RS232 receive
3	TXD	RS232 send
4	А	RS485 + signal
5	GND	Signal ground
6	NC	Unused terminal
7	В	RS485 – signal
8	NC	Unused terminal
9	NC	Unused terminal

The following terms should be done when using download function:

- 1. Turn on switch 2 in DIP switch group to make the COM1 in download mode.
- 2. Please use the cable provided by Xinje company.

#### Step:

- 1. Turn on switch2 when TH power supply is cut off
- 2. Power on TH, connect TH with PC via Xinje download cable to download project
- 3. After the download process is over, cut off the power of TH, then turn off the switch2
- 4. Power on the TH again, the project will run normally

PC TH

 Xinje download cable

 Image: Comparison of the second seco

Make sure your PC has serial port or USB port ( use USB converter tool), connect it with COM1, then



in the software to download data. The pins definition is shown as below:

PC serial port		TH CO	M1 port
Pin	Name	Pin	Name
1		1	NC
2	RXD	2	RXD
3	TXD	3	TXD
4		4	A
5	GND	 5	GND
6		6	NC
7	RTS	7	В
8		8	NC
9		9	NC

# 4-3-2 Forced download



After the download is completed. if the TH cannot display the screen normally, you can try *the forced download* mode to update the system.



#### Note:

About the TH download details, please refer to the chapter "build a simple project---project download".

#### **4-3-3 Communication function**

COM1 port has strong communication functions. The default mode of COM1 is communication mode.



The COM1 default mode is *Communication mode*, you can realize the communication function by setting the correct communication parameters and device

# COM1 port communication parameter

Communication	Parameter	×			
Baudrate C 4800 C 38400	Data Bit C 7Bits ⓒ 8Bits				
9600         115200           19200         187500	Stop Bit © 1Bit © 2Bits				
Parity check	<u>0</u> dd ⊙ <u>E</u> ven				
Wait	0 MSEL				
Send Data 🔽 Vir Station Retry times 3					

# COM1 port communication device

Please select port Download Device	2:
Unuse Downlad Fort	^
Thinget NC Series	
Thinget V5 Series Towerter	
Ninget vo Series Inverter	
Witcubishi D Series	_
Ormen CPU/COU Services	
Omron CR/CT/CS Series	
Circuit Circuit Series	
Siemens 51-200 Series	
Siemens SI-SUU/400	
Royo S Series	
Schneider (Micro/Neza/Iwido)	~
matsushita (FFU/FFI)	



# 4-4 COM2 port

COM2 port has below functions:

1. Communicate with industry devices, such as PLC, inverter, meters...

COM2 port pins definition



Pins	Name	Meaning
1	TD+	RS422 send +
2	RXD	RS232 receive
3	TXD	RS232 send
4	А	RS485 +
5	GND	Signal ground
6	TD-	RS422 send -
7	В	RS485 -
8	RDD-	RS422 receive -
9	RDD+	RS422 receive +

2. Communicate with PLC



TH can communicates with most mainstream PLC.

Select the correct PLC type in the list and set the communication parameters:

Please select port PLC device:	Communication Parameter
Thinget XC Series Thinget FC Series Thinget V5 Series Inverter Mitsubishi FX Series Omron CPM/CQM Series Omron CP/CJ/CS Series Sigmens S7-200 Series	Baudrate         Data Bit           C 4800         C 38400           C 9600         C 115200           C 19200         C 187500           C 187500         C 18it
Siemens S7-300/400 Koyo S Series Schneider (Micro/Neza/Twido) Matsushita (FPO/FP1) LS Master-K CPU Direct	Parity check <u>∩ N</u> one <u>∩ 0</u> dd <u>ⓒ E</u> ven Wait
Com Para: 19200, 8, Even, 1 Setting	Communication Time     0     MSEL       ▼ Send Data     □ Vir Station     Retry times     3

#### Note:

Please refer to "TP connect with PLC" for the details of TH communicate with PLC.

#### 3. Communicate with frequency inverter

TH can communicate with various brands of frequency inverters. For the brands which are not in the list, user can select Modbus protocol or user-defined protocol.



#### Note:

Please refer to "TP series touch screen application examples" for the details of TH communicating with frequency inverter.

#### 4. Communicate with meters

About the communication between TH and meters, users can select user-defined protocol or Modbus protocol.

#### Note:

Please refer to "TP series touch screen application examples" for the details of TH communicating with meters.



# 4-5 USB-A port

TH has two USB-A ports ( accord with USB2.0 ). The functions are show as below:

1. Duplicate data, data import and export, transmission speed can be 480Mbps.

USB-A port definition



Pins	Name	Meaning
1	+5V	+5V voltage signal
2	DATA+	Data signal +
3	DATA-	Data signal -
4	-5V	-5V voltage signal

2. Connect U-disk and other USB port devices





# 4-6 USB-B port

TH has one USB-B port ( accord with USB2.0 ), located in the back side of TH, the functions are shown as below:

To download the data, the speed can up to 480Mbps.

USB-B port definition:



Pins	Name	Meaning
1	+5V	+5V voltage signal
2	DATA+	Data signal +
3	DATA-	Data signal -
4	GND	Ground signal

Please use the USB cable sold in the market when connecting PC with USB-B port, then click in the software to download your project in TH.







TH back side



# **5** Touchwin software

5-1 Preparation

5-2 The construction of Touchwin

5-2 Tool Bar



# 5-1 Title

- 1. Software version: V2.C and later versions.
- 2. Software source: visit Xinje website <u>www.xinje.com</u> to obtain the software or get from the products CD.
- 3. OS requirements: Windows98/2000/XP/ME
- 4. Install steps:





### 5-2-1 Screen

Double click the Touchwin software, build a new project, then you can see the following screen:



- Project bar: build, delete, copy, cut operation of the screen and window
- Screen edit area: make the project in this area
- Menu: it includes file, edit, view, tool, part, window and help.
- Element bar: it includes standard, part, panel, operate, status, zoom, draw and align.
- Status bar: it includes HMI type, PLC port device and download port device.

### 5-2-2 Project bar

Project bar contains the operation of screen and window.

- 1. Screen operation
  - Build a new screen

Method 1: click in the element bar. Method 2: right click the screen in the project bar, then click insert.



It shows the following window:

Screen		×
ĪD	2	
<u>N</u> ame	Screen2	
Back Color		<b>_</b>
<u>M</u> essage		
<u>0</u> K		<u>C</u> ancel

- ID: The number of the screen
- Name: The name of the screen
- Message: The description of the screen



Click **to** modify the screen property.

#### • Screen cut, copy and delete

Select the screen in the project bar, right click and choose cut, copy or delete.

#### Window operation

Right-click the window/insert in the project bar. Input the window ID, name and message.
 2.

	Windo	)W		
	ID	1	Width	160
🖃 🚮 Project 😑 📶 Screen	<u>N</u> ame	Window1	<u>H</u> eight	120
1: Screen1	<u>M</u> essage			
Alar Insert	Frame	Single 💌	Back Col	or 📃
	<u>0</u> K			<u>(</u>

<u>C</u>ancel

 window cut, copy, delete select the window in the project bar, right click to select cut, copy or delete window.



# 5-2-2-1 File

The file menu is shown as the following:

<u>File</u> <u>E</u> dit <u>N</u> ew <u>O</u> pen <u>C</u> lose	<u>View Part I</u> Ctrl+N Ctrl+O Ctrl+Q	<ol> <li>New: Build a new file</li> <li>Open: Open a file</li> <li>Close: Close a file</li> <li>Save: Save a file</li> <li>Save as: Save a file as another name and path</li> </ol>
<u>S</u> ave Save <u>A</u> s	Ctrl+S Ctrl+A	6. Download:
<u>D</u> ownload RunOnLine( RunOffLine	Ctrl+D ( <u>B</u> ) Ctrl+B ( <u>M</u> ) Ctrl+M	7. Run-online: Connect PLC and TH, Simulate online in TH software.
PFW Set( <u>P</u> ) Se <u>t</u> ting	Ctrl+P Ctrl+T	8. Run-offline: Simulate offline , simulate the touch screen action in the software.
Build SCAD Last	A	
E <u>x</u> it		

• PFW set:

#### Step1:

Set the PFW register range, click "Add" to add the register in the list.



Change the range then click "Modify", it will show below message, click 'Yes" to confirm the modify.

TWin			×
1	The pre-setting data beyond the	range will be lost ,while the data in the	same range will be held ,continue?

### Step2:

Set the value in the range

Double click the PFW range, it will show data setting window:

P	FW								×
		+0	+1	+2	+3	+4	+5	+6	+7 🔨
	PFW[00000400]	0	0	0	0	0	0	0	(
	PFW[000000410]	0	0	0	0	0	0	0	(
	PFW[000000420]	0	0	0	0	0	0	0	(
	PFW[00000430]	0	0	0	0	0	0	0	
	PFW[000000440]	0	0	0	0	0	0	0	(
	PFW[00000450]	0	0	0	0	0	0	0	(
	PFW[000000460]	0	0	0	0	0	0	0	(
	PEWE000004701	0		0	0	0	Ŷ	0	>
	Display								
	● <u>D</u> ec   ○ <u>H</u> ex	<u>R</u> e	set 0	<u>S</u>	et FF		<u>0</u> K		<u>C</u> ancel

- 1. Display number can select decimal or hex.
- 2. Set FF: set all the data to FFFF.
- 3. Reset 0: set all the data to 0.

# Step3:

Download the project into TH.

#### Note:

PFW0~PFW256 are occupied by the TH system, please select register start from PFW257.

Setting:

• Para tab:

Device	Font	t	Project
Para	Alternation	Clock	Panel
Screen <u>S</u> tart Scr	een 🚺		
Level L	rd	<u>P</u> assword 0	
Screen Save	<u></u>		
Latency <u>T</u>	ime After 3 M	linute 💌	
⊙ <u>C</u> lose 1	LCD C Show S	creen 🖯	

• Screen:

Select the start screen number when TH is power on.

Password: there are 9 levels password, the level 9 password has the highest priority. The higher level password can used to all the elements of lower level password.

The password is used to protect the element or screen, when input the correct password, the button or screen can be used.

• Screen save:

To protect the LCD. After certain time, the background light will be off or jump to certain screen.

• Alternation tab:

Device	Font	Project
Para	Alternation C	lock Panel
Station Device VirStaND	Screen Control	
- Object- Object		0 xt
Station	Current Screen ID —	
Device VirStaN0	PLC Port	1
Object Object		0 st

1. Change screen control:

2. Change the screen ID according to the value of the register.

3. Report current screen ID:

4. The current screen ID will show in the register.

5. For example, change screen control D0=1, TH displays No.1 screen, report current screen ID D1=1.

Clock tab:

Device	Font		Project
Para	Alternation	Clock	Panel
I▼ Use R Station Device VirStaN		Station	1
- Object-			
Object	D	0	
	Г	Indirect	

• Panel tab:



<u>P</u> FW Num	4096
PS <u>B</u> Num	1024
⊻isPSW Num	4096
P <u>r</u> iPSW Num	4096
C <u>a</u> che Num	1
<u>K</u>	<u>C</u> ancel

• Device tab:



 Export the current time to the register.
 For example, object D0, so the real time will save in D0~D5. D0=year, D1=month, D2=day, D3=hour, D4=minute, D5=second.

Please note the export time is hex number.

- 1. The TH type you are using now.
- 2. Set parameter:

3. Modify the quantity of PFW and PSW registers.

- 1. Set the PFW register quantity
- 2. Set the PSB register quantity

3. VisPSW Num: the PSW quantity in data input, data display area.

4. PriPSW Num: the PSW quantity in history trend map, real time trend map area.

5. Cache Num: PFW register quantity

1. Single, host net, slave net: TH communication mode.

2. PLC port: TH PLC port connects device type, change the communication parameters by ....

3. Download port: TH download port connects device type, change the communication parameters by ...

• Font:

Para A	Lternation 📄	Clock	Panel
Device	Font		Project
String	) 	.ing]	

Set the font of the letter in the screen.

• Project tab:

Para	Alternation	Clock	Panel
Device	Font		Project
<u>N</u> ame Proj	ect		
Author			
<u>R</u> emark		_	

Record the project name, author and remark.

Build SCADA

It realizes the SCADA function in windows. Build the SCADA file, and double click it to simulate online.



#### Note:

Please refer to the chapter " make a project/simulate online ".

Last

The latest files operated by the user.

Exit

Quit the Touchwin software.

# 5-2-2-2 Edit

#### 1. Cut, copy, paste, undo

These operations are used to the elements in the screen.





Select one element in the screen, click public unit, this element will be added in all the screens.



After select one element as public unit, click private unit to delete this element in other screens.

#### 5-2-3-3 View

- <u>View</u> <u>Part</u><u>T</u>ool ✓ Standard
- ✓ <u>S</u>tatus
- <u>b</u>tatas
- ✓ Project
- ✔ Pai<u>n</u>t
- ✓ <u>Z</u>oom
- 🗸 Status Change
- ✔ <u>O</u>perate
- ✓ Part
- ✔ A<u>l</u>ign
- Advance Advance<u>2</u>

- 1. Display all the tool bars. Advance and advance2 is grey colour.
- 2. Only when open the advance function of software, these items can be used.
- 3. All the items with tick are displayed in the software menu.

#### 5-2-2-4 Part

<u>P</u> art	<u>T</u> ool	¥indo	w <u>H</u> elp		
<u>T</u> ex	t				
<u> </u>	rate				
Dis	play				
Inp	ut				
<u>K</u> ey	board				
Bar					
Dyn	amic M	[ap			
₩in	ıdow				
Sc <u>h</u>	Sc <u>h</u> eme				
<u>F</u> ur	ction				
<u>T</u> oo	1				
Dev	ice				
I <u>n</u> v	I <u>n</u> verter Alram Information				
Pic	Picture Disp <u>l</u> ay				
Sam	ple <u>S</u> a	we			

The "part" is used to edit the TH project, it is the same as the tool bar in the software.



#### 5-2-2-5 Tool

<u>T</u> ool	<u>W</u> indow		
<u>L</u> ine			
<u>R</u> ec	<u>R</u> ectangle		
<u>E</u> llipse			
<u>F</u> old			
Map			
<u>O</u> ption			

Tool menu is the same as the following tool bar. ヽ ヽ ロ ロ O () 🍚 🗖 🛃

Grid size:

1. Move Grid: set the min pixel when moving the element.

2. Grid radio: the grid density, the smaller the value is, the denser the grid is.

3. Auto save: auto save the project at the time you set.

Download: select the project 4. download com port.

5. Download all: when you want to upload the data, please select this item before you download the data into TH.

6. Display mouse cursor: display the mouse connected to TH USB port.

#### Option:

Option	2
Grid Size Move Grid 3 Auto Save 1 2 (M)	Zoom Ratio (%) 100 Grid Radio 10
Download Com Port COM1 💌	☐ Down Load All ☐ Secute Code
TW Display Mouse Cursor	Hit Key Errors 10
Other 🔽 🔽 Optin	nistic User Mode
OK	Cancel
# 5-2-2-6 Window



1. New: build a new window

2. Cascade: show all of the window in cascade mode.

3. Tile: show all the window in tiled mode.

4. Arrange icon: arrange all the icons again.

# 5-2-2-7 Help

AboutTouchWin	for	TH	Edit		×	
TouchWin for TH Edit Tool V2.C.3			[	OK		Sh
Copyright (C) 2004 -						co
TouchWin Company CANADA	<b>.</b>					

ow the Touchwin software version and pyright.

# 5-2-2-8 Screen

		ŝ	30	31	r	e	e	n	1												
Г		•																			
ŀ.	·	·	·	•	•	•	·	·	·	·	•	•	•	·	·	•	·	•	•	•	•
ŀ	·	·	·	·	•	•	•	·	·	·	·	•	•	•	·	•	·	·	•	•	•
ŀ	•	•	•	•		•	•	•	•	•	•			•	•	•	•	•	•	•	•
ŀ																·					
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ŀ																					
ŀ																					
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ŀ																					
l.																					

# 1. Zoom in , zoom out the screen:

Θ	100%	-	$\oplus$	

⊖ <sub>zoom out,</sub> ⊕ <sub>zoom in</sub>



show the grid in the screen.

# 5-2-3 Tool bar

lcon	Name	Function	
	New	Build a new project	
<u>1</u>	Open	Open the file	
	Save	Save the file	
<u></u> ₩	Cut	Cut the element	
	Сору	Copy the element	
	Paste	Paste the element	
2	Undo	Undo the operation	
ଙ୍	Help	Check the software version information	
A	Text	Input static text	
ÂÀ	Dynamic text	Display the text according to the value of register, support 16 texts, set register value as 0~15	
ÅÅ	Variation text	Display the text according to the value of register, set register value as user need	
8	Lamp	Display the ON/OFF state of switch	
	Button	ON/OFF the bit element	
0	Lamp button	Combine the function of lamp and button	
	Screen jump	Jump to object screen	
	Digital display	Display the register value	
	Alarm display	Set the upper/lower limit of register value, wher exceeding the range, twinkle display	
	Text display	Display characters in multi-registers	
23	Digital input	Input the data in the register	
AB	Text input	Input characters in the register	
123	Set data	Set data and used in arithmetic	
	Digital keyboard	Digital input keyboard	
	ASCII keyboard	Character input keyboard	
1	User input	One input button of keyboard	
1	Bar	Display the register value in bar picture	
3	Dynamic map	Display the map according to the register value, support 16 maps, the register value is 0~15	
<b>K</b>	Call window	Call window according to the value in the coil or register	
	Window button	Control the open, close of the window	
٠.	Download recipe	Download the recipe into object device	
*	Upload recipe	Upload the recipe into TH register	
	Function button	Realize multi-functions with this button	
623	Function field	Similar to function button, but the trigger condition is different.	
lite.	Discrete column map	Display the data in discrete column map	
lile.	Continue column map	Display the data in continue column map	
	Line	Draw lines	

$\overline{)}$	Arc	Draw arc		
	Rectangle	Draw rectangle		
0	Ellipse	Draw ellipse		
$\bigcirc$	Fold/polygon	Draw fold and polygon		
	Polygon block	Similar to container		
	Frame	Draw 3D rectangle		
	Мар	Add jpg or bmp format pictures		
-	Move animation	make the movement animation of object		
۰	Rotate animation	Switch the picture		
1	Material library	The picture library		
<b>F</b>	Date	Display the date		
6	Clock	Display the time		
<b>4</b> 0	Buzzer	Control the buzzer by the coil		
*	LCD light control	Control the background light by the coil		
512	Scale	Display the value in scale		
	Instrument	Display the value in the meter		
<u> </u>	Valve	Simulate the state of valve		
	Pipe	Simulate the liquid state in the pipe		
<b>A</b>	Pump	Simulate the pump running		
<u>ي</u>	Auto wind	Simulate the auto wind		
<b></b>	Motor	Simulate the motor running		
U	Retort	Simulate the retort running		
	Inverter alarm information	Display the inverter alarm information		
гнич	Scroll text	Display the text in scroll mode		
<u>L</u>	Real time map	Display the current value in curve		
<u>لطر</u>	History data map	Display the current and history value in curve		
	XY curve	Display two curve in X, Y direction		
	XY curve Ex	Display the value in line, point and line-point.		
<b>≥</b>	Time trend control	Display value in certain time space		
<b>=</b>	Event button	Use with event, curve, realize flip, confirm and clear operation		
<b>.</b>	Alarm list	Show the inverter alarm information in the list		
	Display real time event	Display real time alarm information, when the alarm is free, the event will be deleted automatically		
	Display history event	Display many alarm information and event happen time		
	Common grid control	Display a group of register in the table		
	Data grid control	Display a group of register in the table, support time information table		
<b>4</b> 0	Sample save	I o collect the object data, no limit for the sample quantity and time, save the data in TH registers		
4	Sample export	Save the data in TH register and export to object device as CSV format file		

	Align left	Align left the objects			
+0+	Align centre	Align centre the objects			
++	Align right	Align right the objects			
	Align top	Align top the objects			
i.	Align middle	Align middle the objects			
<u>*</u>	Align bottom	Align bottom the objects			
Θ	Zoom out	Zoom out the screen			
100% 🔻	Zoom percent	Zoom percent			
$\oplus$	Zoom in	Zoom in the screen			
	Grid	Display grid in the screen			
2 hrs	State change	Switch button state display			
0 -	Dynamic picture state selection	Switch dynamic picture state display			
8	Public unit	Use the unit in all the screens			
	Private unit	Use the unit in appointed screen			
匔	New	Build a new screen			
6	Property	Screen name, author, remark			
×	Delete	Delete the current screen			
8 <b>8</b> 0	Simulate offline	Simulate the project in the TH			
880	Simulate online	Connect PLC and TH, simulate the project in TH online			
Download		Download the project in the TH			
â	Upload	Upload the project from TH to PC			
dia 1	Debug download	Debug download			

# 6 Create a simple project

In this chapter, make a switch to control the PLC output, in order to explain how to make TH project.

### Note:

Please make sure of the TH type and communication device type. It is important for the project download and device communication.

6-1	Build a new project
6-2	Make a simple project
6-3	Simulate offline
6-4	Simulate online
6-5	Download the project



# 6-1 Build a new Project

- 1. Open the Touchwin version 2.C.2 or above software.
- 2. Click File/New or to build a new project.
- 3. Select the correct TH type and com port device type



COM port device type

<u>S</u> elect Panel	Please select port PLC device:
<ul> <li>☐ ☐ TH60 Series Touch Panel</li> <li>☐ TH465-M</li> <li>☐ TH765-M</li> <li>☐ TH365-M</li> <li>☐ TH365-M</li> <li>☐ THA61-M</li> <li>☐ THA65-M</li> <li>④ PC HMI Software</li> </ul>	Thinget XC Series Thinget FC Series Thinget V5 Series Inverter Mitsubishi FX Series Omron CPM/CQM Series Omron CP/CJ/CS Series Siemens S7-200 Series Siemens S7-300/400 Koyo S Series Schneider (Micro/Neza/Twido) Matsushita (FP0/FP1) LS Master-K CPU Direct Com Para: 19200, 8, Even, 1
Attr: 480*272, 65536 colors	Setting

4. Set the com port device communication parameters according to PLC port device

Communication Parameter						
Baudrate C 4800 C 38400	Data Bit C 7Bits • 8	Bits				
C 9600 C 115200	- Ston Bit					
• 19200 C 187500	<ul> <li>● 1Bit</li> <li>○ 2I</li> </ul>	Bits				
Parity check C <u>N</u> one C	<u>O</u> dd • <u>E</u>	ven				
_ Wait						
Communication Time 0 MSEL						
Send Data 🔽 Vir Station Retry times 3						
🔲 Exchange WORD						

5. When download port (COM1) is not used as communication port, please select unuse download port.

When use COM1 as com port, please select communication device.



# 6. Finish the building process.

Name Project	
Author	Screen1
,	
Remark	
	· · · · · · · · · · · · · · · · · · ·
	<b> </b>

7. Click to save the project in the PC.



# 6-2 Make a simple project

Make a button on the screen, to control the Y0 output of Xinje XC series PLC.



- 1. Make a button:
  - Click , put the button on the screen. Change the object to Y0.

Screenl	
	Button
On	Object Operate Button Color Position Station Device PLC Port = VirStaND 0 Station 1
	Object Object T Indirect

• Select operate tab, change the button operate to reverse.

Button					
Object	Operate	Button	Color	Position	
Button					
C S	Get O <u>N</u> 🔿	Set O <u>F</u> F	• <u>R</u> ev	erse C On <u>I</u> nstant	

• Select button tab, change the text to reverse

Object Operate Button Col	or Position	
Key Type © Touch © Enter <u>C</u> ode		P <u>a</u> ssword el Levell V
Hide Button		
<ul> <li>Normal Change Aspect</li> <li>User Defined</li> <li>Press Save Aspect</li> </ul>	✓ Use Text Content Font	erse
reverse	⊂ Align <u>L</u> eft ⊙ Align <u>C</u> enter ⊂ Align <u>R</u> ight	⊂ Align <u>T</u> op ⊙ Align <u>M</u> iddle ⊂ Align <u>B</u> ottom

• Select the colour tab, change the button colours



2. Make the lamp

• Clic	k put it on the screen, change the object to Y0
	Object Lamp Twinkle Color Position Station Device PLC Port VirStaND 0 Station 1
	Object 0 Diject 1 Indirect

Select the lamp tab, change the aspect of the lamp. •

Object Lamp Twinkle Cold	r Position	Object Lamp	Twinkle Color	Position
Aspect		<u>A</u> spect		
• DN	C <u>h</u> ange Aspect	C ON		C <u>h</u> ange Aspect
C OFF	User Defined	• OFF	(EMI F)	Vser Defined
Visibl	Save Aspect	✓ Yisibl	M	<u>S</u> ave Aspect

Select the twinkle tab, change the lamp state to stop twinkle. ٠

0	bject	Lamp	Twinkle	Color	Position
	-Statu				
		Et and	C ON		C 077
		<u>STob</u>	0.04		OUL

• Colour and position tab are similar to the button.



Do not have to download the project into the TH, you can simulate the project in the touchwin software. It can save debug time and easy to edit.





2. Click the reverse button to see the ON/OFF switching of the lamp.









Turn off the reverse button

Thus, the simulate operation is finished.

Turn on the reverse button



By connecting the PLC and PC, it can read the data from PLC, simulate the operate of TH in Touchwin software. Do not have to download the project into TH, you can control the PLC in your PC. Make sure the connection is correct between PLC and PC, the com port setting is right.

### Note:

Only Xinje PLC support the simulate online function with TH.

- 1. Connect Xinje PLC with the PC via serial port.
- 2. Click the to enter *simulate online*. It will show below message:

<u>Aut oVi</u>	n	×
⚠	The application is not registered, it will be abnormal after 2 how	rs
	() 确定 )	

This means that the *simulate online* is not registered, you can only use it for 2 hours. If you want to use it for longer, please contact **Xinje** company to get register number.

3. Click ok to enter simulate online screen. Right click the screen to show below menu:



- Log: log on time and history record
- About: the version information of autowin
- Com port: the serial port number of your PC which is connected with PLC.
- Register: register to get user right.
- Exit: exit the autowin.

If showing the following message, it means the connection between PLC and PC is not good, or the serial port number is wrong.

communicating	
PLC Port StaNO	1

In this example, we use TH PLC port and PC serial com port3, so select PLC port com 3.

Com Port	
PLC Port	C0M3 -
Download Port	•

1. Click the button to see the lamp is ON/OFF.







Turn off the reverse button

turn on the reverse button

Upon clicking the reverse button, the PLC output Y0 will switch ON/OFF at the same time.

reverse



# 6-5 Downloading the project

There are two modes to download the project into the TH:

- 1. USB port and USB cable
  - USB port downloading:

Connect TH USB-B port and PC with USB cable, power on the TH, click to download the project.



- 2. COM1 port and Xinje special cable
  - COM1 port downloading

Change COM1 to download mode, please refer to chapter 4.3, power on the TH, click download the project.



# 7 Application

7-1 Adjust the touch area

7-2 Photo application

7-3 Debug and download

7-4 Data backup (based on Touchwin V2.C.3)



# 7-1 Adjust the touch screen

The touch area adjustment function can make the component touch more precise.

The adjustment steps:

Step 1:

Turn on the DIP switch 3, then power on the TH again, it will show the following screen:

Turn on switch 3

### Click the centre of the adjust cross



Step2:

After clicking the cross centre, the adjust cross will jump to the second position. Keep on click the cross until the cross jump to the last position 5.



Step 3: Please see the detailed motion:



### Step 4:

When finished the adjustment, the result is as the following;





Adjustment process is end.

Adjustment process is failed. Please do again.

# Note:

If the adjustment process is end, please turn off the power of TH, then turn off the DIP switch 3, then turn on the power again. Now you can use TH normally.



# 7-2 Photo application

TH series LCD are 65536 true colours, it can make your photo display more vividly. This example will make the photo moving in parallel.

Step1: Select the photo



button in the tool bar to open the material library:



Select the photo you want, and click "open". The photo will be added on the screen.



Step2: Design the motion track



Click the **button** in the tool bar, drag your mouse to draw the motion track, double click the mouse to finish the drawing. Please see the drawing:

	GIO	Jen.																																																
									_		-									-	-	-					_											_	-	-		_			_		_	_		1
					1			1			1														1					1		• •		1			1			100										
												1.1		11								11																	1											
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			2.2							• •		• •		• •		• •		• •	-	•	• •		• •	• •			• •	• •				• •					•				• •			•		+		• •		÷
							1.12	- 61		512	2.2	1.1		1.1		1.1		1.12	- 53		5.12	101		12	1112				1.1			1.1							12		1.1			11.5		11		512		
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## Step3: Combine the photo with the motion track

Drag your mouse to select the photo and the motion track, then right click the mouse, select "group".



### Step4: Simulate offline

Click to simulate offline your project. You can see the photo motion track.

Step5:

- Change the animation property
- Right-click the photo and select "animal prop"



The animation property includes coordinate and control.

1. Coo	rdinate		
Nove	Animal		×
Coord	Control		
x	325	Key Point : X=325;Y=110	
Y	110	Key Point: X=325;Y=230 Escape Time:00.1Second	
		Key Foint - X=685; I=230 Escape Time:00. 1Second Key Point : X=685; Y=100	
		Escape Time:00. 1Second Key Point : X=325;Y=100 Escape Time:00. 1Second	
		Key Point: X=325;Y=125	

- X: the position on X axis
- Y: the position on Y axis
- Escape time: the time that the photo moves from (X1,Y1) to (X2,Y2)
- Key point X,Y: the coordinate of every motion position

You can click the X, Y position and the escape time in the list and modify them.

2. Control		
Move	Animal	
Coord	Control	
Enabl	e 🥅 Ctrl	MO
Reset	Ctrl	MO
<b>▼</b> Re	peat	

- Enable: control the animation by bit signal. When the rising edge of the signal is coming, the animation will be activated.
- Reset: control the end of the animation by bit signal. When the rising edge of the signal is coming, the animation will end.
- Repeat: repeat the motion of the animation.



# 7-3 Debug and download

TH series touch screen support debug download function. This function can be used when you are debugging your project in order to save your time.

Compared with normal download function, this function has the following advantages:

- 1. This function only can be used when debugging the project.
- 2. The data transfer speed is faster than normal download, save time and cost.





# 7-4 Data backup

Data backup includes the following contents:

1. Data collection and export, store the data of TH series HMI into USB device or SD card, produce CSV data base file.

- 2. Import CSV data, transfer the data of USB device or SD card to TH series HMI.
  - About CSV file:

The CSV file is based on Excel, the format is as the following:



• To build CSV file

Open Microsoft Excel, input the data as the up format, then save as .CSV file.

# 7-4-1 Data export

Export the data from TH to other device. Step1:

Click function button	or fun	ction field	elect "export CSV data" and add i	t.
Function Button	1			
Function Button Limit	Color   Positi	on		
Function Pressing 💌 Export CSV Data	<u>A</u> dd <u>M</u> odify <u>D</u> elete Move D <u>own</u> Move <u>Up</u> <u>P</u> assword	All Set Coil Reset Coil Reverse Coil Copy Coil Screen Jump Set Data Copy Register User Input Open Window Close Window Down Scheme Up Scheme Data Block Transmit Arithmetic Process Code Import CSV Data Export CSV Data		

When using function button, please select "pressing" or "releasing" as the trigger condition.

Releasing 📃 💌
Released
rressed Releasing
Pressing

When using function field, please select the trigger condition as you need.



Step 2:

Double click "export CSV data", it shows the following window: This window includes destination, import, save and date time tab.

### 1. Destination tab



Device ID: set the object device number which you want to export data, "dynamic set" can connect the D register with the device ID.

Path/File: the name of the CSV file

Fix name: the data collected each time will be saved in the same file.

Re-export title: export the title when collect the data each time Please see the following examples.

Fix name and re-export title file

41

32

Name add automatic: It exports a new file when collect the data each time. The new file name will increase automatically. For example, file 1 is TH001.csv, file 2 will be TH002.csv.

13

Please see the following picture:

<b>≊</b> a,	<b>WSX000.csv</b> Microsoft Office 1 KB	<mark>≊</mark> a,	<b>WSX001.csv</b> Microsoft Office 1 KB

Add number after name: add the number after the file name. For example, input 001 the file name is TH001.csv.

37

Dynamic set: set the number in D register. For example, If D0=20, the file name is TH020, D0=23, the file name is TH023.

001

When "add number after name" and "dynamic set" are both selected, "dynamic set" has priority.

Named by date: the file name is added the date. When exporting the data several times at the same day, it will add the data title in the file automatically.

Length

Width

20

For example:



Export the data the first time on 8/18/2009

Export the data the second time on 8/18/2009

### Hei ght Lengt h ₩dth Qty 20 30 40 12 Lengt h W/dth Hei ght Qty 32 13 41 37

Height

30

Qty

12

40

### 2. Data tab

Destination I	)ata Save	Control Date Time
Register capa Register mode	city C Loo	100 op C Line
Temperature	Add	Title Temperature
		Format
	Delete	● Dec (D) ○ Hex (U) ○ Float (F) ○ Unsigned (M)
	Move up	Data type Word 💌
		Bit length(G) 4
	Move down	Float length(C) 0

Register capacity: import register quantity

Register mode:

Loop: use with "real trend map", "history data map", "time trend control", "sample save"... Line: export the data in the registers to CSV file. It is used to the recipe and data arrays.

Add, delete, move up, move down: Add the data titles, select the export data format and type.

3. Save tab

Destination	Data	Save	Control	Date	Time
Object Object	PSW	<b>.</b>	256		

Save the data in touch screen internal registers.

### 4. Control tab



This tab is used to control the export.

Execute status: To show if it is in exporting state via bit state. If the bit is ON, TH is exporting data. Execute result: Show the export result state via the register state.

- export failed
- export target device does not exist
- the memory is not enough
- file path error
- reading / writing file failed

Execute process: Show the exporting process via register, 100 means the exporting process is succeed.

5. Date time

Destination   3	Data	Save	Control	Date Time	
🔽 Date Tim	e				To add th
Date format	YYYY-M-	-D	•		Please so
Example	20	09-10-8			lonnatin
Time format	H: MM : S	5	•		
Example	9	:43:31			

To add the date in the CSV file.

Please select the data format and time format in the pull down menu.

EXAMPLE:

This chapter will introduce the data export examples in loop and line mode. **<A> Data export in loop mode** 

Purpose: collect the data via history data map, export the data to moveable device and save as CSV file.

Please see the whole process:





Function Field		
Mode Function Position	a	
Function		Al
Arithmetic PSW300 = PSW300 + 10	Add	Set Coil Reset Coil Reverse Coil Copy Coil
	Modify	Screen Jump Set Data Copy Register
	Delete	User Input Open Window Close Window
	Move D <u>o</u> wn	Down Scheme Up Scheme Data Block Transmit
	Move <u>Up</u>	Process Code Import CSV Data Export CSV Data

Add the arithmetic PSW300=PSW300+10

### Note:

Please see the TP touch screen manual for this content.

2. Data collect: use history data map to collect the data every 1 second, use PSB300 to control if it is need to collect.

Click .a

,add it in the screen, change the "trend source" tab.

listr	oy dat	a map		×	•
Trend So	ource Disp	lay   Save   (	Color   Font   Po	osition	Histroy Trend Source
		Add	Modify D	elete	Register Trend Data Color
0	Object PSW300	Min Value O	Max Value 1024		Station Device PLC Port VirStaND 0 Station 0 Object 0 bject 300 Indirect
					Data Data Type Word

Next, change the display tab: page data is 5, control is PSB300.

Histroy data map	
Trend Source Display Save Co	lor Font Position
Data	Time
Page Data 5	С Іор
Iotal Data 10	<u>B</u> ottom
Pick Period 1 Sec	C None
▼ C <u>o</u> ntro] PSB300 This Regist was us	sed to control Pick!
Current Data	

Page data:5, show 5 numbers each screen

Total data:10, it can collect 2 screens data

Pick period: 1 second, collect the data every 1 second.

Control:PSB300, control the ON/OFF of the data collection by PSB300

Change the save tab: save the data in the registers start from PSW400.

Histr	оу	data	тар				
Trend S	ource	Display	Save	Color	Font	Posi	tion
— ОБј ОБј	ect ject	PSW	<b>-</b>	400			
E A	uto Loc	ate					

Add a button, to control the stop and start of the collection process. The button is related to PSB300.

:			•	:	:	:	:		I	)	a	t	a	(	C	b	1	e	ci	i)	01	ņ	8	n	IC	ţ	e	X	p	0]	rt		:	:	:	:		•	•	•																		
	-	: : :1	· · ·			•	· · ·	-					· · ·	· · ·				•	•	•	•			•	•				· · · ·	· · · ·	:	Fu			tio		F	i		d		-			->		PS se	SV	N3	30 nd	0-	+1	0	ev	e	γ		
· · · ·	•			· · ·	·\		V V	/		· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·		· · ·		- - - -	-	- - - - -	· · ·	- - - -	· · · ·	· · ·	· · · ·	· · · · · · · · · · · · · · · · · · · ·	· · ·	· · · ·	· · · ·	· · · ·	· · · ·	· · · ·		•	:		•		- - - -	- - - -	- - - -	-		- - - -		->		P: the	SE	B3 C	30 DN	0, /C	to PF	F (	or	ntr d	ol ata	a	
	-	; ] ; ]	FI FI		F	Ŧ	-	F F	F		•			' ·				F F	F F	(F F	F F		F.	F		•								0	Ð	-		-	•	-						L												
3.		D	a	ta	e	ex	p	0	rt																										Г				_																			

Realize the data export function by function button. Click in the tool bar. Add it on the screen, set the button as the following:

Function Button	L	
Function Button Limit	Color   Positio	n
Function Releasing		A11
Export CSV Data	<u>Add</u>	Set Coil Reset Coil Reverse Coil
	Modify	Copy Coll Screen Jump Set Data Copy Register
	Delete	User Input Open Window Close Window
	Move D <u>o</u> wn	Down Scheme Vp Scheme Data Block Transmit
	Move <u>Up</u>	Arithmetic Process Code Import CSV Data
	Password	Export CSV Data

Double click the "export CSV file" to continue the setting:

Destination Data Save Control	Date	Time
Device ID 1		
Dynamic set DO		
Path/File SJDC.csv		
💽 Fix Name 🔽 Re-export title		
C Name add automatic		
🔘 add number after name		
0		
🗖 Dynamic set 🛛 DO		
C named by date		

Data tab

Destination Da	ata Save	Control Date Time
Register capac Register mode	ity 🖉	5 p () Line
data value	Add Delete	Title data value Format © Dec (1) C Hex (1) C Float (2) C Unsigned (2)
	Move up	Data type Word  Bit length(G) 4
	Move down	Float length(C) 0

Device ID: 1, there is one U disk device.

Path/File: name the file to SJDC.csv, reexport the title.

Register capacity: 10

Register mode: loop, to correspond to the history trend map

Format: decimal

Save tab

Destination Data Save Control Date Time Object Object PSW **v** 400

## Date time tab

Destination Data Save Control Date Time Date Time Date format YYYY-M-D Example 2009-10-8 Time format H:MM:SS Example 13:28:32

Now the data export has been done.

Via the simulate offline, you can monitor the data change and operate the button.

### Data export example



The operation steps:

Step 1: Make sure the TH is connected to object device.

Step 2: Click ON/OFF button to start the data collection in history data map

Step 3: Click the data export button, the U disk device LED starts to flickering, it means the CSV file is being produced, if the LED ends flicker, the export process has been finished.

The CSV data is shown as below:



1	data value	date	time
2	60	2009-9-14	10:12:
3	70	2009-9-14	10:12:
4	80	2009-9-14	10:12:
5	90	2009-9-14	10:12:
6	100	2009-9-14	10:12:

Save the data in PSW400

Date time: export the date and time to the .csv file.

### <B> Data export in line mode

In industry system, HMI is seemed as control and monitor terminal. It can be used to set all kinds of parameters directly. In order to check the history data, use data export function to complete the data management.

### Example:

Using data export function to complete the parameters recording. Purpose: realize parameters setting by data input button, and data export by data export button. The process is shown as below:



Next, we will introduce how to make the project in two parts:

Part 1: Input the parameters

Put the data input button on the screen, change the address as the following:

# Data export example



### Note:

About the data input button, please refer to TP series HMI manual.

Part 2: about data export button

Click function button, then set as the following:

Function Button	L	
Function Button Limit	Color   Positi	on
Function Releasing		All
Export CSV Data	<u>A</u> dd <u>M</u> odify <u>P</u> elete	Set Coil Reset Coil Reverse Coil Copy Coil Screen Jump Set Data Copy Register User Input Open Window Close Window Down Scheme
	Move <u>Up</u> <u>P</u> assword	Up Scheme Data Block Transmit Arithmetic Process Code Import CSV Data Export CSV Data

Double click the export CSV data to change the parameters: Destination tab:



Data tab:



Save tab:

Destination	Data	Save	Control Date Time
– Object –			
object			
Object	PSW	-	500

Set the export object to PSW500, make it the same as the data input button address.

Example:

It has not referred to date and time, so do not have to set them. The screen has been done, please see the following picture:



Run the project, and you will see the following result:





# 7-4-2 Import the C SV data

The purpose is to import the data from the SD card or U disk to TH register.

Step1:		_
Use function button	r function field	_, select import CSV data function
Function Field		
Mode Function Position		
Function Import CSV data Modi fy Delete Move Down Move Up	Al Set Coil Reset Coil Copy Coil Screen Jump Set Data Copy Register User Input Open Window Close Window Down Scheme Up Scheme Data Block Transmit Arithmetic Process Code <u>Import CSV Data</u>	Func Function Field

## Step2:

Double click import CSV data, change the parameters as the following:

1. Source path tab

Source Path	Data Save	Control	Date Time
Device ID	0		
	🔲 Dynamic set	DO	1
	🔲 Import Ctrl	MO	
Path/File	CE. csv		
🖲 Fix Nam	ie		
🔿 Add ID	After Name		
	0		
	🔲 Dynamic set	DO	
start ID	0		
	🔲 Dynamic set	DO	

Device ID: the device number of import device

Dynamic set: set the device ID in D register.

Import control: control the import process by M coil, when M is ON, the import process starts.

Path/File: the CSV file name

Fix name: the import data are from the same source file

Add ID after name: set the import file name by the input value or the value in D register

Please see the following picture: the import data when select start ID to 5 and 10.

	A	В	С	D	E	F	G
1	40	8	10	15	2009-8-10	12:10:12	
2	40	10	10	18	2009-8-10	13:10:12	
3	40	15	10	30	2009-8-10	14:10:12	
4	45	8	6	25	2009-8-10	15:10:12	_
5	45	10	8	20	2009-8-10	16:10:12	
6	50	10	8	20	2009-8-10	17:10:12	
7	55	12	10	15	2009-8-10	18:10:12	
8	55	14	10	30	2009-8-10	19:10:12	
9	55	20	8	20	2009-8-10	20:10:12	
10	60	12	10	25	2009-8-10	21:10:12	
11	60	20	8	35	2009-8-10	22:10:12	
12	65	10	10	20	2009-8-10	23:10:12	
13	65	12	5	15	2009-8-11	8:10:12	
14	65	18	15	15	2009-8-11	9:10:12	
15	65	20	8	30	2009-8-11	10:10:12	
16	70	8	8	18	2009-8-11	11:10:12	
17	70	16	10	18	2009-8-11	12:10:12	
18							
19							

When start ID is 5, import these data.

When start ID is 10, import these data.

When the start ID is 0 or 1, the import data is the first group.

# 2. Data tab

Source Path Da	ta Save	Control Date Time
Register capac: Register mode	ity C Loo	10C op 🖲 Line
Data	Add Delete	Title Data Format © Dec (1) C Hex (1) C Float (2) C Unsigned (2)
	Move up	Data type Word  Bit length(G) 4
	Move down	Float length(C) 0

Register capacity: the import data group quantity

Register mode:

Loop: the data will be stored in the object registers in loop mode, so the original data will be covered.

Line: the data import to the object register one after another.

Add, delete, move up, move down, title....: Add the data title in the list, and select the data format, type, bit length,etc.

Please note the title list items must be the same as the CSV file items.

Source Path	Data	Save	Control	Date	Time		
Register cap Register mod	pacity   le	C Loop	p (@ Line	10			
i 2 3 4	A Del	dd Lete	Title   Format- © Dec ( C Floa	4 <u>D</u> ) ( t( <u>P</u> ) (	O Hex O Uns	: (U) ii gned (X)	
	Mov	eup	Data type Bit lengt	: .h(G)	Wor	d 💌	
	Move	down	Float ler	igth (C)		0	

There are 4 items in the title list.

There are four items in the CSV file.

				•
	A	В	С	D
1	40	8	10	15
2	40	10	10	18
3	40	15	10	30
4	45	8	6	25
5	45	10	8	20
6	50	10	8	20
7	55	12	10	15
8	55	14	10	30
9	55	20	8	20
10	60	12	10	25

### 3. Save tab:

Source Path De	ata S	ave	Control	Date Ti	ime
Object Object	sw (	•	256		
4. Control tab:					
Source Path	)ata	Save	Control	Date	Time
🔽 Execute s	tatus		MO		
🔽 Execute r	esult		DO		
🔽 Execute p	rocess		DO		

The import registers address.

Execute status: to show if it is in importing state via bit state. If the bit is ON, TH is importing data. Execute result: show the import result state via the register state.

- 0- import failed
- 0- import target device does not exist
- 1- the memory is not enough
- 2- file path error
- 3- reading / writing file failed

Execute process: show the importing process via register, 100 means the importing process is succeed.

5. Date time tab

Source Path	Data	Save	Control	L Date	Time
✓ Date Time	)				
Date format	YYYY-M	-D	•		
Example	20	09-10-8			
Time format	H: MM : S	5	•		
Example	13	8:57:04			

Add the date and time in the CSV file. Select the date and time format via the pull down menu.

Example:

Purpose: import the data from object device to TH touch screen, select the import data group by input the start ID.

The CSV file in the SD card is SJDR.csv.



1	40	8	10	15	2009-8-10	12:10:10	
2	40	10	10	18	2009-8-10	13:10:10	
3	40	15	10	30	2009-8-10	14:10:10	
4	45	8	6	25	2009-8-10	15:10:10	
5	45	10	8	20	2009-8-10	16:10:10	
6	50	10	8	20	2009-8-10	17:10:10	
7	55	12	10	15	2009-8-10	18:10:10	
8	55	14	10	30	2009-8-10	19:10:10	
9	55	20	8	20	2009-8-10	20:10:10	
10	60	12	10	25	2009-8-10	21:10:10	
11	60	20	8	35	2009-8-10	22:10:10	
12	65	10	10	20	2009-8-10	23:10:10	
13	65	12	5	15	2009-8-10	0:10:10	
14	65	18	15	15	2009-8-10	10:10:10	
15	65	20	8	30	2009-8-10	2:10:10	
16	70	8	8	18	2009-8-10	3:10:10	
17	70	16	10	18	2009-8-10	4:10:10	
18							

In TH touch screen, the data store address starts from PSW400. The realize steps:

Step1: use function button		or function field	922	. Set as the following:
----------------------------	--	-------------------	-----	-------------------------



Step2: build the import data group selection button.

Put a data input button on the screen-----

### Digital Input Object Display Input Font Color Position Operate Object Station Device PLC Port 💌 VirStaNO Station Change the object to PSW500 and be constant with the Object following import data dynamic Object 500 PSW • appoint address. Indirect Data Data Type Word •
	-				
Source Path	Data	Save	Control	Date	Time
Device ID		1			
	🗌 Dynar	nic set	DO		
	🔲 Impor	rt Ctrl	MO		
Path/File	SJDR. es	v			
🖲 Fix Nam	e				
C Add ID	After Nam	ne			
		0			
	🔲 Dynan	nic set	DO		
start ID		0			

🔽 Dynamic set

PSW500

### Step3: double click "import CSV data".

#### Import tab:

Source Path I	)ata Save	Control Date Time
Register capa Register mode	C Loo	p © Line
1 2 3 4	Add Delete	Title 1 Format © Dec (1) C Hex (1) C Float (2) C Unsigned (2)
	Move up	Data type Word
	Move down	Float length(C) 0

Save tab:



### Control tab:

Source Path   Data   S	ave	Control	Date Time
🔽 Execute status	PSE	300	
🔽 Execute result	PSW	256	
🔽 Execute process	PSW	257	

Device ID: 1

Path/File: SJDR.csv, must be the same as the object import file.

Fix name means importing from the same file.

Start ID: dynamic appoint PSW500.

Register capacity: 10, it means 10 groups of data

Register mode: line

Add the title: there are 4 rows of data.

Object: save the data of mobile device into TH register starts from PSW400.

Execute status: PSB300 to show the importing state

Execute result: PSW256 to show the importing result

Execute process: PSW257 to show the importing process

Date/time tab:



Because the import data has time and date, select this item.

Step4: show the import data start from PSW400 in "data table"

NO	Name	Length	₹idth	Height	Qty	Date time
000	group1	000	000	000	000	16:18:35
000	group2	000	000	000	000	16:18:35
000	group3	000	000	000	000	16:18:35
000	group4	000	000	000	000	16:18:35
000	group5	000	000	000	000	16:18:35
000	group6	000	000	000	000	16:18:35
000	group7	000	000	000	000	16:18:35
000	group8	000	000	000	000	16:18:35
000	group9	000	000	000	000	16:18:35
000	group10	000	000	000	000	16:18:35

Change the parameters:

(	Dbjec	t tab:					
]	Da	ta	Gri	d			
	ОЪј	ject	Comm	on Colu	mn Po	sition	
		- Sta	tion				
		510					
		De	vice	PLC Por	t 💌 .		
		Vir9	StaNO		0	Station	
				· · · · ·			· ·
		_ ОЫ	ect				
		ОЫ	ect	PSW	-		400

The object is PSW400, the same to the data import address.

Common tab:

Object Common Column Position All Records II Fitle Page Records 10 Title Height 20 Vose Title Vose Title Bold Border Title Font Cell Font group	
All Records V Sta Page Records 10 Title Height 20 Vidth 20 Vuse Title V Bold Border Title Font Cell Font group2 group3	
Cell Height 20 Vuse Title V Bold Border group2 Title Font Cell Font group2	atic Field
✓ Use Title ✓ Bold Border group2   Title Font Cell Font group2   ✓ Auto Add Field group2	group1
Title NO group group	1 2 3 4 5 5 7 7 3 9

Set the all records, page records as the left window.

Column tab:

Object Common Column Position							
🦳 Circle Buffer	Add	Modify	Delete				
Title	Width	Data Type	Format				
Length	50	WORD	UINT				
Width	50	WORD	UINT				
Height	50	WORD	UINT				
Qty	50	WORD	UINT				
Date time	80	TIME	H:M:S				

Add the text as the left window.

Set the date time item to time format.

The data table is finished, please see the following screen:

## Data import example

Import data No.





NO	Name	Length	<b>▼idth</b>	Height	Qty	Date time
000	group1	000	000	000	000	16:16:16
000	group2	000	000	000	000	16:16:16
000	group3	000	000	000	000	16:16:16
000	group4	000	000	000	000	16:16:16
000	group5	000	000	000	000	16:16:16
000	groupб	000	000	000	000	16:16:16
000	group7	000	000	000	000	16:16:16
000	group8	000	000	000	000	16:16:16
000	group9	000	000	000	000	16:16:16
000	group10	000	000	000	000	16:16:16

Execute process	00000
-----------------	-------



NO	Name	l ength	Width	Height	Qtv	Date time
0	Group 1	0	8	10	15	2009-08-10 12 : 10 : 10
1	Group 2	40	10	10	18	2009-08-10 13 : 10 : 10
2	Group 3	40	15	10	30	2009-08-10 14 : 10 : 10
3	Group 4	45	8	6	25	2009-08-10 15 : 10 : 10
4	Group 5	45	10	8	20	2009-08-10 16 : 10 : 10
5	Group 6	50	10	8	20	2009-08-10 17 : 10 : 10
6	Group 7	55	12	10	15	2009-08-10 18 : 10 : 10
7	Group 8	55	14	10	30	2009-08-10 19 : 10 : 10
~	~ ~		~~	~	~~	

Step5: Connect the mobile device and TH, click the import data button, monitor the data in "data table".

When the import data No = 0 or 1, the data table is shown as up.

NO	Name	Length	Width	Height	Qty	Date time
0	Group 1	60	12	10	25	2009-08-10 21 : 10 : 10
1	Group 2	60	20	8	35	2009-08-10 22 : 10 : 10
2	Group 3	65	10	10	20	2009-08-10 23 : 10 : 10
3	Group 4	65	12	5	15	2009-08-10 00 : 10 : 10
4	Group 5	65	18	15	15	2009-08-10 10 : 10 : 10
5	Group 6	65	20	8	30	2009-08-10 00 : 10 : 10
6	Group 7	70	8	8	18	2009-08-10 03 : 10 : 10
7	Group 8	70	16	10	18	2009-08-10 04 : 10 : 10

When the import data No = 10, the data table is shown as up.

# **8** TH series interior objects

This chapter will introduce the interior objects of the TH.

The interior objects contain PSB(bit register), PSW(word register), PFW(word register).

### Note:

1. Only when the advanced function is opened, the special interior objects can be used.

2. PSB0~PSB255, PSW0~PSW255, PFW0~PFW255 are occupied by system.

Bit register PSB

Register	Function	Remark
PSB0	Normally closed coil	
PSB1	Normally open coil	
PSB2	Turn on during the first scan period	
PSB3	100ms pulse signal	ON OFF 50ms 50ms
PSB4	1s pulse signal	ON OFF 500ms 500ms
PSB5	1minute pulse signal	ON OFF
PSB6	300ms pulse signal	ON OFF 150ms 150ms
PSB15	Communication failure	0: successful 1: failed
PSB16	Succeed to scan the screen once	
PSB30	First scan after download	
PSB31	First scan after power on	
PSB39	Turn off the touch screen	
PSB60	Level 1 password flag	(1: password is opened, 0: password is closed )
PSB61	Level 2 password flag	(1: password is opened, 0: password is closed )
PSB62	Level 3 password flag	(1: password is opened, 0: password is closed )
PSB63	Level 4 password flag	(1: password is opened, 0: password is closed )
PSB64	Level 5 password flag	(1: password is opened, 0: password is closed )
PSB65	Level 6 password flag	(1: password is opened, 0: password is closed )
PSB66	Level 7 password flag	(1: password is opened, 0: password is closed )
PSB67	Level 8 password flag	(1: password is opened, 0: password is closed)
PSB68	Level 9 password flag	(1: password is opened, 0: password is closed)

# Word register PSW

Deviator	Function	Demode
Register	Function No.	Remark
PSWU	Start screen No.	
PSW1	Current screen No.	
PSW20	Screen width	(read only)
PSW21	Screen height	( read only )
PSW26	PSB amounts	( read only )
PSW27	PSW amounts	( read only )
PSW28	PFW amounts	Occupy PSW28、PSW29 ( read only )
PSW30	Year	(Hex) (read only)
PSW31	Month	(Hex) (read only)
PSW32	Day	(Hex) (read only)
PSW33	Hour	(Hex) (read only)
PSW34	Minute	(Hex) (read only)
PSW35	Second	(Hex) (read only)
PSW36	Week	(Hex) (read only)
PSW40	Recipe index	
PSW54	The device quantity	
PSW60	COM1 communicate successful time	
PSW61	COM1 communicate failure time	
PSW62	COM1 communicate overtime time	
PSW63	COM1 communicate data error time	
PSW64	COM1 device version	
PSW65	COM1 device type	
PSW70	COM2 communicate successful time	
PSW71	COM2 communicate failure time	
PSW72	COM2 communicate overtime time	
PSW73	COM2 communicate data error time	
PSW74	COM2 device version	
PSW75	COM2 device type	

# Word register PFW

Pagistar	Eurotion	Bomork
	The screen Ne. after newer on	Remark
	Reckground colour setting	
	Scroon saver start time	
	The screen number of screen saver	
	COM1 baud rate	4800 0600 10200 28400 115200 187500
PFVV20		4000、9000、19200、30400、115200、167500
PFW21		
PFW22	COM1 stop bit	0-1 bit, 1-1.5 bits, 2-2 bits
PFW23	COM1 CRC	0-None, 1-Odd, 2-Even
PFW24	COM1 station NO.	
PFW25	COM2 send delay	Unit : ms
PFW30	COM2 baud rate	4800、9600、19200、38400、115200、187500
PFW31	COM2 data bit	7、8
PFW32	COM2 stop bit	0-1 bit, 1-1.5 bits, 2-2 bits
PFW33	COM2 CRC	0-None, 1-Odd, 2-Even
PFW34	COM2 station NO.	
PFW35	COM2 send delay	Unit: ms
PFW60	Level 1 password	PFW60、PFW61
PFW62	Level 2 password	PFW62、PFW63
PFW64	Level 3 password	PFW64、PFW65
PFW66	Level 4 password	PFW66、PFW67
PFW68	Level 5 password	PFW68、PFW69
PFW70	Level 6 password	PFW70、PFW71
PFW72	Level 7 password	PFW72、PFW73
PFW74	Level 8 password	PFW74、PFW75
PFW76	Level 9 password	PFW76、PFW77

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