

# SMTPDA software Instruction

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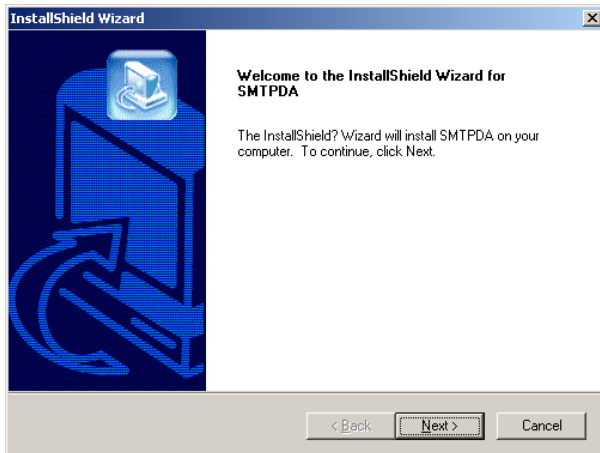
## 1. Software instruction

- 1) SMTPDA software is the controller software for iSmart.
- 2) Operate on PDA. (Recommend PDA Brand: HP).

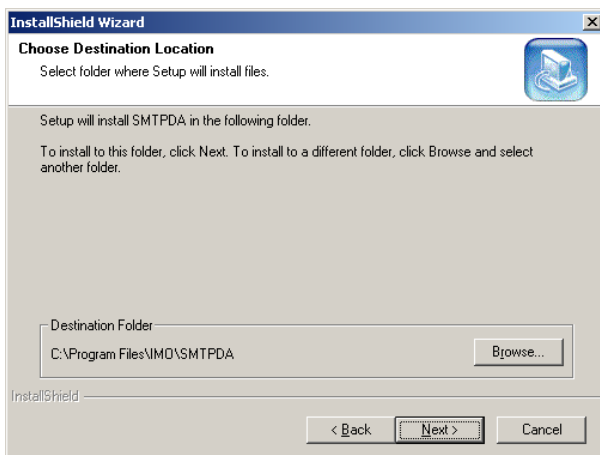
## 2. Installation mode

Install file of SMTPDA software on PC.

- 1) Double click the \*.exe file in software documents, the window is as following:



- 2) Click 'Next', window of installation path:



In the window, you can select the destination of the software, here save the content to be installed to PDA. The content will be installed onto your PDA after the PDA is connected with PC.

- 3) Click 'Next' to continue installing the software.

When PDA has connected with PC, start to install after selecting path of software. Successful installation will be displayed as it is done.

If PDA has not connected with PC, the installation software will be automatically installed to PDA at next connection.

- 4) Now the software is successfully installed onto your PC and PDA.

## 3. Operation the software

Click PDA Start\Program, and you will see the shortcut icon of the SMTPDA software. Click it to run the software.

## 4. Function instruction

### 4.1 Software START window.

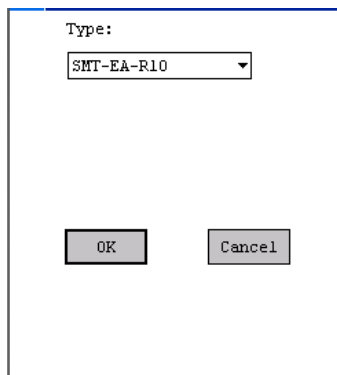


### 4.2 Menu function instruction

#### 4.2.1 File

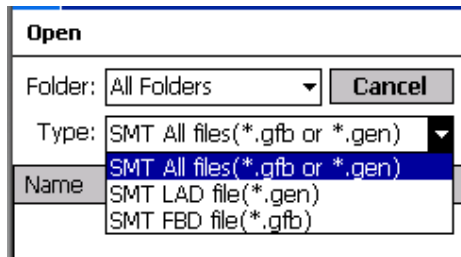
##### 4.1.1.1 New→LAD/New→FBD (Create new LAD/FBD document)

Open SELECT MODULE TYPE window, after selecting required iSmart type, a new LAD/FBD document will be created.



##### 4.1.1.2 Open... (Open an existing document)

Open an existing document, and the types of documents are as following:



SMT All files (\*.gfb or \*.gen): to list all the SMT files;

SMT LAD Files (\*.gen): to list SMT LAD file;

SMT FBD Files (\*.gfb): to list SMT FBD file;

Click the listed file, to open it with corresponding editing method (LAD or FBD).

### 4.1.1.3 Save (save documents)

Save present file. Save As dialog box will be opened at first time saving. The file name defaults as Untitled, which can be renamed.

### 4.1.1.4 Save As... (Save as a new document)

Open 'Save as' dialog box. The document is \*.gen in editing LAD editing mode; while it is \*.Gfb in FBD mode.

### 4.1.1.5 Exit

Exit SMTPDA program. There will be a tip to remind you of saving or exiting present document if it has not been saved.

## 4.2.2 Edit menu

### 4.2.2.1 Undo

Undo the latest operation.

this function is only available under LAD editing mode.

### 4.2.2.2 PLC Ladder

Redo the undo operation just now.

this function is only available under LAD editing screen.

### 4.2.2.3 Cut

Cut the content in the selected area.

this function is only available under LAD editing screen.

### 4.2.2.4 Copy

Copy the content in the selected area.

This function is only available under LAD editing screen.

### 4.2.2.5 Paste

Paste the cut or copy content. In pasting, the original program will be move down at the pasted point. When the total lines are larger than specified after pasted, there will be a tip reminding your that this can not be pasted.

This function is only available under LAD editing screen.

### 4.2.2.6 Delete

Delete the content in selected area. The following lines will be moved up automatically as deleting whole line.

This function is only available under LAD editing screen.

### 4.2.2.7 Select All

Select all the LAD programs.

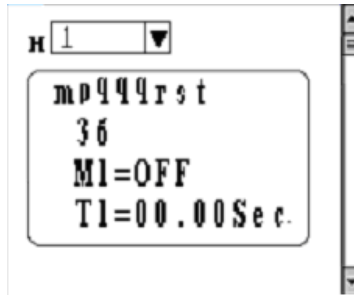
This function is only available under LAD editing screen.

## 4.2.2.8 Insert a Line

Insert a line by positioning the cursor and the original program will move down. There will be tip to remind you this cannot be inserted beyond the editing range after moving down. This function is only available under LAD editing screen.

## 4.2.2.9 HMI/Text

Display and set HMI/Text.



## 4.2.2.10 Symbol... (Component symbol)

Symbolize for the components. The symbol will be displayed under the components at LAD mode.

This function is only available under LAD editing screen.

Type:  Num:

Symbol:

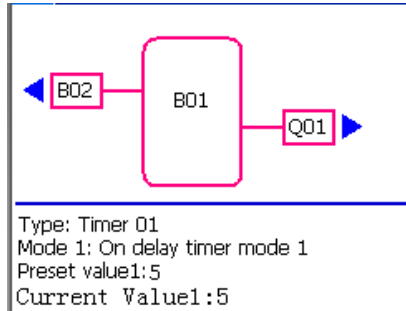
## 4.2.2.11 Function List...

Display all the Function components which have been edited in the program, with the types, operation mode and preset value.

LAD    Function List

FBD    Function List





### 4.1.3.3 Run

When online, controlling the slave to run, there will be a tip to enter Monitor status.

### 4.1.3.4 Stop

When online, controlling the slave to stop, there will be tip to exit Monitor if it is in Monitor status.

### 4.1.3.5 Read

When online, read program from slave and display the program according to LAD or FBD mode. If the slave has a Password set, the program will be read after entering the Password.

This function is unavailable in Monitor status.

### 4.1.3.5 Write

Write program to the slave when online.

Before you write iSmart Ladder program to slave, please check whether there is password. This function is not available in Monitor status.

### 4.1.3.6 System Set

System setting of slave

ID Set	
Current ID:	01
New ID(00-99):	<input type="text" value="01"/>
Remote I/O	Other Setting
<input checked="" type="radio"/> NO	<input checked="" type="checkbox"/> M Keep
<input type="radio"/> Master	<input checked="" type="checkbox"/> C Keep
<input type="radio"/> Slave	<input type="checkbox"/> Backlight
Expand I/O Setting	
I/O Number:	<input type="text" value="0"/>
<input type="checkbox"/> I/O Alarm	
<input type="button" value="Read"/>	<input type="button" value="Set"/>
<input type="button" value="Quit"/>	

Read: Read setting from slave and display it.

Set: Set the setting to slave.

### 4.1.3.7 RTC Set

Set slave RTC:

Year / Month / Day:  
 /  /   
 Hour : Minute  
 :

- (1) Under OFF Link, display PDA date and time.
- (2) Under ON Link, set ISMART date (year, month, date) and time (minute, second)  
 The week in slave will be reset after year, month and date are set.

### 4.1.3.8 Password

Set Password for slave.

Password:   
 New Password:   
 Verify Password:

When iSmart does not have a Password, New Password field is disabled.

Password range is 1~9999. Enter original password before you set a new one and confirm it.

Password is set to 0 that is clearing the original password.

### 4.1.3.9 Language

Set the operation language for slave.

### 4.1.3.10 Analog Set

Set the Analog Gain and Analog Offset:

	Gain (1~999)	Offset (-50~+50)
A1	<input type="text" value="1"/>	<input type="text" value="0"/>
A2	<input type="text" value="1"/>	<input type="text" value="0"/>
A3	<input type="text" value="1"/>	<input type="text" value="0"/>
A4	<input type="text" value="1"/>	<input type="text" value="0"/>

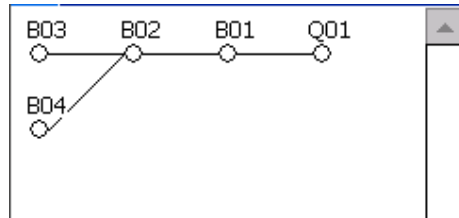
In HMI/Text,  $A? \text{ Display} = \text{Gain} * A? + \text{Offset}$  (? : 1~4)

## 4.1.4 View menu

### 4.1.4.1 Toolbar

Display and hide the toolbar.

### 4.1.4.2 FBD Blocks



Here displays with icons to show the logical relationship of the FBD program. Then the user can view the whole program.

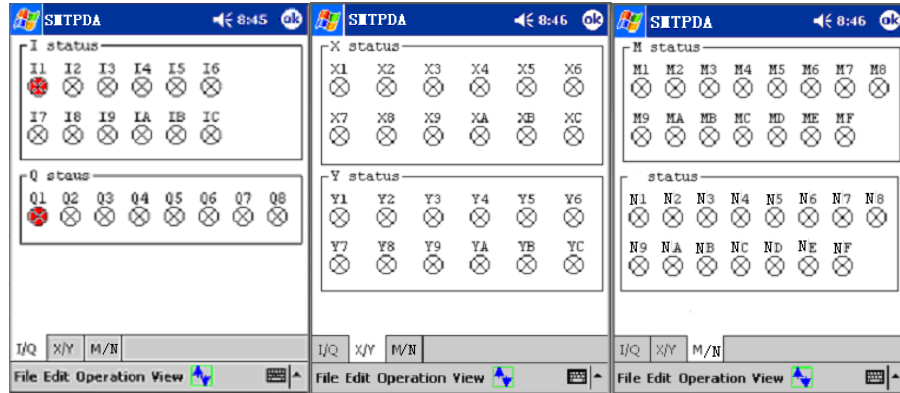
### 4.1.4.3 I/O Status

Monitor I/O status at Monitor status.

Modify the status:

I/Q, X/Y status can be displayed, but can not be modified.

Click M/N mark to modify the status.



















### 4.1.4.4 Module Status...

Monitor the present main module online status and version information.

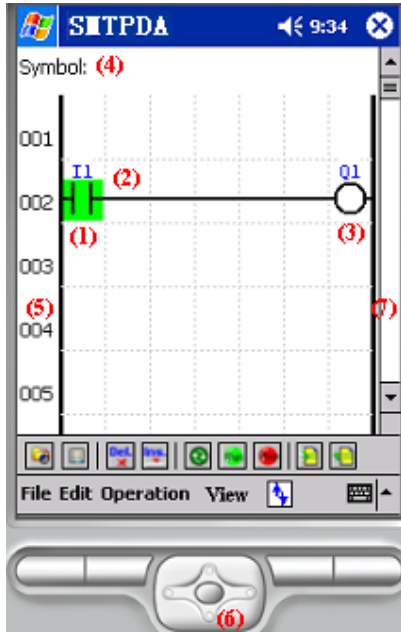
## 4.2 Toolbar

Display/ hide toolbar /  

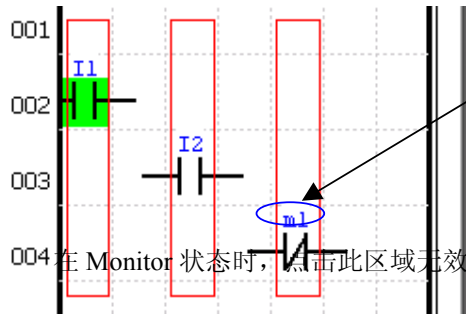
LAD Toolbar:								
								
HMI	Function List	Symbol	Run	Stop	Delete	Insert Line	Read	Write
FBD Toolbar:								
								
HMI	Function List	Block View	Run	Stop	Read	Write		

The functions in the toolbar are corresponding to the ones in the menu. However, the former is easy and convenient for operation.

4.3 Operation under Ladder screen:



(1) Input component edit area



Click on the word (I1, I2, m1) and the green active cursor moves to this position.

在 Monitor 状态时，点击此区域无效。在非 Monitor 状态时，点击在如图红色区段，将开启输入组件

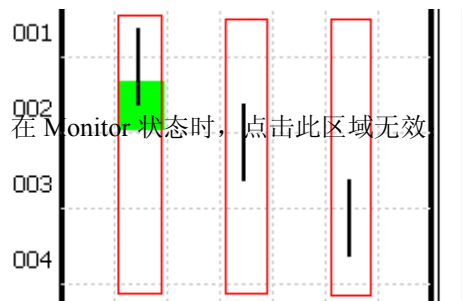
Type:  Num:

STR  STR NOT

Type: I /X/ Q /Y/ M / T / C /  
R/G /D/'-' / ' '

Select 'OK' to add the components to the responding position.

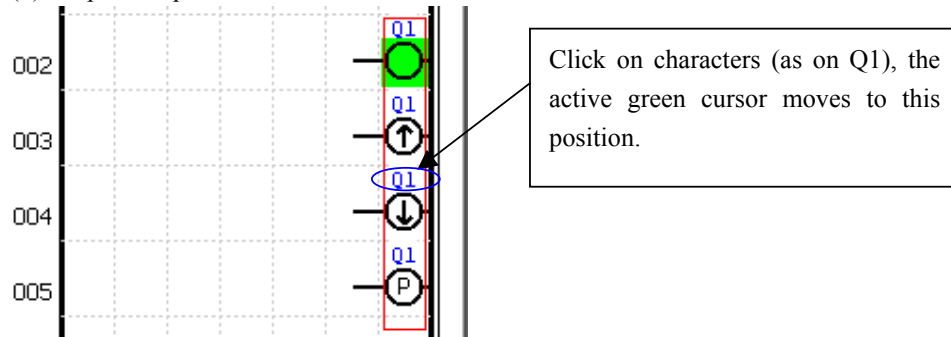
(2) Connect line (OR) edit area



在 Monitor 状态时，点击此区域无效。

In non-Monitor status, click inside red area to set up OR line and click again to delete it

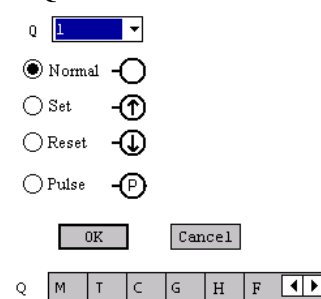
(3) Output component edit area



- 1) Click inside of the red frame area to open the output component dialog box.
- 2) At non-Monitor status, switching of all dialog boxes to set the component parameters and set up such components are all available.
- 3) The output components cannot be used repeatedly, there will be a tip to remind you of this. For example, if component Q1 is used in one line and it is used in another line, there will be a tip to remind Q1 cannot be used again.
- 4) At Monitor status, the present window cannot be switched, and the component type and mode cannot be modified.

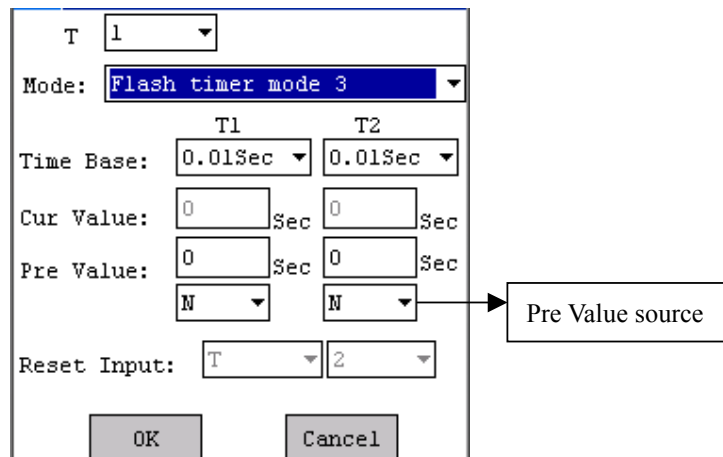
Here is the introduction of every components and setting:

**a. Q /Y/ M**



- 1) At Monitor status, component mode can be displayed, but cannot be modified.
- 2) At non-Monitor status, click 'OK' to add the component to the program.

**b. Timer (T)**



- 1) T2 parameter setting only can be displayed under Mode 7;
- 2) When Pre Value source is set to N, it can be set directly, or T1~T15, C1~C15, A1~A8 present value. When The Pre value is set to later, the former value is useless.
- 3) At Monitor status, Current Value displays real time present value. Only Pre value of Timer can be modified. After being modified, the Pre Value will be written to the slave as 'OK' is clicked.
- 4) At non-Monitor, click 'OK' to set up new components.

### c. Counter (C)

<b>mode: 1-6</b>	<b>Mode 7</b>	<b>Mode 8</b>
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C

Mode:

Cur Value:

Pre Value:

Direction Set:

Reset Input:

C

Mode:

Cur Value:

Pre Value:

Input I1/I2:

Reset Input:

C

Mode:

Cur Value:

Pre Value:  On  Off

Fixed Time:

Input I1/I2:

- 1) Pre Value can be set directly or set as T1~T15, C1~C15, A1~A8 present value. The original preset value is useless as it is set to present value of the other function blocks.
- 2) Under Mode 7, 8, Input I1/I2 option only can be set to I1 or I2.
- 3) At Monitor status, Cur Value displays real time present value. Only Pre Value of the counter can be modified and it will be written to the slave after 'OK' is clicked.
- 4) At non-Monitor, click 'OK' to set up new components.

### d. RTC (R)

<b>Mode 1-2</b>	<b>Mode 3</b>
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R

Mode:

Cur Time:

Week (on-off):  On  Off

Preset Time:  :  On

:  Off

R

Mode:

Cur Time:

Year (on-off):  On  Off

Preset Data:  .  On

.  Off

- 1) At Monitor status, Cur Time displays the RTC value of the slave.
- 2) Set Week/Hour/Minute or Year/Month/Day according to operation mode.
- 3) At Monitor status, click 'OK' to write preset value to slave.

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- 4) At non-Monitor status, click 'OK' to set up new components.

### e. Analog Compare (G)

The dialog box for Analog Compare (G) has a title bar with 'G' and a dropdown menu. Below the title bar, there is a 'Mode:' dropdown menu with the text 'Ay-Ref. Value <= Ax <= Ay'. Underneath, there are two dropdown menus labeled 'A1' and 'A2'. Below these are two input fields: 'Cur Value:' followed by 'Ax' and 'Ay' input boxes. Below that is 'Pre Value:' followed by '0' and 'Ref' input boxes, and a dropdown menu with 'N'. At the bottom are 'OK' and 'Cancel' buttons.

- 1) Pre Value can be set directly, or set to T1~T15, C1~C15, A1~A8 present value. The original value is useless as preset value is set to present value of the other function blocks.
- 2) In Monitor status, Cur Value displays preset A? value.
- 3) In Monitor status, Pre Value of G can be set. After this is modified, it will be written to slave as 'OK' is clicked.
- 4) In non-Monitor status, click 'OK' to set up new components.

### f. HMI (H)

The dialog box for HMI (H) has a title bar with 'H' and a dropdown menu. Below the title bar, there is a 'Mode:' dropdown menu with 'Display'. At the bottom are 'OK' and 'Cancel' buttons.

- 1) In Monitor status, display and set HMI mode.
- 2) In non-Monitor, click 'OK' to set up new components.

### g. PWM (P)

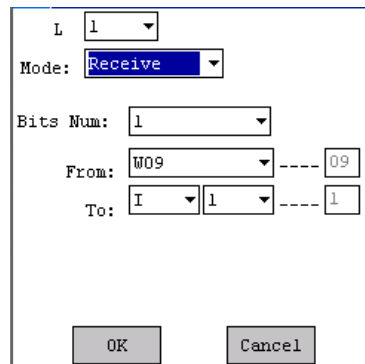
The dialog box for PWM (P) has a title bar with 'P1'. Below the title bar, there is a 'Set:' dropdown menu with '4' and an input field with '1'. Below that is a 'Preset Value' section with 'T:' and 't:' input fields. Below that are three 'Input' sections: 'Input 1:', 'Input 2:', and 'Input 3:', each with two dropdown menus. At the bottom are 'OK' and 'Cancel' buttons. An arrow points from a text box 'Monitor status, present output component' to the '1' in the 'Set:' input field.

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### Display and set PWM

- 1) Set column: 8 group value. The output group number is set according to On/Off status of Input1/Input2/Input3.
- 2) T: Time period, t: On time.
- 3) In Monitor status, to set PWM value is O.K, but Input1/Input2/Input3 setting value cannot be modified. The set value will be written to slave after 'OK' is clicked.
- 4) In non-Monitor status, click 'OK' to set up new components.

### h. DataLink (L)



- 1) In Send status, the status of components will be sent to W list. The send destination is according to ISMART ID, which cannot be modified.
- 2) In Receive status, any group of W list value can be set to component according to component status.
- 3) According to set Bits Num and component begin number to set the end number.
- 4) According to set Bits Num and W list begin number to set the end number of W.
- 5) In Monitor status, the set cannot be modified.
- 6) Slave ID and W corresponding relationship.  
W01-08: ID=0, 1, 9, ..., 89, 97  
W09-16: ID=2, 10, ..., 90, 98  
W17-24: ID=3, 11, ..., 91, 99  
W25-32: ID=4, 12, ..., 92  
W33-40: ID=5, 13, ..., 93  
W41-48: ID=6, 14, ..., 94  
W49-56: ID=7, 15, ..., 95  
W57-64: ID=8, 16, ..., 96

### i. ''



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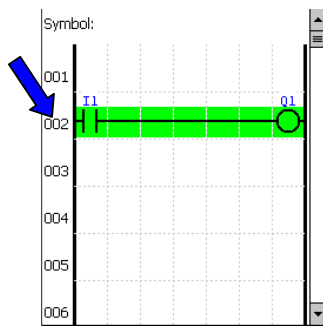
Click 'OK' in this box, the original components will be deleted from program if it is not in Monitor status.

### (4) Symbol display position

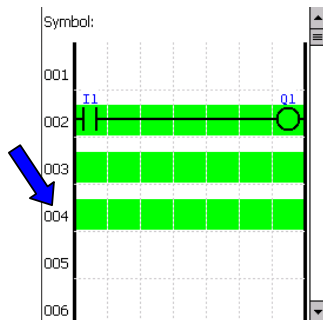
The symbol of the component will be displayed as the green active cursor stops on it.

### (5) Line-number display area and range selection.

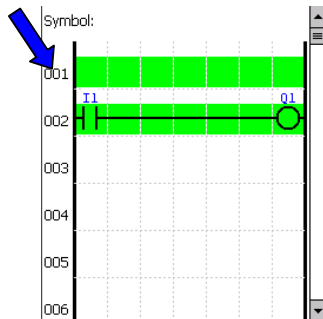
When you click on the line-number display area, the whole line will be selected actively and shown in green. At this time, Cut, Copy... functions are available.



As left figure, click on 002 and the whole line is selected and shown in green. To click other line number you can expand the selected area.



As left figure, click on 002, then on 004, 002~004 lines are all shown in green. Click other line to expand the range.

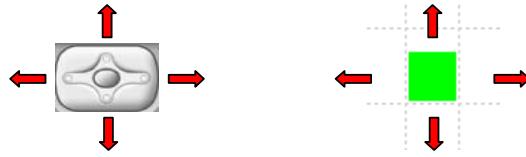


As left figure, following aforementioned steps, then click on 001. Based on 002 line number, 001~002 lines are shown in green. Upward click other line number can also expand the selected area.

**❑ After selected, click on component programming area to cancel.**

### (6) UP/ DOWN/LEFT/RIGHT keys.

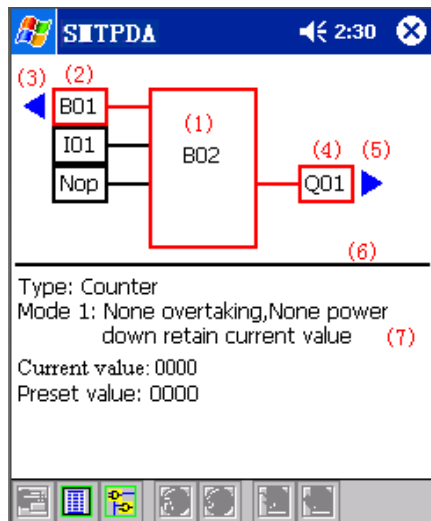
Control green cursor moving direction in PLC Ladder editing screen.



(7) Scroll axis control keys

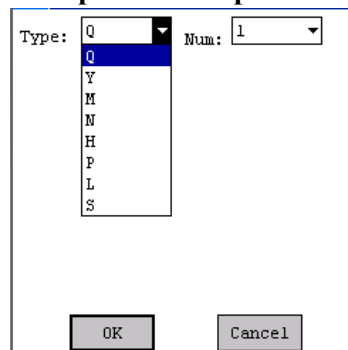
Control vertically scrolling of PLC Ladder editing screen.

## 4.4 FBD mode operation

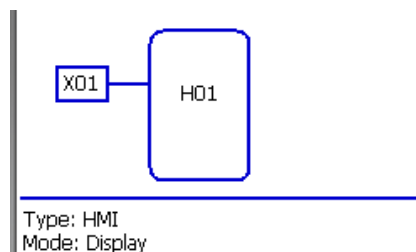


(1) Present component editing area: click on present component area to operate.

**I** present component is Coil (Q/Y/M/N/H/P/L/S):



The product type determines whether having P/L components or not. The program will display connecting relationship as present component selected.



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### A、 When present component is Q/Y/M/N:

The screenshot shows a dialog box with two dropdown menus at the top. The first is labeled 'Type:' and is set to 'Q'. The second is labeled 'Num:' and is set to '1'. At the bottom of the dialog box, there are two buttons: 'OK' and 'Cancel'.

Click 'OK' to switch present component to this one.

### B、 Present component is H:

The screenshot shows a dialog box with three dropdown menus. The first is labeled 'Type:' and is set to 'H'. The second is labeled 'Num:' and is set to '1'. The third is labeled 'Mode:' and is set to 'Display'. At the bottom of the dialog box, there are two buttons: 'OK' and 'Cancel'.

Set HMI operation mode, and write to slave at Monitor status.

### C、 Present component is P:

The screenshot shows a dialog box with two dropdown menus at the top. The first is labeled 'Type:' and is set to 'P'. The second is labeled 'Num:' and is set to '1'. Below these, there is a text field labeled 'Current set:' which is empty. Underneath that is a 'Set:' dropdown menu set to '1', followed by a small waveform diagram. At the bottom, there is a section labeled 'Preset value' containing two text fields: 'T:' with the value '1' and 't:' with the value '0'. At the bottom of the dialog box, there are two buttons: 'OK' and 'Cancel'.

- 1) At Link status, Current Set displays slave present preset value.
- 2) At switching Set, Preset Value displays preset value.
- 3) At Monitor status, the modified value will be written to slave.

### D、 Present component is L:

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The image shows two side-by-side dialog boxes. The left dialog has 'Type' set to 'L' and 'Num' set to '1'. The 'Mode' is 'Send'. The 'From' field has a dropdown set to 'I' and an input box containing '1'. The 'To' field has a dropdown set to 'W09' and an input box containing '09'. The right dialog has 'Type' set to 'L' and 'Num' set to '1'. The 'Mode' is 'Receive'. The 'From' field has a dropdown set to 'W09' and an input box containing '09'. The 'To' field has a dropdown set to 'I' and an input box containing '1'. Both dialogs have 'OK' and 'Cancel' buttons at the bottom.

- 1) In Send status, the status of components will be sent to W list. The send destination is according to ISMART ID, which cannot be modified.
- 2) At Receive status, any group of W list value can be set to component according to component status.
- 3) According to set Bits Num and component begin number to set the end number.
- 4) According to set Bits Num and W list begin number to set the end number of W.
- 5) At Monitor status, the set cannot be modified.
- 6) Slave ID and W corresponding relationship:
  - W01-08: ID=0, 1, 9, ..., 89, 97
  - W09-16: ID=2, 10, ..., 90, 98
  - W17-24: ID=3, 11, ..., 91, 99
  - W25-32: ID=4, 12, ..., 92
  - W33-40: ID=5, 13, ..., 93
  - W41-48: ID=6, 14, ..., 94
  - W49-56: ID=7, 15, ..., 95
  - W57-64: ID=8, 16, ..., 96

### E、 Present component is S:

The dialog box has 'Type' set to 'S' and 'Num' set to '1'. Below this, there is a 'Type' label and two radio buttons: 'Q' (which is selected) and 'Y'. Below the radio buttons, there is another 'Num' dropdown set to '1'. At the bottom are 'OK' and 'Cancel' buttons.

- 1) Type is set Shift component and Num is set control number.
- 2) In Monitor status, property cannot be modified.

## II when present component is Block, display property in windows.

## A、 Logic Block

- 1) In Monitor status, the type of present component cannot be modified.
- 2) In non-Monitor status, click 'OK' to refresh component parameters and program.
- 3) Present window cannot be switched.

## B、 Timer

- 1) In Mode 7, Toff setting is available.
- 2) Pre Value can be set to fixed value or other function block present value (A1~A8, T1~T15, C1~C15).
- 3) In non-Monitor status, modifying component mode is available.
- 4) In Monitor status, Cur Value displays real time present value. Click 'OK' to write Pre Value to slave.
- 5) Present windows cannot be switched.

## C、 Counter

- 1) At mode 8, Preset off and Fixed Time setting are available.
- 2) Pre Value can be set as fixed value or other function blocks present value (A1~A8, T1~T15, C1~C15).

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- 3) In Monitor status, Mode cannot be modified, and Cur Value can display present value. If the value is modified, click OK to write new value to slave.
- 4) Present screen cannot be switched.

### D、 RTC

Mode: Every day action mode

Cur Time: WE 9:38

Week (on-off) SU On SU Off

Preset Time: 0 : 0 On  
0 : 0 Off

Insert to the programme  
 Delete the before items

OK Cancel

- 1) In Link status, present time displays slave time, and at non-link status, present time displays PDA time.
- 2) At Monitor status, Mode cannot be modified. If the default value is modified, click 'OK' to write new program to slave.
- 3) Present window cannot be modified.

### E、 Analog (G)

Mode: Ay-Ref. Value <= Ax <= Ay

Ax A01 Ay A02

Cur Value: [ ] [ ]

Pre Value: 0 Ref  
N

Insert to the programme  
 Delete the before items

OK Cancel

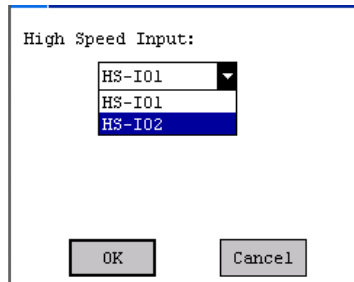
- 1) This function block is available on only SMT-\*D-\*\*\* type. (For example: SMT-ED-R12).
- 2) Pre Value can be set as fixed value or other function blocks present value (A1~A8, T1~T15, C1~C15).
- 3) In Monitor status, Cur value reads slave A? value and displays it. Mode cannot be modified.
- 4) After Pre Value is modified, In Monitor status, click 'OK' to refresh slave component parameters.
- 5) Present window cannot be modified.

**F、 When editing present components, Coil and Bn window can be displayed but cannot be set.**

**(2) Input component edit area.**

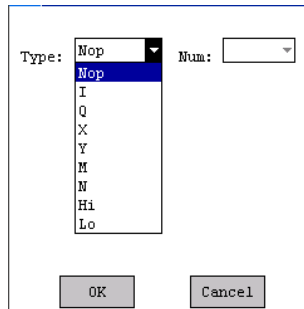
Input component area displays present connection. Owing to the program cannot be modified in Monitor status, to click here is useless. In non-Monitor status, please click at the input component area to edit present connection.

**A) Counter high speed input, the window is as following:**



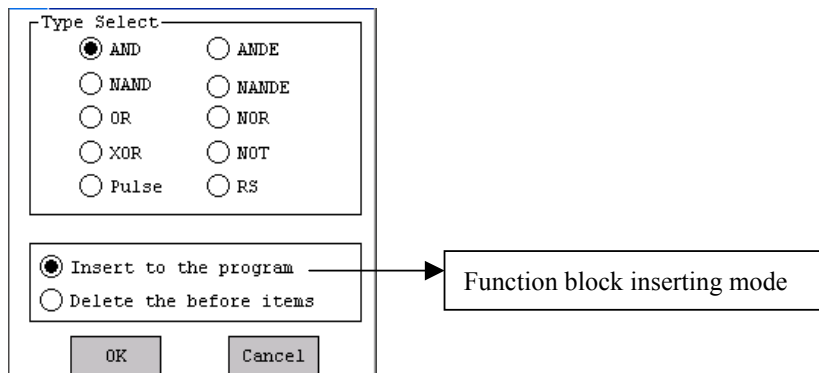
High speed input component can be used repeatedly, or there will be a tip to remind you the selected high speed input has been used.

**B) Contact selection:**



- 1) Display Nop as connecting with no components.
- 2) When present component is Hi or Lo, Num cannot be selected.
- 3) You can switch screen to modify component type.

**C) Logic Block selection:**



**Component inserting mode:**

- Insert to the program: Inserting a component to program and original connected component is set as the first input of the newly inserted component. The other tip defaults as Nop.

## SMTPDA software Instruction

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- Delete the before items: Delete original component of the input tip connected and replace it with new inserted component. And the new component inputs default as Nop.

### D) Timer, RTC, Analog

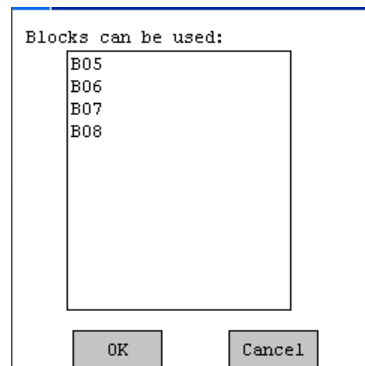
The inserting modes of these functions are same as Logic Block's.

### E) Counter

The inserting modes of Counter mode 1—6 is same as Logic Blocks.

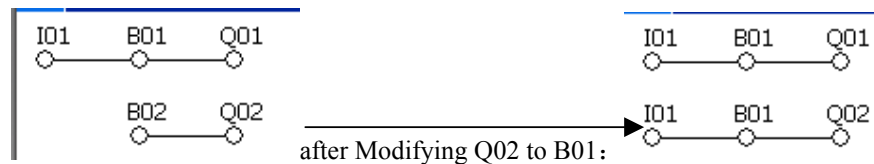
Counter Mode 7, 8, Counter first input (that is high speed pulse input) default as IO1, and original input default as the second input of Counter.

### F) Bn selection



- 1) List all the blocks available for the present input tip. (That cannot form a Block hoop.)
- 2) After select some block, it will be insert in program at Delete the before items mode and maintain connection of new component.

Original program:

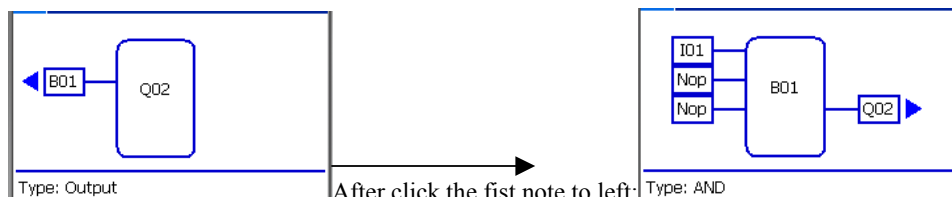


B02 component was deleted, and Q02 connecting component is B01 and its input component.

### (3) Fist note of enquiry program at left side.

FBD program enquiry mode is from back to front, that is only a connection relation is displayed at one time.

When input component is Block, there will be a fist note (triangle) to left. Click the note to display the forward component. Original window:



**(4) Output component display area**

To display output component of present component

FBD program enquiry mode is from back to front, that is only a connection relation is displayed at one time. Consequently, the right connected component at this branch will be displayed (as above figure: enquire left B02 from Q2, and Q2, the output component of B02 will be displayed).

**(5) First note of enquiry program at right side.**

If the present component is not the end component, there will be a fist note to enquire right program.

For example: as above figure, B01 still has output component, and it is available to enquire right program. And now, Q02 become present component after you click the fist note. And click left fist note to return original screen.

**(6) Isolation line**

It is an isolation line between program editing area and parameter display area.

**(7) Present component parameter display area**

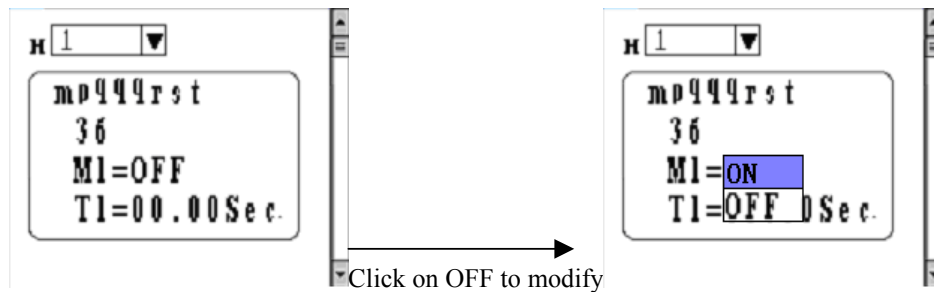
Display present component property information  
 Display refreshed Current Value at Monitor status.

**4.5 HMI function introduction**

1. PDA program cannot edit HMI/Text directly.

At Link status, to read slave HMI information and modify it are available.

1) Modify M component status

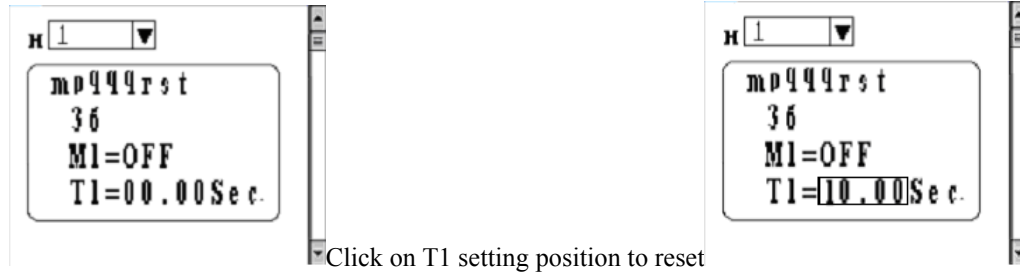


Click ON/OFF option to reset M status

2) When T/C/R/G Pre Value is set to fixed figure (not the present value of other function block), it is available for modifying.

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Click on outside of edit area and Pre Value will be entered.

### 2. Uninstall

Run install software again to uninstall it. If you want to uninstall such program on PDA, please select Start  
→Set→Delete program.