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禾川科技

Explanation of Basic Components

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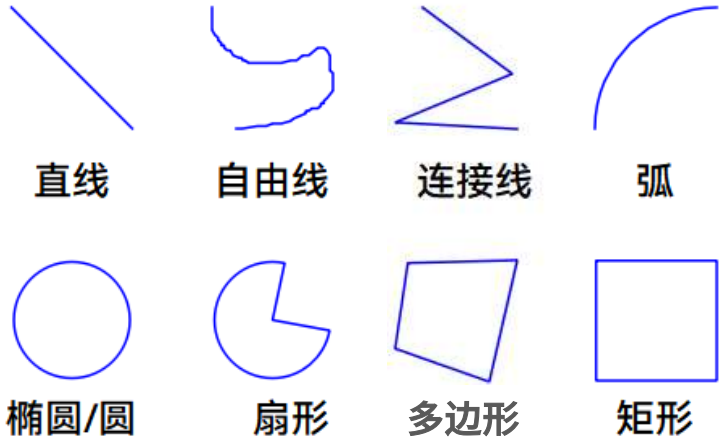
CONTENTS

Basic Components

Graphic Components-1

- **Graphic Components in the menu bar contains: Line, Free Line, Connection Line, Arc, Ellipse/Circle, Sector, Rectangle, Polygon, Scale, Text/Comments, Picture, Vector Chart, Table;**



1. Text/Comments: the basic window to add text, and can set the font, color, size and a variety of related attributes of the content area to enter the text to be displayed. If you use the text tag library, the source of the content of the text will be taken from the selected project;

Basic Components

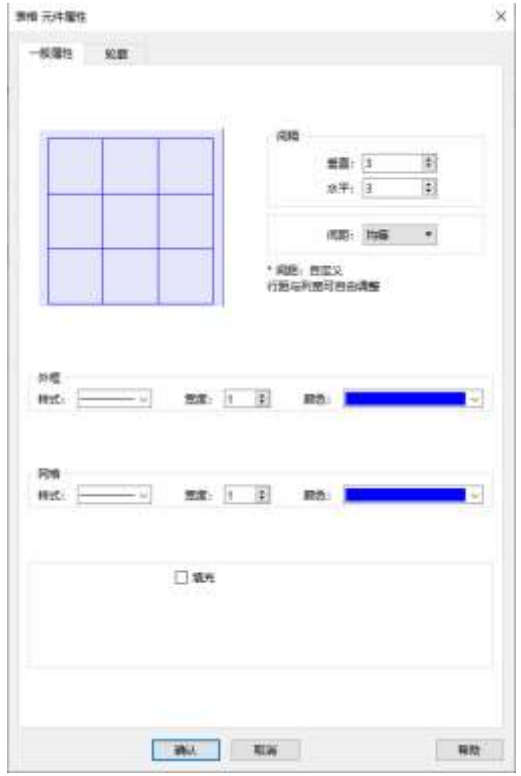
Graphic Components-2

2、Pictures: Select pictures from the picture library to displ ay in the basic window, part of the picture can be adjusted to fill the color of the picture;

Basic Components

Graphic Components-1

。5. Table: Add a table to the basic window, and you can set the style of the table's frame, grid and fill.



表格

Basic Components

Bit Status Indicator

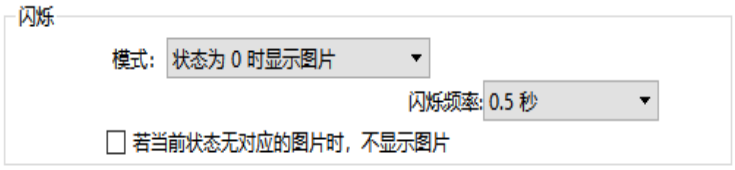
- **The [Bit Status Indicator] Component is used to display the status of the bit registers.**

Step 1: Click [Component] -> [Bit Status Indicator] in the menu bar, the dialogue window of the Bit Status Indicator component will pop up;

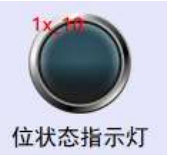
Step 2: Set each property such as read address and blinking;

1, read the address: click [Setting] to select the monitoring address set by the bit register; [Index Register] to use dynamic offset to change the specified address; [Output Reverse] can be read for the reverse display of the state;

2、Blinking: Used to control the blinking mode of different states of the components;



Step 3: Press the [Confirm] key to add a [Bit Status Indicator] component;



Basic Components

Bit Status Setting

- 【[Bit Status Setting] is used to change the status of the bit register.

Step 1: Click [Component] -> [Bit State Setting] in the menu bar, which will bring up the dialogue window of the properties of the bit state setting component;

开关类型	描述
设为 ON	按压此元件后，所指定寄存器的状设置为 ON。
设为 OFF	按压此元件后，所指定寄存器的状态将被设为 OFF。
切换开关	按压此元件后，所指定寄存器的状态将被反向，即 ON->OFF, OFF->ON。
复归型	按压此元件后，所指定寄存器的状态将先被设置为 ON，但手放开后，状态将被设置为 OFF。
周期切换开关	所指定寄存器的状态将在 ON 与 OFF 间周期性切换，此模式为自动执行。 可设置的周期为 0.1 秒 ~25.5 秒。
当窗口打开时设 ON	元件所在位置的窗口被打开时，所指定寄存器的状态将自动被设置为 ON。
当窗口打开时设 OFF	元件所在位置的窗口被打开时，所指定寄存器的状态将自动被设置为 OFF。
当窗口关闭时设 ON	元件所在位置的窗口被关闭时，所指定寄存器的状态将自动被设置为 ON。
当窗口关闭时设 OFF	元件所在位置的窗口被关闭时，所指定寄存器的状态将自动被设置为 OFF。
当背光灯开时设 ON	当背光灯打开时，所指定寄存器的状态自动被设置为 ON。
当背光灯开时设 OFF	当背光灯打开时，所指定寄存器的状态自动被设置为 OFF。
当背光灯关时设 ON	当背光灯关闭时，所指定寄存器的状态自动被设置为 ON。
当背光灯关时设 OFF	当背光灯关闭时，所指定寄存器的状态自动被设置为 OFF。

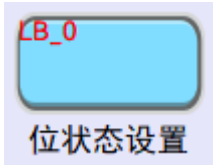
Step 2: Set the write address, switch type, macro instruction and other related parameters;

1. Send command when the button is released: after checking, the pressing action of the component must be completely released for the operation set by the component to be executed;

2、Switch type: set the change bit register state operation to be executed, the specific type is shown in the table;

3、Macro[*1]: set the macro instruction that needs to be executed at the same time;

Step 3: Press the [Confirm] key to add a new [Bit Status Setting] element;



Note: *1. To enable the macro command function, you have to create macros in the macro command library first;

Basic Components

Numeric - General Properties

- The [Numeric] element is used to enter or display the value in the specified word register.

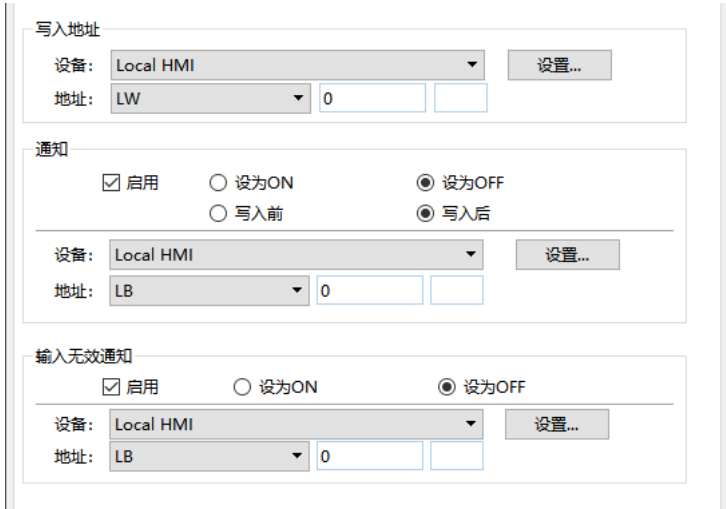
Step 1: Click [Component] -> [Numeric] in the menu bar, the properties window of the numeric component will pop up;

Step 2: In [General Properties], set each property such as Enable Input Function, Read/Write Address, Notification, Invalid Input Notification, and so on;

1. Enable input function: enable the setting of attributes such as write address, notification, input invalid notification, numerical value input, etc. When unchecked, it is only the function of numerical value display;

2. Write Address: Enable the input function before you can configure the input address;;

3. Notification: Write ON or OFF status to the specified bit register before or after the numerical input operation is executed;



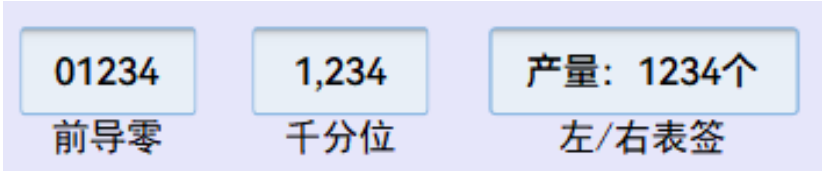
Basic Components

Numeric-Format

Step 3: Set the attributes related to reading register data in [Format];

1. **display format:** set the type of data displayed, the number of integer digits, the number of decimal places;

2. **Display mode:** set the format of data display, you can set the leading zero, thousandths, left label, right tab;



3. **The proportion of conversion:** the data displayed is the use of registers in the original data after conversion obtained. This function must set the ratio of minimum/maximum value and [limit] items in the input lower limit/upper limit; such as the setting of the figure as an example, when the original data is 15, then after conversion to get the Numeric for 40.

Basic Components

Numeric –Data Entry

Step 4: When the input function is enabled, set the relevant properties of the keyboard in [Numeric Input];

1. **Mode:** Touch mode starts the input by to uching the element; **Bit control** mode starts (e nds) the input by specifying the on (off) of th e bit register.

2. **Order input:** set the input order and in put order group to achieve the function of cont inuous input of multiple input elements;

3. **Keyboard:** Use pop-up keyboard when checking: Specify the keyboard window and pop-up position. Whe n starting input, the system will pop up the keyboar d window at the specified position and close it when ending input; when unchecked, the system will not po p up the keyboard window when starting input, and th e user has to use the keyboard input function in the screen or the external keyboard to perform the input operation:

Basic Components

ASCII

- The [ASCII] element displays the character data in the specified register by setting the character code.

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Step 1: Click [Components] -> [ASCII] in the menu bar, the dialogue window of the properties of the Num eric component will pop up;

Step 2: Set the attributes of Enable Input Function, Multi-line Display, Profile Format, and so on;

1. Enable Input Function: You can enable the setting of the attributes related to the notificat ion function;

2. Multi-line display: When the string data i s read with line breaks, it will be displayed with line breaks;

3. Password: The '*' symbol will be used to replace all characters in the character display;

4. High and low byte conversion: tick this fe ature, the display order is changed to [low byte] + [high byte]; according to the controller charact er high and low byte order to adjust;

5. Information format: set the character encod ing format of the string data; default is UTF-8 fo rmat, according to the controller character high e ncoding format selection;

Basic Components

Word Lamp 1

- The [Word Lamp] element displays labels and graphs of relative states by reading the data in the word register or switching at regular intervals.

Step 1: Click [Components] -> [Word Lamp] in the menu bar to bring up the dialogue window of the properties of the Multi-State Indicator component;

Step 2: Set each attribute such as mode (data, LSB, bit combination, cycle transition state), offset, read address, and blink;

1. Data Mode: Specify the result of the data within the word address as the current state of the component (up to 256 states can be supported for display); tick [Use State Settings] and click [Settings] in the properties to configure the word address data corresponding to each state;

Word Lamp 2

2. **LSB mode:** Set the word address data is first converted to binary, and then use the lowest bit that is not 0 to determine the current state of the component, the maximum number of 33 states; for example, when reading the address data is 6, converted to binary 110, the first is not 0 is Bit1, the control displays the state of 2;

5; Bit combination mode: according to set the bit address combination after the Numeric transform state, change the number of states can modify the number of read bit address, up to 4 addresses can be read, a total of 16 states; when the address combination of data for 0101, converted to decimal 5, the control displays the state 5;

Word Lamp 3

4. Cycle transition state: according to a fixed frequency sequential transformation state;

Step 3: Press the [Confirm] key, you can add a new [Word Lamp] components;

Basic Components

Set Word

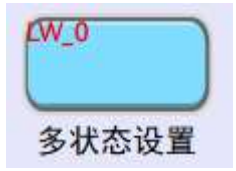
- The [Set word] is used to set the data in the word register.

Step 1: Click [Object] -> [Set Word] in the menu bar, which will bring up the dialogue window of the properties of the multi-state setting component;

Step 2: Set the write address, notification, mode and other related parameters;

1. Mode: Set the operation to be performed to modify the word register data, commonly used mode shown below;

Step ③: Press the [Confirm] key to add a new [Set Word] element;



Basic Components

Toggle switch

- [Toggle switch] is a combination of Bit Status Indicator and Bit Status Setting, and is a read/write switch element.

Step 1: Click [Object] -> [Toggle switch] in the menu bar, the dialogue window of the properties of the Toggle switch component will pop up;

Step 2: Set the read/write address, operation mode, macro command and other related parameters;

1. Mode：Different from Word Lamp, there are only two modes: Data and LSB;

2. Operation Mode: different from Bit Status Setting, there are only four modes: ON, OFF, Toggle Switch, and Reset;

Step 3: Press the [Confirm] key to add a new [Toggle switch] component;

Basic Components

Multi-state switch

- 【Multi-state switch】是Word Lamp 与多状态设置的组合。

Step 1: Click [Object] -> [Multi-state switch] in the menu bar, the property dialogue window of Multi-state switch will pop up;

Step 2: Set the read/write address, operation mode, status setting, notification and other related parameters;

1. Mode: Different from Word Lamp, there are only two modes: data and LSB;

2. Operation Mode: different from Multi-State Setting, there are only two modes: Add and Subtract;

3. State setting: after checking, you can modify the state corresponding to the numeric of the read word address; you can use the action state when there is [illegal input], and after checking the error notification, you can also set the state for the specified bit address;

Step 3: Press the [Confirm] key to add a [Multi-state switch] component;

Basic Components

Combo Button

- The [Combo Button] is an element that can execute multiple commands, and the order of execution can be adjusted;

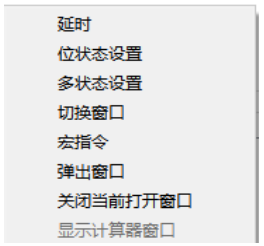
Step 1: Click [Object] -> [Combo Button] in the menu bar, the dialogue window of the properties of the Combo Button component will pop up;

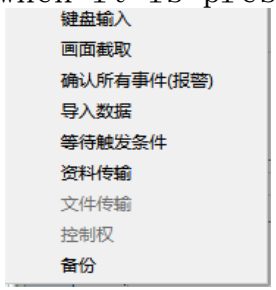
Step 2: Set the indicator and the instructions to be executed; users do not need to stack multiple components in the same position through the Combo Button;

1. Indicator: You can set the Bit Status Indicator, Word Lamp mode, read the data in the specified registers, and display the relative status labels and graphics;

2. Press Action: Set up multiple commands to be executed when Combo Button is pressed, and execute the commands in order from top to bottom and left to right;

3. Release Action: Set the multiple commands to be executed when the Combo Button is pressed, and the other actions are the same as those when it is pressed;





Step 3: Press the [Confirm] key to add a [Multi-state switch] component;

Basic Components

Slider

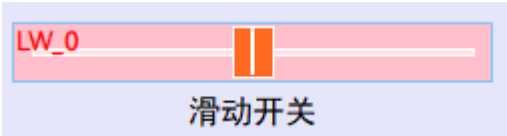
- [Slide Switch] is to create a slider area to change the Numeric within a specified register by dragging or clicking the slide;

Step 1: Click [Object] -> [Slide] in the menu bar, which will bring up the dialogue window of the properties of the slide switch component;

Step 2: Set the direction, minimum scale, upper and lower limits, write address, monitor address and other related parameters;

1. Direction: The display direction of the slide ;
2. Minimum scale: Numeric jumps with the minimum scale value when dragging the slider; when checking [scroll mode] the minimum scale value is invalid, the cut slider can not be dragged, by clicking on the slider left or right of the slider or the background to change the Numeric, the Numeric jumps with the scrolling value;
3. Upper and lower limits: Set the slider to change the upper and lower limits of the word register Numeric;
4. Write Address: when using the slider, transfer the write value to the specified address after release;
5. Monitoring address: when using slide switch, transmit the real-time want to set value to the specified register;

Step ③: Press the [Confirm] key to add a new [slider] element;



Basic Components

Function key

- **[Function key] Provides functions such as window switching, keyboard creation, macro execution and screen printing, etc. It can also be used to set the USB security key;**

Step 1: Click [Object] -> [Function key] in the menu bar, which will bring up the dialogue window of the properties of the Function key component;

Step 2: Select one of the functions of Window Switching, Keyboard Input, Trigger Macro, Screen Capture, Import User Data/USB Security Key;

1. Window switching: Realize the function of switching the basic window, pop-up window, return window and close the pop-up window;
2. Keyboard input: the implementation of the keyboard input function, mainly with the keyboard species, in the [Numeric] and [character] components need to use the keyboard to enter numbers or text;
3. Trigger Macro*1: Set the macro instructions that need to be executed at the same time;
4. Screen capture: used to save the current screen;

5. Import user data/USB security key: Set to import advanced security user account or can be set to use USB key to login;

Note: *1. To enable the macro command function, you have to create macros in the macro command library first;

CONTENTS

Project Menu Explained

Option List Function-1

- **[Option List] User selects the item through the menu list, and the corresponding item data will be written to the specified register.**

Step 1: Click [Components] -> [Option List] in the menu bar, the property window of the Option List component will pop up;

Step 2: Configure parameters such as menu attributes and monitor address in [General Properties];

1. Mode: Select the mode of the component (list or drop-down menu);

2. Number of items: set the number of items needed; set the source of the content displayed by Option List, there are four modes: preset, project address, user account;

3. Item information source: set the source of the content displayed by Option List, there are four modes: preset, project address, user account;

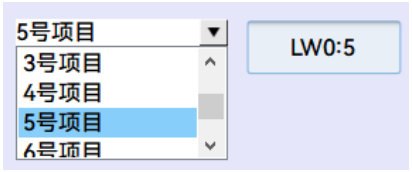
Project Menu Explained

Option List Function-2

When [Item Source] is preset, the Option List configuration step:

Step 1: Set the number of items and monitor address parameters, here take 8 items and monitor address setting LW0 as an example;

Step 2: Select [Status Setting] in the property window of the Option List component; set the corresponding data and project name for each project, and the configuration and result are shown below:



Project Menu Explained

Option List Function-3

Option List configuration steps when [Project Information Source] is the project address:

Step 1: Parameters such as monitor address, control address, and project address need to be set;

1. Control Address: Set the register data of [Set Address] to 1, which will update the content in the Option List; the register data of [Set Address+1] is used to set the number of items;

2. Project address: set the starting address used to store the contents of the project; set the character encoding format of the string data (Unicode, GB code, GB code high and low bytes interchangeable); the default is UTF-8 format, according to the controller character high encoding format selection;

Step 2: Place the relevant components in the basic window of the HMI, parameter settings, interface configuration and results as shown in the figure;

CONTENTS

Direct/Indirect Window Explanation

Direct/Indirect Window Explanation

- **The [Indirect Window] element uses word registers to control the opening and closing of a specified numbered window.**

Step 1: Click [Object] -> [Embedded] -> [Indirect Window] in the menu bar, the dialogue window of the properties of the indirect window will pop up;

Step 2: In [General Properties], set the read address, type, window offset, automatic window resizing and other properties;

1. Type： Set whether the popup window displays the window control bar;

2. Window Offset: the number of the pop-up window after enabled will be equal to the data in the read address plus the offset;

3. **Automatic adjustment of window size:** after enabling the system will adjust the size of the pop-up window according to its display range, and automatically adjust the relative position; unchecked fixed to the upper-left corner of the window as a reference point to display the size of the component size of the specified number of the window;

Direct/Indirect Window Explanation

Direct/Indirect Window Explanation

- The [Direct Window] component is triggered by a bit register to control the opening and closing of a specified window.

Step 1: Click [Object] -> [Embedded] -> [Direct Window] in the menu bar, then the dialogue window of the properties of the direct window will pop up;

Step 2: In [General Properties], set the properties of Trigger, Type, Window No., Read Address, and Auto Window Size;

1. Trigger: Set as the condition of register trigger;

2. Window number: Select the window that needs to be popped up;

CONTENTS

Data Transfer

Explanation of Data Transfer (Window) Function

- [The [Data Transfer (Pre-page)] component manually or conditionally triggers the execution of data transfer.

Step 1: Click [Object] -> [Data Transfer] -> [Data Transfer (Pre-page)] in the menu bar, which will bring up the dialogue window of the properties of the [Data Transfer (Pre-page)] component;

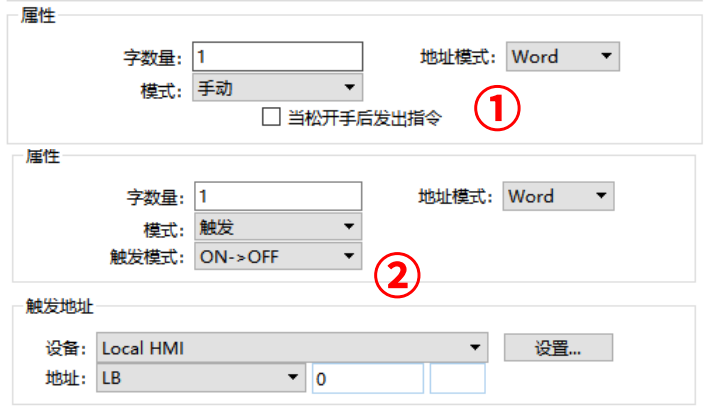
Step 2: Set [General Properties] in the dialogue window, and set the source address, destination address, address mode, trigger mode, and other properties;

1.Source Address: Set the source address for data transmission;

2. Target address: set the target address for data transmission;;

3. Address Mode: can set Word register data transmission, or Bit data transmission;

4. Mode: ①Manual: execute data transfer when clicking or releasing the element; ②Trigger: set the trigger condition for executing data transfer;



Data Transfer

Explanation of Data Transfer (Global) Function

- [Data Transmission (Global)] Data transmission is performed automatically using a fixed frequency.

Step 1: Click [Object] -> [Data Transfer] -> [Data Transfer (Global)] in the menu bar, which will bring up the property window of Data Transfer (Global);

Step 2: Click the [Add] button to bring up the event (alarm) login dialogue window; in the dialogue window, set [General Properties], set the source address, target address, address mode, trigger mode, execution mode and other properties;

1. **Only open in the specified window**: If ticked, the data transfer will be executed only when the selected window is opened;

2. **Effective enabling**: if ticked, you can set the register address and trigger mode for executing trigger.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