Coolmay Products FAQ

Shenzhen Coolmay Technology Co.,Ltd

Version:V9.121

Catalog

Chapter 1. 2N series PLC

1. PLC software can't be installed

Confirm the integrity of the software, system XP is the best. It is recommended to install GX8.52 on the WIN7 system. If an error occurs, try to change to the Works 2 software.

Software download address:www.coolmay.com

2. 2N series PLC type selection.

PLC series: FXCPU   PLC type：FX2N(C)

GX8.52 software screen shots   WORKS 2 software screen shots
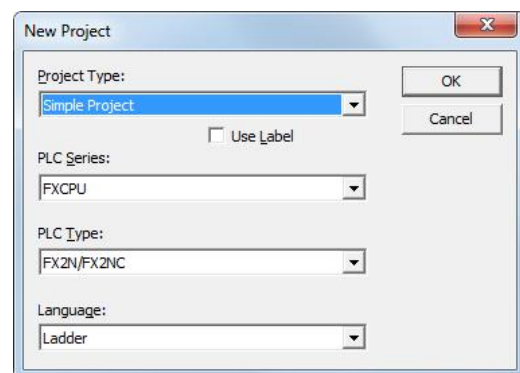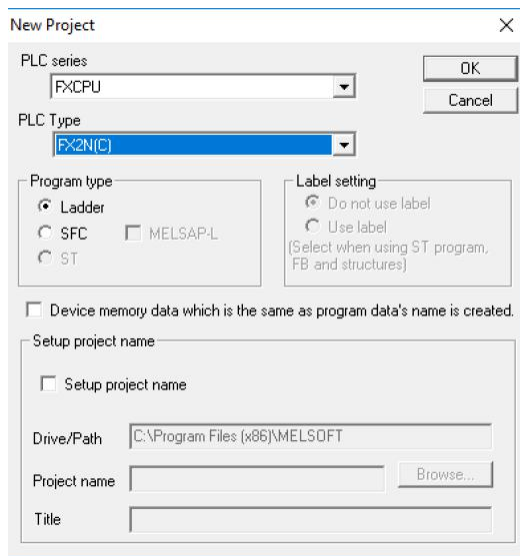
3. There is no way to create a new program after the PLC software is opened.

In the process of installing the software, there is a check box for monitoring only. After the check is made, can monitor and not create new.

The solution is to uninstall the software, re install it, and check monitoring without checking.

4. PLC can't communication with PC (can't monitor, can't download）

There are several situations in which PLC and computer communication are not available.

- PC serial port is broken, there is no way to use it.
- USB to 232 for laptop, the driver is not installed.
- PC serial port may leak, burn the PLC download protection resistor.
- Select wrong COM port on PC hardware.
- Can communicate, communication is unstable, check the line, try to replace the computer.

Summary: There are a variety of situations in which PLC can't download. It is recommended to use the replacement method to troubleshoot, such as replacing the computer, changing the download cable, replacing the PLC, etc...

5. PLC internal data (program) error

Fault performance: data jumps, the program does not follow the normal execution. Possible causes:

- Use GX 8.52 or GX8.86 or Works 2 programming software not provided by our company, After replacing the software, turn off the PLC DIP switch, clear the PLC memory, and then re-use GX 8.52 or GX8.86 or Works 2 software.

  Software download address:www.coolmay.net

- The PLC program has a logic error, testing every small segment, and then exclude.

6. PLC special encryption setting steps

(1) Drive PLC from run to stop state, it must be ensured that the PLC is in the state of stopping the operation, and the login keyword can be successfully written; if the write is executed in the run state, will show a prompt "login keyword of the PLC cannot be executed".

(2) Select menu "online" ——> "login keyword" ——> "create a new login, change it".

(3) PLC has regular encryption and special encryption, set to 12345678, which is the special encryption password of PLC. Anyone or cracking software can't crack even if they know it. After the login keyword is set to 12345678, you must first clear the PLC memory, then you can download the program again.

7. Precautions of using PLC transistor and relay

The PLC output is a common cathode output, the theoretical value is 1A, the actual use is less than 500mA, the COM wiring is negative, please use 24V voltage, there is no voltage output when it is used as a switch. If an external relay, the relay needs an external power supply.

The relay has a contact life, the theoretical value is 30W times, and the theoretical value of the external load does not exceed 5A. Frequently, the full load current may affect the service life, and there is no voltage out.

8. Precautions of Coolmay PLC output type selection

MT: indicates the transistor output, MR: indicates the relay output, and MRT: indicates the relay transistor mixed output.

The main differences between transistor output and relay output are:

① The difference in current load. At present, we use a transistor with a maximum current load of 500MA, and the maximum current load of the relay is 5A (the maximum relay current of the EX2N(S)/DX2N(S) series PLC is 3A);

② Output power: The transistor can only be connected to the DC24V power supply , and the relay can be connected to the DC24V and AC220V power supply ;

③ Functional characteristics: If you need to send a pulse to drive a stepper motor, you should use the transistor output or the mixed output. Also if the output switch is active, it is recommended to use a transistor output;

④If both the relay and the transistor are available, it is recommended to use a transistor output because the transistor has no contact life limit and the lifetime will be longer than the relay as long as the current does not exceed the limit.

9. PLC switch input wiring (COM connected to the negative pole)

Diagram 9 Input Wiring
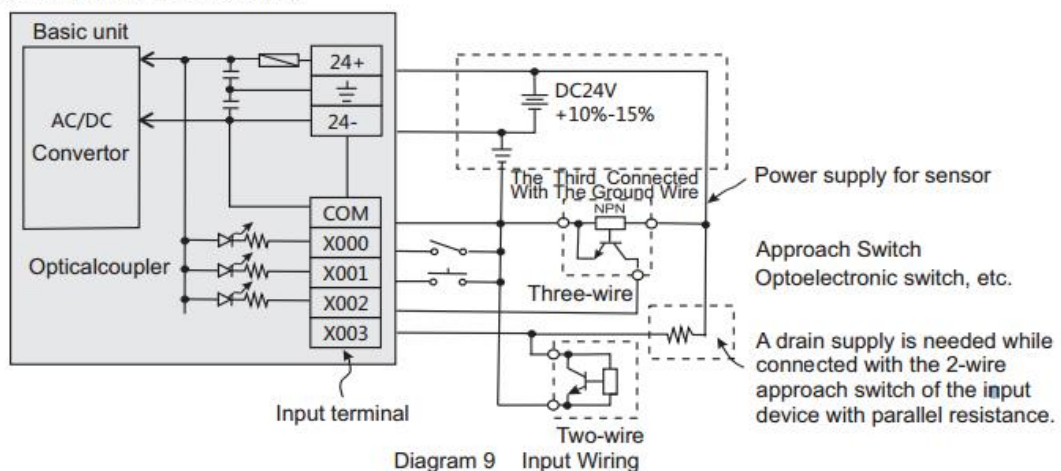
10. PLC digital output (relay/transistor) wiring

Diagram 10 is an equivalent circuit diagram of relay output module. There are several group of input terminals, each group is electrical isolation and the output electric shock of different groups should be connected with different power circuit.

Please choose proper insurance for each load to out the output unit and the plate wires of the plc due to the load circuit and other problems.
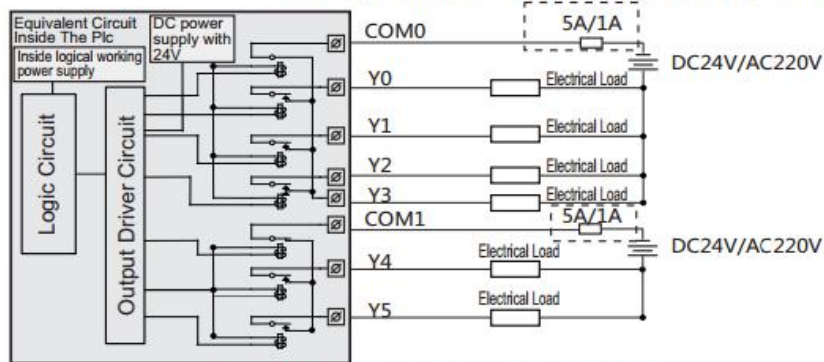
Diagram 10   Equivalent Circuit of Relay Output

Please choose proper insurance for each load to avoid burning out the output unit and the plate wires of the plc due to the load circuit and other problems.
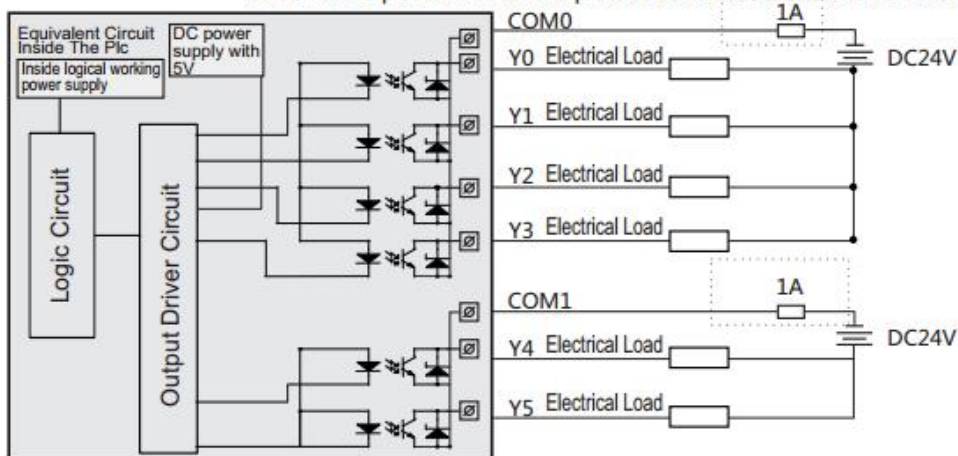
Diagram 11   Equivalent Circuit of Transistor Output

11. How to use multimeter to detect when PLC digital has no output?

In the PLC program, the output is tested with a multimeter. The transistor is about 100 ohms when the air load is positively connected, and the reverse connection is about 270 ohms. The relay tests its continuity.

12. PLC Analog wiring
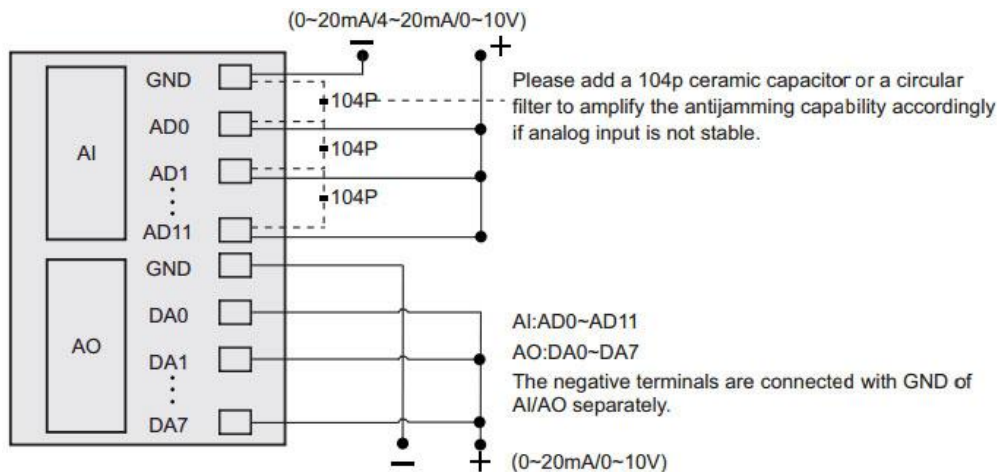
Diagram 14 Analog Wiring

Analog wiring

Two-wire: the power supply's positive pole is connect with the transmitter's positive pole. The transmitter's negative pole is connect with AD, the power supply's negative pole is connect with GND, generally as the wiring of 4-20mA/0-20mA transmitter.

Three-wire: the power supply's positive pole is connect with the transmitter's positive pole. The power supply's negative pole and the signal output cathode are the same terminal. The transmitter output is connect with AD.

Four-wire: the positive and negative poles of the power supply are connect with the transmitter's positive and negative poles separately. The positive and negative poles of transmitter output are connect with AD and GND separately.

When the analog is temperature, two wires should be connect with AD and GND separately. As for three- wire PT100, it should be merged into two wire.

13.2N series PLC analog data reading

The PLC analog data only needs to read the corresponding register value. For example, For the AD0 data, just read the D8030 register value, and AD1 corresponds to D8031, and then goes down...
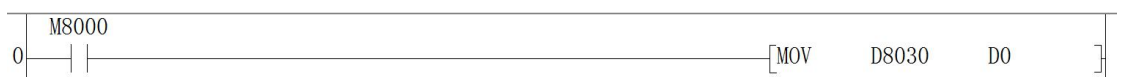
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For details, please refer to the official website of ShenZhen Coolmay Technology Co., Ltd. Download Manual---Download

http://www.coolmay.com/kindeditor/attached/file/20160728/20160728115808_0506.pdf

14.2N series PLC Analog correction

For details, please refer to the official website of ShenZhen Coolmay Technology Co., Ltd. Download Manual

15.2N series PLC Analog selection

Analog（temperature）input which can be customized are as follow:

Input signals	Measurement range	Registers value read	Resolution	Accuracy(whole measuring range	Registers D8213/D8049/D8045
E-type thermocouple	Environment temperature-599.9℃	Room temperature-5999	0.1℃	1%	0
K-type thermocouple （Regular）	Environment temperature-999.9℃	Room temperature-9999	0.1℃	1%	1
K-type thermocouple （Special）	Environment temperature-1299.9℃	Room temperature-12999	0.1℃	1%	1
J-type thermocouple	Environment temperature -999.9℃	Room temperature -9999	0.1℃	1%	/
S-type thermocouple	Environment temperature -1749.9℃	Room temperature -17499	0.1℃	1%	/
PT100	-99.9-499.9℃	-999-4999	0.1℃	1%	/
NTC10K	-19.9-109.9℃	-199-1099	0.1℃	1%	/
NTC50K	-40-199.9℃	-400-1999	0.1℃	1%	/
NTC100K	-40-299.9℃	-400-2999	0.1℃	1%	/
Voltage	0-10V	0-4000	2.5mV	1%	/

| Current Type1 | 0-20mA | 0-4000 | 5uA | 1% | / |
| Current Type2 | 4-20mA | 0-4000 | 4uA | 1% | / |

16.PLC PT100 Instructions

The PT100 signal access is a two-wire system. If it is a three-wire system temperature, it needs to be connected in two wires. If the line distance is long and the line loss is large, resulting in a large error, it is recommended to replace it with NTC if the temperature range allows.

17.2N series EK thermocouple correction (cold end)

The temperature reference point of Coolmay PLC EK thermocouple is the cold junction thermocouple on the board. The temperature will rise a few degrees with the board for the first 2 minutes when booting. We can wait until the exact data through adjusting the temperature of the cold end.

18.2N series PLC PID control（ multi-channel control）

Download –Cases—2N PLC Cases "PID output 300'"

http://www.coolmay.com/webdown/PID%20output%20300%C2%B0.rar

19.2N series PLC High-speed counting does not respond

PLC high-speed counting is the function of PLC input terminal X, single-phase counting through program.

(1) Built -in high speed counter input allocation table

5.1 Assignment table of built-in high speed counter

	Single phase						AB phase			ABZ phase		
	C235 10KHz/ 100KHz	C236 100KH z	C238 10KHz/ 100KHz	C239 100KHz	C240 10KHz	C237 10KHz	C251 10KHz/ 100KHz	C253 10KHz/ 100KHz	C254 10KHz	C252 10KHz/ 100KH z	C253 10KHz/ 100KHz	C254 10KHz
X000	U/D						A			A		
X001		U/D					B			B		
X002										Z		
X003			U/D					A			A	
X004				U/D				B			B	
X005					U/D			R			Z	
X007						U/D						
X010									A			A
X011									B			B
X012												Z

Normal[U]:up counter   [D]:down counter   [A]: A phase counter   [B]: B phase counter   [R]: reset

	Single phase counter input					C237 10KHz
	C235 10KHz/100KHz	C236 100KHz	C238 10KHz/100KHz	C239 10KHz	C240 10KHz	
M8235	Down counter while driving; Up counter without driving					
M8236		Down counter while driving; Up counter without driving				
M8238			Down counter while driving; Up counter without driving			
M8239				Down counter while driving; Up counter		

					without driving	
M8237					Down counter while driving; Up counter without driving	
						Down counter while driving; Up counter without driving

- The maximum frequency of single-phase counting is 10KHz, and it can be customized into 6 single-phase 10KHz-100KHz, and three AB (Z) -phase 10KHz-100KHz.

- Single-phase counting at 10KHz is X00 / X03, which corresponds to C235 / 238. It can be customized into up to 6 single-phase counts. The counter corresponds to the X point relationship: C235-X0; C236-X1; C237-X7; C238-X3; C239-X4; C240-X5; Instead, it needs to connect to X7 for high-speed counting. Among them, X0 / X1 / X3 / X4 can be customized to 100KHz, and X5 / X7 can be customized to 10KHz.

- When using 6-way single-phase counting, it does not conflict with other counters and pulse outputs, but conflicts with the ZRN origin return instruction. The ZRN origin return instruction must not be used; only when X3 counting is not used, the Y7 / X7 ZRN origin return instruction can be used. .

- The AB phase count is 2 times frequency, and it is usually 10KHz two X00-X01 / X03-X04, corresponding to C251 / C253. Can also be customized into three AB phase counts, add one X10-X11, corresponding to C254; of which X00-X01 / X03-X04 can be customized to 100KHz, X10-X11 can be customized to 10KHz.

(2) High-speed counting AB (Z) phase wiring instructions

- Add AB phase rotary encoder counting function, the wiring of C251 is: A is connected to X0, B is connected to X1, Z is not, C251 counter is used for plc ladder diagram.

- Add AB (Z) phase rotary encoder counting function. The wiring of C252 is: A is connected to X0, B is connected to X1, Z is connected to X2, plc ladder diagram uses C252 counter.

- Add AB (Z) phase rotary encoder counting function. The wiring of C253 is: A is connected to X3, B is connected to X4, Z is connected to X5, plc ladder diagram is used with C253 counter.

- Add AB (Z) phase rotary encoder counting function, the wiring of C254 is: A is connected to X10, B is connected to X11, Z is connected to X12, plc ladder diagram uses C254 counter. Does not conflict with other counters and pulse outputs.

Single phase

Manual test method: use one wire to turn on the input COM and the other end to turn on X0. Turn on and off to be a pulse signal.

Biphasic
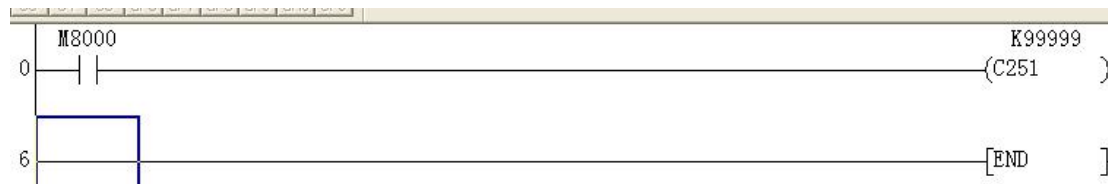
Manual test method: one wire is connected to COM X0, the other one connected to COM X1, and then connected and disconnected in turn, monitoring the data of C251.

20.No response from 2N series PLC pulse

PLC sends pulses through Y0 Y1 Y6 Y7 (can be customized up to 5 channels, Y0, Y1, Y6, Y7, Y10), and Mitsubishi general instructions, wiring method as follow.

Wiring: The wiring of the stepper or servo motor is as shown in the figure below, 5V drive must be connected with a 2KΩ resistor on DC24V.
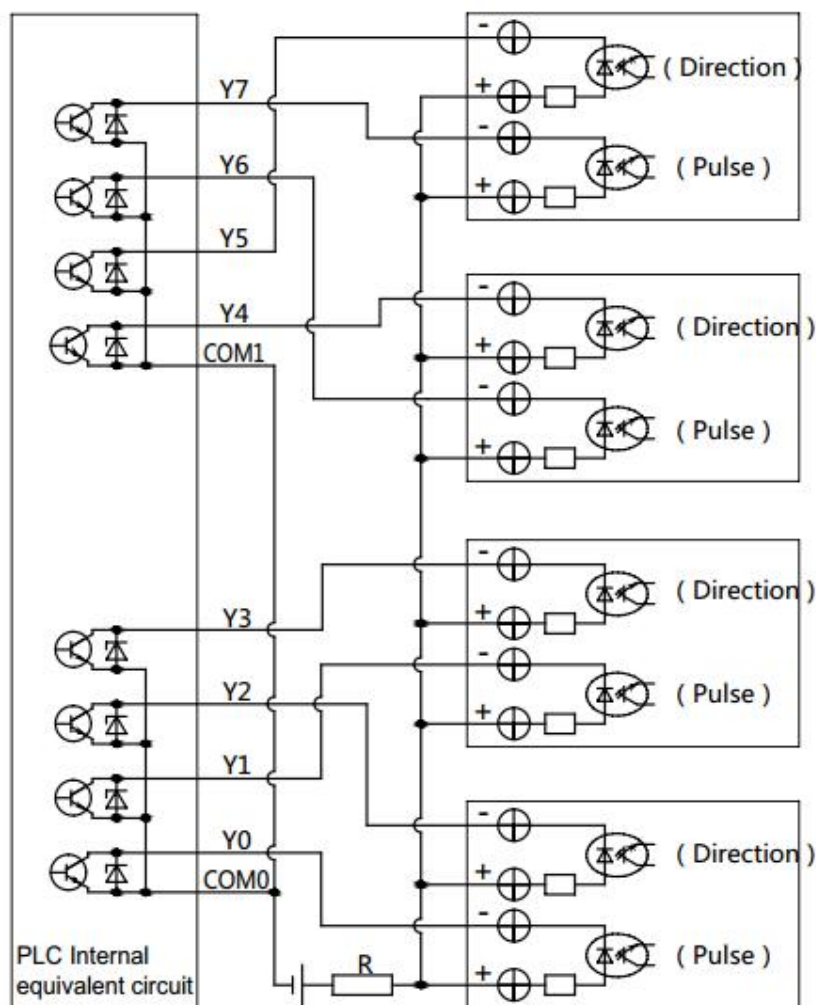
Detection method:

(1) We can monitor the D8140 data to monitor whether there are pulses and check the D8140 data

(2) Coolmay PLC has high-speed counting and high-speed pulse functions, and uses high-speed counting to record the sent pulses

Wiring: input COM is connected to output COM0 (Y0), X0 is connected to Y0, the program of counting and pulse is written in the PLC, and the data is viewed through online monitoring.

 (3) In order to ensure the accuracy of the pulse, please connect the COM port of the pulse output and the COM of the X input to ground.

21 .2N series PLC high-speed pulse is not accurately

After custom-made high-speed pulse of 100K-200K, when the pulse frequency is between 20K-60K, if the duty cycle is inaccurate (the normal duty cycle of the square wave is 50%, that is, the positive level takes 0.5 cycle),it may cause the phenomenon of loud motor noise and pulse inaccuracy, M8149 (pulse width adjustment) must be set.

22.Restrictions on the use of 2N series PLC counting

For details, please refer to the official website of Shenzhen coolmay Technology Co., Ltd .: "COOLMAY PLC high-speed counting and high-speed pulse usage guide"

http://www.coolmay.net/kindeditor/attached/file/20160722/20160722172406_1159.pdf

23.Restrictions on the use of 2N series PLC pulses

For details, please refer to the official website of Shenzhen Coolmay Technology Co., Ltd .: "COOLMAY PLC high-speed counting and high-speed pulse usage guide"

http://www.coolmay.net/kindeditor/attached/file/20160722/20160722172406_1159.pdf

24. The data of 2N series PLC is not saved in D200 ~ D999 after power off

Exclusion:

(1) Use a multimeter to test whether the power supply voltage is DC24V. If the conditions permit, check the 24V AC voltage, whether the AC voltage is not filtered

(2) Check whether it is Mitsubishi GX8.52 / GXworks2 software, other software may be incompatible

25. 2N series PLC 485 port communication (485 port / free agreement)

COOLMAY PLC can realize PLC direct communication, other host computer, industrial control instrument communication through 485

Connection method: A + B-, take our PLC485 and HW-40B text communication as an example: 19 connects A + 68 connects B-

Information download address:

(1) Set up communication parameters with other brands of PLC or text [HW-40B manual.pdf page 41]

http://www.coolmay.net/kindeditor/attached/file/20160722/20160722173212_9502.pdf

(2) Introduction of 485 communication protocol [PLC modbus communication protocol manual.pdf]

http://www.coolmay.com/webdown/CoolmayPLC%20Modbus%20Communication%20Manual.pdf

26. Multiple network of 2N series PLC (modbus protocol)

(1). PLC modbus communication protocol manual.pdf

http://www.coolmay.com/webdown/CoolmayPLC%20Modbus%20Communication%20Manual.pdf

(2). 48-point PLC to 48-point PLC extension routine, MODBUS networking routine.rar

http://www.coolmay.net/Download.aspx?ColumnId=74&Language=34&Terminal=41

27. Communication between 2N series PLC and other industrial control instruments (non-modbus communication)

Others that do not support modbus protocol, can choose 485 communication port or 232 communication port, use RS command free port communication (refer to Mitsubishi PLC RS command format)

Routine reference "PLC and inverter communication"

http://www.coolmay.com/Download-177-36-41.html

28. FX2NC public terminal distribution

X Y on the FX2NC public label is the corresponding public COM, X label can be used as the analog public terminal

29. 2N series PLC comes with a programming port, and two optional 485 ports or one 485 port and one 232 port serial port are optional

(1) COM1: RS422 supports Mitsubishi programming port protocol;

(2) COM2: RS485 / RS232 supports Mitsubishi programming port protocol, Mitsubishi serial port protocol and MODBUS protocol;

(3) COM3: RS485 supports Mitsubishi programming port protocol and MODBUS protocol.

Pay attention:

Among the three communication ports, the programming port protocol cannot be used simultaneously; the MODBUS protocol can be used simultaneously, but COM3 is only used as a slave. Among them, please refer to the RS instruction description in "Mitsubishi FX Programming Manual" for Mitsubishi programming port protocol. For MODBUS protocol, please refer to "Coolmay 2N Series PLC MODBUS Communication Protocol Manual".

The built-in programming port RS422 / RS232 corresponds to COM1, the optional A port B corresponds to COM2, and the MODBUS communication parameters are set by D8120 (communication parameters) and D8121 (station number); the optional A1 port B1 corresponds to COM3 and can only be done For slave use, MODBUS communication parameters are set by D8160 (communication parameters) and D8161 (station number).

30. Communication setting of Coolmay PLC and network module (Wi-Fi / GPRS / Ethernet)

"CM-WIFI Module Manual"

http://www.coolmay.com/kindeditor/attached/file/20170120/20170120171758_4166.pdf

"CM-GPRS Module Manual"

http://www.coolmay.com/webdown/CM-GPRS%20User%20Manual.pdf

"CM-NET Ethernet Module Manual"

http://www.coolmay.com/kindeditor/attached/file/20170120/20170120171725_3723.pdf

31. PLC analog quantity, switching value, communication port, grounding, inverter, power supply anti-interference processing method

Download Area-Manual Download

http://www.coolmay.net/kindeditor/attached/file/20160722/20160722151620_6881.pdf

Chapter 2 PLC part of 3G series (different from 2N)

1 How to check the PLC version number?

Major version number: D8001; minor version number: D8101

2. How to download programs for 3G series PLC?

3G series PLC comes with two download ports: mini USB port and RS232 serial port. The mini USB port needs to install the driver:

Download area-PLC software download-USB programming port driver of 3G series PLC & PLC integrated machine

http://www.coolmay.com/webdown/3G_PLCHMIUSBdriv.rar

3. 3G series PLC type selection PLC series: FXCPU PLC type: FX3G / FX3GC

GX Works2 software screenshot:
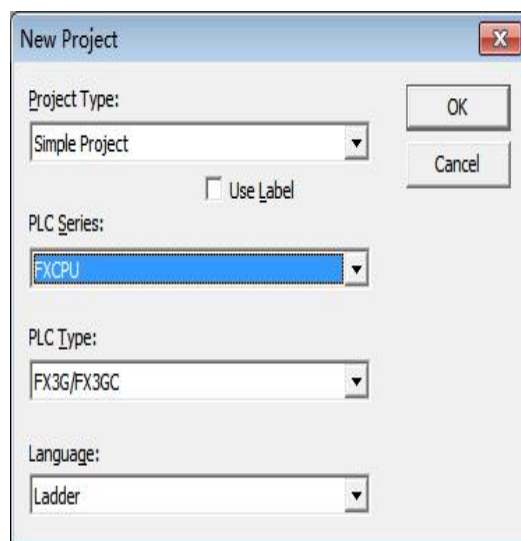
4. 3G series PLC switch input wiring (public termination 24V +)

The PLC input (X) is an externally powered DC24V sink type (passive NPN) with the input signal isolated from the power supply. When using, connect S/S to 24V positive external power supply.

PLC Digital Input Wiring:
Port short circuit: S/S of PLC input terminal is connected to 24V,X terminal is connected to power supply 0V, that is, input signal; two-wire system (magnetic control switch): PLC switch input is connected to two-wire magnetic control switch,magnetic The positive pole of the control switch is connected to the X terminal, and the negative pole is connected to the 0V. Three-wire system (photoelectric sensor or encoder): The PLC switch is connected to the three-wire photoelectric sensor or encoder.The power supply of the sensor or encoder is connected to the positive pole of the power supply, and the signal line is connected to the X terminal. The encoder and photoelectric sensor requirements are NPN type (PNP needs to be customized)

PLC Digital Output Wiring:
Transistor: The output is NPN, COM is connected to the negative pole, and Y is connected to the positive pole of the power supply after the load.
Relay: dry contact output, COM can be connected to positive or negative

Diagram 6　Input wiring diagram

5. 3G series PLC analog quantity selection

The transmitter integrated in the PLC is one or more of the types listed in the table above, and one or more of them can be ordered when ordering.

Below table for software version 26230 and above

Input signal	Range	Register value	Resolution	Accuracy (Total Measuring range)
K-type thermocouple	0～1100℃	Room temperature ～11000	0.1℃	1%
K-type thermocouple (Negative temp)	-230～1370℃	-2300～13700	0.1℃	1%
T-type thermocouple	0～400℃	Room temperature ～4000	0.1℃	1%
T-type thermocouple (Negative temp)	-230～400℃	-2300～4000	0.1℃	1%
S-type thermocouple	0～1690℃	Room temperature ～16900	0.1℃	1%
S-type thermocouple (Negative temp)	-40～1690℃	-400～16900	0.1℃	1%
J-type thermocouple	0～800℃	Room temperature ～8000	0.1℃	1%
J-type thermocouple (Negative temp)	-90～950℃	-900～9500	0.1℃	1%
E-type thermocouple	0～600℃	Room temperature ～6000	0.1℃	1%
S-type thermocouple (Negative temp)	-110～730℃	-1100～7300	0.1℃	1%
PT100/PT1000	-200～500℃	-2000～5000	0.1℃	1%
NTC50K/100K	-48～210℃	-480～2100	0.1℃	1%

6. Examples of 3G series PLC analog input

The following is an example of CX3G's temperature analog AD0 acquisition. The program reads the values as follows
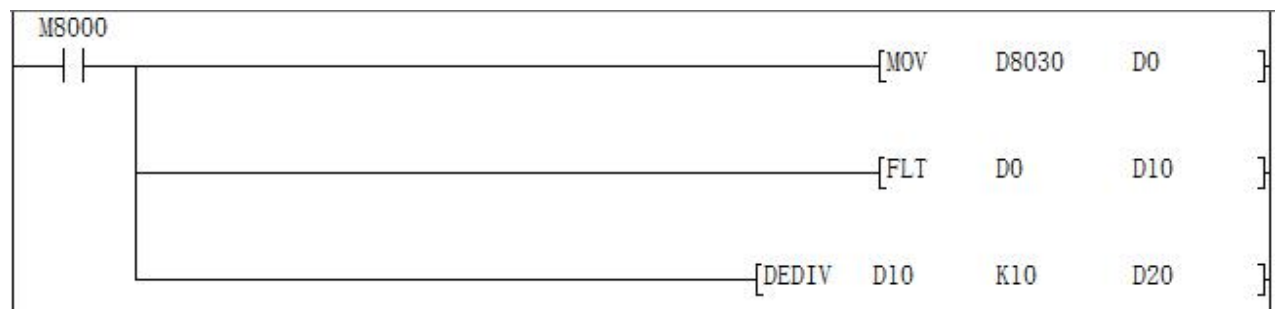
Connect the signal end of the temperature sensor to the AD0 input end of the PLC, and the other end to the GND of the analog input port. When the PLC is running, the value of the data register D8030 corresponding to AD0 will be passed to D0, and the value of D0 will be placed in D10 after floating-point arithmetic, and then the floating-point division operation will be performed on

D10. Actual temperature value. In the ladder diagram, you can also directly divide the value of D8030.

Note: When the input is 0-10V analog, the actual analog value = register reading / 400;

When the input is temperature, the actual temperature value = register reading / 10;

When the input is 0-20mA analog, the actual analog value = register reading / 200;

When the input is 4-20mA analog, the actual analog value = register reading / 250 + 4.

The analog quantity correction is the size correction. The following figure is an example of the correction after collecting the temperature of AD0:
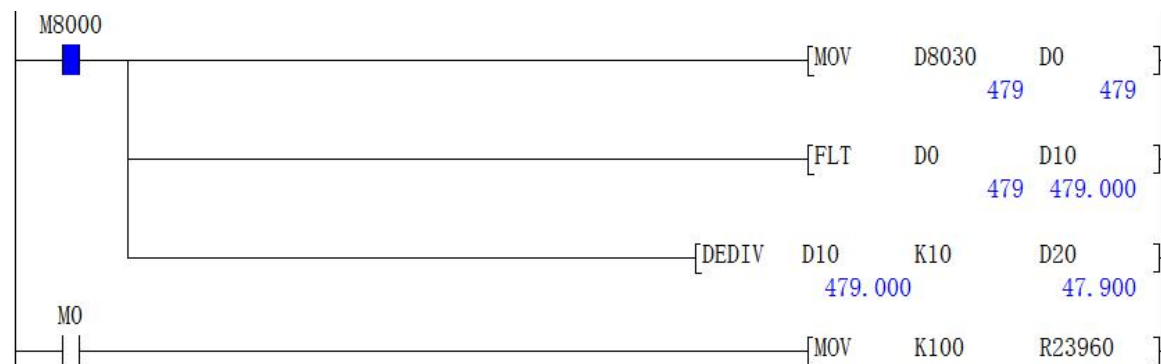
Assuming that the current temperature is 37.9 ° C, the actual test is 47.9 ° C, and the error is 10 ° C, you need to modify the value of the size correction register, as shown in the following figure:
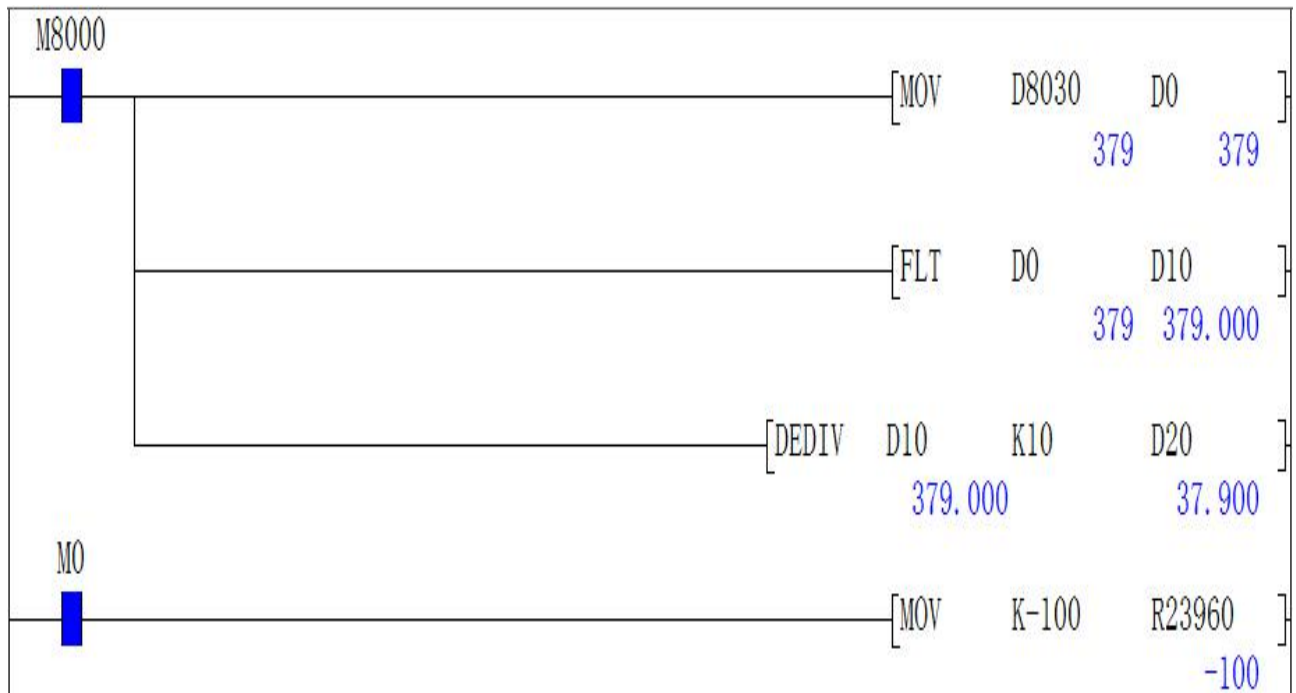
When M0 is closed in the above figure, the value -100 is transferred to the correction register R23960. At this time, it can be seen that the actual measured temperature D20 is close to the actual temperature of 37.9 ° C.

7. 3G series PLC size correction register

R23960 starts with the zero correction value, and the default is 0 (that is, the size correction)。

8. Sampling of 3G series PLC analog input

Number of filter cycles = (R23600 ~ R23615) * PLC scan time, if R23600 = 1, then one PLC scan cycle is sampled once and the value in the first analog input is changed once. The larger the value of R23600 ~ R23615 is, the more stable the result is.

R23600 ~ R23615 is the number of filter cycles, the default is 100 (range 2 ~ 20000);

D8073 is the smoothing filter coefficient of all analog input, setting range: 0 ~ 999.

9. 3G series PLC analog output

Analog output setting range is 0 ~ 4000, precision is 12 digits. Direct register assignment operation: D8050 ~ D8057.

	AO register	Setting range	Output type
DA0	D8050	0-4000	When D8058.0~D8058.7=0 Represents 0~20mA；
DA1	D8051	0-4000	
DA2	D8052	0-4000	
DA3	D8053	0-4000	
DA4	D8054	0-4000	
DA5	D8055	0-4000	When D8058.0~D8058.7=1 Represents 4~20mA。
DA6	D8056	0-4000	
DA7	D8057	0-4000	

10. 3G series PLC PID control (support auto-tuning, note: versions before 26236-3 do not support negative output)

For detailed functions, please refer to "Mitsubishi FX3G Programming Manual" PID instruction usage. The self-tuning mode of PID instruction only has step response mode. The step value is S0 + 22.

Download transfer zone-application case-3G series application case-"3G series PLC-PID self-tuning routine"

http://www.coolmay.com/webdown/3G%E7%B3%BB%E5%88%97PLC-PID%E8%87%AA%E6%95%B4%E5%AE%9A%E4%BE% 8B% E7% A8% 8B.zip

11. 3G series PLC high-speed counting

Single phase: up to 6 channels, maximum frequency 60KHz

Two-phase: 2 times frequency: up to 2-3 channels, the maximum frequency is 60KHz; M8198 is the 4 times frequency mark of C251

4 times frequency: up to 2-3 channels, the maximum frequency is 24kHz; M8199 is the 4 times frequency mark of C253

※ High-speed input C254

When M8396 = 0, the original C254 function is phase A B corresponding to X3 X4.

When M8396 = 1, the C254 function becomes phase A B corresponding to X6 X7.

The built-in high-speed counter input allocation table is as follows:

Assignment table of built-in high speed counter

Counter type	No.	Input assignment							
		X000	X001	X002	X003	X004	X005	X006	X007
Single phase single counter input	C235	U/D							
	C236		U/D						
	C237			U/D					
	C238				U/D				
	C239					U/D			
	C240						U/D		
	C241	U/D	R						
	C242			U/D	R				
	C243					U/D	R		
	C244	U/D	R					S	
	C245			U/D	R				S
Single phase double counter input	C246	U	D						
	C247	U	D	R					
	C248				U	D	R		
	C248(OP)*1				U	D			
	C249	U	D	R				S	
	C250				U	D	R		S
AB phase double counter input	C251	A	B						
	C252	A	B	R					
	C253				A	B	R		
	C253(OP)*1				A	B			
	C254(OP)*1							A	B
	C255				A	B	R		S

U: Up counting input D: Down counting input A: Phase A input B: Phase B input

R: External reset input S: External start input

12. 3G series PLC high-speed pulse output

Coolmay CX3G series PLC high-speed pulse output conventional 8 channels, Y0 ~ Y3 each channel 100KHz, Y4 ~ Y7 each channel 10KHz, support variable speed, start / stop initial / final speed is 0, the chart is as follows: (acceleration and deceleration time D8148 For example).
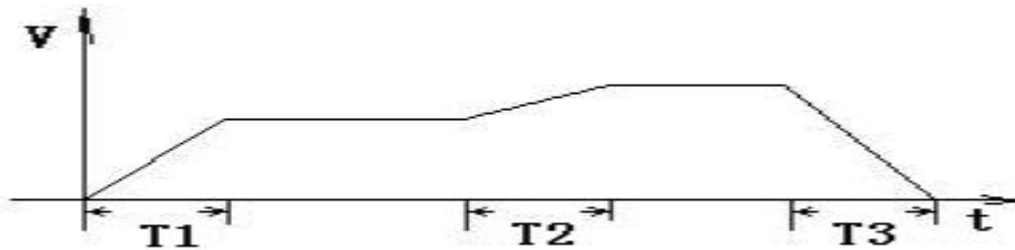
Calculation of acceleration / deceleration time T: (target speed --- current speed) * acceleration / deceleration time / maximum speed

For example: target speed = 50000, current speed = 20000, acceleration time 100 (ms), maximum speed = 100000, T = 30 ms.

PLSY, ZRN, PLSV, DRVI, DRVA, DVIT, DSZR, only Y0-Y3 support DVIT (interrupt positioning), DSZR (origin return with DOG search) instructions.

Pulse point / Functions	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7
Pulse operation monitoring	M8340	M8350	M8360	M8370	M8151	M8152	M8153	M8154
Position pulse (32 bit)	D8340 D8341	D8350 D8351	D8360 D8361	D8370 D8371	D8140 D8141	D8142 D8143	D8144 D8145	D8160 D8161
Acceleration and deceleration time	D8348、 D8349	D8358、 D8359	D8368、 D8369	D8378、 D8379	D8148	D8148	D8148	D8148
Pulse stop bit	M8349	M8359	M8369	M8379	M8450	M8451	M8452	M8453
Top speed	D8343 D8344	D8353 D8354	D8363 D8364	D8373 D8374	D8146 D8147	D8146 D8147	D8146 D8147	D8146 D8147

The original Mitsubishi FX3G pulse program can be used directly without modification.

All commands except the DVIT, DSZR support the first 4 channels, all support 8 pulses.

13. Each 3G series PLC comes with a programming port (RS232), two communication ports (RS232 or RS485) can be optionally installed, and a CAN port and a network port can be optionally installed to meet users' external connection of several types of equipment.

Serial port 1: RS232 (PLC programming port), supports Mitsubishi programming port protocol; can be used to download PLC programs or communicate with devices supporting Mitsubishi programming port protocol.

Serial port 2: RS485 (A B) / RS232, support Mitsubishi programming port protocol, Mitsubishi BD board protocol, free port protocol and MODBUS protocol.

Serial port 3: RS485 (A1 B1), support Mitsubishi programming port protocol, free port protocol and MODBUS protocol.

CAN communication port: support RS2 protocol and MODBUS RTU protocol.

The special relays and special registers involved are as follows:

Functions	Serial port 2(A/B)	Serial port 3(A1/B1)	CAN(H/L)	Remark
Mitsubishi programming port protocol	M8196=0	M8192=0	-	26232 or higher version: power lost can not be retentive
RS port protocol	M8196=1 M8125=0	M8192=1	-	
RS sending mark	M8122=1	M8402=1	M8422=1	Need manual reset
RS sending completion	-	-	M8425	Need manual reset
RS receiving completion	M8123	M8403	M8423	Need manual reset
RS receiving process	M8124	M8404	M8424	Data is receiving
RS command 8/16 bits differentiation	M8161	M8161	M8161	
RS command CAN master-slave	-	-	M8426	M8426=0 master-slave mode, M8426=1 multi-device mode
RS command end operation settings	0	1	2	
MODBUS RTU function	M8196=1 M8125=1	M8192=1	-	
RD3A/WR3A Receive correct	M8128	M8408	M8428	Need manual reset

completion				
RD3A\WR3A communication over-time	M8129	M8409	M8429	Need manual reset
ADPRW command completion mark	M8029	M8029	M8029	Command execution end mark
Communication parameters	D8120	D8400	D8420	Bit12=0：MODBUS RTU(Default) Bit12=1：MODBUS ASCII (26236 and higher version)
Communication mode	-	D8401	D8421	
Master-slave station number	D8121	D8414	D8434 D8440 D8442	D8434:CAN slave station NO D8440\D8442 multi-device mode ID NO
RD3A/WR3A overtime	D8129	D8409	D8429	Unit: ms
RD3A/WR3A interval period	D8126	D8406	D8426	26232 or higher version
RD3A\WR3A end operation -1	0	1	2	
ADPRW command settings	D8126=0	D8126=1	D8126=2	26232 or lower version
ADPRW command settings	D8397=0	D8397=1	D8397=2	26232 or higher version
CAN data frame	-	-	M8427	

Network port: Automatically detect the network after power on. When there is a network chip, M8193 = 1, the network is ready.

The involved special relays, special registers and registers used by the IP address are as follows:

Functions	Network	Remark
Network preparation	M8193	
Write network address	M8197	26232 or higher version
MODBUS time out	M8062	
IP address conflict	M8063	
Switch mark between Mitsubishi	D8395	

functions and MODBUS		
ADPRW command settings	D8397=3	
Router address	R23800 R23801	
Mask address	R23802 R23803	
MAC address	R23804~R23806	
Local IP address	R23807 R23808	
Target IP address	R23810 R23811	
Terminal	R23812	Default as 502
RD3A/WR3A command cycling times	R23813	
MODBUS time-out period	R23814	
Send Packets numbers	R23815	26235 and higher version
Receive Packets numbers	R23816	26235 and higher version

For detailed settings, please refer to the official website "CX3G & FX3GC Series PLC Programming Manual",

Link:http://www.coolmay.com/webdown/CX3G%20FX3GC%20PLC%20Programming%20manual.pdf

Chapter 3 MX2N series PLC part

3.1　MX2N series PLC switch input wiring

MX2N series PLC integrated machine wiring (COM connected to negative electrode)）

MX2N series single PLC wiring (common termination 24V +):

PLC Digital Input Wiring：

Port short circuit: S/S of PLC input terminal is connected to 24V,X terminal is connected to power supply 0V, that is, input signal;

two-wire system(magnetic control switch): PLC switch input is connected to two-wire magnetic control switch,magnetic The positive pole of the control switch is connected to the X terminal, and the negative pole is connected to the 0V.

Three-wire system (photoelectric sensor or encoder): The PLC switch is connected to the three-wire photoelectric sensor or encoder.The power supply of the sensor or encoder is connected to the positive pole of the power supply, and the signal line is connected to the X terminal. The encoder and photoelectric sensor requirements are NPN type

PLC Digital Output Wiring：
Transistor: The output is NPN, COM is connected to the negative pole, and Y is connected to the positive pole of the power supply after the load.
Relay: dry contact output, COM can be connected to positive or negative

Diagram 6

3.2 MX2N series PLC analog quantity selection

4　Analog Usage

4.1 Analog input type

Input signal type	Range	Register reading value	Resolution	Accuracy total range
Thermistor NTC10K	-19.9~109.9℃	-199~1099	0.1℃	1%
Thermistor NTC50K	-40~199.9℃	-400~1999	0.1℃	1%
Voltage analog	0~10V/0-5V	0~4000	2.5mV	1%
Current analog	0~20mA	0~4000	5uA	1%

3.3　MX2N series PLC analog input reading

Up to 8 analog inputs can be selected, with a precision of 12 digits.

NO	Register reading value
AD0	D8030
AD1	D8031
AD2	D8032
AD3	D8033
AD4	D8034
AD5	D8035
AD6	D8036
AD7	D8037

MX2N series PLC integrated machine thermocouple analog reading register:

NO	Register reading value
1st channel	D8094
2nd channel	D8095
Cold junction temperature	D8093

Thermocouple sampling filter times	D8090(0-22,Default 0)

Calculate the input voltage formula: measurement voltage = D803n (n = 0-7) * (VRF reference voltage / 4095);

Analog input sampling period: fixed at 22 PLC scan periods.

3.4 MX2N series PLC analog output

Output signal type	Range	Register reading value
Voltage analog	0~10V/0-5V	0~4095
Current analog	0~20mA	0~4095

3.5   MX2N series PLC analog output reading

Up to 2 analog outputs can be selected, with a precision of 12 bits.

NO	Register reading value
DA0	D8096
DA1	D8097

● When PLC is in STOP, D8096 D8097 is automatically set to 0, DA output is also 0;

● When the data setting of analog output is wrong, 6712 fault will be detected and DA output will be set to 0.

3.6 MX2N series PLC use positioning command without pulse output?

Solution: Set the minimum frequency of pulse output = 100, the highest frequency> = 20KHz

3.7 MX2N series PLC does not support PID function, optional high-speed pulse output supports PWM, please refer to the official website programming manual for details.

Download area-PLC manual download-MX2N series PLC programming manual V9.81:

http://www.coolmay.com/webdown/Coolmay%20MX2N%20series%20PLC%20programming%20Manual.pdf

Chapter4 EX2N-B text PLC integrated machine part

4.1 The PLC program of the text PLC integrated machine cannot be downloaded

PLC and computer can't communicate (can't download):

- ➢ The serial port of the computer is broken, there is no way to use it
- ➢ USB to 232 used by laptop computer, the driver is not installed
- ➢ The serial port of the computer may be leaking or plugged and unplugged while the PLC download protection resistor is burned out
- ➢ The COM port on the computer hardware is not selected correctly
- ➢ Can communicate, the communication is unstable, check the line, try to replace the computer

Summary: There are many situations where the PLC cannot download. It is recommended to use the replacement method to troubleshoot, such as replacing the computer, following the download line, replacing the PLC, etc ...

Text application environment

EX2N-30A / 40A / 50A software can be used in windows XP / win 7 environment;

HW-40B software is used in windows XP environment, win 7 may not be compatible.

4.2 Text PLC all-in-one text software reports an error

Open the HW-40B software editor, after completing the program, click the red button, after an error, the software will automatically close

elimination method:

①Confirm that it is windowsXP system，please enter

Right-click properties,Run the program in compatibility mode, click confirm.

②It may be destroyed by a virus, turn off the antivirus software first, uninstall the software and re-install it

4.3 The edited text display screen is saved, and when it is opened again, what is the reason for the error?

Solution: Do not double-click the program directly to open it through the software.

4.4 There is no solution to download the text program of the text PLC integrated machine

There are several situations where the text cannot be downloaded

①The download port (COM) is selected incorrectly, and it prompts that the COM port cannot be specified. Just select the corresponding COM port (Note: you cannot use a port above COM10)
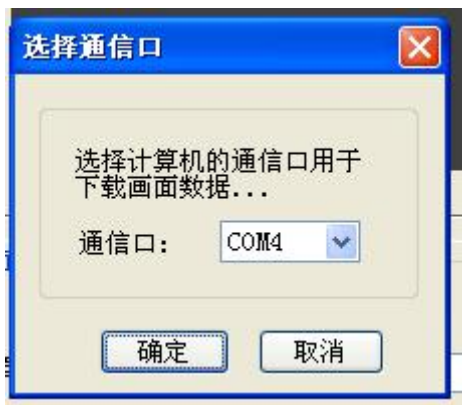
②The communication line is not connected, there may be the following reasons:

➢ The computer serial port is broken
➢ Poor or bad wire contact

The text download port is broken

The above elimination method: replace the corresponding equipment for investigation

➢ Poor contact in programming port

Try it by hand. Unplug it after power off and try again

4.5 Incomplete display of the text PLC integrated machine

The screen display is not complete in the following situations:

➢ The display is half-cut or irregular, it may be that the wiring cable is loose, the screen is broken, and the display chip is burnt out
➢ 30B text PLC all-in-one machine, using HW-40B software, the internal editing interface of the software displays 4 lines and 12 characters, and the 30B screen is 4 lines and 8 characters, which can only be edited on the left two thirds

Use a multimeter to test whether the voltage is stable

4.6 The display communication of the text PLC integrated machine is not connected.

After the first time the customer downloads the text, the buttons are intermittent, or the button cannot be pressed, the response is very slow, the screen shows that the communication is in progress ...

Solution: As shown below, change the communication option to 485

4.7 The analog data of the text PLC integrated machine cannot be displayed on the PLC

The text in the PLC integrated machine can only display the register values of D0 ~ D999. If you read other register data, you need to MOV data in the PLC to within D1000.

4.8 The buttons of the text PLC all-in-one machine not respond

  Possible reasons:

➢   Communication: It may be that the communication option 485 is not selected, and the communication is abnormal

Hardware: If there are a few fixed buttons, there is no response, such as: there is no drip, the panel may be damaged, please contact customer service

4.9 The text parameter setting encryption of the text PLC integrated machine

There is an encryption check box on the screen editing register. After ticking, the user needs to enter the password to continue the operation

Password setting: In the tool-setting HW-40B, "port" is the password password

4.10 Decimal display of text PLC integrated machine

Decimal numbers can be displayed by floating point numbers within the PLC, but the text does not support

We can display the integer data inside the PLC in decimal format on the text

4.11 Text PLC integrated data channel conversion

Q & A above

4.12　Clock reading of text PLC integrated machine

Text The PLC all-in-one text does not have a clock. You can display the time by reading the internal clock register of the PLC, and then register the value within the PLC MOV to D1000

D8013	second
D8014	minute
D8015	hour
D8016	day
D8017	Month
D8018	Year
D8019	Week

4.13.Backlight setting of text PLC integrated machine

In the text software, online, set HW-40B, select the screen saver to Never, and turn off the backlight

4.14 How to use RS232 port of HW-40B text screen as 485?

Pin 19 is connected to A, 68 is connected to B, and then the communication parameter selection is 485

Chapter5 EX2N-A text PLC integrated machine part

5.1 EX2N-A text PLC integrated machine numerical input

① Use the numeric keys to directly enter the value: for example, enter the number 8988, directly press the four numbers 8 9 8 8.

②Do not enter numeric keys，just enter these two buttons, You can only press the up / down keys to increase / decrease to the required value. Note: When inputting numerical values, the A series text integrated machine. These two buttons will not move the cursor to the required value, so please use the numeric keyboard to input the value. This function will be added in the next version of the software.

5.2 Software use flow

After opening the project file, the user can create or open a screen. Each screen can be placed with text (Chinese and English), indicator light, switch, data display setting window, jump key and other elements. You can freely jump between each screen, and the operator can complete data monitoring, parameter setting, switch control, alarm list monitoring and other operations.

The basic usage process of COOLMAY-30A is as follows:
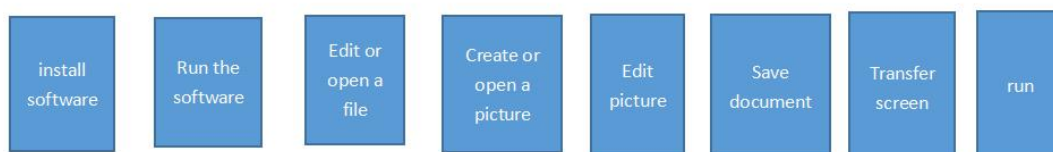
5.3 Software menu interface
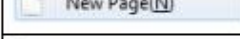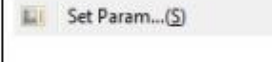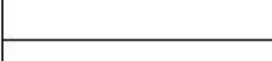
Menu:
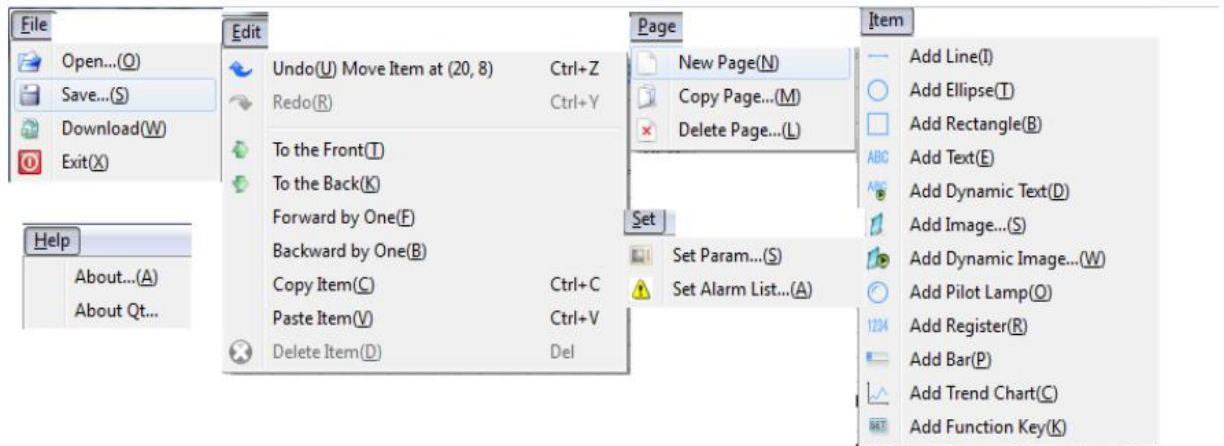
5.4 Function introduction of all buttons in toolbar and function menu

Item	Main function	Hotkey
Add Line(I)	Place a line	
Add Ellipse(T)	Place a circle	
Add Rectangle(B)	Place a rectangle	
Add Text(E)	Enter characters, including Chinese characters and letters, any font optional	
Add Dynamic Text(D)	Place variable text, display current state of text monitor through variable text, any font optional	
Add Image...(S)	Insert image files with various format, images can be display, which is easily to understood	
Add Dynamic Image...(W)	Place variable images, can achieve the effect of animations guide the operator	
Add Pilot Lamp(O)	Place a indicator, display the switch state of M\X\Y\S\T\C, ON/OFF icon can be seen.	
Add Register(R)	Place a data monitoring window or a data setting window, display or set the	

	value of D/C/T	
Add Bar(P)	Place a bar chart, used to directly display values of D/C/T, usually used to display analog	
Add Trend Chart(C)	Place a tendency chart, used to display the changing process of D/C/T value in certain period	
Add Function Key(K)	Place a function key, the function including jumping or turning back the former screen and switch control	
Open...(O)	Open a saved project	
Save...(S)	Save the editing project	
Download(W)	Download the finished project to text monitor through RS232	
Exit(X)	Exit the softwore	
Undo(U) Add Item at (0, 0) Ctrl+Z	Withdraw the former editing operation	**Ctrl+Z**
Redo(R) Ctrl+Y	Revert the undo operation	**Ctrl+Y**
To the Front(T)	Move the image to the top layer	
To the Back(K)	Move the image to the lowest layer	
Forward by One(F)	Move up the image one layer	
Backward by One(B)	Move down the image one layer	
Copy Item(C) Ctrl+C	Copy one or multiply selected images to the pasteboard	**Ctrl+C**
Paste Item(I) Ctrl+V	Paste the images in the pasteboard to the editing screen, can be pasted to another project	**Ctrl+V**

Delete Item(D) Del	Delete one or multiply selected images	**Del**
New Page(N)	Create a new image	
Copy Copy Page...(M)	Copy one screen image to another screen, screen No. can be designated.	
Delete Page...(L)	Delete the current screen	
Set Param...(S)	Set initial screen, password, screen saver, screen No. Register, backlight, buzzer and etc.	
Set Alarm List...(A)	Broadcast alarm list message, every alarm message corresponding to a intermediate relay	

5.5 Function key usage

Click the key in the toolbar ⌷ ， Display area shows default button ⓪，
You can select 18 buttons through the drop-down options, and set the
properties of the buttons in the lower left。
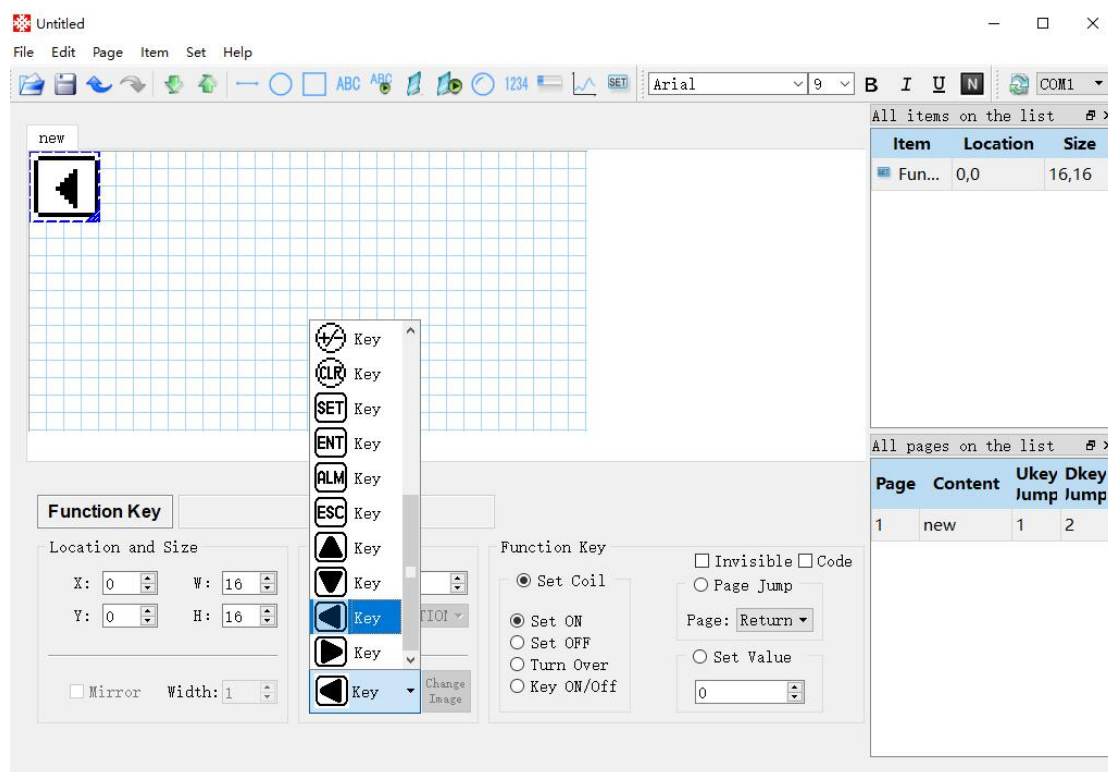
Invisible: The user can choose not to show the graphic of the button on the
screen, but the function of the button still exists.

Encryption: This function key is only valid when the system password is
opened.

Set coil: The action of this function key is the switch setting.

Screen jump: The action of this function key is screen jump, and the position of
the screen jump can be determined by setting the screen number.

Set register: The action of this function key is to set the specified register

parameter

Type: When the action of the function key is the switch value setting, determine the definition number of the PLC internal intermediate relay corresponding to the switch action.

Address: Set the intermediate relay address

Set to ON: Turn on the specified intermediate relay.

Set to OFF: Turn off the specified intermediate relay.

Reverse: Set the specified intermediate relay to reverse logic.

Momentary ON: When the button is pressed, the designated intermediate relay is turned on; when the button is popped up, the designated intermediate relay is turned off.

Function key setting register parameter function: set a function key, select "set register", you can set a parameter value (constant) to the specified data register. During operation, press this function key, the parameter value will be written into the designated register immediately.

5.6 Data Display

Click the key in the toolbar ,A rectangular frame appears on the screen, and "01234" 5 Arabic characters are displayed inside the rectangular frame, indicating that the part is a register display window or register setting window with a length of 5 digits, and the data can be adjusted in the register through the display and control at the bottom The number of digits can be displayed or set, and decimal places can be added.
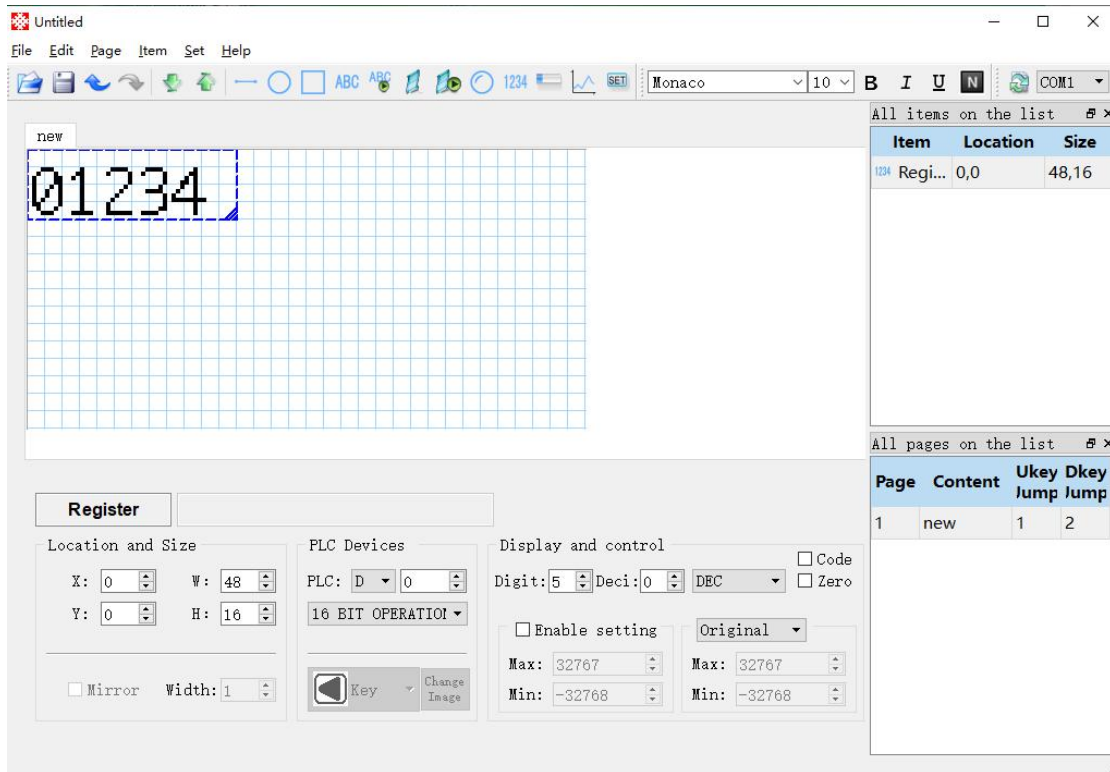
Register number: PLC register definition number corresponding to the display part.

Number of registers: continuously display or set the number of registers, the minimum is 1 and the maximum is 2.

Encryption: Only when the system password is opened can the data be modified. The password value is set by the tool menu.

Digits: Display or set the maximum digits of data.

Decimal: Retain the number of significant digits after the decimal point.

Decimal: Display the data in the register in decimal format. (It is recommended that PLCs such as Mitsubishi and Omron choose this form)

Signed number: This attribute can only be selected when displaying data in decimal form. If the highest bit of the register is 1, the data is displayed in the form of negative numbers. Example: FFFEH means –2.

Hex / BCD: Display data in hexadecimal.

Setting: This part has setting function, which can monitor data and set data. The register setting window has upper and lower limits and encryption properties.

Upper and lower limits: The designer can set upper and lower limits to invalidate the data exceeding the upper and lower limits, to prevent the input of too large or too small data, causing harm to the device. Example: Set the upper limit to 9000 and the lower limit to 0. Only when 0 <setting value <9000, the setting data will be written into PLC; otherwise, wait for setting new valid value.

Original data and engineering data: After selecting the upper and lower limits, you can select original data or engineering data.

Original data: The original data indicates that the value in the register without operation is directly displayed, and the decimal point is placed according to the number of decimal places. For example, when the number of decimal places is 2, when the value in the register is 14561, it will display 145.61.

Engineering data: The read register data is converted to engineering data display before display.

Converted value = lower limit of engineering quantity + (original value in register-lower input limit) × (upper engineering limit-lower limit of engineering amount) / (upper input limit-lower input limit)

For example, the binary value of 12-bit A / D conversion is stored in the register and the actual display is -10000 to 10000mV voltage, which can be set as follows:

Input upper limit: 4095

Enter the lower limit: 0

Maximum project volume: 10000

Lower limit of engineering quantity: －10000

In this way, when the A / D conversion value is entered in the register, the voltage value can be displayed.

Note: Due to the limitation of the precision of floating point arithmetic, there may be errors in the conversion results.

Engineering quantity upper and lower limits: the maximum and minimum value of the engineering quantity display.

5.7 How to set the indicator

Click on the key on the toolbar , The grid area displays an indicator icon, and can be replaced by different types of display icons by changing the pattern. A series of text software provides a dozen different icons for users to choose. The indicator light can display the user's operation status, and can generally be used with function keys. For example, a key is set, and when the key is pressed, the indicator M0 lights up.
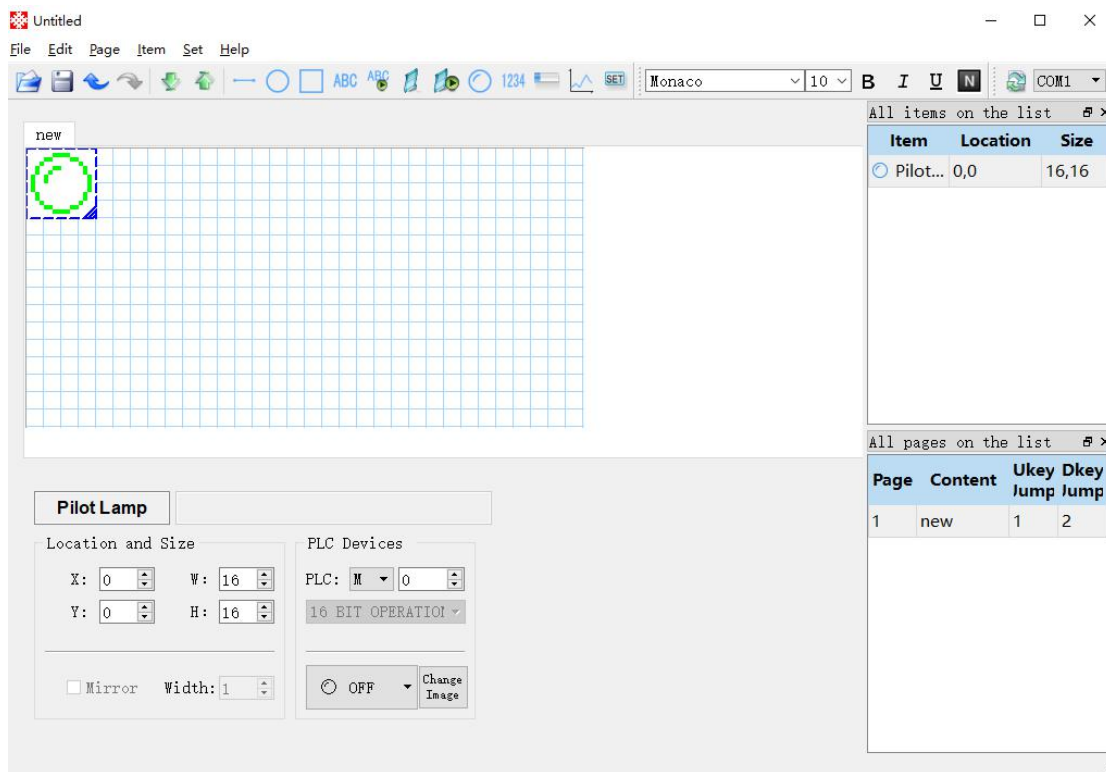
5.8 Setting method of bar graph

The bar graph is used to visually display analog parameters, such as flow, pressure, and liquid level. The height, width and direction can be arbitrarily specified. Click the button in the toolbar, a grid-like icon will be displayed in the grid area. You can mark its scale with text at its top and bottom, and set its register in the original properties, as shown in the following figure
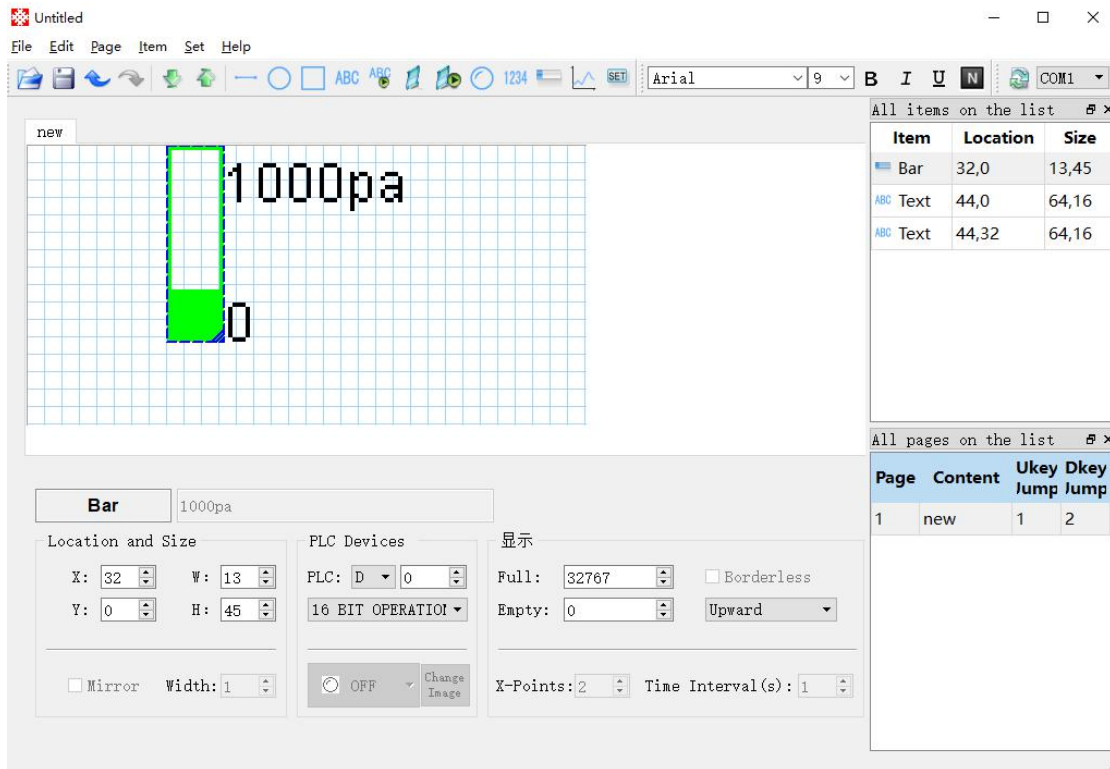
5.9 How to make a graph

During the industrial control process, some parameters change slowly, and the operator wants to understand the changing process of these parameters within a certain period of time. The graph should be the most ideal way.

Click the button in the toolbar，The entire grid area displays a graph, which can be adjusted by the mouse or X.Y coordinates
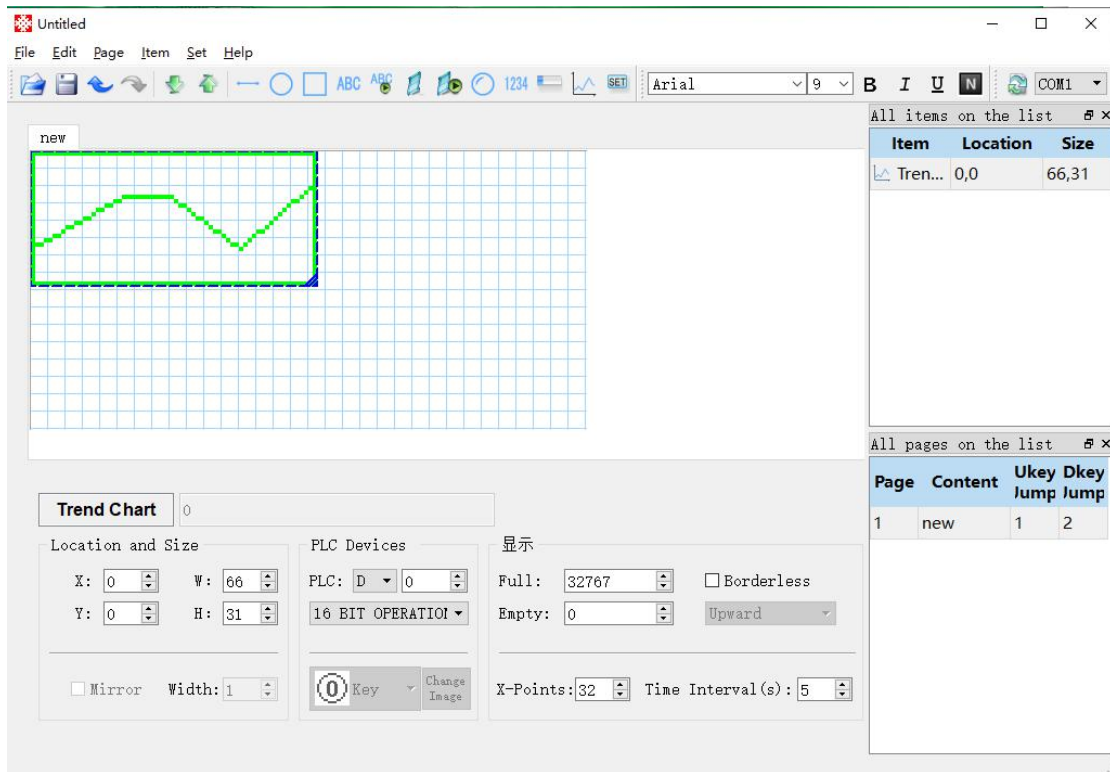
Register number: the register address corresponding to the graph.

Full Scale Value: When the graph shows 100% scale, the value corresponding to the register.

Zero quota value: the value corresponding to the register when the 0% scale of the graph is displayed.

Data acquisition (points): the number of all sampling points from left to right in the entire graph. The larger the value, the more delicate the graph changes, and of course the time is longer.

Sampling interval: the interval time between every two sampling points.

Size: This value determines the length and width of the graph.

Note: Only one curve can be displayed for one curve element.

5.10　A series of text machine clock settings

If you want to set the display time of the text, you can set it by adding a register function. The registers for setting the time of the A series text all-in-one are:

D8013	second
D8014	minute
D8015	hour
D8016	day
D8017	Month
D8018	Year
D8019	Week
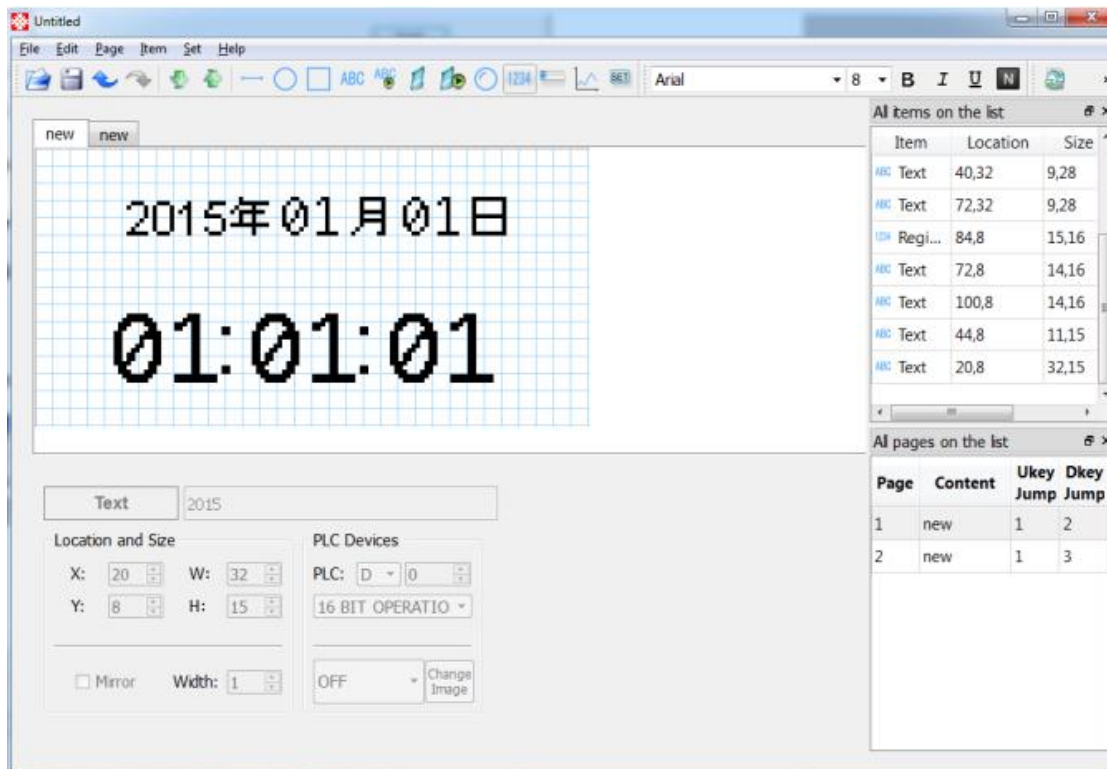
5.11 How to set alarm list?

In industrial automation control, the alarm display is very important and will be used in many occasions. The alarm list is the simplest and most intuitive alarm method.

A set of alarm list information can be set for each project in the A series of text

editing software. An alarm message corresponds to an intermediate relay. The definition number of the intermediate relay is continuous. The first address of the intermediate relay can be set by the user according to the actual user program. When any one of the intermediate relays changes from OFF to ON, it means that when the corresponding alarm occurs, the display interface of the A series of text integrated machine will automatically pop up the alarm display screen, and display the alarm information on the first line. When the other intermediate relay is ON, a new alarm message is displayed from the second line. On the contrary, after an alarm intermediate relay turns OFF, the corresponding alarm message automatically disappears.

The alarm login method is as follows:

Click "Alarm List" under the Set menu in the menu bar to pop up the alarm list dialog window:

Because nothing is entered, the alarm list content is blank. First, move the cursor to the "Alarm Content" column, write the alarm information [temperature is too high], and press Enter to confirm the screen displays:
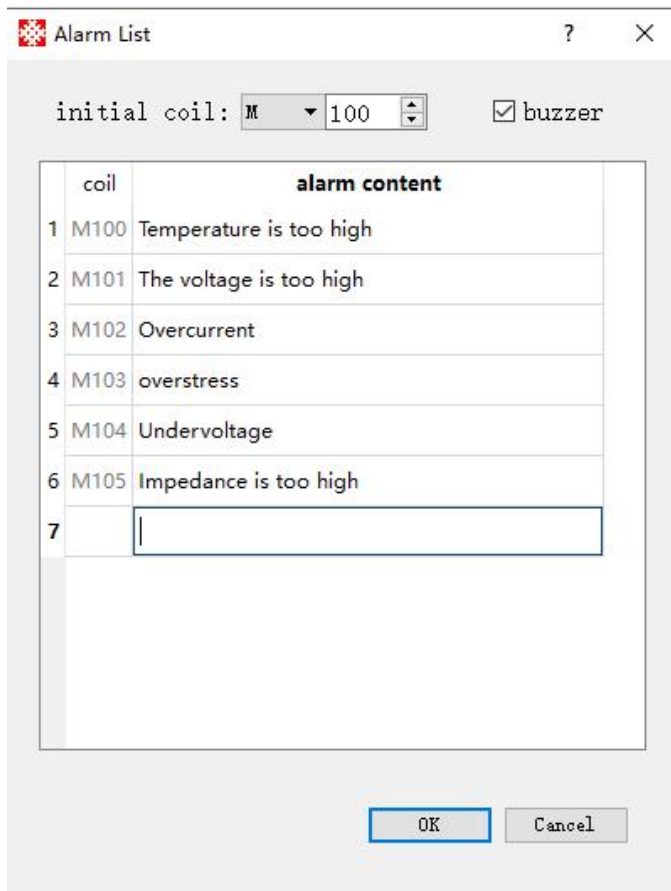
Enter other alarm information in the same way.

After all alarm information is registered, change the coil definition number to M100 (for example), which means that M100-M105 respectively correspond to 6 alarm information.

When the A-type text all-in-one machine is working normally, if one or more of M100, M101, M102 ... are turned ON, the display will automatically pop up an alarm screen. The operator can then take measures to remove the fault. If you want to return to the monitoring screen, press the [ESC] key.

5.12 Other considerations

①ALM, SET, ESC, ENT, UP, DOWN and other buttons have default basic functions. If these basic functions conflict with user-defined function keys, the basic functions will be blocked except the SET key. The SET key has the

highest priority when performing the basic function of setting registers. Therefore, if there is a register setting function on the screen, please do not use the SET button for other functions.

②When setting the register, press the SET button to input the numbers continuously, and then directly press the required numbers. If you need to enter hexadecimal A-F, you can enter this digit 9 or 0, and then use the up and down keys to get the required hexadecimal number.

③ If the actual value of the register exceeds the number of digits set by the user, the data will be truncated from the end of the data. This will inevitably lead to errors. Therefore, the user must set the maximum number of digits according to the register type when programming. Although some large values may not be realized in the project, they must be kept in a sufficient position to prevent the data truncated after an error from being considered as legal data.

④If there is a key operation under the screen saver jump screen, it will be invalid. Any key wakes up the screen saver and returns to the original screen.

⑤If the upper and lower limit settings of the register, bar graph, and trend graph are lower than the upper limit, the program will automatically check and report errors during download. The configuration cannot be downloaded until corrected

⑥ When setting a new register value, after using the CLR key to clear the current value, you can press the numeric keys to enter continuously to increase the speed of entering numbers.

⑦Under the premise of ensuring reliable communication, a higher baud rate should be used as much as possible. A higher baud rate can greatly improve the refresh rate of the picture and reduce the response time of the key control.

5.13　30A If the communication is interrupted during the text download, how to solve the black screen that may appear?

If the communication is interrupted during the text download, a black screen may appear. In this case, press and hold the ESC key until the initial screen appears, and then you can download it again. After downloading the text display software and PLC software, if you want to run the PLC software, you need to press and hold the ESC key for 3 seconds, the dialog box of PLC running and stopping will appear on the screen, press the 0 key to run, and press the 1 key to stop.

5.14 Comparison of EX2N-A series text editing software functions with EX2N-B series

1) Easy to edit and support undo, redo, mouse selection, cross-project copy and paste;

2) Support font selection function, register numbers, text Chinese characters display can freely choose various fonts；

3) Large amount of display information, text size, font can be selected；

4) The ON / OFF picture of the indicator light can be replaced with any picture;

5) Support multiple format picture files, dynamic picture function can realize 16 pictures switching display;

6) Support input display of straight line, rectangle and circle;

7) The primitive display has hierarchical attributes, and the display of overlapping primitives will not interfere with each other；

8）LCD display: 30A is 128 × 64 pixels; 40A is 192 × 64 pixels; 50A is 240 × 128 pixels; LCD life is up to 20,000 hours. Blue screen, gray screen and yellow-green screen are optional;

9)Screen storage capacity: 256KB Flash ROM;

10)Function keys: 30A has 18 (40A and 50A have 19 function keys, one more

CLR key), the functions can be freely assigned.

5.15 The buzzer of the text PLC all-in-one machine keeps alarming, the PLC and the text program cannot be downloaded, the RUN light is off, and the ERR light is on.

Solution: Press and hold the ESC key until the system menu screen pops up, then stay on this screen and download the text program.

5.16 .Please refer to the PLC section for answering the PLC

Chapter 6 HMI, PLC HMI ALL IN ONE

6.1 Touch screen and touch screen PLC integrated machine man-machine interface parameter setting

Open the software application --- set working parameters (F7), view the display unit parameter settings:

人机界面型号简写	人机界面匹配型号	触摸屏PLC一体机匹配型号
MT6037H(320*240)	MT6037H/MAY3S	*
MT6043H(480*272)	MT6043H(A)/MT6043KH(A)/MT9043H/MT9043KH	EX2N-43H(A)/EX2N-43KH(A)/EX3G-43HA(HB)/EX3G-43KHB/MX2N-43HB
MT6043HV(272*480)	MT6043H(A)V/MT6043KH(A)V	EX2N-43H(A)V/EX2N-43KH(A)V
MT6047H(480*320)	MT6047H	*
MT6070HV(480*800)	MT6070H(AS)V/MT6050H(A)V/MT6050KH(A)V/MT6100HV	EX2N-70H(AS)V/EX2N-50KH(A)V/EX2N-100HV
MT6070H(800*480)	MT6070H(AS)/MT6050H(A)/MT6050KH(A)/MT6100H/MT9050(70)KH/MT9100H/MAY5S	EX2N-70H(AS)/EX2N-50KH(A)/EX2N-100H/EX3G-50(70)KHB/EX3G-100HB
MT6080H(800*600)	MT6080H	*
MT6104H(1024*768)	MT6104H/MT6150HA	EX3G-150HA
MT6100HA(1024*600)	MT6100HA/MT6070HA	EX2N-100HA/EX2N-70HA/EX3G-70KHA/EX3G-100HA

（1）.MT6043H (HA) touch screen and EX2N-43H (HA) all-in-one horizontal screen select MT6043H (480 * 272);

Choose MT6043HV (272 * 480) for MT6043H touch screen and EX2N-43H all-in-one vertical screen.
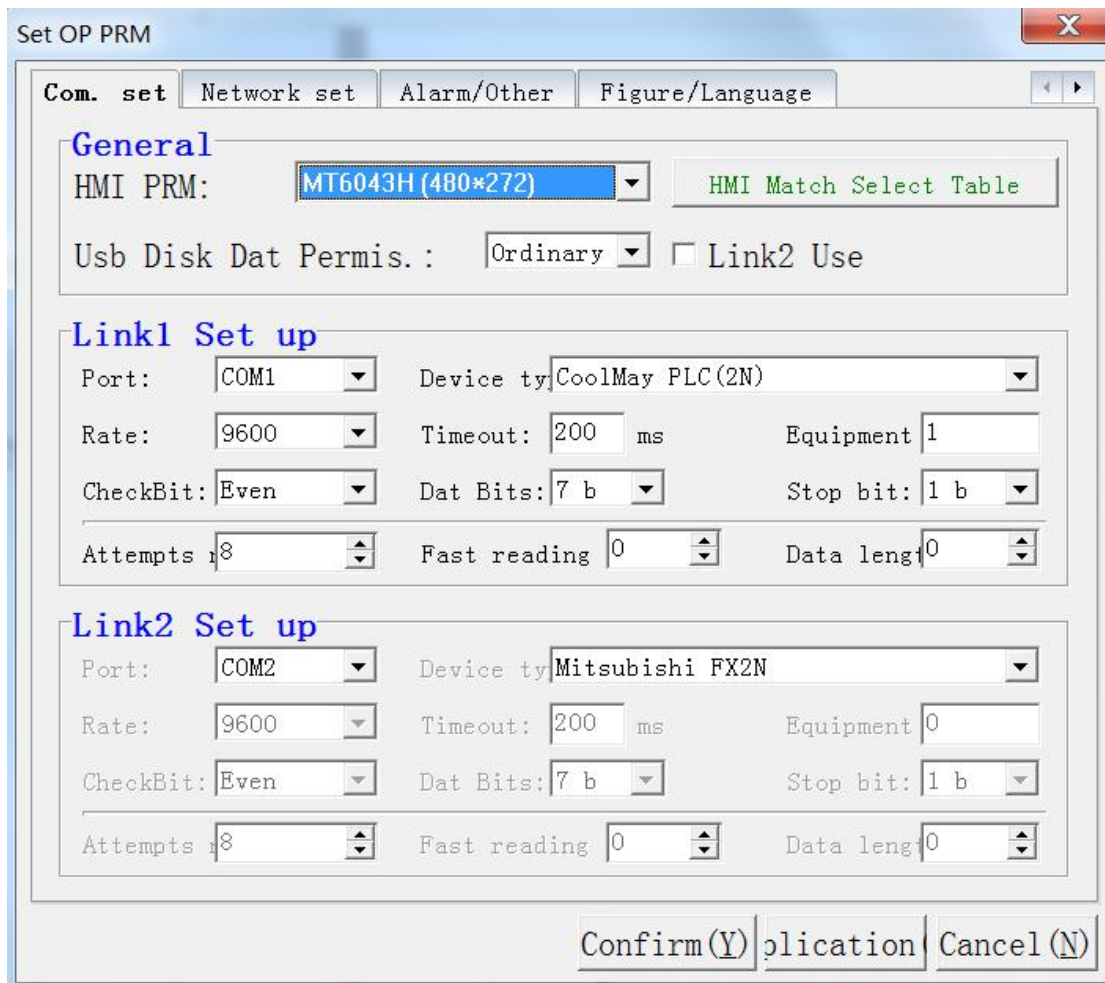
（2）.MT6050H (HA) / MT6070H touch screen and EX2N-70H all-in-one horizontal screen select MT6070H (800 * 480);

Choose MT6070H (480 * 800) for MT6050H / MT6070H touch screen and EX2N-70H all-in-one vertical screen.
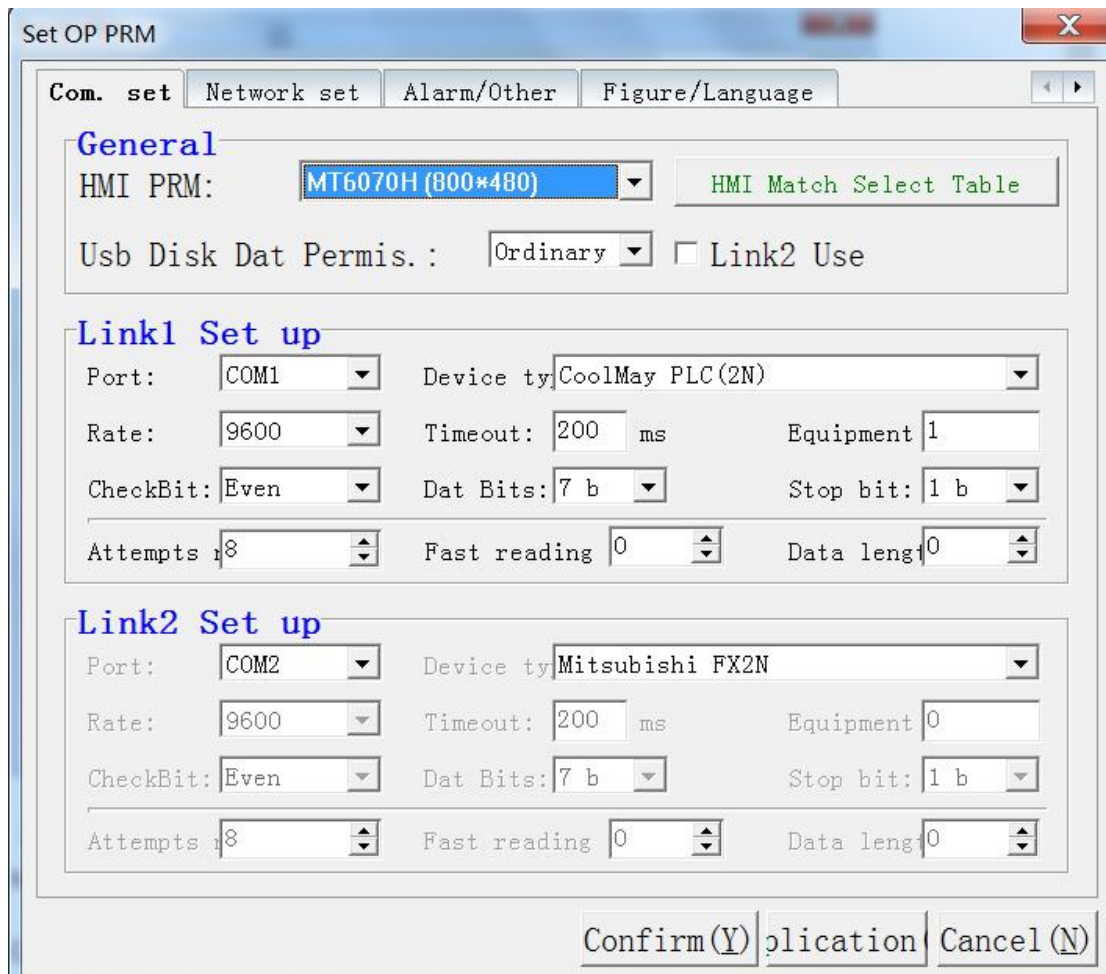
（3）.MT6070HA / MT6100HA touch screen and EX2N-70HA / EX2N-100HA all-in-one horizontal screen selection

MT6100HA (1024 * 600);
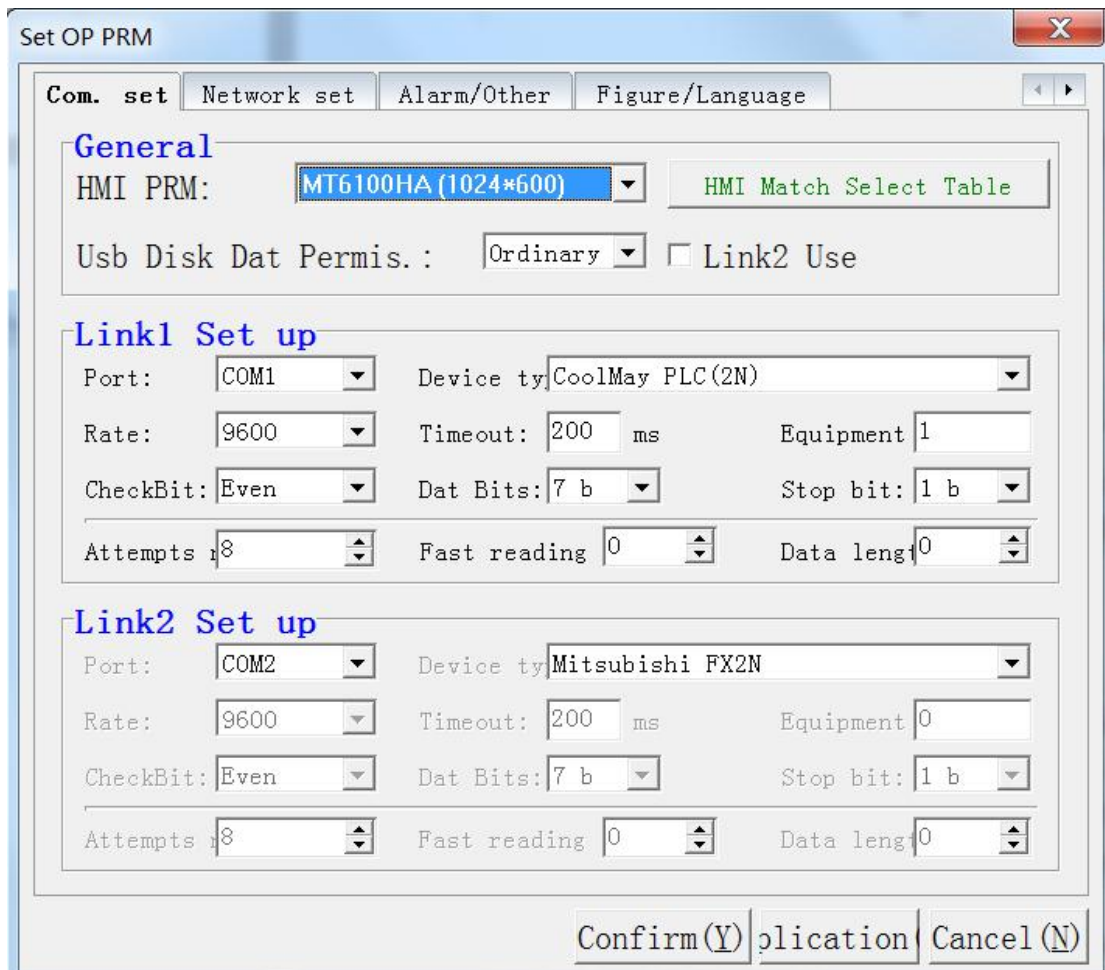
note:

1. COM1 is selected as the communication port by default, and COM2 is selected in some special cases. If the label "Internal Communication COM2" is attached to the product, the communication port is COM2;

2. HA / HAS / KHA and HB series do not support vertical screen display temporarily, H series all support vertical screen display.

3. To communicate with Gumei PLC or touch screen PLC all-in-one machine, Link1 setting parameters must be:

2N series PLC:

3G series PLC:

6.2 The touch screen driver of the touch screen PLC integrated machine is not automatically installed

After installing CoolMayHMI touch screen software on the Win8 / Win10 system, you need to disable the driver's forced signature before you can download the program directly using the touch screen download line. For the setting procedure, please refer to "Win8 / Win10 System Touch Screen Driver Installation Procedure":

http://www.coolmay.com/webdown/MT60 series Win8 system touch screen comes with driver installation steps.pdf

http://www.coolmay.com/webdown/MT60 series win10 system touch screen comes with driver installation steps.pdf

6.3 How to download the program online?

Note: Both online download and U disk download programs need to be compiled first (F5). After compiling (F5), click to download (F6)

A dialog box pops up, click download.
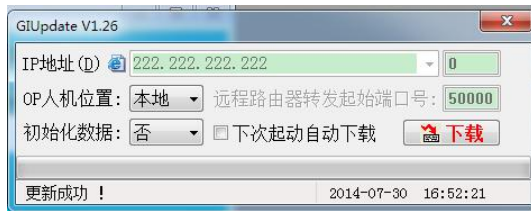
6.4.How to download program with U disk?

① After saving the program, compile the program (shortcut key F5);
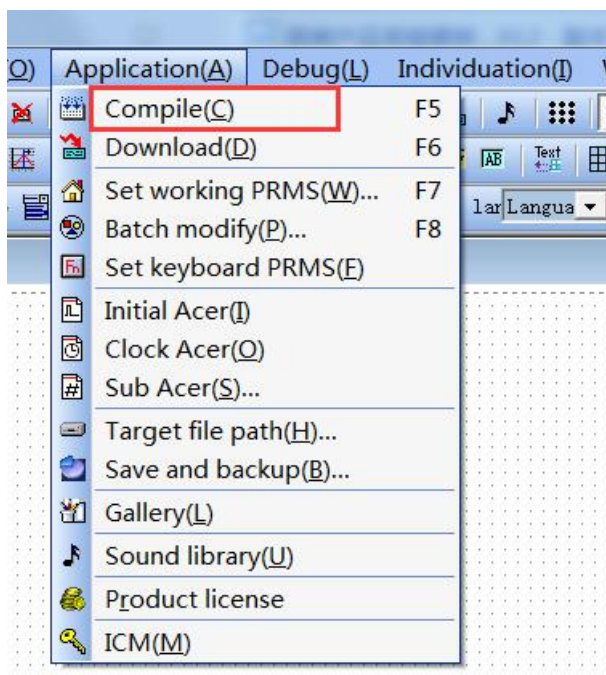
②In the target file path (check the default disk in the software application --- target file path, the default is in the C drive)
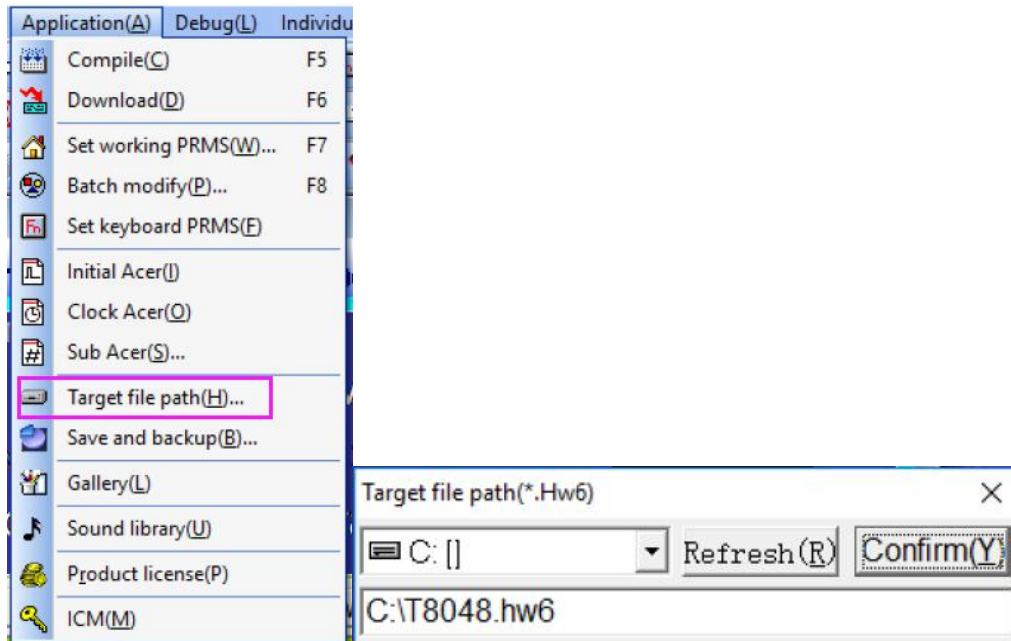
Find the file with the same file name as the program name and the format of .hw6 generated by the C drive, as shown in the figure for the test program.
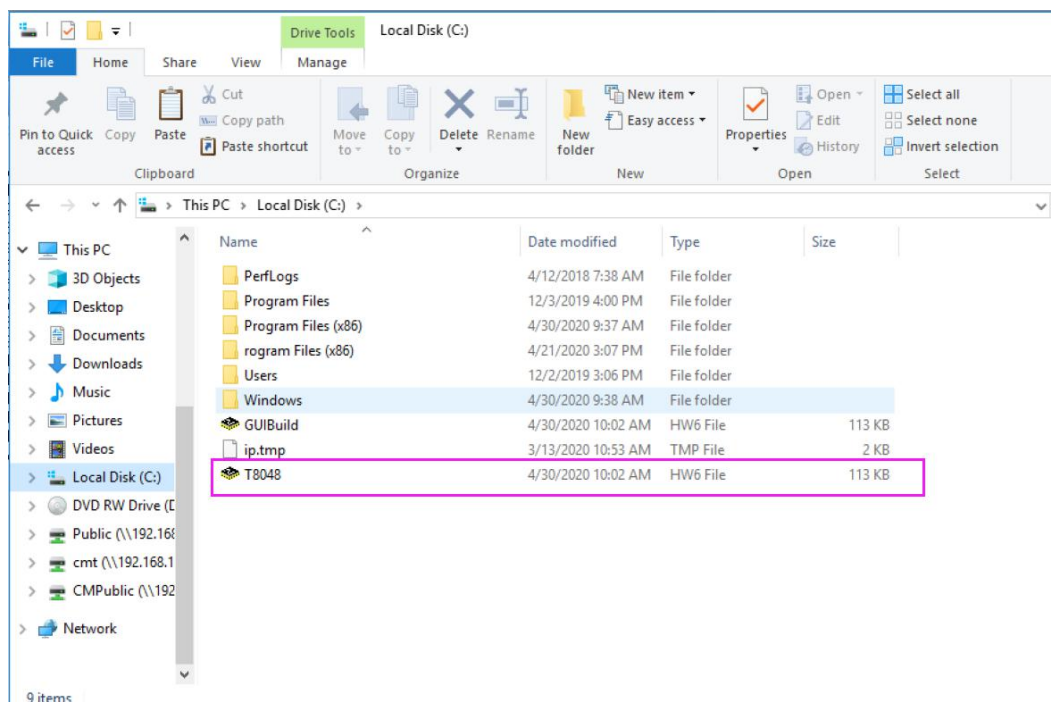
③ Copy the .hw6 file under the target file path to the U disk;

④Insert the U disk into the USB port of the product-the USB setting screen will pop up immediately;

⑤Click the update * .hw6 file, enter the corresponding level of password, the default super password is 12345678, the default ordinary password is blank (direct confirmation); if you have changed the password, you need to enter the corresponding correct password;
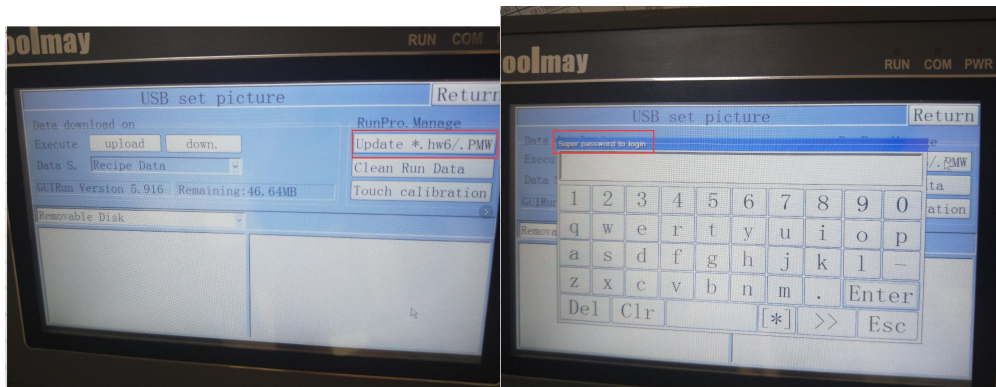
After confirming, find the .HW6 file in the lower right corner. After double-clicking, a confirmation box will pop up and the progress bar will be automatically updated.

6.5.Touch screen program download method and download problem solution

For online download methods of touch screen and U disk download, as well as solutions to problems encountered during download, please refer to the information

(1) Download area-HMI manual download-"Touch screen program download method and download problem solution":
http://www.coolmay.net/kindeditor/attached/file/20160716/20160716184222_7679.pdf

(2) Download area-HMI manual download-"About the" Unsuccessful Download of Touch Screen "Solution":

http://www.coolmay.com/kindeditor/attached/file/20170828/20170828155536_9738.pdf

6.6 How to change the picture size?

Double-click to change the picture, click stretch to set the width and height to change the picture size。
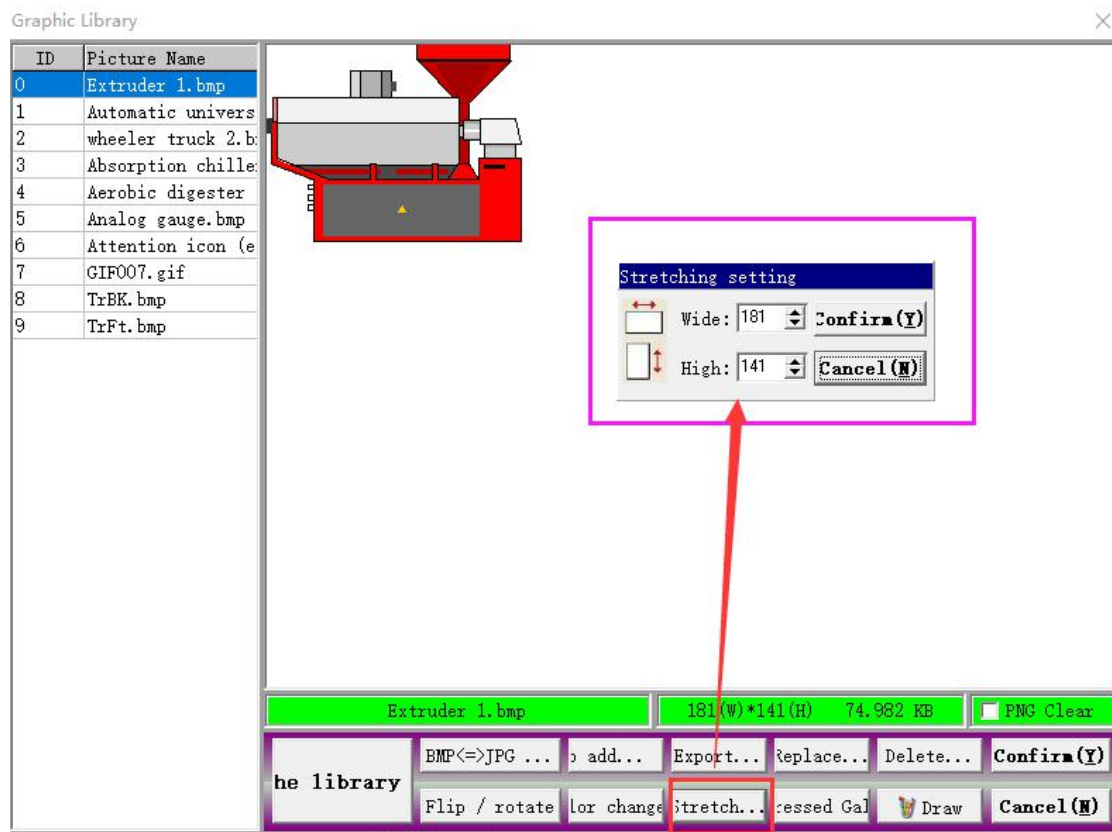
Note: The maximum size of the picture cannot be greater than the screen's human-machine interface parameters.

6.7 How to use picture components to make animation effects?

Method ① Add pictures to the touch screen software and add the state animation pictures
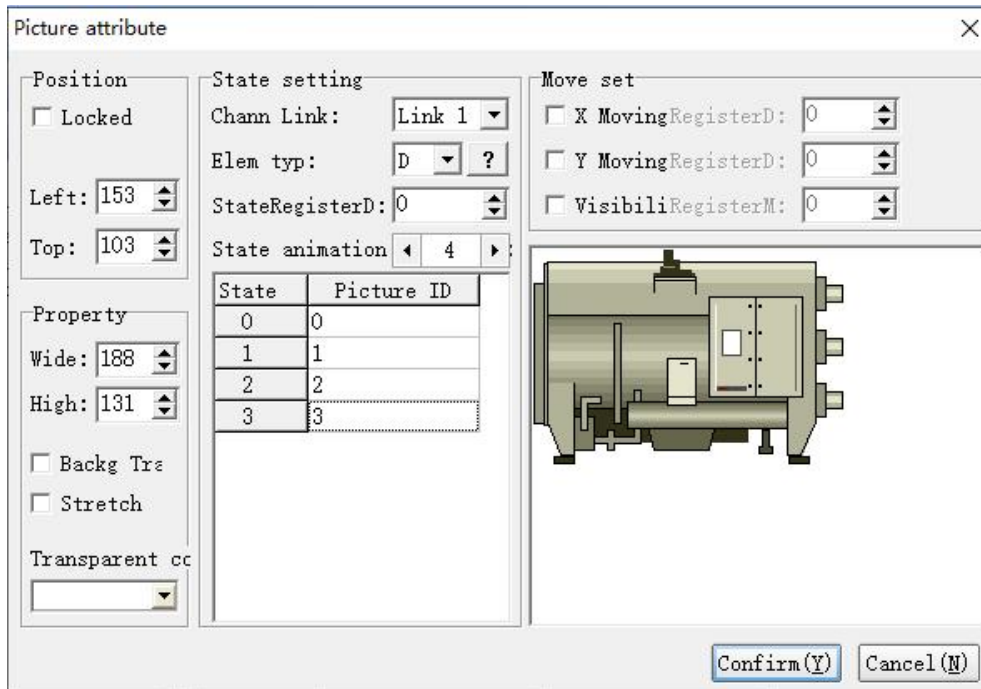
Then write a program in the PLC to switch:
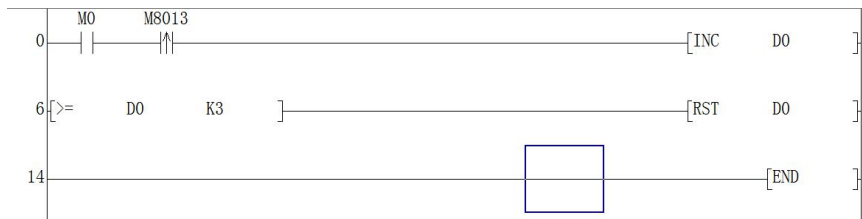
Method ② Use the touch screen clock macro to control the animation, and use the picture element to add the corresponding picture first
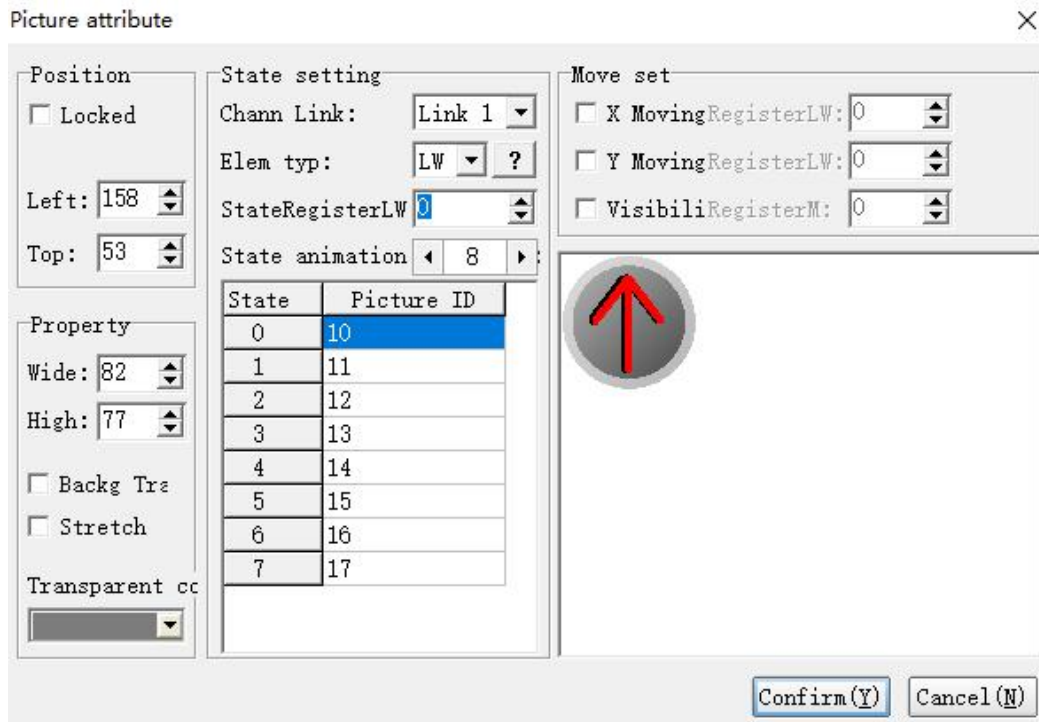
Add clock program, when M0 is ON, animation switch
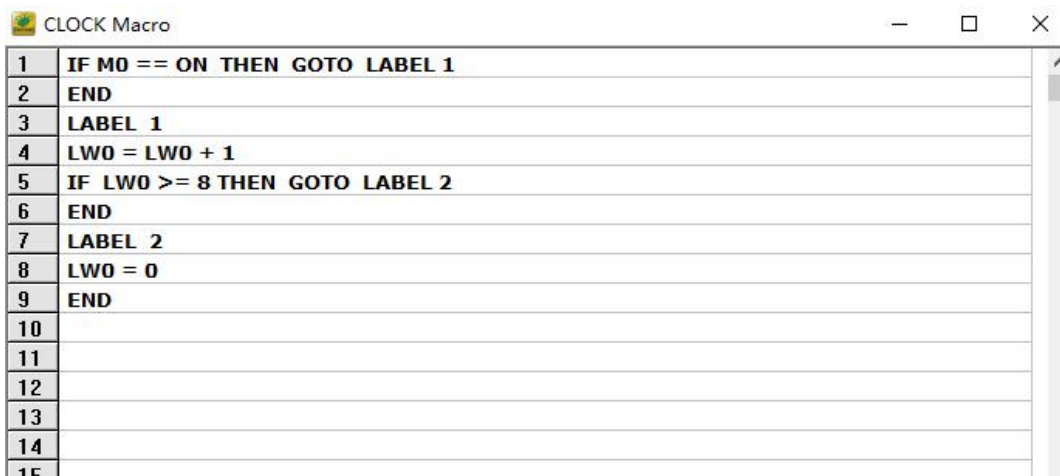
6.8 How to choose the glyph font?

The font is divided into glyph matching selection and language matching selection, and multiple fonts and multiple languages can be set.
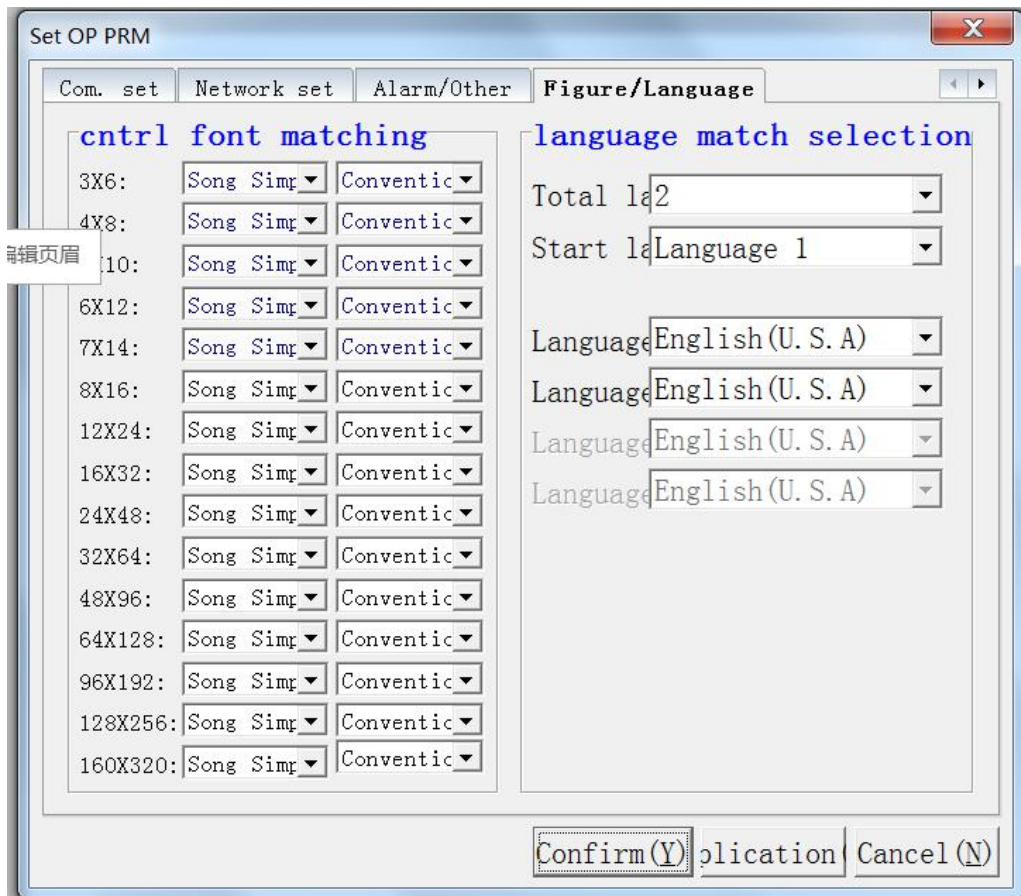
Static text can choose to use multiple fonts:
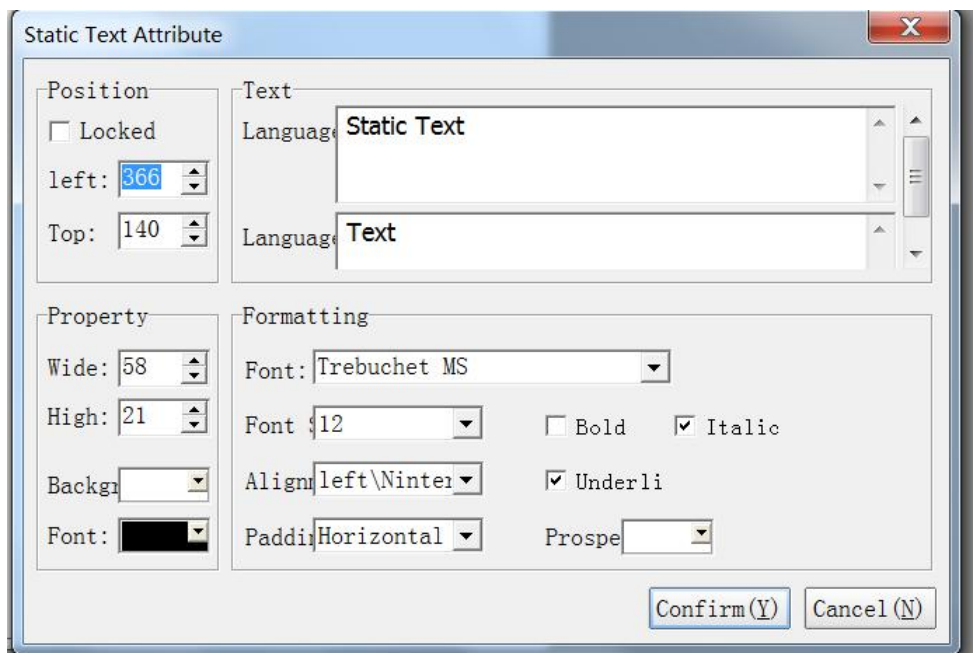
6.9(1) How to remove the touch screen saver (steady light)?

Method 1. Make a function key on the screen and change the basic function to jump to No. 255: System menu screen
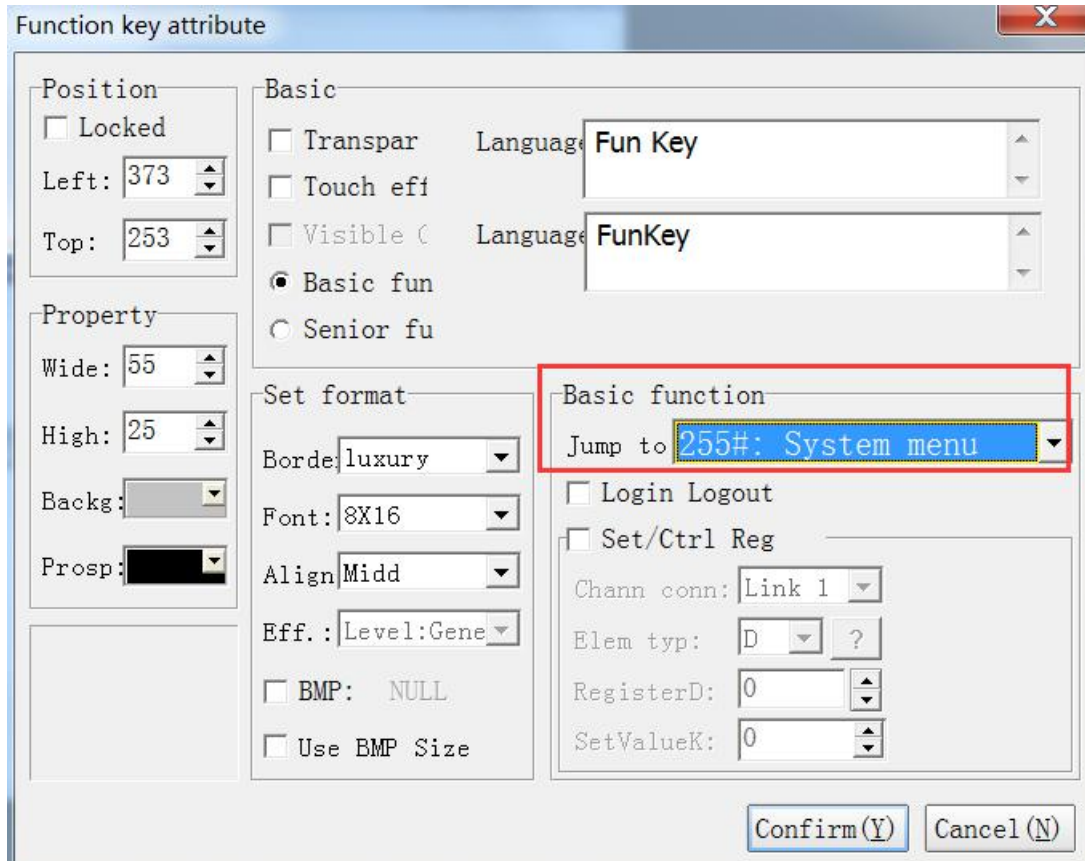
Then click the function key on the product to enter the system menu screen, change the LCD backlight time to 0, and take effect after the power off and restart of the touch screen.

Method 2: Change the screen saver time (minutes) in the application-setting working parameters to 0, and then download and compile the program, and take effect after the power off and restart of the touch screen, as shown below:
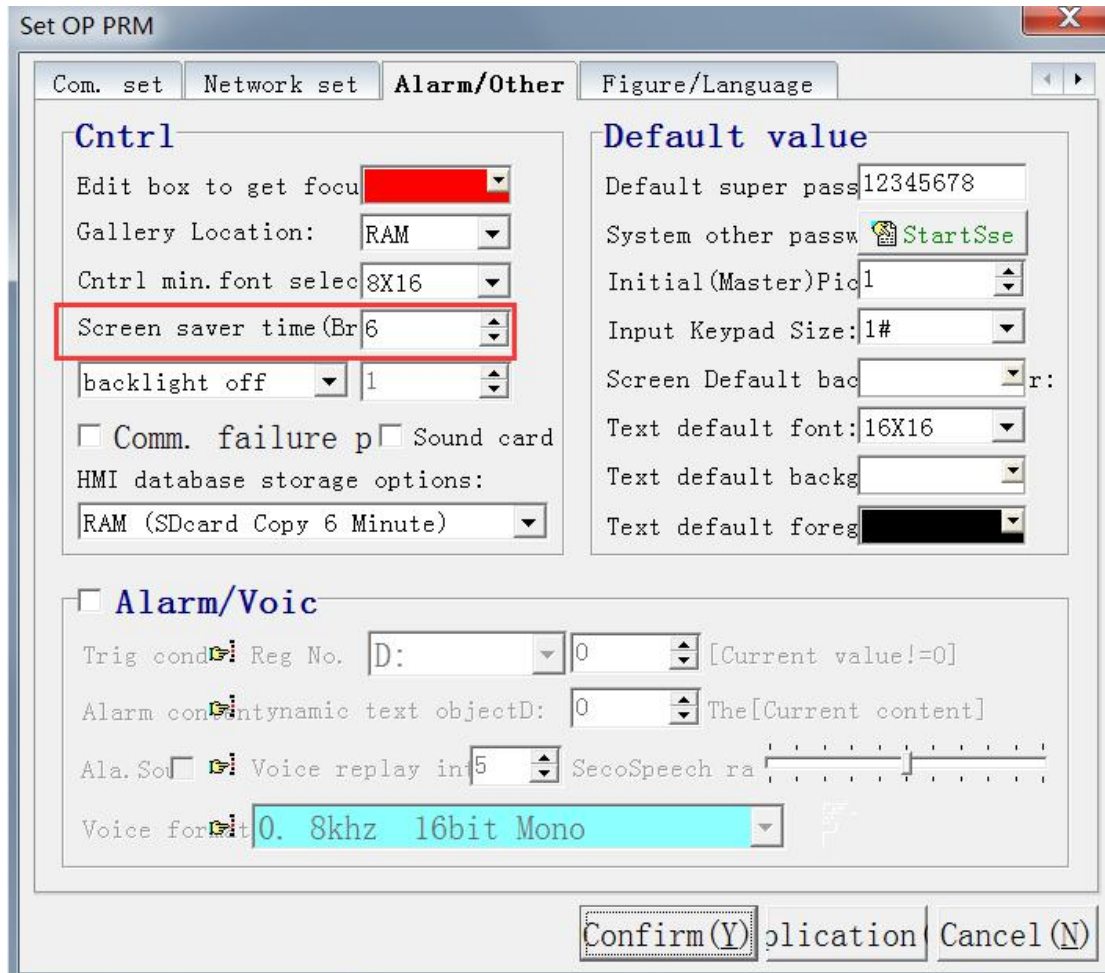
6.9(2) How to display a page when the screen saver time is up?

Application --- set working parameters--alarm / others, select [Display screen when screen saver: 2] and then download and compile the program, and take effect after power off and restart the touch screen.
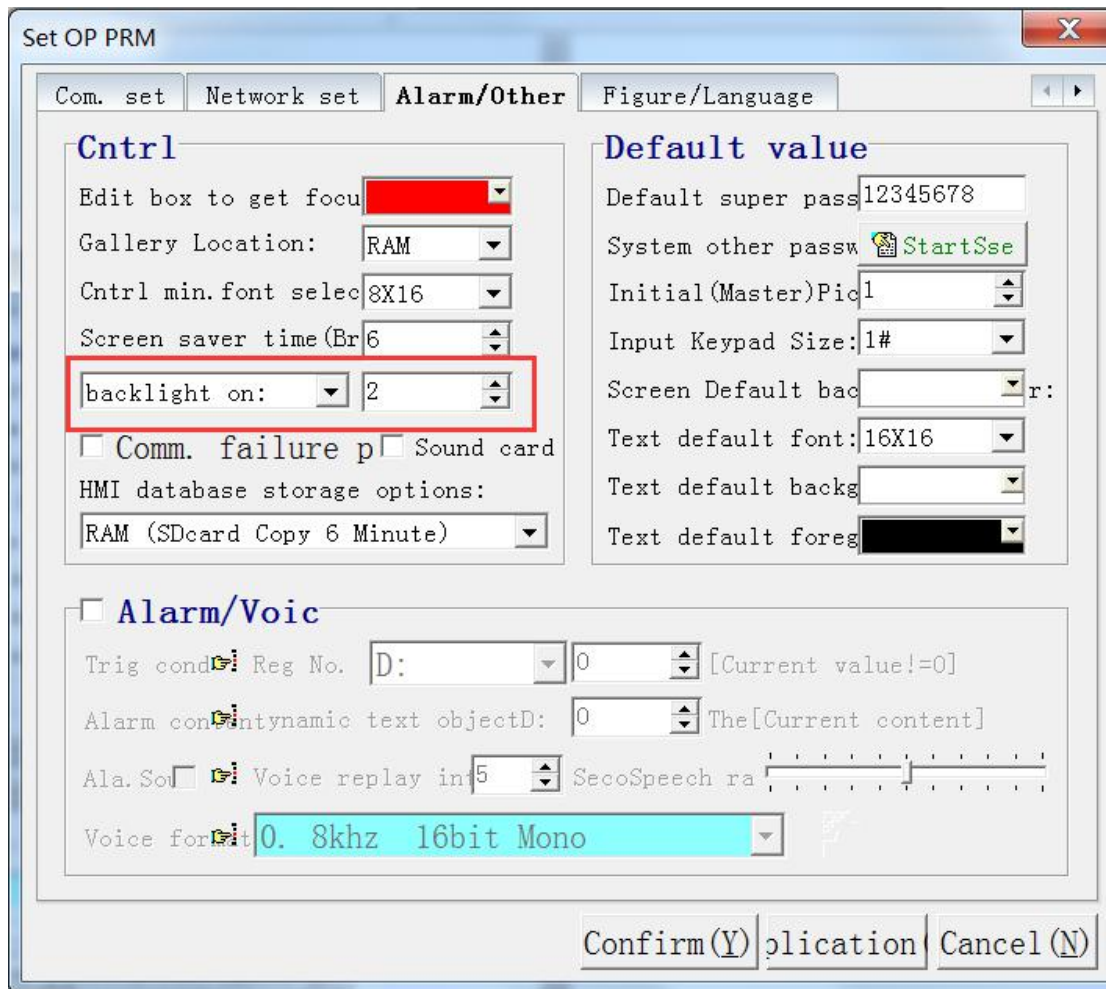
6.10 How to modify the input keyboard size?

Open the application --- set the working parameters, modify the input keyboard size selection (1 # ...... 8 #), 1 # minimum, 8 # maximum.
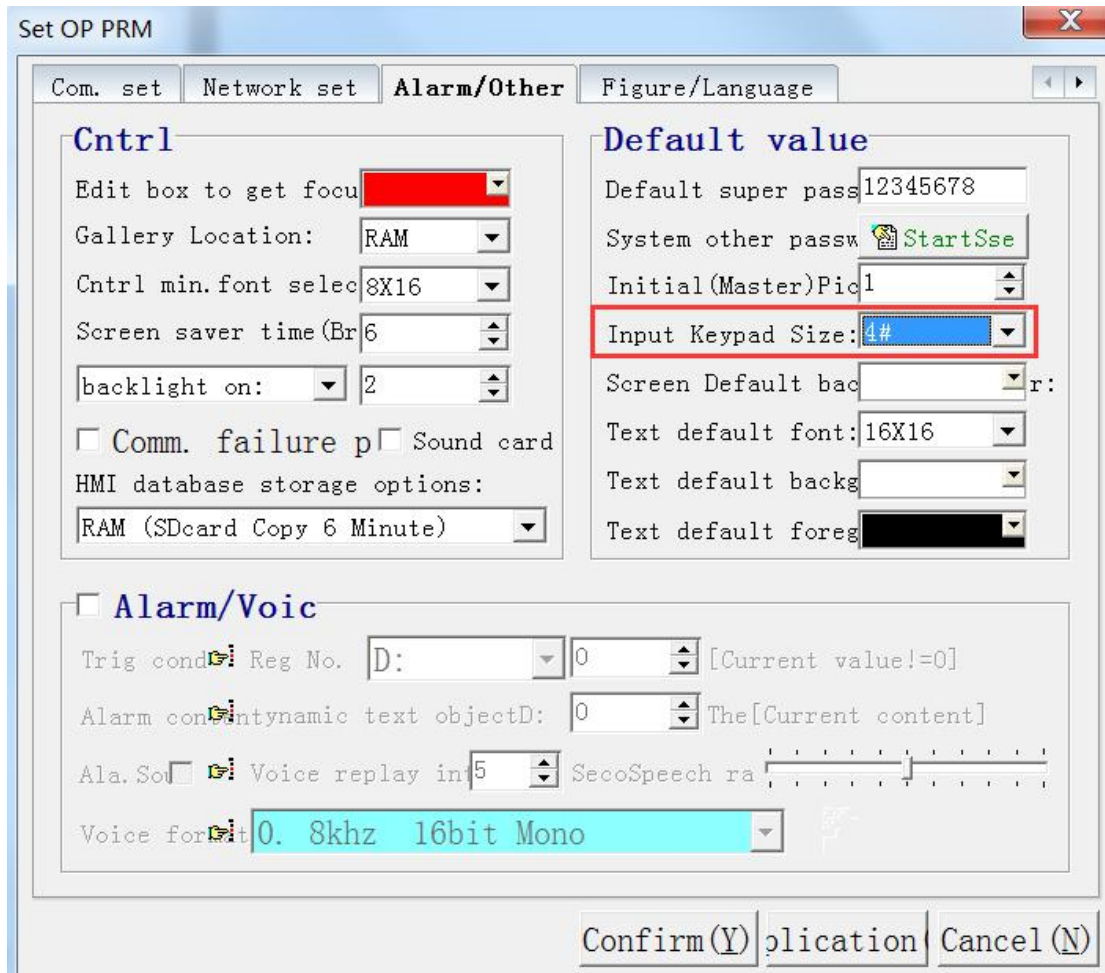
6.11 How to turn on or off the communication failure prompt?

Open the application --- set the working parameters, check the option of communication failure prompt (prompt) or not (not prompt).
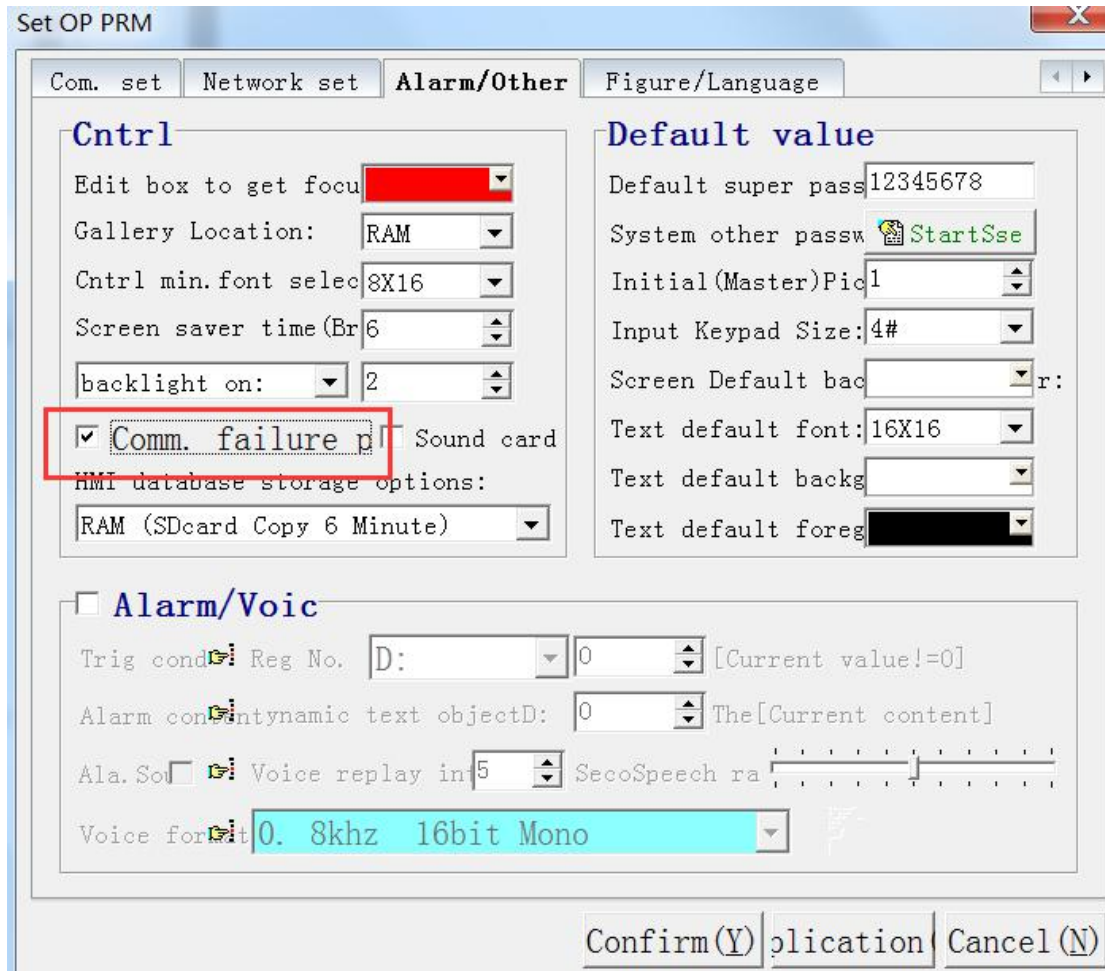
6.12 Touch screen user permission (encryption) settings of touch screen PLC integrated machine

Download area--application case--touch screen user password setting and logout setting v9.71

http://www.coolmay.com/kindeditor/attached/file/20160721/20160721171350_4067.pdf

6.13 Touch screen external printer with touch screen PLC integrated machine

Download area--application case--touch screen printer routine

http://www.coolmay.net/Download.aspx?ColumnId=74&Language=34&Terminal=41&page=3

6.14 Touch screen PLC integrated machine date and clock settings

Add the date and clock components in the software, select the setting permission in the properties, then compile and download the program to the product, and then click on the touch screen to modify the time and date.
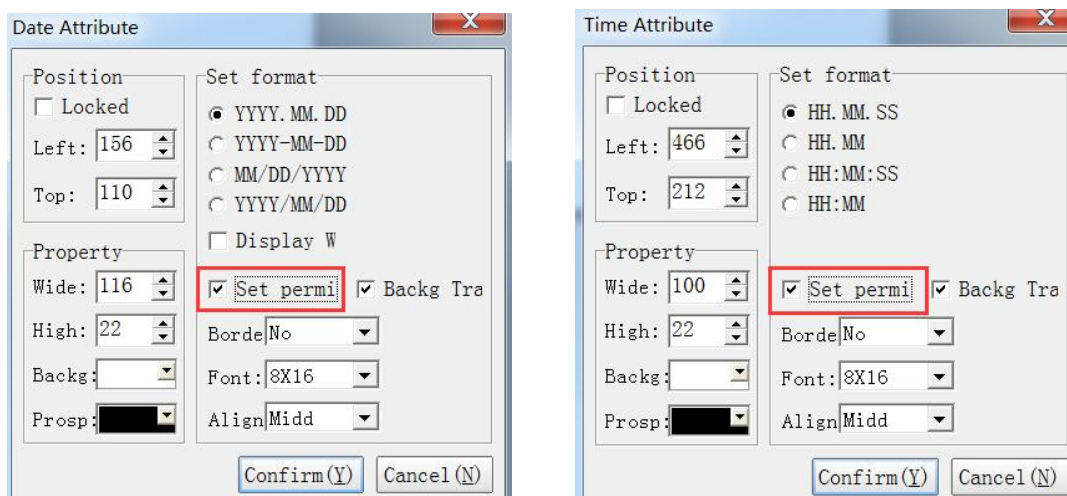
6.15 Touch screen and touch screen PLC all-in-one replacement startup screen

Before changing the start up screen, you must confirm that the touch screen is a conventional horizontal screen display, that is, the screen has not been rotated or customized for the vertical screen display, and the display degree is 0 ° before the start up screen can be replaced.

Prerequisite: Set the picture format of the start up screen (must be in .bmp format), picture name and picture size

The screen size of the MT6037H touch screen is 320 * 240 pixels, and the picture is named Logo320240.bmp;

MT6043H (HA) touch screen and EX2N-43H / EX2N-43KH, EX3G-43H (B) / EX3G-43KH all-in-one start-up screen size is 480 * 272 pixels, the picture is named Logo480272.bmp;

MT6050H (A) / MT6070H (AS) touch screen and EX2N-70H (AS) / EX2N-50KH (A), EX3G-50KH / EX3G-70KH (AS) / EX3G-70H all-in-one startup screen size is 800 * 480 pixels, The picture is named Logo800480.bmp;

The startup screen size of MT6070HA / MT6100HA touch screen and EX2N-70HA / EX2N-100HA, EX3G-70KHA / EX3G-100HA all-in-one machine is 1024 * 600 pixels, and the picture is named Logo1024600.bmp.

Regardless of the horizontal or vertical screen display, the picture pixels (size) must be set according to the horizontal screen picture pixels (size), and the horizontal and vertical screen pictures have the same name.

Method 1: Copy the set picture to the root directory of the U disk, insert the U disk in the product USB port, it will automatically jump to the USB setting screen, and then select the data to choose to change the startup screen (bmp), and then click Upload to this machine, enter the super password (default is 12345678) or the password you set for the data upload / download permission of the mobile U disk. After entering the confirmation, it will automatically restart the update; generally use method 1 to update.
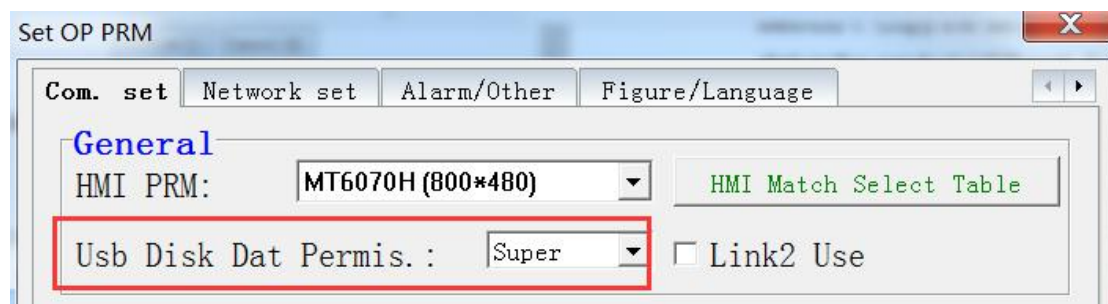
Method 2: Replace the set picture with Logo480272.bmp or Logo800480.bmp or Logo1024600.bmp in the U disk update folder, then find a U disk in FAT32 format, insert it in the computer, and update the U disk update folder Copy all the sub-files in the root directory of the U disk, double-click the Auto43 or Auto70 or Auto100 file in the U disk, a DOS window will flash on the computer, you can unplug the U disk and insert the U disk on the touch screen , It will be updated automatically, and you can see the replaced startup screen after restarting. Note: U disk update files must be obtained from Gumei technical customer service, please do not update without authorization.

6.16. Alarm list production of touch screen PLC integrated machine

Download Zone--Application Case--Touch Screen Alarm List

http://www.coolmay.net/kindeditor/attached/file/20160721/20160721171424_8291.pdf

6.17. Production of curve (real-time curve and historical curve) of touch screen PLC integrated machine

Download Zone-Application Case-Real-time Curve Routine and Historical Curve Routine

http://www.coolmay.com/kindeditor/attached/file/20160721/20160721171313_6250.rar

6.18 Formula production of touch screen PLC integrated machine

Download Zone--Application Case--Formulation Test

http://www.coolmay.net/Download.aspx?ColumnId=74&Language=34&Terminal=41&page=3

6.19 Screen jump of touch screen PLC integrated machine

Download Area--Application Case--Screen Jump of Touch Screen PLC All-in-One

http://www.coolmay.net/Download.aspx?ColumnId=74&Language=34&Terminal=41&page=2

6.20 How to use U disk to release touch screen memory for touch screen

①After creating a simple program with a touch screen, compile it and copy the compiled file in the format of .hw6 (under the target file path, the default is the C drive) to the root directory of the U disk, that is, it will not be placed in any folder inside;

② The product is powered on. Before the screen is bright, use both hands to quickly touch the touch screen. At this time, it will jump to the calibration screen. After calibration, click the touch screen again to jump directly to the USB setting screen, and then insert the U disk into the product's USB mouth;

Note: You must jump to the USB setting screen before the progress bar appears, because the existing error program in the touch screen has been loaded after the progress bar appears.

③Click the update * .hw6 file, enter the password (default): 95959595, and then find the compiled file copied to the U disk in the lower right corner, double-click and update, you can release all the memory space of the original program. After updating, check the remaining space in the USB setting screen: 40MB to 70MB is normal.

6.21 Touch screen network port communicates with computer or touch screen uses network port to communicate with other network port equipment

Three functions of the optional network port of the touch screen:

①It is used to remotely download the touch screen program from the internal network or the external network.

② Use the Ethernet monitoring capability of the COOLMAY HMI touch screen software to realize remote real-time monitoring of the internal or external network and operate the components on the touch screen.

③ Support Modbus TCP / IP protocol, etc., used to communicate with other network port devices.

Download area-application case-" Coolmay touch screen network port and computer communication setting steps":

http://www.coolmay.com/webdown/COOLMAYHMIWKSYSM.pdf

6.22 Coolmay touch screen USB camera screen setting steps

Download area-application case-"Coolmay touch screen USB camera screen setting steps":

http://www.coolmay.com/kindeditor/attached/file/20160721/20160721171506_8140.pdf

6.23How to export the data stored in the touch screen

Insert a USB flash drive with FAT 32 format, it will automatically jump to the USB setting screen, data selection to select the content to be downloaded, such as: historical data and historical curve data, then select the record area database, alarm list data select the alarm After selecting the database, click to download to the U disk, and you will be prompted to enter the password, which

is the password corresponding to the data upload / download permission of the mobile U disk
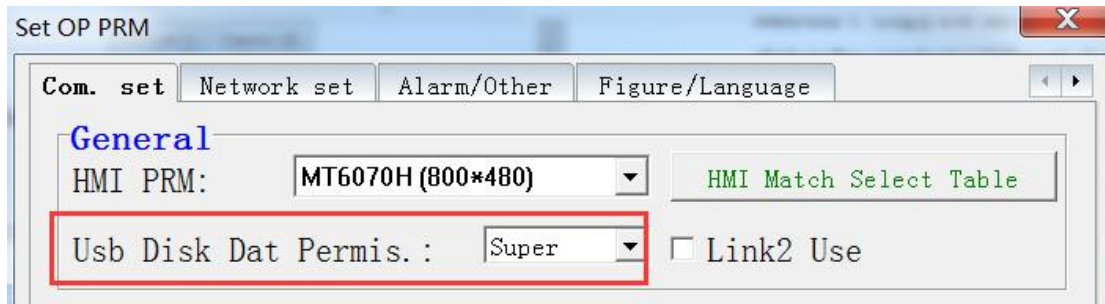
If it is super, enter the super password, if it is ordinary, enter the ordinary password. After entering the correct password, click yes, a prompt will appear, click Yes, after the download is complete, a file in the corresponding format will be generated in the U disk, for example: the file of historical data table and historical curve is Buffer1.db, and the file of alarm list is Alarm.db , Such files are viewed using a database browser, as shown below:

The recipe list file is RECIPE.bin, change the file to use the recipe data viewing function

Set OP PRM ✕

| Alarm/Other | Figure/Language | Record buffer | **Recipe setting** | ◀ ▶ |

Recipe attri

☑ Recipe funct

Recipe de:

☐ Auto matching with Link?

Recipe le: 50   Recipe to: 50   Data type 32 Bit unsign ▼

Cntrller addr.

☑ Write recipe   WriteAdd.D: 0   ☑ Auto download the curr

☑ From PLC rea   ReadAddr.D: 0   ☑ Read addr. and write a

Recipe memory

Reg addr. range: LR1 — LR5000

Now recipe

Reg addr. range: LW6001 — LW6100   **Recipe View**

Recipe no. correspond LW6000

Confirm(Y) | plication(| Cancel(N)

Recipe data view   — ☐ ✕

Recipe expor

Recipe data replication

Recipe impor   Source recipe 7   Target recipe N 5   art copyi

	RECIPE:1	RECIPE:2	RECIPE:3	RECIPE:4	RECIPE:5	RECIPE:6
LW:600	LR1 111	LR51 0	LR101 0	LR151 0	LR201 0	LR251 0
LW:600	LR2 222	LR52 0	LR102 0	LR152 0	LR202 0	LR252 0
LW:600	LR3 333	LR53 0	LR103 0	LR153 0	LR203 0	LR253 0
LW:600	LR4 444	LR54 0	LR104 0	LR154 0	LR204 0	LR254 0
LW:600	LR5 555	LR55 0	LR105 0	LR155 0	LR205 0	LR255 0
LW:601	LR6 666	LR56 0	LR106 0	LR156 0	LR206 0	LR256 0
LW:601	LR7 777	LR57 0	LR107 0	LR157 0	LR207 0	LR257 0
LW:601	LR8 888	LR58 0	LR108 0	LR158 0	LR208 0	LR258 0
LW:601	LR9 999	LR59 0	LR109 0	LR159 0	LR209 555	LR259 0
LW:601	LR10 1010	LR60 0	LR110 0	LR160 0	LR210 0	LR260 0
LW:602	LR11 1111	LR61 0	LR111 0	LR161 0	LR211 0	LR261 0
LW:602	LR12 1212	LR62 0	LR112 0	LR162 0	LR212 0	LR262 0
LW:602	LR13 1313	LR63 0	LR113 0	LR163 0	LR213 0	LR263 0
LW:602	LR14 1414	LR64 0	LR114 0	LR164 0	LR214 0	LR264 0
LW:602	LR15 1515	LR65 0	LR115 0	LR165 0	LR215 0	LR265 0
LW:603	LR16 1616	LR66 0	LR116 0	LR166 0	LR216 0	LR266 0

6.24How to hide the touch screen cursor

Open the touch screen program and set LB8020 in the Initial macro, as shown below
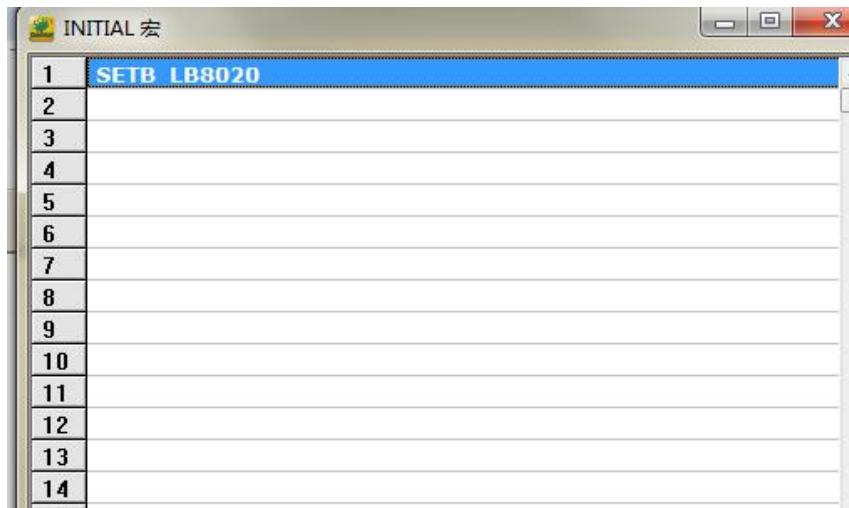
6.25 How to turn off the touch screen button sound

Add a function key in the touch screen program, set to jump to the 255 system menu screen, and then download the program to the product, click the function key on the product, jump to the system menu page, select the buzzer function as . Then power off and restart the product.
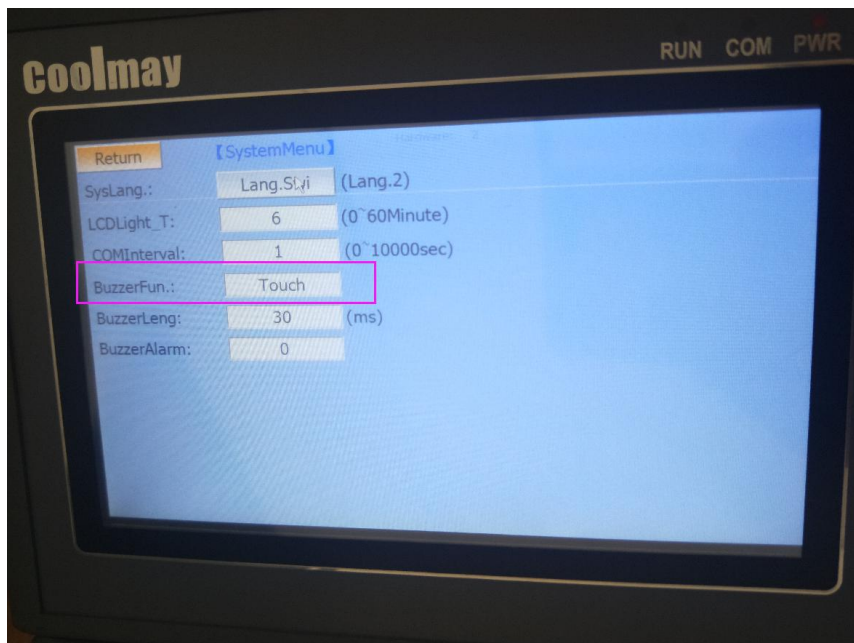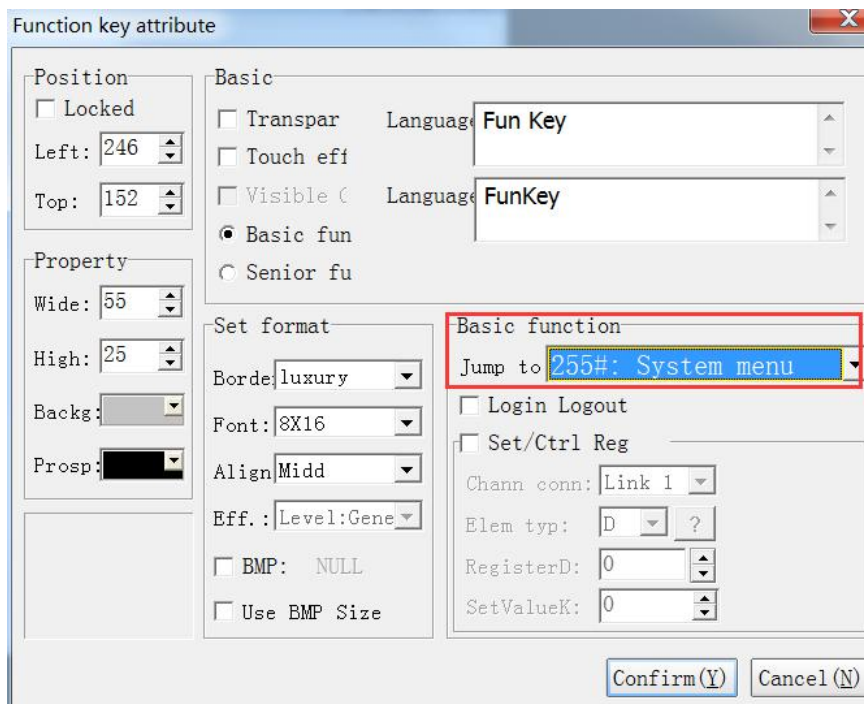
6.26 Use of optional audio on touch screen

In the software menu bar "application-set working parameters-alarm / other" check the sound card option, as shown below:
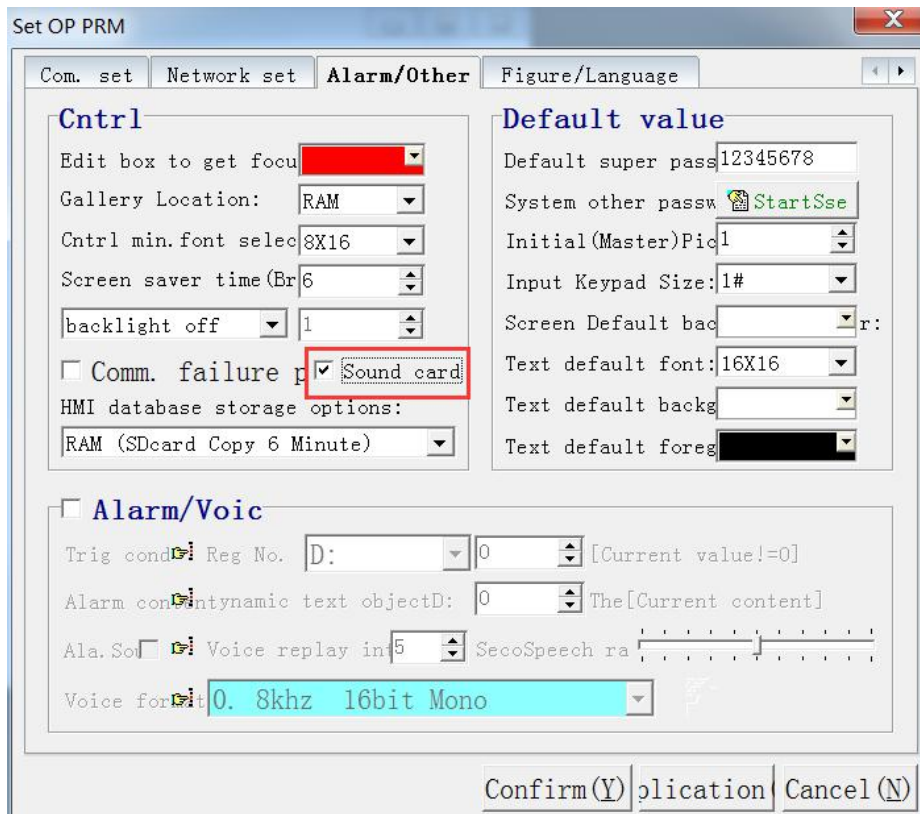
Find the button in the drop-down menu of the component in the menu bar, , place an audio playback component on the screen, and add WAV format audio files in the audio playback properties. (WAV format audio files that can be added from the audio library or recorded by yourself), and set the device address that triggers the audio file playback, as shown in the figure below, M0 triggers audio playback.
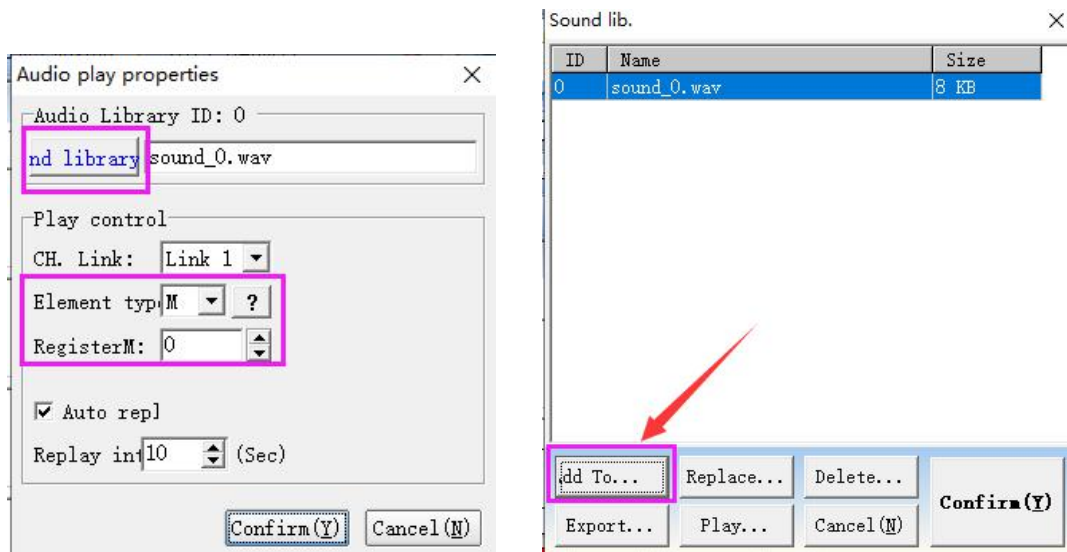
6.27 How to set the horizontal screen of the touch screen to the vertical screen? How to rotate the touch screen picture?

Note: Only the H / KH series support is set to portrait

Plug in the U disk and jump to the USB screen (or add a function key in the touch screen project-choose to jump to the USB page 250), the data selection is changed to screen rotation-click upload to this machine-input Super password (default 12345678)-After confirming the rotation, it will rotate 90 degrees.

After rotating, you must perform screen calibration. If you ca n't use the pen or your hand to directly touch the screen and you ca n't find the stylus calibration button, you can plug in a USB mouse and click the stylus calibration button. After the cross cursor appears, no matter how many degrees you rotate Then, press and hold the middle, long press on the upper left, long press on the lower left, long press on the lower right, and long press on the upper right to calibrate.

6.28 The function of touch screen parameter setting fast reading area

Communication settings: fast reading area

This setting can improve the function of quickly displaying and updating DATA data when the human interface and PLC are actually connected. Because when designing the screen normally, some PLC data addresses may be scattered rather than continuous. In order to obtain better data update effect and ensure correct communication, it is recommended that your PLC data is continuous and uninterrupted. The data displayed in the set range will display much faster than the data outside the range.

In addition, system program update conditions, automatic change of display screen, voice control, history curve, clock pulse (trigger condition), clock counter (count condition), data storage (data source), history list, alarm list, LED indicator used The data must also be within the fast reading area, otherwise the system will not actively read the data of the above components.

6.29 During the touch screen upgrade process, it prompts that no licenses are installed
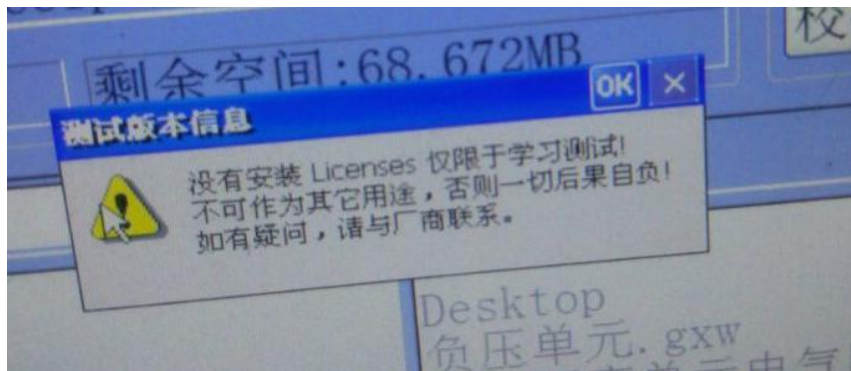
Solution: Put a function key on the touch screen program interface, jump to page 255, download to the touch screen, and then change the hardware code, if it is 2, it will be changed to 1, if it is 1, it will be changed to 2.
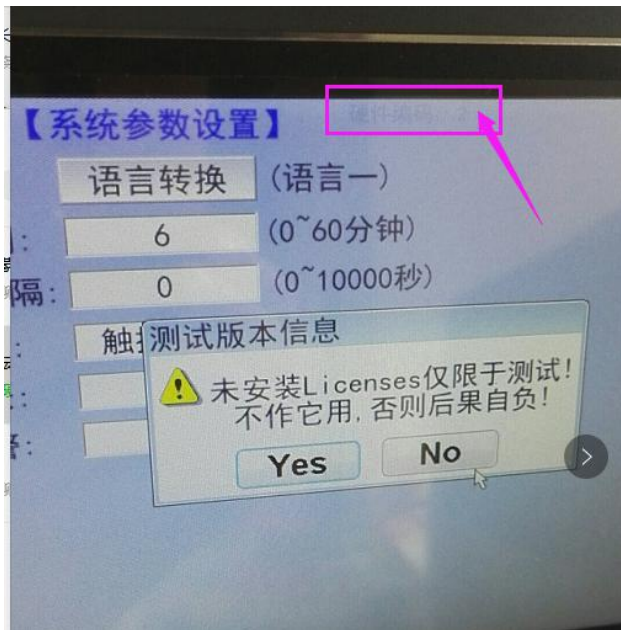
6.30 The installed license appears on the touch screen. Please complete the registration as soon as possible?

Solution: Use the register Fait-CM (need to obtain from Coolmay   Technology) to register and activate:

6.31 When using the function keys to control the jump screen, it prompts that I need to enter a password?

In the function key attribute setting, if the touch is effective, the password protection level will be automatically set, as shown below:
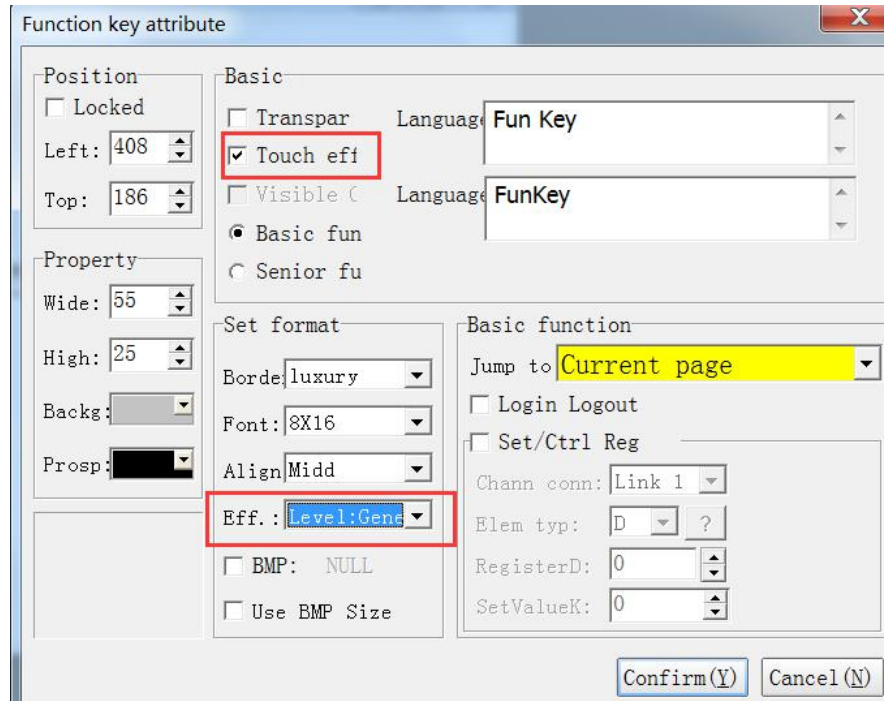
The solution is to remove the effective hook directly without a password. Coolmay touch screen and Xinjie PLC communicate with Xinjie protocol register number up to 8768.

6.32 Coolmay touch screen uses modbus RTU protocol to communicate with Xinjie plc, the register number can reach 20000, while using the thing XC / XCM series Xinjie protocol register can only reach 8768

6.33 Use Coolmay EX2N series touch screen all-in-one machine or touch screen to communicate with the 2N series PLC. The COM lamp of the touch screen flashes, and the register data of the PLC can be read and written, but the button M cannot control the PLC.

The PLC model is a 2N series PLC, but the working parameters are set in the H MI-Communication Link1 selects the device type as, you need to select coolmay PLC (2N), as follows:
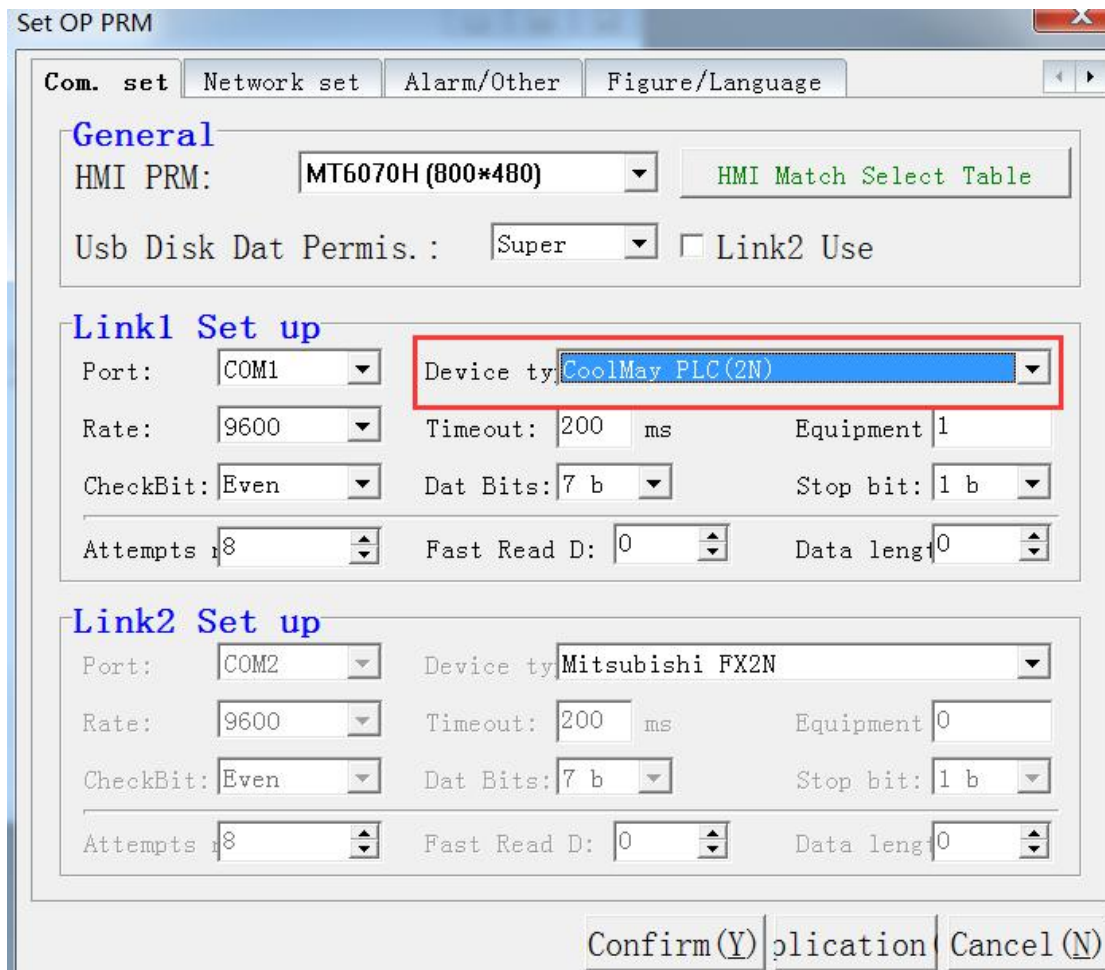
6.34 The historical data / historical alarm data of the touch screen are not saved after the power is turned off. The HMI is powered off or the program is downloaded again, and the data disappears.

In the HMI software, set the working parameters-alarm / other-HMI database storage option, the default is to store in the SD card, no SD card is optional, historical data will not be stored. Solution: Change this item to [RAM (ROM. Backup Suppression ** minutes)] or [RAM (U disk. Backup Suppression ** minutes)], and plug in U disk for storage.

See the official website for specific cases: download area-HMI case download-"historical data list"

http://www.coolmay.com/webdown/%E5%8E%86%E5%8F%B2%E8%B5%84
%E6%96%99%E5%88%97%E8%A1%A8%EF % BC% 88% E6% 9C% 80%
E6% 96% B0% EF% BC% 89.rar
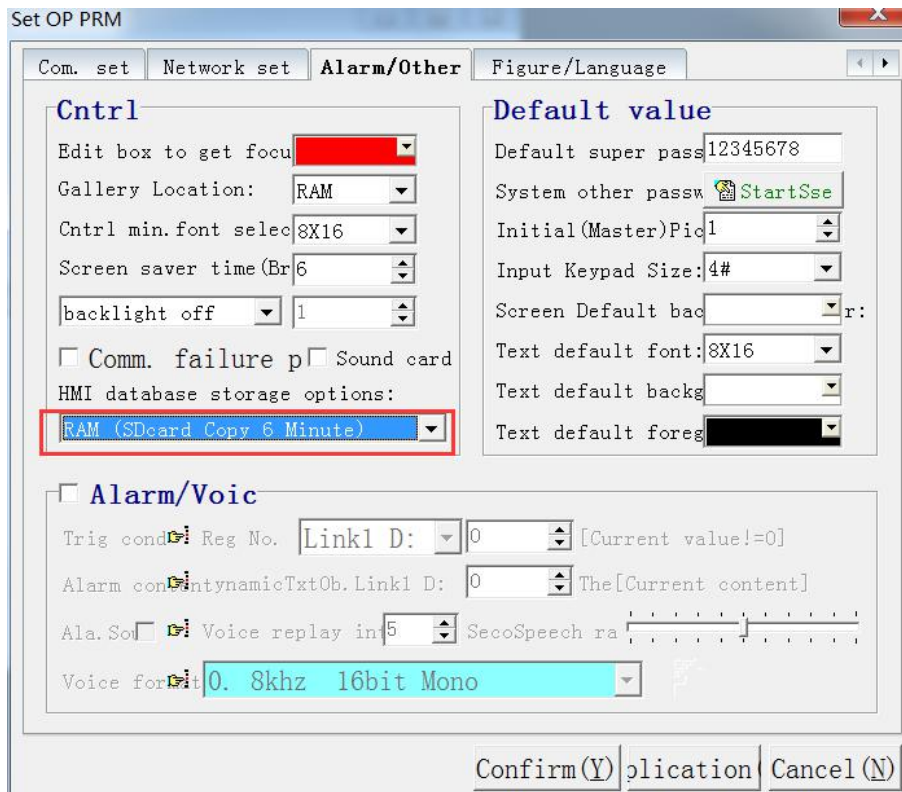
6.35 How to set up to communicate with other devices via modbus protocol using touch screen RS232 / RS485?

See the official website download area-HMI manual download-"Coolmay touch screen modbus communication manual"

http://www.coolmay.com/kindeditor/attached/file/20180202/20180202090950_1912.pdf

6.36 How to set the optional CAN port of MT90 series touch screen?

Only the MT90 series can be equipped with CAN port for Gu Mei touch screen, but it can only communicate via free port. The standard charging pile CAN2.0 protocol is not supported.

For details, please refer to the official website manual: "MAY3S & MAY5S Intelligent Control Panel Manual"

Case, download area-HMI case download-"screen to screen CAN communication":

http://www.coolmay.com/webdown/0102%E5%B1%8F%E4%B8%8E%E5%B1 %8FCAN%E9%80%9A%E8%AE%AF.rar

6.37 How to expand the gallery if the pictures on the touch screen gallery are not enough or do not meet the requirements?

See the official website download area-HMI manual download-"touch screen software to add pictures-the application method of the extended library standard library"

http://www.coolmay.com/kindeditor/attached/file/20180209/20180209144603_ 9968.pdf

And extension library: download area-other application cases-"new gallery and use method":

http://www.coolmay.com/webdown/%E6%96%B0%E5%A2%9E%E5%9B%BE %E5%BA%93.zip

6.38How to trigger the touch screen buzzer alarm?

Download area-HMI application case-"Buzzer Alarm":

http://www.coolmay.com/kindeditor/attached/file/20160721/20160721171118_0610.rar

6.39.What is the difference between MT90 series and MT60 series touch screens?

See the official website, download area-HMI manual download-the difference between Coolmay touch screen MT90 series and MT60 series:

http://www.coolmay.com/webdown/MT90andMT60dequbie.pdf

6.40.Refer to the PLC part for the answering of PLC

Chapter 7 Modules

7.1. The software version requirements for connecting the network module to Coolmay PLC

2N series PLC software must be GX developer 8.52E or GX WORKS 2 version

3G series PLC software must be GX developer 8.86Q or GX WORKS 2 version。

7.2. The software version requirements for connecting the network module to Coolmay　PLC

2N series PLC software must be GX developer 8.52E or GX WORKS 2 version

3G series PLC software must be GX developer 8.86Q or GX WORKS 2 version
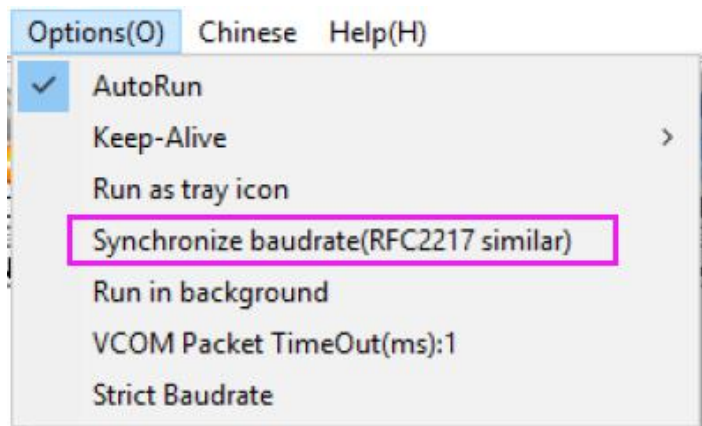
7.3 PLC manufacturer whose network module has been successfully connected

CM-GPRS module

PLC without communication: Xinjie, Siemens

PLC on communication: Coolmay, Mitsubishi, Delta, Yonghong, Omron CP1H, inverter

CM-WIFI module

PLC without communication: Siemens S7-200 (STA mode), Xinjie (STA mode)

PLCs that have communicated: Coolmay Mitsubishi, Delta, Xinjie (AP mode), Schneider, Haiwei, Inverter, and Siemens S7-200, touch screen in AP mode, Hechuan, Omron CP1H

CM-NET module

PLC on communication: Coolmay Mitsubishi, Delta, inverter

Remarks: If the network module needs to communicate with a PLC not mentioned above, PLC can be provided to Coolmay Technical Customer Service for debugging.

7.4 Module PLC communication timeout setting

When CM-GPRS / CM-4G and CM-WIFI / CM-WIFI-2NET download PLC program remotely, the communication time check must be set to 20 seconds or more, and the number of retries set to 2 or more to connect successfully.
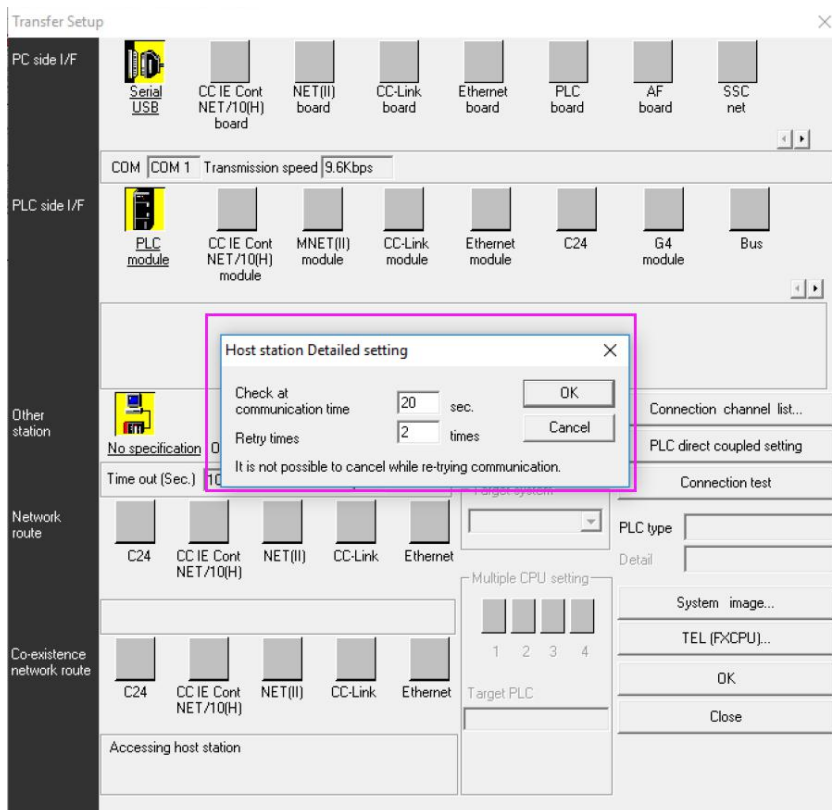
7.5 How to download Gumei PLC program on the computer with CM-WIFI module?

① Connect the SSID of the wifi module on the computer, and enter the http://10.10.100.254 webpage to set the relevant parameters of the WiFi module (STA settings, AP settings, network settings, serial port settings, other settings and other parameters).

② Install CM virtual serial port software, add virtual serial number; set network protocol: TCP Client; set target IP / domain name: remote STA mode (connect to external network) set to 120.76.116.193, AP mode (connect to WiFi module) within 100 meters SSID) is set to 10.10.100.254; set the target port: remote STA mode (connected to the external network) is set to 25565, AP mode (connected to the WiFi module SSID) is set to 8899 within 100 meters; advanced D2D registration ID is enabled: (Only the remote STA mode (connecting to the external network) needs to be set) Consult Gumei technical customer service before setting.

③ Use the programming cable to connect the wifi module to the PLC, open the PLC programming software (the software version must be 8.52 or WORKS 2 when communicating with Gumei PLC or Mitsubishi PLC), and use the corresponding virtual serial port number for communication test to connect successfully.

——For detailed steps, please refer to "CM-WIFI Module Manual"

7.6 The main difference between CX-4G module and CM-GPRS module

①4G module transmission and communication rate is faster than GPRS module, relatively less likely to drop。

②The GPRS module can only be inserted into the mobile and Unicom 2G networks; it does not support telecommunications; the 4G module supports mobile, Unicom, Telecom 4G and mobile, and Unicom 3G and 2G network standards.

③The GPRS module has the SMS transparent transmission function, but the 4G module does not support it.

7.7 How to download Gumei PLC program on the computer with CM-GPRS / CX-4G module?

① Place the SIM card in the module slot and wait for the RUN light and GPRS light to light up. Before leaving the factory, the communication parameters, address and port registration data type registration ID in the GPRS module setting software have been set.

② Install CM virtual serial port software, add a virtual serial number; set the network protocol: TCP Client; set the target IP / domain name: 120.76.116.193; set the target port: 25565; enable D2D registration ID in the advanced options: the product label is also posted Or consult Gumei technical customer service before setting.

③ Use the programming cable to connect the module to the PLC, open the PLC programming software (the software version must be 8.52 or WORKS 2 when communicating with Gumei PLC or Mitsubishi PLC), and the CM-GPRS module communication time check must be set to 20 seconds or more. The number of trials is set to 2 or more, the CX-4G module can use the default 5 seconds, and then use the corresponding virtual serial number for communication test to connect successfully.

——For detailed steps, please refer to "CM-GPRS Module Manual" and "CX-4G Module Manual"

7.8 How to download Gumei PLC program on the computer with CM-NET module?

① Connect the network port of the CM-NET module to the router or switch, set it up, set the module basic settings and port settings

② Install CM virtual serial port software, add virtual serial number; set network protocol: TCP Client; set target IP / domain name: remote STA mode (connect to external network) set to 120.76.116.193, AP mode (connect to WiFi module) within 100 meters SSID) is set to 10.10.100.254; set the target port: remote STA mode (connected to the external network) is set to 25565, AP mode (connected to the WiFi module SSID) is set to 8899 within 100 meters; advanced D2D registration ID is enabled: (Only the remote STA mode (connecting to the external network) needs to be set) Consult Gumei technical customer service before setting.

③ Use the programming cable to connect the Ethernet module to the PLC, open the PLC programming software (the software version must be 8.52 or WORKS 2 when communicating with Gumei PLC or Mitsubishi PLC), and use the corresponding virtual serial port number for communication test to connect successfully.

——Refer to "CM-NET Module Manual" for detailed steps

7.9 After the WiFi module is set to STA mode, the SSID of the WiFi module of the module cannot be found by the computer. How to connect the wifi module for parameter setting?

① Press the black button of the module for more than 5 seconds to re-enter the settings page after restoring the factory settings.

② Enter the router of the network connected to the wifi module, if the IP address of the connected network router is 192.168.1.1, after entering, check the IP address of the added device in the router client list, enter the IP address on the web page to enter the setting page.

③ Set to STA mode, set the module to a fixed IP address, if set to 192.168.1.150, enter 192.168.1.150 on the web page to enter the setting page.

7.10 How to set the parameters in the serial port setting of the network module?

This setting depends on the serial communication parameters of the PLC connected to the network module. For example, Gu Mei 's PLC is 9600 7 even 1,

Then the serial port setting of the network module should also be 9600 7 even 1.

7.11 Amplifier module features

1. CM-MOS transistor amplifier module:

This amplifier module can only be connected to DC load, the working voltage is limited to 12 ~ 30V, and the output current is 5 ~ 10A. Can be used countless times, long life. The fastest response.

2. CM-SSR solid-state amplifier module:

This amplifier module can only be connected to AC resistive loads, not to inductive and capacitive loads. The working voltage is AC 100 ~ 250V, and the output current is 5 ~ 10A. It is generally used for heating or operations that require frequent actions, and can also be used for heating tubes or small current solenoid valves. The service life is generally longer than the relay amplifier module.

Solid-state relays are actually equivalent to packaged thyristors.

3.CM-REY relay amplifier module:

This amplifier module can be used for high current DC or AC loads. The working voltage is DC / AC0 ~ 250V, and the output current is 15A ~ 16A. Generally used for inductive or capacitive loads, not for resistive loads. Life is limited, suitable for low frequency operation.

7.12 Gumei configuration software features

1. Suitable for small and medium-sized systems within 2 sites, cost-effective.

2. The Coolmay configuration software is based on the Windows platform and is used to write touch screen programs and generate software for the host computer monitoring system. The software online simulation function can completely replace the touch screen and directly communicate with the PLC, which can realize all the functions of the touch screen and PLC communication.

7.13 Coolmay configuration software serial number application steps

Note: Before applying for the serial number, you need to contact the technical customer service of Shenzhen Gumei Technology Co., Ltd. and then perform the following operations, and keep the computer can access the Internet normally. When applying for a serial number, the computer must be logged in as an administrator.

1. Open the computer C drive and search for the Dcslic file in the computer C drive;

2. After searching for the file, double-click the DcsLic file;

3. After double-clicking, the serial number application window will appear; send the screenshot of the serial number application window that appears on the computer to Shenzhen Gumei Technology Co., Ltd. technical customer service, and the sequence will be submitted after the Shenzhen Gumei Technology Co., Ltd. technical customer service confirm Number to the server and generate a registry (format: .reg) file; the technical customer service will send the registry file to the customer. The customer needs to save the registry file on the computer that provides the serial number application window. Note: the registry Never delete files! After saving, double-click the registry file, a confirmation message appears, click "Yes", a window successfully added to the registry appears, click OK, the registration is successful.

Note: If the computer with the serial number has been applied to reinstall the system or restore the system, you can contact Shenzhen Gumei Technology Co., Ltd. technical customer service to re-register for the computer or double-click the corresponding registry file to register.

7.14 Prerequisites for mobile phone APP local area control

1. Any one of CM-WIFI, CX-WIFI-2NET, CM-NET module is required;

2. A serial port (RS232 or RS485 port) on the PLC needs to be connected to the network module。

7.15 Prerequisites for remote control of mobile APP

1. Any one of CM-WIFI, CX-WIFI-2NET, CM-NET module is required;

2. A serial port (RS232 or RS485 port) on the PLC needs to be connected to the network module;

3. The location of the network module needs to have a network that can go to the external network, and the router supports port forwarding function, and must have a fixed domain name.

7.16 Where CM-RFM radio frequency module is used

Transparent transmission of traditional serial devices such as PLC, human-machine interface, instrument, etc., to achieve long-distance communication.

Note: The fixed data bit of the RF module is 8 bits, which cannot be changed. Other parameters can be changed:

Set up	Options	Default
Serial port speed	1200,2400,4800,9600,19200,38400,115200bps	9600 bps
Serial data bit	8 bit	8 bit
Serial port stop bit	1bit,2bit	1bit
Serial check digit	None,Even,Odd	None
RF transceiver channel	Channel 0,1,2,3,4,5,6,7	Channel 0
RF air rate	1Kbps,10Kpbs,19.2Kpbs,38.4kpbs,50kpbs,100kpbs	10Kpbs

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