

Chapter X WRT Panel Operation and Functions

There are two methods of programming for SR, one is to complete editing of the function diagram directly on the operation WRT panel using the keys, while the other is to do the same on the computer using the programming software SuperRelayLogic. The latter procedure is recommended for more complex control schemes. Programming for SR can be completed with either of the two methods. This Chapter will describe in detail how to use the operation WRT panel to edit the Function Block Diagram Program and the programming method using SuperRelayLogic will be covered in detail in the second part of this manual.

There are two kinds SR WRT panel. One kind is the displaying panel, which is used to display the value of the time, output and input state, counter, timer, analog and so on data. The displaying panel is only being used to display the data and cannot be used to program. The other is the programming panel, which can not only display the data, but also carry out the programming. This chapter will cover how to program by the programming panel.

10.1 The Structure of WRT

SR-HMI is convenient for the user to program, test, modify the program, setup the time parameter, mark the value of the analog A and B and so on operation on SR.

SR operating panel is as shown in the following diagram. It is a easy human-machine interface. The Programming is carried out through the six keys on the panel as shown in the following diagram.

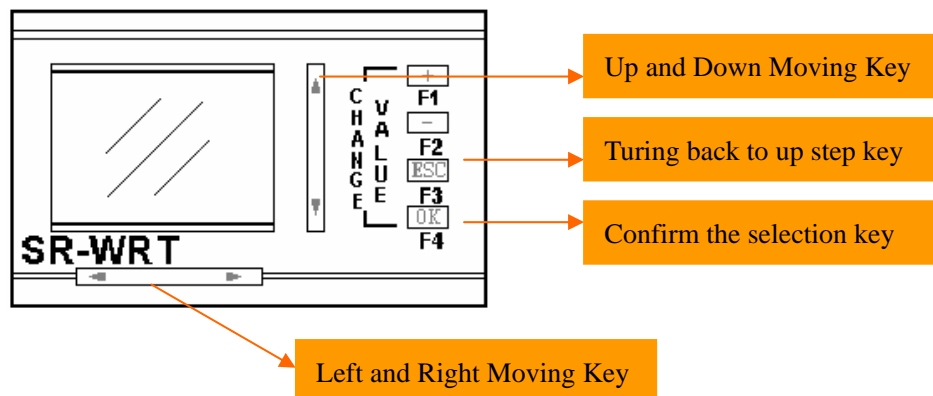


Fig. 10.1 Structure Diagram of WRT

There are eight keys: +, -, ESC, OK, UP, DOWN, LEFT, RIGHT and an WRT of 4*10 on the programming WRT panel.

+, - keys are mainly for the modification of the number, character and function of the cursor position.

ESC key is used to back to the up grade interface.

OK key is used for confirmation the function, selection of the module and the modification of the cursor type during the programming..

UP and Down keys is to select the position of the cursor during the selection of functions and modules and programming.

LEFT and RIGHT keys is to check the input and output state of each sub-module of the SR machine and the selection of the cursor position in situation of programming and parameter modification in the main interface.

SR-EHC is the other kind of WRT, which is mainly used for remote program. The WRT is separate from the machine and can remote program to the SR. And the WRT can be equipped to your equipment to operate to the SR machine internal the equipment. The entity diagram of the SR-EHC is as shown in the following diagram:



Fig. 10.1-A Using Diagram of SR-EHC

10.2 Displaying Interface and Functions of WRT

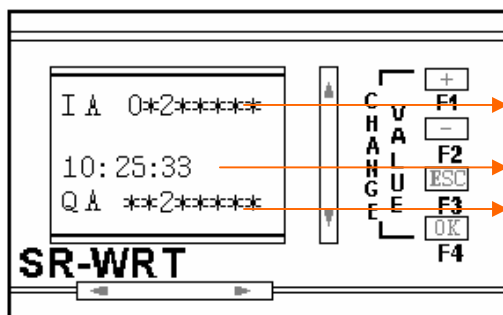


Fig. 10.2 WRT Main Interface

In this main interface, the input and output state of each module can be observed. For the WRT reason, the two sub-module numbers represent the input of a sub-module (IA, IB represent the input of the No. 1 sub-module, IC, ID represent the input of the No. 2 sub-module, and the followings are as the same.) For example: as for a system which having 7 sub-modules, if we want to know the state of the tenth input point of the fourth sub-module, move the cursor to IH by using LEFT and RIGHT key and then check IH1 is 1 or *. (For IG, IH represent the fourth sub-module, IG0-IG7 represent the first to eighth point of the fourth sub-module and IH0-IH3 represent the ninth to thirteenth point of the fourth sub-module.) If it is 1, which means there being input in the tenth input point of the fourth sub-module, otherwise there is no input.

Press OK and ESC simultaneously for two seconds in the main interface, it will enter the following interface:

To display the input state, I: Input, A: Sub-module No., 0, 2: the relative points having inputs, *: the relative points not-having inputs.
To display the current system time.
To display the output state, A: sub-module No., 2: the relative points having outputs, *: the relative points not-having outputs.

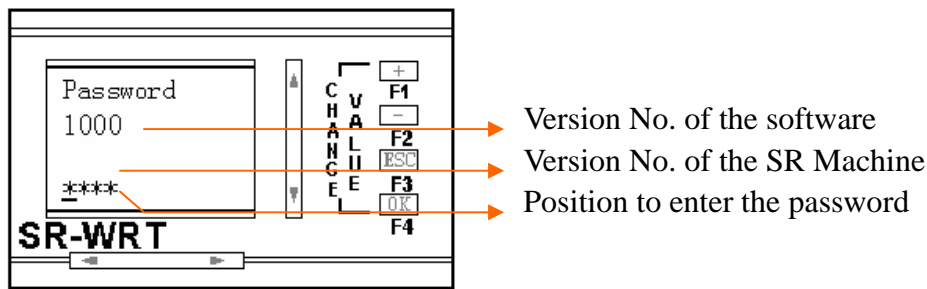


Fig. 10.3 Password Entering Interface

In this sub-interface, it is required to enter the four-digit password. Entering the password, change the number of the cursor by +, - keys and change the position of the cursor by LEFT and RIGHT keys. After the finish of the passwords entering, press OK key. If the password is correct, it will enter the interface as shown in Fig. 10.4, otherwise it will return to the main interface.

10.3 WRT Function Interface

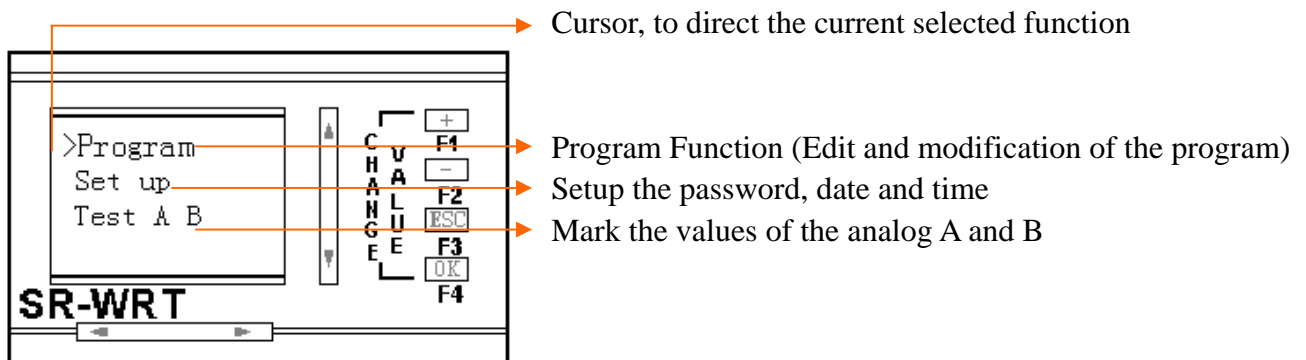


Fig. 10.4 Editing Interface

In this interface, select the desired function by changing the cursor position via UP and DOWN keys and press OK to enter the relative interface and press ESC to enter the main interface.

10.4 WRT Programming Operation

In the interface shown in Fig. 10.4, move ">" to the front of the Program and press OK key to enter the Programming Interface as shown in Fig. 10.5.

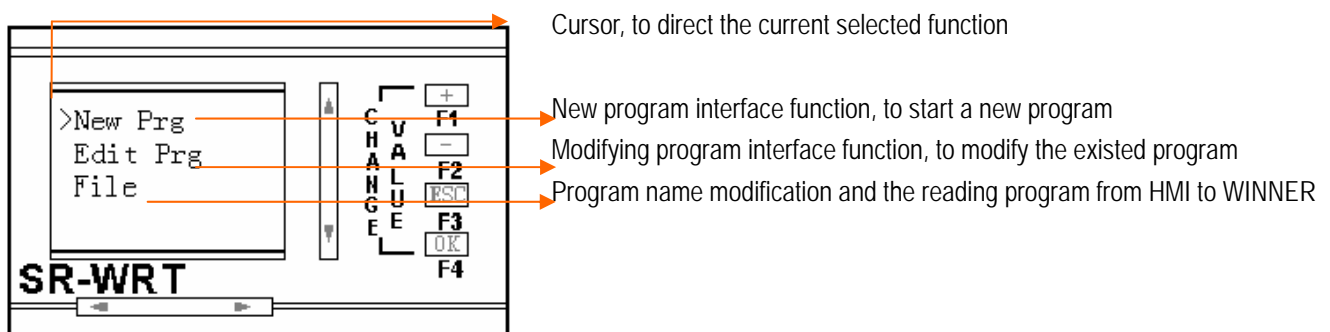


Fig. 10.5 Programming Interface

In this interface, change the cursor interface by UP and DOWN keys and select

the desired function. Press OK to enter the relative interface or enter ESC to return to Fig. 10.4.

10.4.1 New Prg Operation

In Fig. 10.5, move “>” to the front of New Prg and press OK key, and it will enter the following interface.

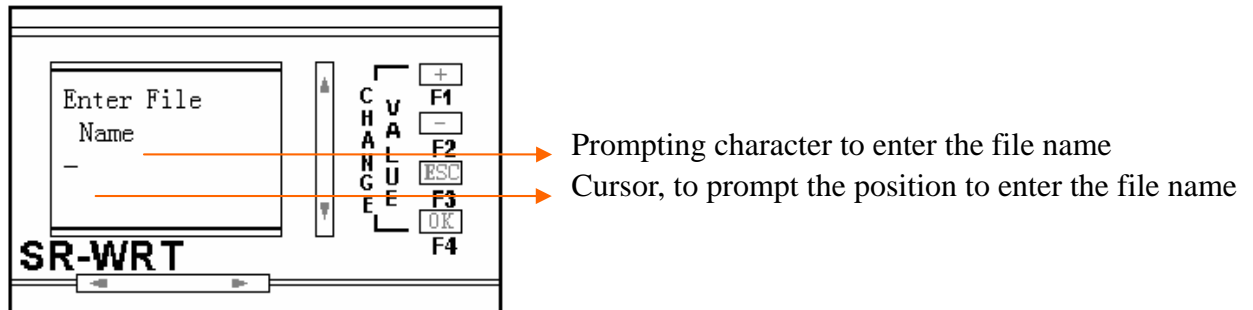


Fig. 10.6 File Name Entering Interface

While building a new file, a file name no longer than 10 character can be enter in this interface for the user to realize the use of the files in the Programmer (The file name can be not input, then the file name will be empty).

When entering the file name, change the character of the cursor position by + and - keys and change the cursor position by LEFT and RIGHT keys. Press ESC to give up the entering and turn back to the interface of Fig. 10.5. Press OK to confirm the entering and enter the interface of Fig, 10.7 of the function block selection interface.

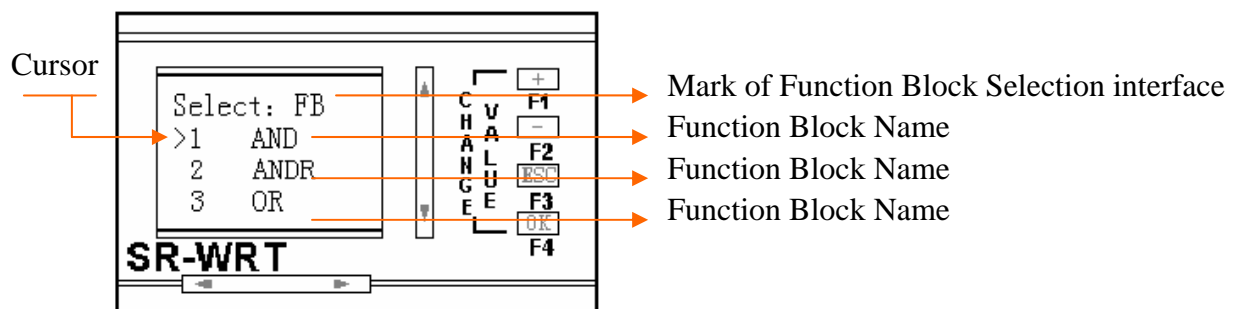


Fig. 10.7 Function Block Selection Interface

In the function selection interface, there are 27 function block for the users to select. For the convenience of program, it uses the cycle menu method to select the function blocks. That is to say that when the “>” is before “1 AND”, press UP key to move the “>” before “27 TCCP”, and when the “>” is before “27 TCCP”, press DOWN key to move the “>” before “1 AND”. The selection of other function blocks can be carried out by using UP and DOWN keys according to the position of the cursor and the desired function block situation. For example, in the situation as in Fig. 10.7, if we want to select the fifth function, press DOWN key and press DOWN key continuously till the “>” appears the last row of WRT. And at this time, the menu will move upward. When “5 XOR” is back the “>”, press OK and it will be OK. In the same methods, in the situation as in Fig. 10.7, if we want to select the “25D_IN” choice, press UP key continuously and move the menu downward. When the “25 D_IN” appears back of the “>”, press OK and it will be OK.

Select the desired function block and press OK, it will appear the interface as in Fig. 10.8.

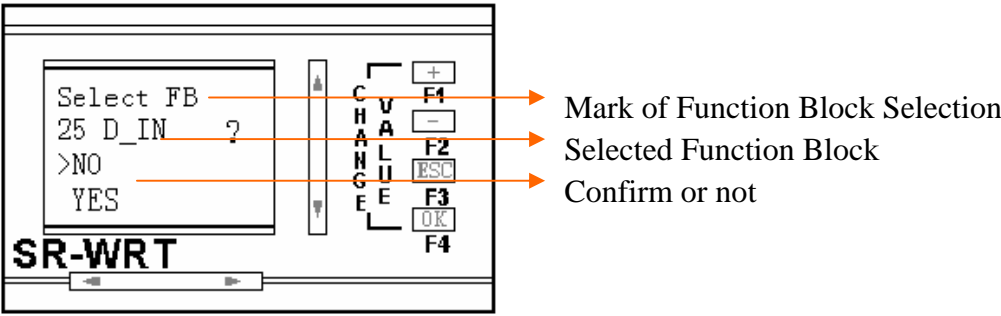


Fig. 10.8 Function Block Selection Confirmation Interface

In Fig. 10.7, if the selected function block is the desired, move the “>” before “YES” and press “OK” to confirm, otherwise re-select the function block. After the finish of the function block selection, it will enter the programming. (Consult the next chapter for details.)

10.5 Edit Prg Operation

In Fig. 10.5 the Programming Interface, move the “>” before “Edit Prg” and press “OK” key to enter this function block interface as shown in Fig. 10.9. This function is used to modify an existed program, which may be edited in the HMI and may be read from the SR.

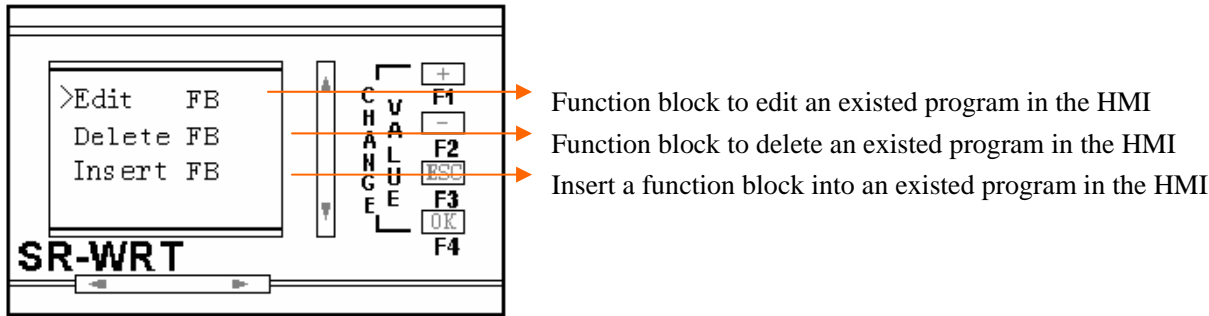


Fig. 10.9 Edit Prg Interface

10.5.1 Edit FB Operation

In Fig. 10.9, move the “>” before “Edit FB” and press OK key to enter the function block editing interface as shown in Fig. 10.10, whose function is to modify the input, output and parameter of the function block.

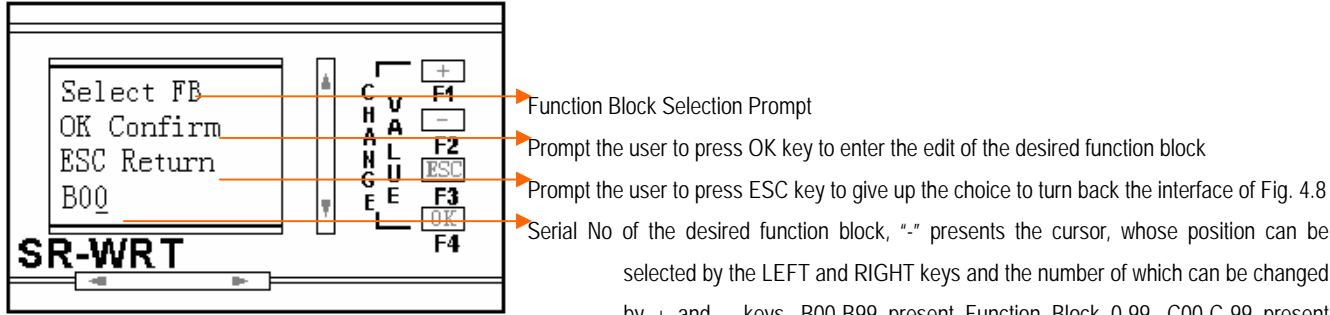


Fig. 10.10 Edit FB Selection Interface

For example, we want to modify the 101st function block in the program, move the cursor under the “B” first and change the “B” into the “C” by using +. Then move the cursor to the last “0” and change it into “1” by using + and press OK. Thus the 101st function block in the program will be invoked into the interface to be modified. If giving up the selection, press “ESC” to return to the Fig. 10.9.

10.5.2 Delete FB Operation

In Fig. 10.9, move “>” before the “Delete FB” and press OK to enter into the Function Block Deleting Interface as shown in Fig. 10.11, whose function is to delete the function block existed in the HMI. The explanation to each line is shown in Fig. 10.10.

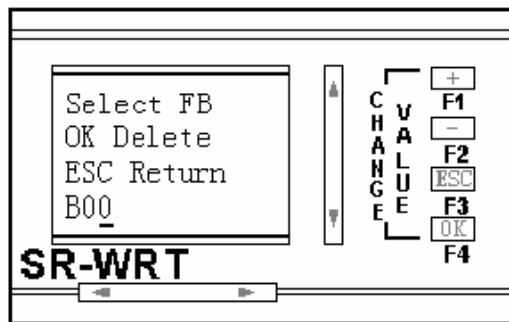
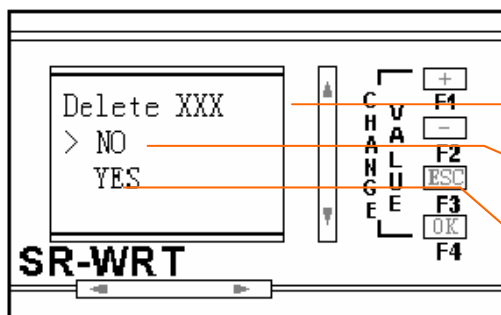


Fig. 10.11 FB Deleting Selection Interface

The operation is the same as that of the “Edit FB”. When select a function block to delete, the system will appear some prompting information. If we want to delete the 78th function block in the program, change B00 into B78 by the operation introducing in “Edit FB” and press ‘OK:’. The HMI will appear the interface as shown in Fig. 10.12. In Fig. 10.12, if the prompting function block in the diagram is the one to be deleted, move the “>” before the “YES” by using UP and DOWN keys, then press OK and wait for the finish of the delete. By pressing “ESC” or moving “>” before “NO” and pressing “YES”, it will return to the interface shown in Fig. 10.11. If the function block is not the one desired to be deleted, move “>” before “NO” by using UP and DOWN keys and press “OK” to return to the interface shown in Fig. 10.11.



- FB Deleting Prompt, “XXX” presents the serial No. of the FB to be deleted.
- If “XXX” is not the being deleted FB, move the “>” before “NO” and press OK.
- If “XXX” is the being deleted FB, move the “>” before “YES” and press OK.

Fig. 10.12 FB Deleting Interface

10.5.3 Insert FB Operation

In Fig. 10.9, move “>” before “Insert FB” and press “OK” to enter the function block inserting interface as shown in Fig. 10.13, whose function block is to insert one or more function block into the saved program by HMI in the selected serial No. position.

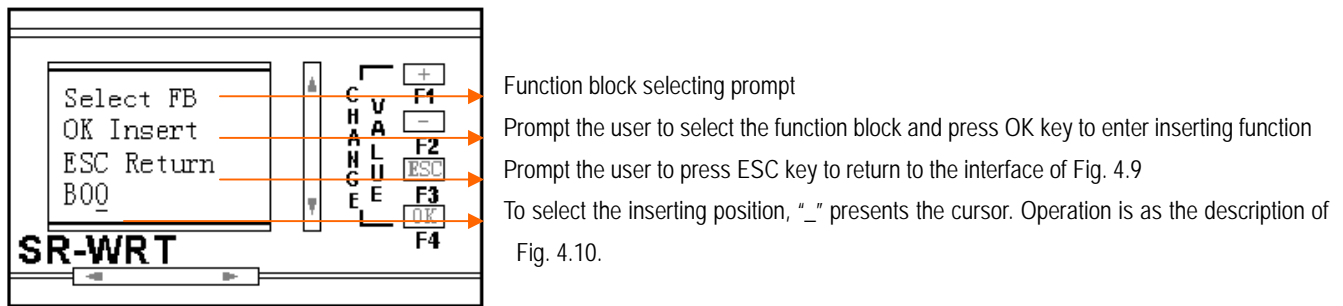


Fig. 10.13 Function Block Inserting Interface

After selecting the inserting position, press OK key to enter the interface as shown in Fig. 10.7. The next operation is the same as the programming, for details please refer to the chapter of programming. It may continuously insert several continuous function block in one position without need to returning to Fig. 10.13. If it is needed to insert function blocks in several positions, it must return to Fig. 10.13 to select the inserting positions.

If we want to insert two function blocks: OR and NOT in the position of B34 and insert a function block AND in the position of B40, first in Fig. 10.13 change B00 into B34 and press OK key to enter Fig. 10.7. Then select function block OR to edit. After editing, return to Fig. 10.7 and select the function block NOT to edit. After editing, return to Fig. 10.13 and change B00 into B42 (for that two function blocks have been inserted into B34 and the B40 has changed into B42.). Press OK key and enter into Fig. 10.7. Then select function block AND to edit. After editing, return to this interface. After inserting, press ESC to return to Fig. 10.9.

10.6 File

In Fig. 10.5, move “>” before File and press OK to enter Fig. 10.14 the file interface. In this interface, it can realize two functions: one is to rename the file in HMI and the other is to read the SR. For details, please consult the following diagram.

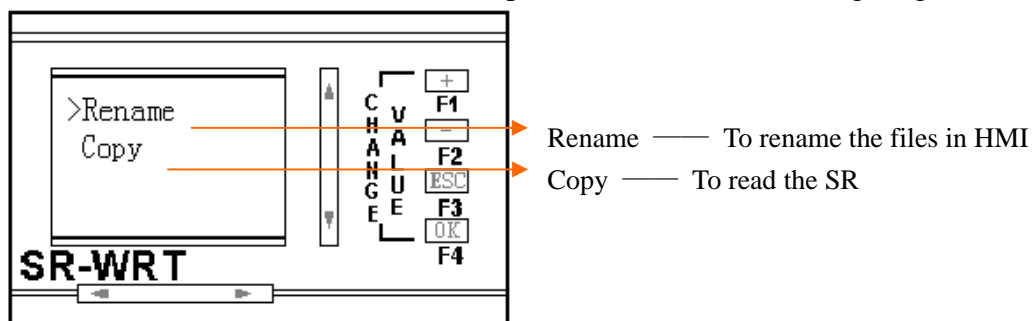


Fig. 10.14 File Interface

10.6.1 Rename

In Fig. 10.14, move “>” before Rename and press OK to enter the rename interface. This function is to modify the file names saved in HMI. The interface is as the following.

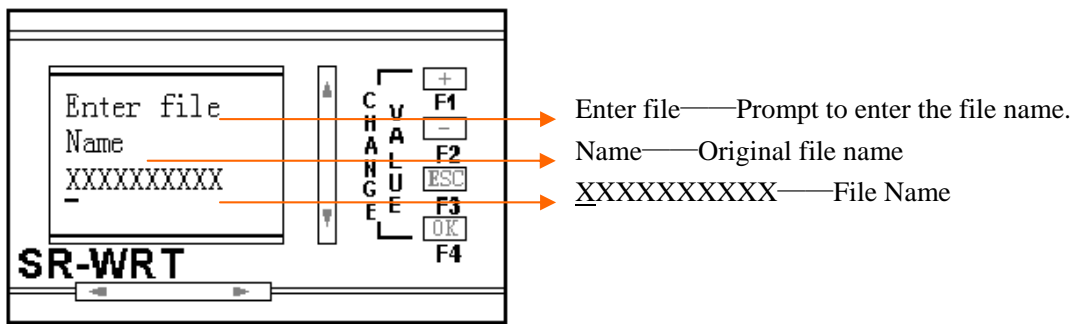


Fig. 10.15 Rename Interface

In Fig. 10.15, “XXXXXXXXXX” is the original file name and the “_” under the first “X” is the cursor, whose position can be changed and selected by LEFT and RIGHT keys. After the selection of the “_” position, change the character on the position of “_” by the +, - keys and it will be OK. After the finish of the modification, press OK key to confirm this modification and return to the interface of Fig. 10.14. Or press ESC to give up this modification and return to the interface of Fig. 10.14.

10.6.2 Copy

In Fig. 10.14, move “>” before Copy and press OK to enter Fig. 10.16, the file writing and reading interface. The function is to reading the program of the SR machine or to write the program of the HMI into the SR machine. The interface is as the following:

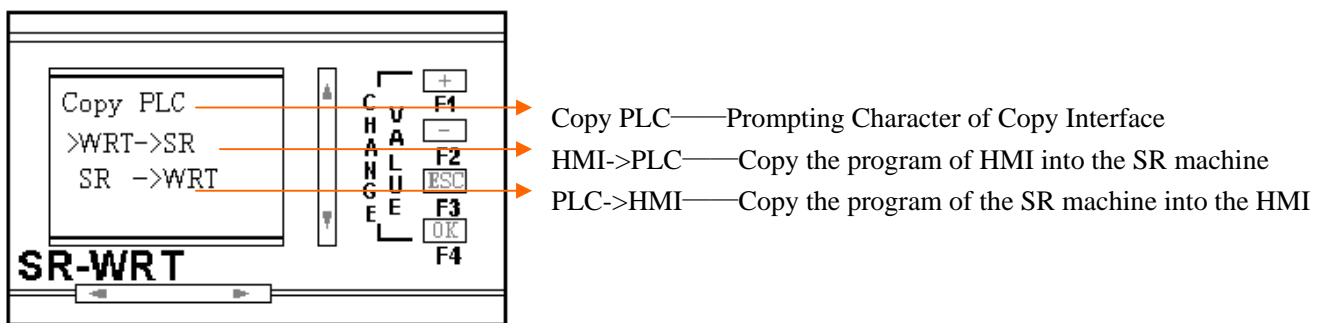


Fig. 10.16 Copy

When write the program into the SR machine, it will cover the original program in the SR. So when the “>” is before the HMI->PLC and press OK key to write the SR, the interface as in Fig. 10.17 will appear to avoid the mistaken operation of the user.

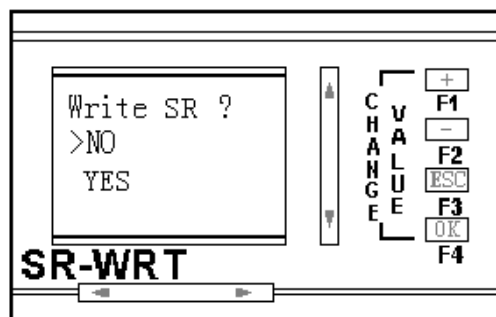


Fig. 10.17 HMI->PLC

If it is need to write the program in HMI into the SR, move “>” before YES and press OK key. And at this time, the interface as shown in Fig. 10.18 will be displayed. Otherwise move “>” before NO and press OK key to return to Fig. 10.15.

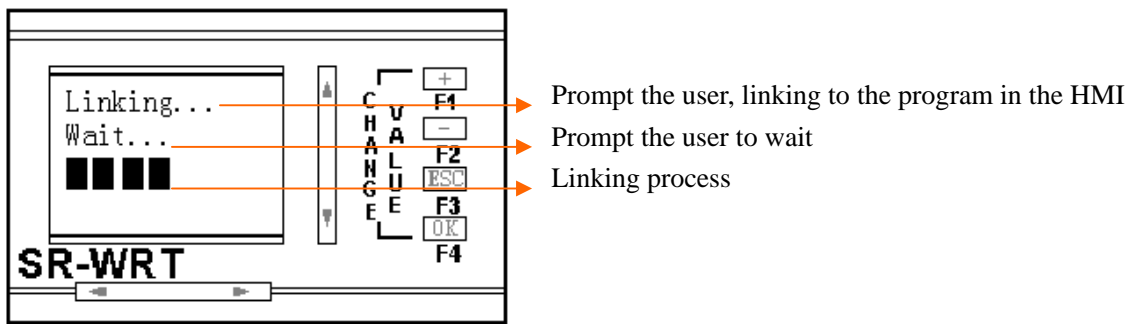


Fig. 10.18 Process Interface of Linking to HMI

In the process of linking, if there is something wrong with the linking in the program, automatically it will stop the linking and it will invoke the wrong function block into the display. And the wrong place will be displayed in the form of “?” to prompt the user to modify. After the modification, press ESC key, the system will connect again till all the mistakes in the system is modified. And next the interface as shown in Fig. 10.10 will be displayed.

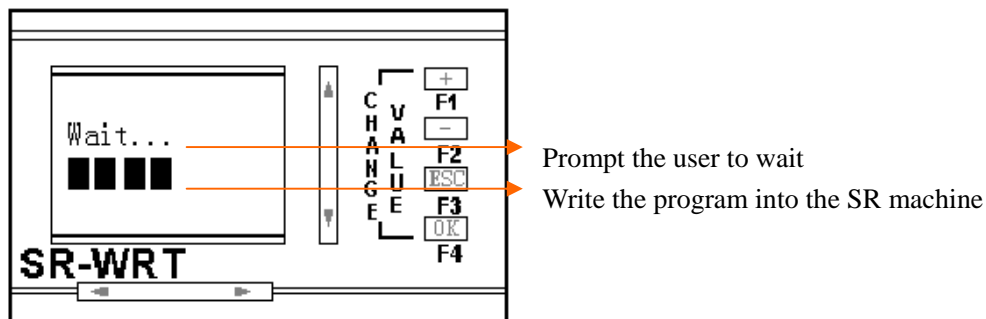


Fig. 10.19 Process Interface of Writing Program into SR

After the finish of writing program into SR, it will automatically return to Fig. 10.16 to connect and complete the writing operation.

It is just the same. For when reading program from the SR, it will cover the original program in the HMI, it will display the interface as shown in Fig. 10.20 when you move “>” before PLC->HMI and press OK key to writing program in SR into HMI.

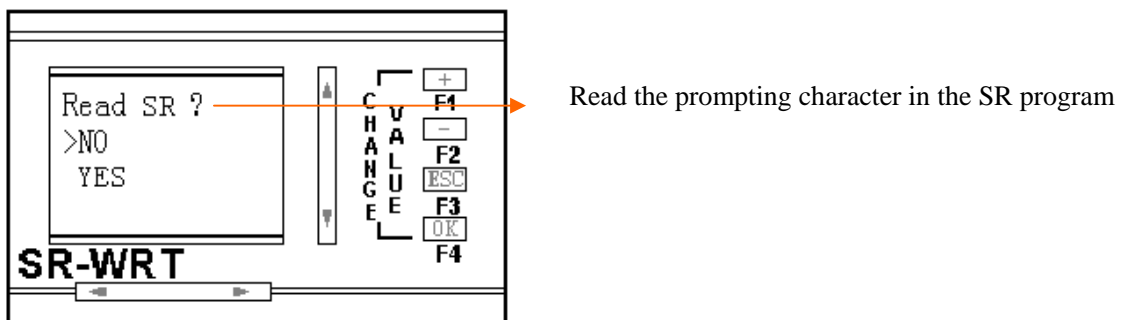


Fig. 10.20 Writing Program in SR into HMI

In the interface shown in Fig. 10.20, if it is confirmed to reading the program from the SR, move “>” before YES and press OK key, the reading process interface as in Fig. 10.21 will be displayed. Otherwise move “>” before NO and press OK key or directly press ESC key to return to the interface in Fig. 10.16.

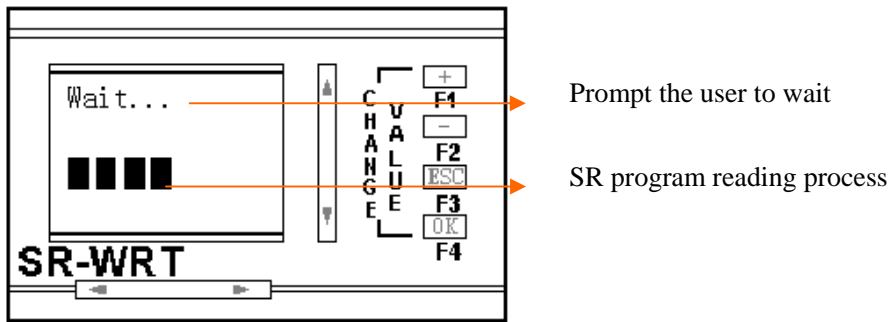


Fig. 10.21 Reading Process Interface

After Fig. 10.21, HMI has read the program from the SR and it will automatically return to Fig.10.16. And the reading process is finished.

10.7 Set up

In Fig. 10.4, move ">" before the Setup and press OK key to enter the interface as in Fig. 10.22. In this interface, the date, time and password setup can be finished.

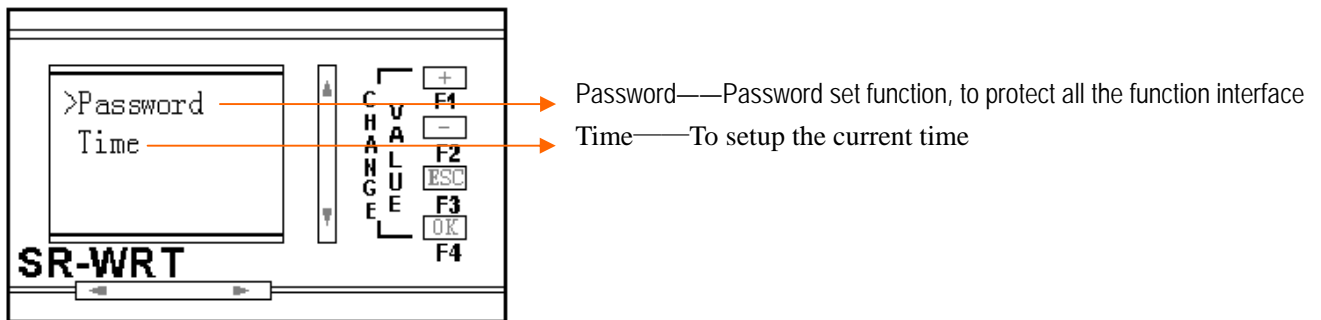


Fig. 10.22 Time and Password Setup Interface

In Fig. 10.22, move ">" before the Password and press OK key to enter the password modification interface as in Fig. 10.23.

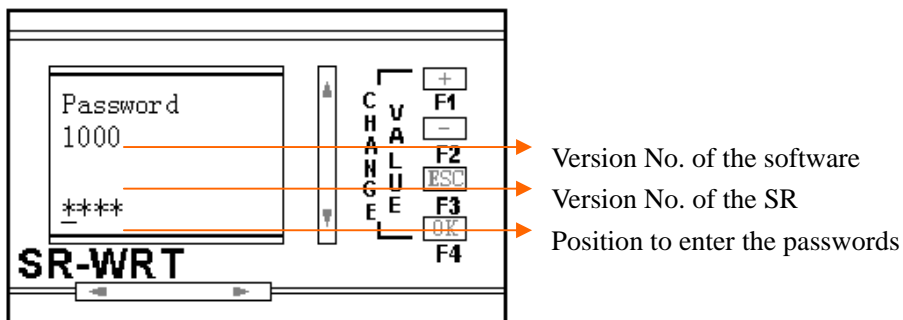


Fig. 10.23 Password Modification Interface

In Fig. 10.23, we can select the position of the cursor by using the LEFT and RIGHT keys and modify the number in the cursor by +, - keys to modify the password as the desired. After the modification, press OK key to confirm this modification or press ESC to give up this modification.

In Fig. 10.22, move ">" before Time and press OK key to enter the time modification interface as in Fig. 10.22.

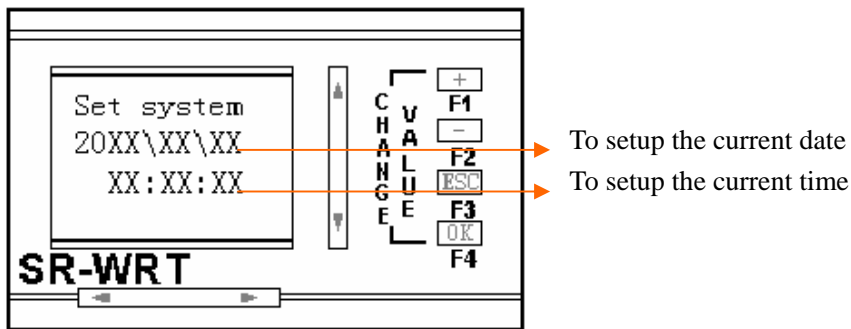


Fig. 10.24 Time Modification Interface

In Fig. 10.24, the “>” is the cursor, whose position can be selected by UP, DOWN, LEFT and RIGHT key and whose number can be changed by +, - keys. When modifying the date, you’d better modify the year and month first and then the date. For when modify the date, the number of the date can be limited by the month. For example, if the number of the month is 2 and it is not the leap year, and the max number of the date is 28.

After the finish of the current date and time, press OK key to confirm this modification and return to Fig. 10.22, or press ESC to give up this modification and return to Fig. 10.22.

10.8 Test AB

In Fig. 10.4, move “>” before Test A B and press OK key to enter Fig. 10.25, the demarcating interface of Analogue A, B value display. In this interface and the next two interfaces, after the selection, it will finish the site adjust the value of A and B to correctly display some analogue and will display at the last interface. The A and B here means in some assumed range, displaying value Y and the displaying value X being converted via AD, the value of A and B can demand the relationship $Y=AX+B$. Please see the following example for details. IA2 is to detect the environment temperature and to accurately display in HMI. The following procedure is how SR detects and displays the environment temperature.1. The temperature signal is transferred into electronic level signal and sent to IA2 port via sensor. 2. SR transfers the electronic level signal of IA2 port into a detailed value X via AD. 3. According to $Y=AX+B$, through the X from step 2 via AD, accumulate the value of Y. Because to different sensors and one sensor in different temperature range. The line relationship of the displaying value and the AD value are different. Also the value of A and B are different. So it is needed to field adjust the value of A and B. The procedure is as the following.

In Fig. 10.4, move “>” before Test AB and press OK key to enter Fig. 10.25 Selection Interface of AB value Demarcating Input.

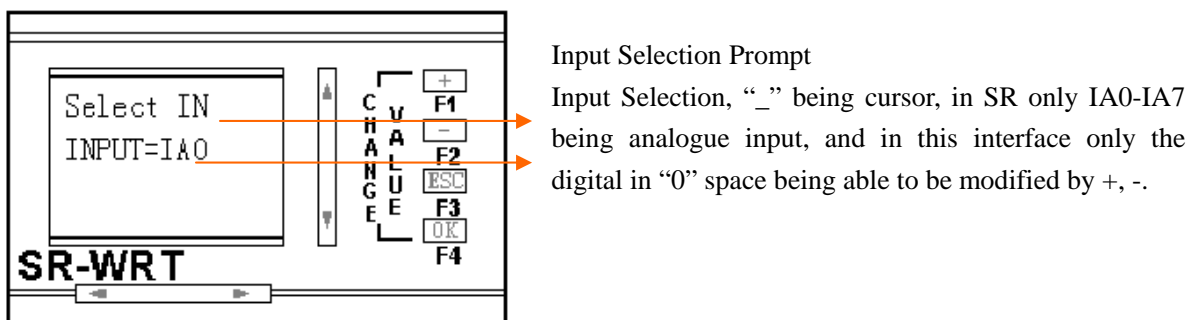


Fig. 10.25 Selection Interface of A B Value Demarcating Input

In the above example, when IA2 is selected, press OK key to confirm the selection of the analogue input port and enter into Fig. 10.26 Setup Interface of Input1. Press ESC key to give up the

selection and return to Fig. 10.4.

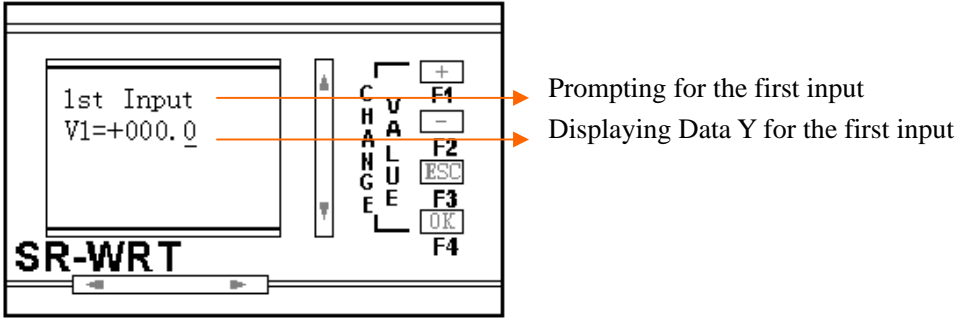


Fig. 10.26 Setup Interface of Input1

In Fig. 10.26, if the current environment temperature is 87°C, change V1=+000.0 to V1=+087.0 by LEFT, RIGHT, +, - and press OK key to confirm to enter Fig. 10.27 Setup Interface of Input2.

Notes: In Fig. 10.26, it already enters the demarcation of A and B value and it is impossible to exit via ESC key.

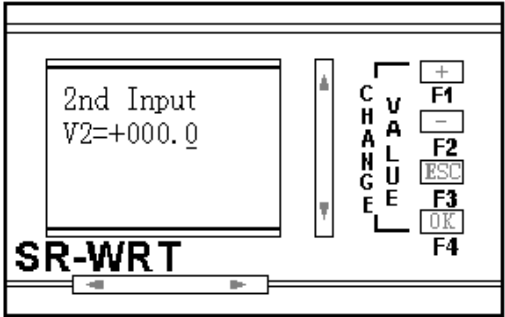


Fig. 10.27 Setup Interface of Input2

In Fig. 10.26 after finish the setup of Input1, put SR in the environment whose temperature is 70°C (may be other temperature). After the temperature sensor is stable, change V2=+000.0 to V1=+070.0 (the environment temperature) by LEFT, RIGHT, +, - and press OK key to finish the input of the Input 2. Thus the demarcation of the value of A and B. And at this time the interface is displayed as Fig. 10.28.

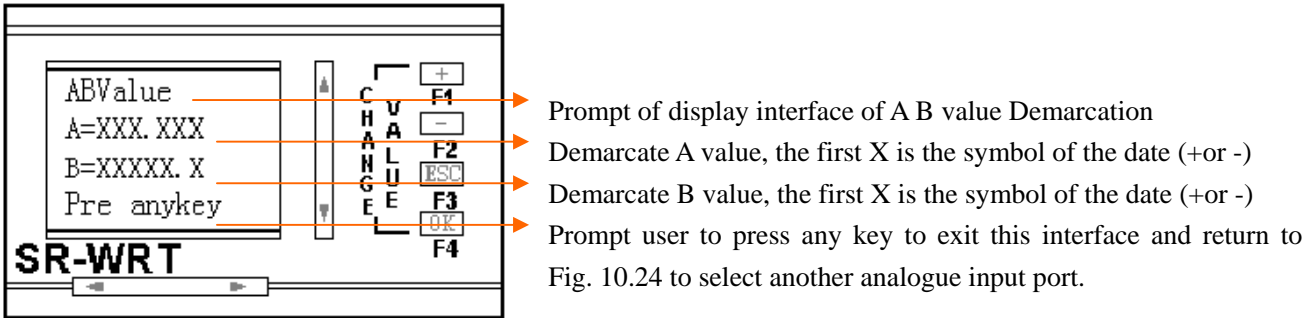


Fig. 10.28 Input Interface of A B Value Demarcating Input

In Fig. 10.28, press any key to finish the demarcation of the value of A and B this time.

10.9 WRT Programming Examples

In order to be convenient for the user to use HMI to program and understand the operation of all the function blocks in programming. Here we list a program that includes all kinds of function block. In programming, for the limit of WRT, we use the Block No as the line. For example: If the output of one function block is M01 and the input of another function block is M01, then these two points are connected together. The points in the left side of the function block in WRT are input ports.

The first point in the right ride is the output port. And the other points in the right ride are different.

The following the an intelligent control example of a modern building area:

Requirements:

1. Every evening from 17:30 to 21:30 the fountain equipment in the square will be open automatically.
2. The fountain is divided into eight watering sets. One of the watering set will be watering all the time and then the others will be added in turn. The time interval is 5S till all the eight sets watering. It stops in 5S time delay and then added in turn.
3. The lighting system in the building area will be will open every evening 18:00 and will be closed 6:00 the next morning.
4. When the extra-red sensor detects that someone enter the building area from the wall, the SR will dial the telephone and report the detailed space of the theft. And the alarming system at the space will be started.

Notes: The areas are divided into four squares, each of them are numbered and named and put into the voice module.

For Example: Message 6: Alarm in Area A

Message 7: Alarm in Area B

Message 8: Alarm in Area C

Message 9: Alarm in Area D

In Fig. 10.29, the program is the control system of the eight fountains. B1 is the time ON/OFF function block. And the time module is set as DAY. The ON time is set as 17:30 and the OFF time is set as 21:30. Thus every day from 17:30 to 21:30, the output of B1 is high electronic level to activate the SET input of B3. The SET pin of B3 is LO, which means it will never reset B3. Set the time parameter (T) of B3 as 5 and time unit as S. Thus every day from 17:30 to 21:30, the output wide of the output input of B3 is 5S. The pulse of B3 is passed to SET pin of B4. B4 is the stop sequence output function block. The RST pin is LO, which means that it will never reset B4. QA0-QA7 will separately control the engine of each set of the eight watering sets. The SET pin will receive a pulse from B4 and open the fountain engine. When all the engines are open, it will receive a pulse to close the seven engines controlled by QA1-QA7. Thus the point 1 and point 2 of the requirement will be realized. When it is 21:30, the time function bock of B1 will be low electronic level and SET pin of B3 will be closed. B3 will stop outputting pulse and only output low electronic level to close the SET pin of B4. Thus the eight output of B4 will close the controlled relay and the connected engines also stop run.

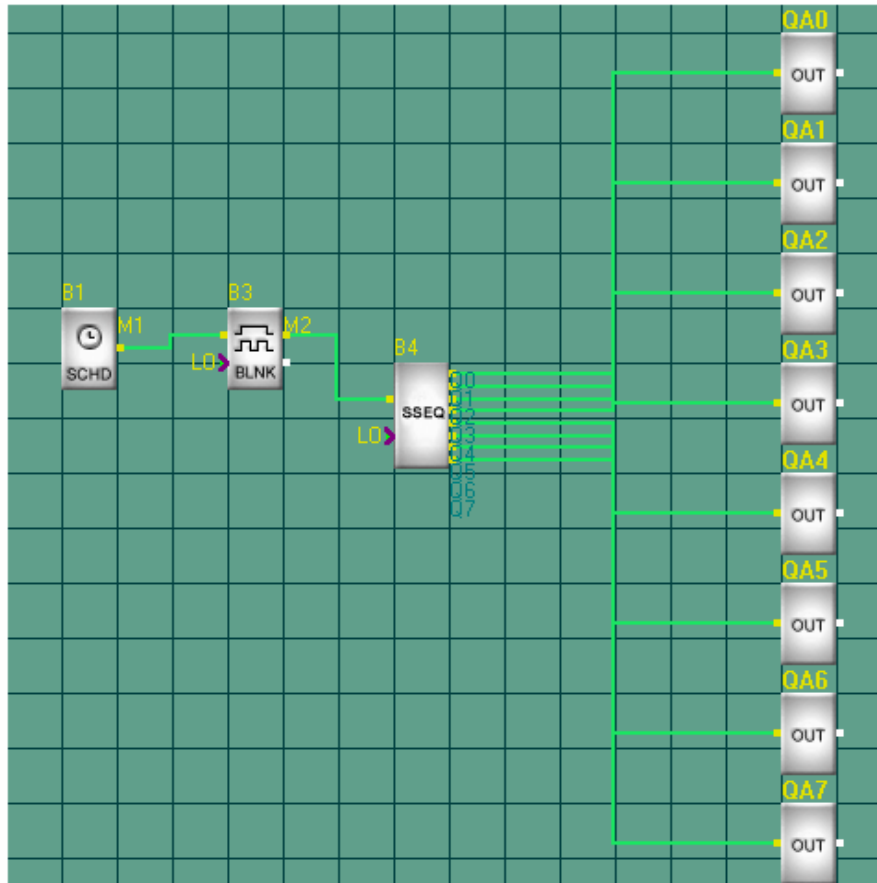


Fig. 10.29 Fountain Control Function Diagram

In Fig. 10.30, it is Road Light Control and Anti-theft System. B0-B2-QC0 is to control the road light. The time module of B0 is set as DAY module. The ON time is set as 6:00 and the OFF time is set as 18:00. Thus every morning the output of B0 will be high electronic level.

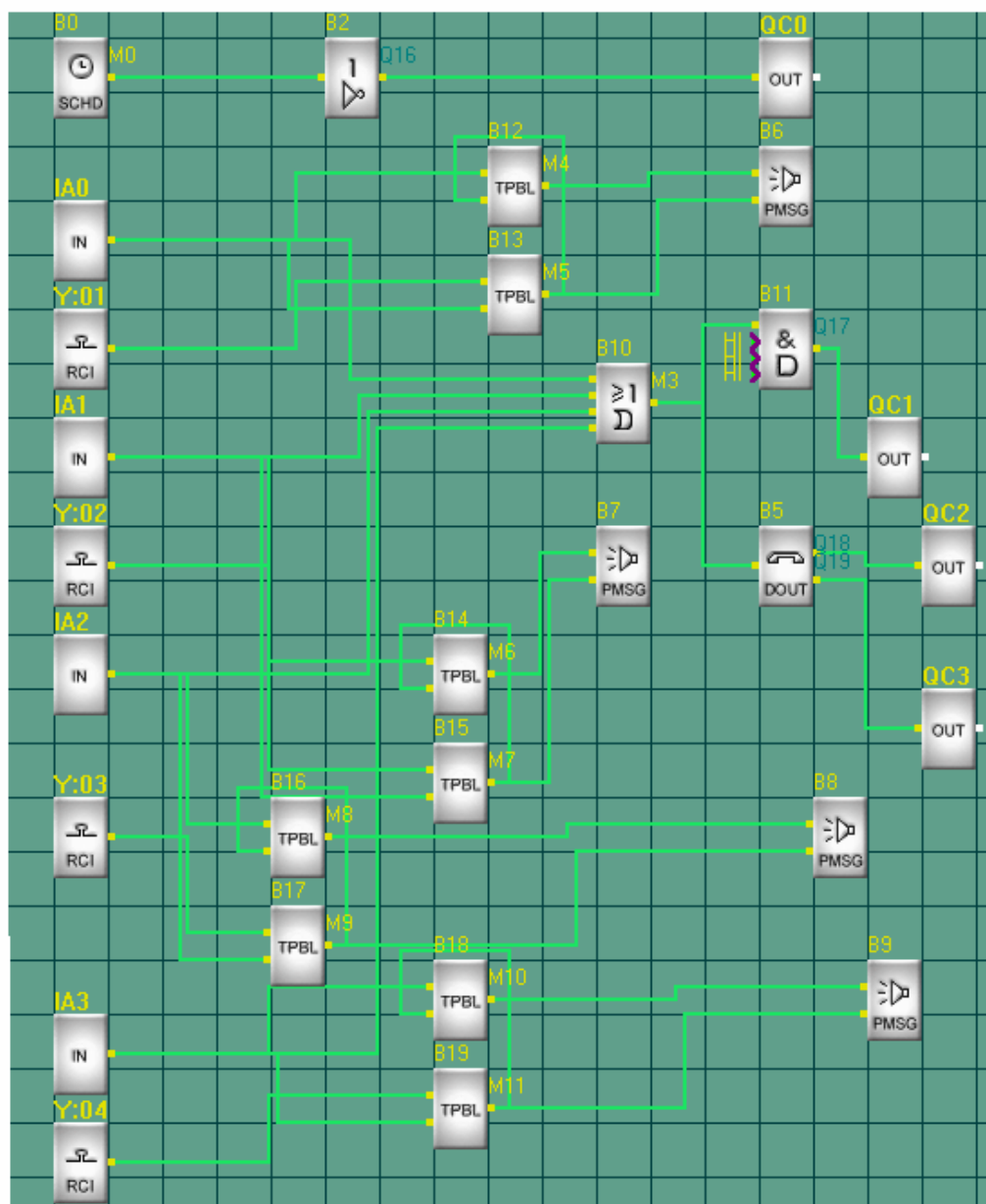


Fig. 10.30 Road Light Control and Anti-theft System

Before edit the program in PROGRAMMER, it is better to design the program in paper or in computer. For example, we have design the above program in computer and print it out. Now it is time to edit this program in PROGRAMMER. According to the explained operation in chapter I, in order to memory, we name this program as ZHINENGXQ. Turn the interface to Fig. 10.7 and enter the edition procedure.

1. Select the function. In Fig. 10.7, move ">" before 17 SCHD and press OK to enter Fig. 10.8. Move ">" before YES and press OK key to enter Fig. 10.31, Function Block Edition Interface.

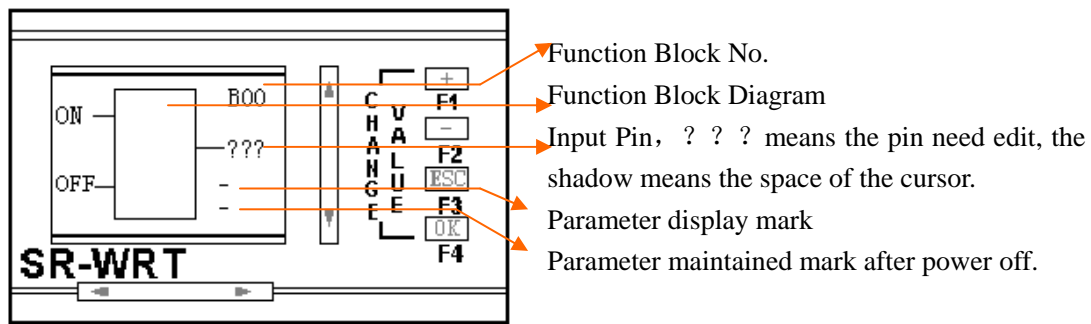


Fig. 10.31 Function Block Edition Interface

In Fig. 10.31, B00 is the sequence No. of the function block, which is produced automatically in programming and is not able to be edit. The ON of the left side means the space to modify the ON date and the OFF of the left side means the space to modify the OFF date.

2. Edit Input and Output points: The "█" will appear on the first pin on the right side. We can change the output type via + and -. Press +, "???" will be changed into "QA0", Q type is not the type we needed. It is need to press continuous via +. "QA0" will be changed into "M00", which is just what we want. Thus the edit of this output is finished. (If M is what we want, but 00 is not the wanted output point. We can change the space of "█" via LEFT, RIGHT and change the number of the cursor via +, -. Till the wanted output is displayed.)

3. Select and Edit Point ON: The cursor "█" will also appear in M00. It is need to edit the ON time. Press OK key and cursor will change from "█" to "_". Press LEFT, RIGHT key, the cursor will be moved under OFF. Press UP, DOWN key, the cursor will be moved under ON. Now the cursor is "_". Press OK key, Fig 10.32, Clock Time Edit Interface will be displayed.

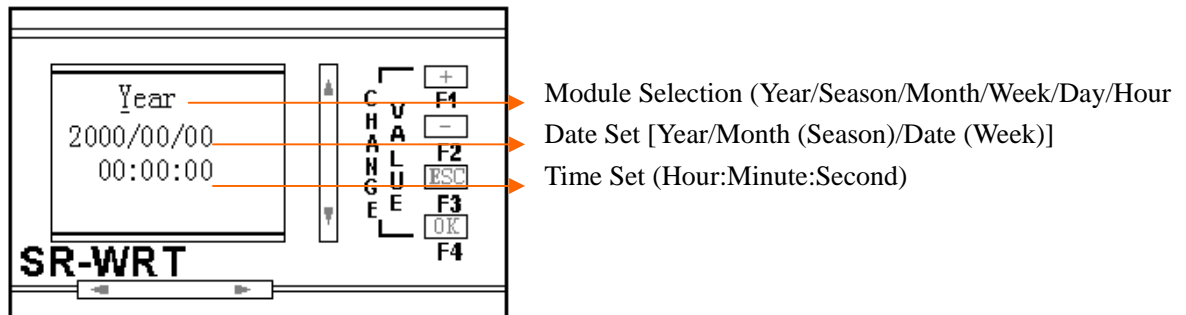


Fig. 10.32 Clock Time Edit Interface

In Fig. 10.32, "_" is the cursor. The space of the cursor can be changed via UP, DOWN, LEFT, RIGHT and the data or module of the cursor can be changed via +, -. In Fig. 10.32, change the YEAE into DAY and change time to 6:30, thus the time of ON is set. Press OK key to return to Fig. 10.31. But at this time the cursor will be "█" and be on the "O" of ON. The input of this point can be selected via +, -. If "-" is selected, which means this point is not used. If this point is needed, select "On" and press "OK" key, change cursor to "_". Then select and edit other points.

4. Select and Edit Point OFF: The same method as Select and Edit Point ON. Change OFF time as 18:00.

5. Select and Edit the parameter and the maintain module after power-off. When cursor is in any space, press OK key and change the cursor to "_". Move cursor to the selection point of select and edit the parameter and maintain module after power-off. Press OK key and change cursor to "█". Change it to "+" or "-" via +, -. "+" means with parameter display and maintain module after power-off function. "-" means without parameter display and maintain module after power-off function.

6. Return to Fig. 10.7, Function Block Selection interface. The edit of function block B00 is

finished via the above steps. Press ESC, all the points are edit correctly and return to Fig. 10.7. Otherwise the wrong points will be displayed in Fig. 10.31 as “???”. And the cursor will be in the first “?” as the form of “■” and wait for the edition. And the mistakes at this space including the following three points:

- 1). When the input port is not the parameter points, it should be edited as one of IXX, QXX, VXX, PXX, MXX, YXX, NXX, HI, LO, X.
- 2). The output port should be one of QXX, MXX, NXX.
- 3). The output port of the function block, for example: M00 cannot be the same as the any one output of the input function block.

Any mistake of the above situation appears. If user press ESC key, it cannot return to Fig. 10.7. It must be modified and it can be returned to Fig. 10.7.

Select and Edit B01: Via the above procedure, select function block 17SCHD. Through the confirm in Fig. 10.8, it will enter Fig. 10.31, function block edition interface. But the B00 is changed into B01, which means the function block edited is the second function block. Using the methods when editing B00, edit B01 as M01, ON time as 17:30, OFF time as 21:30. After edition, press ESC key to return to Fig. 10.7.

Select and Edit B02: Using steps above to select function block 4 NOT. Through the step 2, edit B02 as QC0. Through the step 3, move the cursor to the input point. Press OK key and the cursor will be change into “■”. As step 2, edit the input port as M00. Through step 6, return to Fig. 10.7 and finish the edition of B02.

Select and Edit B03: Using step 1 to select function block 13 BLNK. Through the step 2, edit the output of B03 as M02. Through step 3, move the cursor to the second input port. Press OK key and the cursor will be changed into “■”. As step 2 again, edit the input port as LO. Through step 3, move the cursor to the third input port (T, means time parameter input port.). And this time the cursor will be “_” and be on “T”. Press OK key to enter Fig. 10.33, time parameter setup interface.

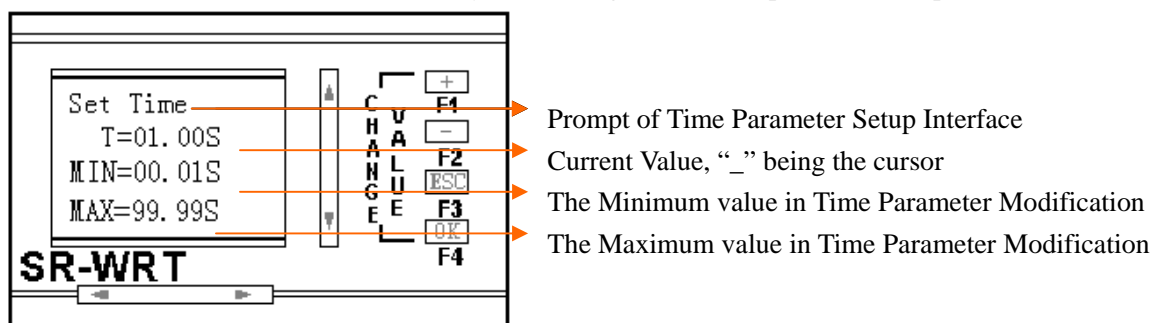


Fig. 10.33 Time parameter Setup Interface

In Fig. 10.33, the space of the cursor can be changed by LEFT, RIGHT, UP, DOWN and the data and time unit (time unit: H means Hour, M means minute, S means second) can be changed via +, -. Chang T=01.00S into T=05.00S. Press OK key to return to the function block edition interface. Thus the pulse wide is set. Through step 6 to return to Fig. 10.7, the edit of B03 is finished.

Select and Edit B04: Using step 1 to select function block 22 SSEQ. Through the step 2, edit the first input port of B04 as M02. After confirmation, through step 3, move cursor to the second input port and edit it as LO. Through step 3, move cursor to the first output port “OUT” at the right side. At this time the cursor will be “_”. Press OK key to enter Fig. 10.34, Step Sequence Output Edit Interface.

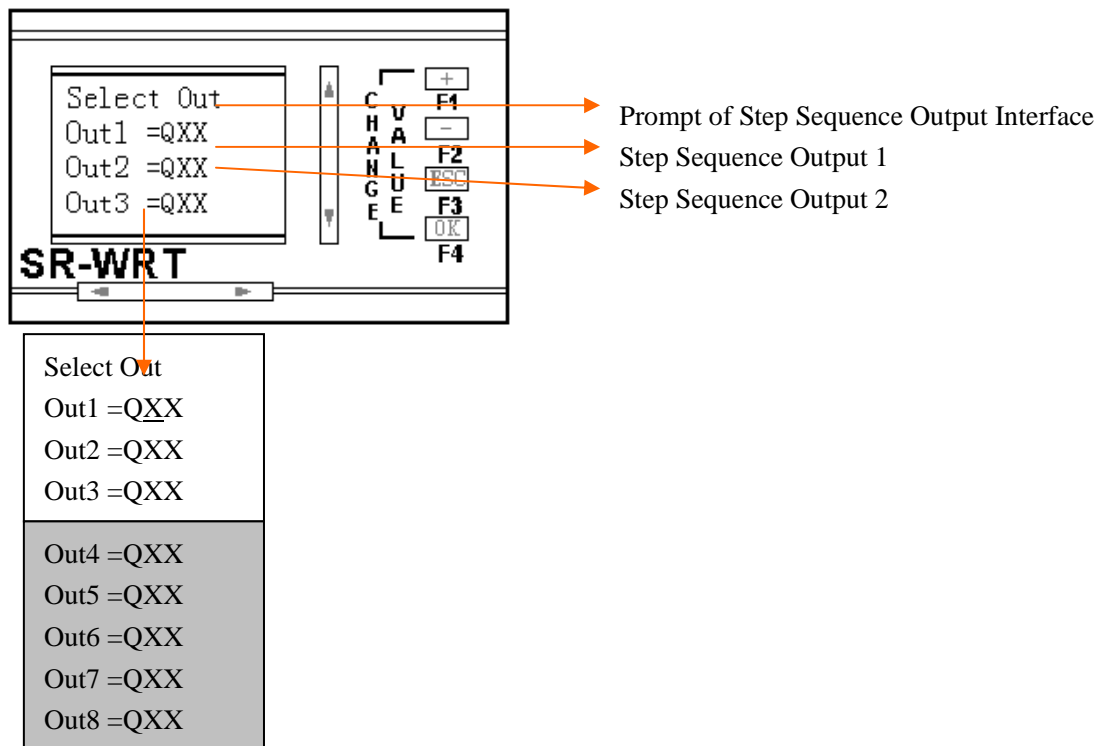


Fig. 10.34 Step Sequence Output Edit Interface

In Fig. 10.34, Step Sequence Output Edit Interface, “_” is the cursor. The step sequence can be edit via UP, DOWN, and the space of the step sequence can be edit via LEFT, RIGHT. Notes: Q cannot be selected. Only XX can be selected and edited. Change the data of the cursor via +, -. Change QXX to the output we needed. In edition procedure, please be attention the following notes. 1. When editing the step sequence, the output of the above step sequence cannot be as QXX. It must be on detailed output. If we want to edit Out 4 =QA3, then the output port of Out1, Out2, Out3 cannot be QXX. They must be the detailed output, for example, Out1=QA0, Out2=QA1, Out3=QA2 and so on. 2. To be convenient to the user, we design the menu as circle menu. For example, in Fig. 10.31, if the cursor in the second line of the WRT (caused by the first action prompt). The symbol of the above step sequence is Out1. Now Out8 is needed to be edited. Pressing DOWN eight times is too trouble. Directly press UP key one time. The cursor will be on Out8 directly and user can edit.

According to the above methods, edit the eight outputs of the step sequence as Out1 =QA0, Out2=QA1, Out3 =QA2, Out4 =QA3, Out5 =QA4, Out6 =QA5, Out7 =QA6, Out8 =QA7. Press OK or ESC key. If the output ports of the eight step sequence are not as the same as the outputs of the above function blocks. It will enter the function edition interface. Otherwise, the same output ports will be displayed in Fig. 10.34 as Q?? and the cursor will be on the first ? for the user to finish the edit. In function block edition interface, through step 6 to return to Fig. 10.7, thus the edition of B04 is finished.

Select and Edit B05: Using step 1 to select function block 26 D_OUT. Using the above methods, edit the input port as M3, the first output port as QC2, the second output port as QC3. Move the cursor to the SET pin, the third pin of the function block at the right side. Press OK key, Fig. 10.35, Telephone Setup and Protection Interface, will be displayed.

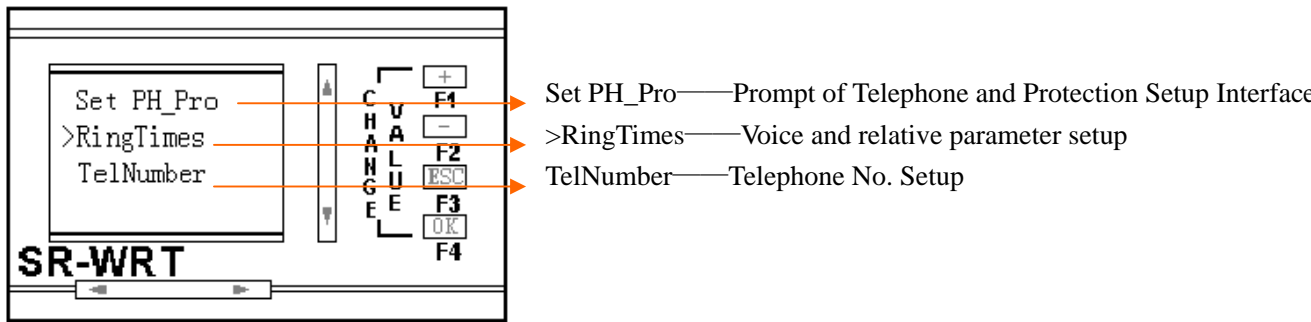


Fig. 10.35 Telephone Setup and Protection Interface

In Fig. 10.35, move “>” before Ring Times and press OK key. Fig. 10.36, Voice and Relative Parameter Setup Interface, will be displayed.

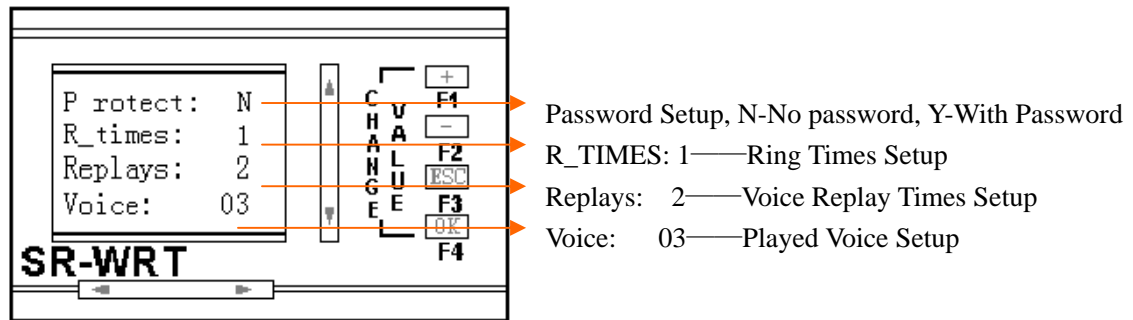


Fig. 10.36 Voice and Relative Parameter Setup Interface

In Fig. 10.36, select the function needed to set via UP, DOWN and change the character or the data of the “_” via +, -.

In Fig. 10.35, move “>” before TelNumber and press OK key. Fig. 10.37, Telephone No Setup Interface, will be displayed.

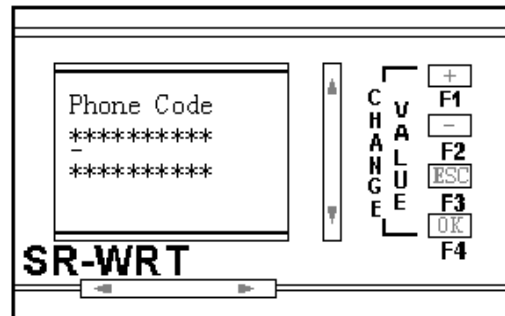


Fig. 10.37 Telephone No Setup Interface

In Fig. 10.37, Telephone No Setup Interface, change “_”, the space of the cursor via LEFT, RIGHT, UP, DOWN, change the data of the cursor via +, -. Set it as the telephone NO as we need.

Press ESC to return to Fig. 10.35, and press ESC again to return to the function block edit interface. Return to Fig. 10.7 via Step 6. Thus the edition of B05 is finished.

The edit method and procedure of other function block is the similar as this. We don’t explain here in details one by one.