Chapter VIII Application

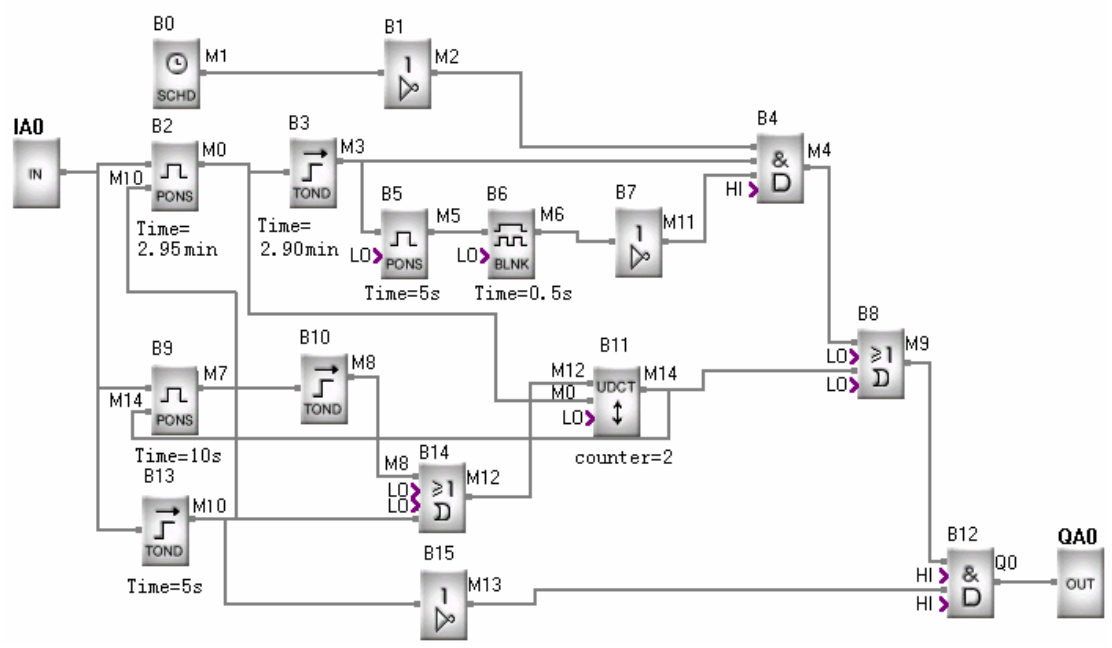
SR has a very wide application range. In order to let the user consider the wide application potential for SR and the convenience brought about by its use, we will show some common and representative control schemes herein. After the user has read these application examples it will be clear how simple it is to use SR to establish automatic control requirements, especially in a system requiring time control and in the automatic control of intelligent living quarters etc.

8 . 1 the illumination of Multifunction switch in stairs, halls etc.

Requirement:

1. When the light switch has been pressed, the illumination will be connected and then be cut off automatically after the set time of 3 minutes.
2. Lights glimmer for 5 seconds before being switched off.
3. When the switch is pressed again, the illumination will be on as usual.
4. When the switch is pressed for more than 2 seconds the illumination will be on as usual.
5. The illumination will be automatically connected every day at PM6:30 and be cut off every day at AM6:30.

The Function Block Program Diagram 3 seconds as follows:

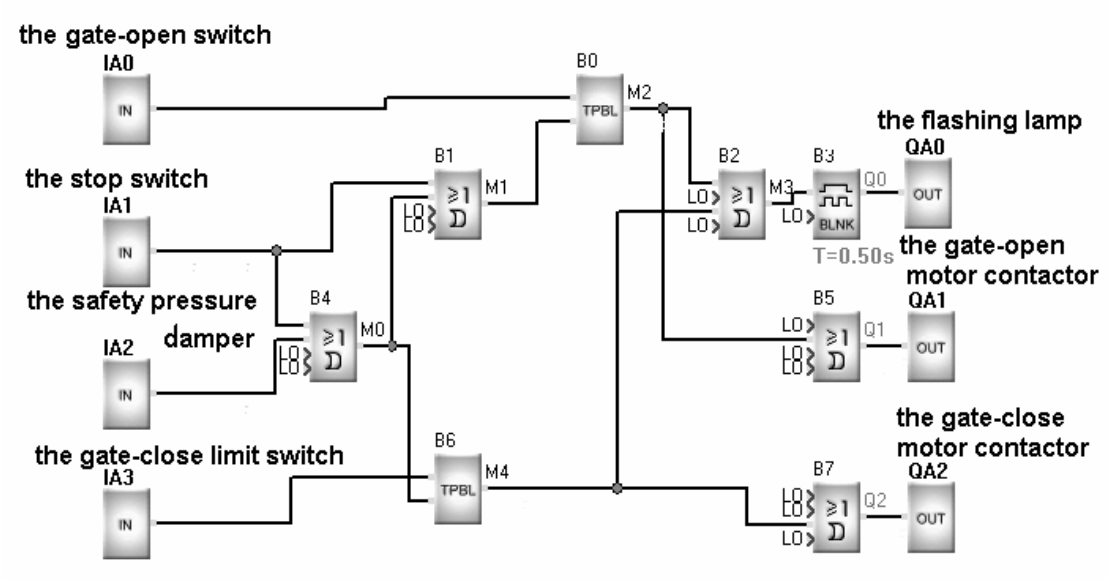


8 . 2 Automatic gate control requirements:

Requirement:

1. Opening and closing of the gate shall be controlled by the guard in the control room.
2. Normally the gate shall be opened or closed completely, but the opening and closing action can be interrupted at any time.
3. The alarm lamp shall begin to flash when the gate acts and shall keep flashing as long as the gate continues to move.
4. A pressure damper shall be provided so that the gate can be automatically opened when it touches a person or an article.

The Function Block Program Diagram is as follows:



Note:

IA0 shall be connected to gate-open switch;

IA1 to the stop switch;

IA2 to the safety pressure damper.

IA3 to the gate-close limit switch;

QA0 to the flashing lamp;

QA1 to the gate-open motor contactor;

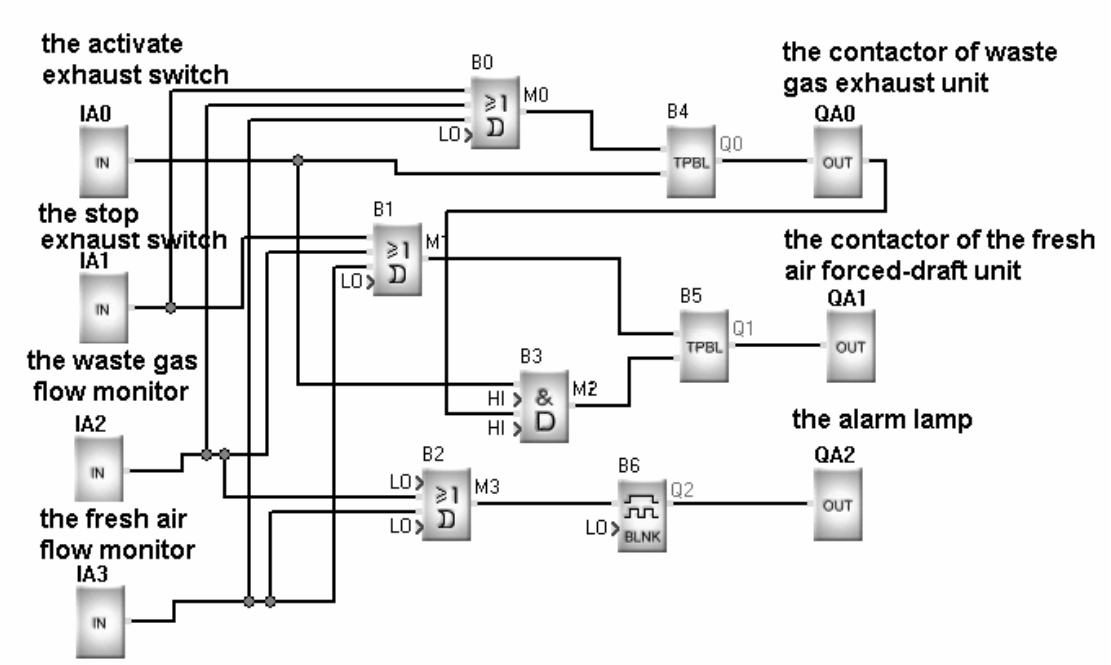
QA2 to the gate-close motor contactor;

8 . 3 Ventilation system

Requirements: The ventilation system shall be able to send fresh air into the room and to exhaust the waste gas out of the room;

1. Waste gas exhaust unit and fresh air forced-draft unit shall be installed in the room.
2. The ventilation system shall be controlled by the control monitor.
3. No over atmospheric pressure is allowed in the room at any time.
4. The fresh air forced-draft unit can not be put into service until the flow monitor indicates that the waste gas exhaust unit is in normal operation.
5. In case of any fault in the ventilation system, the alarm lamp shall be on.

The Function Block Program Diagram is as follows:



Note:

IA0 shall be connected to the activate exhaust switch;

IA1 to the stop exhaust switch;

IA2 to the waste gas flow monitor;

IA4 to the fresh air flow monitor.

QA0 to the contactor of waste gas exhaust unit;

QA1 to the contactor of the fresh air forced-draft unit;

QA2 to the alarm lamp;

8 . 4 Illumination system for display windows

Control requirements:

1. Basic lighting for the display period:

a) Time:

Monday to Friday 8:00~22:00;

On Saturday 8:00~24:00;

On Sunday 9:00~20:00;

b) Automatic off: the basic lighting can be automatically turned off whilst maintaining minimum illumination and display lighting.

2. Additional requirements for night lighting :

a) Time:

Monday to Friday light sensitive switch is triggered at 22:00;

On Saturday light sensitive switch is triggered at 24:00;

On Sunday light sensitive switch is triggered at 20:00;

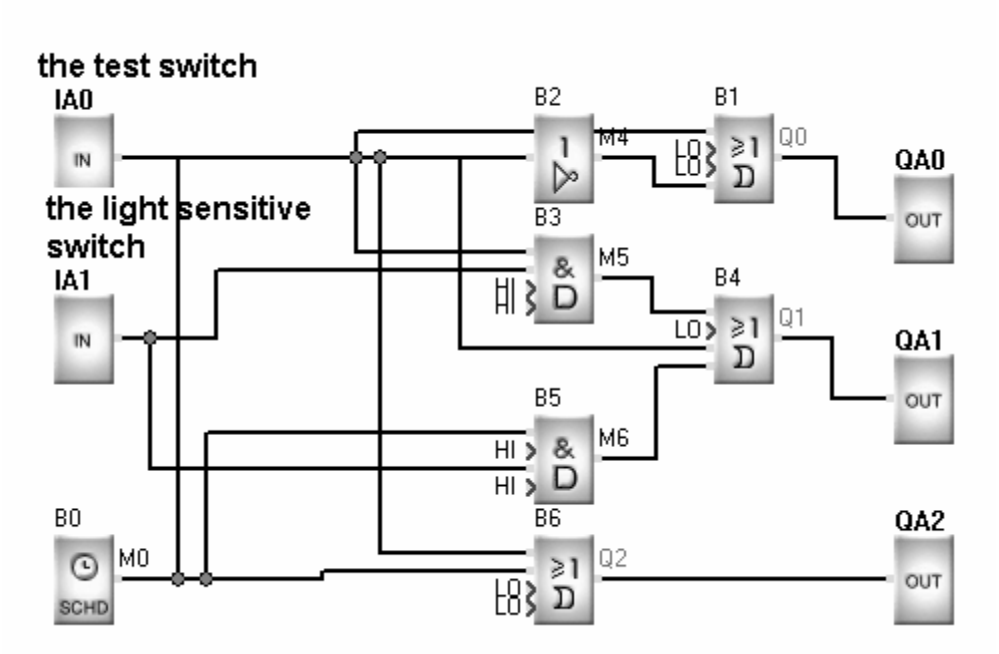
b) Light sensitive switch triggering/ automatic off: can automatically turn off the minimum illumination and the display lamps when it is on and can also automatically turn on the minimum illumination and display lighting when it is off.

3. Minimum illumination and display lighting in non-display period:

a) The minimum illumination and the display lighting shall be maintained and shall be automatically turned on when the shopping period ends and the basic lighting and night lighting are turned off.

4. Test switch:

All lamp groups can be tested when the test switch is pressed.



Note:

IA 0to the test switch;

IA1 shall be connected to the light sensitive switch;

QA0 to the basic lighting in display period;

QA1 to the night additional lighting within display period;

QA2 to the minimum illumination maintaining during non-display period;

QA3 to the projection light for special commodities in non-display period.

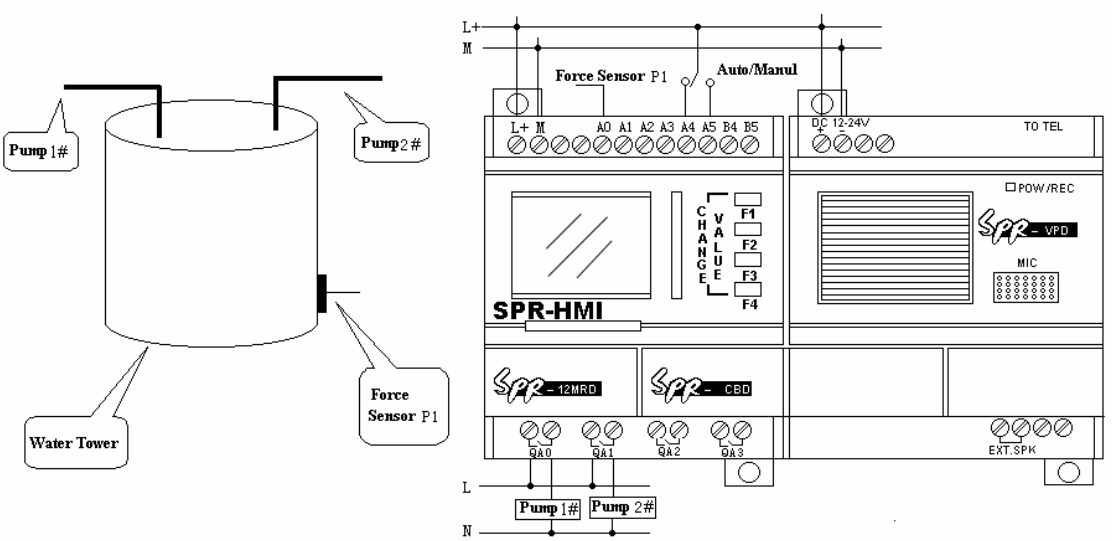
8．5 Automatically Supplying system of the Tower

Requirement:

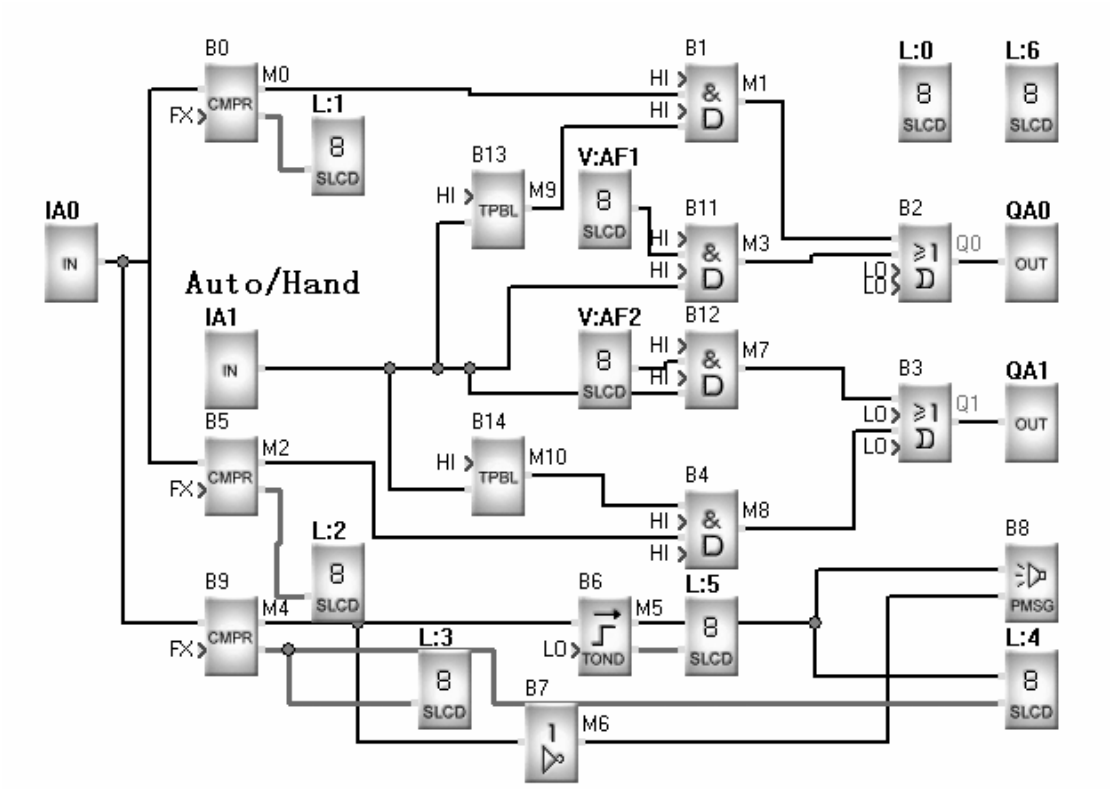
1. The pressure signal (P1) is entered. If P1<7V, the 1# pump will be started.
2. If P1<3V, the 2# pump will be started.
3. If P1<1V, it will wait for 5 seconds. After that if it is still <1V, the voice alarming function will be started.

Here we adopt the SR-12MRDC and SR-VPD to realize the function.

The wiring diagram:



Control Program:



2. Explanation:

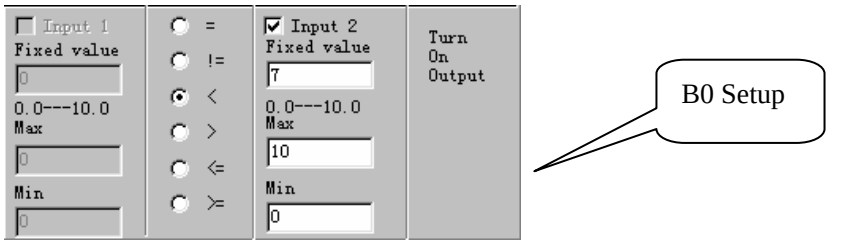
a. SR-12MRDC controls the pressure sensor P1 that entering the pressure signal. If P1<7V, the 1# Pump will be started; if P1<3V, the 2# Pump will be started; if P1<1V, it will wait for 5 seconds and if the condition is still, the voice alarming function will be started.

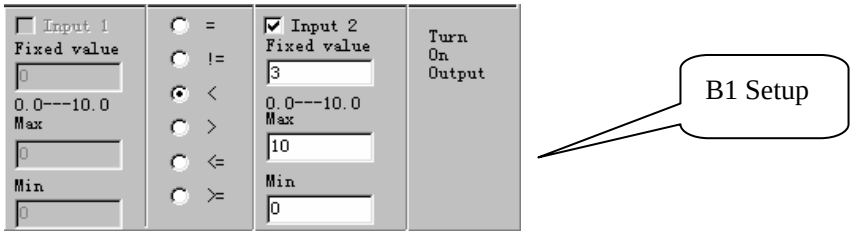
b. SA is the Handle/Auto switch. I4 and I5 are separately connected.

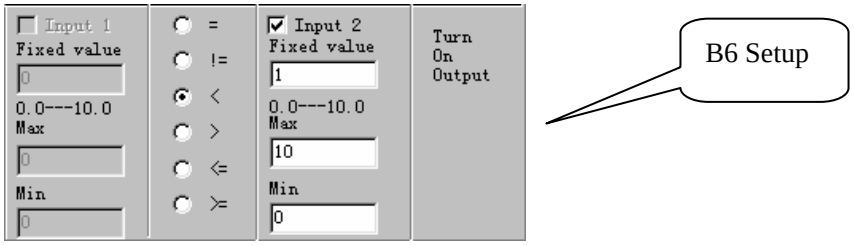
c. If SA is Handle, SR-12MRDC has two function keys: AF1, which controls the 1# pump, and AF2, which controls the 2# pump.

d. If SA is Auto, SR-12MRDC has three analog comparisons B0, B1, B6.

The parameters setup is as the following:

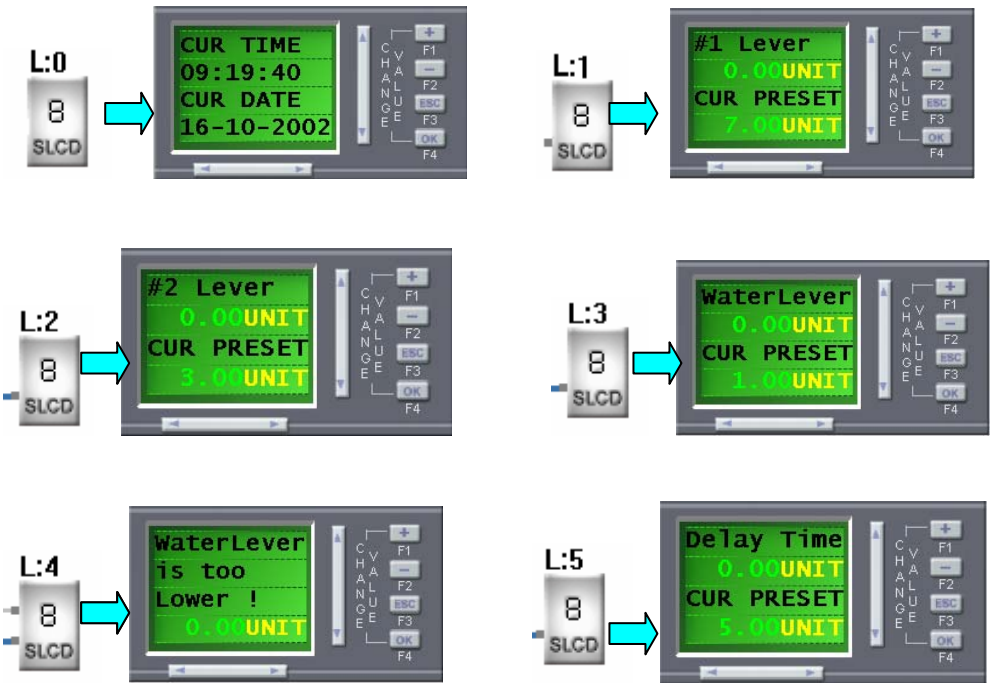


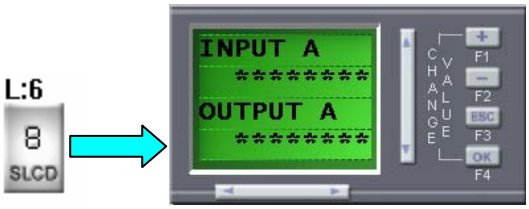




e. B0 controls the #1 pump; B1 controls the #2 pump and B6 controls the voice alarming function.

f. Editing HMI. In this example, there are 7 HMIs. The explanation is as the following:





Chapter IX Quality Guarantee

Quality Guarantee

The product has been strictly tested for quality before delivery from our plant and it

complies with (as appropriate) all product requirements listed in this manual. When properly installed it will work in accordance with its' specifications.

Warranty Period

This product is warranted against defects in material and manufacturing for a period of one year from the date of delivery. During the warranty period, MAXTHERMO shall be responsible for necessary repairs or replacement, as long as the product is proven to be inherently defective.

Warranty Range

During the above mentioned Warranty Period, if the product is fails to perform in accordance with its' specifications and has not been misused it shall be delivered to a service centre, which MAXTHERMO authorizes, for free repair. MAXTHERMO reserves the right to repair or replace the product in accordance with it's discretion. In the event of product replacement the buyer will be informed and shall be responsible for reloading software, unless agreed otherwise.

The buyer shall pay the shipping charge for delivery to the MAXTHERMO service centre and the MAXTHERMO service centre will repair or replace the product and deliver it to the buyer free of charge.

The above warranty does not include the following circumstances.

1. Improper installation testing or operation
2. Misuse
3. Damage caused by unauthorized dismantling of the product
4. Damage to consumable parts such as rubber cover, buttons, batteries, relays etc.

Claim:

As the hardware and software contents of this manual have been seriously checked in detail and sometimes mistakes is not avoidable, the manual is not completely correct. We will check the manual in time and revise the necessary in the next version. Your proposal is welcome.