

Chapter VI Remote control and extension function

6.1 Remote control function

The remote control function is to use a wireless transmitter and a receiver to control the ON/OFF status of outputs of SR. There are 6 remote control points on the transmitter: Y1、Y2、Y3、Y4、Y5、Y6. The remote control distance can reach 100 m. And this is a very outstanding feature of SR.

6.1.1 Structure of receiver and transmitter

The remote control system needs to use together with the SR main machine. It can be divided into receiver part and transmitter part.

Their structure is as following:

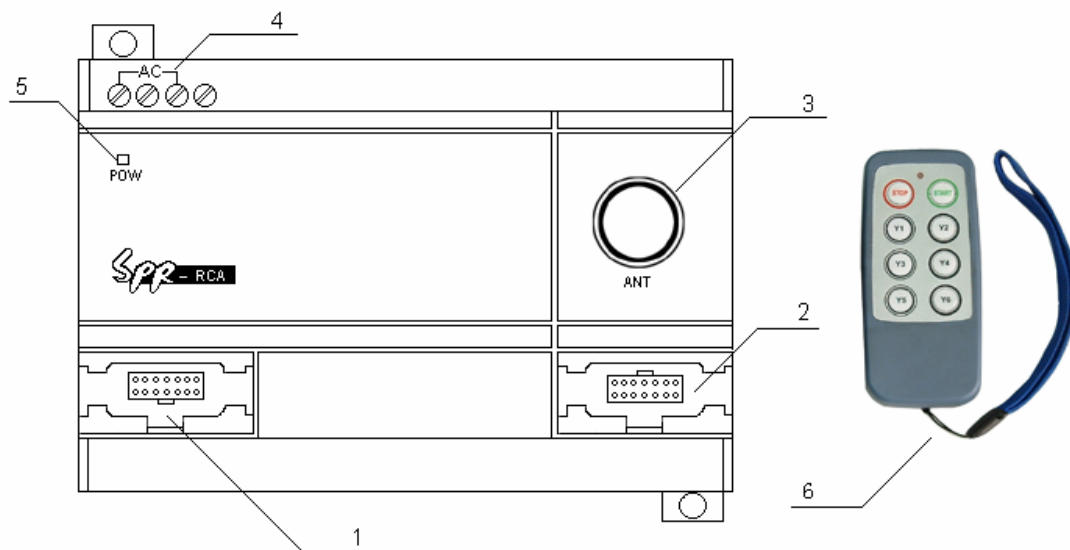


Fig6.1 Remote control system

1. The interface to SR or Voice module.
2. The communication port to connect receiver to Computer or next extension module.
3. The antenna of receiver
4. The power terminals of receiver (AC100-240V or DC12-24V).
5. Power indicator
6. SR-TC transmitter.

6.1.2 The connection method between receiver and SR or Voice module.

There are 2 types of receiver module, SR-RCA (AC type) and SR-RCD (DC type), the receiver can be connected to the same type (AC or DC type) of SR and voice module to realize the wireless remote control of the I/O for SR and voice module.

1. The connecting diagram of SR-RCA and SR-12MRA、SR-VPA The AC type receiver and AC type SR, AC type voice module can be used together, SR-RCA can work with SR-12MRAC,SR-22MRAC or SR-VPA, and at the same time, the system can extended to connect 5 PCs of SR-20ERA.

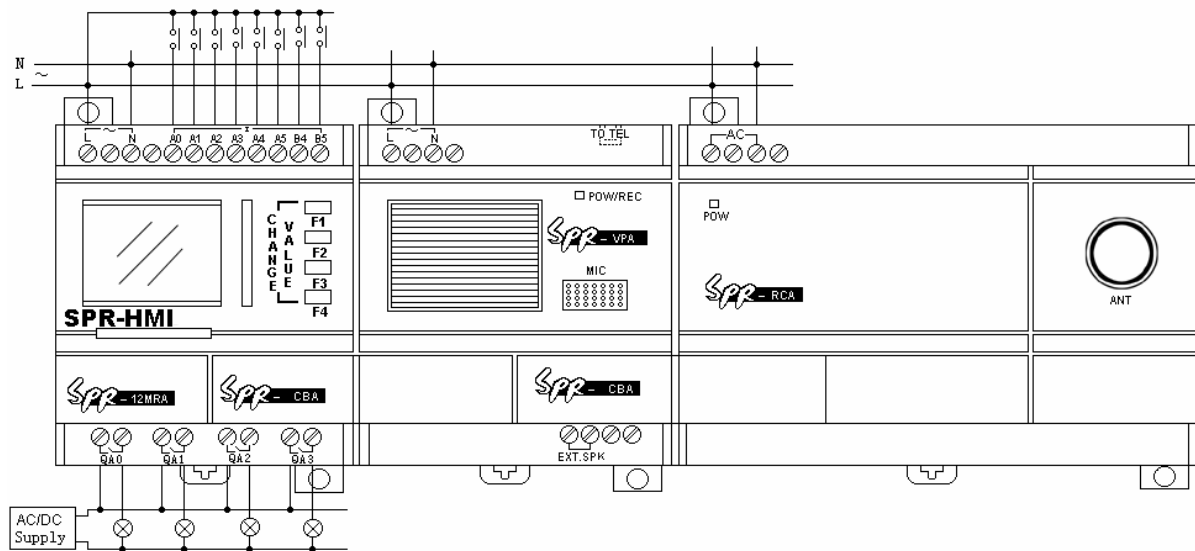


Fig6.2 SR-RCA connected to SR-12MRAC and SR-VPA

2. SR-RCD connected to SR-12MRDC and SR-VPD The DC type receiver and DC type SR, DC type voice module can be used together, SR-RCD can work with SR-12MRDC, SR-12MTDC, SR-22MRDC, SR-22MTDC or SR-VPD, and at the same time, the system can extended to connect 5 PCs of SR-20ERD.

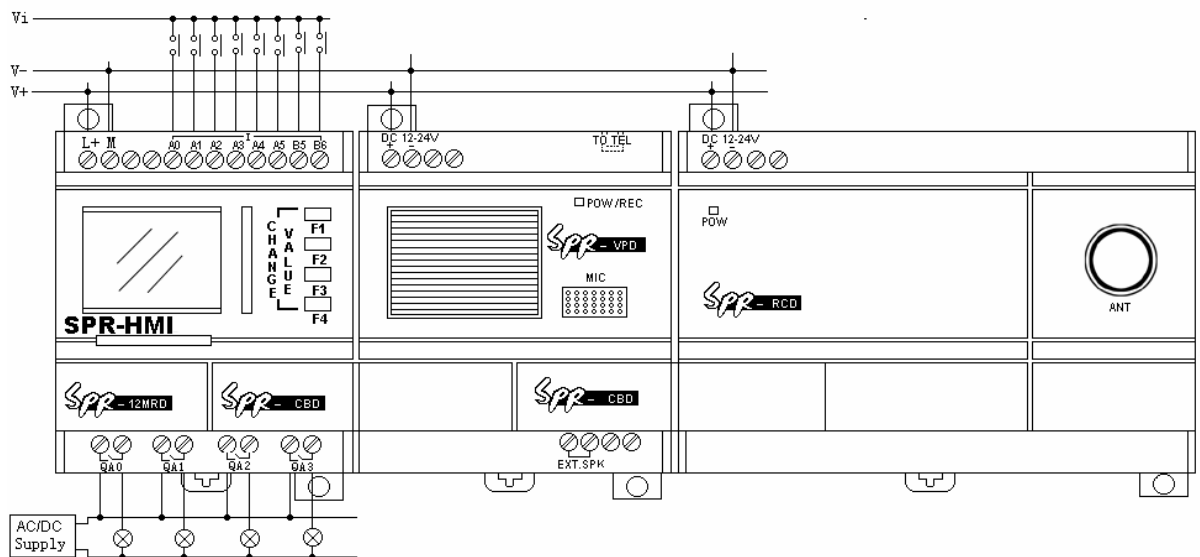


Fig6.3 SR-RCD connected to SR-12MRDC and SR-VPD

3. SR-RCD connected to SR-12MTDC and SR-VPD

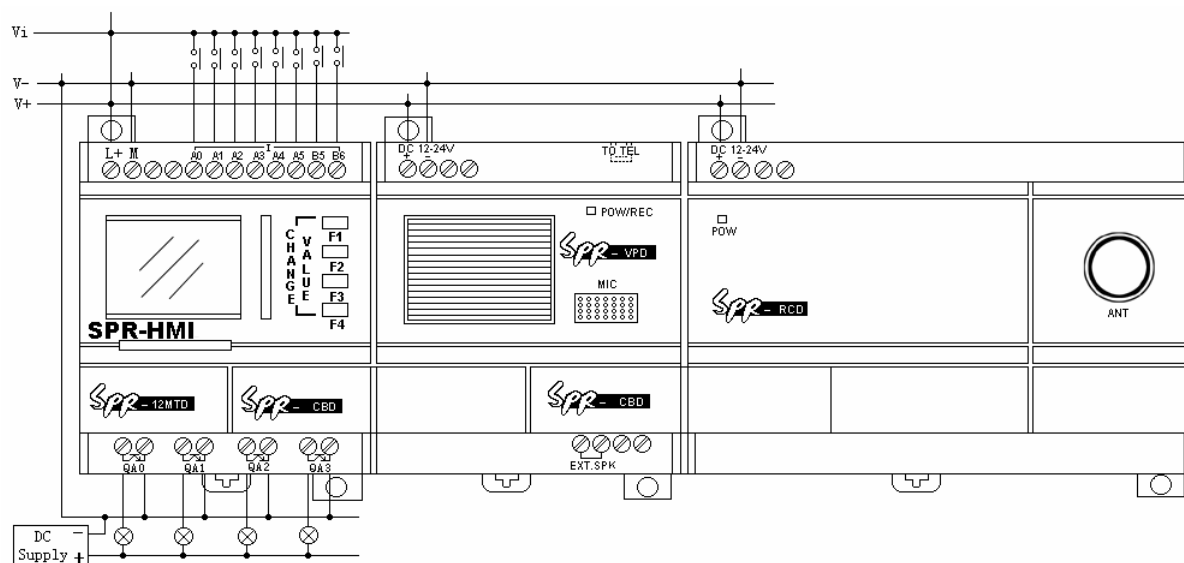


Fig6.4-1 SR-RCD connected to SR-12MTDC and SR-VPD

3. SR-RCD connected to SR-12MGDC and SR-VPD

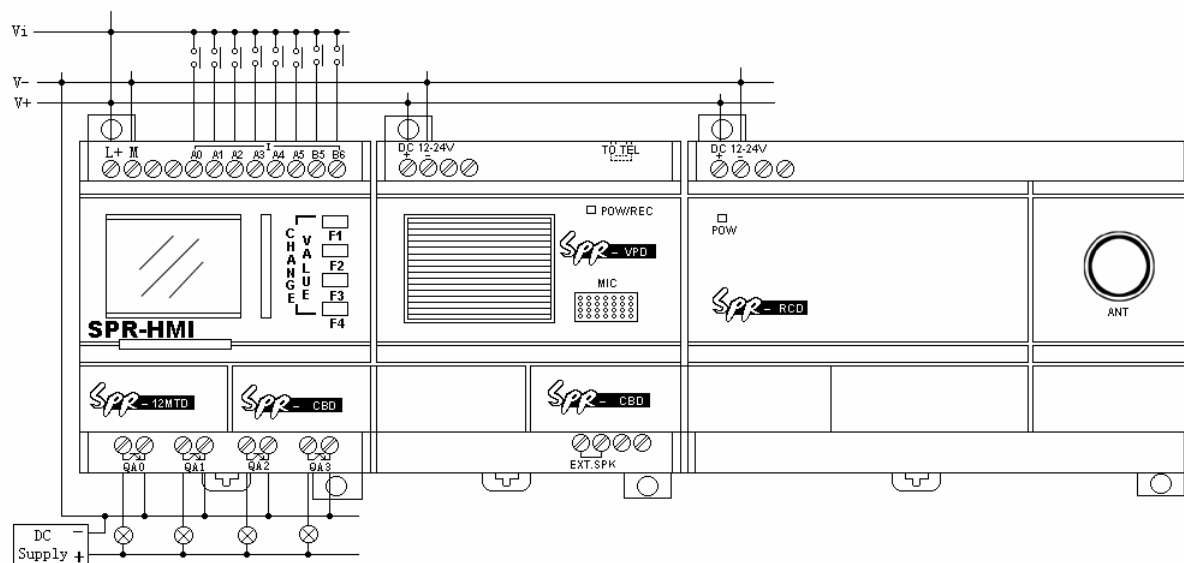


Fig6.4-2 SR-RCD connected to SR-12MGDC and SR-VPD

Note:

1. Only the same type (AC or DC) can be used together.
2. One SR main machine can extend to connect 5 extension module.(Same AC or DC type).
3. The transmitter can control the I/O of the SR or Extension module.
4. User must edit the Remote control instruction in control program, such as Fig.6.5

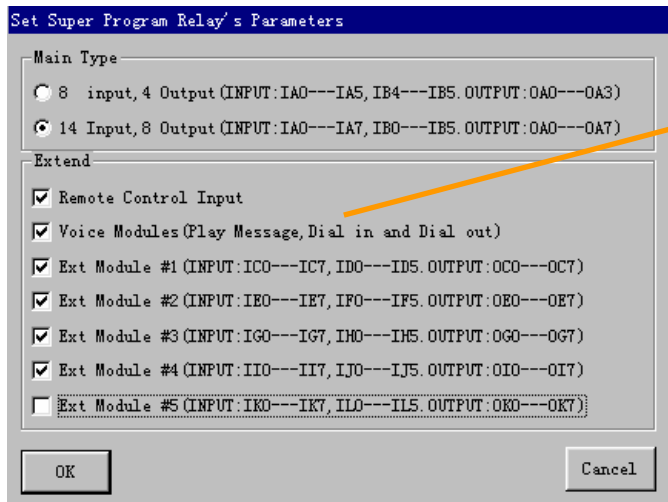


Fig. 6.5 Hardware Configuration

6.2 Extension module

Extension module can be connected to the same type of SR main machine to extend the I/O, each extension module has 12I/8O, one SR can be connected to 5 extension module one by one. Such as that SR-22 can be connected to 5 SR-20 to reach 74I/48O. This powerful extension function brings you much easier to do the control system, and also lower you cost very greatly. The I/O of extension module is divided as:

- Inputs of No.01 extension module are IC0~IC7, ID0~ID3,
- Inputs of No.02 extension module are E0~IE7, IF0~IF3,
- Inputs of No.03 extension module are IG0~IG7, IH0~IH3,
- Inputs of No.04 extension module are II0~II7, IJ0~IJ3
- Inputs of No.05 extension module are IK0~IK7, IL0~IL3.
- Outputs of No.01 extension module are QC0~QC7
- Outputs of No.02 extension module are QE0~QE7
- Outputs of No.03 extension module are QG0~QG7
- Outputs of No.04 extension module are QI0~QI7
- Outputs of No.05 extension module are QK0~QK7

6.2.1 The extension module structure

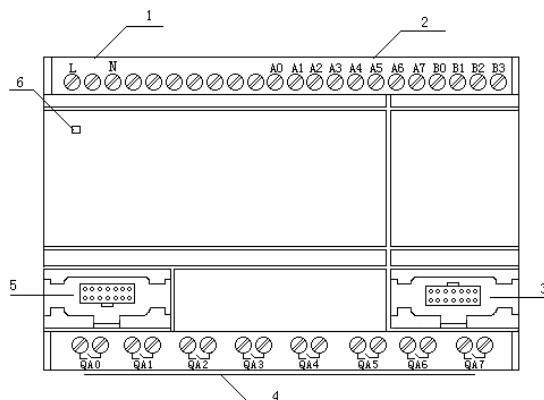


Fig6.6 Extension module structure

1. Power supply terminals (AC100-240V or DC12-24V)
2. Input terminals
3. Communication port to voice module , voice module or receiver module
4. Output terminals

5. Communication port to SR main machine
6. Power indicator light

6.2.2 Extension module address setting

SR series product can be connected to 5 extension module at the most, we need to give each extension module an address. So we defined their address as 1~5. The system will work correctly only after setting the correct address. The address setting is as in Fig.6.6. EXT1~EXT5 are the No.1 to No.5 extension modules.

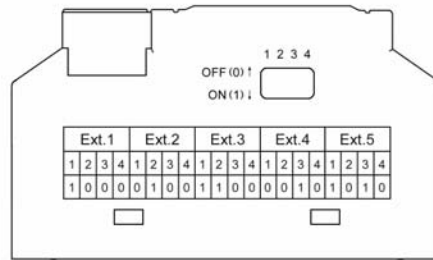


Fig. 6.7 Addresses List of Extension Module

6.2.3 The types and connection of extension module

1. SR-20ERA (AC power and relay outputs) can work connected to SR-12MRA or SR-22MRA

The connection diagram of SR-20ERA and SR-12MRA:

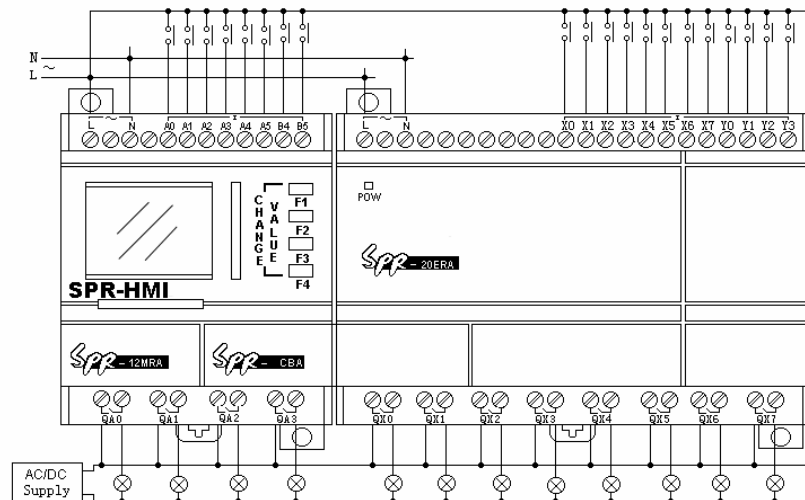


Fig6.8 SR-20ERA connected to SR-12MRAC

⚠ Danger

- 1.Current safety regulations do not permit the connection of different phases to the input.
- 2.Power and input must same phases
- 3.Do not touch the input and output points and power input points at SR working.
- 4.Don't touch or take down the link bridge SR-CB at SR working.

2. SR-20ERD (DC power and relay outputs) can work connected to SR-12MRD or SR-22MRD.

The connection diagram of SR-20ERD and SR-12MRD:

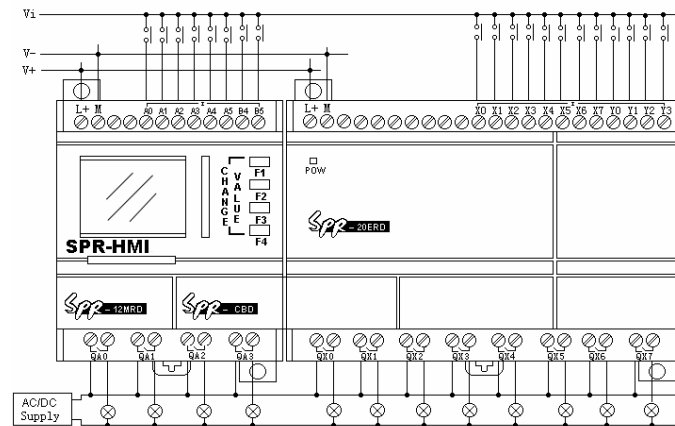


Fig6.9 SR-20ERD connected to SR-12MRDC

3. SR-20ETD (DC power and transistor outputs) can work connected to SR-12MTDC or SR-22MTDC.

The connection diagram of SR-20ETD and SR-12MTDC:

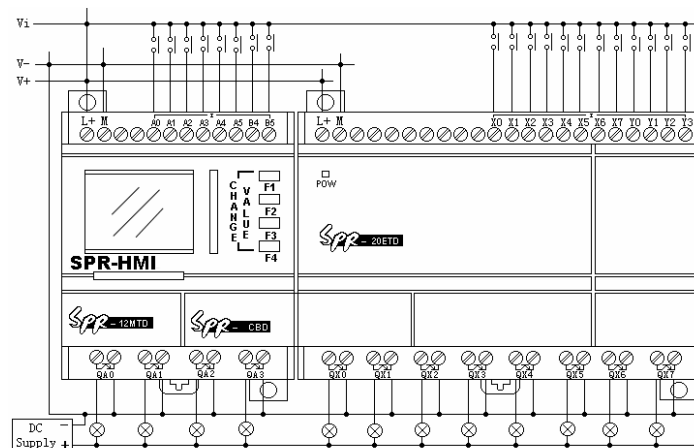


Fig 6.10-1 SR-20ETD connected to SR-12MTDC

4. SR-20EGD (DC power and transistor outputs) can work connected to SR-12MGDC or SR-22MGDC.

The connection diagram of SR-20EGD and SR-12MGDC:

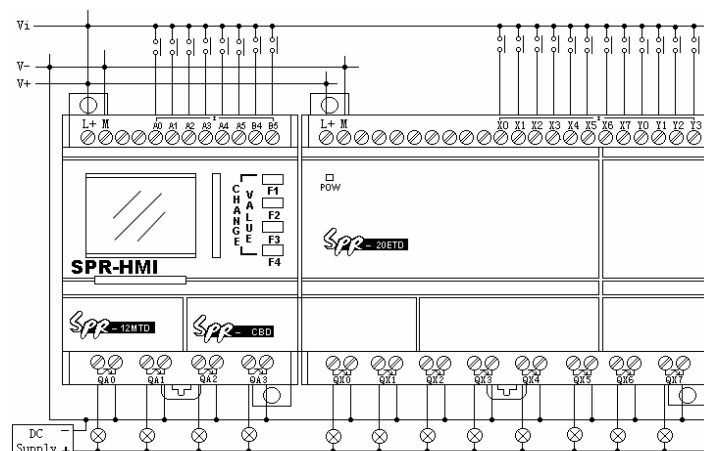


Fig 6.10-2 SR-20EGD connected to SR-12MGDC

Note:

1. The extension module can be only connected to the same type of SR main machine, it means that the AC type should work together with AC type SR main machine, and DC type should work together with DC type, and transistor type should work together with transistor type.
 2. One SR main machine can be connected to 5 same type extension module at the most.
 3. The address of each extension module should be different to others. Must be in the range of 1-5.
 4. The address setup of the extension module must be before powering on. Modification after powering off will be ineffective.
 5. To use the extension module after connecting them to the main machine, we must choose the relative extension module at the beginning of edit the control program, or we can not program them. See the following fig.
 6. More extension modules connected, more slow the system runs.
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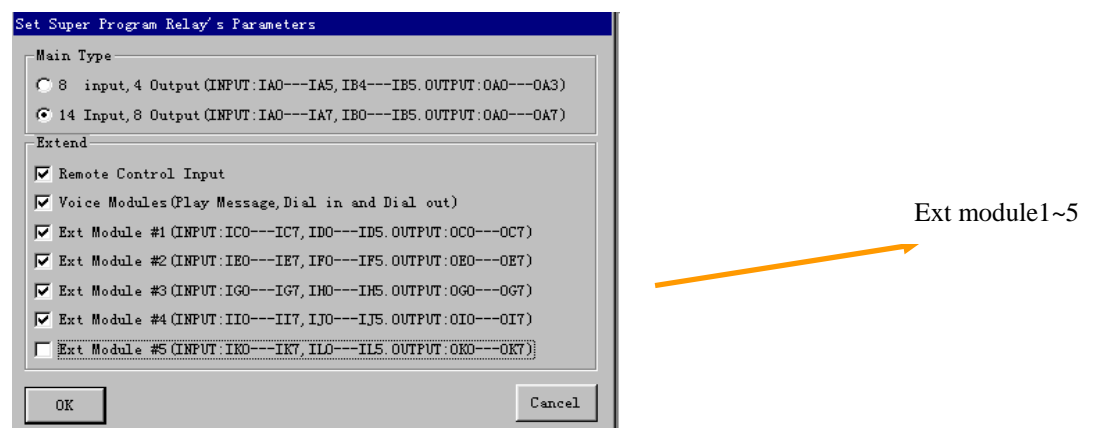


Fig. 6.11

6.3 SR series products and optional parts



Fig. 6.12 SR-12 Series PLC



Fig. 6.13 SR-VPA/VPD Voice/Telephone



Fig. 6.14 SR-22 Series PLC



Fig. 6.15 SR-CP



Fig. 6.16 SR-CB



Fig. 6.17 SR-ECB



Fig. 6.18 SR-EHC



Fig. 6.19 SR-RCA/RCD Remote Controller Module



Fig. 6.20 SR-TC Module



Fig. 6.21 SR-20E Series Extend Module