

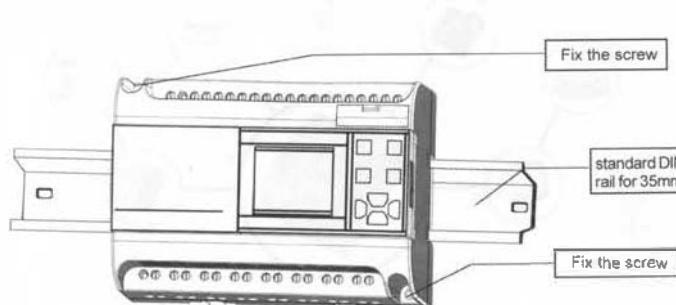
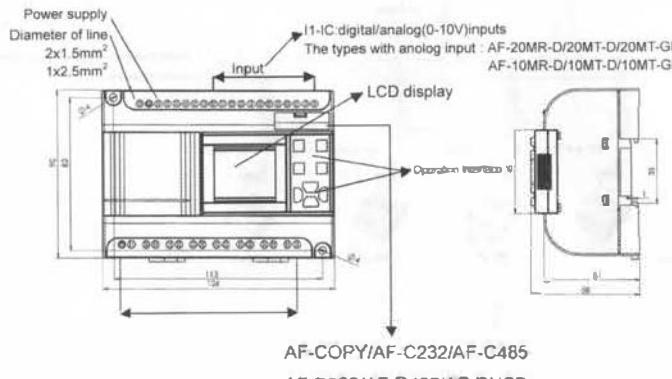
## Installation & Connection

### AF Series

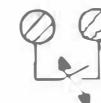
Ver 1.0

(※Take 20 points as an example)

(Types) AF-10MR-A/10MR-D/10MR-E/10MT-D/10MT-E/10MT-GD  
AF-20MR-A/20MR-D/20MR-E/20MT-D/20MT-E/20MT-GD



## Relay output for AF series



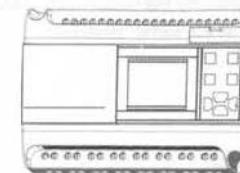
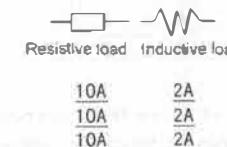
When the Max current is 10A,

The operations of the relay are up to 100,000 times

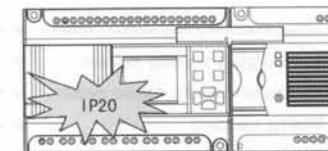
AF-20MR-A/AF-10MR-A  
AF-20MR-D/AF-10MR-D  
AF-20MR-E/AF-20MR-E



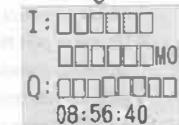
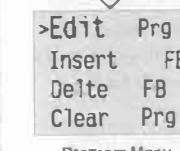
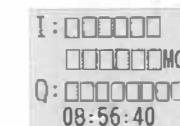
Danger! Hazardous voltage can cause electrical shock and fire. Please disconnect main power before operating equipment. You will find further information in the FAB manual.



When 25, the real-time clock keeps running up to 100 hours.

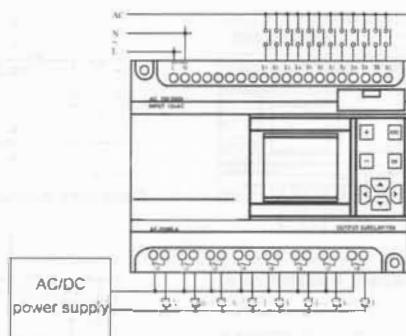


## Operation panel

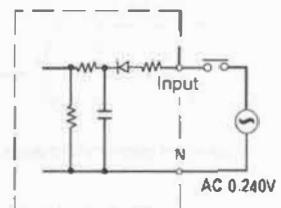


## AF-20MR-A/AF-10MR-A

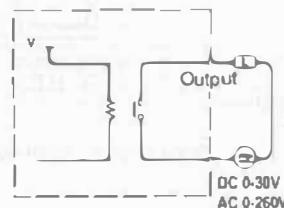
Rated voltage: AC100-240V      Main voltage operation range: AC85-260V  
 Digital input I1-IC: signal 0: AC 0-40V      Input current: <0.1mA  
                                         signal 1: AC 80-240V      Input current: ≤0.5mA  
 Q1-Q8: Relay output



Wiring diagram (digital input)



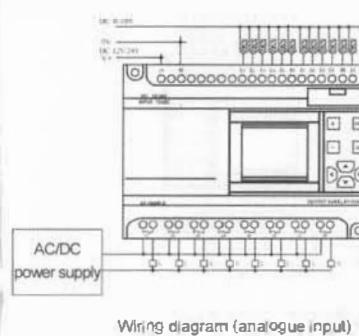
Equivalent diagram (digital input)



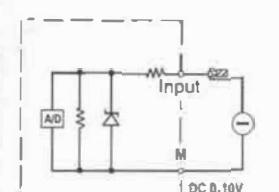
Equivalent diagram (relay output)

## AF-20MR-D/AF-10MR-D

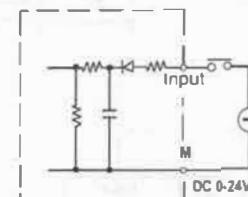
Rated voltage: DC12/24V      Main voltage operation range: DC10-28V  
 Digital input I1-IC: signal 0: DC 0-5V      Input current: <0.4mA  
                                         signal 1: DC 10-24V      Input current: ≤1mA  
 Analogue input I1-IC: DC 0-10V  
 Q1-Q8: Relay output



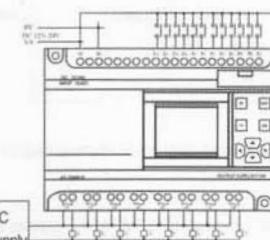
Wiring diagram (analogue input)



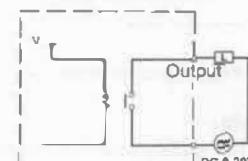
Equivalent diagram (analogue input)



Equivalent diagram (digital input)



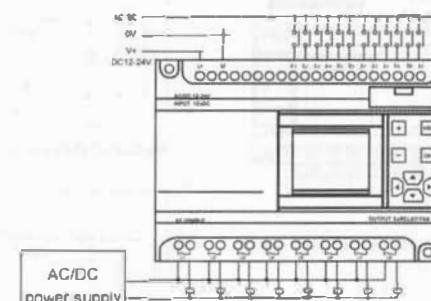
Wiring diagram (digital input)



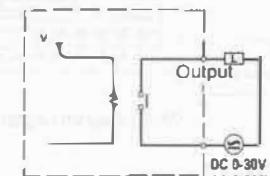
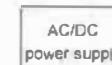
Equivalent diagram (digital input)

## AF-20MR-E/AF-10MR-E

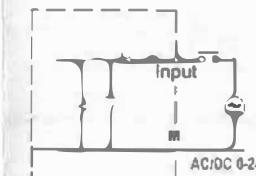
Rated voltage: AC14-20V/DC12-24V      Input current: <0.2mA  
 Main voltage operation range: AC12-24V/DC10-28V      Input current: ≤1mA  
 Digital input I1-IC: signal 0: AC/DC 0-5V  
                                         signal 1: AC12-24V/DC1024V  
 Q1-Q8: Relay output



Wiring diagram (digital input)



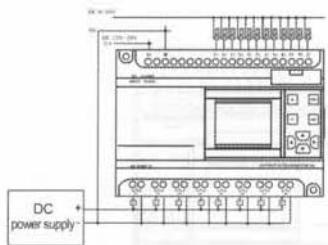
Equivalent diagram (relay output)



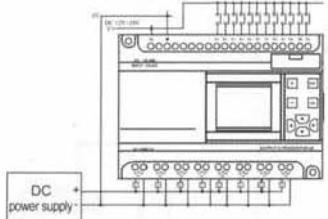
Equivalent diagram (digital input)

## AF-20MT-D/AF-10MT-D

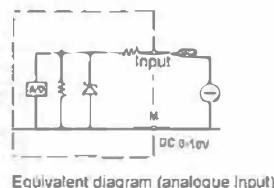
Rated voltage: DC12/24V  
 Digital input I1-IC: Signal 0: DC 0-5V  
 Signal 1: DC 10-24V  
 Analogue input I1-IC: DC 0-10V  
 Q1-Q8 Transistor output (equivalent NPN)



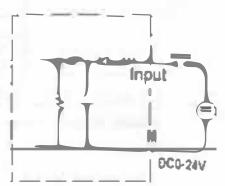
Wiring diagram (analogue input)



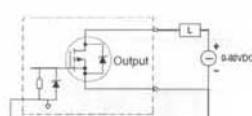
Wiring diagram (digital input)



Equivalent diagram (analogue input)



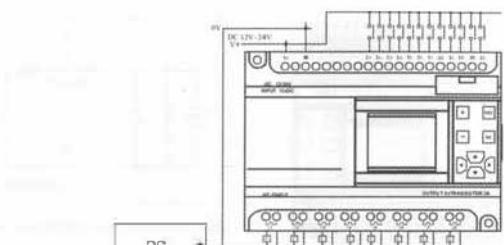
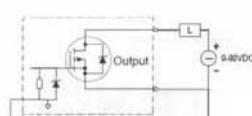
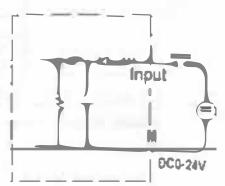
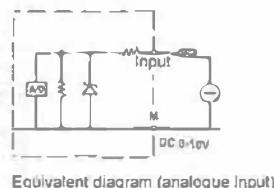
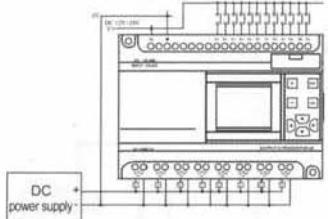
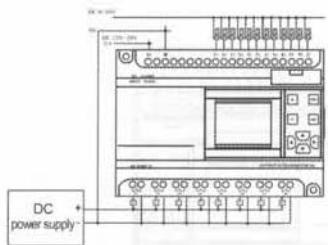
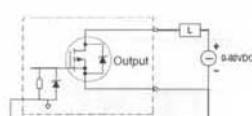
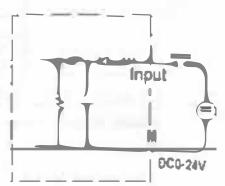
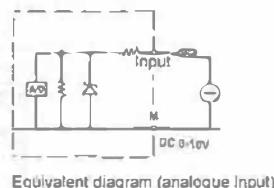
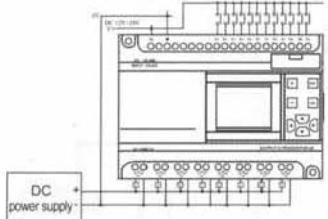
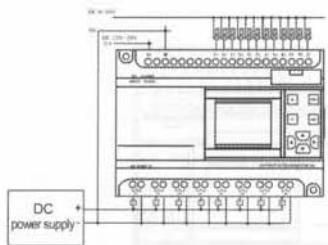
Equivalent diagram (digital input)



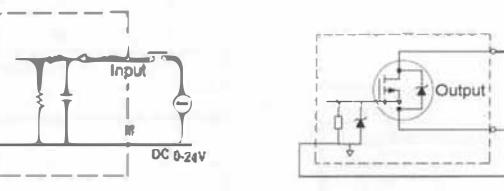
Equivalent diagram (P channel output)

## AF-20MT-E/AF-10MT-E

Rated voltage: DC12/24V  
 Main voltage operation range: DC10-28V  
 Input current: <0.4mA  
 Digital input I1-IC: Signal 0: DC 0-5V  
 Signal 1: DC 10-24V  
 Q1-Q8: Transistor output(equivalent NPN)



Wiring diagram (digital input)



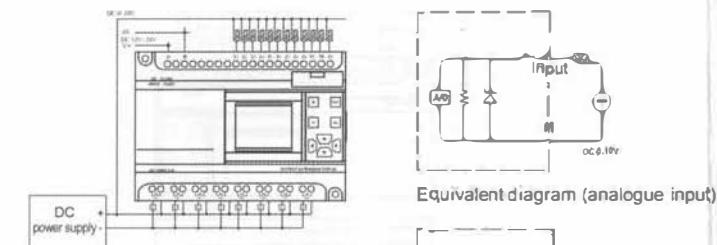
Wiring diagram (digital input)

### Note:

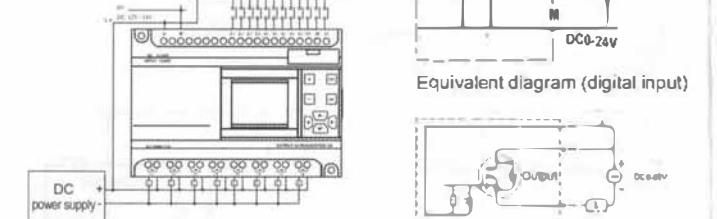
1. The negative pole "-" of the load should be connected to "M" of AF power supply.  
 Load must be connected to the positive pole "+" of DC power supply.
2. The voltage of the load should not be more than DC80V.

## AF-20MT-GD/AF-10MT-GD

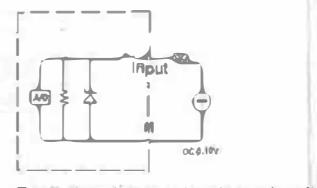
Rated voltage: DC12/24V  
 Main voltage operation range: DC10-28V  
 Input current: <0.4mA  
 Digital input I1-IC: Signal 0: DC 0-5V  
 Signal 1: DC 10-24V  
 Analogue I1-IC: DC 0-10V  
 Q1-Q8: Transistor output (equivalent PNP)



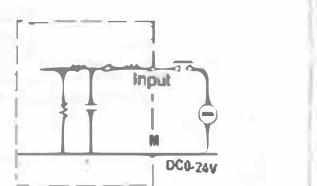
Wiring diagram (analogue input)



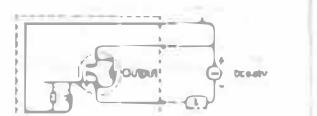
Wiring diagram (digital input)



Equivalent diagram (analogue input)



Equivalent diagram (digital input)

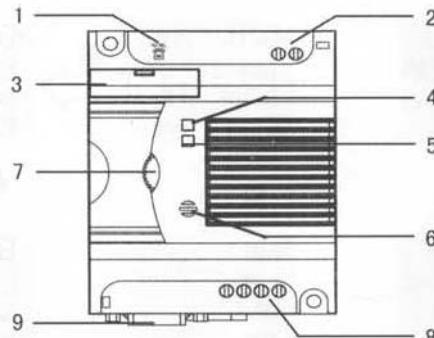


Equivalent diagram(N channel output)

### Note:

1. The positive pole "+" of the load should be connected to "L+" of AF power supply.  
 Load must be connected to negative pole "-" of DC power supply.
2. The voltage of the load should not be more than DC80V.

## The Voice Module

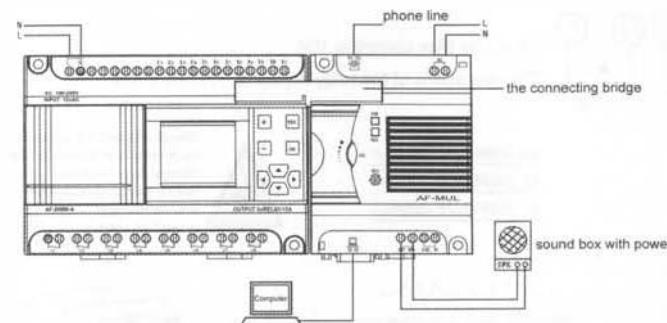


- 1. Socket of telephone crystal plug
- 2. Power terminals(AC100-240V/DC12-24V)
- 3. Connecting port with AF
- 4. Power indicator
- 5. Recording indicator
- 6. Recording microphone
- 7. Volume control switch (controls the volume of AF-MUL Speaker)
- 8. Terminal port for external speaker (it can be connected to an externally powered-speaker to amplify the voice. Its volume can not be controlled by 7 (Volume control switch))
- 9. Communication Port

### Note:

1. Section 0-3 are for the voice system. users can not record the four sections randomly.
2. The user shall record message in sequence from 0 to 98 without skipping. For example, it is impossible to record the third message after having recorded the first message. The user should record the third message after having recorded the second message.
3. All originally recorded messages within AF-MUL have to be deleted before commencing a new set of voice recordings. The 99th message does not indicate recording, but wiping away all of the recorded messages.

## Connection between the voice module and AF



### Note:

1. Please connect the Voice Module to AF with connecting bridge before you write or program. And you can edit program etc. through the communication between PC and the communication port of Voice Module.
2. After connecting AF to Voice Module, please electrify the Voice Module first, and then electrify AF, or electrify both of them at the same. otherwise, AF will not work normally.

## Application Scope

- |                                      |   |
|--------------------------------------|---|
| ★ Small machinery automation system  | ★ Agriculture irrigation & Lighting control |
| ★ Anti-burglary security system      | ★ Sewage disposal automation                |
| ★ Heating and air-conditioner system | ★ Home intelligent control system           |
| ★ Rolling billboard                  | ★ Factory school bell automation control    |
| ★ Fountain control system            | .....                                       |

## Connecting AF network

### Short network Wiring (Within 1.2KM)

