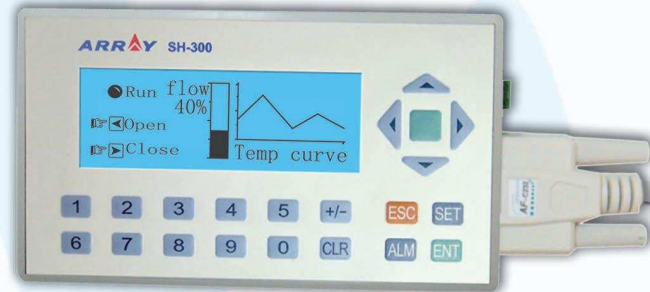
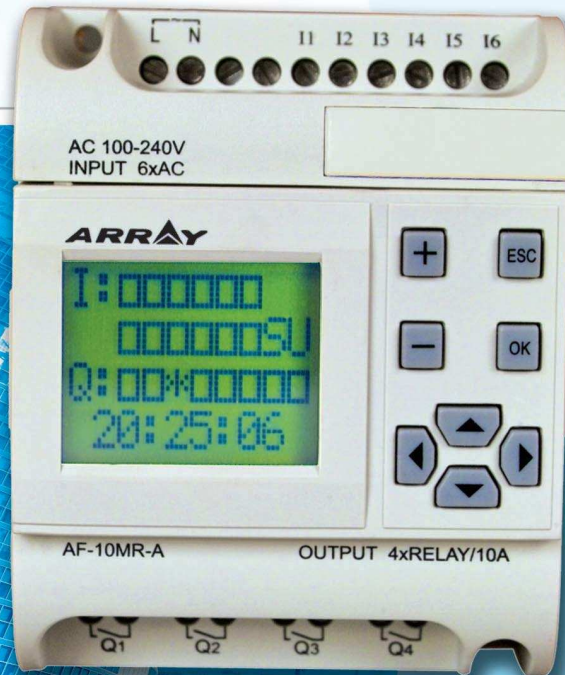


SMALL SIZE  
BIG UTILITY  
EVERYTHING IS POSSIBLE



**Intelligent  
Controller**




**FAB Giant**


Version: 3.0


# Selection Guide...


## AF Modules




	AF- 10 main modules			
	Type	Power supply	Input	Output
	AF- 10MR- A	AC100- 240V	6 points AC digital input	4 points relay output
	AF- 10MR- D	DC12- 24V	6 points DC input (with analog )	4 points relay output
	AF- 10MR- E	AC/DC12- 24V	6 points DC input (with analog )	4 points relay output
	AF- 10MT- D	DC12- 24V	6 points DC input (with analog )	4 points transistor (NPN) output
	AF- 10MT- GD	DC12- 24V	6 points DC input (with analog )	4 points transistor (PNP) output

	AF- 20 main modules			
	Type	Power supply	Input	Output
	AF- 20MR- A	AC100- 240V	12 points AC digital input	8 points relay output
	AF- 20MR- D	DC12- 24V	12 points DC input (with analog )	8 points relay output
	AF- 20MR- E	AC/DC12- 24V	12 points DC input (with analog )	8 points relay output
	AF- 20MT- D	DC12- 24V	12 points DC input (with analog )	8 points transistor (NPN) output
AF- 20MT- GD	DC12- 24V	12 points DC input (with analog )	8 points transistor (PNP) output	

	Text panel			
	Type	Power supply	Display	Communication interface
	SH300	DC12- 24V	4.3"STN(12 Characters * 4 Rows)	RS232/RS422/RS485
	SH200	DC12- 24V	4.3"STN(12 Characters * 4 Rows)	RS232

	Telephone voice module		
	Type	Power supply	Property
	AF- MUL- A	AC110- 220V	Telephone remote control, automatic dialing alarm and voice broadcasting
	AF- MUL- D	DC12- 24V	
AF- AUDRecording line			

	Switching power supply					
	Type	Output voltage	Output current	Type	Output voltage	Output current
	SP- 05AS	DC5V	6A	SP- 12AL	DC12V	6A
	SP- 12AS	DC12V	3A	SP- 24AL	DC12V	3A
	SP- 24AS	DC24V	1.5A	SP- 48AS	DC48V	0.75A
	SP- 05AL	DC12V	10A	SP- 48AL	DC48V	1.5A



# Selection Guide...

## Technical parameters

Type	AF- 10MR- A AF- 20MR- A	AF- 10MR- E AF- 20MR- E	AF- 10MT- E AF- 20MT- E	AF- 10MR- D AF- 20MR- D	AF- 10MT- D AF- 20MT- D	AF- 10MT- GD AF- 20MT- GD
<b>Power supply</b>						
Rated voltage	AC100- 240V	AC/DC12- 24V	DC12/24V	DC12/24V	DC12/24V	DC12/24V
Permitted voltage range	AC85- 260V	AC/DC10- 28V	DC10- 28V	DC10- 28V	DC10- 28V	DC10- 28V
Power consumption	3W/ 5W	3W/ 5W	1.5W/2W	3W/ 5W	1.5w/2W	1.5w/2W
<b>Input part</b>						
Digital input	Yes	Yes	Yes	Yes	Yes	Yes
Analog input	NO	NO	NO	Yes	Yes	Yes
Input voltage for Signal 0	AC0- 40V	AC0- 5V DC0- 5V	DC0- 5V	DC0- 5V	DC0- 5V	DC0- 5V
Input voltage for Signal 1	AC80- 240V	AC10- 24V DC10- 24V	DC10- 24V	DC10- 24V	DC10- 24V	DC10- 24V
Analog voltage	/	/	/	DC0- 10V	DC0- 10V	DC0- 10V
Input current for Signal 0	< 0.1mA	< 0.2mA	< 0.4mA	< 0.4mA	< 0.4mA	< 0.4mA
Input current for Signal 1	≤ 0.5mA	≤ 1mA	≤ 1mA	≤ 1mA	≤ 1mA	≤ 1mA
<b>Output part</b>						
Output type	Relay	Relay	Transistor (NPN)	Relay	Transistor (NPN)	Transistor (PNP)
Output voltage	AC0- 240V DC0- 30V	AC0- 240V DC0- 30V	DC0- 80V	AC0- 240V DC0- 30V	DC0- 80V	DC0- 80V
Output current	Resistance 10A Induction 2A	Resistance 10A Induction 2A	≤ 2A	Resistance 10A Induction 2A	≤ 2A	≤ 2A
<b>Switching frequency</b>						
Machine	10Hz					
Resistor load/Lamp load	2Hz					
Inductive load	0.5Hz					
<b>Environmental parameter</b>						
Working temperature	0°C~55°C					
Storage temperature	- 40°C~70°C					
Transport temperature	- 40°C~70°C					
Protection grade	IP20					
Anti- interference	EN55011(B class)					
Insulation strength	IEC1131					
25°C clock buffer	100h					
Real- time clock precision	Max ± 5s/day					
<b>Others</b>						
Timer	127					
Counter	127					
Function block	127					
Real- time clock control intervals	127					
Program memory	64k					
Dimensions	90× 71× 58(10点) / 90× 126× 58(20点)(Unit: millimeter)					
Mounting method	Standard 35mm DIN rail installation and screw fixing					

# Reliability...

## More possibility



● Switching power supply



● Sensor



● Text panel



● Communication cable



● Water Pump

### AF input

Support digital input and analog input such as pressure, liquid level, temperature, humidity and flow etc. And the received analog signal is DC0- 10V. The minimum accuracy: 0.1.

### Switching power supply

It should provide 5V, 12V, 24V and 48V, and their power are 36W and 72W respectively. AF power supply have AC 100- 240V, AC 14- 20V and DC12- 24V.

### ● Programming method: FBD

### ● Timers: 127

### ● Counters: 127

Real-time clock control intervals: 127

### ● Network function

Set different PLC addresses through RS-485 bus to realize network function, which breaks through the limitation of short distance operation. And it is able to realize data acquisition, saving and computer monitoring with SCADA software.

### ● Telephone remote control function

It can control PLC through telephone keys, and has voice broadcasting function making PLC become vivid.

### The battery terminals

Charge the external battery to realize UPS function.

### FAB Output

FAB output has relay output or transistor output. When it is relay output, the resistive load 10A, and inductive load 2A can be provided. Transistor output includes NPN and PNP. The maximum output current of transistor type is 2A.

### Removable display panel

This panel can be used for displaying the input/output status, as well as manual programming, modifying program parameters. It also can be connected to text panel to display the status and modify parameters more directly and clearly.

### The socket of telephone crystal plug

Plug into telephone wire to realize the telephone remote control function.

### Manual recording microphone

Speak into microphone to make sure the voice is recorded clearly.

### MUL power

AF-MUL power has AC100- 240V and DC12- 24V. It has the same optimum power configuration as AF main machine.

### Terminals for external speaker

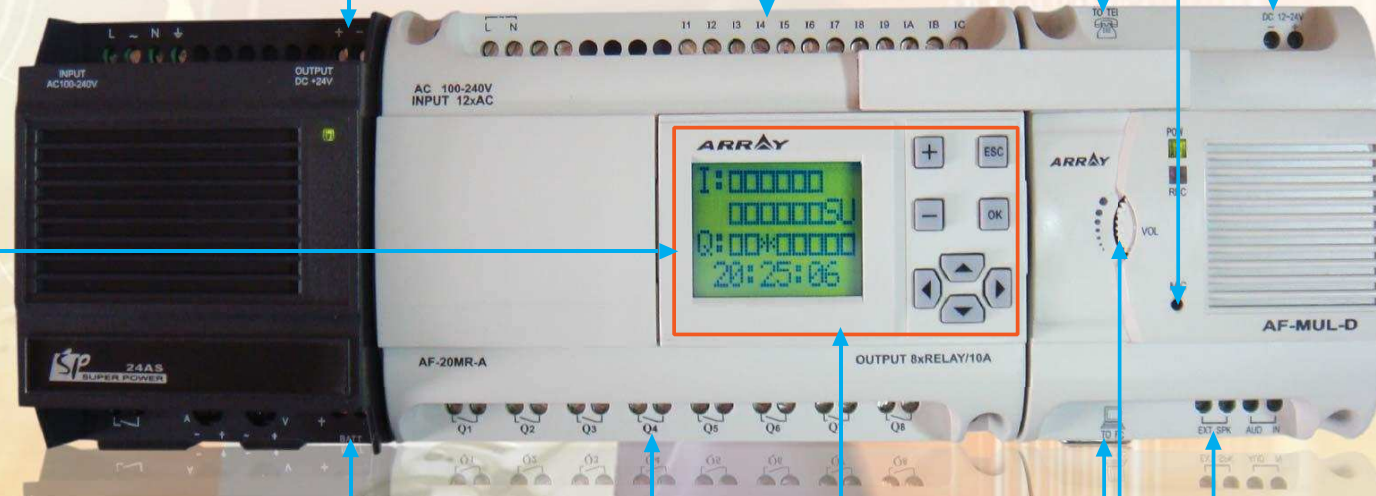
It can be connected to an external powered-speaker to amplify the voice. The volume is not under the control of " volume switch " .

### Volume switch

Adjusts the volume of AF- MUL speaker.

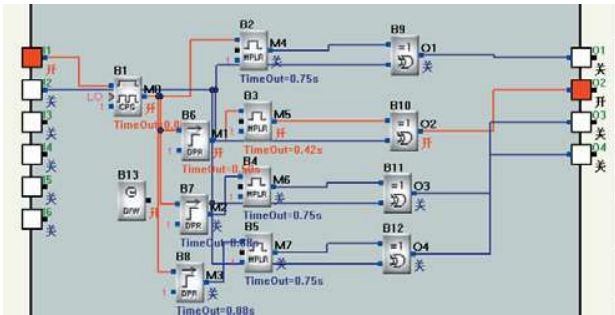
### Communication port

It can be connected to PC to program and monitor etc.



# Free Program and Installation...

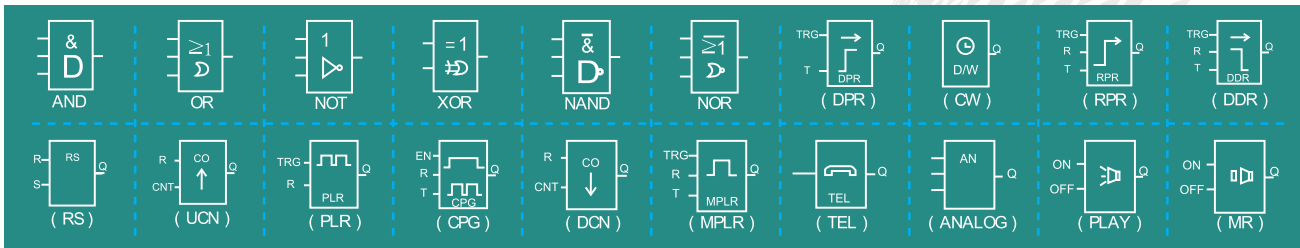
- Choose the flexible and efficient FBD language for programming. 127 function blocks can be processed at most.



## Quick program and Safe enough!

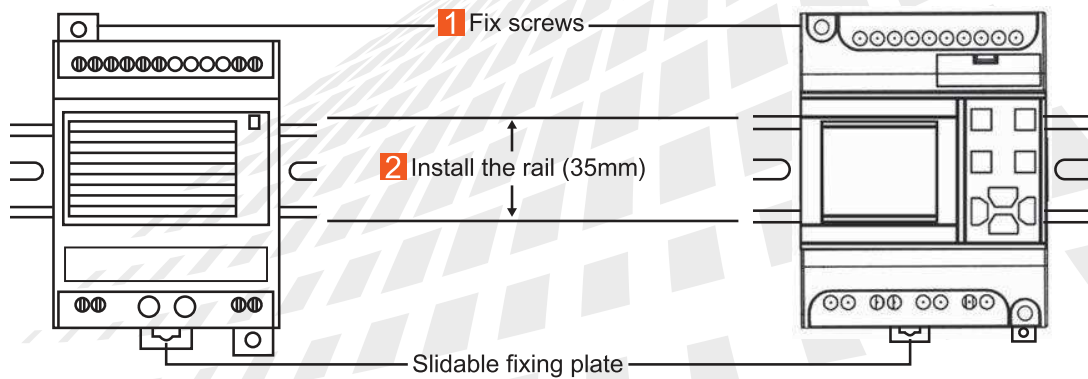
- \* **Simulation mode**  
It supports off- line simulation, and corrects the program easily to meet your requirements, which avoids many possible inconvenience existed in on- line testing.
- \* **Monitor mode**  
Check the input/output status during the running of your application program.
- \* **Online help**  
Please consult AF User` s Manual online.

## 20 Function blocks

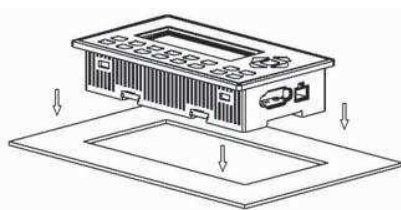


## SP switching power supply

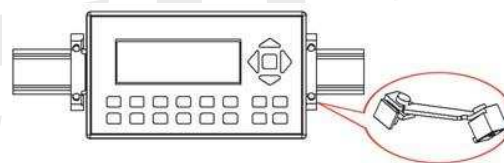
## AF PLC



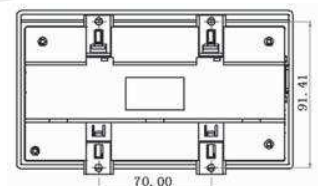
## Text panel



● Flush mounting



● DIN rail mounting



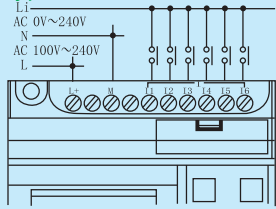
● Screw mounting



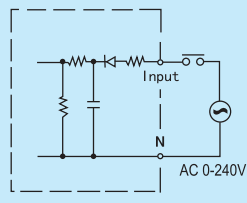
# Hardware Connections...

## Input connections

### Connections of digital input AC type

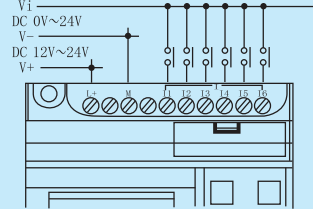


Wiring diagram

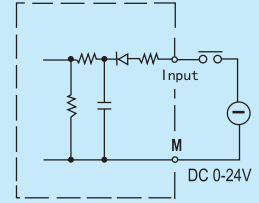


Equivalent diagram

### DC type

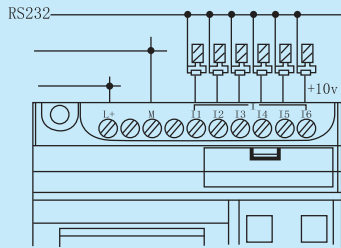


Wiring diagram

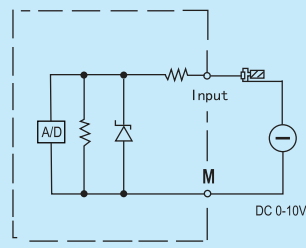


Equivalent diagram

### Connections of analog input (Only for DC type and the analog signal is DC 0-10V. Min. accuracy: 0.1)



Wiring diagram

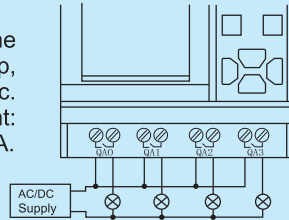


Equivalent diagram

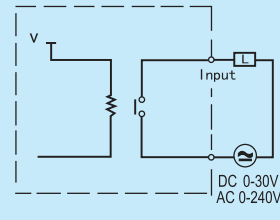
## Output connections

### Connections of relay output

Various loads can be connected to the output, such as incandescent lamp, fluorescent light, and contactor etc. The maximum supplied output current: resistive load: 10A, inductive load: 2A.



Wiring diagram

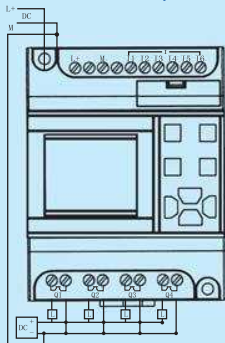


Equivalent diagram

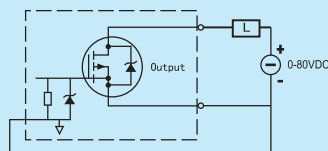
### Connections of transistor output

The load connected to AF of transistor type must have the following property:  
The maximum switching current is no more than 2A; Transistor type has NPN and PNP.

#### NPN transistor output



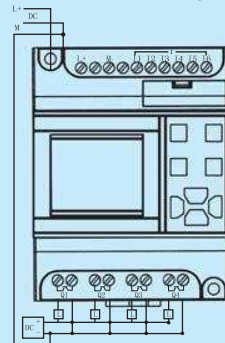
Wiring diagram



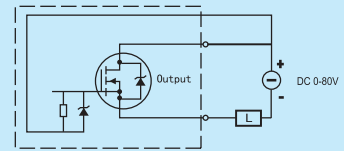
Equivalent diagram

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

#### PNP transistor output



Wiring diagram

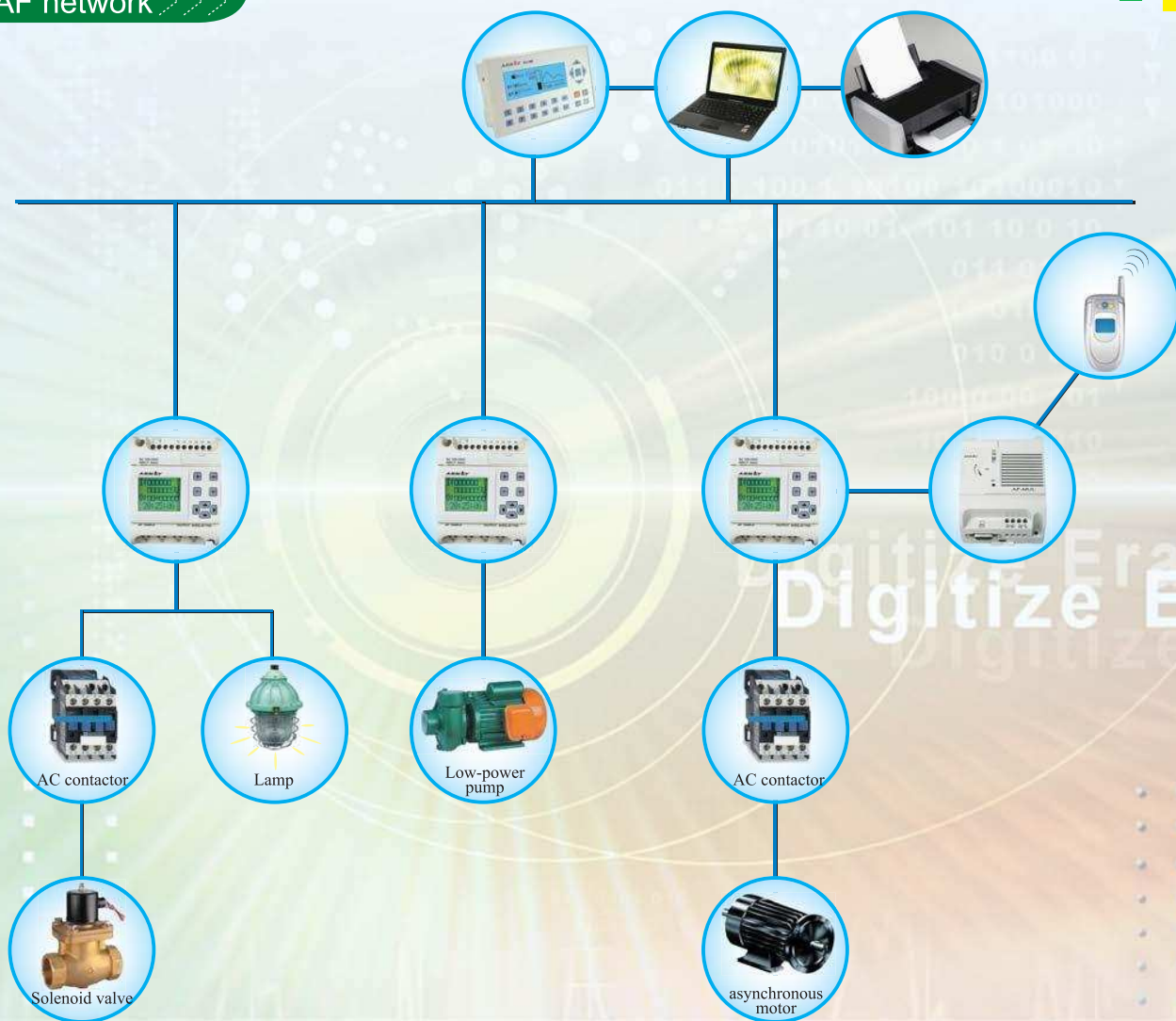


Equivalent diagram

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

# Monitoring Your Installation...

## AF network



## AF accessories

	<b>AF_LCD</b> The removable LCD for programming		<b>AF_C232/ AF_D232</b> Communication cable between AF and PC, realizing programming, simulating and slow monitoring from PC
	<b>AF_P485</b> The interface between PC and RS485 bus, realizing network function		<b>AF_C485/D485</b> The interface between AF and RS485 bus, realizing network function
	<b>AF_COPY</b> FAB program copy module		<b>AF_AUD</b> The microphone used for recording between audio card of PC and AF- MUL- A/D
	<b>AF_CMP</b> The communication cable connecting PC to the port of telephone voice module		<b>AF(SR)_USB</b> USB/RS232 Adapter
	<b>AF_S485</b> RS232/RS485 Adapter		<b>AF_DUSB</b> The communication cable between FAB and PC USB port

# Optimized Solutions for Your Applications

AF Series PLC enjoys wide applications, which can be used in industrial and mining enterprises, and in civil appliance. Its main applications include machinery tool automation, injection machine, printing machinery, textile machinery, packing machinery, conveyer belt, environmental protection equipment, elevator, and various production lines etc.



## Intelligent Components For Your Applications



*The whole developmental history of mini automation products*

