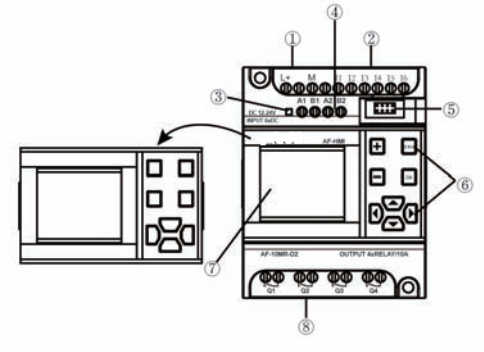


FAB2 PLC series

1.1 Structure of FAB2(take 10 point for instance)



① Power input
② Input terminals
③ Power indicator(blink once a second,red indicator)
④ 485 communication port
⑤ Program port
⑥ Operating keys
⑦ LCD display panel
⑧ Output terminals(relay or transistor)

1.2 Specification

Type	Type	Power	Input	Output
1	AF-10MR-A2	AC100-240V	6 points AC input	4 points relay output
2	AF-10MR-E2	AC/DC12-24V	6 points AC/DC input	4 points relay output
3	AF-10MT-E2	DC12-24V	6 points DC input	4 points transistor (NPN)output
4	AF-10MR-D2	DC12-24V	6 points DC input (with analog)	4 points relay output
5	AF-10MT-D2	DC12-24V	6 points DC input (with analog)	4 points transistor (NPN)output
6	AF-10MT-GD2	DC12-24V	6 points DC input (with analog)	4 points transistor(PNP)output



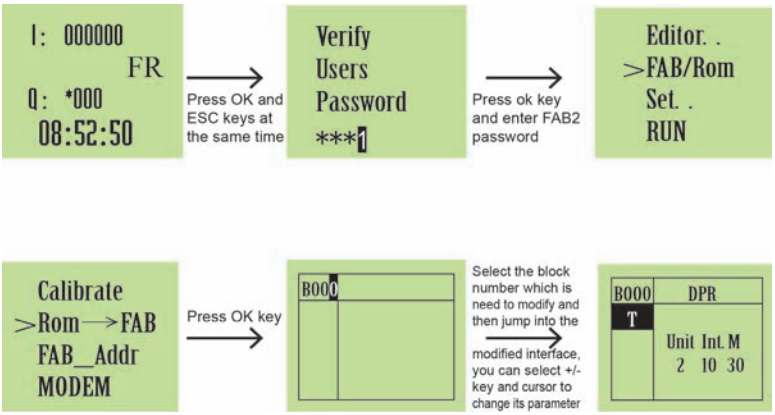
Type	Type	Power	Input	Output
7	AF-20MR-A2	AC100-240V	12 points AC input	8 points relay output
8	AF-20MR-E2	AC/DC12-24V	12 points AC/DC input	8 points relay output
9	AF-20MT-E2	DC12-24V	12 points DC input	8 points transistor (NPN)output
10	AF-20MR-D2	DC12-24V	12 points DC input (with analog)	8 points relay output
11	AF-20MT-D2	DC12-24V	12 points DC input (with analog)	8 points transistor (NPN)output
12	AF-20MT-GD2	DC12-24V	12 points DC input (with analog)	8 points transistor (PNP)output
13	AF-HMI	Removable HMI panel		
14	APB_DUSB	Download program cable(same as apb-dusb cable)		

1.3 Parameter changeI

Modify time parameters through HMI panel

Unit	1-hour;2-minute;4-second
Int	Integer part
M	Decimal part

Example:2 10 30 said 10.3minuts





1.4 Analog calibration

(1) Press OK and ESC simultaneously and enter FAB2 password to jump into the function interface, select FAB/ROM ok, and then press OK and → keys to calibration interface, each channel must be calibrated separately(AI0 said I1).

(2) When "minimum" is prompted, input voltage value to this channel. Press OK key to confirm, then success message will be prompted, and the input value will be identified by Vmin. When "maximum" is prompted, input maximum voltage value to this channel. Press OK key to confirm, then success message will be prompted, and the input value will be identified by Vmax. The input range for Vmin and Vmax is between 0V to 10V.

(3) After the analog has been calibrated successfully, FAB2 need to be cut off the power supply and then it is powered on.

(4) It is the same for the calibration of other channels. If the analog has been calibrated successfully, when using relevant analog function blocks, the analog input value (0V-10V) is not the actual input voltage value, but the calculation result of the math formula: (V input -Vmin) / (Vmax -Vmin)* 10.

1.5 485 interface

1) communication with sh300(A2B2)

Item	Content
SH-300 COM port	9 pin COM port
PLC COM port	485 interface(A2B2)
Default parameter	9600bps、8bits、1stop、none
Station No.	0-254, default value is 0
Communication method	485



The description of address types used in SH300 software:

Object type	Address type	Address range	Read/write	Description
Indicator	I	1～12	Read	Read input status
	Q	1～8	Read	Read output status
	M	The number of the corresponding auxiliary relays in FAB2 program (0～127)	Read	Read the output status of the function block in FAB2 program
Function key	Q	1～8	write	Write the status of empty output port(the output port that is not programmed in FAB2 program)
Dynamic text	I	1～12	Read	Read input analog value(DC type PLC)
	B	The number of the corresponding blocks in FAB2 program（1～128）	Read	Read the parameter value of the function block in FAB2 program
register	I	1～12	Read	Read input analog value
	B	The number of the corresponding blocks in FAB2 program（1～128）	Read	Read the parameter value of the function block in FAB2 program
			write	Write the parameter value of the function block in FAB2 program
Bar graph/ Trend line	I	1～12	Read	Read input analog value
	B	The number of the corresponding blocks in FAB2 program（1～128）	Read	Read the parameter value of the function block in FAB2 program



2) Modbus RTU(A1B1）

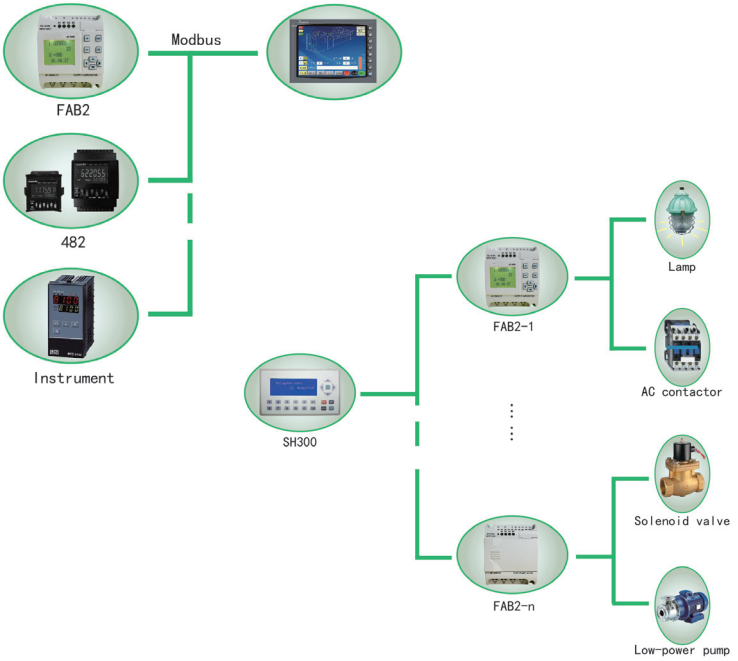
MODBUS RTU Introduction

Address type	R/W	Function code	remark
0X	Only read	01	Read system status (00-FF)
0X	Only read	01	Read digital inputs status (100-1FF)
4X	Only read	03	Read analog input AI status (300-3FF)
0X	Only read	01	Read output Q status (200-2FF)

Note 1:Fab2 is act as modbus slave device, which responds according to the requested data by modbus master device.

Note 2: Communication parameters:19200bps,8 data bits,1 stop bit and no parity.

3) Network



Mail:sales@yingselectric.com



1.6 Comparison table

		FAB	FAB2015
I/O points	Digital input	6/12	6/12
	Digital output	4/8	4/8
Memory		64k/127blocks	64k/127blocks
Supply voltage		DC12-24V/AC110-220V	DC12-24V/AC110-220V
Extension module		none	none
general characteristics			
Programming language		FBD	FBD
Timer number		127	127
Counter number		127	127
Password protection		yes	yes
25℃ RTC buffer		120h	160h
RTC accuracy		150s/month	20s/month
Program between new and old		shared	shared
Modify parameter on LCD		yes	yes
Manual programming on LCD		yes	no
LCD panel		Not shared	Not shared
Quick ii software		shared	shared
cable		Not shared	Same as apb cable
communication			
RS485		none	Two groups
isolation		none	none
Communication rate		9600	9600/19200
protocol		Self-defined protocol	Self-defined/modbus protocol
DI characteristics			
Input voltage range		AC85-265V/DC10-28V	AC85-265V/DC10-28V
isolation		none	none
AI characteristics			
AD resolution		8bits	10bits
Signal type		0-10v	0-10v
physical characteristics			
weight (g)		same	same
size (mm)		90*71*58	90*71*58
Working temperature		-20℃-70℃	-20℃-70℃
Storage temperature		-40℃-70℃	-40℃-70℃
humidity		5%~95% no condensation	5%~95% no condensation