

Samkoon PLC Introduction

Samkoon PLC includes FAT series PLC, FAs series PLC, FGR series MINI type PLC, FGs series basic type PLC, PRO and MAX series bus type PLC, GT series all-in-one machine. The product has powerful functions and abundant models. With independent intellectual property rights and rich engineering experience accumulated by the R&D team, Samkoon PLC can be customized to meet specific scenarios according to the diversified needs of users and the characteristics of specific automation processes.

FAT Series PLC:



FAs Series PLC:



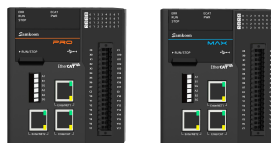
FGR Series MINI PLC:



FGs Series Standard PLC:



PRO Series Bus PLC:

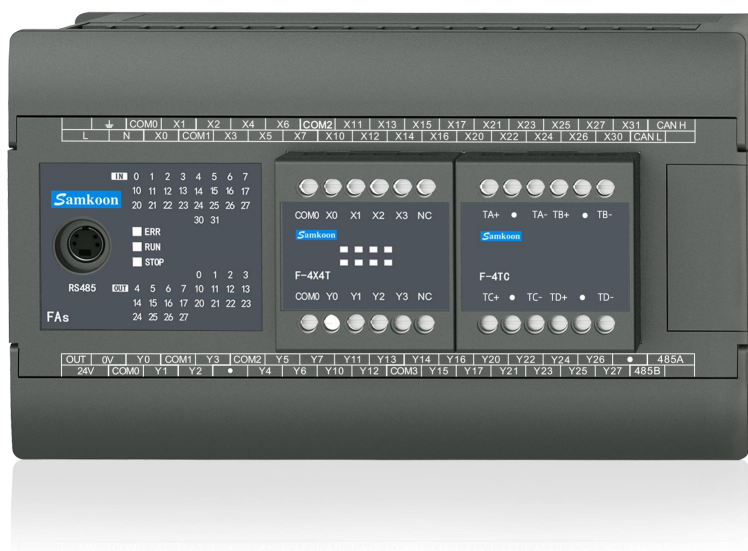


GT Series All-in-one (HMI+PLC) :



FAs Series PLC





FAs series PLC is a new generation of PLC launched by Samkoon Technology after years of research, combined with years of practical experience in PLC projects and digging deeply into industry needs.

Product Features

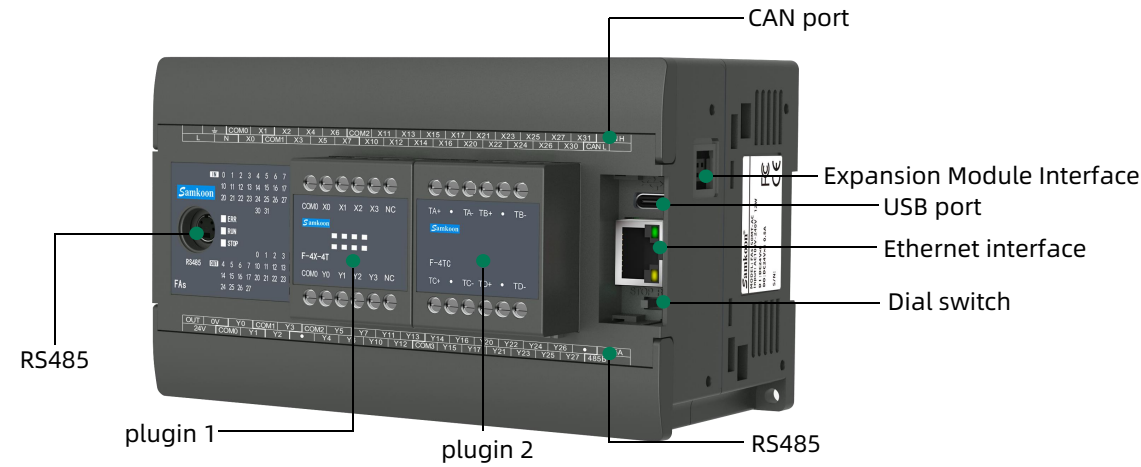
Powerful hardware and software configuration

- The hardware is based on the 32-bit micro-controller with Arm® Cortex®-M4 core, 200MHz main frequency, enhanced hardware anti-interference, stable response to grid power fluctuations, and ensuring continuous and efficient operation of the machine.
- Compiled underlying software guarantees a very short scan cycle, and its execution speed is more than 10 times that of interpreted PLC with the same configuration.



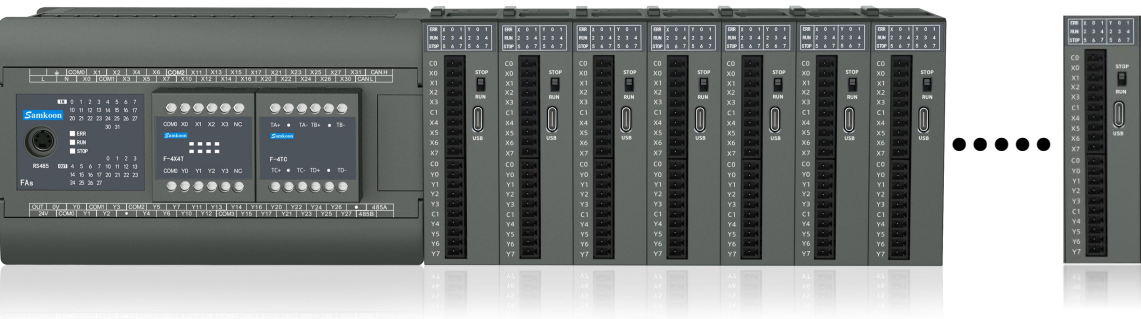
Abundant communication interface

- Ethernet interface, support Modbus TCP/IP protocol
- RS485 communication port, support Modbus RTU and free communication protocol
- 1 full speed USB download port
- Download, monitor and debug PLC from any communication port



Flexible and comprehensive performance

- Ethernet host supports 4-way high-speed pulse output, 8-way high-speed counting input, with powerful motion control function.
- Powerful instruction function
- Based on the right expansion module of CAN communication, the maximum communication rate can reach 1Mbps, and 64 expansion modules can be expanded.



Supports up to 64 expansion modules

- The expansion module can be used as an independent control unit to run the program



(S series extended modules)

- The front supports 2 small plug-in expansion modules, which can be combined with digital IO modules, analog modules, and temperature modules arbitrarily



The upgraded host software SamSoar2022

- Compile speed < 0.5 seconds, download speed < 3 seconds, and allow online editing of programs
- SamSoar2022 supports instruction list, function block diagram, SFC step ladder diagram programming, user UI is highly customized, contains rich PLC instructions, and function blocks can be written in C language
- The software adopts a compiled architecture to ensure that it cannot be decoded and the program cannot be cracked
- The software has rich compatibility with competing products, and can directly convert ladder diagram programs of the same category into display and control ladder diagrams
- PLC program can be downloaded through the display and control screen



(SamSoar2022)

Host naming rules

FAs

①

-

□

②

-

MT

③

-

A

④

-

C

⑤

-

E

⑥

①FAs: FAs series PLC

④A: AC power supply

②16: input/output in total 16 (8DI/8DO)
20: input/output in total 20 (12DI/8DO)
22: input/output in total 22 (12DI/10DO)
32: input/output in total 32 (16DI/16DO)
40: input/output in total 40 (22DI/18DO)
50: input/output in total 50 (26DI/24DO)
66: input/output in total 66 (34DI/32DO)

⑤C: compiled type

③MR: unitrelay output
MT/HT: Transistor output

⑥E: With Ethernet port
N: Without Ethernet port

Right extension module naming rules

S

①

-

E

②

-

8X

③

-

8T

④

-

C

⑤

①S: S series Expansion Module

④8T: 8 digital outputs
8R: 8-channel relay output
2AO: 2 analog outputs

②Default: main module with high-speed count/pulse output (4-way)
E: Without high-speed counter/pulse output

⑤C: With CAN port
M: Can only be used as a host, not as an expansion module
Default: Support RS485 communication

③8X: 8 digital inputs
4TC: 4-way thermocouple input
4PT: 4-way temperature measurement
4AI: 4 analog inputs

Note: S series expansion module is applicable to FAs and FAT series PLC.

Plug-in extension naming rules

F

①

-

2AI

②

-

1AO

③

①F: F series Plugin Extension

④8T: 8 outputs
1AO: 1 analog outputs
4R: 4-channel relay output

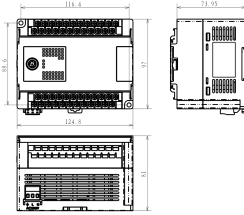
②8X: 8 inputs
4TC: 4-way thermocouple input
4PT: 4-way temperature measurement
2AI: 2 analog inputs

Note: F series plug-in expansion is applicable to FAs series PLC, GT series all-in-one machine.

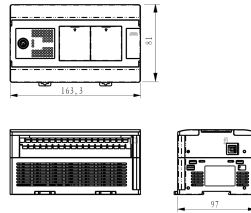
Product specifications

Model		FAs-32MT-AC-E	FAs-32MT-AC-N	FAs-32MR-AC-E	FAs-32MR-AC-N
Structure and environment	Size (mm)	125 × 97 × 81	125 × 97 × 81	125 × 97 × 81	125 × 97 × 81
	Weight (g)	500	500	500	500
	Working environment temperature	-20°C~55°C(no freezing)	-20°C~55°C(no freezing)	-20°C~55°C(no freezing)	-20°C~55°C(no freezing)
	Working environment humidity	5~95%RH(non-condensing)	5~95%RH(non-condensing)	5~95%RH(non-condensing)	5~95%RH(non-condensing)
	Shock resistance	10 ~ 25HZ (XYZ direction 2G/30 minutes)	10 ~ 25HZ (XYZ direction 2G/30 minutes)	10 ~ 25HZ (XYZ direction 2G/30 minutes)	10 ~ 25HZ (XYZ direction 2G/30 minutes)
Power supply	Power supply voltage	AC 100V ~ 240V	AC 100V ~ 240V	AC 100V ~ 240V	AC 100V ~ 240V
Input parameter	High-speed counter	2 single-phase(X0, X2) 200kHz 2 single-phase(X1, X3) 20kHz	2 single-phase(X0, X2) 200kHz 2 single-phase(X1, X3) 20kHz	2 single-phase(X0, X2) 200kHz 2 single-phase(X1, X3) 20kHz	2 single-phase(X0, X2) 200kHz 2 single-phase(X1, X3) 20kHz
	AB phase counter	2 AB phase count (X0X1, X2X3) 200kHz	2 AB phase count (X0X1, X2X3) 200kHz	2 AB phase count (X0X1, X2X3) 200kHz	2 AB phase count (X0X1, X2X3) 200kHz
	Digital input	16	16	16	16
	Input wiring	Supports SINK/SOURCE (sink/source), which can be converted by internal common terminal S/S and external common wiring	Supports SINK/SOURCE (sink/source), which can be converted by internal common terminal S/S and external common wiring	Supports SINK/SOURCE (sink/source), which can be converted by internal common terminal S/S and external common wiring	Supports SINK/SOURCE (sink/source), which can be converted by internal common terminal S/S and external common wiring
	Input signal voltage	DC24V±20%	DC24V±20%	DC24V±20%	DC24V±20%
Output parameters	Maximum inductive load	6W	6W	6W	6W
	Maximum resistance load	single point 0.3A, total point 1A	single point 0.3A, total point 1A	single point 2A, total point 4A	single point 2A, total point 4A
	Pulse output	4 channels up to 200KHz respectively	4 channels up to 200KHz respectively		
	Digital output	16	16	16	16
	Output Type	transistor/NPN	transistor/NPN	relay	relay
	The output voltage	24V	24V	24V	24V
Interface	RS485	2	2	2	2
	USB port	Support upload and download, online monitoring	Support upload and download, online monitoring	Support upload and download, online monitoring	Support upload and download, online monitoring
	Ethernet interface	YES	NO	YES	NO
	Front expansion slot	1	1	1	1
	Right expansion module	Supports up to 64 expansion modules	Supports up to 64 expansion modules	Supports up to 64 expansion modules	Supports up to 64 expansion modules
Other parameters	FCC compatibility	Compatibility Complies with FCC, Class A	Compatibility Complies with FCC, Class A	Compatibility Complies with FCC, Class A	Compatibility Complies with FCC, Class A
	high-voltage insulation test	Withstand voltage test 1000V AC, 1 minute	Withstand voltage test 1000V AC, 1 minute	Withstand voltage test 1000V AC, 1 minute	Withstand voltage test 1000V AC, 1 minute
	CE certification	Complies with EN55032 and EN55035 standards	Complies with EN55032 and EN55035 standards	Complies with EN55032 and EN55035 standards	Complies with EN55032 and EN55035 standards
	Protection class	IP30	IP30	IP30	IP30
	Software	SamSoar2022	SamSoar2022	SamSoar2022	SamSoar2022

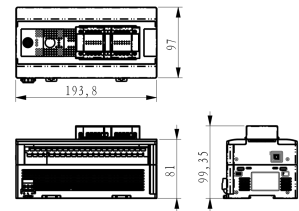
Product Size



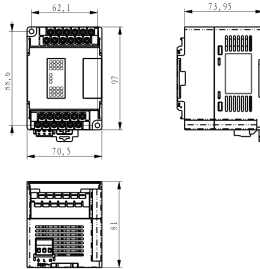
FAs-32MT-AC-E/FAs-32MT-AC-N
FAs-32MR-AC-E/FAs-32MR-AC-N



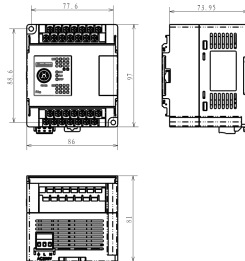
FAs-50MT-AC-E/FAs-50MT-AC-N
FAs-50MR-AC-E/FAs-50MR-AC-N



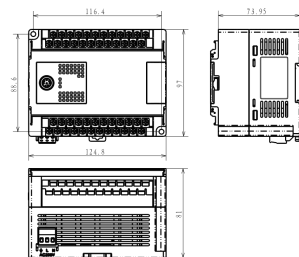
FAs-66MT-AC-E/FAs-66MT-AC-N
FAs-66MR-AC-E/FAs-66MR-AC-N



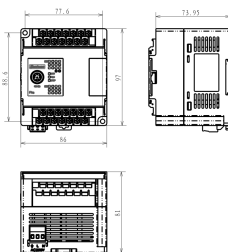
FAs-16MT-AC



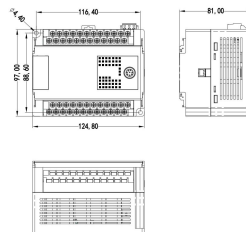
FAs-22HT-AC



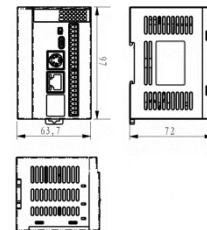
FAs-40HT-AC



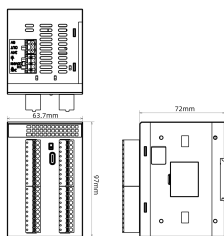
FAs-16HT-AC/FAs-20MR-AC/
FAs-20MT-AC



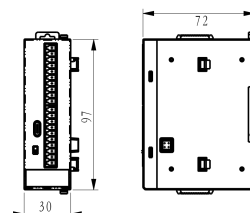
FAs-40MR-AC/FAs-40MT-AC



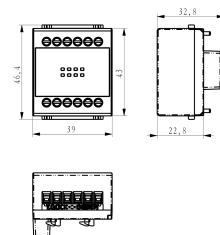
FAT-16MT-AC-E/FAT-16MT-DC-N



FAT-32MT-DC



S-E16T, S-E16T-C, S-16T, S-16T-M
S-E16X-C, S-E8X8T, S-E8X8T-C,
S-8X8T, S-8X8T-M, S-E8X8R,
S-E12R, S-E4TC4T, S-E4PT4T,
S-E4AI4T, S-E4AI2AO



F-4X4T/F-8X/F-8T/F-4R
F-4TC/F-4AI/F-4PT
F-2AI1AO/F-2AO

SamSoar 2022 (Programming Software)



SamSoar 2022 is a PLC programming software launched by Samkoon Technology based on more than 10 years of experience in industrial automation information technology and user needs and oriented to improve engineers' programming efficiency. The software features fast download and compilation; supports online editing of programs; supports writing function blocks in C language; supports UI style customization, etc.

Full command set coverage
of foreign counterparts



Function block diagrams, ladder diagrams,
instruction tables, sequential function
diagrams, arbitrary mode programming

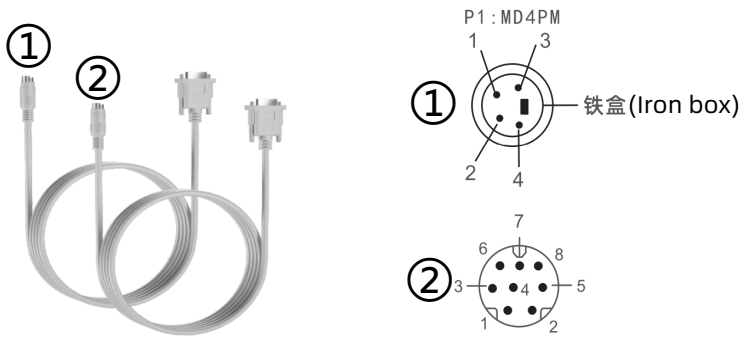


Step	Instruction	Comment
0	LDI	输入X0
1	ANDI	输入X1
2	LD	输入X2
3	AND	输入X3
4	OR	输入X4
5	AND	输入X5
6	LD	输入X6
7	AND	输入X7
8	LD	输入X8
9	AND	输入X9
10	LD	输入X10
11	AND	输入X11
12	LD	输入X12
13	AND	输入X13
14	LD	输入X14
15	AND	输入X15
16	LD	输入X16
17	AND	输入X17
18	LD	输入X18
19	AND	输入X19
20	LD	输入X20
21	AND	输入X21
22	LD	输入X22
23	AND	输入X23
24	LD	输入X24
25	AND	输入X25
26	LD	输入X26
27	AND	输入X27
28	LD	输入X28
29	AND	输入X29
30	LD	输入X30
31	AND	输入X31
32	LD	输入X32
33	AND	输入X33
34	LD	输入X34
35	AND	输入X35
36	LD	输入X36
37	AND	输入X37
38	LD	输入X38
39	AND	输入X39
40	LD	输入X40
41	AND	输入X41
42	LD	输入X42
43	AND	输入X43
44	LD	输入X44
45	AND	输入X45
46	LD	输入X46
47	AND	输入X47
48	LD	输入X48
49	AND	输入X49
50	LD	输入X50
51	AND	输入X51
52	LD	输入X52
53	AND	输入X53
54	LD	输入X54
55	AND	输入X55
56	LD	输入X56
57	AND	输入X57
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74	LD	输入X74
75	AND	输入X75
76	LD	输入X76
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79	AND	输入X79
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81	AND	输入X81
82	LD	输入X82
83	AND	输入X83
84	LD	输入X84
85	AND	输入X85
86	LD	输入X86
87	AND	输入X87
88	LD	输入X88
89	AND	输入X89
90	LD	输入X90
91	AND	输入X91
92	LD	输入X92
93	AND	输入X93
94	LD	输入X94
95	AND	输入X95
96	LD	输入X96
97	AND	输入X97
98	LD	输入X98
99	AND	输入X99

USB download cable

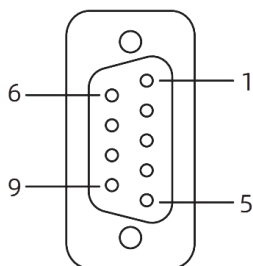
Product image	Corresponding product model
	FAT Series: FAT-16MT-DC-E, FAT-16MT-DC-N, FAT-32MT-DC FAs Series: FAs-66MT-AC-N, FAs-66MT-AC-E, FAs-66MR-AC-N, FAs-66MR-AC-E, FAs-50MT-AC-N, FAs-50MT-AC-E, FAs-50MR-AC-N, FAs-50MR-AC-E, FAs-32MT-AC-N, FAs-32MT-AC-E, FAs-32MR-AC-N, FAs-32MR-AC-E, FAs-20MT-AC, FAs-20MR-AC, FAs-40MR-AC, FAs-40MT-AC, FAs-16HT-AC Expansion Module : S-E16T, S-E16T-C, S-16T, S-16T-M, S-E16X-C, S-E8X8T, S-E8X8T-C, S-8X8T, S-8X8T-M, S-E8X8R, S-E12R, S-E4TC4T, S-E4PT4T, S-E4AI4T, S-E4AI2AO GT Series: GT-043-16MT, GT-070-32MT-G, GT-070-32MT, GT-070-32MT-8PT, GT-070-32MT-8PT-G, GT-070-30MR-G, GT-070-30MR, GT-070-32MT-8TC, GT-070-32MT-8TC-G, GT-070-26MR-1TC1AI, GT-070-26MR-1TC1AI-G, GT-070-23M-PTAIO
	FAs Series: FAs-40HT-AC, FAs-22HT-AC, FAs-16MT-AC, FAs-20MT-AC, FAs-20MR-AC, FAs-40MR-AC, FAs-40MT-AC PRO、MAX Series Bus PLC: PRO-C 16X16T A, MAX-C 16X16T A FGR Series: FGRB-C8X8T-2/2, FGRS-C8X8T-4/4, FGRB-C8X6R
	FGs Series: FGs-16MT-AC, FGs-16MR-AC, FGs-32MT-AC, FGs-32MR-AC, FGs-48MT-AC, FGs-48MR-AC, FGs-64MT-AC, FGs-64MR-AC

Communication Cable



illustrate:

- ①FAs series PLC、FAT series PLC Communication Cable
- ②FGR serie PLC、FGs serie PLC、FGm series PLC Communication Cable



DB9M(Male head)

SK series communication port 9-pin arrangement diagram of male seat

PIN	RS232	RS422	RS485
1			
2	RX		
3	TX		
4			
5	GND		
6		RX-	
7		RX+	
8		TX-	B-
9		TX+	A+

This port is used to connect PLC or other controllers with RS232/RS422/RS485 communication ports

- 1. The USB communication cable is used for uploading and downloading project filesf connecting the PC and the man-machine interface;
- 2.The communication cable connects the PLC and the man-machine interface to realize data communication, and the corresponding cable can be selected according to the PLC model used by the customer;

Note: Before using please read the product manual In detail.