

Samkoon

Shenzhen Samkoon Technology Corporation Ltd.

Industrial automation solution providers

PLC

Programmable logic controller

Product Selection Guide

- FAs Series PLC
- FGR Series MINI PLC
- FGs Series Standard PLC
- FGM Series Motion Controller PLC
- PRO series Bus PLC



About Samkoon Technology

Focus on the R&D and manufacturing of automation products, and provide complete solutions for Industry 4.0



Human Machine Interface

- SK Series
- EA Series



Control Unit

- FAS Series PLC
- FGR Series MINI PLC
- FGs Series Standard PLC
- FGm Series Motion Controller PLC
- PRO series Bus PLC



Drive Element

- R8 series servo driver
- Customized type

Step Drive

CHAIRMAN
ADDRESS



Shenzhen Samkoon Technology Co., Ltd. (referred to as "Samkoon Technology") was established in March 2007. It is a national high-tech enterprise, a dual-soft enterprise, and a "specialized, refined, and new" small and medium-sized enterprise in Shenzhen. The R&D center is located in the High-tech Park, Nanshan District, Shenzhen, and the production base is located in the Fashion Brand Industrial Park of the Shenzhen-Shantou Special Cooperation Zone.

Samkoon Technology has been deeply involved in the field of industrial automation for more than ten years, focusing on the research and development, production and sales of technology and products in the fields of industrial human-machine interface (HMI), programmable logic controller (PLC), servo drives, motion controllers and robots. All product software and hardware have 100% independent intellectual property rights. At present, Samkoon Technology has applied for a total of 82 national patents (including 57 invention patents), of which 36 have been authorized; applied for 32 software copyright registrations, all of which have been authorized.



发展历程

Company Development



2007

Samkoon founded and released 260000 true color LCD HMI series products

调研示范基地

2009

Honored as "Industrial Control Research Demonstration Base" by National Sciences and Technology regulatory Commission



2011

Awarded as "National High-tech Enterprise"



2012

Succeeded in the development of Samkoon PLC, and released compiled PLC after three years, which increases 10 times of scanning speed periodically



2017

Cooperated with HUST and built research base for postgraduates



2017

Held new product launch in Shenzhen Xilihu Conference Center to announce the dominance of having four core technologies of industrial control



2018

Signed cooperative agreement with THU and formally became the practice base for PhD students in automation



2019

Built 20000m² production plant in Shenzhen-Shantou cooperation zone, speed up in industrialization and standardization



2021

Samkoon Technology was elected as the governing unit of Shenzhen Advanced Manufacturing Federation



2022

Samkoon Technology has been recognized by Shenzhen "specialized, refined and new" small and medium-sized enterprises

Product layout

Human machine interface
SK, EA Series

Programmable logic controller
FAs, FGR, FGs, FGm, PRO Series

All-in-one (HMI+PLC)
GC Series



Servo driver
R8 series servo driver
HK series servo motor

Remote module
Samkoon cloud platform

By analyzing the
industry and customer



By deconstructing product
function and debugging



Discover the demand

Project design

Function customization

Trial production



With experiences and need



Including small amount production
for testing and debugging; and
optimization based on feedbacks
from factories and customers

400-606-9669

Service hotline

Engineers on-site debug

Focus on customer needs

More than 20 offices
nationwide

All over the country's
major provinces

A number of overseas
institutions

Products are exported to more
than 30 countries and regions

Contents

06 FAs Series PLC Summary

FAs Series Features
FAs Series Naming rules

07 FAs Series PLC Features

FAs Series Features
FAs Series Size
Power connection

09 FGR Series MINI PLC Summary

FGR Series Features
FGR Series Naming rules

10 FGR Series MINI PLC Features

FGR Series Features

11 FGR Series MINI PLC Digital Module Features

FGR Series Digital Module Features

12 FGR Series MINI PLC Analog Module Features

FGR Series Analog Module Features

13 Dimensions of FGR series main module and extension module

Power Connection

15 FGs Series Standard PLC Summary

FGs Series Product Features
FGs Series Naming Rules

16 FGs Series Standard PLC Features

FGS Series Features

18 FGs Series Standard PLC Extended Modules Features

FGs Series Digital Extended Module Features
FGs Series Analog Extended Module Features

20 Dimensions of FGs series basic PLC main module and expansion module

21 FGm Series Motion Controller PLC Summary

FGm Series Product Features
FGm Series Naming rules

22 FGm Series Motion Controller PLC Features

FGm Series Features
FGm Series Size

24 PRO series Bus PLC Summary

PRO Series Features
PRO Series Naming rules

25 PRO Series PLC Features

PRO Series Features
PRO Series Size

27 PLC Software (SamSoarII) introduction

Software Interface

28 PLC Optional Accessories For Series Products

Optional Accessories

29 National Office



FAs Series Features

1 Fast speed

- Compiled architecture executing the native code directly, more than 10 times faster than interpreted architecture

2 Fine security

- Upload, download, monitor the password, upload forbidden, file code, subprogram password, Function performance block code

4 Customization

- Customizing the products based on clients' needs and correspondent scenes, providing fast and considerable technical support

5 Price superiority of hardware

- 220v power supply, full choice of models, cost-effective

7 large storage

- Support more than 20,000 lines of users' program storage, no worries of space limitation
- Support 16 Kbyte power-off storage area

3 Flexible and comprehensive performance

- Pulse and high speed counting up to 200KHz frequency
- 2 pulse inputs for real-time speed and position control
- Support interpolation and electronic concave wheel function
- 2-4 high-speed counting, 1-2 AB phase counting
- Support multiple high-speed counting interrupt threshold

6 Various of communication interface

- Support RS232, RS485, USB, free port and modbus
- Modular extension and programmatic mapping strategy through the RS485 Modbus RTU master-slave mode to achieve networking

8 Clock accuracy

- The external real-time clock chip is used to make the clock more accurate

FAs Series Naming rules

FAs - **MR** - **A** **C**
 ① ② ③ ④ ⑤

① FAs: FAs series PLC

② 20: Input/output in total 20
40: Input/output in total 40

③ MR: elementary unit relay output
MT: elementary Transistor output

④ A: AC Power type

⑤ C: compiled type

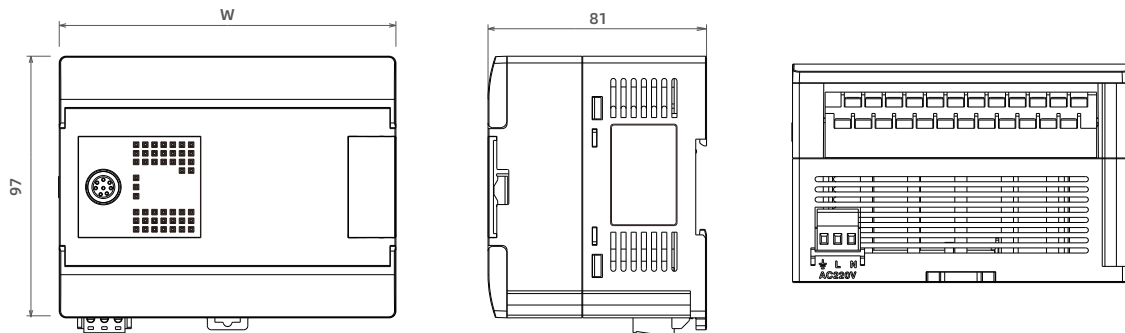
FAs series specification

Model	FAs-20MT-AC	FAs-20MR-AC	FAs-40MT-AC	FAs-40MR-AC
Structure and environment				
Size(mm)	86 × 97 × 81		124.8 × 97 × 81	
weight(g)	465		525	
Working environment temperature	-20°C~55°C (no freezing)			
Working environment tomatic humidity	5~95% (non-condensing)			
Shock resistance	10 ~ 25HZ (XYZ direction 2G/30 minutes)			
Power supply				
Power consumption (W)	2.6	3.2	4.2	5
Power supply voltage	AC 100V ~ 240V			
Input parameter				
High-speed counter	High-speed counting 2 channels up to 200KHz respectively			
AB that count	AB phase count 1 channel up to 200KHz			
Digital input	12		22	
Input 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%			
Output parameters				
Maximum inductive load	12VA	80VA	12VA	80VA
Maximum resistance load	single point 0.5A, total point 2A	single point 2A, total point 4A	single point 0.5A, total point 2A	single point 2A, total point 4A
Pulse output	Pulse output 2 channels up to 200KHz respectively		Pulse output 2 channels up to 200KHz respectively	
digital output	8		18	
Output Type	ransistor/NPN	relay	ransistor/NPN	relay
The output voltage	12-30VDC	AC220/DC24V	12 ~ 30VDC	AC220/DC24V
Interface				
RS485	RS485 2 supports seria			
USB port	Support upload and download, online monitoring			
Other parameters				
FCC compatibility	Compatibility Complies with FCC, Class A			
high-voltage insulation test	Withstand voltage test 1000V AC, 1 minute			
CE certification	Complies with EN55032 and EN55035 standards			
Protection class	IP30			
Software				
SamSoar II	SamSoar II			

FAs Series Size

Product Size

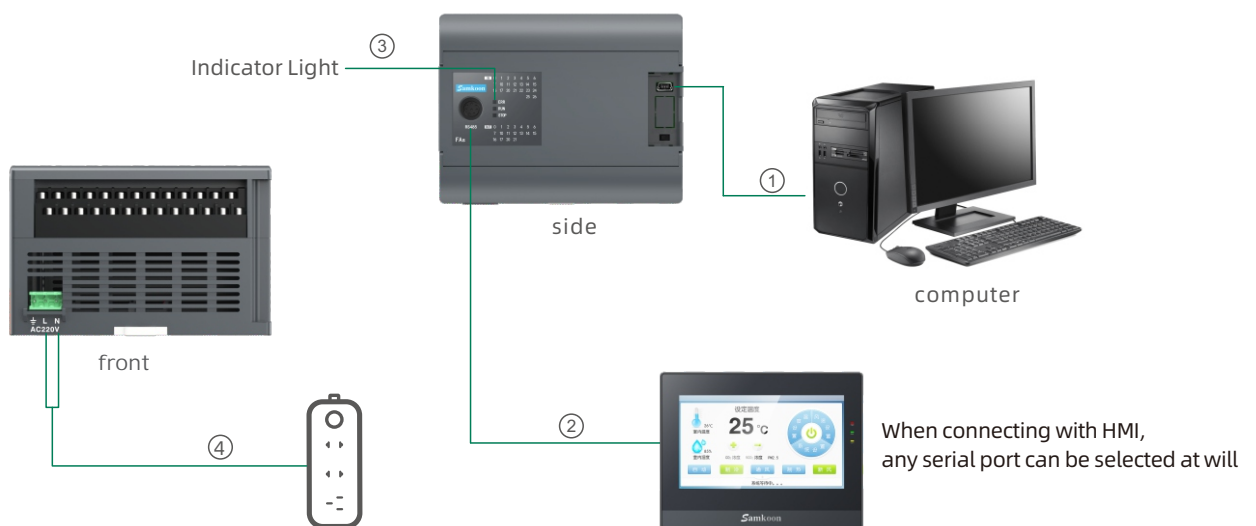
(Unit: mm)



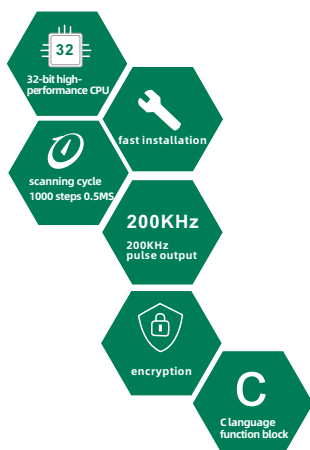
Installation: 35mm wide DIN rail installation, or direct installation

Power connection

When the Samkoon FAs series PLC is in use, it needs AC 220V AC power supply, and the connection with HMI and PC can be connected as shown in the figure below



- ① Programming line
- ② Communication line
- ③ Indicator light
- ④ 220V power supply



FGR Series Features

1 High speed

- Compiled architecture executing the native code directly, more than 10 times faster than interpreted architecture

2 Fine security

- Upload, download, monitor the password, CPU, upload forbidden, file code, subprogram password, Function performance block code
- Machine code download, can not compile reversely

4 Customization

- Customizing the products based on clients' needs and correspondent scenes, providing fast and considerable technical support

6 Various of communication interface

- Support RS232, RS485, USB, free port and modbus

8 Clock accuracy

- The external real-time clock chip is used to make the clock more accurate

3 Flexible and comprehensive performance

- Pulse and high speed counting up to 200KHz frequency
- Pulse inputs for real-time speed and position control
- Support interpolation and CAD import function, and electronic concave wheel function
- 2-4 high-speed counting, 1-2 AB phase counting, support multiple speed counting mode
- Support multiple high-speed counting interrupt threshold
- Support 3 extended modules and 1 IO extensions

5 Price superiority of hardware

- 24v power supply, small dimension, suitable for narrow space, cost-effective

7 Large storage

- Support more than 20,000 lines of users' program storage, no worries of space Limitation Support 16 Kbyte power-off storage area

FGR Series Naming Rules



① FGR: Mini-type product

② B: Basic CPU
S: High-performance CPU
E: Network model

③ C: Main control MCU modu

④ 8X: 8-transistor pulse input
8T: 8-transistor pulse output

⑤ 2: 2 High speed input
4: 4 High speed input

⑥ 2: 2 High speed output
4: 4 High speed output

FGR Series MINI PLC Specifications

FGR Series Features

Model	FGRB-C8X8T-2/2	FGRS-C8X8T-4/4	FGRB-C8X6R
Structure and environment			
Size(mm)	25.2 × 92 × 63.4		
weight(g)	102		
Working environment temperature	-20°C~55°C (no freezing)		
Working environment automatic humidity	5~95% (non-condensing)		
Shock resistance	10 ~ 25HZ (XYZ direction 2G/30 minutes)		
Power supply			
Power consumption (W)	1.5		
Power supply voltage	DC24V ± 20%		
Input parameter			
Digital input	8		
Input 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%		
High-speed counter	High-speed counting 2 channels up to 200KHz respectively	High-speed counting 2 channels up to 200KHz respectively	无
AB that count	AB phase count 1 channel up to 200KHz	AB phase count 2 channel up to 200KHz	无
Output parameters			
Digital output	8		6
Output Type	transistor/NPN		relay
The output voltage	6~30VDC		<250VAC, 30VDC
Pulse output	Pulse output 2 channels up to 200KHz respectively	Pulse output 4 channels up to 200KHz respectively	NO
Maximum inductive load	12VA		80VA
Maximum resistance load	single point upto 0.3A		single output 2A, single end 4A
Other parameters			
FCC compatibility	Compatibility Complies with FCC, Class A		
high-voltage insulation test	Withstand voltage test 1000V AC, 1 minute		
CE certification	Complies with EN55032 and EN55035 standards		
Protection class	IP30		
Interface			
RS232	One MINI 232 port, support upload and download, monitoring, serial port communication Baud rate: 1200Bps ~ 115200Bps		
RS485	RS485 One MINI 485 interface for downloading, monitoring an serial portcommunication; Baud rate:1200Bps~115200Bps		
Ethernet	No		
USB port	Support upload and download, online monitoring		
Software			
SamSoar II	SamSoar II		

FGR Series Digital Module Features

Model	A-E16T FGR-E16T	A-E16X FGR-E16X	A-E12R FGR-E12R	A-E8X8T FGR-E8X8T	A-E8X8R FGR-E8X8R
Structure and environment					
Size(mm)	25.2 × 92 × 63.4				
weight(g)	102				
Working environment temperature	-20°C~55°C (no freezing)				
Working environment automatic humidity	5~95% RH (non-condensing)				
Shock resistance	10 ~ 25HZ (XYZ direction 2G/30 minutes)				
Power supply					
Power consumption (W)	1.5				
Input parameter					
Digital input		16		8	
Input wiring	Supports SINK/SOURCE (sink/source), which can be converted by internal common terminal S/S and external common wiring				
input signal voltage		24VDC±20%		24VDC±20%	
Output parameters					
Digital output	16		12	8	
Output Type	ransistor/NPN		relay	ransistor/NPN	relay
The output voltage	6~30VDC		<250VAC,30VDC	6~30VDC	<250VAC,30VDC
Maximum inductive load	12VA		80VA	12VA	80VA
Maximum resistance load	single point uptp 0.3A		single output 2A, single end 4A	single point uptp 0.3A	single output 2A, single end 4A
Other parameters					
FCC compatibility	Compatibility Complies with FCC, Class A				
high-voltage insulation test	Withstand voltage test 1000V AC, 1 minute				
CE certification	Complies with EN55032 and EN55035 standards				
Protection class	IP30				
Software					
SamSoar II	SamSoar II				

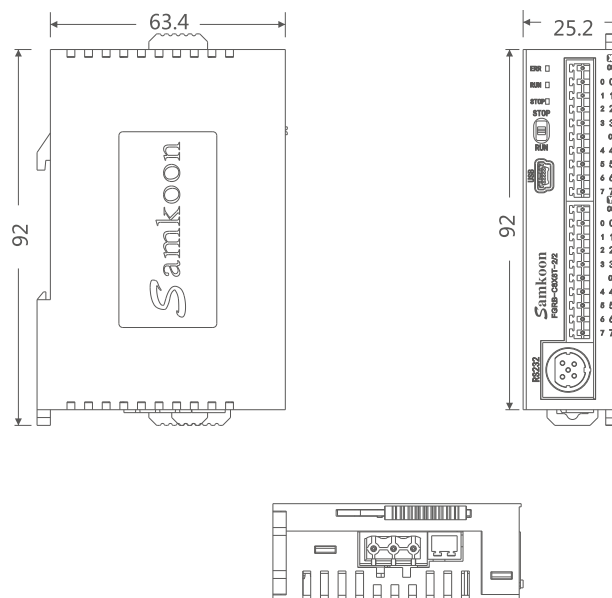
FGR Series MINI PLC Analog Module Features

FGR Series Analog Module Features

Model	FGR-E4AI2AO	FGR-E4AI	FGR-E8AI	FGR-E2AO	FGR-E4TC
Structure and environment					
Size(mm)	25.2 × 92 × 63.4				
weight(g)	102				
Working environment temperature	0°C~55°C (no freezing)				
Working environment automatic humidity	5~95%RH (non-condensing)				
Shock resistance	10 ~ 25HZ (XYZ direction 2G/30 minutes)				
Power supply					
Power consumption (W)	2	1.5			0.5
Input parameter					
Analog input	4		8		4
Input model	Voltage/current measurement				Electric resistance PT100 K type,Y type thermal resistance couple
Measuring range	0~5V ,0~10V, 4~20mA				-200°C ~+850°C
Maximum output range	12V,30mA				
Maximum resolution	0~5V: 1.25mV; 0~10V: 2.5mV; 4~20mA: 5uA				0.1°C
Digital to analog conversion accuracy	12 bit				16 bit
Overall measurement accuracy	±5‰				±1°C
Output parameters					
Analog output	2			2	
Output model analog output	Current/Voltage			Current/Voltage	
Output range	0~5V ,0~10V, 4~20mA			0~5V ,0~10V, 4~20mA	
Maximum resolution	0~5V : 1.25mV 0~10V: 2.5mV 4~20mA : 5uA			0~5V : 1.25mV 0~10V: 2.5mV 4~20mA : 5uA	
output accuracy	±5‰			±5‰	
Output load impedance	≥1KΩ@10V ≥500Ω@5V ≤500Ω@20mA			≥1KΩ@10V ≥500Ω@5V ≤500Ω@20mA	
Other parameters					
FCC compatibility	Compatibility Complies with FCC, Class A				
high-voltage insulation test	Withstand voltage test 1000V AC, 1 minute				
CE certification	Complies with EN55032 and EN55035 standards				
Protection class	IP30				
Software					
SamSoar II	SamSoar II				

FGR Series Size

■ Product Size

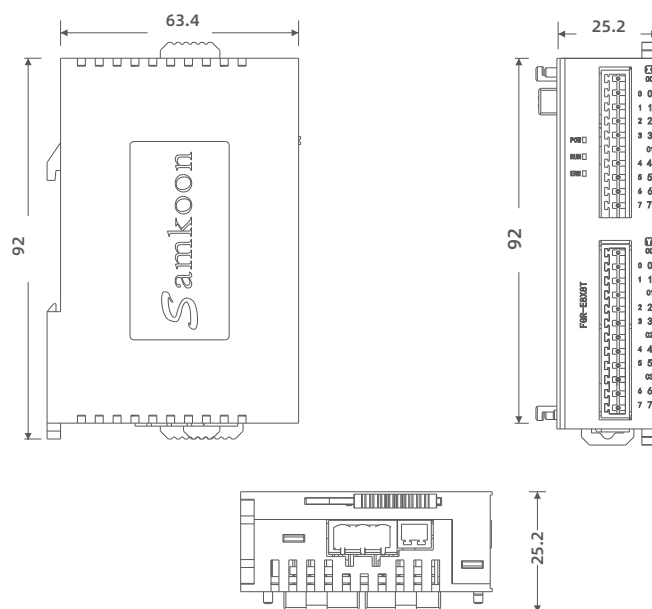


(Unit: mm)

Installation: 35mm wide DIN rail installation, or direct installation

FGR Series Digital Expansion Module Size

■ Product Size



(Unit: mm)

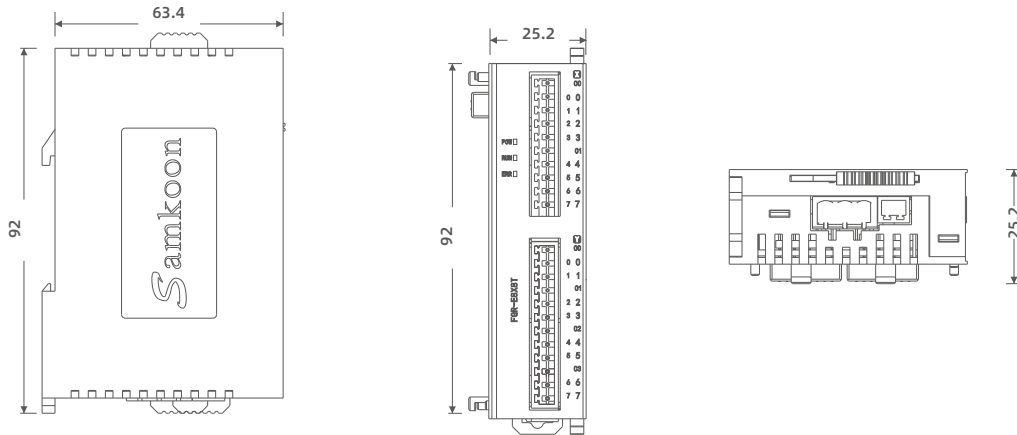
Installation: 35mm wide DIN rail installation, or direct installation

Dimensions of FGR series main module and extension module

三 FGR Series Analog Module Size

■ Product Size

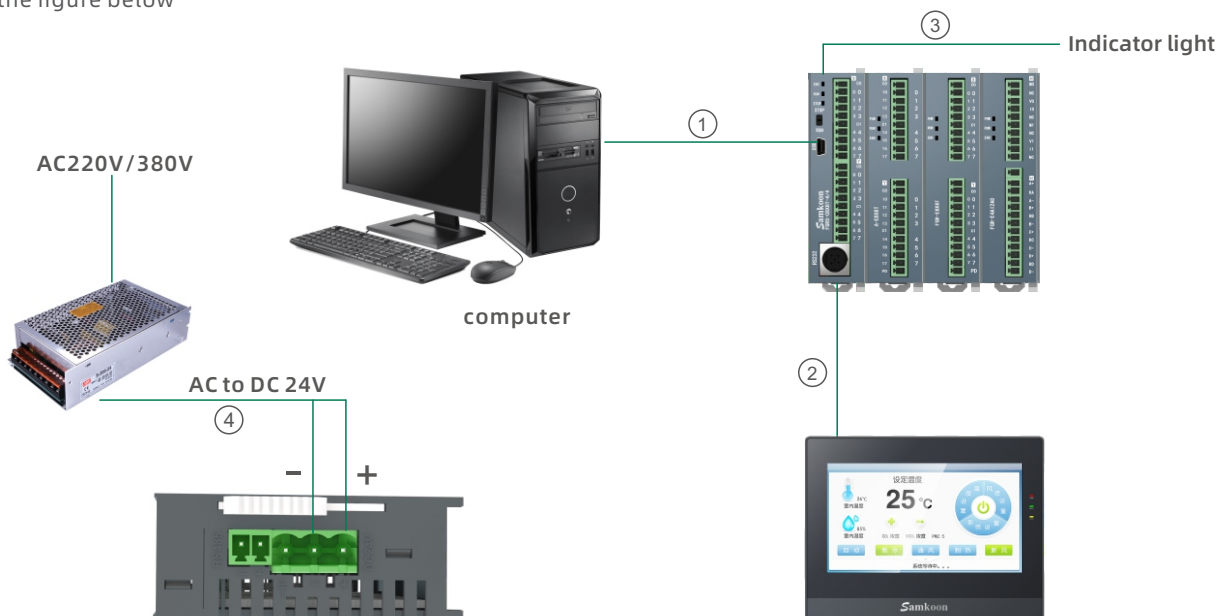
(Unit: mm)



Installation: 35mm wide DIN rail installation, or direct installation

四 Power Connection

When Samkoon FGR series PLC is in use, it needs AC 220V AC power supply, and the connection with HMI and PC can be connected as shown in the figure below



When connecting with HMI, you can choose any serial port at will

- ① Programming line
- ② Communication line
- ③ Indicator light
- ④ 24V DC power supply



— FGs Series Features

1 High Speed

- Compiled architecture executing the native code directly, more than 10 times faster than interpreted architecture

2 Fine security

- Upload download, monitor the password,CPU, upload forbidden,file code,subprogram password,Function performance block code

4 Customization

- Customizing the products based on clients' needs and correspondent scenes, providing fastand considerable technical support

5 Price superiority of hardware

- 220v power supply, full choice of models, cost-effective

7 Large storage

- Support more than 20,000 Lines of users' program storage, no worries of space limitation
- Support 16 Kbyte power-off storage area

3 Flexible and comprehensive performance

- Pulse and high speed counting upto200KHz frequency
- 2-4 pulse inputs for real-time speed and position control
- Support interpolation and electronic concave wheel function
- 2-4 high-speed counting, 1-2 AB phase counting, support multiple speed counting mode
- Support multiple high-speed counting interrupt threshold
- Support 8 extended modules

6 Various of communication interface

- Support RS232, RS485, USB, free port and modbus
- Modular extension and programmatic mapping strategy through the RS485 Modbus RTU
- Master-slave mode to achieve networking, up to connection with 127 communication devices

8 Clock accuracy

- The external real-time clockchip is used to make the clock more accurate

— FGs Series Naming Rules

FGs - **MR** - **A** **C**

① ② ③ ④ ⑤

① FGs: basic series PLC

④ A: AC Power type

② 16: Input/output in total 16
32: Input/output in total 32
48: Input/output in total 32
64: Input/output in total 64

⑤ C: Compiled type

③ MR: elementary unitrelay output
MT: elementary Transistor output

FGs Series Standard PLC Specifications

FGs Series Features

Model	FGs-16MR-AC	FGs-16MT-AC	FGs-32MR-AC	FGs-32MT-AC
Structure and environment				
Size(mm)	109.5 × 92 × 80		147.6 × 92 × 80	
weight(g)	465	454	590	563
Working environment temperature	0℃~55℃ (no freezing)			
Working environment automatic humidity	5~95% (non-condensing)			
Shock resistance	10 ~ 25HZ (XYZ direction 2G/30 minutes)			
Power supply				
Power consumption (W)	3.2	2.6	5.2	3
Power supply voltage	AC 100V ~ 240V			
Input parameter				
High-speed counter	High-speed counting 2 channels up to 200KHz respectively			
AB phase counter	AB phase count 1 channel up to 200KHz			
Digital input	8		16	
Input 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%			
Output parameters				
Maximum inductive load	80VA	12W	80VA	12W
Maximum resistance load	single output 2A, single end 4A	single output 0.5A, single end 2A	single point 0.5A, total point 2A	0.5/high speed up to 200KH (Y0/Y1.) respectively; 0.2A/low speed10KHz (Y2-Y7) , concurrent no more than 3A
Pulse output		Pulse output 2 channels up to 200KHz respectively		Pulse output 2 channels up to 200KHz respectively
Digital output	8		16	
Output Type	Relay	Ransistor/NPN	Relay	Ransistor/NPN
The output voltage	< 250VAC, 30VDC	6 ~ 30VDC	< 250VAC, 30VDC	6 ~ 30VDC
Interface				
RS232	One mini232 port, support upload and download, monitoring, serial port communication Baud rate: 1200Bps ~ 115200Bps			
RS485	One RS485 support serial port communication Baud rate: 4800Bps ~ 115200Bps			
USB port	Support upload and download, online monitoring			
Other parameters				
FCC compatibility	Compatibility Complies with FCC, Class A			
high-voltage insulation test	Withstand voltage test 1000V AC, 1 minute			
CE certification	Complies with EN55032 and EN55035 standards			
Protection class	IP30			
Software				
SamSoar II	SamSoar II			

FGs Series Features

Model	FGs-48MR-AC	FGs-48MT-AC	FGs-64MR-AC	FGs-64MT-AC
Structure and environment				
Size(mm)	185.7 × 92 × 80		216 × 92 × 80	
weight(g)	710		831	769
Working environment temperature	0°C~55°C (no freezing)			
Working environment automatic humidity	5~95% (non-condensing)			
Shock resistance	10 ~ 25HZ (XYZ direction 2G/30 minutes)			
Power supply				
Power consumption (W)	6	3.4	6.8	3.6
Power supply voltage	AC 100V ~ 240V			
Input parameter				
High-speed counter	High-speed counting 4 channels up to 200KHz respectively			
AB phase counter	AB phase count 2 channel up to 200KHz			
Digital input	24		32	
Input 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%			
Output parameters				
Maximum inductive load	80VA	12VA	80VA	12VA
Maximum resistance load	Single output 2A, single end 4A	Single output 0.5A, single end 2A	Single point 0.5A, total point 2A	0.5/high speed up to 200KH (Y0/Y1.) respectively; 0.2A/low speed 10KHz (Y2-Y7) , concurrent no more than 3A
Pulse output		Pulse output 4 channels up to 200KHz respectively		Pulse output 4 channels up to 200KHz respectively
Digital output	24		32	
Output Type	Relay	Ransistor/NPN	Relay	Ransistor/NPN
The output voltage	< 250VAC, 30VDC	6 ~ 30VDC	< 250VAC, 30VDC	6 ~ 30VDC
Interface				
RS232	One mini232 port, support upload and download, monitoring, serial port communication Baud rate: 1200Bps ~ 115200Bps			
RS485	One RS485 support serial port communication Baud rate: 4800Bps ~ 115200Bps			
USB port	Support upload and download, online monitoring			
Other parameters				
FCC compatibility	Compatibility Complies with FCC, Class A			
high-voltage insulation test	Withstand voltage test 1000V AC, 1 minute			
CE certification	Complies with EN55032 and EN55035 standards			
Protection class	IP30			
Software				
SamSoar II	SamSoar II			

FGs Series Standard PLC Expansion Module Specifications

FGs Series Digital Expansion Module Specifications

Model	FGs-E16T-C	FGs-E16X-C	FGs-E16R-C	FGs-E8X8T-C	FGs-E8X8R-C
Structure and environment					
Size(mm)	109.2 × 61.7 × 80				
weight(g)	250				
Working environment temperature	0°C~55°C (no freezing)				
Working environment automatic humidity	5~95% (non-condensing)				
Shock resistance	10 ~ 25HZ (XYZ direction 2G/30 minutes)				
Power supply					
Power consumption (W)	1.5				
Input parameter					
Digital input		16		8	
Input wiring	Supports SINK/SOURCE (sink/source), which can be converted by internal common terminal S/S and external common wiring				
input signal voltage		24VDC±20%		24VDC±20%	
Output parameters					
Maximum inductive load	12VA		80VA	12VA	80VA
Maximum resistance load			Single output 2A, single end 4A		Single output 2A, single end 4A
Digital output	16		16	8	8
Output Type	Ransistor/NPN		Relay	Ransistor/NPN	Relay
The output voltage	6~30VDC		<250VAC,30VDC	6~30VDC	<250VAC,30VDC
Other parameters					
FCC compatibility	Compatibility Complies with FCC, Class A				
high-voltage insulation test	Withstand voltage test 1000V AC, 1 minute				
CE certification	Complies with EN55032 and EN55035 standards				
Protection class	IP30				
Software					
SamSoar II	SamSoar II				

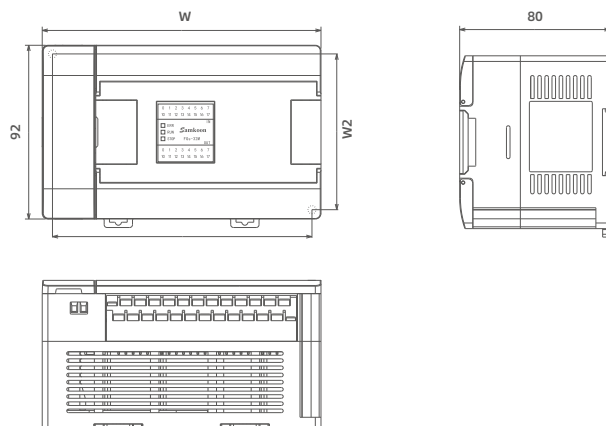
FGs Series Standard PLC Analog Module Features

Model	FGs-E4AI2AO-C		FGs-E4TC-C	FGs-E8AI-C
Structure and environment				
Size(mm)	109.2 × 61.7 × 80			
weight(g)	250			
Working environment temperature	0°C~55°C (no freezing)			
Working environment automatic humidity	5~95% (non-condensing)			
Shock resistance	10 ~ 25HZ (XYZ direction 2G/30 minutes)			
Power supply				
Power consumption (W)	2	0.5		
Input parameter				
Analog input	4			8
Input model	Curent/Voltage	Electric resistance PT100 K type, Y type thermal resistance couple		Curent/Voltage
Measuring range	0~5V ,0~10V, 4 ~ 20mA	-200°C ~ +850°C		0~5V ,0~10V, 4~20mA
maximum output range	12V,30mA			
Maximum resolution	0~5V : 1.25mV 0~10V: 2.5mV 4~20mA : 5uA	0.1°C		0~5V : 1.25mV 0~10V: 2.5mV 4~20mA : 5uA
Digital to analog conversion accuracy	12 bit	16 bit		12 bit
overall measurement accuracy	±5‰	±1°C		±5‰
Output parameters				
Analog output	2			
Output model	Curent/Voltage			
Output range	0 ~ 5V ,0 ~ 10V, 4 ~ 20mA			
Maximum resolution	0~5V:1.25mV 0~10V:2.5mV 4~20mA : 5uA			
Output accuracy	±5‰			
Output load impedance	≥1KΩ@10V ≥500Ω@5V ≤500Ω@20mA			
Other parameters				
FCC compatibility	Compatibility Complies with FCC, Class A			
High-voltage insulation test	Withstand voltage test 1000V AC, 1 minute			
CE certification	Complies with EN55032 and EN55035 standards			
Protection class	IP30			
Interface				
RS485	One RS485 support serial port communication Baud rate: 4800Bps ~ 115200Bps			
Software				
SamSoar II	SamSoar II			

Dimensions of FGs series basic PLC main module and expansion module

FGs Series Size

Product Size

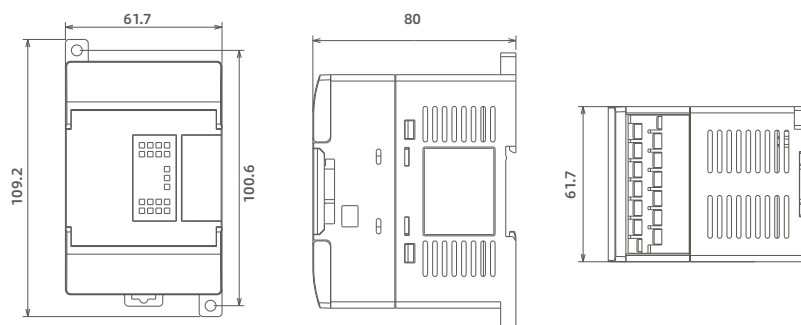


(unit: mm)

Installation: 35mm wide DIN rail installation, or direct installation

FGs Series Digital Module Size

Product Size

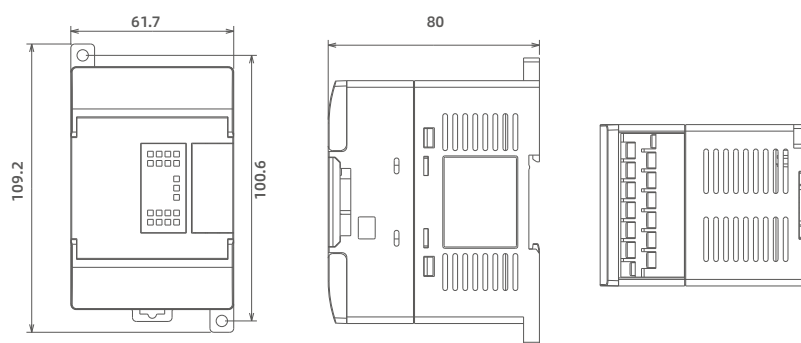


(unit: mm)

Installation: 35mm wide DIN rail installation, or direct installation

FGs Series Expansion Module Size

Product Size



(unit: mm)

Installation: 35mm wide DIN rail installation, or direct installation



FGm Series Specifications

1 Fast speed

- Compiled architecture executing the native code directly, more than 10 times faster than interpreted architecture

2 Fine security

- Upload,download,monitor the password,CPU,upload forbidden, file code,subprogram password,Function performance block code

4 Customization

- Customizing the products based on clients' needs and correspondent scenes, providing fast and considerable technical support

5 Price superiority of hardware

- 220v power supply, full choice of models, cost-effective

7 Large storage

- Support more than 20,000 lines of users' program storage, no worries of space limitation
- Support 16 Kbyte power-off storage area

3 Flexible and comprehensive performance

- Pulse and high speed counting up to 200KHz frequency
- 10 pulse inputs for real-time speed and position control, connection with up to 10 servos, stable and anti-jamming
- Support interpolation and electronic concave wheel function
- 12-input single phase counter, 6-input AB phase counter, support multiple speed counting mode
- Support 8 extended modules

6 Various of communication interface

- Support RS232, RS485, USB, free port and modbus

8 Clock accuracy

- The external real-time clock chip is used to make the clock more accurate

FGm Series Naming Rules

$$\frac{\text{FGm}}{\textcircled{1}} - \frac{64}{\textcircled{2}} - \frac{\text{MT}}{\textcircled{3}} - \frac{\text{A}}{\textcircled{4}} - \frac{\text{C}}{\textcircled{5}}$$

- ① FGm series motion controller PLC
- ② 64: Input/output in total 64
- ③ MT: Delementary Transistor output
- ④ A: AC Power type
- ⑤ C: compiled type

FGm Series Sports PLC specifications

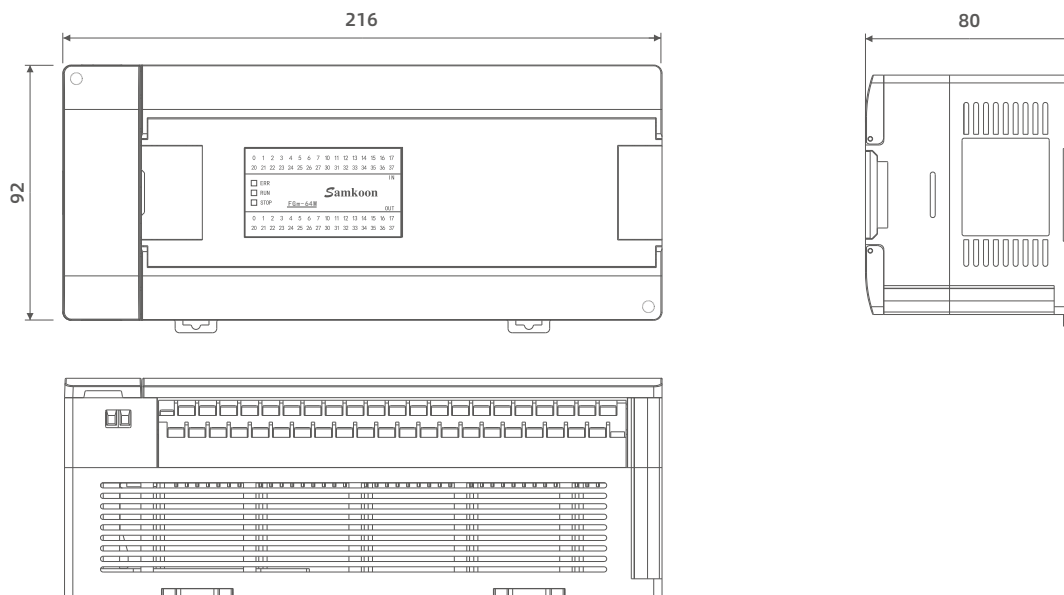
FGm Series Specifications

Model	FGm-64MT-AC
Structure and environment	
Size(mm)	216 × 92 × 80
weight(g)	769
Working environment temperature	0°C~55°C (no freezing)
Working environment automatic humidity	5~95% (non-condensing)
Shock resistance	10 ~ 25HZ (XYZ direction 2G/30 minutes)
Power supply	
Power consumption (W)	3.6
Power supply voltage	AC 100V ~ 240V
Input parameter	
High-speed counter	High-speed counting 12 channels up to 200KHz respectively
AB phase counter	AB phase count 6 channel up to 200KHz
Digital input	32
Input 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%
Output parameters	
Maximum output range	12VA
Maximum resolution	0.5/high speed up to 200KHz (Y0~Y11) respectively; 0.2A/low speed 10KHz (Y12~Y37), concurrent no more than 3A
Digital output	32
Output Type	ransistor/NPN
The output voltage	DC 6 ~ 30V
Pulse output	Pulse output 10 channels up to 200KHz respectively
Output parameters	
FCC compatibility	Compatibility Complies with FCC, Class A
High-voltage insulation test	Withstand voltage test 1000V AC, 1 minute
CE certification	Complies with EN55032 and EN55035 standards
Protection class	IP30
Interface	
RS232	One mini 232 port, support upload and download, monitoring, serial port communication Baud rate: 1200Bps - 115200Bps
RS485	One RS485 support serial port communication Baud rate: 4800Bps ~ 115200Bps
USB port	Support upload and download, online monitoring
Module common	
Module common	FGm series mainframe expansion modules can share FGs series expansion modules
Software	
SamSoar II	SamSoar II

FGm Series Size

Product Size

(unit: mm)



Installation: 35mm wide DIN rail installation, or direct installation



PRO series Bus PLC Features

- Built-in 32-point IO, while supporting local 8-axis high-speed pulse output and 16 high-speed count.
- Support EtherCAT nanosecond real-time network master stack, minimum setup system cycle is 500us.
- Support debugging and uploading interfaces, including USB, U disk, Ethernet network port, RS485.
- Support PLC axis control parameterized configuration and online debugging interface, including limiting, zeroing and pointing functions.
- Support ladder diagram-based motion control. Support ladder diagram-based IEC61131-3 motion control MC commands.
- Support mapping programming of large-scale hardware configurations, reducing the difficulty of field wiring and line changing.
- Support the control of motion control.

PRO Series Naming Rules

PRO - C 16X16T - A

① ② ③ ④

① PRO: PRO series Bus PLC

③ Indicates 16 inputs and 16 outputs

② C: Indicates the host CPU module

④ A: Indicates the version number

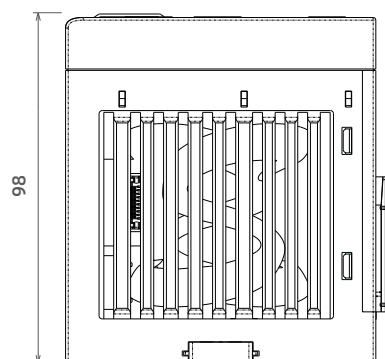
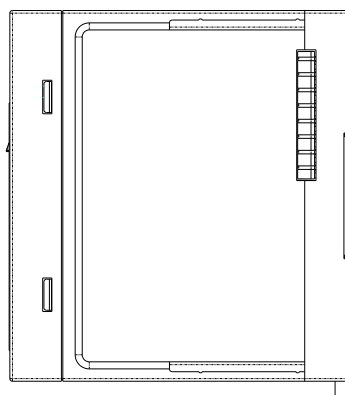
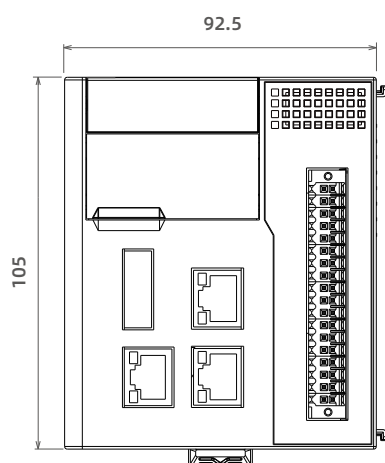
PRO series specification

Model	PRO Series
Core part	
CPU	1GHz frequency + large-scale FPGA logic
Linux	Operating System Linux Multitasking
RAM space	512MBytes
FLASH space	4GBytes eMMC
Power-down storage space	Full register area power-down retention
Interface part	
EtherCAT	1x, EtherCAT master, max. 32 axes
Ethernet	1 channel, Modbus TCP protocol, network port download and monitoring
RS485	2 channels, 1200-115200bps, Modbus protocol/Freeport protocol
U disk	1 channel, download program and firmware
USB	1 channel, USB download and monitoring
IO	16 high-speed inputs and 16 high-speed outputs, supporting up to 8 local axes with 200KHz high-speed pulses
PLC section	
Ladder diagram instructions	Support logic, operation, communication and other instructions
MC single-axis command	Support logic, operation, communication and other commands
MC interpolation instruction	Subsequent versions support
Electronic cam command	
Motion section	
Sports function	Subsequent versions support
Interpolation curve	Subsequent versions support
Continuous interpolation	Subsequent versions support
Error compensation	Subsequent versions support
Way back to zero	Subsequent versions support
Variable speed function	Subsequent versions support
G code function	Subsequent versions support
Power supply	
Power consumption	10W
Power supply	DC24V±15%
Structure and environment	
size	92.5mm X 105mm X 98mm
Working temperature	0°~50° (no freezing)
Operating humidity	5~95% RH (non-condensing)
Shock resistance	10~25Hz (XYZ direction, 2G/30 minutes)
Static level	Class 3 ±6kV

PRO series Size

Product Size

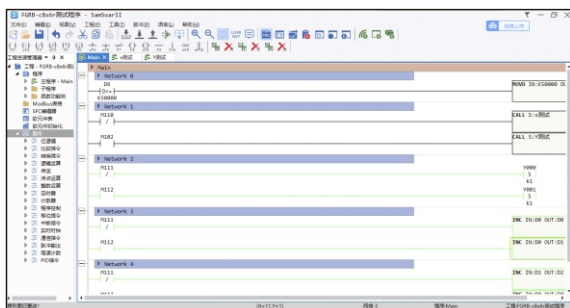
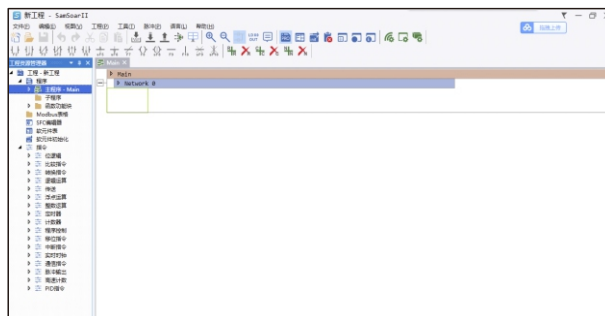
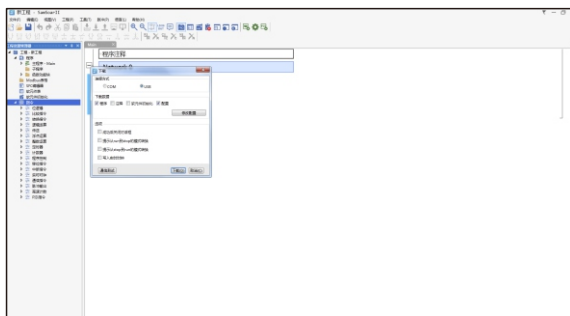
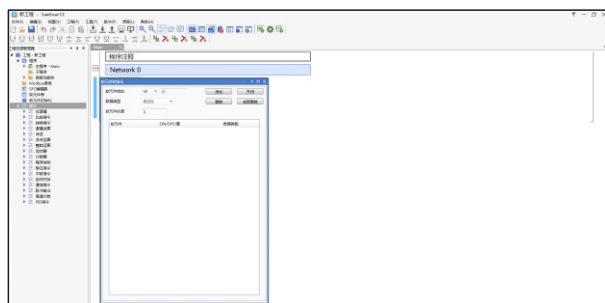
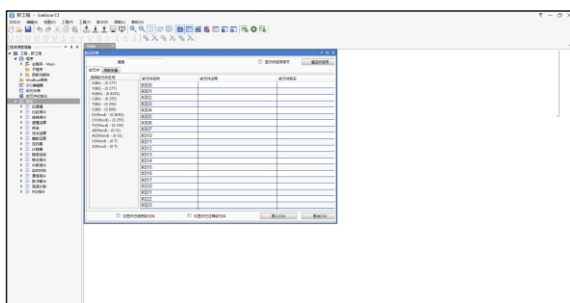
(unit: mm)



Software Features

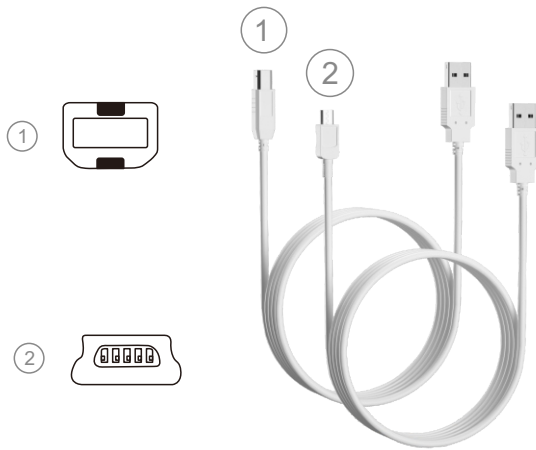
- The application instructions in the ladder diagram are in the form of instruction blocks, which are easy to understand
- Support more than 160 instructions, support Ladder diagram input and instruction inputsupports SFC step ladder diagram to reduce the difficulty and rich functions at the same time
- The program structure is clear, divided into main program, subprogram, interrupt program .
The program is divided into multiple networks
- Support soft element initialization the soft element usage table can be easily viewed Manage register allocation
- Support user variable table, can customize variable name, support online monitoring
- Support rich library functions and custom function operation
- Multi-layer encryption protection, including uploading and downloading, monitoring passwords, folder passwords, subroutines password, function block password, upload prohibition/ installment payment, etc., to protect user accounts legal rights
- Support interrupt function, including external interrupt and timer interrupt, not affected by scan cycle respond promptly
- Support other PLC ladder diagram conversion
- Support simulation run

Software Interface



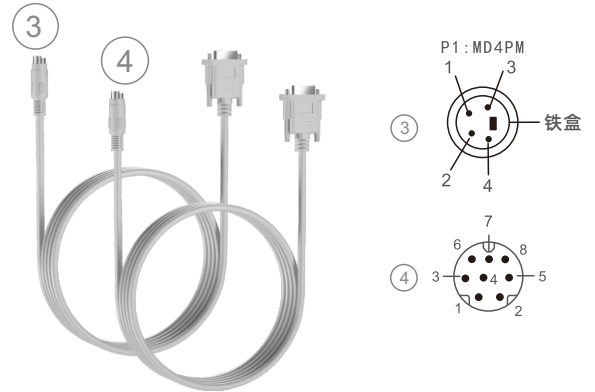
Optional Accessories For PLC Series Products

Optional Accessorie



USB Communication Cable

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



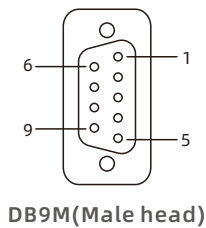
Communication Cable

- ③ FAs series PLC Communication Cable
- ④ FAs series PLC、FGs series PLC、FGm series PLC、Communication Cable

1.The USB communication cable is used for uploading and downloading project files 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. Parameters are subject to change without notice, please call for consultation.



DB9M(Male head)

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

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

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

Based in China, Serving the world

Samkoon has been deeply engaged in the field of industrial automation for more than 10 years. Our products are exported to more than 30 countries and regions. Serving domestic and foreign leading enterprises in various industries, providing high-quality products and services for customers of different scales.



SHENZHEN SAMKOON TECHNOLOGY CO.LTD

R&D center address: 4th Floor, Block 2, Shenzhen software park,
Middle Zone of High-tech, Nanshan District, Shenzhen, China.

R&D center address: 4th Floor, Block 2, Shenzhen software park,
Middle Zone of High-tech, Nanshan District, Shenzhen, China.

Tel: 0755-29419028/38/68

Fax: 0755-29455559

E-mail: samkoon@samkoon.com.cn

Website: www.samkoon.com.cn

The performance and specifications of the products published in this catalog are subject to change without prior notice due to product improvements, etc. Please understand

National Service Hotline:

400-606-9669



WeChat official account



Website