

Medium PLC

Overall improvement of speed, capacity and function

With faster processing speed, stronger motion control function, higher reliability and more compact structure, provides users with more perfect solutions and creates higher value.



Function features

New appearance design, high space utilization

Ethernet port communication is convenient, fast, powerful and adaptable

CPU processing speed increased significantly

Higher reliability

Greater storage capacity

System composition



EtherCAT motion control type

XG2 series

The motion control type of medium-sized PLC provides customers with an ideal solution in bus motion control.

- ① 16MB program capacity
- ② 4 channels 100KHz pulse output
- ③ Max IO 1050 points
- ④ Basic instruction 0.005~0.01us
- ⑤ RS232&RS485 port
- ⑥ Linear/arc interpolation
- ⑦ Ethernet communication
- ⑧ EtherCAT communication
- ⑨ Follow up function
- ⑩ Support differential input
- ⑪ axes linear, arc interpolation
- ⑫ 16 channels electronic CAM



Performance specification

Product series XG2-		26T4
Main body I/O	Total points	26
	Input points	18
	Output points	8
Max I/O points		1050
High speed positioning	Normal pulse output	4 axes
	Differential pulse output	-
High speed input	Single/AB phase mode	4 channels, max 200KHz
	Input mode	Differential input
Expansion capability	Right expansion module	16
	Left expansion module	-
	BD BOARD	-
Interruption	External interrupt	12
	Timing interrupt	20
	Other interrupts	High speed counting interrupt, pulse interrupt
Communication function	Communication port	1 RS232 port, 2 RS485 ports, 2 RJ45 ports
	Communication protocol	Standard Modbus ASCII/RTU communication, free format communication, Ethernet communication
Bus function		EtherCAT bus control
PWM pulse width modulation		-
Frequency measurement		-
Precise timing		-
Multi-station control		Support
Program execution mode		Cyclic scanning mode
Programming mode		Command, ladder chart, C language
Power failure holding		Use FlashROM
Basic instruction processingspeed		0.005~0.01us
User program capacity (secret download mode)		16MB
Security function		6-bit ASCII password, secret downloading

| XG2 series model list

Model						
AC power				DC power		
	Relay output	Transistor output	Transistor&relay mixed output	Relay output	Transistor output	Transistor&relay mixed output
NPN	-	-	-	-	XG2-26T4	-

Product series XG2-		26T4	
Self diagnosis function		Power on self-test, monitoring timer, syntax check	
Real-time clock		Built-in clock, lithium battery power supply, power down memory	
Bit soft component	Input relay (X)		1280 points: X0~X77, X10000~X11777, X20000~X20177, X30000~X30077
	Output relay (Y)		1280 points: Y0~Y77, Y10000~Y11777, Y20000~Y20177, Y30000~Y30077
	Auxiliary relay	General M	700000 points M0~M699999
		Power-off retentive HM	48000 points HM0~HM47999
		Special SM	50000 points SM0~SM49999
	Flow	General S	80000 points S0~S79999
		Power-off retentive HS	4000 points HS0~HS3999
	Timer	Specification	100ms timer: 0.1~3276.7s, 10ms timer: 0.01~327.67s, 1ms timer: 0.001~32.767s
		General T	50000 points T0~T49999
		Power-off retentive HT	8000 points HT0~HT7999
		Precise timing	26 points ET0~ET25 (notsupported right now)
	Counter	Specification	16-bit counter: 0~32767 32-bit counter: -2147483648~+2147483647
		General C	50000 points C0~C49999
		Power-off retentive HC	8000 points HC0~HC7999
		High speed counter	40 points HSC0~HSC39
Word soft component	Special coil for WAIT instruction		32 points SEM0~SEM31
	Data register	General D	700000 points HD0~SD699999
		Power-off retentive HD	100000 points SD0~SD99999
		Special SD	10000 points SD0~SD9999
	FlashROM register	Power-off retentive FD	65536 points FD0~FD65535
		Special SFD	10000 points SFD0~SFD9999
		Security register FS	48 points FS0~FS47

*Note: ①Only the PLC with transistor output has high speed positioning function;②The “-” in the table indicates that this function is not available;
③Special use refers to being occupied by the system and cannot be used for other purposes.

Basic unit general specification

| General specification

Item	Specification
Insulation voltage	Above DC500V 2MΩ
Anti-noise	Noise voltage 1000Vp-p 1us pulse 1 minute
Air	No corrosive and combustible gases
Ambient temperature	0°C~60°C
Ambient humidity	5%~95% (nocondensation)
Installation	It can be fixed with M3 screws or directly installed on the rail
Grounding (FG)	The third kind of grounding (notcommon grounding with strong current system)

| Input specification

XG2series PLC input specification
XG2 series PLC supports NPN and differential signal input mode.

NPN mode specification

Item	Specification
Input signal voltage	DC24V±10%
Input signal current	7mA/DC24V
Input ON current	Above 4.5mA
Input OFF current	Below 1.5mA
Input reponse time	About 10ms
Input signal format	Contact input NPN open collector transistor (X2 X5, X10, X13, X14, X15, X16, X17, X20, X21)
Circuit insulation	Photoelectric coupling insulation
Input action display	LED lights when input is ON

| Output specification

Transistor output

External power supply		Below DC5~30V
Circuit insulation		Optocoupler insulation
Action indicator		LED indicator
Max load	Resistive load	0.3A
	Inductive load	7.2W/DC24V
	Light load	1.5W/DC24V
Min load		DC5V 2mA
Open circuit leakage current		Below 0.1mA
Response time	OFF→ON	Below 0.2ms
	ON→OFF	Below 0.2ms

| Power supply specification

Item	Specification
Rated voltage	DC24V
Voltage allowable range	DC21.6V~26.4V
Input current (onlyfor basic unit)	120mA DC24V
Allowable instantaneous power off time	10ms DC24V
Impact current	10A DC26.4V
Maximum power consumption	12W
Power supply for sensor	24VDC±10%

Differential signal mode specification

Item	Specification
Input signal voltage	DC5V±10%
Input signal current	12mA/DC5V
Input ON current	Above 4.5mA
Input OFF current	Below 1.5mA
Input response feature	Max 200KHz
Input signal format	Differential input (XQ X1, X3, X4, X6, X7, X11, X12)
Circuit insulation	Photoelectric coupling insulation
Input action display	LED lights when input is ON

*Note: X0+, X0-, X1+, X1-, X3+, X3-, X4+, X4-, X6+, X6-, X7+, X7-, X11+, X11-, X12+, X12- are four groups of differential signal, which can be high speed counting terminals. To receive the collector signal, first convert the differential signal into collector signal through differential to collector board (DIFF-OC).

High speed pulse output

Model	T4 type
High speed pulse output terminal	Y0~Y3
External power supply	Below DC5~30V
Action indicator	LED indicator
Max current	50mA
Pulse max output frequency	100KHz

*Note: ① When using the high-speed pulse output function, the PLC can output pulses up to 200kHz, but it can not ensure the normal operation of all servos. Please connect a resistance of about 500Ω between the output end and 24V power supply;
② PLC is generally equipped with plug-in spring connector when leaving the factory, which is convenient for wiring. The length of wire peeling off is required to be at least 1.5cm. When wiring, press the yellow spring switch with a small screwdriver, insert the wire into the corresponding socket, and release the spring switch.

Expansion unit

XG series medium-sized PLC can connect 1~16 different type and model of expansion modules.

General specification

Item	Specification
Using environment	No corrosive gas
Ambient temperature	0°C ~ 60°C
Storage temperature	-20 ~ 70°C
Ambient humidity	5 ~ 95%RH
Storage humidity	5 ~ 95%RH
Installation	Directly installed on the guide rail of model XG-EB-Length (mm)
Dimension	130.0mm×40.0mm×133.4m



XG series I/O expansion module

When the number of main body I/O points cannot meet the use requirements, the I/O expansion module can be used.

Digital input module



Model	Function	Specification
XG-E16X	16 channels digital input	Compatible with NPN&PNP input The module does not need external power supply Input filtering time 1 ~ 50ms optional External wiring mode: 16X, 32X body include terminal strip 64X requires external terminal block Terminal wiring mode: the same to PLC body
XG-E32X	32 channels digital input	
XG-E64X	64 channels digital input	

Digital output module



Model	Function	Specification
XG-E16YR	16 channels relay output	The module does not need external power supply R: output relay T: output transistor R response time: below 10ms T response time: below 0.2ms R max load: resistive 3A inductive 80VA T max output current: each point 0.3A External wiring mode: 16YR, 16YT, 32YT body include terminal strip 64YT requires external terminal block Terminal wiring mode: the same to PLC body
XG-E16YT	16 channels transistor output	
XG-E32YT	32 channels transistor output	
XG-E64YT	64 channels transistor output	

Digital input output mixed module



Model	Function	Specification
XG-E8X8YR	8 channels digital input 8 channels relay output	Compatible with NPN&PNP input The module does not need external power supply Input filter time 1~50ms optional R: output relay T: output transistor R response time: below 10ms T response time: below 0.2ms R max load: resistive 3A inductive 80VA T max output current: each point 0.3A External wiring mode: the body include terminal strip Terminal wiring mode: the same to PLC body
XG-E8X8YT	8 channels digital input 8 channels transistor output	
XG-E16X16YT	16 channels digital input 16 channels transistor output	

Expansion unit

XG series analog expansion module

- ① By expanding analog input/output module and temperature control module, XG series PLC can be applied to process control systems such as temperature, flow, liquid level and pressure.
- ② With the addition of PID regulation function, it has wider application, more flexible use and higher control accuracy.
- ③ XG-E8TC-P, XG-E8PT3-P module each channel can do independently PID controlling and self-tuning, and exchange information with the main body through FROM and TO instructions.

Analog input module (AD type)



Model	Input channel	Input signal	Specification
XG-E8AD-A-S	8	Current input: 0~20mA/4~20mA/-20~20mA	Power supply for analog DC24V±10%, 150mA Conversion speed 2ms/channel Resolution 1/65535 (16-Bit) Comprehensive accuracy ±1% AD filter coefficient 0~254 AD channel has the functions of short circuit, open circuit and over range detection Channel enable bit is added
XG-E8AD-V-S	8	Voltage input: 0~5V/0~10V/-5~5V/-10~10V	

Analog I/O mixed module (nADmDA type)



Model	Channel		Input/output signal	Specification
	Input	Output		
XG-E4AD2DA	4	2	Voltage input: 0~5V/0~10V/-5~5V/-10~10V Current input: 0~20mA/4~20mA/-20~20mA Voltage output: 0~5V/0~10V/-5~5V/-10~10V (external load resistor 2KΩ~1MΩ) Current output: 0~20mA/4~20mA (external load resistor less than 500Ω)	Power supply for analog DC24V±10%, 150mA Conversion speed 2ms/channel Input resolution 1/16383 (14-Bit) Output resolution 1/4095 (12-Bit) AD filter coefficient 0~254 AD channel has the functions of short circuit open circuit and over range detection Comprehensive accuracy ±1% Channel enable bit is added

Analog output module (DA type)



Model	Output channel	Output signal	Specification
XG-E4DA-S	4	Voltage output: 0~5V/0~10V/-5~5V/-10~10V (external load resistor 2KΩ~1MΩ) Current output: 0~20mA/4~20mA (external load resistor less than 500Ω)	Power supply for analog DC24V±10%, 150mA Conversion speed 2ms/channel Resolution 1/65535 (16-bit) Comprehensive accuracy ±1% Channel enable bit is added

Temperature control expansion module



Model	Channel	Input signal	Specification
XG-E8PT3-P	8	Pt100 platinum thermistor (three wire system with compensation) Measuring temperature range -100°C~500°C (digital output range -1000~5000, signed 16-bit, binary)	Power supply for analog DC24V±10%, 50mA Control precision ±0.5% Resolution 0.1°C Comprehensive accuracy ±1% (relative max value) PT conversion speed 650ms/8 channels TC conversion speed 450ms/8 channels PT filter coefficient 0~254 8 groups of independent PID parameters, support self-tuning function
XG-E8TC-P	8	K, S, E, N, B, T, J and R type thermocouple Measuring temperature range 0°C~1300°C (K type) (digital output range 0~13000, signed 16-bit, binary)	

Accessory

I Special power supply module XG-P75-E

XG independent power supply ensures the operation of PLC in a good and reliable power supply system, which can prolong the service life of PLC.

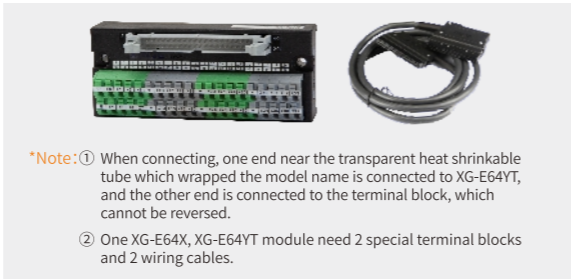
Item	Content
Rated voltage	AC100V~240V
Allowable voltage	AC90V~265V
Rated frequency	50Hz~60Hz
Allowable instantaneous power off time	Interruption time≤0.5 AC cycle, interval≥1s
Impact current	Max 40A below 5ms/AC100V Max 60A below 5ms/AC200V
Max consumption power	75W



I External terminal block

XG2-26T4, XS3-26T4, XG-E64X, XG-E64YT module need external terminal block, the following is suitable terminal and wiring cable for the module.

Product model	Terminal block model	Wiring cable model
XG2-26T4	JT-G26	JC-TG26-NN05 (0.5m)
XS3-26T4		JC-TG26-NN10 (1.0m) JC-TG26-NN15 (1.5m)
XG-E64X	JT-E32X	JC-TE32-NN05 (0.5m)
XG-E64YT	JT-E32YT	JC-TE32-NN10 (1.0m) JC-TE32-NN15 (1.5m)



I U-shaped connector XG-EUC-1、XG-EUCT-1

XG-EUC-1
The U-shaped connector is used to connect the medium-sized PLC with the expansion module, or the connection between expansion modules.

XG-EUCT-1
Based on the XG-EUC-1, the built-in terminal resistance is inserted into the expansion port of the last expansion module to improve the signal quality.

***Note:** ① When more than 10 expansion modules are connected, XG-EUCT-1 is required. It is also recommended for occasions with strong electromagnetic interference;
② When connecting multiple expansion modules, XG-EUCT-1 can only be used in the last expansion location, and XG-EUC-1 can still be used in other locations.



I Basic unit communication port accessories

Name	Model	Description	Product drawing
Communication/programming cable	JC-EL-Length	Elbow XVP cable is only applicable to XG2, XS3 series PLC. Three specifications are available: JC-EL-25 (2.5m), JC-EL-50 (5m), JC-EL-100 (10m)	
USB convertor	USB-COM	For the interface conversion of DB9 female port and USB port	
USB printer cable	JC-UA-15	Special USB cable for Xinje products, black with double magnetic rings to improve anti-interference ability	
EtherCAT communication cable	JC-CB-Length	EtherCAT bus cable, for the second Ethernet port of XG2, XS3, XDH, XLH series PLC. Nine specifications are available: JC-CB-OP1 (0.1m), JC-CB-OP2 (0.2m), JC-CB-OP3 (0.3m), JC-CB-OP5 (0.5m), JC-CB-1 (1m), JC-CB-3 (3m), JC-CB-5 (5m), JC-CB-10 (10m), JC-CB-20 (20m)	

I Mounting plate XG-EB series

XG-EB series guide rail is selected for the installation of basic unit, expansion module and power module.

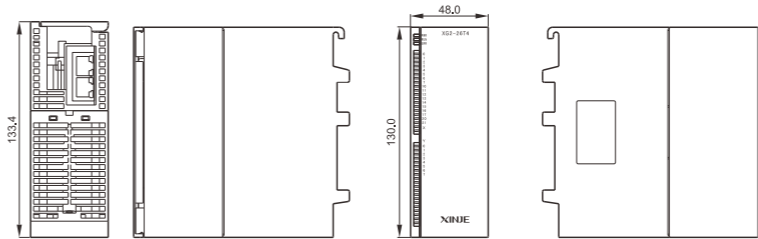
The following six specifications are available:

XG-EB-170(170mm),XG-EB-260 (260mm)
XG-EB-385(385mm), XG-EB-590 (590mm)
XG-EB-880(880mm),XG-EB-1500 (1500mm)

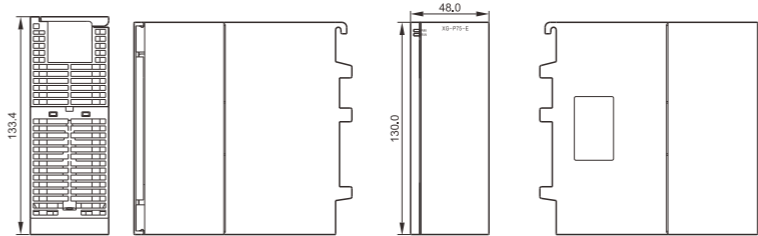


Dimension (unit: mm)

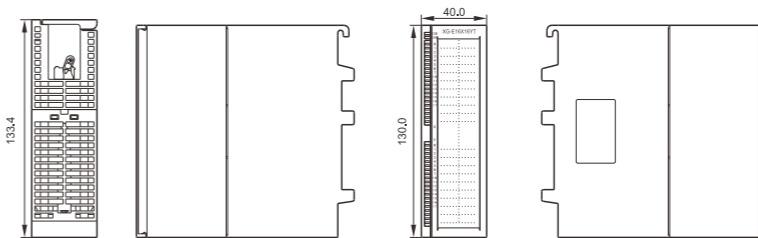
XG2 series basic unit



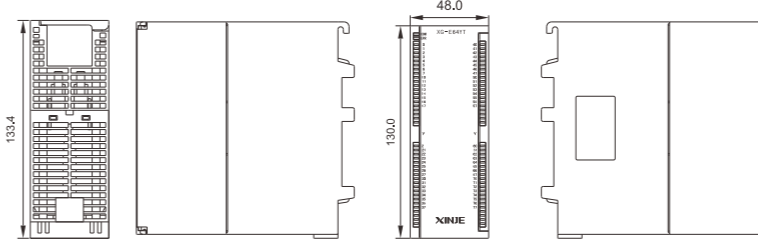
Power supply module



Expansion module



Expansion module



Suitable model

Module type	Digital value	analog value
Model	16X	All
	32X	
	16Y	
	32Y	
	8X8Y	
	16X16Y	

Suitable model

Module type	Digital value
Model	64X
	64Y