XINJE Wechat

XINJE

WUXI XINJE ELECTRIC CO.,LTD.

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Technical Service
tech@xinje.com

To be the Most Trusted Partner in Automation

XINJE

EtherCAT
PROFI NET
XS Studio
CANopen
Ethernet
EtherNet/IP

2026

All products catalog

PLC | HMI | Industrial informatization | Servo system | Frequency inverter | Stepping system | Vision system | IOT Industrial Controller

COMPANY INTRODUCTION

Wuxi Xinje Electric Co., Ltd. (XINJE) is a well-known national enterprise specializing in the R&D and application of industrial automation products.

Since its establishment, the company has adhered to the tenet of "Independent Innovation, Promptness and Pragmatism", striving to enhance its R&D capabilities and product quality, and applying advanced scientific and technological achievements to strengthen its overall strength. Through continuous innovation and pioneering efforts, Xinje has remained at the forefront of the industry. It has successively been recognized as a High-Tech Enterprise, a Key Project Unit under the Six Major Actions for Strengthening Industry in Jiangsu Province, a Qualified Unit for Implementing Intellectual Property Standards in Jiangsu Province, a Provincial Engineering Technology Research Center, a Provincial Enterprise Technology Center, and a Provincial Engineering Center, and has obtained numerous patented technologies.

The company's core products include Programmable Logic Controllers (PLC), Human-Machine Interfaces (HMI), servo control systems, and variable frequency drives. It also provides a comprehensive range of advanced automation equipment, including intelligent machine vision systems, teaching-based robotic arms, robots, and information-based network solutions. Xinje closely serves end customers, provides competitive customized solutions for equipment manufacturers in segmented industries, and offers advanced and reliable automation product solutions for high-quality equipment suppliers. The company continuously helps enterprises improve productivity, reduce costs, and promote the common growth of corporate value and customer value.

To date, Xinje Electric has established 32 offices and 300 distributors across China, covering the entire country. Overseas, it has set up 1 subsidiary and 20 agents covering Europe, the Americas, Southeast Asia, the Middle East, and Africa. Its extensive sales network ensures comprehensive product demand, technical support, personnel training, and other services for numerous users worldwide.

Xinje Electric currently has more than 2,600 employees, an office building covering 20,000 square meters, an independent factory covering 71,000 square meters, 1 R&D center, 4 laboratories, and 42 training bases. The company also cooperates with many universities to cultivate young and outstanding technical talents.

With dedication, sincerity, a proactive team spirit, and efficient operations, Xinje has achieved remarkable results. In December 2016, Xinje was successfully listed on the Main Board of the Shanghai Stock Exchange (Stock Code: 603416). Guided by the business philosophy of "Innovation, Quality, Service", the company continuously develops and designs more reliable products and improves product quality. It is committed to becoming "a world-class supplier of intelligent and automated overall solutions" and building a well-respected brand in the industrial automation field.

32 branch offices

300 domestic distributors

2600+ employees

2000m^2 office building

71000m^2 independent factory building

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HMI P132

Industrial Informatics P154

Servo System P166

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Stepper System P290

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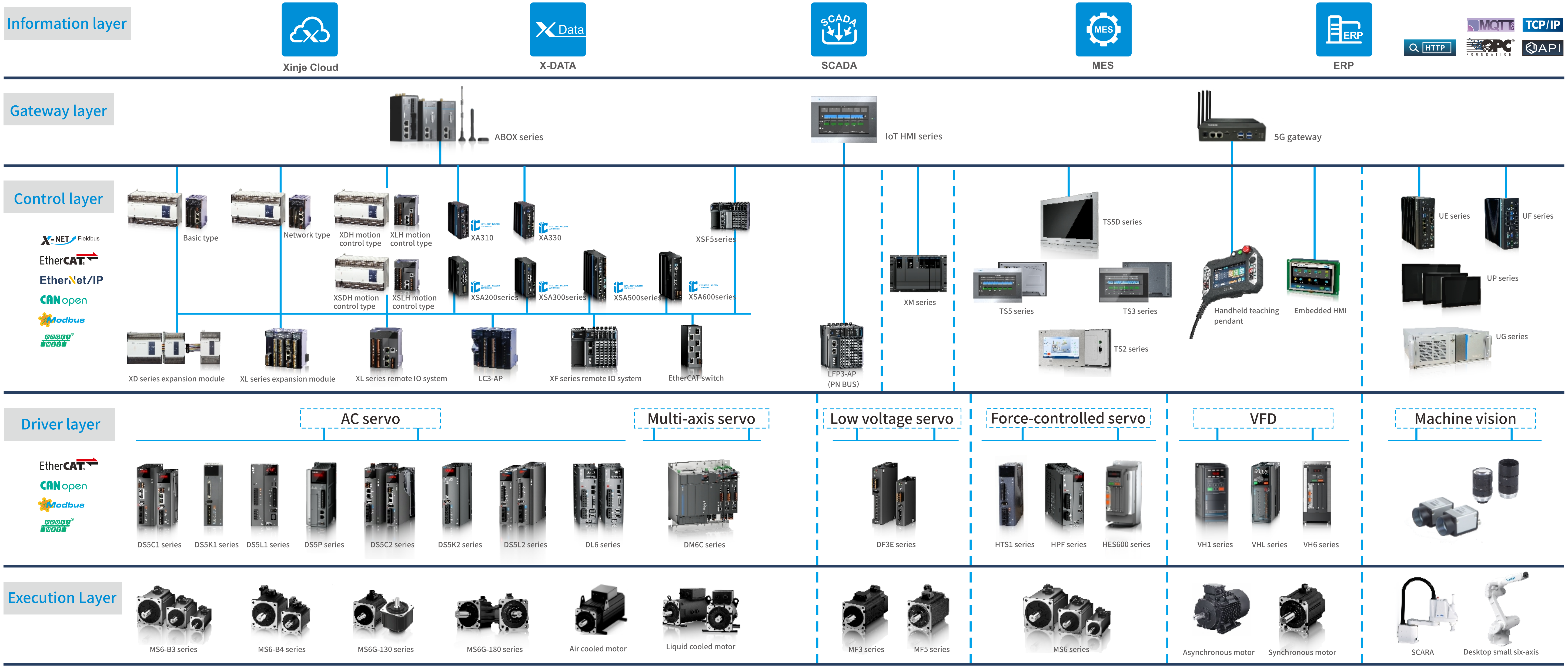
Integrated network architecture diagram


Information layer
Xinje Cloud
X-DATA
SCADA
MES
ERP
HTTP
MQTT
OPC
TCP/IP
API
Gateway layer
ABOX series
IoT HMI series
5G gateway
Control layer
X-NET Fieldbus
EtherCAT
EtherNet/IP
CANopen
Modbus
PROFINET
Basic type
Network type
XDH motion control type
XLH motion control type
XA310
XA330
XSF5series
XSDH motion control type
XSLH motion control type
XSA200series
XSA300series
XSA500series
XSA600series
XD series expansion module
XL series expansion module
XL series remote IO system
LC3-AP
XF series remote IO system
EtherCAT switch
LFP3-AP (PN BUS)
XM series
TS5D series
TS5 series
TS3 series
TS2 series
Handheld teaching pendant
Embedded HMI
UE series
UF series
UP series
UG series
Driver layer
EtherCAT
CANopen
Modbus
PROFINET
AC servo
Multi-axis servo
Low voltage servo
Force-controlled servo
VFD
Machine vision
DS5C1 series
DS5K1 series
DS5L1 series
DS5P series
DS5C2 series
DS5K2 series
DS5L2 series
DL6 series
DM6C series
DF3E series
HTS1 series
HPF series
HES600 series
VH1 series
VHL series
VH6 series
Execution Layer
MS6-B3 series
MS6-B4 series
MS6G-130 series
MS6G-180 series
Air cooled motor
Liquid cooled motor
MF3 series
MF5 series
MS6 series
Asynchronous motor
Synchronous motor
SCARA
Desktop small six-axis

Food and beverage

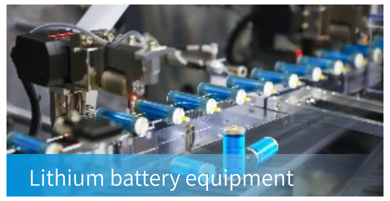
Printing and packaging

Textile industry

Vehicle transportation

Furniture and building materials

Machine tool processing


Lithium battery equipment

Photovoltaic energy

Electronic manufacturing

Warehouse logistics

Chemical industry

01

PLC

I^2C · PLCopen | Small Size | Medium & Large Size | Slim Type

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PLC overview

I^{2}C series

The I^{2}C series controller is based on the X86 high-performance processor and supports programming on the XS Studio/XDPro platform. Strong operational control capability, supporting up to 1ms 256 axes. Windows version fusion control meets the multi-purpose needs of information technology+control, machine vision+motion control, and more.

XF series

Blade type PLC

The XF series PLC is designed with a brand new blade structure, featuring a thinner body, stronger and richer expansion capabilities. Through a high-speed backplane bus, it is connected for more stable, reliable and high real-time performance.

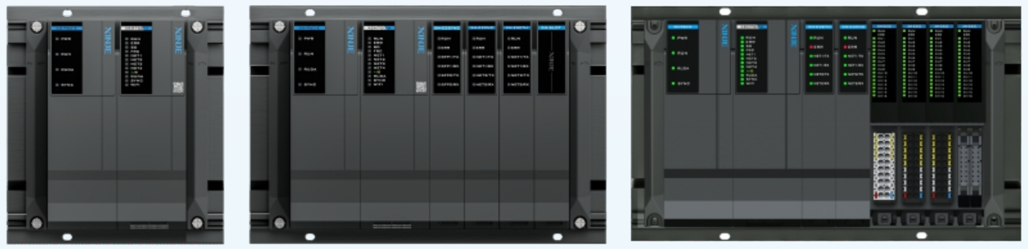
XL series

Slim type PLC

XL series slim PLC card design, ultra-thin appearance, compact and practical, outstanding cost-effectiveness, can meet the vast majority of functional requirements in smaller spaces.

XM series

Medium-to-Large PLC



The newly designed XM series medium-to-large PLC can meet the demands for redundant and stable operation, open ecosystem compatibility, harsh usage environments, and information network security protection required in complex field applications, effortlessly building large-scale, complex control systems.

XD series

Small PLC

The XD series small PLC has the characteristics of fast speed, stable performance, complete functions, and wide applicability, which can meet the diverse needs of users.

IO series

Diverse structural designs, diverse product types, and a complete IO system product matrix can provide customers with diverse choices based on actual on-site needs.

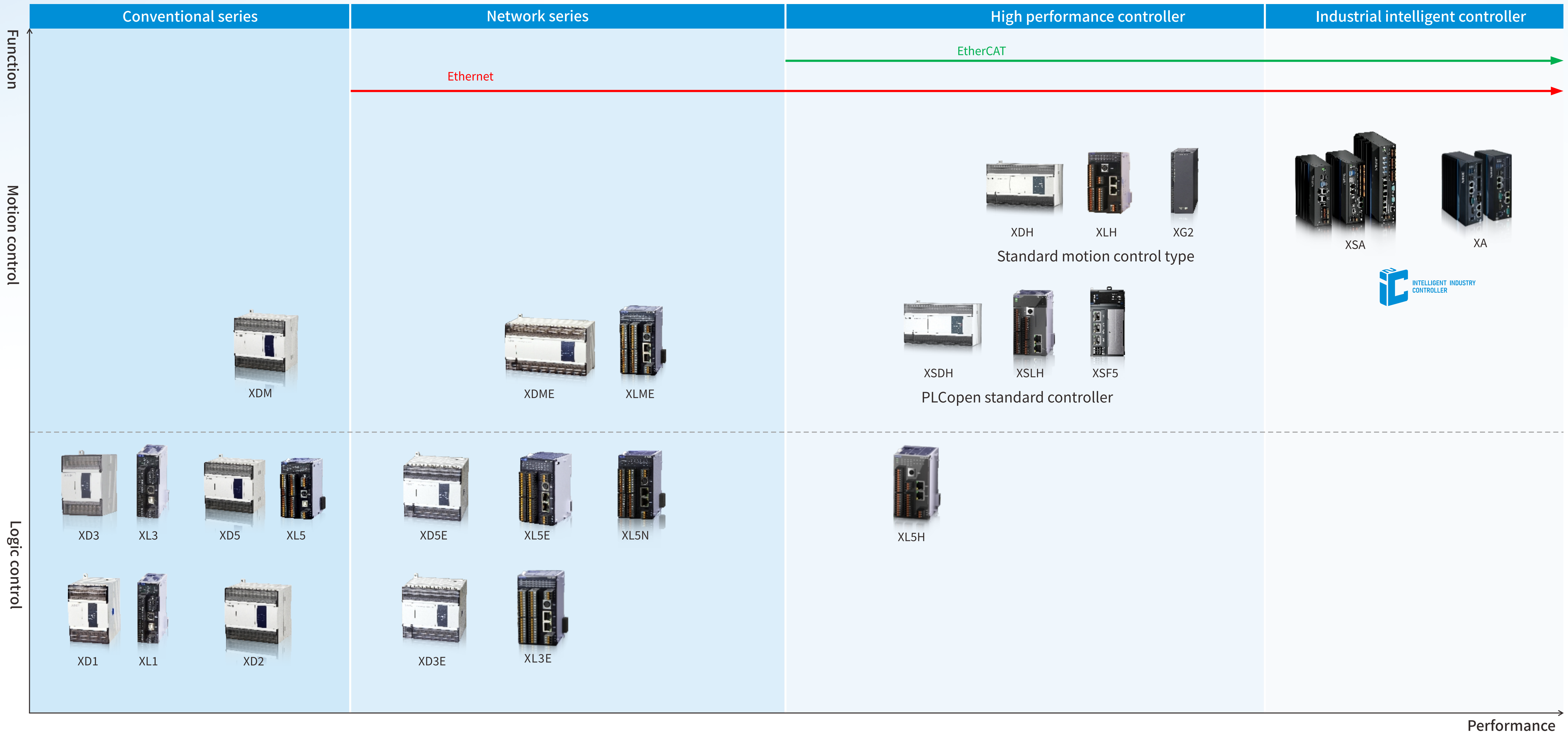
PLC product model selection topology

Xinje PLC products encompass 6 major product lines with over 400 models, offering a wide variety suitable for different control scenarios. The product series can be divided into XF, XS, XA, XD, and XL. In terms of product performance, they can be categorized into conventional PLCs, network PLCs, high-performance controllers, and industrial intelligent controllers. Functionally, they can be classified into logic control types and motion control types.

Logic control PLCs are primarily used for point control and also support 2-10 axes positioning control functions. Motion control PLCs include the XS, XA, XDH, and XLH series, which support 2-256 axes synchronous motion control.

Network-based PLCs, high-performance controllers, and industrial intelligent controllers support Ethernet communication and Ethernet/IP communication; high-performance controllers and industrial intelligent controllers also support EtherCAT bus control functionality.

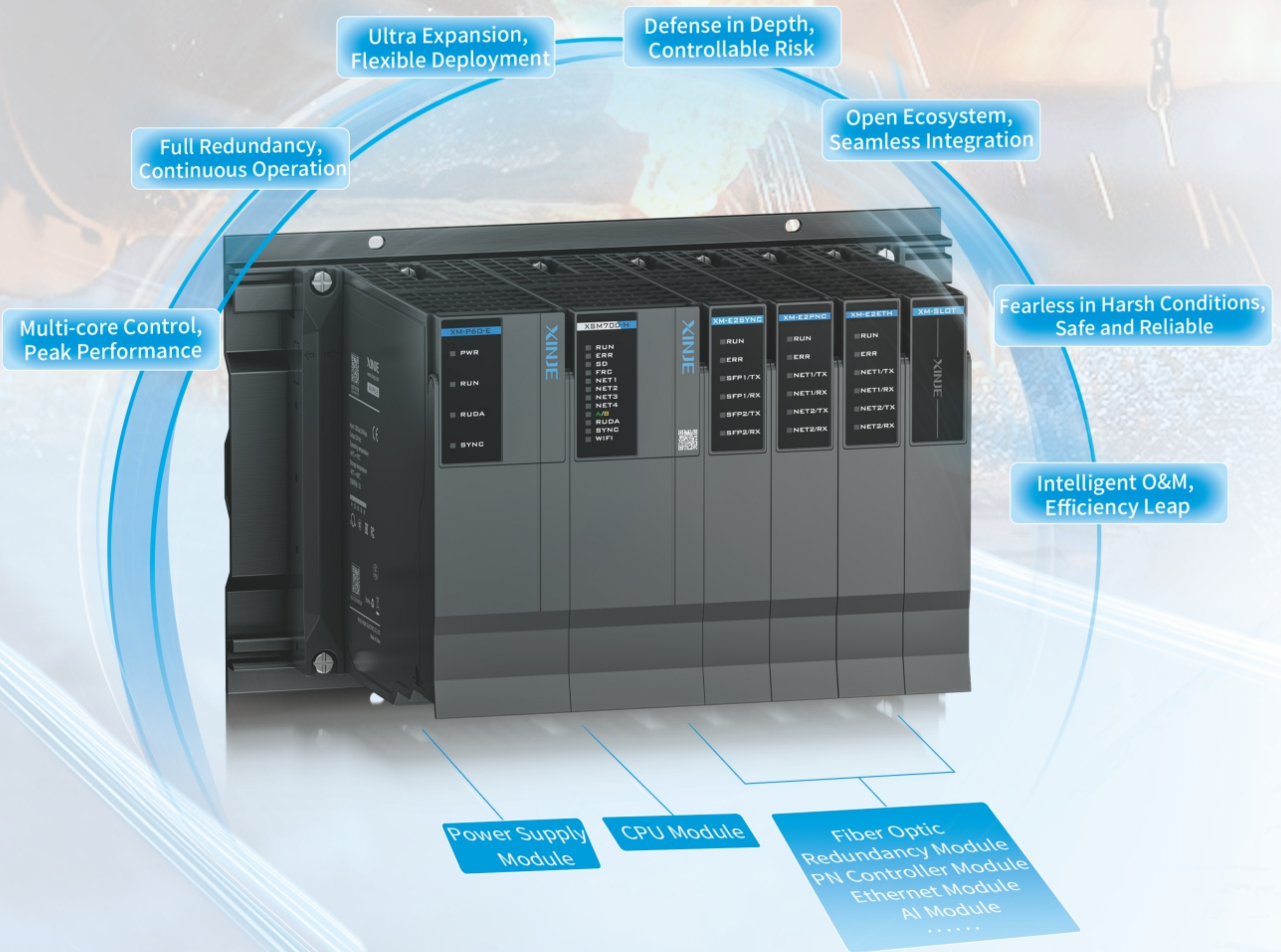
The XSF5 series and I/O modules feature a blade-style design with an ultra-thin body, supporting up to 32 expansion modules. The XSA series of industrial intelligent controllers, based on the X86 processor, offer superior performance, capable of controlling up to 256 axes with a synchronous cycle of 256 axes per 4 milliseconds.


Conventional series
Network series
High performance controller
Industrial intelligent controller
Function
Motion control
Logic control
Performance
EtherCAT
Ethernet
XDH
XLH
XG2
Standard motion control type
XSA
XA
INTELLIGENT INDUSTRY CONTROLLER
XDM
XDME
XLME
XSDH
XSLH
XSF5
PLCopen standard controller
XD3
XL3
XD5
XL5
XD5E
XL5E
XL5N
XL5H
XD1
XL1
XD2
XD3E
XL3E

XM Series Medium-to-Large PLC

More than just FA, designed for PA

Achieving compatible retrofitting, upgrading, and expansion, helping to realize benefits and maintenance


Ultra Expansion, Flexible Deployment
Defense in Depth, Controllable Risk
Open Ecosystem, Seamless Integration
Full Redundancy, Continuous Operation
Fearless in Harsh Conditions, Safe and Reliable
Multi-core Control, Peak Performance
Intelligent O&M, Efficiency Leap
Power Supply Module
CPU Module
Fiber Optic Redundancy Module
PN Controller Module
Ethernet Module
AI Module
......

PLC
HMI
Industrial informatization
Servo system
Frequency inverter
Stepping system
Vision system
IoT Industrial Controller

7 Core Advantages - Foundation of PF/FA Industry

Multi-core Control, Peak Performance

Equipped with an eight-core CPU, bit instruction speed as fast as 1ns, easily handles complex multi-tasking; system redundancy switchover time as low as 20ms, ensuring uninterrupted critical processes.

Full Redundancy, Continuous Operation

Supports full-chain redundancy including CPU, power supply, rack, network, fieldbus, etc., achieving 7*24, 365-day uninterrupted operation, reducing unplanned downtime losses;

MTBF: ≥200,000 hours; MTTR: <8 hours, maximizing equipment utilization.

Ultra Expansion, Flexible Deployment

Rich variety of I/O module types, supports ultra-large scale of 100,000 points, flexible configuration and easy expansion, full series supports hot-swapping for convenient maintenance;

Channel-level isolation and diagnostic functions, including but not limited to overtemperature, short circuit, open circuit, over-limit, power supply missing, etc., for easy maintenance.

Defense in Depth, Controllable Risk

Fully domestically produced and independently controllable software and hardware, compliant with IEC 62443, building a trusted security foundation.

Open Ecosystem, Seamless Integration

Provides abundant fieldbus and industrial Ethernet options, integrates third-party devices and network equipment, breaking down information silos;

PROFINET EtherNet/IP Modbus OPC MQTT

NTP

Complies with PLCopen standards, supports multiple programming languages; integrates basic algorithm libraries, rich PID instructions, and process automation industry process libraries.

Fearless in Harsh Conditions, Safe and Reliable

Meets rigorous reliability test standards including electromagnetic compatibility (Level 4 EMC), strong anti-vibration (2G), environmental adaptability (-40°C~70°C, -1000~5000m), while also satisfying G3/3C4 corrosion protection requirements, fearless in salt spray, mold, and humid environments.

Intelligent O&M, Efficiency Leap

Provides a full lifecycle toolchain for design, simulation, debugging, and diagnosis;

Supports wireless/wired login and WEB access, enabling comprehensive equipment monitoring and fault diagnosis via network.

From "Responding" to "Co-creating": Strategic Synergy, Resonant Value

Deep Coordination

Joint Innovation

Technology R&D → Scenario Validation → Scale Application

Municipal & Livelihood

Mining Engineering

Engineering Equipment

Food & Pharmaceutical

Automotive Production Lines

Ports & Terminals

Metal Manufacturing

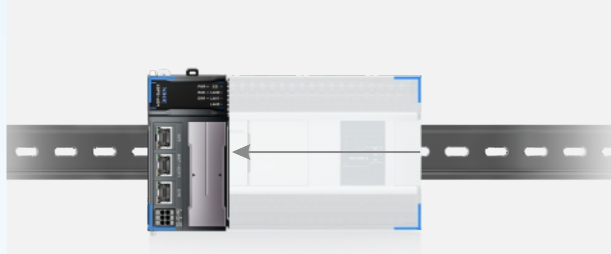
Chemical Industry

XSF Series blade type PLC

4 Quad-core MPU,
Major Performance Upgrade

Blade structural design, achieving slim body

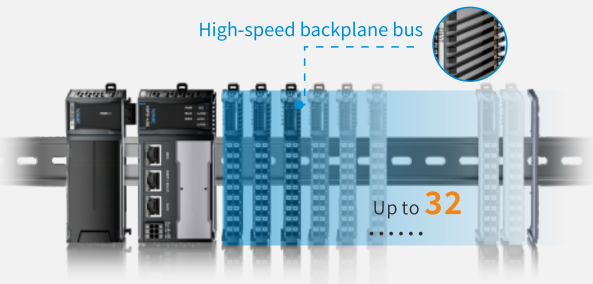
- Compared with XDH-60A64-E, the body size is reduced by 70%, significantly reducing installation space.



Approximately **70%** reduction in volume
compared to the previous generationXDH-60A64-E

More powerful scalability

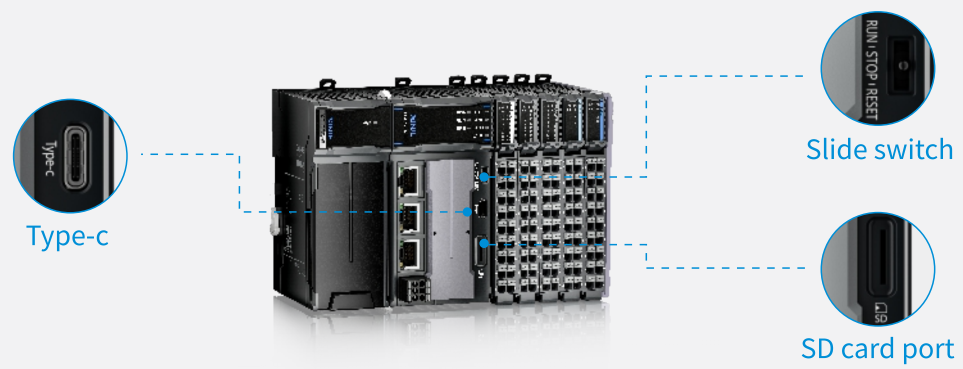
- Up to 32 XF extension modules can be connected locally.
- The new high-speed backplane bus allows for the expansion of functional modules such as high-speed counting, pulse output, flying shooting, and communication.



*Note: Modules such as high-speed counting, pulse output, flying shoot, and communication are under development. Stay tuned!

Easy to debug and maintain

- The entire XSF series products, including the main control unit and expansion unit, support firmware self updating, and new features are available with just one click.
- Equipped with Type-C port, it can connect to the upper computer, and online debugging only requires a mobile data cable.
- Support importing and exporting device data and project files through USB flash drives and TF cards (version V2.3.0 supports).
- Standard system slide switch, which can immediately stop PLC operation without power outage.



Production MES Traceability

- Supports internal/external network isolation to ensure network information security;
- NTP synchronization for accurate timestamp recording;
- Supports rich protocol integration: OPC UA, MQTT, HTTP

Outstanding motion control ability

- The XSF main control unit can communicate with various EtherCAT standard protocol devices, such as Xinje XF/XL series distributed IO, DS5C1/DS5C2 series servo drivers, VH6 series freguency converters, DP3CL series stepper drivers, etc.

Up to 64 axes EtherCAT bus control with short synchronization cycle.

High speed bus control 8 axes
Synchronization cycle **1ms**

XSF5-A8

High speed bus control 16 axes
Synchronization cycle **1ms**

XSF5-A16

High speed bus control 32 axes
Synchronization cycle **2ms**

XSF5-A32

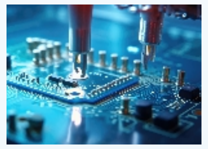
High speed bus control 64 axes
Synchronization cycle **4ms**

XSF5-A64

Multiple networks union,convenient interwork

- The XSF main control unit is equipped with 3 RJ45 ports, 1 CAN communication port, and 1 RS485 port.
- Supports multiple protocols, including Mdbus TCP, UDP, OPC UA, TCP/IP, Ethernet/IP, CANopen, and Modbus communication.
- Support dual IP settings, achieve isolation between internal and external networks of equipment, and assist in the digital transformation of factories.

Applicable Industries



3C

Logistics

Photovoltaics

Medical

Machine Tools

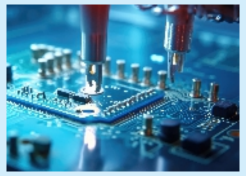
Packaging

XSA Series Industrail Intelligent Controller

XSA Series Controller based on a high-performance processor, supports programming on the XS Studio platform. Adopts a unique Taihu stone-inspired exterior design, with rich built-in interfaces and powerful motion control capabilities. The Windows version further meets multi-purpose demands such as information + control, machine vision + motion control, all in one machine.

Comprehensive Industry Applications

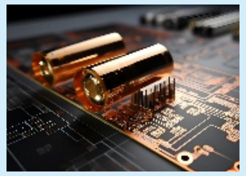
Applicable in industries such as 3C (Computer, Communication, Consumer Electronics), photovoltaics, warehousing, lithium batteries, semiconductors, electronics, laser, and more.



3C

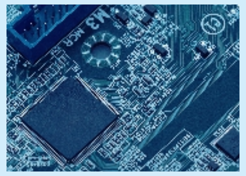
Photovoltaic

Warehousing



Lithium battery

semiconductors



electronics

laser

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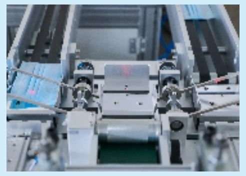
As a Standalone High-Performance Motion Controller

Enhances quality and efficiency for traditional industries with complex processes, such as printing, packaging, aluminum profiles, hygiene products, woodworking, filling, HVAC, and others.

Printing equipment

Packaging equipment

Aluminum profile processing equipment



Hygienic product processing equipment

woodworking

filling

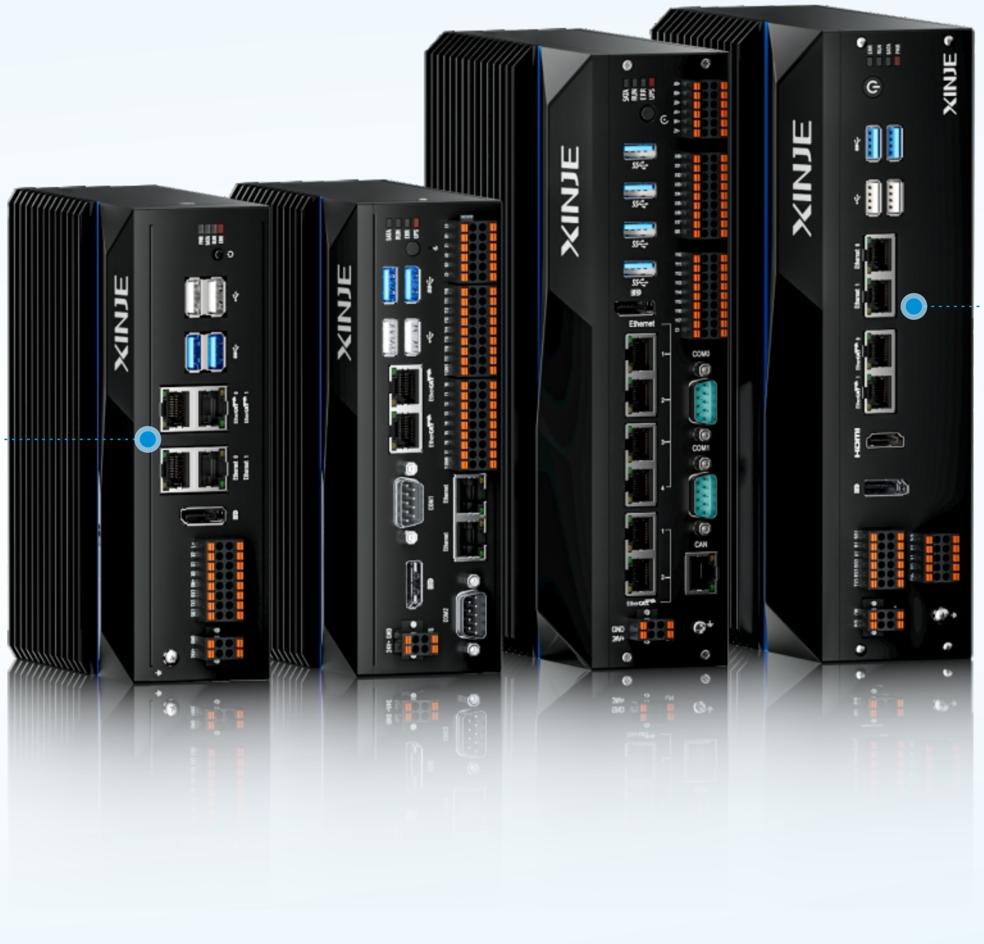
HVAC

......

Distinctive Technology Integration

Allows WIN & Linux systems to implement functions such as CAD graphics processing (CAM), MES client, AGV algorithms, etc.;

The XSA Series integrates motion control, logic control, IPC fusion applications, machine vision, HMI, and other functions into one, resulting in a more streamlined overall product topology.



Multi-purpose Machine

Through APIs, motion control, logic control, data processing, machine vision, HMI, and more can be integrated. A single industrial computer consolidates functions such as PLC, motion controller, vision industrial computer, and HMI display, resulting in a more streamlined overall product topology.

Virtualization Technology

Based on Hypervisor virtualization technology, it ensures independence between systems. If the Windows system crashes, the real-time system remains unaffected; moreover, the performance of the real-time system is not impacted by high CPU load in the Windows system.

High reliability

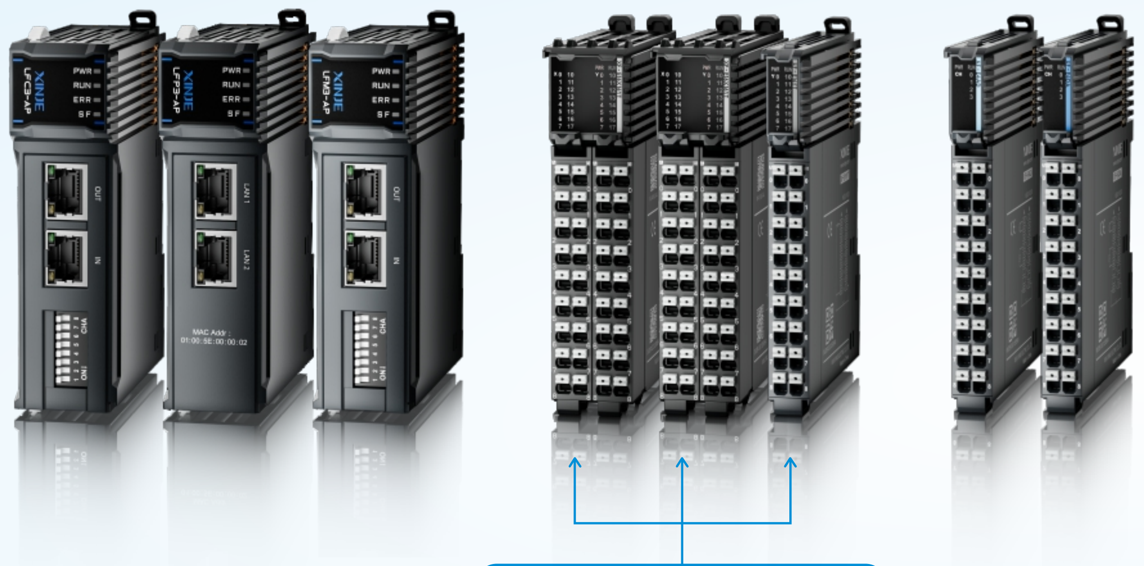
The product design fully complies with strict PLC standards, making it more suitable for industrial use on site.

User-friendliness

Developed based on the XS Studio platform, it supports the IEC61131-3 standard and offers a variety of programming languages including LD, ST, FBD, and SFC. It enables faster development and debugging with real-time debugging, online monitoring, and simulation capabilities.

XF series --New generation IO system

Rich module types, supporting up to 32 IO modules



Adapter module

- Support multiple bus protocols including PROFINET, EtherCAT, Modbus-TCP

Analog module

- 4-channel 0-5V/10V, 1-5V, -20/0/4-20mA, ±5V, ±10V analog input (16-bit).
- 4-channel 0-5V/10V, 1-5V, 0/4-20mA, ±5V, ±10V analog output (16-bit).
- Support disconnection detection function.
- Channel conversion speed of 60us/CH.
- The error in the entire temperature range is ±0.2%.

Digital module

- 8 points dry contact relay output
- 16 points bipolar input
- 16 points transistor output (NPN)
- 16 points transistor output (PNP)
- 8 points NPN input and 8 points NPN output
- 32 points bipolar input
- 32 points transistor output (NPN)
- 16 points bipolar input and 16 points NPN output
- The time from the IO excitation signals to the main station is less than 1ms

High speed counting module

- 1-channel high-speed counting module
- Support differential/single ended options
- 2-channel high-speed input (probe function)
- 4-channel high-speed output (flying shooting function)
- Maximum frequency 2MHz
- Support pulse frequency/width measurement

Special module

- DC24V system power supply module

Temperature acquisition module

- 4-channel thermistor, thermocouple.
- Thermistor (RTD) PT100, PT1000, CU50, CU100, NTC-5K, NTC-10K resistance measurement input module, compatible with 2/3-wire thermistor sensor.
- Thermocouples (TC) K, S, E, N, B, T, J, R types, -100~100mA pressure measurement input module.

Communication module

- Dual independent 232/485 serial communication ports, supporting Modbus master, slave, and free format communication.
- Channel isolation ensures strong anti-interference capability.

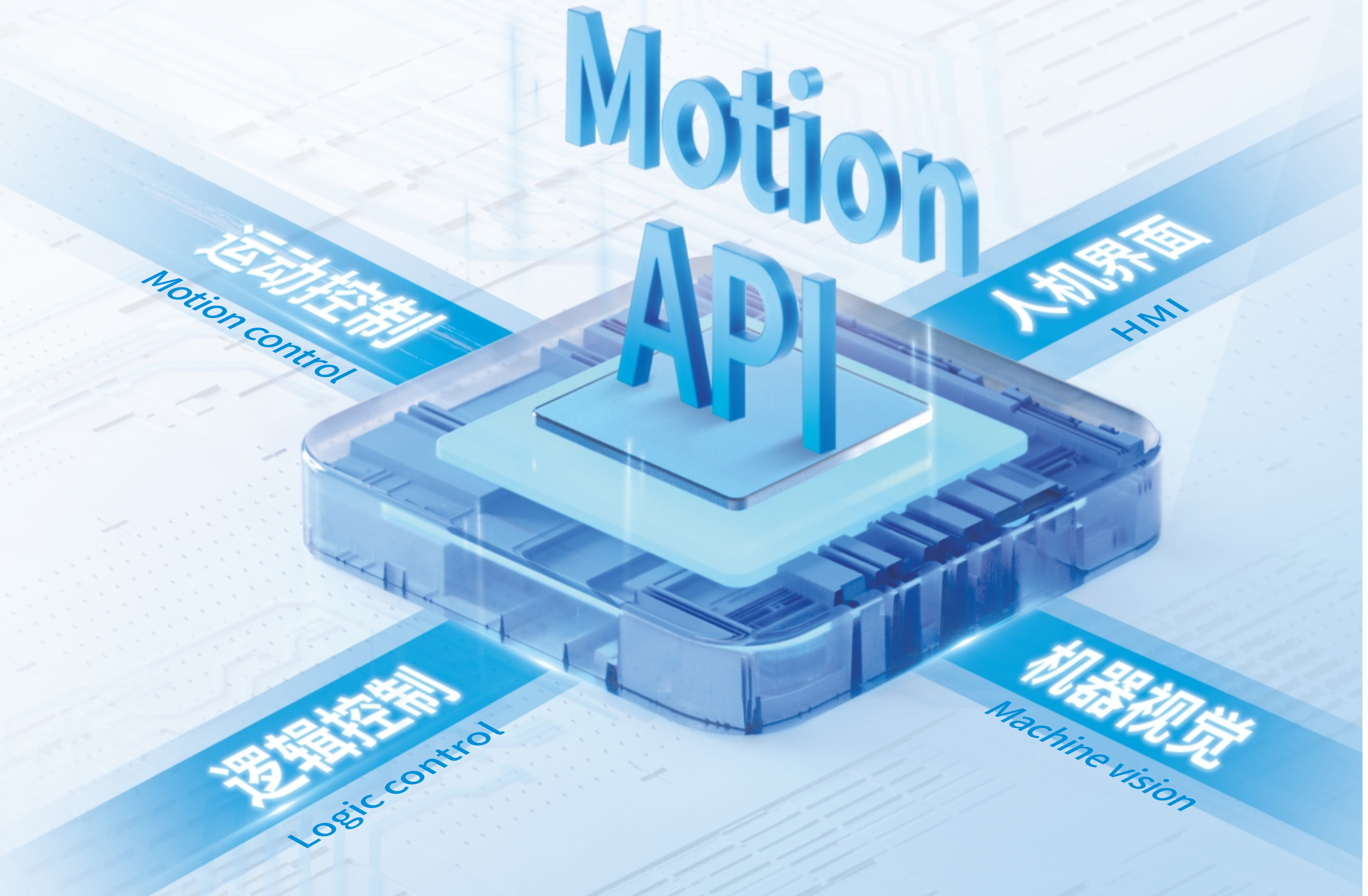
Pulse module

- Two-channel pulse output
- Supports pulse+direction, A/B phase 1x frequency, CW/CCW, and PWM output modes.

Motion API

The perfect fusion of high flexibility and robust performance

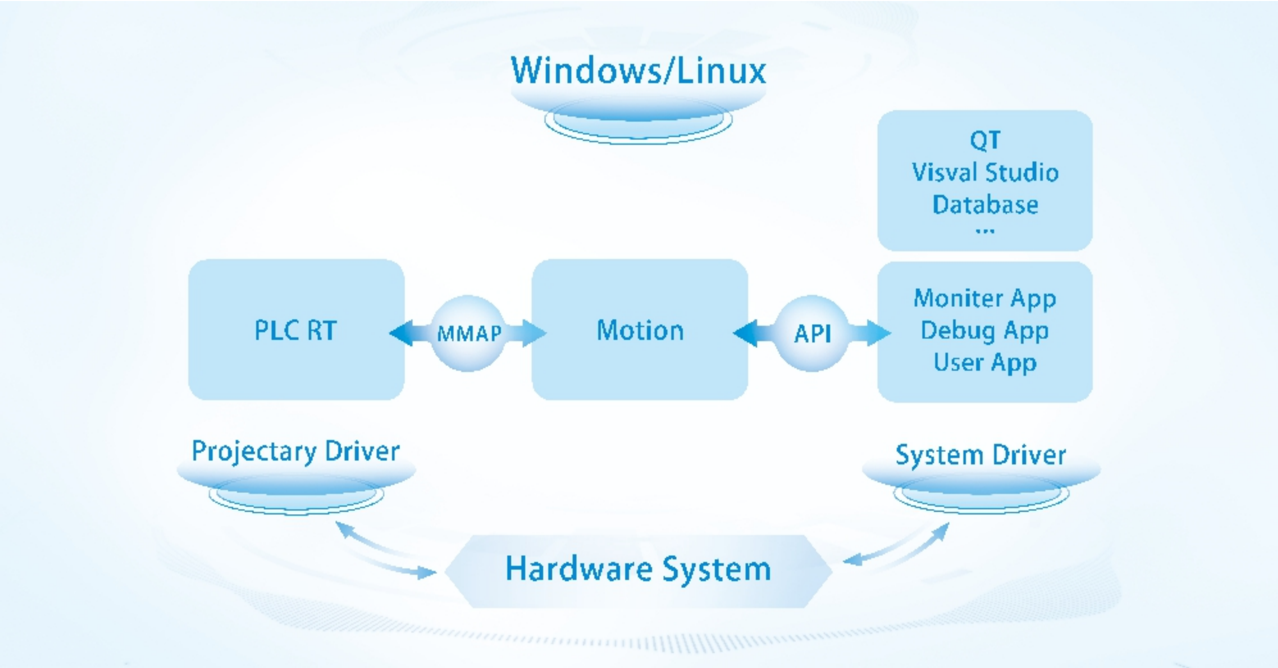
- Innovative architecture, multi-dimensional integration
- Control software integration, industrial interconnection
- Process confidentiality, reliable barrier
- Shared memory, lightning-fast interaction
- High-efficiency axis control, performance pioneer
- Multiple programming options, flexible and efficient



Motion API

Motion API is a PC-based motion control system in the form of an industrial computer, utilizing an open X86 architecture, a microsecond-level Windows real-time system, and mainstream pure software EtherCAT communication.

It encompasses multiple instruction libraries, supports various programming languages (such as C++/C#), allows for kernel-level algorithm secondary development, is compatible with commonly used Fanuc G code, and supports 16-axis synchronous high-speed and high-precision trajectory interpolation, as well as advanced algorithms like look-ahead and AFM filtering. Deeply integrated with Xinje's servo, VFD, stepper drives, and I/O modules, it forms a comprehensive industry solution widely applied in



Six major advantages, interpreting efficiency and flexibility

Architectural innovation, multi-dimensional integration

The Motion API series products integrate motion control, logic control, machine vision, and other functionalities into one, greatly simplifying the system architecture. This integration addresses the inconvenience caused by repeatedly switching between multiple software during the programming process and enhances development efficiency.

Control software integration, industrial interconnection

Utilizing soft PLC simplifies the topology structure, avoids wear and tear on PCI interfaces, and reduces hardware failure rates.

The Motion API series products can be deployed on either Windows or Linux systems as needed, easily integrating third-party software and bridging IT/OT data channels.

Process confidentiality, reliable barrier

The Motion API series products support secondary development at the algorithm kernel level in the form of C language and can be mounted on hardware platforms for execution, offering a high degree of confidentiality.

Shared memory, lightning-fast interaction

The Motion API series products utilize shared memory for data interaction, capable of handling megabyte-level data exchanges every millisecond, with system files and configuration files transmitted in seconds.

High-efficiency axis control, performance pioneer

The Motion API series products are based on the X86 hardware architecture, boasting exceptional performance with a single instruction operation cycle of 5ns, an interpolation cycle of 1ms, and the ability to control up to 256 axes in 1ms, with a maximum of 256 axes per single channel.

Multiple programming pptions, flexible and user-friendly

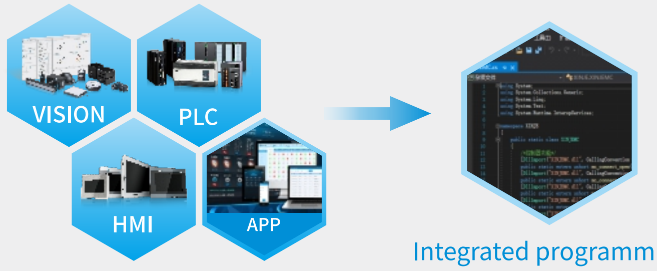
The Motion API series products support various programming languages such as C#, C++, LabView, VB, and VC, making projects more flexible and easier to maintain.

Motion API

Breaking through traditional forms, reshaping a highly integrated and unified intelligent platform

IPC+software PLC

Hardware carrier: XS series industrial intelligent controllers
Software carrier: 64-bit Windows/Linux operating systems

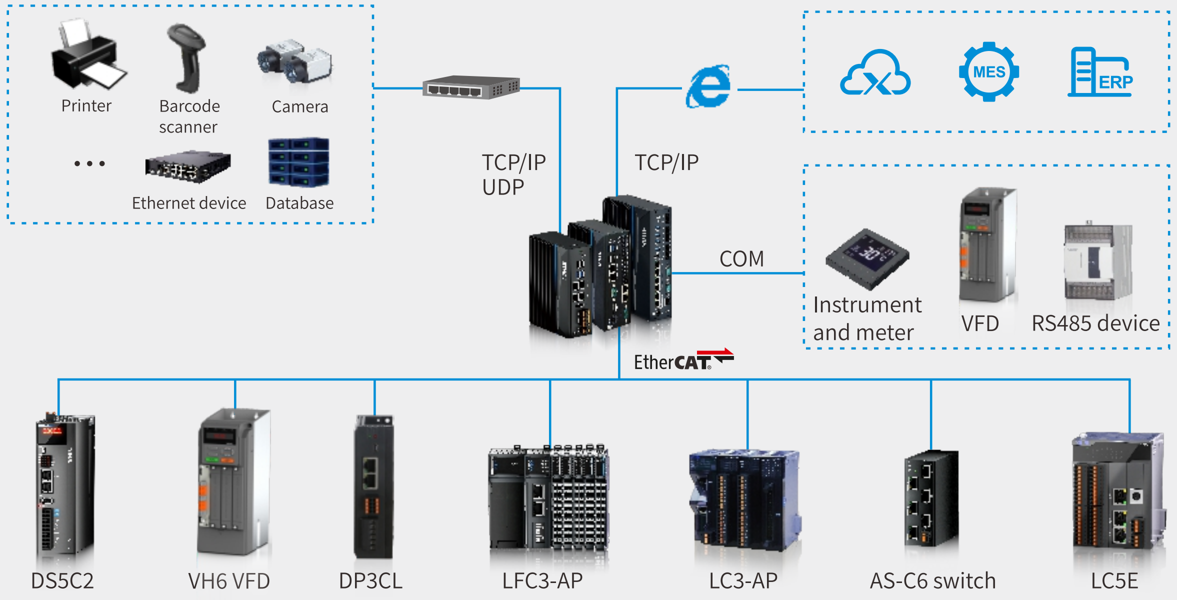


Highly integration

The PLC, HMI, motion control, vision, PC APP and other functions are integrated in a hardware carrier, which improves the development rate.

Open ecosystem, creating a comprehensive industrial information network

The Motion Api product series integrates the advantages of traditional PLC and IPC platforms, combining the powerful control capabilities of PLCs with the open ecosystem of Windows/Linux. It allows for the operation of motion control, logic control, machine vision, and high-speed data acquisition for automation all on a single platform. Additionally, it facilitates information databases, cloud platform interaction, and supports a wide range of bus protocols. It also accommodates third-party software integration, making it convenient for equipment manufacturers to integrate IT/OT applications.



Motion API

Quickly meet market demands for customization, bus-based systems, high performance, expansion interfaces, multi-step processes, and complete supply solutions.

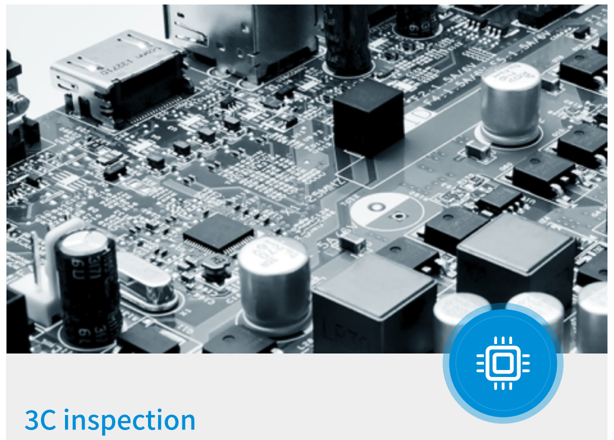
Widely used in 3C testing, semiconductor, woodworking, laser cutting, dispensing, photovoltaic and other industries.

Aluminum profile drilling and milling machine

The aluminum profile drilling and milling machine is used for processing aluminum profile door and window materials. It features a wide range of basic machining templates and various hinge patterns. With a CNC host system, it offers high processing speed and precision, maintaining a graphic accuracy error within 0.05mm. This machine boasts rich functionality and powerful performance, applicable in numerous fields such as laser cutting, 3C inspection, dispensing, photovoltaics, and semiconductors.

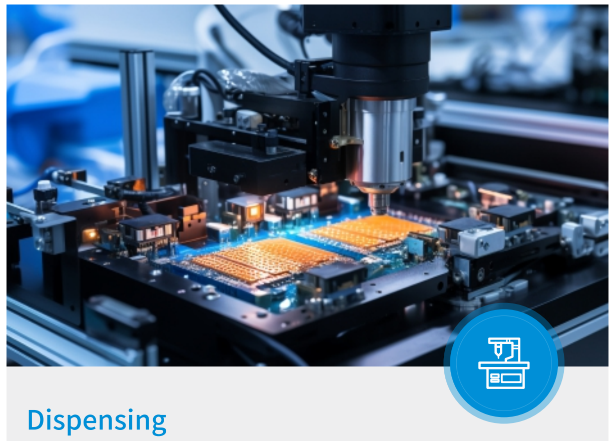
Robot

The robot system developed based on API features a rich set of instructions and is suitable for various scenarios. It supports debugging, is easy to program, and simple to operate. It offers advanced algorithms for smooth transitions at high speeds and allows users to load their own algorithm libraries to conduct higher-level development in combination with the Motion API.



3C inspection

During the movement of objects, there is no need to stop as the camera takes images and uses vision to calculate the position of objects, significantly improving production efficiency. The API-based 3C inspection system features high-speed responsiveness, ensuring that the transmitted IO signals reach the camera as quickly as possible. The camera can continuously move and capture images without stopping, and it can continuously output signal points.



Dispensing

Dispensing machines require precise control of the glue amount, consistency in dispensing, and high-quality stability during efficient operations. The API-based dispensing system ensures equipment stability and meets the demands of high-speed operations. The host software integrates functions such as algorithms, configuration, and diagnostics. It is easy to debug, supports data diagnostics and preview, and facilitates subsequent parameter adjustments, offering higher integration and suitability for experienced IT developers.

List of API functions

A rich function library that meets basic operations, read/write operations, and motion control functions.

Foundation class

Function	Name	Remark
Controller functions	mc_connect_open	Function for industrial computer operation. Communication connection, reboot, obtaining software version, reading and writing IP address, etc.
	mc_connect_close	
	mc_controller_restart	
	mc_get_connect_status	
	mc_get_controller_soft_version	
	mc_get_controller_ip_address	
	mc_set_controller_ip_address	

Management class

Function	Name	Remark
Ethercat communication	emc_get_object_node	PDO data reading (position, speed, torque, etc.) Ethercat bus cycle period Obtain scan period data
	emc_set_object_node	
	emc_get_pdo_ctrl_mode	
	emc_get_pdo_position	
	emc_get_pdo_velocity	
	emc_get_pdo_torque	
	mc_get_cycle_time	
	emc_get_consume_time_fieldbus	
	emc_clear_consume_time_fieldbus	
Axis configuration	mc_get_config_axis_type	Axis configuration parameter Axis type acquisition The amount of movement per turn Soft limit IO settings
	mc_set_config_pulse_movement	
	mc_get_config_pulse_movement	
	mc_set_softlimit_unit	
	mc_get_softlimit_unit	
	mc_set_config_counting_type	
	mc_get_config_counting_type	
	mc_set_config_counting_limit	
	mc_get_config_counting_limit	
	pmc_set_io_config	
	pmc_get_io_config	
Axis operation functions	mc_get_axis_status	Single axis data acquisition: position, speed, torque Gear binding setting
	mc_get_axis_err	
	mc_get_axis_ctrl_mode	
	mc_get_axis_target_position	
	mc_get_axis_target_velocity	
	mc_get_axis_target_accelerate	
	mc_get_axis_target_torque	
	mc_get_axis_actual_position	
	mc_get_axis_actual_velocity	
	mc_get_axis_actual_accelerate	
	mc_get_axis_actual_torque	
	mc_set_gearin_ratio	
	mc_get_gearin_ratio	

PLC
HMI
Industrial informatization
Servo system
Frequency inverter
Stepping system
Vision system
IoT Industrial Controller

List of API functions

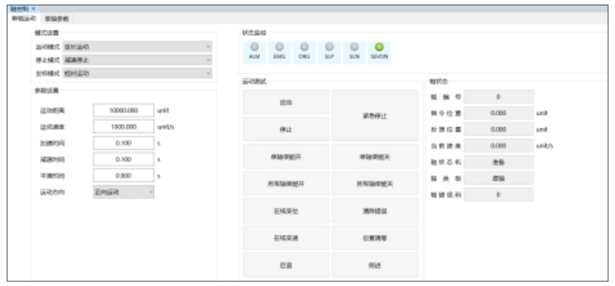
Motion class

Function	Name	Remark
Axis group motion	mc_group_inst_ptp	Straight line, arc, PTP interpolation Interpolation speed read and write Axis group stop
	mc_group_inst_line	
	mc_group_inst_circle	
	mc_set_vector_profile	
	mc_get_vector_profile	
	mc_group_inst_stop	
Single axis motion	mc_axis_enable	Absolute and relative positioning of single axis Speed and torque control Gear binding Homing
	mc_axis_disable	
	mc_reset_fault	
	mc_position_move	
	mc_move_superpose	
	mc_velocity_move	
	mc_continue_move	
	mc_axis_stop	
	mc_gear_in	
	mc_gear_out	
	mc_home	
	mc_set_control_mode	
	mc_torque_control	
	mc_set_position	
G-Code	mc_gcode_start	G instruction function G command start, stop, pause Get file, update delete file, get current line information Get the next line of information and so on...
	mc_gcode_stop	
	mc_gcode_pause	
	mc_gcode_go_on	
	mc_gcode_get_status	
	mc_gcode_get_current_file	
	mc_gcode_get_current_line	
	mc_gcode_set_new_file	
	mc_gcode_change_file	
	mc_gcode_delete_file	
	mc_gcode_clear_file	
	mc_gcode_get_first_file	
	mc_gcode_get_next_file	

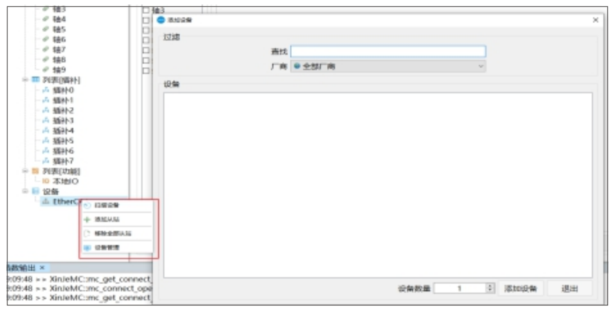
Debugging assistant interface

Intuitive and simple, good programming helper

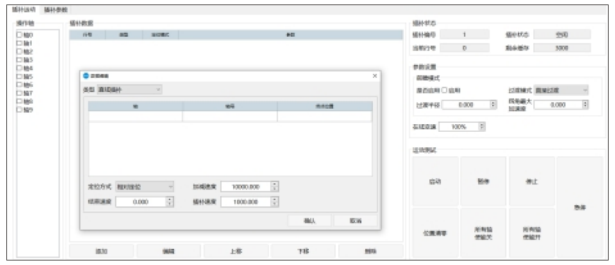
Single axis debugging



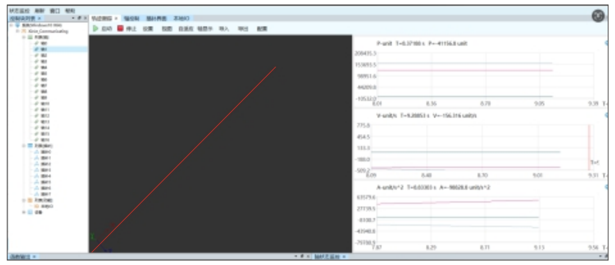
Interpolation debugging



Scan

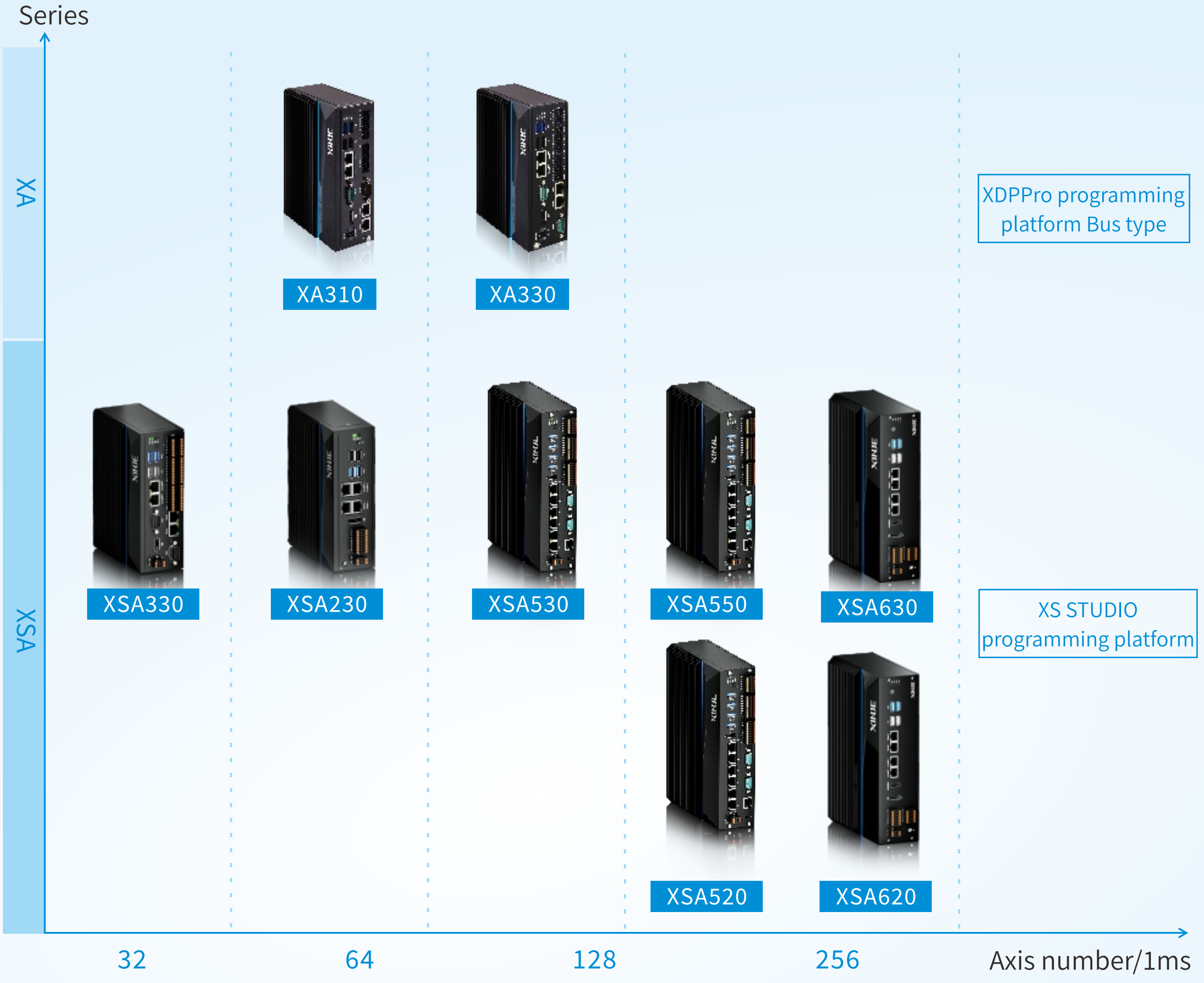


Oscilloscope



Industrial intelligent controller

The perfect combination of high flexibility and powerful performance



Universal characteristic

Platform complementarity

The XA series and the XSA series complement each other in terms of programming platforms, with the XA series supporting the XDPPro programming platform and the XSA series supporting the XS Studio programming platform.

High performance

Based on Intel high-performance x86 processors, it features a small size but offers faster response and greater computing power, with instruction execution capabilities reaching the ns level.

Fusion control

Offer optional Windows or Linux support to meet multifunctional needs such as informatization and control, machine vision and motion control. It also supports MotionAPI functionality.

Rich interfaces

The system supports differential encoder input and features frequency measurement, high-speed counting, high-speed pulse output, and pulse width modulation to meet various

Industrial intelligent controller

XA series

Intel high-performance X86 processor

XA series can integrate motion control, machine vision, HMI, information and other industrial automation applications to provide customers with integrated and intelligent system solutions. It is compatible with Xinje XDPPro programming platform, which supports POU programming mode and can significantly improve user programming efficiency.

① 4~8 channels 200KHz pulse output
② 2~4 channels 200KHz high speed counting
③ EtherCAT motion control
④ Support dual IP Ethernet interfaces to meet the separation of internal and external networks
⑤ Built-in UPS to ensure user data and device security
⑥ Support LD, IL, C language programming

Performance specification

Product series	XA310	XA330
CPU	Intel Celeron , 1.5GHz ARM Cortex A8	Intel Celeron , 1.5GHz
Operating system	Windows	Linux/Windows
Memory	DDR4-4G	
Display	DP, max resolution is 4096×2160@60Hz	
Ethernet	3 LAN ports	2 LAN ports
TMP	2.0	
Storage	1xM.22280（128G）	
USB	2xUSB2.0,2xUSB3.0	
IO	12 inputs (NPN/PNP), 12 outputs 4 channels 200K high speed counting 4 channels 200K pulse output	16 inputs (NPN/PNP), 16 outputs 2 channels 200K high speed counting 8 channels 200K pulse output *Note: pulse output is temporarily not supported.
Serial	RS485/RS232*1	RS485/RS232*2(BIOS switching)
EtherCAT communication node	64	128
Motion control	Single axis, axis group, electronic cam	
CAN	Not support	
Power supply	24VDCIN, 4PINPhonix, ACPI management, built-in UPS	
power waste	20W(typical)~60W(max)	
Working temperature	0°C~60°C with 0.7m/s airflow	-25°C~60°C with 0.7m/s airflow
Storage temperature	-10°C~60°C	-40°C~80°C
Relative humidity	10~95%@40°C（non-condensing）	
ESD	Contact discharge ±4KV, air discharge ±8KV	
Protection level	IP30	
Certificate	CE/FCC	CE/FCC

*Note: XA series use EtherCAT remote expansions.

XA 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&PNP	-	-	-	-	XA310	-
	-	-	-	-	XA330	-

X86 Industrial intelligent controller

XSA series

Based on the X86 platform, Intel high-performance processor, and the response speed is faster. The self-developed XS Studio programming platform, which can reference many standard function libraries, adopt the IEC61131-3 programming standard, support six programming languages (ST, SFC, FBD, CFC, LD, IL), and develop Xinje proprietary function blocks, instruction libraries and system libraries, which can significantly improve user programming efficiency.

① 128MB Program Capacity
② Dual EtherCAT Master Control
③ EtherCAT Remote I/O Support
④ Ethernet Communication
⑤ Virtualization Technology
⑥ Built-in UPS
⑦ Optional Windows or Linux Operating System
⑧ High Reliability: Exceeds IPC Standards

Performance specification

Product series XSA-			XSA230	XSA330	XSA520	XSA530	XSA550	XSA620
Operating System			Windows/Linux (Supports multi-core)					
CPU Model			J6412:2.0GHz Quad-core	J3455:1.5GHz	I3-1115G4:3.0GHz Dual-core four-threads	I5-1135G7:2.4GHz Quad-core eight-threads	I7-1165G7:2.8GHz Quad-core eight-threads	I3-1215U
Storage Configuration			8G+128G	8G+128G	8G+256G	8G+256G	8G+256G	8G+256G
Programming method			IL、LD、FBD、ST、SFC、CFC					
Program capacity			128MB					
Data capacity			128MB (include power-off holding 6MB)					
Power supply			Rated voltage DC24V					
I/O	Total points		6	32	32	32	32	6
	Input points	NPN	3	16	16	16	16	3
		PNP	-	16	16	16	16	-
	Output points	Transistor	3	16	16	16	16	3
		Relay	-	-	-	-	-	-
High speed input	Encoder input	Single phase	-	2 channels (max 1MHz)				-
		AB phase	-	2 channels (max 1MHz)				-
	OC input	Single phase	-	2 channels (max 200kHz)				-
		AB phase	-	2 channels (max 200kHz)				-
Expansion ability			Only support ECAT remote expansions					
Interrupt	External interrupt		-	16	16	16	16	-
Communication function	Communication port		4 channels RJ45 (2 channels EtherCAT, 2 channels Ethernet) 2 channels USB2.0、2 channels USB3.0 1 channels RS232/RS485	4 channels Rj45 (2 channels EtherCAT, 2 channels Ethernet) 2 channels USB2.0、2 channels USB3.0 2 channels RS232/RS485 (isolated) BIOS control	6 channels RJ45 (2 channels EtherCAT, 4 channels Ethernet) 4 channels USB3.0 2 channels RS232/RS485 (isolated) BIOS control			4channelsRJ45 (2channelsEtherCAT、2channelsEthernet) 2channelsUSB2.0、2channelsUSB3.0、2channelsRS232/RS485
	free format protocol		Modbus RTU, Modbus TCP, Ethernet IP, TCP/IP, UDP, OPC UA, free format protocol, etc.					
Axis drive capacity			32轴/1ms	32axes/1ms	256axes/1ms	128axes/1ms	256axes/1ms	256axes/1ms
Data power-off holding function			Supported					
RTC function			Supported					
Motion control	Single axis motion		Supported					
	Axis group motion		Supported					
	Electronic cam		Supported					

*Note: XSA series use EtherCAT remote expansion.

XSA series product list

	Model					
	AC power			DC power		
	Relay output	Transistor output	Transistor relay mixed output	Relay output	Transistor output	Transistor relay mixed output
NPN&PNP	-	-	-	-	XSA230-L/W	-
	-	-	-	-	XSA330-L/W	-
	-	-	-	-	XSA520-L/W	-
	-	-	-	-	XSA530-L/W	-
	-	-	-	-	XSA550-L/W	-
	-	-	-	-	XSA620-L/W	-

Power supply specification

General specification

Item	XA series	XSA series
Insulation resistance	/	Above DC500V 2MΩ
Anti-noise	Noise voltage 1000Vp-p 1us pulse 1 minute	/
Air	No corrosive and combustible gas	No corrosive and combustible gas
Working temperature	-25°C~55°C (XA330) -5°C~55°C (XA310)	-20°C~55°C
Storage temperature	-40°C~80°C	-40°C~80°C
Working humidity	5%~95% (no condensation)	5%~95% (no condensation)
Installation	Rail mounting	It can be fixed with M3 screws or directly installed on the guide rail
Grounding (FG)	The third kind of grounding (cannot be grounded with the strong current system)	

Power supply specification

XSA power supply specification

Item	Specification
Rated voltage	DC24V
Allowable range of voltage	DC21.6V~26.4V
Permissible instantaneous power-off time	10ms DC24V
Impact current	10A DC26.4V
Maximum power consumption	60W-70W
Power supply for sensor	24VDC±10%

Input specification

XA310, XSA input specification

Input signal voltage	DC24V±10%
Input signal current	7mA/DC24V
Input ON current	Above 4.5mA
Input OFF current	Below 1.5mA
Input response time	About 10ms
Input signal format	Contact input or NPN or PNP open collector transistor
Circuit insulation	Photoelectric coupling insulation

XA330 input specification

Input signal voltage	DC24V±10%
Input signal current	7mA/DC24V
Input ON current	Above 4.5mA
Input OFF current	Below 1.5mA
Input response time	Low speed 0.1ms, high speed 5us
Input signal format	Bidirectional optocoupler
Circuit insulation	Photoelectric coupling insulation

Output specification

XA310 output specification

General 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

High speed pulse output

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

XSA330 output specification

General transistor output

Output load max voltage	DC24V±10%
Maximum current of nominal load	100mA/DC24V
Short-circuit protection current	200mA
Output response time	NPN 0.2ms, NMOS is 5us
Output signal format	NMOS open circuit leakage current or NPN open collector
Circuit insulation	Photoelectric coupling insulation

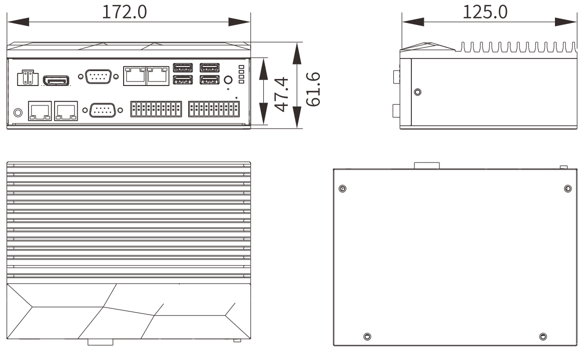
XSA output specification

General 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

Exterior dimensional drawing (Unit：mm)

XA310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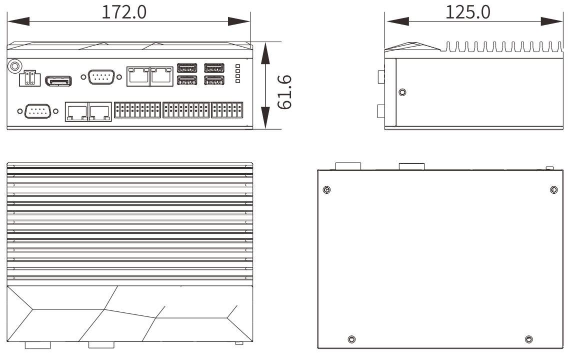
125.0
47.4
61.6

XA330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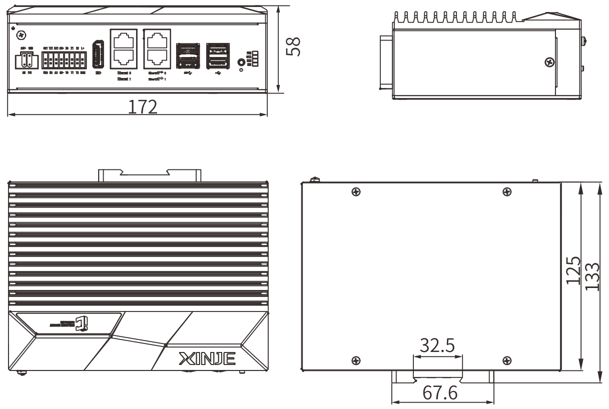
125.0
61.6

XSA230 series


58
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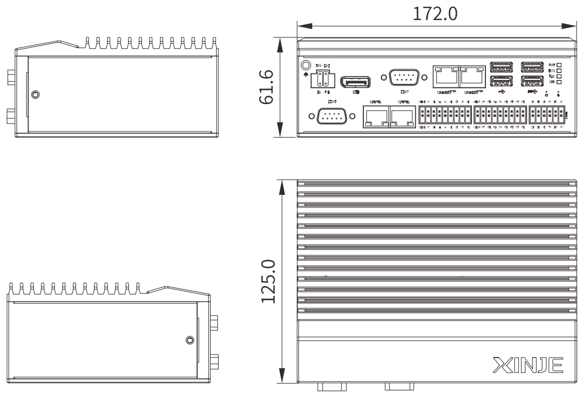
125
133
32.5
67.6
XINJE

XSA330 series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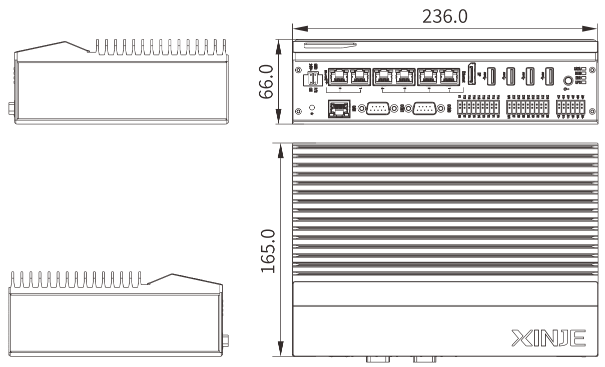
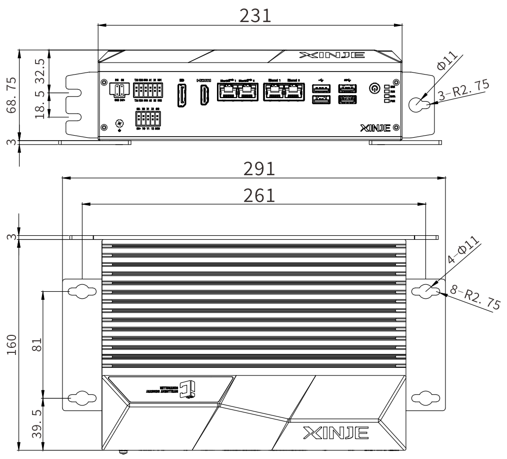
61.6
125.0
XINJE

XSA500 series


236.0
66.0
165.0
XINJE

XSA600 series


231
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32.5
18.5
3
Φ11
3-R2.75
291
261
3
4-Φ11
8-R2.75
160
81
39.5
XINJE

XFseries blade type PLC

Compact, faster, and stronger motion control ability

The XSF5 series adopts a blade structure with a compact body, complies with the PLCopen programming specification, supports 6 programming languages, and can expand up to 32 local modules.

Features

Blade structural design, achieving slim body

- Compared with XDH-60A64-E,the body size is reduced by 70%, significantly reducing installation space.

Easy to debug and maintain

- The entire XSF series products, including the main control unit and expansion unit, support firmware self updating, and new features are available with just one click.
- Equipped with Type-C port, it can connect to the upper computer, and online debugging only requires a mobile data cable.
- Support importing and exporting device data and project files through USB flash drives and TF cards.
- Standard system slide switch, which can immediately stop PLC operation without power outage.

More powerful scalability

- Up to 32 XF extension modules can be connected locally.
The new high-speed backplane bus allows for the expansion of functional modules such as high-speed counting, pulse output, flying shooting, and communication.

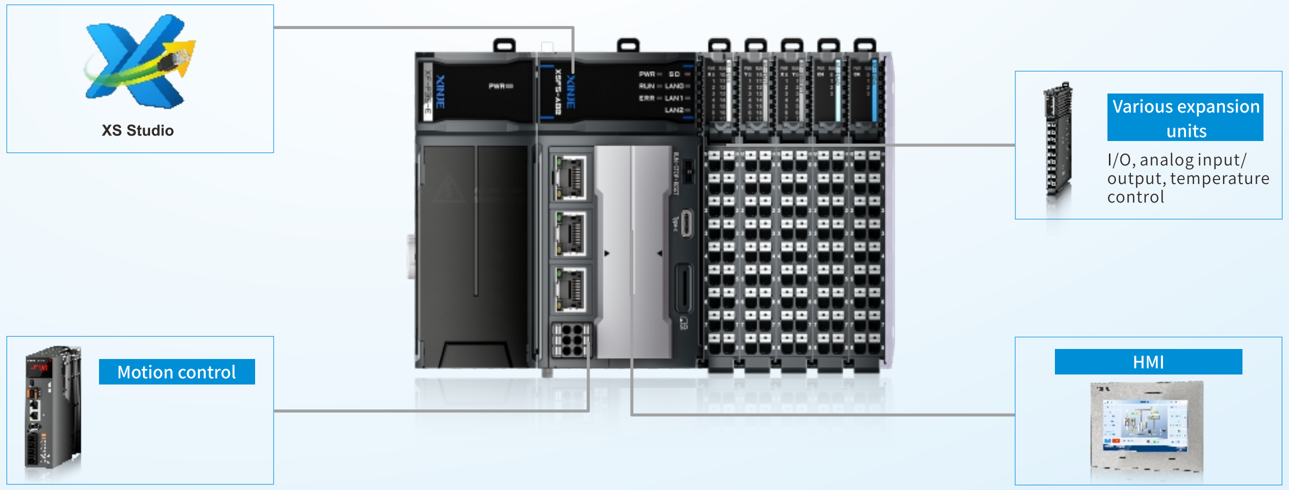
Flexible and open, free programming

- XSF supports the Codesys platform, can be adapted to Xinje XS Studio programming software, meets the IEC61131 standard and PLCopen programming specification.

Multiple networks union, convenient interwork

- The XSF main control unit is equipped with 3 RJ45 ports,1 CAN communication port, and 1 RS485 port.
- Supports multiple protocols, including Mdbus TCP, UDP, OPC UA, TCP/IP, Ethernet/IP, CANopen, and Modbus communication.
- Support dual IP settings, achieve isolation between internal and external networks of equipment, and assist in the digital transformation of factories.

System composition


XS Studio
Motion control
Various expansion units
I/O, analog input/ output, temperature control
HMI

Blade type controller

XSF5 series

Adopting a blade structure design, it has a compact body, complies with PLCopen programming specifications, supports 6 programming languages, and can be locally expanded up to 32 modules.

① 32MB program capacity
② Support up to 32 local expansion
③ EtherCAT motion control
④ EtherCAT remote IO
⑤ Ethernet/IP communication
⑥ CAN bus

Performance specification

Product series XSF5-		A8	A16	A32	A64
Processing time	LD Bit	15ns			
	Mov Double	25ns			
Programming method		ST、SFC、FBD、CFC、LD and IL			
User program capacity		32MB			
Data capacity	Non holding	32MB			
	Holding	10MB			
	Storage capacity (files/recipes)	512MB			
Built-in I/O function		None			
Scalability		Right expansion module*32			
Perpetual Calendar (RTC)		No battery can support 14 days (RTC battery can be added)			
Communi-cation	Port	1*CAN, 1*RS485, 3*RJ45 ports			
	Communication protocol	Standard MODBUS ASCII/RTU communication, Ethernet/IP, TCP/IP, UDP, OPC UA, free format communication			
Bus function		EtherCAT bus, CANbus			
ECAT max driving axis number		8	16	32	64
Axial capability		8-axis/1ms	16-axis/1ms	16-axis/1ms、32-axis/2ms	32-axis/2ms、64-axis/4ms
Motion control	Single axis motion	Support			
	Axis group motion	Support			
	Electronic cam	Support			

XSF5 series model list

	Model			
	DC power supply			
EtherCAT bus type	XSF5-A8	XSF5-A16	XSF5-A32	XSF5-A64

General specification

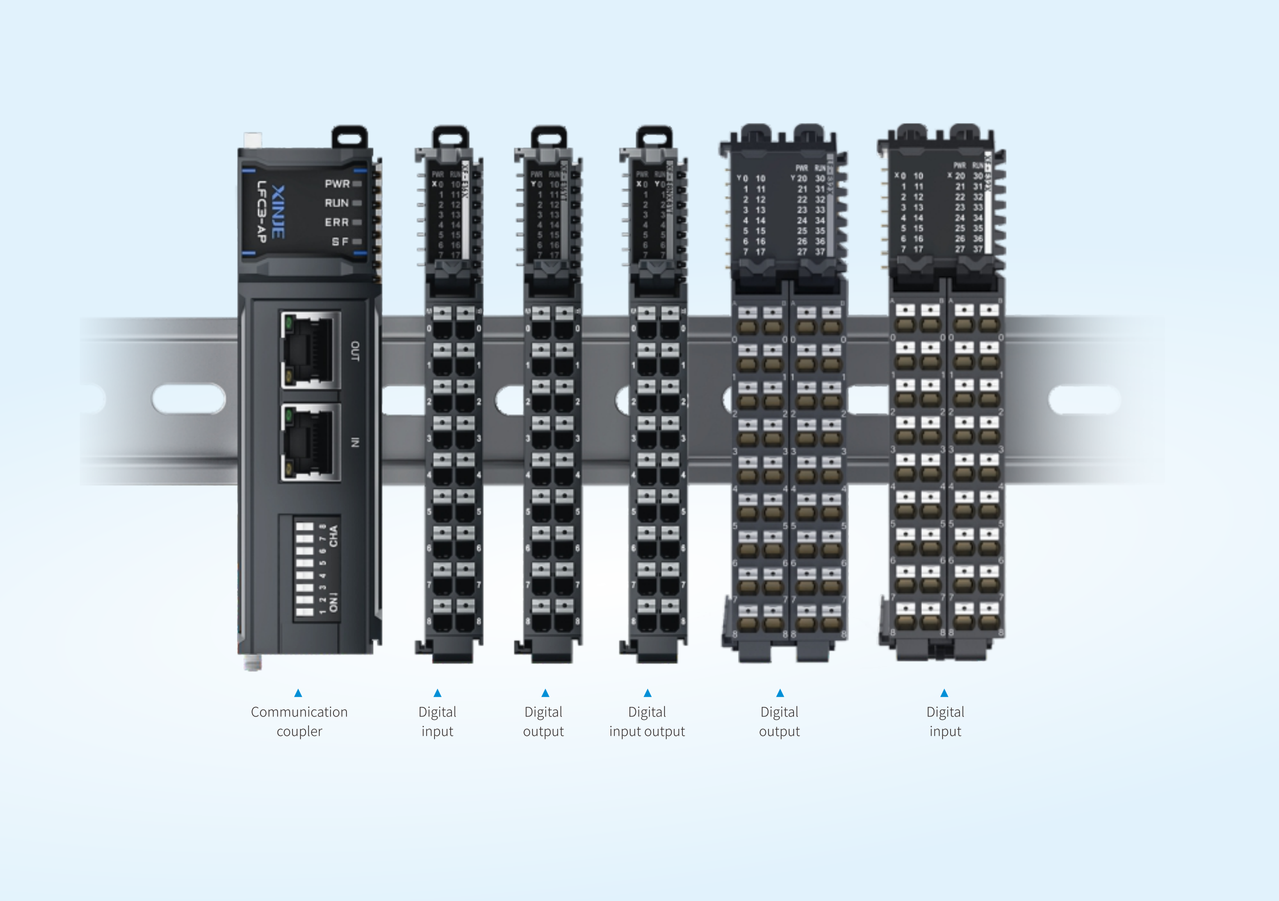
Item	Specification
Insulation voltage	Above DC 500V 2MΩ
Anti-noise	Noise voltage 1000Vp-p 1us pulse for 1 minute
Air	Non corrosive and flammable gases
Ambient temperature	0°C~60°C
Ambient humidity	5%~95%（no condensation)
Installation	Can be fixed with M3 screws or directly installed on the guide rail
Grounding (FG)	The third type of grounding (cannot be connected to the common grounding of the high-voltage system)

Power supply specification

Item	Specification
Rated voltage	DC24V
Voltage allowable range	DC21.6V~26.4V
Input current (basic unit only)	120mA DC24V
Allow instantaneous power outage time	10ms DC24V
Impact current	10A DC26.4V
Maximum power consumption	10W
Sensor power supply	24VDC±10%

Expansion units

In order to meet the application needs of more occasions, the XF series PLC can be equipped with rich I/O expansion modules, analog input and output, temperature acquisition, communication, pulses, etc. The ontology can expand up to 32 different types of expansion modules.



General specification

Item	Specification
Usage environment	Non corrosive gas
Operation temperature	-20°C~55°C
Storage temperature	-40°C~70°C
Ambient humidity	10~95%RH
Storage environment humidity	10~95%RH
Installation	Directly installed on the DIN46277 (35mm wide) guide rail

Expansion unit model list

Digital Module

Module type	Model	Channel	Input signal	Specification
Digital input	XF-E16X	16	Digital input	Rated input DC24V Positive and negative logic can be set Input filtering time 0~128ms optional NPN&PNP input compatibility
	XF-E32X	32	Digital input	
Digital output	XF-E8YR	8	Dry contact relay output	DC24V±10% power supply Positive and negative logic can be set The response to CPU exception/STOP mode can be set
	XF-E16YT	16	Transistor output, NPN type	
	XF-E16PYT	16	Transistor output, PNP type	
	XF-E32YT	32	Transistor output, NPN type	
Digital IO	XF-E8NX8YT	16	8-channel digital input, 8-channel transistor output, NPN input, NPN output	DC24V±10% power supply Positive and negative logic can be set Input filtering time 0ms~128ms optional The response to CPU exception/STOP mode can be set
	XF-E16X16YT	16	16-channel digital input, 16-channel transistor output, NPN&PNP bipolar input, NPN output	

Analog Module

Module type	Model	Channel	Input signal	Specification
Analog input	XF-E4AD	4	Input current: 0~20mA, 4mA~20mA, -20mA~20mA Input voltage: 0-5V, 0~10V, 1-5V, ±5V, ±10V	DC24V±10% power supply Resolution: 16 bits Conversion speed: 60us/CH Response speed: 60us Accuracy: ±0.1% (room temperature 25±5°C) ±0.2% (full temperature range -20~55°C) Filtering methods: first-order filtering, time averaging, frequency averaging, and moving average are optional Capable of detecting power outages, disconnections, and exceeding the range
Analog output	XF-E4DA	4	Output current: 0~20mA, 4mA~20mA Output voltage: 0-5V, 0~10V, 1-5V, ±5V, ±10V	DC24V±10% power supply Resolution: 16 bits Conversion speed: 60us/CH Response speed: 45us Accuracy: ±0.1% (room temperature 25±5°C) ±0.2% (full temperature range -20~55°C)

Temperature Acquisition Module

Module type	Model	Channel	Input signal	Specification
Temperature collection	XF-E4RTD	4	Pt100, PT1000, CU50, CU100, NTC-5K, NTC-10K sensor types temperature range: PT100: -200.0~850.0°C PT1000: -200.0~850.0°C CU50: -50.0~150.0°C CU100: -50.0~150.0°C NTC-5K (B value 2000~6000): 40000Ω~400Ω NTC-10K (B value 2000~6000): 40000Ω~400Ω	DC24V±10% power supply Resolution of 0.1°C, 1°C optional Conversion speed (full channel): 250ms, 500ms, 1000ms optional Accuracy: ±0.1% (room temperature 25±5°C) ±0.2% (full temperature range -20~55°C) Filtering methods: first-order filtering, time averaging, frequency averaging, and moving average are optional Capable of detecting power outages, disconnections, and exceeding the range
	XF-E4TC	4	K, S, E, N, B, T, J, and R-type thermocouples temperature range: K-type: -200.0~1300°C S-type: -50.0~1768.0°C E-type: -200.0~1000.0°C N-type: -200.0~1300°C B-type: 250.0~1820.0°C T-type: -200.0~400.0°C J-type: -210.0~1200.0°C R-type: -50.0~1768.0°C Support -100mV~100mV voltage acquisition	

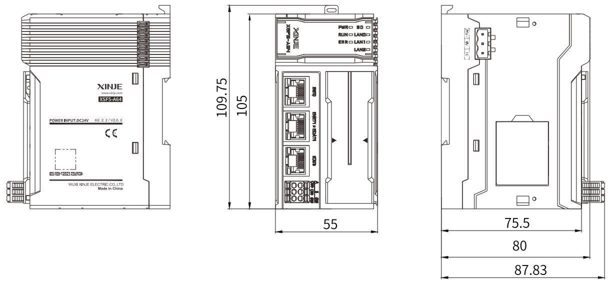
Special Module

Module type	Model	Channel	Input signal	Specification
Serial port	XF-E2COM24	2	2-channel independent RS232/485 serial port communication	RS232/485 optional Support Modbus master, slave, and free-form communication The channel is isolated from the interior, strong anti-interference ability
High speed count	XF-E1HSC	1-channel single ended input or differential input, 2-channel input, 4-channel output	Support 1-channel of encoder single ended input (bipolar) or differential input (A\B\Z) 2-channel high-speed input and 4-channel high-speed output	A/B phase supports 1/2/4 frequency doubling Differential/single ended optional Maximum frequency 2MHz Support pulse frequency/width measurement Support 2-channel probe Support 4-channel comparison output (fly shooting)
Pulse positioning module	XF-E2HSP	2	Two-channel high-speed pulse output 8 high-speed inputs (bipolar) 6 high-speed outputs (NPN)	Pulse + direction, A/B phase 1x frequency, PWM output and CW/CCW mode optional Maximum frequency supports 200kHz
Relay power supply module	XF-EP24	7	7-channel DC24V power supply	Input voltage range: DC24V ±10% Supports short-circuit protection and overload protection

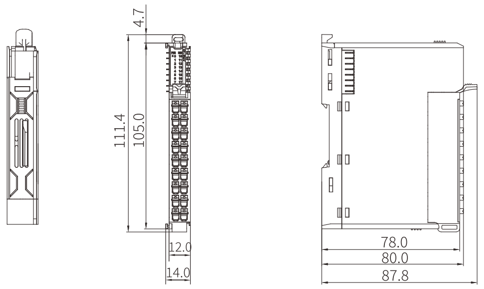
Appearance dimension diagram

(Unit：mm)

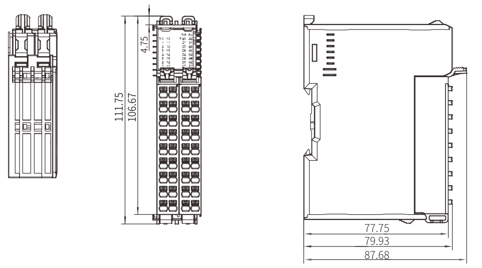
XSF5 series basic unit



XF series expansion modules



Suitable models	
Suitable models	XF-E16X XF-E16(P)YT XF-E8NX8YT XF-E4AD XF-E4DA XF-E2COM24 XF-E4RTD XF-E4TC XF-E1HSC XF-EP24 XF-E2HSP

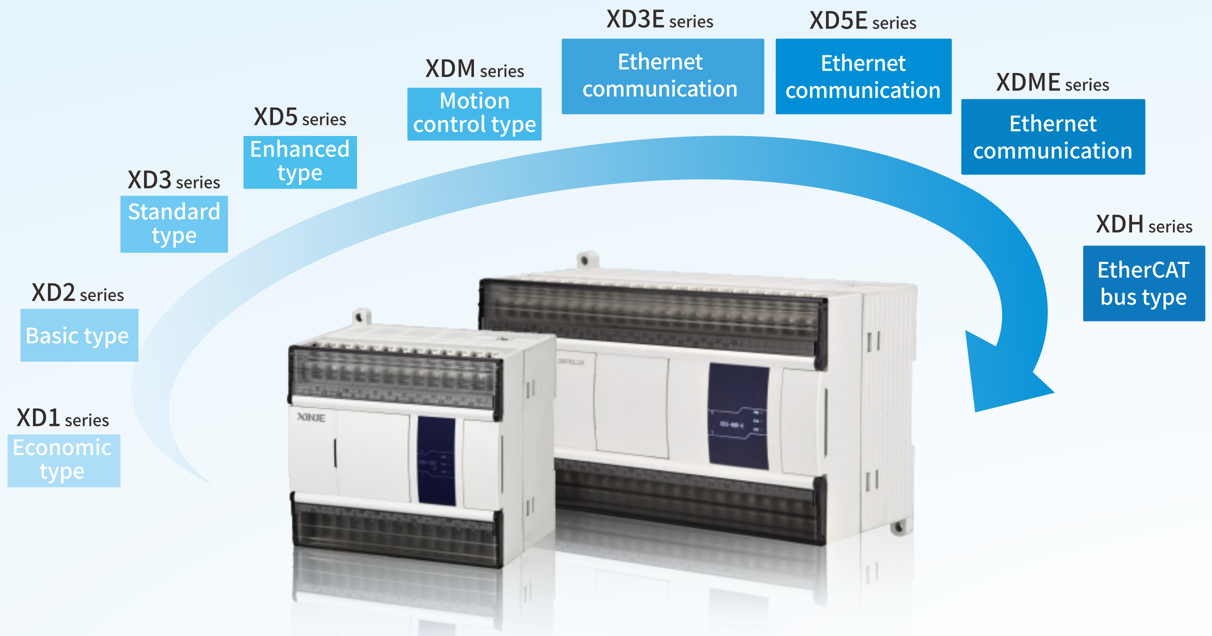


Suitable models	
Suitable models	XF-E32X XF-E32YT XF-E16X16YT XF-E8YR

Small-sized PLC

XD series small-sized PLC fast speed, stable performance and powerful function

9 sub-series to meet various needs



XD1 series
Economic type

XD2 series
Basic type

XD3 series
Standard type

XD5 series
Enhanced type

XDM series
Motion control type

XD3E series
Ethernet communication

XD5E series
Ethernet communication

XDME series
Ethernet communication

XDH series
EtherCAT bus type

High speed operation Fast data processing

Non-Ethernet type PLC
The basic instruction processing speed 0.02~0.05us, scanning time 10000 steps 0.5ms, program capacity 256kB~512kB, and processing speed are about 12-15 times that of XC series.

Ethernet type PLC
The basic instruction processing speed 0.01~0.03us, scanning time 10000 steps 0.2ms, program capacity 1MB~4MB, and processing speed are about 2-3 times that of XDM series.

Bus control High speed communication, cost saving

The bus network can be easily constructed through standard EtherCAT bus and CAN bus, and multi-device control can be realized with minimal wiring.

XDH series PLC has EtherCAT motion control master station function.

Wide range of applications and can meet the diversified needs of users

Network control

Ethernet series PLC is equipped with 2 Ethernet communication ports as standard to easily build an intelligent network system.

High speed pulse output

With 2~10 axes positioning control function

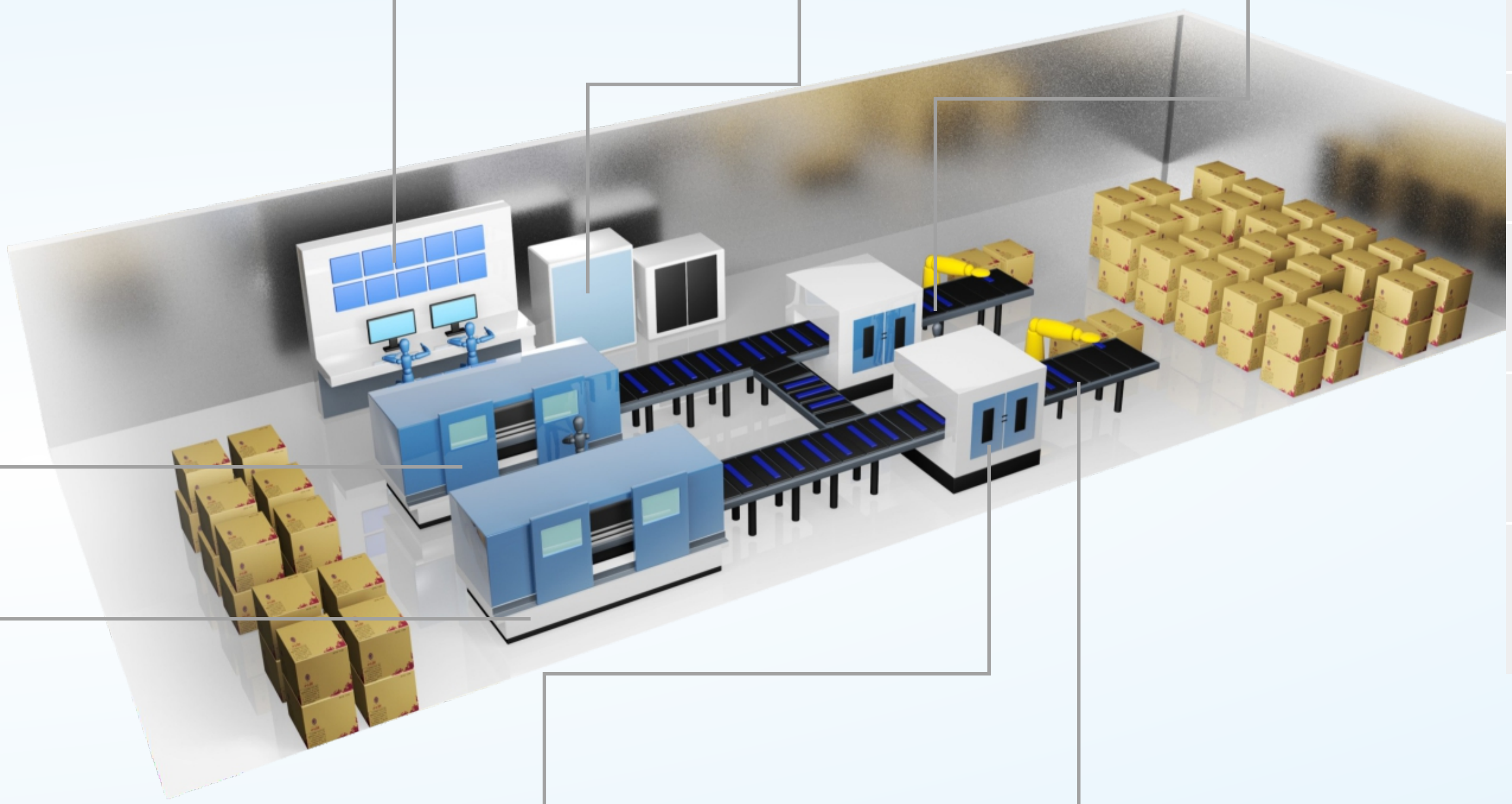
Up to 100KHz pulse output.

Pulse instruction is simple and powerful.

Multiple communication ports

Can realize rich communication functions

XD series PLC has 5 communication ports at most. Support RS232, RS485, bus communication (EtherCAT&CAN), Ethernet (only for Ethernet type PLC), can connect VFD, meter and other peripheral devices, communication network can be set up freely.



High speed signal acquisition

With 3~10 channels high speed counter

By selecting different counters, it can count in single-phase incremental mode (the max frequency can reach 80kHz), AB phase mode (double frequency and quadruple frequency are optional, and the max frequency can reach 50KHz) and differential mode (the max frequency can reach 200kHz).

High speed control is realized by simple high-speed counting instruction.

Strong expansion capability

XD series PLC basic units can be equipped with rich I/O expansion module, analog input and output module, temperature control module, BD board and left expansion module, which can easily realize analog control for various purposes.

The data exchange between the expansion module and the ontology has changed from the original parallel port communication mode of XC series to the SPI serial port communication mode of XD series, so the data exchange speed is faster than that of the original XC series (2ms/AD).

Economic type

XD1 series

The function is relatively simple. It can carry out logic control, data operation and other general functions. It does not support right expansion module, left expansion ED module or expansion BD board.

① Program capacity 256KB
② I/O sequential control
③ Max I/O 32 points
④ Basic instruction 0.02~0.05us
⑤ RS232, RS485
⑥ X-NET fieldbus

Performance specification

Product series XD1-		10R/T	16R/T	24R/T	32R/T
I/O	Total points	10	16	24	32
	Input points	5	8	12	16
	Output points	5	8	12	16
Max I/O points		10	16	24	32
High speed positioning	General pulse output	-	-	-	-
	Differential pulse output	-	-	-	-
High speed input	Single/AB phase mode	-	-	-	-
	Input mode	-	-	-	-
Expansion ability	Right expansion module	-	-	-	-
	Left expansion module	-	-	-	-
	BD board	-	-	-	-
Interruption	External interrupt	3	6	10	10
	Timing interrupt	20	20	20	20
	Other interrupts	-	-	-	-
Communication function	Communication port	2 RS232 ports	2 RS232 ports	2 RS232 ports 1 RS485 port	2 RS232 ports 1 RS485 port
	Communication protocol	Standard Modbus ASCII/RTU communication, free format communication			
Bus function		X-NET fieldbus			
PWM pulse width modulation		-			
Frequency measurement		-			
Precise timing		26 points ET0~ET25 (Only even numbers can be used)			
Multi-station control		-			
Program execution mode		Cyclic scanning mode			
Programming method		LD, ST, C, IL			
Power off holding		Use FlashROM and lithium battery (3V button battery)			
Basic instruction processing speed		0.02~0.05 µs			
User program capacity (secret download mode)		256KB			

XD1 series model list

	Model					
	AC power supply			DC power supply		
	Relay output	Transistor output	Transistor relay mixed output	Relay output	Transistor output	Transistor relay mixed output
NPN type	XD1-10R-E	XD1-10T-E	-	XD1-10R-C	XD1-10T-C	-
	XD1-16R-E	XD1-16T-E	-	XD1-16R-C	-	-
	XD1-24R-E	XD1-24T-E	-	XD1-24R-C	-	-
	XD1-32R-E	XD1-32T-E	-	XD1-32R-C	XD1-32T-C	-
PNP type	XD1-16PR-E	-	-	-	-	-

Product series XD1-			10R/T	16R/T	24R/T	32R/T
Security function			6-bit ASCII password encryption, secret downloading			
Self-diagnosis function			Power on self-test, monitoring timer, syntax check			
Real-time clock			Built-in clock, Lithium battery power supply, with power down memory			
SD expansion card			-			
Bit soft component	Input relay (X)		896 points: X0~X77, X10000~X11177, X20000~X20177, X30000~X30077			
	Output relay (Y)		896 points: Y0~Y77, Y10000~Y11177, Y20000~Y20177, Y30000~Y30077			
	Auxiliary relay	General M	8000 points M0~M7999			
		Power off holding HM	960 points HM0~HM959			
		Special SM	2048 points SM0~SM2047			
	Flow	General S	1024 points S0~S1023			
		Power off holding HS	128 points HS0~HS127			
	Timer	Specification	100ms timer: 0.1~3276.7s, 10ms timer: 0.01~327.67s, 1ms timer: 0.001~32.767s			
		General T	576 points T0~T575			
		Power off holding HT	96 points HT0~HT95			
	Counter	Specification	16-bit counter: K0~32767 32-bit counter: -2147483648~+2147483647			
		General C	576 points C0~C575			
		Power off holding HC	96 points HC0~HC95			
	Special coil for WAIT instruction		32 points SEM0~SEM31			
Word soft component	Data register	General D	8000 points D0~D7999			
		Power off holding HD	1000 points HD0~HD999			
		Special SD	2048 points SD0~SD2047			
	FlashROM register	Power off holding FD	5120 points FD0~FD5119			
		Special SFD	2000 points SFD0~SFD1999			
		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 model doesn't have this function;
③Special refers to system occupancy, cannot be used for other purposes.

Basic type

XD2 series

The functions are complete. In addition to the basic data processing function, it also has special functions such as pulse output, high-speed counting, pulse width modulation, frequency measurement and so on. It supports left expansion ED and BD (16 points are not supported), and does not support right expansion module, which can meet the basic use needs of users.

① Program capacity 256KB
② I/O sequential control
③ Max I/O 60 points
④ Basic instruction 0.02~0.05us
⑤ RS232, RS485
⑥ X-NET fieldbus
⑦ 2 channels 100KHz pulse output
⑧ 3 channels high speed counting (single phase max 80K, AB phase max 50K)

Performance specification

Product series XD2-		16R/T/RT	24R/T/RT	32R/T/RT	42R/T/RT	48R/T/RT	60R/T/RT
I/O	Total points	16	24	32	42	48	60
	Input points	8	14	18	24	28	36
	Output points	8	10	14	18	20	24
Max I/O points		16	24	32	42	48	60
High speed positioning	General pulse output	2 axes	2 axes	2 axes	2 axes	2 axes	2 axes
	Differential pulse output	-	-	-	-	-	-
High speed input	Single/AB phase mode	3 channels	3 channels	3 channels	3 channels	3 channels	3 channels
	Input mode	OC	OC	OC	OC	OC	OC
Expansion ability	Right expansion module	-	-	-	-	-	-
	Left expansion module	1	1	1	1	1	1
	BD board	-	1	1	1	2	2
Interruption	External interrupt	6	10	10	10	10	10
	Timing interrupt	20					
	Other interrupts	High speed counting interrupt, pulse interrupt					
Communication function	Communication port	2 RS232 ports, 1 RS485 port					
	Communication protocol	Standard Modbus ASCII/RTU communication, free format communication					
Bus function		X-NET fieldbus					
PWM pulse width modulation		Support					
Frequency measurement		Support					
Precise timing		26 points ET0~ET25 (only even numbers can be used)					
Multi-station control		-					
Program execution mode		Cyclic scanning mode					
Programming method		LD, ST, C, IL					
Power off holding		Use FlashROM and lithium battery (3V button battery)					
Basic instruction processing speed		0.02~0.05us					
User program capacity (secret download mode)		256KB					

XD2 series model list

Model						
	AC power supply			DC power supply		
	Relay output	Transistor output	Transistor relay mixed output	Relay output	Transistor output	Transistor relay mixed output
NPN type	XD2-16R-E	XD2-16T-E	XD2-16RT-E	XD2-16R-C	XD2-16T-C	-
	XD2-24R-E	XD2-24T-E	XD2-24RT-E	XD2-24R-C	XD2-24T-C	XD2-24RT-C
	XD2-32R-E	XD2-32T-E	XD2-32RT-E	XD2-32R-C	XD2-32T-C	XD2-32RT-C
	XD2-42R-E	XD2-42T-E	XD2-42RT-E	-	-	-
	XD2-48R-E	XD2-48T-E	XD2-48RT-E	XD2-48R-C	XD2-48T-C	XD2-48RT-C
	XD2-60R-E	XD2-60T-E	XD2-60RT-E	XD2-60R-C	XD2-60T-C	XD2-60RT-C
PNP type	-	-	-	XD2-32PR-C	-	-

Product series XD2-			16R/T/RT	24R/T/RT	32R/T/RT	42R/T/RT	48R/T/RT	60R/T/RT
Security function			6-bit ASCII password encryption, secret downloading					
Self-diagnosis function			Power on self-test, monitoring timer, syntax check					
Real-time clock			Built-in clock, Lithium battery power supply, with power down memory					
SD expansion card			-					
Bit soft component	Input relay (X)		896 points: X0~X77, X10000~X11177, X20000~X20177, X30000~X30077					
	Output relay (Y)		896 points: Y0~Y77, Y10000~Y11177, Y20000~Y20177, Y30000~Y30077					
	Auxiliary relay	General M	8000 points M0~M7999					
		Power off holding HM	960 points HM0~HM959					
		Special SM	2048 points SM0~SM2047					
	Flow	General S	1024 points S0~S1023					
		Power off holding HS	128 points HS0~HS127					
	Timer	Specification	100ms timer: 0.1~3276.7s, 10ms timer: 0.01~327.67s, 1ms timer: 0.001~32.767s					
		General T	576 points T0~T575					
		Power off holding HT	96 points HT0~HT95					
	Counter	Specification	16-bit counter: K0~32767 32-bit counter: -2147483648~+2147483647					
		General C	576 points C0~C575					
		Power off holding HC	96 points HC0~HC95					
	Special coil for WAIT instruction		32 points SEM0~SEM31					
Word soft component	Data register	General D	8000 points D0~D7999					
		Power off holding HD	1000 points HD0~HD999					
		Special SD	2048 points SD0~SD2047					
	FlashROM register	Power off holding FD	5120 points FD0~FD5119					
		Special SFD	2000 points SFD0~SFD1999					
		Security register FS	48 points FS0~FS47					

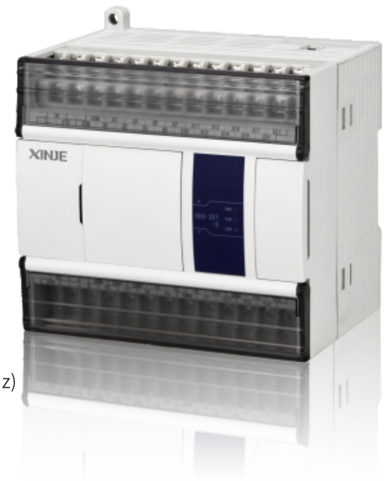
*Note: ①Only the PLC with transistor output has high speed positioning function;②The “-” in the table indicates that this model doesn't have this function;
③Special refers to system occupancy, cannot be used for other purposes.

Standard type

XD3 series

The functions are complete. In addition to the basic data processing function, it also has special functions such as pulse output, high-speed counting, pulse width modulation, frequency measurement and so on. It supports left expansion ED, expansion BD (16 points are not supported) and right expansion module, which can meet the usage needs of the majority of customers.

① Program capacity 256KB
② I/O sequential control
③ Max I/O 380 points
④ Basic instruction 0.02~0.05μs
⑤ RS232, RS485
⑥ X-NET fieldbus
⑦ 2~4 channels 100KHz pulse output (Y2, Y3 max pulse output frequency of XD3-24T4/32T4 are 10KHz)
⑧ 3 channels high speed counting (single phase max 80K, AB phase max 50K)
⑨ USB port high speed download (max 12Mbps)①



Performance specification

Product series XD3-		16R/T/RT	24R/T/RT	24T4	32R/T/RT	32T4	42R/T/RT	48R/T/RT	60R/T/RT
I/O	Total points	16	24	24	32	32	42	48	60
	Input points	8	14	14	18	18	24	28	36
	Output points	8	10	10	14	14	18	20	24
Max I/O points		336	344	344	352	352	362	368	380
High speed positioning	General pulse output	2 axes	2 axes	4 axes	2 axes	4 axes	2 axes	2 axes	2 axes
	Differential pulse output	-	-	-	-	-	-	-	-
High speed input	Single/AB phase mode	3channels	3channels	3channels	3channels	3channels	3channels	3channels	3channels
	Input mode	OC	OC	OC	OC	OC	OC	OC	OC
Expansion ability	Right expansion module	10	10	10	10	10	10	10	10
	Left expansion module	1	1	1	1	1	1	1	1
	BD board	-	1	1	1	1	1	2	2
Interruption	External interrupt	6	10	10	10	10	10	10	10
	Timing interrupt	20							
	Other interrupts	High speed counting interrupt, pulse interrupt							
Communication function	Communication port	1 RS232 ports, 1 RS485 port, 1 USB port							
	Communication protocol	Standard Modbus ASCII/RTU communication, free format communication							
Bus function		X-NET fieldbus							
PWM pulse width modulation		Support							
Frequency measurement		Support							
Precise timing		26 points ET0~ET25 (only even numbers can be used)							
Multi-station control		-							
Program execution mode		Cyclic scanning mode							
Programming method		LD, ST, C, IL							
Power off holding		Use FlashROM and lithium battery (3V button battery)							
Basic instruction processing speed		0.02~0.05us							
User program capacity (secret download mode)		256KB							

XD3 series model list

	Model					
	AC power supply			DC power supply		
	Relay output	Transistor output	Transistor relay mixed output	Relay output	Transistor output	Transistor relay mixed output
NPN type	XD3-16R-E	XD3-16T-E	XD3-16RT-E	XD3-16R-C	XD3-16T-C	XD3-16RT-C
	XD3-24R-E	XD3-24T-E	XD3-24RT-E	XD3-24R-C	XD3-24T-C	XD3-24RT-C
	-	XD3-24T4-E	-	-	XD3-24T4-C	-
	XD3-32R-E	XD3-32T-E	XD3-32RT-E	XD3-32R-C	XD3-32T-C	XD3-32RT-C
	-	XD3-32T4-E	-	-	-	-
	XD3-42R-E	XD3-42T-E	XD3-42RT-E	-	-	-
	XD3-48R-E	XD3-48T-E	XD3-48RT-E	XD3-48R-C	XD3-48T-C	XD3-48RT-C
	XD3-60R-E	XD3-60T-E	XD3-60RT-E	XD3-60R-C	XD3-60T-C	XD3-60RT-C
PNP type	XD3-16PR-E	XD3-16PT-E	-	XD3-16PR-C	XD3-16PT-C	XD3-16PRT-C
	XD3-24PR-E	XD3-24PT-E	XD3-24PRT-E	XD3-24PR-C	XD3-24PT-C	XD3-24PRT-C
	XD3-32PR-E	XD3-32PT-E	XD3-32PRT-E	XD3-32PR-C	XD3-32PT-C	XD3-32PRT-C
	XD3-48PR-E	XD3-48PT-E	XD3-48PRT-E	XD3-48PR-C	XD3-48PT-C	XD3-48PRT-C
	XD3-60PR-E	XD3-60PT-E	XD3-60PRT-E	XD3-60PR-C	XD3-60PT-C	XD3-60PRT-C

Product series XD3-			16R/T/RT	24R/T/RT	24T4	32R/T/RT	32T4	42R/T/RT	48R/T/RT	60R/T/RT
Security function			6-bit ASCII password encryption, secret downloading							
Self-diagnosis function			Power on self-test, monitoring timer, syntax check							
Real-time clock			Built-in clock, Lithium battery power supply, with power down memory							
SD expansion card			-							
Bit soft component	Input relay (X)		896 points: X0~X77, X10000~X11177, X20000~X20177, X30000~X30077							
	Output relay (Y)		896 points: Y0~Y77, Y10000~Y11177, Y20000~Y20177, Y30000~Y30077							
	Auxiliary relay	General M	8000 points M0~M7999							
		Power off holding HM	960 points HM0~HM959							
		Special SM	2048 points SM0~SM2047							
	Flow	General S	1024 points S0~S1023							
		Power off holding HS	128 points HS0~HS127							
	Timer	Specification	100ms timer: 0.1~3276.7s, 10ms timer: 0.01~327.67s, 1ms timer: 0.001~32.767s							
		General T	576 points T0~T575							
		Power off holding HT	96 points HT0~HT95							
	Counter	Specification	16-bit counter: K0~32767 32-bit counter: -2147483648~+2147483647							
		General C	576 points C0~C575							
		Power off holding HC	96 points HC0~HC95							
	Special coil for WAIT instruction		32 points SEM0~SEM31							
Word soft component	Data register	General D	8000 points D0~D7999							
		Power off holding HD	1000 points HD0~HD999							
		Special SD	2048 points SD0~SD2047							
	FlashROM register	Power off holding FD	5120 points FD0~FD5119							
		Special SFD	2000 points SFD0~SFD1999							
		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 model doesn't have this function；
③Special refers to system occupancy, cannot be used for other purposes.

Enhanced type

XD5 series

In addition to all the functions of standard PLC, it has faster processing speed (about 15 times that of XC series), larger internal resource space and 2 ~ 10 channels of high-speed pulse output. It supports the connection of right expansion module, expansion BD board (not supported by 16 points) and left expansion ED module, and supports SD card expansion (except 16 points), which can meet various requirements.

① Program capacity 512KB
② I/O sequential control
③ Max I/O 592 points
④ Basic instruction 0.02~0.05μs
⑤ RS232, RS485
⑥ X-NET fieldbus
⑦ 2~10 channels 100KHz pulse output
⑧ 3~10 channels high speed counting (single phase max 80K, AB phase max 50K)
⑨ USB port high speed download (max 12Mbps)

Performance specification

Product series XD5-		16	24	24T4	32	32T4	42	48	48T4	48T6	60	60T4	60T6	60T10	80
Main body I/O	Total points	16	24	24	32	32	42	48	48	48	60	60	60	60	80
	Input points	8	14	14	18	18	24	28	28	28	36	36	36	36	40
	Output points	8	10	10	14	14	18	20	20	20	24	24	24	24	40
Max I/O points		528	536	536	544	544	554	560	560	560	572	572	572	572	592
High speed positioning	General pulse output	2 axes	2 axes	4 axes	2 axes	4 axes	2 axes	2 axes	4 axes	6 axes	2 axes	4 axes	6 axes	10 axes	2 axes
	Differential pulse output	-	-	-	-	-	-	-	-	-	-	-	-	-	-
High speed input	Single/AB phase mode	3channels	3channels	4channels	3channels	4channels	3channels	3channels	4channels	6channels	3channels	4channels	6channels	10channels	3channels
	Input mode	OC	OC	OC	OC	OC	OC	OC	OC	OC	OC	OC	OC	OC	OC
Expansion ability	Right expansion module	16	16	16	16	16	16	16	16	16	16	16	16	16	16
	Left expansion module	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	BD board	-	1	1	1	1	1	2	2	2	2	2	2	2	2
Interruption	External interrupt	6	10	10	10	10	10	10	10	10	10	10	10	10	10
	Timing interrupt	20													
	Other interrupts	High speed counting interrupt, pulse interrupt													
Communication function	Communication port	1 RS232 ports, 1 RS485 port, 1 USB port													
	Communication protocol	Standard Modbus ASCII/RTU communication, free format communication													
Bus function		X-NET fieldbus													
PWM pulse width modulation		Support													
Frequency measurement		Support													
Precise timing		26 points ET0~ET25 (only even numbers can be used)													
Multi-station control		Support													
Program execution mode		Cyclic scanning mode													
Programming method		LD, ST, C, IL													
Power off holding		Use FlashROM and lithium battery (3V button battery)													
Basic instruction processing speed		0.02~0.05us													
User program capacity (secret download mode)		512KB													

XD5 series model list

	Model					
	AC power supply			DC power supply		
	Relay output	Transistor output	Transistor relay mixed output	Relay output	Transistor output	Transistor relay mixed output
NPN type	XD5-16R-E	XD5-16T-E	XD5-16RT-E	XD5-16R-C	XD5-16T-C	XD5-16RT-C
	XD5-24R-E	XD5-24T-E	XD5-24RT-E	XD5-24R-C	XD5-24T-C	XD5-24RT-C
	-	XD5-24T4-E	-	-	XD5-24T4-C	-
	XD5-32R-E	XD5-32T-E	XD5-32RT-E	XD5-32R-C	XD5-32T-C	XD5-32RT-C
	-	XD5-32T4-E	-	-	XD5-32T4-C	-
	XD5-42R-E	XD5-42T-E	-	-	-	-
	XD5-48R-E	XD5-48T-E	XD5-48RT-E	XD5-48R-C	XD5-48T-C	XD5-48RT-C
	-	XD5-48T4-E	-	-	XD5-48T4-C	-
	-	XD5-48T6-E	-	-	XD5-48T6-C	-
	XD5-60R-E	XD5-60T-E	XD5-60RT-E	XD5-60R-C	XD5-60T-C	XD5-60RT-C
	-	XD5-60T4-E	-	-	XD5-60T4-C	-
	-	XD5-60T6-E	-	-	XD5-60T6-C	-
	-	XD5-60T10-E	-	-	XD5-60T10-C	-
	XD5-80R-E	XD5-80T-E	-	-	-	-
PNP type	XD5-24PR-E	XD5-24PT-E	XD5-24PRT-E	XD5-24PR-C	XD5-24PT-C	XD5-24PRT-C
	-	XD5-24PT4-E	-	-	-	-
	XD5-32PR-E	XD5-32PT-E	XD5-32PRT-E	-	XD5-32PT-C	XD5-32PRT-C
	-	-	-	-	XD5-32PT4-C	-
	-	-	XD5-48PRT-E	-	-	-
	-	XD5-48PT6-E	-	-	XD5-48PT6-C	-
	XD5-60PR-E	-	-	-	XD5-60PT-C	-
	-	-	-	-	XD5-60PT6-C	-

Product series XD5-			16	24	24T4	32	32T4	42	48	48T4	48T6	60	60T4	60T6	60T10	80
Security function			6-bit ASCII password encryption, secret downloading													
Self-diagnosis function			Power on self-test, monitoring timer, syntax check													
Real-time clock			Built-in clock, Lithium battery power supply, with power down memory													
SD expansion card			Support (16 points cannot support)													
Bit soft component	Input relay (X)		1280 points: X0~X77, X10000~X11177, X20000~X20177, X30000~X30077													
	Output relay (Y)		1280 points: Y0~Y77, Y10000~Y11177, Y20000~Y20177, Y30000~Y30077													
	Auxiliary relay	General M	70000 points M0~M69999													
		Power off holding HM	12000 points HM0~HM11999													
		Special SM	5000 points SM0~SM4999													
	Flow	General S	8000 points S0~S7999													
		Power off holding HS	1000 points HS0~HS999													
	Timer	Specification	100ms timer: 0.1~3276.7s, 10ms timer: 0.01~327.67s, 1ms timer: 0.001~32.767s													
		General T	5000 points T0~T4999													
		Power off holding HT	2000 points HT0~HT1999													
	Counter	Specification	16-bit counter: K0~32767 32-bit counter: -2147483648~+2147483647													
		General C	5000 points C0~C4999													
		Power off holding HC	2000 points HC0~HC1999													
	Special coil for WAIT instruction		32 points SEM0~SEM31													
Word soft component	Data register	General D	70000 points D0~D69999													
		Power off holding HD	25000 points HD0~HD24999													
		Special SD	5000 points SD0~SD4999													
	FlashROM register	Power off holding FD	8192 points FD0~FD8191													
		Special SFD	6000 points SFD0~SFD5999													
		Security register FS	48 points FS0~FS47													

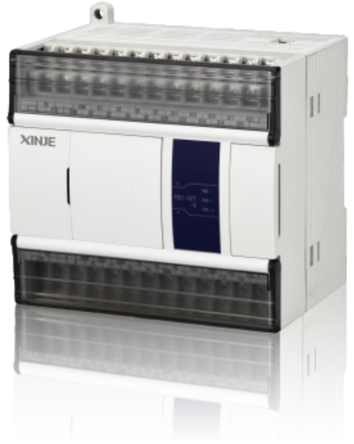
*Note: ①Only the PLC with transistor output has high speed positioning function；②The "-" in the table indicates that this model doesn't have this function.
③Special refers to system occupancy, cannot be used for other purposes；④The D register range of XD5 firmware v3.4.5 and below is D0~D59999.

Differential type

XD5-xDnTm series

Xd5 series high-speed differential PLC is designed according to the fast response demand of servo motor. It does not need conversion circuit, wiring is convenient and standard equipped with all functions of enhanced PLC.

① Program capacity 512KB
② I/O sequential control
③ Max I/O 560 points
④ Basic instruction 0.02~0.05μs
⑤ RS232, RS485
⑥ X-NET fieldbus
⑦ 4 axes 920KHz differential pulse output
⑧ 4 channels 1MHz differential high speed counter
⑨ USB port high speed download (max 12Mbps)



Performance specification

Product series XD5-		24D2T2	48D4T4
Main body I/O	Total points	24	48
	Input points	14	28
	Output points	10	20
Max I/O points		536	560
High speed positioning	General pulse output	2 axes	4 axes
	Differential pulse output	2 axes	4 axes
High speed input	Single/AB phase mode	2 channels	4 channels
	Input mode	2 channels	4 channels
Expansion ability	Right expansion module	16	16
	Left expansion module	1	1
	BD board	1	2
Interruption	External interrupt	10	
	Timing interrupt	20	
	Other interrupts	High speed counting interrupt, pulse interrupt	
Communication function	Communication port	1 RS232 ports, 1 RS485 port, 1 USB port	
	Communication protocol	Standard Modbus ASCII/RTU communication, free format communication	
Bus function		X-NET fieldbus	
PWM pulse width modulation		Support	
Frequency measurement		Support	
Precise timing		26 points ET0~ET25 (only even numbers can be used)	
Multi-station control		Support	
Program execution mode		Cyclic scanning mode	
Programming method		LD, ST, C, IL	
Power off holding		Use FlashROM and lithium battery (3V button battery)	
Basic instruction processing speed		0.02~0.05us	
User program capacity (secret download mode)		512KB	

PLC
HMI
Industrial informatization
Servo system
Frequency inverter
Stepping system
Vision system
IoT Industrial Controller

XD5 differential series model list

	Model					
	AC power supply			DC power supply		
	Relay output	Transistor output	Transistor relay mixed output	Relay output	Transistor output	Transistor relay mixed output
NPN type	-	XD5-24D2T2-E	-	-	-	-
	-	XD5-48D4T4-E	-	-	-	-

Product series XD5-			24D2T2	48D4T4
Security function			6-bit ASCII password encryption, secret downloading	
Self-diagnosis function			Power on self-test, monitoring timer, syntax check	
Real-time clock			Built-in clock, Lithium battery power supply, with power down memory	
SD expansion card			Support	
Bit soft component	Input relay (X)		1280 points: X0~X77, X10000~X11177, X20000~X20177, X30000~X30077	
	Output relay (Y)		1280 points: Y0~Y77, Y10000~Y11177, Y20000~Y20177, Y30000~Y30077	
	Auxiliary relay	General M	70000 points M0~M69999	
		Power off holding HM	12000 points HM0~HM11999	
		Special SM	5000 points SM0~SM4999	
	Flow	General S	8000 points S0~S7999	
		Power off holding HS	1000 points HS0~HS999	
	Timer	Specification	100ms timer: 0.1~3276.7s, 10ms timer: 0.01~327.67s, 1ms timer: 0.001~32.767s	
		General T	5000 points T0~T4999	
		Power off holding HT	2000 points HT0~HT1999	
	Counter	Specification	16-bit counter: K0~32767 32-bit counter: -2147483648~+2147483647	
		General C	5000 points C0~C4999	
		Power off holding HC	2000 points HC0~HC1999	
	Special coil for WAIT instruction		32 points SEM0~SEM31	
Word soft component	Data register	General D	70000 pointsD0~D69999	
		Power off holding HD	25000 points HD0~HD24999	
		Special SD	5000 points SD0~SD4999	
	FlashROM register	Power off holding FD	8192 points FD0~FD8191	
		Special SFD	6000 points SFD0~SFD5999	
		Security register FS	48 points FS0~FS47	

*Note: ①The "-" in the table indicates that this model doesn't have this function;②Special refers to system occupancy, cannot be used for other purposes.

Motion control type

XDM series

In addition to all functions of standard PLC, it has faster processing speed (about 15 times that of XC Series), larger internal resource space, two-axis linkage, interpolation and follow-up functions, and supports external SD card for data storage. Support the connection of right expansion module, expansion BD board and left expansion module.

① Program capacity 512KB~1.5MB
② I/O sequential control
③ Max I/O 572 points
④ Basic instruction 0.02~0.05μs
⑤ RS232, RS485
⑥ X-NET fieldbus
⑦ 4~10 axes 100KHz pulse output
⑧ 4~10 channels high speed counter (single phase up to 80K, AB phase up to 50K)
⑨ Follow-up function
⑩ USB port high speed download (max 12Mbps)
⑪ Linear/arc interpolation

Performance specification

Product series XDM-		24T4	32T4	60T4	60T4L	60T10
Main body I/O	Total points	24	32	60	60	60
	Input points	14	18	36	36	36
	Output points	10	14	24	24	24
Max I/O points		536	544	572	572	572
High speed positioning	General pulse output	4 axes	4 axes	4 axes	4 axes	10 axes
	Differential pulse output	-	-	-	-	-
High speed input	Single/AB phase mode	4 channels	4 channels	4 channels	4 channels	10 channels
	Input mode	OC	OC	OC	OC	OC
Expansion ability	Right expansion module	16	16	16	16	16
	Left expansion module	1	1	1	1	1
	BD board	1	1	2	2	2
Interruption	External interrupt	10				
	Timing interrupt	20				
	Other interrupts	High speed counting interrupt, pulse interrupt				
Communication function	Communication port	1 RS232 ports, 1 RS485 port, 1 USB port				
	Communication protocol	Standard Modbus ASCII/RTU communication, free format communication				
Bus function		X-NET fieldbus				
PWM pulse width modulation		Support				
Frequency measurement		Support				
Precise timing		26 points ET0~ET25 (only even numbers can be used)				
Multi-station control		Support				
Program execution mode		Cyclic scanning mode				
Programming method		LD, ST, C, IL				
Power off holding		Use FlashROM and lithium battery (3V button battery)				
Basic instruction processing speed		0.02~0.05us				
User program capacity (secret download mode)		512KB (XDM-60T4L:1.5MB)				

XDM series model list

	Model					
	AC power supply			DC power supply		
	Relay output	Transistor output	Transistor relay mixed output	Relay output	Transistor output	Transistor relay mixed output
NPN type	-	XDM-24T4-E	-	-	XDM-24T4-C	-
	-	XDM-32T4-E	-	-	XDM-32T4-C	-
	-	XDM-60T4-E	-	-	XDM-60T4-C	-
	-	XDM-60T10-E	-	-	XDM-60T10-C	-
	-	XDM-60T4L-E	-	-	-	-
NPN type	-	XDM-24PT4-E	-	-	XDM-24PT4-C	-
	-	XDM-32PT4-E	-	-	XDM-32PT4-C	-
	-	XDM-60PT10-E	-	-	XDM-60PT10-C	-

Product series XDM-			24T4	32T4	60T4	60T4L	60T10
Security function			6-bit ASCII password encryption, secret downloading				
Self-diagnosis function			Power on self-test, monitoring timer, syntax check				
Real-time clock			Built-in clock, Lithium battery power supply, with power down memory				
SD expansion card			Support				
Bit soft component	Input relay (X)		1280 points: X0~X77, X10000~X11177, X20000~X20177, X30000~X30077				
	Output relay (Y)		1280 points: Y0~Y77, Y10000~Y11177, Y20000~Y20177, Y30000~Y30077				
	Auxiliary relay	General M	70000 points M0~M69999				
		Power off holding HM	12000 points HM0~HM11999				
		Special SM	5000 points SM0~SM4999				
	Flow	General S	8000 points S0~S7999				
		Power off holding HS	1000 points HS0~HS999				
	Timer	Specification	100ms timer: 0.1~3276.7s, 10ms timer: 0.01~327.67s, 1ms timer: 0.001~32.767s				
		General T	5000 points T0~T4999				
		Power off holding HT	2000 points HT0~HT1999				
	Counter	Specification	16-bit counter: K0~32767 32-bit counter: -2147483648~+2147483647				
		General C	5000 points C0~C4999				
		Power off holding HC	2000 points HC0~HC1999				
	Special coil for WAIT instruction		32 points SEM0~SEM31				
Word soft component	Data register	General D	70000 pointsD0~D69999				
		Power off holding HD	25000 points HD0~HD24999				
		Special SD	5000 points SD0~SD4999				
	FlashROM register	Power off holding FD	8192 points FD0~FD8191				
		Special SFD	6000 points SFD0~SFD5999				
		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 model doesn't have this function.
③Special refers to system occupancy, cannot be used for other purposes.

Ethernet communication type

XD3E series

In addition to all the functions of XD3 series (except SD card function), it has faster processing speed, supports RS232, RS485 serial port communication and Ethernet communication, and supports the connection of right expansion module, BD board and left expansion ED module.

① Program capacity 256KB
② I/O sequential control
③ Max I/O 572 points
④ Basic instruction 0.02~0.05μs
⑤ RS232, RS485, RJ45
⑥ X-NET fieldbus
⑦ 2 axes 100KHz pulse output
⑧ 3 channels high speed counter (single phase up to 80K, AB phase up to 50K)

XINJE
PROGRAMMABLE CONTROLLER

XD3E series model list

	Model					
	AC power supply			DC power supply		
	Relay output	Transistor output	Transistor relay mixed output	Relay output	Transistor output	Transistor relay mixed output
NPN type	XD3E-24R-E	XD3E-24T-E	-	-	-	-
	XD3E-30R-E	XD3E-30T-E	-	-	-	-
	XD3E-48R-E	XD3E-48T-E	-	-	-	-
	XD3E-60R-E	XD3E-60T-E	-	-	-	-
PNP type	-	-	-	XD3E-30PR-C	XD3E-30PT-C	-
	-	-	-	XD3E-48PR-C	-	-
	-	-	-	-	XD3E-60PT-C	-

Performance specification

Product series XD3E-		24R/T	30R/T	48R/T	60R/T
Main body I/O	Total points	24	30	48	60
	Input points	14	16	28	36
	Output points	10	14	20	24
Max I/O points		536	542	560	572
High speed positioning	General pulse output	2 axes	2 axes	2 axes	2 axes
	Differential pulse output	-	-	-	-
High speed input	Single/AB phase mode	3 channels	3 channels	3 channels	3 channels
	Input mode	OC	OC	OC	OC
Expansion ability	Right expansion module	10	10	10	10
	Left expansion module	1	1	1	1
	BD board	1	1	1	1
Interruption	External interrupt	10			
	Timing interrupt	20			
	Other interrupts	High speed counting interrupt, pulse interrupt			
Communication function	Communication port	1 RS232 port, 1 RS485 port, 2 Ethernet ports			
	Communication protocol	Standard Modbus ASCII/RTU communication, free format communication			
Bus function		X-NET fieldbus			
PWM pulse width modulation		Support			
Frequency measurement		3 channels			
Precise timing		Support			
Multi-station control		-			
Program execution mode		Cyclic scanning mode			
Programming method		LD, ST, C, IL			
Power off holding		Use FlashROM and lithium battery (3V button battery)			
Basic instruction processing speed		0.02~0.05us			
User program capacity (secret download mode)		256KB			

Product series XD3E-			24R/T	30R/T	48R/T	60R/T
Security function			6-bit ASCII password encryption, secret downloading			
Self-diagnosis function			Power on self-test, monitoring timer, syntax check			
Real-time clock			Built-in clock, Lithium battery power supply, with power down memory			
SD expansion card			-			
Bit soft component	Input relay (X)		896 points: X0~X77, X10000~X11177, X20000~X20177, X30000~X30077			
	Output relay (Y)		896 points: Y0~Y77, Y10000~Y11177, Y20000~Y20177, Y30000~Y30077			
	Auxiliary relay	General M	8000 points M0~M7999			
		Power off holding HM	960 points HM0~HM959			
		Special SM	2048 points SM0~SM2047			
	Flow	General S	1021 points S0~S1023			
		Power off holding HS	128 points HS0~HS127			
	Timer	Specification	100ms timer: 0.1~3276.7s, 10ms timer: 0.01~327.67s, 1ms timer: 0.001~32.767s			
		General T	576 points TO~T575			
		Power off holding HT	96 points HT0~HT95			
	Counter	Specification	16-bit counter: K0~32767 32-bit counter: -2147483648~+2147483647			
		General C	576 points C0~C575			
		Power off holding HC	96 points HC~HC95			
	Special coil for WAIT instruction		32 points SEM0~SEM31			
Word soft component	Data register	General D	8000 points D0~D7999			
		Power off holding HD	1000 points HD0~HD999			
		Special SD	2048 points SD0~SD2047			
	FlashROM register	Power off holding FD	5120 points FD0~FD5119			
		Special SFD	2000 points SFD0~SFD1999			
		Security register FS	48 points FS0~FS47			

*Note: ①The "-" in the table indicates that this model doesn't have this function；②Special refers to system occupancy, cannot be used for other purposes.

Ethernet communication type

XD5E series

In addition to all functions of XD5 series (except SD card function), it has faster processing speed (about 2 ~ 3 times that of XDM series), larger internal resource space, supports RS232, RS485 serial port communication and Ethernet communication, and supports the connection of right expansion module, BD board and left expansion ED module.

① Program capacity 1MB
② I/O sequential control
③ Max I/O 572 points
④ Basic instruction 0.01~0.03μs
⑤ RS232, RS485, RJ45
⑥ X-NET fieldbus
⑦ 2~10 axes 100KHz pulse output
⑧ 3~10 channels high speed counter (single phase up to 80K, AB phase up to 50K)
⑨ Online downloading

Performance specification

Product series XD5E-		24R/T	30R/T	30T4	48R/T	60R/T	60T4	60T6	60T10
Main body I/O	Total points	24	30	30	48	60	60	60	60
	Input points	14	16	16	28	36	36	36	36
	Output points	10	14	14	20	24	24	24	24
Max I/O points		536	542	542	560	572	572	572	572
High speed positioning	General pulse output	2 axes	2 axes	4 axes	2 axes	2 axes	4 axes	6 axes	10 axes
	Differential pulse output	-	-	-	-	-	-	-	-
High speed input	Single/AB phase mode	3 channels	3 channels	4 channels	3 channels	3 channels	4 channels	6 channels	10 channels
	Input mode	OC	OC	OC	OC	OC	OC	OC	OC
Expansion ability	Right expansion module	16	16	16	16	16	16	16	16
	Left expansion module	1	1	1	1	1	1	1	1
	BD board	1	1	1	2	2	2	2	2
Interruption	External interrupt	10							
	Timing interrupt	20							
	Other interrupts	High speed counting interrupt, pulse interrupt							
Communication function	Communication port	1 RS232 ports, 1 RS485 port, 2 RJ45 ports							
	Communication protocol	Standard Modbus ASCII/RTU communication, free format communication, Ethernet communication							
Bus function		X-NET fieldbus							
PWM pulse width modulation		Support							
Frequency measurement		Support							
Precise timing		26 points ET0~ET25 (only even numbers can be used)							
Multi-station control		Support							
Program execution mode		Cyclic scanning mode							
Programming method		LD, ST, C, IL							
Power off holding		Use FlashROM and lithium battery (3V button battery)							
Basic instruction processing speed		0.01~0.03us							
User program capacity (secret download mode)		1MB							

XD5E series model list

	Model					
	AC power supply			DC power supply		
	Relay output	Transistor output	Transistor relay mixed output	Relay output	Transistor output	Transistor relay mixed output
NPN type	XD5E-24R-E	XD5E-24T-E	-	XD5E-24R-C	-	-
	XD5E-30R-E	XD5E-30T-E	-	XD5E-30R-C	-	-
	-	XD5E-30T4-E	-	-	XD5E-30T4-C	-
	XD5E-48R-E	XD5E-48T-E	-	-	-	-
	XD5E-60R-E	XD5E-60T-E	-	-	-	-
	-	XD5E-60T4-E	-	-	XD5E-60T4-C	-
	-	XD5E-60T6-E	-	-	XD5E-60T6-C	-
	-	XD5E-60T10-E	-	-	XD5E-60T10-C	-
NPN type	-	-	-	XD5E-30PR-C	XD5E-30PT-C	-
	-	XD5E-30PT4-E	-	-	-	-
	-	-	-	XD5E-48PR-C	-	-
	-	-	-	-	XD5E-60PT-C	-
	-	XD5E-60PT6-E	-	-	-	-
	-	-	-	-	XD5E-60PT10-C	-
Bipolar	XD5E-60NPR-E	-	-	-	-	-

Product series XD5E-			24R/T	30R/T	30T4	48R/T	60R/T	60T4	60T6	60T10
Security function			6-bit ASCII password encryption, secret downloading							
Self-diagnosis function			Power on self-test, monitoring timer, syntax check							
Real-time clock			Built-in clock, Lithium battery power supply, with power down memory							
SD expansion card			-							
Bit soft component	Input relay (X)		1280 points: X0~X77, X10000~X11177, X20000~X20177, X30000~X30077							
	Output relay (Y)		1280 points: Y0~Y77, Y10000~Y11177, Y20000~Y20177, Y30000~Y30077							
	Auxiliary relay	General M	70000 points M0~M69999							
		Power off holding HM	12000 points HM0~HM11999							
		Special SM	5000 points SM0~SM4999							
	Flow	General S	8000 points S0~S7999							
		Power off holding HS	1000 points HS0~HS999							
	Timer	Specification	100ms timer: 0.1~3276.7s, 10ms timer: 0.01~327.67s, 1ms timer: 0.001~32.767s							
		General T	5000 points T0~T4999							
		Power off holding HT	2000 points HT0~HT1999							
	Counter	Specification	16-bit counter: K0~32767 32-bit counter: -2147483648~+2147483647							
		General C	5000 points C0~C4999							
		Power off holding HC	2000 points HC0~HC1999							
	Special coil for WAIT instruction		32 points SEM0~SEM31							
Word soft component	Data register	General D	70000 pointsD0~D69999							
		Power off holding HD	25000 points HD0~HD24999							
		Special SD	5000 points SD0~SD4999							
	FlashROM register	Power off holding FD	8192 points FD0~FD8191							
		Special SFD	6000 points SFD0~SFD5999							
		Security register FS	48 points FS0~FS47							

*Note: ①The "-" in the table indicates that this model doesn't have this function；②Special refers to system occupancy, cannot be used for other purposes.

Ethernet communication type

XDME series

In addition to all the functions of XDM series, it has faster processing speed (about 2 ~ 3 times that of XDM Series), larger internal resource space, and supports the connection of right expansion module, BD board and left expansion ED module.

① Program capacity 1MB
② I/O sequential control
③ Max I/O 572 points
④ Basic instruction 0.01~0.03μs
⑤ RS232, RS485, RJ45
⑥ X-NET fieldbus
⑦ 4~10 axes 100KHz pulse output
⑧ 4~10 channels high speed counter (single phase up to 80K, AB phase up to 50K)
⑨ Linear/arc interpolation
⑩ Follow-up function

Performance specification

Product series XDME-		30T4	60T4	60T10
Main body I/O	Total points	30	60	60
	Input points	16	36	36
	Output points	14	24	24
Max I/O points		542	572	572
High speed positioning	General pulse output	4 axes	4 axes	10 axes
	Differential pulse output	-	-	-
High speed input	Single/AB phase mode	4 channels	4 channels	10 channels
	Input mode	OC	OC	OC
Expansion ability	Right expansion module	16	16	16
	Left expansion module	1	1	1
	BD board	1	2	2
Interruption	External interrupt	10		
	Timing interrupt	20		
	Other interrupts	High speed counting interrupt, pulse interrupt		
Communication function	Communication port	1 RS232 ports, 1 RS485 port, 2 RJ45 ports		
	Communication protocol	Standard Modbus ASCII/RTU communication, free format communication, Ethernet communication		
Bus function		X-NET fieldbus		
PWM pulse width modulation		Support		
Frequency measurement		Support		
Precise timing		26 points ET0~ET25 (only even numbers can be used)		
Multi-station control		Support		
Program execution mode		Cyclic scanning mode		
Programming method		LD, ST, C, IL		
Power off holding		Use FlashROM and lithium battery (3V button battery)		
Basic instruction processing speed		0.01~0.03μs		
User program capacity (secret download mode)		1MB		

XDME series model list

Model						
	AC power supply			DC power supply		
	Relay output	Transistor output	Transistor relay mixed output	Relay output	Transistor output	Transistor relay mixed output
NPN type	-	XDME-30T4-E	-	-	XDME-30T4-C	-
	-	XDME-60T4-E	-	-	-	-
	-	XDME-60T10-E	-	-	-	-

Product series XDME-			30T4	60T4	60T10
Security function			6-bit ASCII password encryption, secret downloading		
Self-diagnosis function			Power on self-test, monitoring timer, syntax check		
Real-time clock			Built-in clock, Lithium battery power supply, with power down memory		
SD expansion card			-		
Bit soft component	Input relay (X)		1280 points: X0~X77, X10000~X11177, X20000~X20177, X30000~X30077		
	Output relay (Y)		1280 points: Y0~Y77, Y10000~Y11177, Y20000~Y20177, Y30000~Y30077		
	Auxiliary relay	General M	70000 points M0~M69999		
		Power off holding HM	12000 points HM0~HM11999		
		Special SM	5000 points SM0~SM4999		
	Flow	General S	8000 points S0~S7999		
		Power off holding HS	1000 points HS0~HS999		
	Timer	Specification	100ms timer: 0.1~3276.7s, 10ms timer: 0.01~327.67s, 1ms timer: 0.001~32.767s		
		General T	5000 points T0~T4999		
		Power off holding HT	2000 points HT0~HT1999		
	Counter	Specification	16-bit counter: K0~32767 32-bit counter: -2147483648~+2147483647		
		General C	5000 points C0~C4999		
		Power off holding HC	2000 points HC0~HC1999		
	Special coil for WAIT instruction		32 points SEM0~SEM31		
Word soft component	Data register	General D	70000 pointsD0~D69999		
		Power off holding HD	25000 points HD0~HD24999		
		Special SD	5000 points SD0~SD4999		
	FlashROM register	Power off holding FD	8192 points FD0~FD8191		
		Special SFD	6000 points SFD0~SFD5999		
		Security register FS	48 points FS0~FS47		

*Note: ①The "-" in the table indicates that this model doesn't have this function;②Special refers to system occupancy, cannot be used for other purposes.

EtherCAT bus type

XDH series

Compatible with most functions of XDM, it has larger program capacity and faster processing speed, supports Ethernet communication, EtherCAT bus, motion control commands such as interpolation and follow-up, expansion module and left expansion ED module.

① Program capacity 2~4MB
② Ethernet communication
③ Max I/O 572 points
④ Basic instruction 0.01~0.05μs
⑤ RS232, RS485, RJ45
⑥ X-NET fieldbus
⑦ 4 axes 100KHz pulse output
⑧ 4 channels high speed counter (up to 200KHz)
⑨ 3-axis linear/arc interpolation
⑩ Follow-up function
⑪ EtherCAT communication
⑫ 16 channels electronic CAM (XDH-30A16L cannot support)

Performance specification

Product series XDH-		24A8	24A8L	30A16	30A16L	60T4	60A32	60A64
Main body I/O	Total points	30	30	30	30	60	60	60
	Input points	16	16	16	16	36	36	36
	Output points	14	14	14	14	24	24	24
Max I/O points		542	542	542	542	572	572	572
High speed positioning	General pulse output	4 axes	4 axes	4 axes	4 axes	4 axes	4 axes	4 axes
	Differential pulse output	-	-	-	-	-	-	-
High speed input	Single/AB phase mode	4 channels	4 channels	4 channels	4 channels	4 channels	4 channels	4 channels
	Input mode	OC	OC	OC	OC	OC	OC	OC
Expansion ability	Right expansion module	16	16	16	16	16	16	16
	Left expansion module	1	1	1	1	1	1	1
	BD board	0	0	0	0	1	1	1
Interruption	External interrupt	10						
	Timing interrupt	20						
	Other interrupts	High speed counting interrupt, pulse interrupt						
Communication function	Communication port	1 RS232 ports, 1 RS485 port, 2 RJ45 ports						
	Communication protocol	Standard Modbus ASCII/RTU communication, free format communication, Ethernet/IP communication						
Bus function		EtherCAT bus control XDH-30A16, XDH-60A32, XDH-60T4, XDH-60A64: support single axis, axis group motion and electronic CAM function. XDH-30A16L: support single axis, axis group motion (Note: cannot support electronic CAM)						
PWM pulse width modulation		Support						
Frequency measurement		-						
Precise timing		26 points ET0~ET25 (only even numbers can be used)						
Multi-station control		Support						
Program execution mode		Cyclic scanning mode						
Programming method		LD, ST, C, IL						
Power off holding		Use FlashROM						
Basic instruction processing speed		0.02~0.05μs	0.02~0.05μs	0.01~0.03μs	0.02~0.05μs	0.01~0.03μs	0.01~0.03μs	0.01~0.03μs
User program capacity (secret download mode)		2MB	2MB	1MB	2MB	4MB	4MB	4MB

XDH series model list

	Model					
	AC power supply			DC power supply		
	Relay output	Transistor output	Transistor relay mixed output	Relay output	Transistor output	Transistor relay mixed output
NPN type	-	XDH-30A16-E	-	-	-	-
	-	XDH-30A16L-E	-	-	XDH-30A16L-C	-
	-	XDH-60T4-E	-	-	XDH-60T4-C	-
	-	XDH-60A32-E	-	-	-	-
	-	XDH-60A64-E	-	-	-	-
PNP type	-	XDH-30PA16-E	-	-	-	-
	-	XDH-30PA16L-E	-	-	XDH-30PA16L-C	-
	-	XDH-60PT4-E	-	-	-	-
	-	XDH-60PA32-E	-	-	-	-
	-	XDH-60PA64-E	-	-	-	-

Product series XDH-			24A8	24A8L	30A16	30A16L	60T4	60A32	60A64
Security function			6-bit ASCII password encryption, secret downloading						
Self-diagnosis function			Power on self-test, monitoring timer, syntax check						
Real-time clock			Built-in clock, Lithium battery power supply, with power down memory						
SD expansion card			-						
Bit soft component	Input relay (X)		1280 points: X0~X77, X10000~X11177, X20000~X20177, X30000~X30077						
	Output relay (Y)		1280 points: Y0~Y77, Y10000~Y11177, Y20000~Y20177, Y30000~Y30077						
	Auxiliary relay	General M	200000 points M0~M199999						
		Power off holding HM	20000 points HM0~HM19999						
		Special SM	50000 points SM0~SM49999						
	Flow	General S	20000 points HS0~HS19999						
		Power off holding HS	2000 points HS0~HS1999						
	Timer	Specification	100ms timer: 0.1~3276.7s, 10ms timer: 0.01~327.67s, 1ms timer: 0.001~32.767s						
		General T	20000 points T0~T19999						
		Power off holding HT	2000 points HT0~HT1999						
	Counter	Specification	16-bit counter: K0~32767 32-bit counter: -2147483648~+2147483647						
		General C	20000 points C0~C19999						
		Power off holding HC	2000 points HC0~HC1999						
		High speed counter	40 points HSC0~HSC39						
	Special coil for WAIT instruction		32 points SEM0~SEM31						
Word soft component	Data register	General D	500000 points D0~D499999				1000000 points D0~D999999		
		Power off holding HD	50000 points HD0~HD49999				100000 points HD0~HD99999		
		Special SD	65488 points SD0~SD65487						
	FlashROM register	Power off holding FD	65536 points SFD0~SFD65535						
		Special SFD	50000 points SFD0~SFD49999						
		Security register FS	48 points FS0~FS47						

*Note: ①The "-" in the table indicates that this model doesn't have this function;②Special refers to system occupancy, cannot be used for other purposes.

Basic unit general specification

General specification

Item	Specification
Insulation voltage	DC500V above 2MΩ
Anti noise	Noise voltage 1000Vp-p 1us pulse 1 minute
Air	No corrosive and combustible gas
Ambient temperature	0°C~60°C
Ambient humidity	5%~95% (no condensation)
Installation	It can be fixed with M3 screws or directly installed on the guide rail
Grounding (FG)	The third grounding (It shall not be grounded in common with strong current system)

*Note: XDH series ambient temperature is 0°C~50°C.

Power supply specification

AC power supply

Item	Specification
Rated voltage	AC100V~240V
Allowable voltage range	AC90V~265V
Rated frequency	50/60Hz
Allowable instantaneous power off time	Interruption time ≤0.5 AC cycle interval ≥1s
Impulse current	Max 40A below 5ms/AC100V Max 60A below 5ms/AC200V
Maximum power consumption	15W (16 points)/ 30W (24 points and up)
Power supply for sensor	24VDC±10% 16 points max 200mA 32 points max 400mA

*Note: ①Please use more than 2mm^2 wires for the power cable to prevent voltage drop.

②Even in case of power failure within 10ms, the PLC can continue to work. When the power is cut off for a long time or the abnormal voltage drops, the PLC will stop working and the output is also in off state. When the power supply is restored, the PLC will automatically start running.

③The grounding terminals of basic unit and expansion module are recommended to be connected with each other and grounded reliably.

DC power supply

Item	Specification
Rated voltage	DC24V
Allowable voltage range	DC21.6V~26.4V
Rated frequency	120mA DC24V
Allowable instantaneous power off time	10ms DC24V
Impulse current	10A DC26.4V
Maximum power consumption	15W (16 points)/ 30W (24 points and up)
Power supply for sensor	24VDC±10% 16 points max 200mA 32 points max 400mA

Input specification

NPN type

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 response time	About 10ms
Input signal format	Contactor input or NPN open collector transistor
Circuit insulation	Photoelectric coupling insulation
Input action display	LED lights when the input is ON

PNP type

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 response time	About 10ms
Input signal format	Contactor input or NPN open collector transistor
Circuit insulation	Photoelectric coupling insulation
Input action display	LED lights when the input is ON

Differential type

Item	Contents
Input signal	5V differential signal
Input max frequency	1MHz
Circuit insulation	Photoelectric coupling insulation
Input action display	LED lights when the input is ON

Output specification

Relay output

External power supply		Below AC250V, DC30V
Circuit insulation		Mechanical insulation
Action indicator		LED indicator
Max load	Resistive load	3A
	Inductive load	80VA
	Lamp load	100W
Min load		DC5V 10mA
Response time	OFF→ON	10ms
	ON→OFF	10ms

Transistor output

External power supply		DC5~30V
Circuit insulation		Optocoupler insulation
Action indicator		LED indicator
Max load	Resistive load	0.3A
	Inductive load	7.2W/DC24V
	Lamp 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

High speed pulse output

Model	RT/T model	T4 model	T6 model	T10 model
High speed pulse output terminal	Terminal Y0~Y1	Terminal Y0~Y3	Terminal Y0~Y5	Terminal Y0~Y11
External power supply	Below DC5~30V			
Action indicator	LED indicator			
Max current	50mA			
Pulse max output frequency	100KHz			

*Note: terminal Y2, Y3 max pulse output frequency of XD3-24T4/32T4 is 10KHz.

Differential high speed output

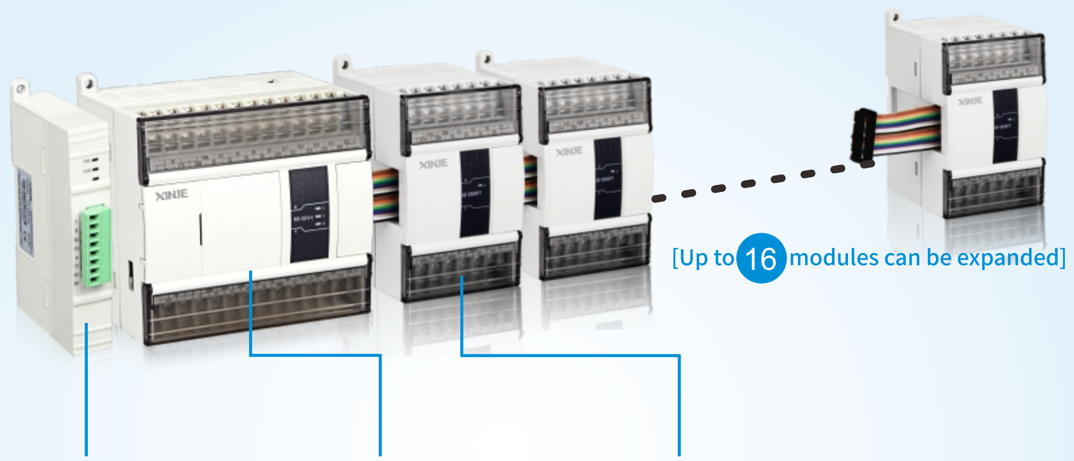
Model		XD5-xDnTm-E
Output signal		5V differential signal
Max frequency		920KHz
Circuit insulation		Photoelectric coupling insulation
Action indicator		LED indicator
Response time	OFF→ON	Below 0.2ms

Serial port (RS232/RS485) communication parameter specification

Item	Parameter
Communication mode	Half duplex
Baud rate	4800bps,9600bps,19200bps(default)，38400bps，57600bps，115200bps
Data type	Data bit: 5, 6, 7, 8 (default), 9 Stop bit: 1 (default), 1.5, 2 Parity bit: none, odd, even (default)
Mode	RTU (default), ASCII, free format
Station number	1~255 (the default is 1)
Delay before sending	1~100ms (the default is 3ms)
Reply timeout	1~1000ms (the default is 300ms)
Retry count	1~20 times (the default is 3 times)

Expansion unit

In order to meet more application requirements, XD series PLC basic units can be equipped with rich I/O expansion modules, analog input and output modules, temperature control modules, BD boards and left expansion modules. The ontology can expand up to 10 ~ 16 right expansion modules, 1 ~ 2 BD boards and 1 left expansion module of different types.



Left expansion module

Analog and temperature expansion module

With D/A, A/D conversion and temperature measurement function.

Communication module

PLC can realize wireless WiFi, 4G and other data transmission, as well as wired communication of RS232, RS485 and CANopen.

Expansion BD

The compact expansion card can be directly installed on the basic unit, does not occupy excess space, and can complete the communication expansion function.

Right expansion module

I/O expansion module

It is used to expand the number of input and output points. The number of points is 8 ~ 32, and the basic unit can be expanded by 512 points at most.

The output expansion module is divided into transistor (T) and relay (R) output types.

Analog and temperature expansion module

It has D/A and A/D conversion functions. By expanding analog input/output module, temperature control module, XD series PLC can be used in temperature, flow, liquid level, pressure and other process control systems.

By adding PID regulation function, it can be used more widely, flexibly and controlled with higher precision. Only four parameters need to be set.

Each channel of the temperature control module can carry out PID control independently, which can do self-tuning, and exchange information with the PLC through FROM and TO instructions.

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	It can be fixed with M3 screws or directly installed on the guide rail of DIN46277 (35mm wide); BD board is directly installed on the top of PLC.

Right expansion module

I/O expansion module

When the number of ontology points cannot meet the use requirements, this type of extension module can be used. The basic unit can be expanded by 512 points.

Total I/O points: 8 points/16 points

Total I/O points: 32 points

Digital input module

Model		Function description	Specification
NPN input type	PNP input type		
XD-E8X	XD-E8PX	8 channels digital input, DC24V power supply	Input filter time 1~50ms External wiring method: terminal block Wiring method: same to PLC unit
XD-E16X	XD-E16PX	16 channels digital input, DC24V power supply	
XD-E32X-E	XD-E32PX-E	32 channels digital input, AC220V power supply	
XD-E32X-C	XD-E32PX-C	32 channels digital input, DC24V power supply	

Digital output module

Model	Function description	Specification
XD-E8YR	8 channels relay output, no need power supply	R: relay output T: transistor output R response time below 10ms T response time below 0.2ms R max load: resistive 3A, inductive 80VA T max load: max output current of each point is 0.3A External wiring method: terminal block Wiring method: same to PLC unit
XD-E8YT	8 channels transistor output, no need power supply	
XD-E16YR	16 channels relay output, no need power supply	
XD-E16YT	16 channels transistor output, no need power supply	
XD-E32YR-E	32 channels relay output, AC220V power supply	
XD-E32YR-C	32 channels relay output, DC24V power supply	
XD-E32YT-E	32 channels transistor output, AC220V power supply	
XD-E32YT-C	32 channels transistor output, DC24V power supply	

Digital I/O module

Model		Function description	Specification
NPN input type	PNP input type		
XD-E8X8YR	XD-E8PX8YR	8 channels digital input, 8 channels relay output DC24V power supply	Input filter time 1~50ms 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 load: max output current of each point is 0.3A External wiring method: terminal block Wiring method: same to PLC unit
XD-E8X8YT	XD-E8PX8YT	8 channels digital input, 8 channels transistor output DC24V power supply	
XD-E16X16YR-E	XD-E16PX16YR-E	16 channels digital input, 16 channels relay output AC220V power supply	
XD-E16X16YR-C	XD-E16PX16YR-C	16 channels digital input, 16 channels relay output DC24V power supply	
XD-E16X16YT-E	XD-E16PX16YT-E	16 channels digital input, 16 channels transistor output AC220V power supply	
XD-E16X16YT-C	XD-E16PX16YT-C	16 channels digital input, 16 channels transistor output DC24V power supply	

Expansion unit

Analog and temperature expansion module

It has D/A and A/D conversion function. By expanding analog input and output module, temperature control module, XD series PLC can be applied to process control systems such as temperature, flow, liquid level and pressure.

With PID regulation function, it can be used more widely, flexibly, and has higher control accuracy. Only four parameters need to be set.

Each channel of the temperature control module can carry out PID control independently, can do self-tuning, and exchange information with the PLC through the FROM, TO command.

Analog input module (AD type)

Model	Channel	Input signal	Specification
XD-E4AD	4	Input voltage: 0~5V/0~10V/-5~5V/-10~10V Input current: 0~20mA/4~20mA/-20~20mA	Power supply for analog DC24V±10%, 150mA Conversion speed 2ms/channel Resolution 1/16383 (14 bits) Comprehensive accuracy ±1% AD filter coefficient 0~254 Channel enabit bit is added AD channel has the functions of short circuit, open circuit and over range detection
XD-E8AD	8	Input voltage: 0~5V/0~10V/-5~5V/-10~10V Input current: 0~20mA/4~20mA/-20~20mA (first four channels are voltage, last four channels are current)	
XD-E8AD-A	8	Input current: 0~20mA/4~20mA/-20~20mA	
XD-E8AD-V	8	Input voltage: 0~5V/0~10V/-5~5V/-10~10V	
XD-E12AD-V	12	Input voltage: 0~5V/0~10V/-5~5V/-10~10V	

Analog output module (DA type)

Model	Channel	Input signal	Specification
XD-E2DA	2	Output voltage: 0~5V/0~10V/-5~5V/-10~10V Output current: 0~20mA/4~20mA	Power supply for analog DC24V±10%, 150mA Conversion speed 2ms/channel Resolution 1/4095 (12 bits) Comprehensive accuracy ±1% Channel enabit bit is added
XD-E4DA	4	Output voltage: 0~5V/0~10V Output current: 0~20mA/4~20mA	

Temperature control module (PT&TC type)

Model	Channel	Input signal	Specification
XD-E4PT3-P	4	Pt100, PT1000 Platinum thermistor Temperature range -100°C~500°C (digital output range -1000~5000, signed 16 bits, binary)	Analog power supply DC24V±10%, 50mA Resolution: 0.1°C Comprehensive accuracy: ±0.5% (relative maximum value) PT conversion speed: 80ms/1 channel PT3 conversion speed: 450ms/4 channels Filter coefficient: 0~254 Each channel is independently PID controlled and supports self-tuning function Capable of detecting power outages, disconnections, and exceeding the range
XD-E6PT-P	6	Pt100, PT1000 platinum thermistor (two-wire system) Temperature measurement range: -100.0°C~500.0°C (PT100, PT1000)	
XD- E2TC-P	2	K, S, E, N, B, T, J, and R-type thermocouples temperature range: K-TYPE 0.0°C~1300.0°C E-TYPE 0.0°C~600.0°C B-TYPE 250.0°C~1800.0°C J-TYPE 0.0°C~800.0°C S-TYPE 0.0°C~1700.0°C N-TYPE 0.0°C~1200.0°C T-TYPE 0.0°C~400.0°C R-TYPE 0.0°C~1700.0°C	Analog power supply DC24V±10%, 50mA Resolution: 0.1°C Comprehensive accuracy: ±1% (relative maximum value) Conversion speed: 80ms/1 channel Each channel is independently PID controlled and supports self-tuning function Capable of detecting power outages, disconnections, and exceeding the range
XD- E6TC-P	6		
XD-E6TC-P-H	6	K, S, E, N, B, T, J, and R-type thermocouples temperature range: K-type -200.0°C~1372.0°C E-type -200.0°C~1000.0°C B-type -250.0°C~1798.0°C J-type -210.0°C~1200.0°C S-type -50.0°C~1768.0°C N-type -200.0°C~1300.0°C T-type -200.0°C~400.0°C R-type -50.0°C~1768.0°C	Analog power supply DC24V±10%, 50mA Resolution: 0.1°C Comprehensive accuracy: ±1% (relative maximum value) Conversion speed: 80ms/1 channel Each channel is independently PID controlled and supports self-tuning function Capable of detecting power outages, disconnections, and exceeding the range

Analog I/O hybrid module (nADxPTmDA type)

Model	Channel		I/O signal	Specification
	Input	Output		
XD-E4AD2DA	4	2	Input voltage: 0~5V/0~10V/-5~5V/-10~10V Input current: 0~20mA/4~20mA/-20~20mA Output voltage: 0~5V/0~10V/-5~5V/-10~10V Output current: 0~20mA/4~20mA	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 Comprehensive accuracy ±1% Channel enable bit is added AD channel has the functions of short circuit, open circuit and over range detection
XD-E2AD2PT2DA	4	2	Input voltage: 0~5V/0~10V Input current: 0~20mA/4~20mA Output voltage: 0~5V/0~10V Output current: 0~20mA/4~20mA Temperature collection: PT100 Platinum thermistor Temperature range: -100°C ~500°C (digital output range -1000~5000, signed 16 bits, binary)	Power supply for analog DC24V±10%, 150mA Conversion speed 2ms/channel Input resolution 1/16383 (16-bit) Output resolution 1/1023 (10-bit) AD filter coefficient 0~254 PT channel resolution 0.1°C Comprehensive accuracy ±1% (relative max value) PT conversion speed 2ms/channel PT filter coefficient 0~254 Channel enable bit is added
XD-E3AD4PT2DA	7	2	Input current: 0~20mA/4~20mA Output voltage: 0~5V/0~10V Temperature collection: PT100 Platinum thermistor Temperature range: -100°C ~500°C (digital output range -1000~5000, signed 16 bits, binary)	Power supply for analog DC24V±10%, 150mA Conversion speed 2ms/channel Input resolution 1/16383 (14-bit) Output resolution 1/1023 (10-bit) AD filter coefficient 0~254 PT channel resolution 0.1°C Comprehensive accuracy ±1% (relative max value) PT conversion speed 2ms/channel PT filter coefficient 0~254 Channel enable bit is added

Weighing extension module

It is used to convert the analog signal of the load cell into digital signal.
The weighing module has the characteristics of dynamic weighing, small volume, stable performance, simple and practical operation.

It can be widely used in seed, chemical industry, grain, feed weight control and other occasions.

1~2 channels weighing

4 channels weighing

Module features

① New algorithm, optimized hardware system, faster and accurate weighing control
② Analog voltage signals of 4 load cells can be collected at the same time
③ High performance A/D conversion, sampling speed up to 450 times/s
④ The display accuracy up to 1/300000
⑤ Automatic zero tracking function
⑥ The real-time data communicates with PLC at high speed through the bus, which does not affect the conversion speed

Item	Specification
Model	XD-E1WT-D,XD-E2WT-D,XD-E4WT-D
Analog input range	DC-20～20mV
A/D actual resolution	1/8388607（23Bit)
Max display resolution	1/500000
Nonlinear	0.01%F.S0.01%F.S
Conversion speed	150 times/s, 300 times/s, 450 times/s optional
Power supply	DC24V±10%
Sensor excitation power supply	5VDC/120mA, four 350Ω load cells can be connected in parallel
Software version	V3.5.3 and up

Expansion unit

SSI encoder measurement module XD-E4SSI

Module features

① Support 4-channel absolute encoder position or displacement sensor detection
② Suitable for 10 ~ 31 bits SSI encoder, supporting 125KHz ~ 1MHz communication frequency and gray code or binary format coding
③ It has the function of disconnection detection and alarm

Specification

Item	Specification
Module power supply	DC24V (input range: 20.4~28.8V)
Module power consumption	1W (no load)
Position detection	Absolute mode
Difference between SSI data and clock signal	Comply with RS422 standard
Encoder bit number	10bit~31bit
Digital output range	0~encoder max feedback value
Resolution	1/encoder max feedback value
Communication frequency	125KHz~1MHz
Coding type	Gray code or binary code
Comprehensive accuracy	1%
Conversion speed	400us/channel
Power supply for encoder	DC24V±10%, 100mA or 300mA

XD-E4SSI communication speed and cable length

Communication speed	Shielded twisted pair length
125KHz	Max 320m
250KHz	Max 160m
500KHz	Max 60m
1MHz	Max 20m

Macro measurement module XD-E2GRP

Precision displacement sensor is also called position sensor. Digital displacement sensors are widely used to transform old machine tools and equip new machine tools. After ordinary machine tools are equipped with digital display devices, they can meet the machining accuracy requirements of most parts and are suitable for machining complex parts.

XD-E2GRP can be widely used in precision measurement occasions, such as bearing inner and outer diameter detection, shaft product detection, non-standard product detection, etc.

Performance features

① Range: ±1000um
② Resolution: 0.1um
③ Full range linearity error: ≤0.1%
④ Repeatability error: ≤1um
⑤ Working temperature range: -10~50°C
⑥ Data collection mode: parallel communication

Specification

Item	Specification
Power supply	DC24V±10%
Nonlinear	0.001%F.S
Time drift	0.005%F.S
Input sensitivity	0.004uV/d
Comprehensive accuracy	0.1%

Left expansion ED module

In addition to supporting the right expansion module, XD series PLC can also expand another ED module on the left side of the PLC. The left expansion ED module is designed as a thin sheet, occupies less space, and has the functions of AD/DA conversion, temperature measurement, remote communication and so on.

Analog and temperature expansion ED module

With the functions of AD/DA conversion, temperature measurement. XD series (except XD1 series) can connect 1 ED module.

Model	I/O signal	Specification
XD-4AD-A-ED	4 channels current input: 0~20mA/4~20mA	Power supply for the module: DC24V±10%, 150mA Conversion speed: 10ms (all the channels) AD/DA: Current/voltage input resolution: 1/4095 (12-bit) Current/voltage output resolution: 1/1023 (10-bit) AD/DA conversion comprehensive accuracy: ±1% PT: Temperature range: -100~500°C Digital output range: -1000~5000 Temperature input resolution: 0.1°C PT channel comprehensive accuracy: ±0.8% of the full scale
XD-4AD-V-ED	4 channels voltage input: 0~5V/0~10V	
XD-4DA-A-ED	4 channels current output: 0~20mA/4~20mA	
XD-4DA-V-ED	4 channels voltage output: 0~5V/0~10V	
XD-2AD2DA-A-ED	2 channels current input: 0~20mA/4~20mA 2 channels current output: 0~20mA/4~20mA	
XD-2AD2DA-V-ED	2 channels voltage input: 0~5V/0~10V 2 channels voltage output: 0~5V/0~10V	
XD-2AD2PT-A-ED	2 channels current input: 0~20mA/4~20mA 2 channels temperature input: PT100 platinum thermistor	
XD-2AD2PT-V-ED	2 channels voltage input: 0~5V/0~10V 2 channels temperature input: PT100 platinum thermistor	
XD-2PT2DA-A-ED	2 channels temperature input: PT100 platinum thermistor 2 channels current output: 0~20mA/4~20mA	
XD-2PT2DA-V-ED	2 channels temperature input: PT100 platinum thermistor 2 channels voltage output: 0~5V/0~10V	
XD-1TC-ED	K, S, E, N, B, T, J and R type thermocouple Temperature measuring range 0°C ~ 1300°C (K type) (digital output range 0~13000, signed 16-bit, binary)	Power supply for analog is DC24V±10%, 50mA Resolution: 0.1°C Integrated precision ±1% (relative max value) TC conversion speed 80ms/channel
XD-4PT-ED	Pt100, PT1000 Platinum thermistor Temperature measuring range -100°C ~ 500°C (digital output range -1000~5000, signed 16-bit, binary)	Power supply for analog is DC24V±10%, 50mA Control precision ±0.5% Resolution: 0.1°C Integrated precision ±1% (relative max value) PT conversion speed 80ms/channel Pt3 conversion speed 450ms/4 channels PT filter coefficient 0~254 Each channel has independent PID parameters Support self-tuning function Optional sampling period

Communication expansion ED module

PLC can realize wireless WIFI, 4G and other data transmission, as well as wired communication such as RS232, RS485 and CANopen.

XD-4GBOXL-ED Left expansion 4GBOX module

① Realize wireless downloading and real-time monitoring of PLC program
② SMS communication with user's mobile phone
③ Support remote monitoring
④ Support multiple Telecom operators including China Mobile, China Telecom, China Unicom
⑤ Support GPS positioning function
⑥ As the left expansion ED module of XD series PLC, the transmission rate can reach 1M
⑦ Support fieldbus (X-NET) and deep optimization of data monitoring
⑧ Long lasting online, with disconnection redial and watchdog functions

XD-WBOXL-ED Left expansion WIFI module

① Support 2.4GHz wireless WLAN technology
② Support AP (wireless hotspot) and STA mode
③ XD-WBOX-ED is left expansion TTL interface
④ Support wireless hotspot (same SSID) roaming technology
⑤ XD series PLC provides data support for XD-WBOX-ED
⑥ Support Modbus-TCP communication protocol (up to 4 connections)
⑦ Support X-NET communication protocol, support Xinje Cloud accesscess

XD-NES-ED Left expansion RS232/RS485 module

XD series extended ED module can expand one RS232 or RS485 port (support fieldbus communication).

XD-COBOX-ED CANopen communication module

① The communication rate can reach 1Mbps
② 64 communication nodes
③ Support master and slave modes
④ The reliability of the system is improved
⑤ Heartbeat protection
⑥ Easier wiring

Expansion unit

Expansion BD board

| Communication expansion BD board

■ XD-NE-BD

XD series expansion BD, fieldbus, X-NET interface.

The names of each part are as follows:

Name		Function
Communication indicator		The indicator flashes when the BD board communicating successfully
Terminal block	A	485+
	B	485-
	SG	Signal ground
	●	Vacant terminal
Terminal resistance dialing switch		Select whether terminal resistance is required through the dial switch (120Ω)

■ XD-NO-BD

XD series expansion BD, fieldbus communication function and X-NET optical fiber interface. It is used for optical fiber communication. It has the advantages of high speed and strong anti-interference.

The names of each part are as follows:

Name	Function
Communication indicator	The indicator flashes when the BD board communicating successfully
Terminal block	On the left is the signal input terminal and on the right is the signal output terminal

■ XD-NS-BD

XD series expansion RS-232 BD.

The names of each part are as follows:

Name		Function
Communication indicator		The indicator flashes when the BD board communicating successfully
Terminal block	TX	Signal sending terminal
	RX	Signal receiving terminal
	GND	Grounding terminal
	●	Vacant terminal

| Precise clock expansion BD

■ XD-RTC-BD

More accurate clock function can be realized, and the clock error is about 13s per month.

Software version requirements: V3.5.3 (20190124) and above.

Parts

| List of basic unit accessories

■ Communication/programming cable

XVP/DVP

For communication and program uploading/downloading.

■ USB to serial port convertor

USB-COM

For interface conversion between DB9 female port and USB port.

■ USB printer cable

JC-UA-15

Special download cable for Xinje products (except products without USB-B interface). Black, with double magnetic rings to improve anti-interference performance.

■ DB9 to RS485 cable

JC-EB-Length

Db9 to RS485 cable for RS485 communication between HMI and PLC. It has three models: JC-EB-3 (3m), JC-EB-5 (5m), JC-EB-8 (8m).

■ Relay module

JR-EH

Suitable for all the RS485 communication occasions.

■ Program downloader

JD-P03

① Without computer, it can be used for program and data transfer and download between multiple Xinje PLCs.

② Suitable PLC: uploading requires the XD/XL/XG2 series PLC firmware v3.4.6 or above v3.5.3 (Ethernet type) or ZG/ZP series integrated controller. Downloading requires the PLC firmware v3.4 and up.

③ JD-P03 has small appearance and takes up small space

*Note: Please refer to the manual for specific use. XDH, XC series PLC is not supported temporarily.

| List of expansion module accessories

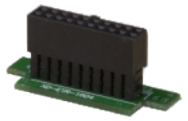
■ XD expansion module extension cable

XD extension cable has the length of 0.7m and 1.5m. Two 0.7m or one 1.5m cables can be added to a series of modules, and two 1.5m cables are not supported.

■ XD series terminal resistance

XD-ETR

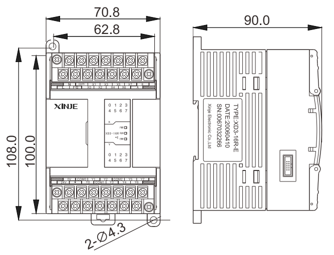
The terminal resistance is a small plug-in board, which is inserted into the expansion port of the last expansion module to improve the signal quality. This accessory is required when more than 5 modules are connected or extension cables are used.



Dimension drawing

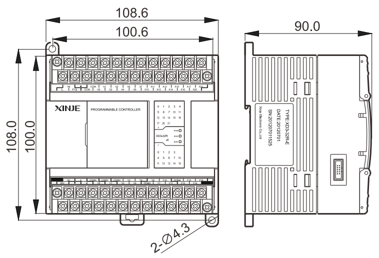
(Unit: mm)

XD series basic unit


70.8
62.8
90.0
108.0
100.0
2-Ø4.3

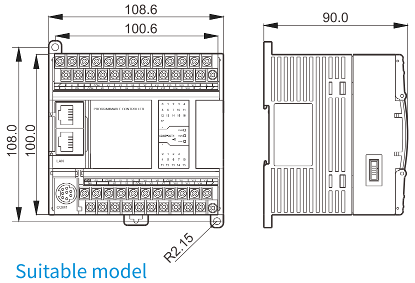
Suitable model

Series	XD1	XD2	XD3	XD5
Points	10/16 Points			


108.6
100.6
90.0
108.0
100.0
2-Ø4.3

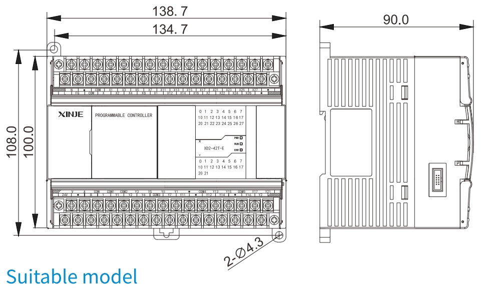
Suitable model

Series	XD1	XD2	XD3	XD5	XDM	XDC	CCSD
Points	24/32 Points						


108.6
100.6
90.0
108.0
100.0
R2.15

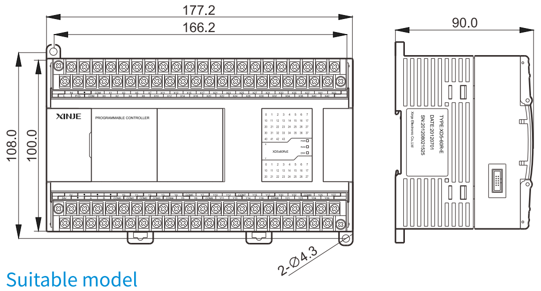
Suitable model

Series	XD3E	XD5E	XDME	XDH
Points	24/30 Points			


138.7
134.7
90.0
108.0
100.0
2-Ø4.3

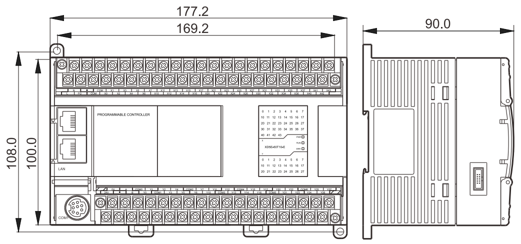
Suitable model

Series	XD2	XD3	XD5
Points	42 Points		


177.2
166.2
90.0
108.0
100.0
2-Ø4.3

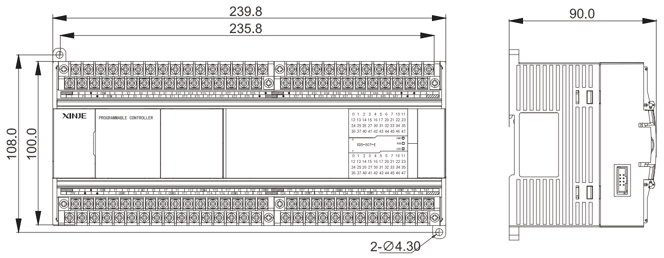
Suitable model

Series	XD2	XD3	XD5	XDM	XDC	CCSD
Points	48/60 Points					


177.2
169.2
90.0
108.0
100.0

Suitable model

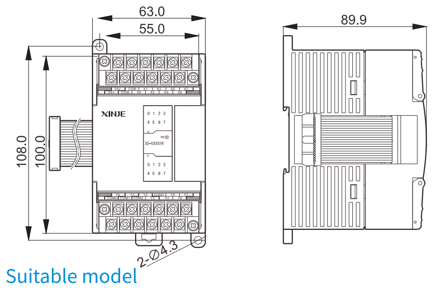
Series	XD3E	XD5E	XDME	XDH	XSDH
Points	48/60 Points				


239.8
235.8
90.0
108.0
100.0
2-Ø4.30

Suitable model

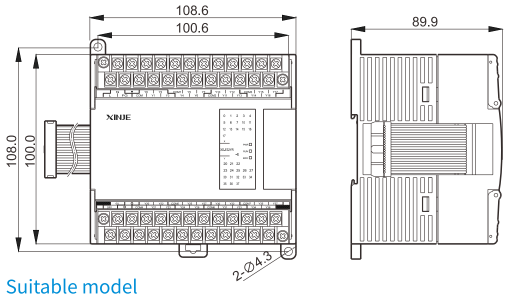
Series	XD5
Points	80 Points

XD series right expansion module


63.0
55.0
89.9
108.0
100.0
2-Ø4.3

Suitable model

Module type	Digital value		Analog value
Model	8X	16X	All
	8Y	16Y	
	8X8Y		


108.6
100.6
89.9
108.0
100.0
2-Ø4.3

Suitable model

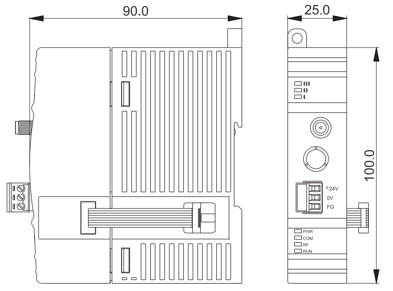
Module type	Digital value	Analog value
Model	32X	XD-E2GRP
	32Y	XD-E4WT-D
	16X16Y	

Dimension

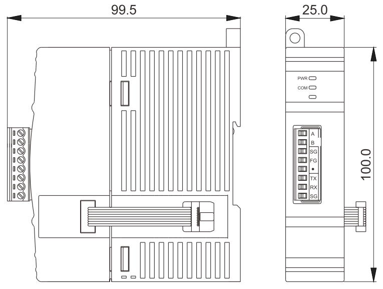
(Unit: mm)

XD series left expansion ED module

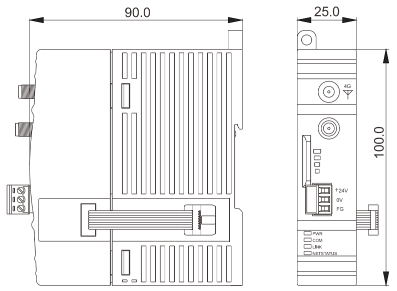
XD-WBOXL-ED


90.0
25.0
100.0

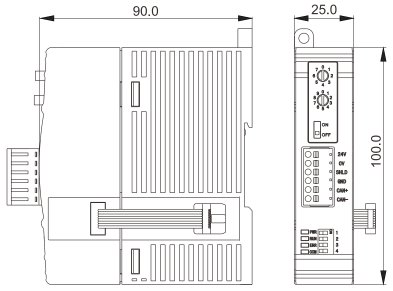
XD-NES-ED


99.5
25.0
100.0

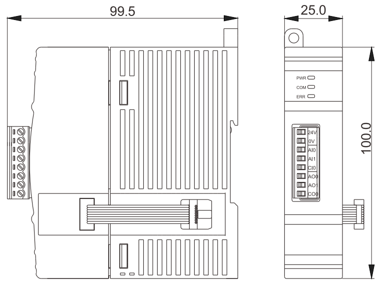
XD-4GBOXL-ED


90.0
25.0
100.0

XD-COBOX-ED


90.0
25.0
100.0

XD analog ED module

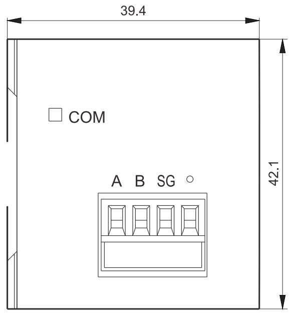

99.5
25.0
100.0

Dimension drawing

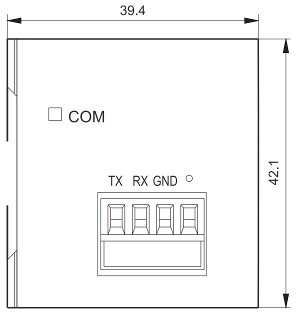
(Unit: mm)

XD series expansion BD board

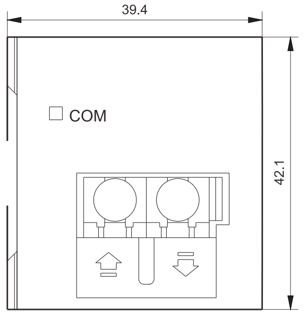
XD-NE-BD



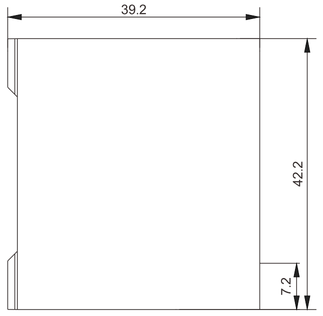
XD-NS-BD



XD-NO-BD

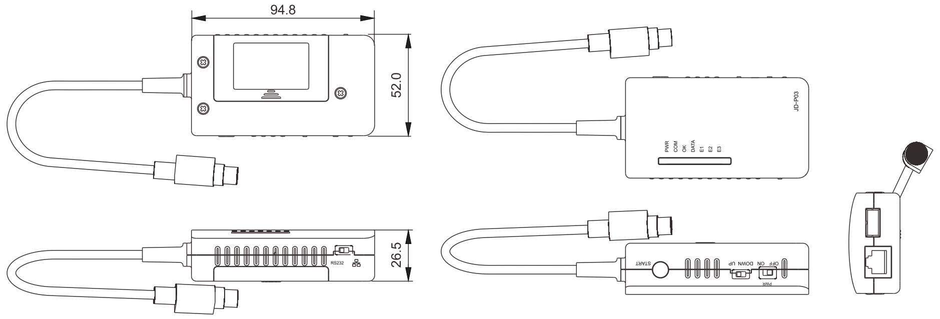


XD-RTC-BD



Host accessories

JD-P03



Slim type PLC

Small size, large function, powerful core

XL series PLC has card design, ultra-thin appearance,
Equipped with powerful CPU processor, complete functions, high reliability and compact structure,
Especially suitable for narrow installation space.

① Slim appearance, small and practical
② Strong compatibility
③ Strong expansion ability
④ Outstanding cost performance
⑤ Save more installation space

Economic
XL1 series

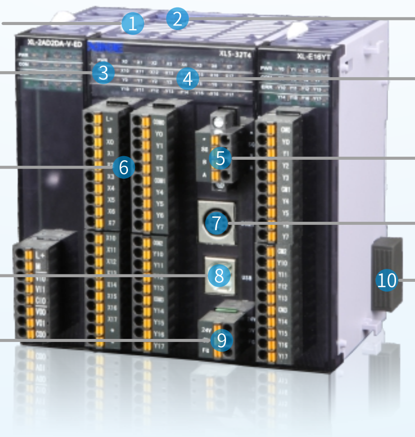
Standard
XL3 series

Enhanced
XL5 series

Ethernet communication
XL3E/XL5E/XL5N series

CAN communication
XLMEseries

EtherCAT bus
XLH/XL5H series



① Fixed snap-fit between modules
③ Operation LED of PLC body
⑥ I/O terminal block
⑧ USB port
⑨ Power supply input terminal
② Battery holder
④ I/O indicator
⑤ Serial port 2: RS485
⑦ Serial port 1: RS232
⑩ Right expansion module interface
⑪ Left expansion module interface

Economic type

XL1 series

The function is relatively simple, which can carry out logic control, data operation and other general functions. XL1 series is equipped with RS232 port, RS485 port, USB port and supports the networking function of X-NET fieldbus. No expansion, high-speed processing function.

① Program capacity 256KB
② I/O sequential control
③ Max I/O 16 points
④ Basic instruction 0.02~0.05μs
⑤ RS232, RS485
⑥ X-NET fieldbus
⑦ USB port high speed download (max 12Mbps)

Performance specification

Product series XL1-		16T	16T-U
Main body I/O	Total points	16	16
	Input points	8	8
	Output points	8	8
Max I/O points		16	16
High speed positioning	General pulse output	-	-
	Differential pulse output	-	-
High speed input	Single/AB phase mode	-	-
	Input mode	-	-
Expansion ability	Right expansion module	-	-
	Left expansion module	-	-
	BD board	-	-
Interruption	External interrupt	6	6
	Timing interrupt	20	20
	Other interrupts	-	-
Communication function	Communication port	2 RS232 ports, 1 RS485 port	1 RS232 port, 1 RS485 port, 1 USB port
	Communication protocol	Standard Modbus ASCII/RTU communication, free format communication	
Bus function		X-NET fieldbus	
PWM pulse width modulation		-	
Frequency measurement		-	
Precise timing		-	
Multi-station control		-	
Program execution mode		Cyclic scanning mode	
Programming method		LD, ST, C, IL	
Power off holding		FlashROM and lithium battery (3V button battery)	
Basic instruction processing speed		0.02~0.05μs	
User program capacity (secret download mode)		256KB	

XL1 series model list

	Model					
	AC power supply			DC power supply		
	Relay output	Transistor output	Transistor relay mixed output	Relay output	Transistor output	Transistor relay mixed output
NPN type	-	-	-	-	XL1-16T	-
	-	-	-	-	XL1-16T-U	-

Product series XL1-			16T	16T-U
Security function			6-bit ASCII password encryption, secret downloading	
Self-diagnosis function			Power on self-test, monitoring timer, syntax check	
Real-time clock			Built-in clock, Lithium battery power supply, with power down memory	
SD expansion card			-	
Bit soft component	Input relay (X)		896 points: X0~X77, X10000~X11177, X20000~X20177, X30000~X30077	
	Output relay (Y)		896 points: Y0~Y77, Y10000~Y11177, Y20000~Y20177, Y30000~Y30077	
	Auxiliary relay	General M	8000 points M0~M7999	
		Power off holding HM	960 points HM0~HM959	
		Special SM	2048 points SM0~SM2047	
	Flow	General S	1024 points S0~S1023	
		Power off holding HS	128 points HS0~HS127	
	Timer	Specification	100ms timer: 0.1~3276.7s, 10ms timer: 0.01~327.67s, 1ms timer: 0.001~32.767s	
		General T	576 points T0~T575	
		Power off holding HT	96 points HT0~HT95	
	Counter	Specification	16-bit counter: K0~32767 32-bit counter: -2147483648~+2147483647	
		General C	576 points C0~C575	
		Power off holding HC	96 points HC0~HC95	
	Special coil for WAIT instruction		32 points SEM0~SEM31	
Word soft component	Data register	General D	8000 points D0~D7999	
		Power off holding HD	1000 points HD0~HD999	
		Special SD	2048 points SD0~SD2047	
	FlashROM register	Power off holding FD	5120 points FD0~FD5119	
		Special SFD	2000 points SFD0~SFD1999	
		Security register FS	48 points FS0~FS47	

*Note: ①The "-" in the table indicates that this model doesn't have this function;②Special refers to system occupancy, cannot be used for other purposes.

Standard type

XL3 series

It has complete functions. In addition to the general data processing function, it also has special functions such as high-speed pulse output, high-speed counting function, pulse width modulation, frequency measurement and accurate timing. It supports the connection of right expansion module and left expansion module, which can meet various use needs.

① Program capacity 256KB
② I/O sequential control
③ Max I/O 352 points
④ Basic instruction 0.02~0.05μs
⑤ RS232, RS485
⑥ X-NET fieldbus
⑦ USB port high speed download (max 12Mbps)
⑧ 3 channels high speed counter (single phase up to 80K, AB phase up to 50K)
⑨ 2-4 channels 100KHz pulse output

XINJE
XL3-16T

XL3 series model list

	Model					
	AC power supply			DC power supply		
	Relay output	Transistor output	Transistor relay mixed output	Relay output	Transistor output	Transistor relay mixed output
NPN type	-	-	-	XL3-16R	XL3-16T	-
	-	-	-	XL3-32R	XL3-32T	-
PNP type	-	-	-	XL3-16PR	-	-
	-	-	-	XL3-32PR	-	-
PNP &NPN type	-	-	-	-	XL3-16T4	-

Performance specification

Product series XL3-		16R/T	16T4	32R/T
Main body I/O	Total points	16	16	32
	Input points	8	8	16
	Output points	8	8	16
Max I/O points		336	336	352
High speed positioning	General pulse output	2 axes	4 axes	2 axes
	Differential pulse output	-	-	-
High speed input	Single/AB phase mode	3 channels	3 channels	3 channels
	Input mode	OC	OC	OC
Expansion ability	Right expansion module	10	10	10
	Left expansion module	1	1	1
	BD board	-	-	-
Interruption	External interrupt	6	10	10
	Timing interrupt	20		
	Other interrupts	High speed counter interrupt, pulse interrupt		
Communication function	Communication port	1 RS232 port, 1 RS485 port, 1 USB port		
	Communication protocol	Standard Modbus ASCII/RTU communication, free format communication		
Bus function		X-NET fieldbus		
PWM pulse width modulation		Support		
Frequency measurement		Support		
Precise timing		26 points ET0~ET25 (Only even numbers can be used)		
Multi-station control		-		
Program execution mode		Cyclic scanning mode		
Programming method		LD, ST, C, IL		
Power off holding		FlashROM and lithium battery (3V button battery)		
Basic instruction processing speed		0.02~0.05μs		
User program capacity (secret download mode)		256KB		

Product series XL3-			16R/T	16T4	32R/T
Security function			6-bit ASCII password encryption, secret downloading		
Self-diagnosis function			Power on self-test, monitoring timer, syntax check		
Real-time clock			Built-in clock, Lithium battery power supply, with power down memory		
SD expansion card			-		
Bit soft component	Input relay (X)		896 points: X0~X77, X10000~X11177, X20000~X20177, X30000~X30077		
	Output relay (Y)		896 points: Y0~Y77, Y10000~Y11177, Y20000~Y20177, Y30000~Y30077		
	Auxiliary relay	General M	8000 points M0~M7999		
		Power off holding HM	960 points HM0~HM959		
		Special SM	2048 points SM0~SM2047		
	Flow	General S	1024 points S0~S1023		
		Power off holding HS	128 points HS0~HS127		
	Timer	Specification	100ms timer: 0.1~3276.7s, 10ms timer: 0.01~327.67s, 1ms timer: 0.001~32.767s		
		General T	576 points T0~T575		
		Power off holding HT	96 points HT0~HT95		
	Counter	Specification	16-bit counter: K0~32767 32-bit counter: -2147483648~+2147483647		
		General C	576 points C0~C575		
		Power off holding HC	96 points HC0~HC95		
	Special coil for WAIT instruction		32 points SEM0~SEM31		
Word soft component	Data register	General D	8000 pointsD0~D7999		
		Power off holding HD	1000 points HD0~HD999		
		Special SD	2048 points SD0~SD2047		
	FlashROM register	Power off holding FD	5120 points FD0~FD5119		
		Special SFD	2000 points SFD0~SFD1999		
		Security register FS	48 points FS0~FS47		

*Note: ①The “-” in the table indicates that this model doesn't have this function；②Special refers to system occupancy, cannot be used for other purposes.

Enhanced type

XL5 series

In addition to all the functions of standard PLC, it has faster processing speed (about 15 times of XC series), larger internal resource space, 2 ~ 4 channels high-speed pulse output, supports the connection of right expansion module and left expansion ED module, and can meet various use requirements.

① Program capacity 512KB
② I/O sequential control
③ Max I/O 576 points
④ Basic instruction 0.02~0.05μs
⑤ RS232, RS485
⑥ X-NET fieldbus
⑦ USB port high speed download (max 12Mbps)
⑧ 3~4 channels high speed counter (single phase up to 80K, AB phase up to 50K)
⑨ 2~10 channels 100KHz pulse output

Performance specification

Product series XL5-		16T	16T4	32T	32T4	64T10
Main body I/O	Total points	16	16	32	32	64
	Input points	8	8	16	16	32
	Output points	8	8	16	16	32
Max I/O points		528	528	544	544	576
High speed positioning	General pulse output	2 axes	4 axes	2 axes	4 axes	10 axes
	Differential pulse output	-	-	-	-	-
High speed input	Single/AB phase mode	3 channels	3 channels	3 channels	4 channels	10 channels
	Input mode	OC	OC	OC	OC	OC
Expansion ability	Right expansion module	16	16	16	16	16
	Left expansion module	1	1	1	1	1
	BD board	-	-	-	-	-
Interruption	External interrupt	6	6	10	10	10
	Timing interrupt	20				
	Other interrupts	High speed counter interrupt, pulse interrupt				
Communication function	Communication port	1 RS232 port, 1 RS485 port, 1 USB port				
	Communication protocol	Standard Modbus ASCII/RTU communication, free format communication				
Bus function		X-NET fieldbus				
PWM pulse width modulation		Support				
Frequency measurement		Support				
Precise timing		26 points ET0~ET25 (Only even numbers can be used)				
Multi-station control		-				
Program execution mode		Cyclic scanning mode				
Programming method		LD, ST, C, IL				
Power off holding		FlashROM and lithium battery (3V button battery)				
Basic instruction processing speed		0.02~0.05μs				
User program capacity (secret download mode)		512KB				

XL5 series model list

	Model					
	AC power supply			DC power supply		
	Relay output	Transistor output	Transistor relay mixed output	Relay output	Transistor output	Transistor relay mixed output
NPN type	-	-	-	-	XL5-16T	-
	-	-	-	-	XL5-32T	-
	-	-	-	-	XL5-32T4	-
	-	-	-	-	XL5-64T10	-
NPN type	-	-	-	-	XL5-32PT4	-
PNP &NPN type	-	-	-	-	XL3-16T4	-

Product series XL5-			16T	16T4	32T	32T4	64T10
Security function			6-bit ASCII password encryption, secret downloading				
Self-diagnosis function			Power on self-test, monitoring timer, syntax check				
Real-time clock			Built-in clock, Lithium battery power supply, with power down memory				
SD expansion card			-				
Bit soft component	Input relay (X)		1280 points: X0~X77, X10000~X11177, X20000~X20177, X30000~X30077				
	Output relay (Y)		1280 points: Y0~Y77, Y10000~Y11177, Y20000~Y20177, Y30000~Y30077				
	Auxiliary relay	General M	70000 points M0~M69999				
		Power off holding HM	12000 points HM0~HM11999				
		Special SM	5000 points SM0~SM4999				
	Flow	General S	8000 points S0~S7999				
		Power off holding HS	1000 points HS0~HS999				
	Timer	Specification	100ms timer: 0.1~3276.7s, 10ms timer: 0.01~327.67s, 1ms timer: 0.001~32.767s				
		General T	5000 points T0~T4999				
		Power off holding HT	2000 points HT0~HT1999				
	Counter	Specification	16-bit counter: K0~32767 32-bit counter: -2147483648~+2147483647				
		General C	5000 points C0~C4999				
		Power off holding HC	2000 points HC0~HC1999				
	Special coil for WAIT instruction		32 points SEM0~SEM31				
Word soft component	Data register	General D	70000 pointsD0~D69999				
		Power off holding HD	25000 points HD0~HD24999				
		Special SD	5000 points SD0~SD4999				
	FlashROM register	Power off holding FD	8192 points FD0~FD8191				
		Special SFD	6000 points SFD0~SFD5999				
		Security register FS	48 points FS0~FS47				

*Note: ①The “-” in the table indicates that this model doesn't have this function;②Special refers to system occupancy, cannot be used for other purposes.

Ethernet communication type

XL3E series

In addition to all the function of SL3 series (Excluding the SD card function), it has faster processing speed, RS232, RS485 and Ethernet port and supports the connection of right expansion module and left expansion ED module.

① Program capacity 256KB
② I/O sequential control
③ Max I/O 572 points
④ Basic instruction 0.02~0.05μs
⑤ RS232, RS485, RJ45
⑥ X-NET fieldbus
⑦ 2 channels 100KHz pulse output
⑧ 3 channels high speed counter (single phase up to 80K, AB phase up to 50K)

Performance specification

Product series XL5E-		16T	32T
Main body I/O	Total points	16	32
	Input points	8	16
	Output points	8	16
Max I/O points		528	544
High speed positioning	General pulse output	2 axes	2 axes
	Differential pulse output	-	-
High speed input	Single/AB phase mode	3 channels	3 channels
	Input mode	OC	OC
Expansion ability	Right expansion module	16	16
	Left expansion module	1	1
	BD board	-	-
Interruption	External interrupt	6	10
	Timing interrupt	20	
	Other interrupts	High speed counter interrupt, pulse interrupt	
Communication function	Communication port	1 RS232 port, 1 RS485 port, 2 RJ45 ports	
	Communication protocol	Standard Modbus ASCII/RTU communication, free format communication	
Bus function		X-NET fieldbus	
PWM pulse width modulation		Support	
Frequency measurement		Support	
Precise timing		Support	
Multi-station control		Support	
Program execution mode		Cyclic scanning mode	
Programming method		LD, ST, C, IL	
Power off holding		FlashROM and lithium battery (3V button battery)	
Basic instruction processing speed		0.01~0.03us	
User program capacity (secret download mode)		256KB	

XL5E series model list

	Model					
	AC power supply			DC power supply		
	Relay output	Transistor output	Transistor relay mixed output	Relay output	Transistor output	Transistor relay mixed output
PNP &NPN type	-	-	-	-	XL3E-16T	-
	-	-	-	-	XL3E-32T	-

Product series XL3E-			16T	32T
Security function			6-bit ASCII password encryption, secret downloading	
Self-diagnosis function			Power on self-test, monitoring timer, syntax check	
Real-time clock			Built-in clock, Lithium battery power supply, with power down memory	
SD expansion card			-	
Bit soft component	Input relay (X)		1280 points: X0~X77, X10000~X11177, X20000~X20177, X30000~X30077	
	Output relay (Y)		1280 points: Y0~Y77, Y10000~Y11177, Y20000~Y20177, Y30000~Y30077	
	Auxiliary relay	General M	70000 points M0~M69999	
		Power off holding HM	12000 points HM0~HM11999	
		Special SM	5000 points SM0~SM4999	
	Flow	General S	8000 points S0~S7999	
		Power off holding HS	1000 points HS0~HS999	
	Timer	Specification	100ms timer: 0.1~3276.7s, 10ms timer: 0.01~327.67s, 1ms timer: 0.001~32.767s	
		General T	5000 points C0~C4999	
		Power off holding HT	2000 points HC0~HC1999	
	Counter	Specification	16-bit counter: K0~32767 32-bit counter: -2147483648~+2147483647	
		General C	5000 points C0~C4999	
		Power off holding HC	2000 points HT0~HT1999	
	Special coil for WAIT instruction		32 points SEM0~SEM31	
Word soft component	Data register	General D	70000 pointsD0~D69999	
		Power off holding HD	25000 points HD0~HD24999	
		Special SD	5000 points SD0~SD4999	
	FlashROM register	Power off holding FD	8192 points FD0~FD8191	
		Special SFD	6000 points SFD0~SFD5999	
		Security register FS	48 points FS0~FS47	

*Note: ①The "-" in the table indicates that this model doesn't have this function；②Special refers to system occupancy, cannot be used for other purposes.

Ethernet communication type

XL5E series

In addition to all the functions of XL5 series, it has faster processing speed (about 2 ~ 3 times that of XDM series), larger internal resource space (1M), RS232, RS485 and Ethernet ports, supports 2 ~ 10 channels pulse output, and supports the connection of right expansion module and left expansion module.

① Program capacity 1MB
② I/O sequential control
③ Max I/O 576 points
④ Basic instruction 0.01~0.03μs
⑤ RS232, RS485, RJ45
⑥ X-NET fieldbus
⑦ 2~10 channels 100KHz pulse output
⑧ 3~10 channels high speed counter (single phase up to 80K, AB phase up to 50K)
⑨ Online downloading
⑩ Bipolar input

Performance specification

Product series XL5E-		16T	32T	32T4	64T6	64T10
Main body I/O	Total points	16	32	32	64	64
	Input points	8	16	16	32	32
	Output points	8	16	16	32	32
Max I/O points		528	544	544	576	576
High speed positioning	General pulse output	2 axes	2 axes	4 axes	6 axes	10 axes
	Differential pulse output	-	-	-	-	-
High speed input	Single/AB phase mode	3 channels	3 channels	4 channels	6 channels	10 channels
	Input mode	OC	OC	OC	OC	OC
Expansion ability	Right expansion module	16	16	16	16	16
	Left expansion module	1	1	1	1	1
	BD board	-	-	-	-	-
Interruption	External interrupt	6	10	10	10	10
	Timing interrupt	20				
	Other interrupts	High speed counter interrupt, pulse interrupt				
Communication function	Communication port	1 RS232 port, 1 RS485 port, 2 RJ45 ports				
	Communication protocol	Standard Modbus ASCII/RTU communication, free format communication				
Bus function		X-NET fieldbus				
PWM pulse width modulation		Support				
Frequency measurement		Support				
Precise timing		26 points ET0~ET25 (Only even numbers can be used)				
Multi-station control		Support				
Program execution mode		Cyclic scanning mode				
Programming method		LD, ST, C, IL				
Power off holding		FlashROM and lithium battery (3V button battery)				
Basic instruction processing speed		0.01~0.03μs				
User program capacity (secret download mode)		1MB				

XL5E series model list

	Model					
	AC power supply			DC power supply		
	Relay output	Transistor output	Transistor relay mixed output	Relay output	Transistor output	Transistor relay mixed output
PNP &NPN type	-	-	-	-	XL5E-16T	-
	-	-	-	-	XL5E-32T	-
	-	-	-	-	XL5E-32T4	-
	-	-	-	-	XL5E-64T6	-
	-	-	-	-	XL5E-64T10	-
PNP type	-	-	-	-	XL5E-32PT4	-

Product series XL5E-			16T	32T	32T4	64T6	64T10
Security function			6-bit ASCII password encryption, secret downloading				
Self-diagnosis function			Power on self-test, monitoring timer, syntax check				
Real-time clock			Built-in clock, Lithium battery power supply, with power down memory				
SD expansion card			-				
Bit soft component	Input relay (X)		1280 points: X0~X77, X10000~X11177, X20000~X20177, X30000~X30077				
	Output relay (Y)		1280 points: Y0~Y77, Y10000~Y11177, Y20000~Y20177, Y30000~Y30077				
	Auxiliary relay	General M	70000 points M0~M69999				
		Power off holding HM	12000 points HM0~HM11999				
		Special SM	5000 points SM0~SM4999				
	Flow	General S	8000 points S0~S7999				
		Power off holding HS	1000 points HS0~HS999				
	Timer	Specification	100ms timer: 0.1~3276.7s, 10ms timer: 0.01~327.67s, 1ms timer: 0.001~32.767s				
		General T	5000 points T0~T4999				
		Power off holding HT	2000 points HT0~HT1999				
	Counter	Specification	16-bit counter: K0~32767 32-bit counter: -2147483648~+2147483647				
		General C	5000 points C0~C4999				
		Power off holding HC	2000 points HC0~HC1999				
	Special coil for WAIT instruction		32 points SEM0~SEM31				
Word soft component	Data register	General D	70000 pointsD0~D69999				
		Power off holding HD	25000 points HD0~HD24999				
		Special SD	5000 points SD0~SD4999				
	FlashROM register	Power off holding FD	8192 points FD0~FD8191				
		Special SFD	6000 points SFD0~SFD5999				
		Security register FS	48 points FS0~FS47				

*Note: ①The "-" in the table indicates that this model doesn't have this function；②Special refers to system occupancy, cannot be used for other purposes.

CAN communication type

XL5N series

Compatible with most functions of XL5E series, it has built-in two-channel independent CAN communication, equipped with RS232, RS485, RJ45 port, supports two-channel pulse output, three-channel high-speed counting, and supports the connection of right expansion module and left expansion module.

① Program capacity 1MB
② I/O sequential control
③ Max I/O 544 points
④ Basic instruction 0.01~0.03µs
⑤ RS232, RS485, Rj45
⑥ 2 channels CAN communication, support CANopen and CAN free format communication
⑦ Support Ethernet communication
⑧ 2 channels 100KHz pulse output
⑨ 3 channels high speed counter (single phase up to 80K, AB phase up to 50K)
⑩ Online downloading

Performance specification

Product series XL5N-		32T
Main body I/O	Total points	32
	Input points	16
	Output points	16
Max I/O points		544
High speed positioning	General pulse output	2 axes
	Differential pulse output	-
High speed input	Single/AB phase mode	3 channels
	Input mode	OC
Expansion ability	Right expansion module	16
	Left expansion module	1
	BD board	-
Interruption	External interrupt	10
	Timing interrupt	20
	Other interrupts	High speed counter interrupt, pulse interrupt
Communication function	Communication port	1 RS232 port, 1 RS485 port, 2 RJ45 ports
	Communication protocol	Standard Modbus ASCII/RTU communication, free format communication, Ethernet communication, CAN communication
Bus function		CANbus control, X-NET fieldbus
PWM pulse width modulation		Support
Frequency measurement		Support
Precise timing		Support
Multi-station control		Support
Program execution mode		Cyclic scanning mode
Programming method		LD, ST, C, IL
Power off holding		FlashROM
Basic instruction processing speed		0.01~0.03µs
User program capacity (secret download mode)		1MB

XL5N series model list

	Model					
	AC power supply			DC power supply		
	Relay output	Transistor output	Transistor relay mixed output	Relay output	Transistor output	Transistor relay mixed output
NPN type	-	-	-	-	XL5N-32T	-
PNP type	-	-	-	-	XL5N-32PT	-

Product series XL5N-			32T
Security function			6-bit ASCII password encryption, secret downloading
Self-diagnosis function			Power on self-test, monitoring timer, syntax check
Real-time clock			Built-in clock, Lithium battery power supply, with power down memory
SD expansion card			-
Bit soft component	Input relay (X)		1280 points: X0~X77, X10000~X11177, X20000~X20177, X30000~X30077
	Output relay (Y)		1280 points: Y0~Y77, Y10000~Y11177, Y20000~Y20177, Y30000~Y30077
	Auxiliary relay	General M	200000 points M0~M199999
		Power off holding HM	20000 points HM0~HM19999
		Special SM	5000 points SM0~SM4999
	Flow	General S	2000 points S0~S19999
		Power off holding HS	2000 points HS0~HS1999
	Timer	Specification	100ms timer: 0.1~3276.7s, 10ms timer: 0.01~327.67s, 1ms timer: 0.001~32.767s
		General T	20000 points T0~C4999
		Power off holding HT	2000 points HT0~HC1999
	Counter	Specification	16-bit counter: K0~32767 32-bit counter: -2147483648~+2147483647
		General C	20000 points C0~C19999
		Power off holding HC	2000 points HC0~HC1999
	Special coil for WAIT instruction		32 points SEM0~SEM31
Word soft component	Data register	General D	500000 pointsD0~D499999
		Power off holding HD	50000 points HD0~HD49999
		Special SD	50000 points SD0~SD49999
	FlashROM register	Power off holding FD	65536 points FD0~FD65535
		Special SFD	50000 points SFD0~SFD49999
		Security register FS	48 points FS0~FS47

*Note: ①The “-” in the table indicates that this model doesn't have this function；②Special refers to system occupancy, cannot be used for other purposes.

Ethernet communication type

XLME series

In addition to all the functions of XDM series small-sized PLC, it has faster processing speed (about 2 ~ 3 times that of XDM series), larger internal resource space (1M), supports up to 10 channels pulse output, is equipped with RS232, RS485 port and 2 channels 100kHz high speed pulse output, and supports the connection of right expansion module and left expansion module.

① Program capacity 1MB
② I/O sequential control
③ Max I/O 576 points
④ Basic instruction 0.01~0.03μs
⑤ RS232, RS485, RJ45
⑥ X-NET fieldbus
⑦ 4~10 channels 100KHz pulse output
⑧ 4~10 channels high speed counter (single phase up to 80K, AB phase up to 50K)
⑨ Linear/arc interpolation
⑩ Follow-up function
⑪ Online downloading

Performance specification

Product series XLME-		16T4	32T4	64T10
Main body I/O	Total points	16	32	64
	Input points	8	16	32
	Output points	8	16	32
Max I/O points		528	544	576
High speed positioning	General pulse output	4 axes	4 axes	10 axes
	Differential pulse output	-	-	-
High speed input	Single/AB phase mode	4 channels	4 channels	10 channels
	Input mode	OC	OC	OC
Expansion ability	Right expansion module	16	16	16
	Left expansion module	1	1	1
	BD board	-	-	-
Interruption	External interrupt	10	10	10
	Timing interrupt	20		
	Other interrupts	High speed counter interrupt, pulse interrupt		
Communication function	Communication port	1 RS232 port, 1 RS485 port, 2 RJ45 ports		
	Communication protocol	Standard Modbus ASCII/RTU communication, free format communication, Ethernet communication		
Bus function		X-NET fieldbus		
PWM pulse width modulation		Support		
Frequency measurement		Support		
Precise timing		26 points ET0~ET25 (only even numbers can be used)		
Multi-station control		Support		
Program execution mode		Cyclic scanning mode		
Programming method		LD, ST, C, IL		
Power off holding		FlashROM and lithium battery (3V button battery)		
Basic instruction processing speed		0.01~0.03μs		
User program capacity (secret download mode)		1MB		

XLME series model list

	Model					
	AC power supply			DC power supply		
	Relay output	Transistor output	Transistor relay mixed output	Relay output	Transistor output	Transistor relay mixed output
PNP &NPN type					XLME-16T4	
	-	-	-	-	XLME-32T4	-
	-	-	-	-	XLME-64T10	-

Product series XLME-			16T4	32T4	64T10
Security function			6-bit ASCII password encryption, secret downloading		
Self-diagnosis function			Power on self-test, monitoring timer, syntax check		
Real-time clock			Built-in clock, Lithium battery power supply, with power down memory		
SD expansion card			-		
Bit soft component	Input relay (X)		1280 points: X0~X77, X10000~X11177, X20000~X20177, X30000~X30077		
	Output relay (Y)		1280 points: Y0~Y77, Y10000~Y11177, Y20000~Y20177, Y30000~Y30077		
	Auxiliary relay	General M	70000 points M0~M69999		
		Power off holding HM	12000 points HM0~HM11999		
		Special SM	5000 points SM0~SM4999		
	Flow	General S	8000 points S0~S7999		
		Power off holding HS	1000 points HS0~HS999		
	Timer	Specification	100ms timer: 0.1~3276.7s, 10ms timer: 0.01~327.67s, 1ms timer: 0.001~32.767s		
		General T	5000 points T0~T4999		
		Power off holding HT	2000 points HT0~HT1999		
	Counter	Specification	16-bit counter: K0~32767 32-bit counter: -2147483648~+2147483647		
		General C	5000 points C0~C4999		
		Power off holding HC	2000 points HC0~HC1999		
	Special coil for WAIT instruction		32 points SEM0~SEM31		
Word soft component	Data register	General D	70000 pointsD0~D69999		
		Power off holding HD	25000 points HD0~HD24999		
		Special SD	5000 points SD0~SD4999		
	FlashROM register	Power off holding FD	8192 points FD0~FD8191		
		Special SFD	6000 points SFD0~SFD5999		
		Security register FS	48 points FS0~FS47		

*Note: ①The “-” in the table indicates that this model doesn't have this function；②Special refers to system occupancy, cannot be used for other purposes.

EtherCAT bus type

XLH series

Compatible with most functions of XLME, it has larger program capacity and faster processing speed, supports Ethernet communication, EtherCAT bus, motion control commands such as interpolation and follow-up, can connect expansion module and left expansion ED module.

① Program capacity 2~4MB
② Max I/O 542 points
③ Basic instruction 0.01~0.05μs
④ RS232, RS485, RJ45
⑤ Ethernet communication
⑥ X-NET fieldbus
⑦ EtherCAT bus control
⑧ 4 channels 100KHz pulse output
⑨ 4 channels high speed counter (up to 200KHz)
⑩ Follow-up function
⑪ 3 axes linear/acr interpolation
⑫ 16 channels electronic cam (XLH-24A16L/XLH-30A32L not supported)
⑬ Bipolar input

XINJE
XLH-30A32

Performance specification

Product series XLH-		24A16	24A16L	30A32	30A32L
Main body I/O	Total points	24	24	30	30
	Input points	12	12	14	14
	Output points	12	12	16	16
Max I/O points		536	536	542	542
High speed positioning	General pulse output	4 axes	4 axes	4 axes	4 axes
	Differential pulse output	-	-	-	-
High speed input	Single/AB phase mode	4 channels	4 channels	4 channels	4 channels
	Input mode	OC	OC	2 channels differential signal + 2 channels OC	2 channels differential signal + 2 channels OC
Expansion ability	Right expansion module	16	16	16	16
	Left expansion module	1	1	1	1
	BD board	-	-	-	-
Interruption	External interrupt	10	10	10	10
	Timing interrupt	20	20	20	20
	Other interrupts	High speed counter interrupt, pulse interrupt			
Communication function	Communication port	1 RS232 port, 1 RS485 port, 2 RJ45 ports			
	Communication protocol	Standard Modbus ASCII/RTU communication, free format communication, Ethernet communication, CAN communication (only 30A32 support)			
EtherCAT bus function	Single axis	Support	Support	Support	Support
	Axis group	Support	Support	Support	Support
	Electronic cam	Support	-	Support	-
PWM pulse width modulation		Support			
Frequency measurement		-			
Precise timing		26 points ET0~ET25 (cannot support this function)			
Multi-station control		Support			
Program execution mode		Cyclic scanning mode			
Programming method		LD、ST、C、IL			
Power off holding		FlashROM			
Basic instruction processing speed		0.01~0.03us			
User program capacity (secret download mode)		2MB		4MB	

XLH series model list

	Model					
	AC power supply			DC power supply		
	Relay output	Transistor output	Transistor relay mixed output	Relay output	Transistor output	Transistor relay mixed output
NPN type	-	-	-	-	XLH-24A16	-
	-	-	-	-	XLH-24A16L	-
	-	-	-	-	XLH-30A32	-
	-	-	-	-	XLH-30A32L	-
PNP type	-	-	-	-	XLH-24PA16	-
	-	-	-	-	XLH-24PA16L	-
	-	-	-	-	XLH-30PA32	-

Product series XLH-			24A16	24A16L	30A32	30A32L
Security function			6-bit ASCII password protection, secret download			
Self-diagnosis function			Power on self-test, monitoring timer, syntax check			
Real-time clock			Built-in clock, Lithium battery, power off memory			
SD expansion card			-			
Bit soft component	Input relay (X)		1280 points: X0~X77, X10000~X11177, X20000~X20177, X30000~X30077			
	Output relay (Y)		1280 points: Y0~Y77, Y10000~Y11177, Y20000~Y20177, Y30000~Y30077			
	Auxiliary relay	General M	200000 points M0~M199999			
		Power off holding HM	20000 points HM0~HM19999			
		Special SM	50000 points SM0~SM49999			
	Flow	General S	20000 points S0~S19999			
		Power off holding HS	2000 points HS0~HS1999			
	Timer	Specification	100ms timer: 0.1~3276.7s, 10ms timer: 0.01~327.67s, 1ms timer: 0.001~32.767s			
		General T	20000 points T0~T19999			
		Power off holding HT	2000 points HT0~HT1999			
		Precise timing	40 points ET0~ET39			
	Counter	Specification	16-bit counter: K0~32767 32-bit counter: -2147483648~+2147483647			
		General C	20000 points C0~C19999			
		Power off holding HC	2000 points HC0~HC1999			
		High speed counter	40 points HSC0~HSC39			
	Special coil for WAIT instruction		32 points SEM0~SEM31			
Word soft component	Data register	General D	500000 points D0~D499999	500000 points D0~D499999	1000000 points D0~D999999	
		Power off holding HD	50000 points HD0~HD49999	50000 points HD0~HD49999	100000 points HD0~HD99999	
		Special SD	50000 points SD0~SD49999			
	FlashROM register	Power off holding FD	65536 points FD0~FD65535			
		Special SFD	50000 points SFD0~SFD49999			
		Security register FS	48 points FS0~FS47			

*Note: ①The "-" in the table indicates that this model doesn't have this function；②Special refers to system occupancy, cannot be used for other purposes.

EtherCAT bus type

XL5H series

It is compatible with most functions of XL5E, supports EtherCAT bus, is equipped with RS232, RS485 and RJ45 ports, supports 2-channel pulse output, 3-channel high-speed counting, and supports the connection of right expansion module and left expansion module.

① Program capacity 1M
② Max I/O 536 points
③ Basic instruction 0.01~0.05μs
④ RS232, RS485, RJ45
⑤ Ethernet communication
⑥ X-NET fieldbus
⑦ EtherCAT bus control
⑧ 2 channels 100KHz pulse output
⑨ 3 channels high speed counter (single phase max 80K, AB phase max 50K)
⑩ Follow-up function
⑪ Online downloading
⑫ Bipolar input

XL5H series model list

Model						
	AC power supply			DC power supply		
	Relay output	Transistor output	Transistor relay mixed output	Relay output	Transistor output	Transistor relay mixed output
PNP &NPN type	-	-	-	-	XL5H-24A8	-
	-	-	-	-	XL5H-24A8L	-

Performance specification

Product series XL5H-		24A8L	24A8L
Main body I/O	Total points	24	24
	Input points	12	12
	Output points	12	12
Max I/O points		536	536
High speed positioning	General pulse output	2 axes	2 axes
	Differential pulse output	-	-
High speed input	Single/AB phase mode	3 channels	3 channels
	Input mode	OC	OC
Expansion ability	Right expansion module	16	16
	Left expansion module	1	1
	BD board	-	-
Interruption	External interrupt	10	10
	Timing interrupt	20	
	Other interrupts	High speed counting interrupt, pulse interrupt	
Communication function	Communication port	1 RS232 port, 1 RS485 port, 1 EtherCAT port, 1 Ethernet port	
	Communication protocol	Standard Modbus ASCII/RTU, free format communication, Modbus-TCP Client/Server, TCP/UDP	
EtherCAT bus function	Single axis	Support	Support
	Axis group	Support	Support
	Electronic cam	Support	-
PWM pulse width modulation		Support	
Frequency measurement		3 channels	
Precise timing		Support	
Multi-station control		Support	
Program execution mode		Cyclic scanning mode	
Programming method		Command, ladder chart, C language	
Power off holding		FlashROM and lithium battery (3V button battery)	
Basic instruction processing speed		0.01~0.05μs	
User program capacity (secret download mode)		1MB	

Product series XL5H-			24A8	24A8L
Security function			6-bit ASCII password protection, secret download	
Self-diagnosis function			Power on self-test, monitoring timer, syntax check	
Real-time clock			Built-in clock, Lithium battery, power off memory	
SD expansion card			-	
Bit soft component	Input relay (X)		1280 points: X0~X77, X10000~X11177, X20000~X20177, X30000~X30077	
	Output relay (Y)		1280 points: Y0~Y77, Y10000~Y11177, Y20000~Y20177, Y30000~Y30077	
	Auxiliary relay	General M	70000 points M0~M69999	
		Power off holding HM	12000 points HM0~HM11999	
		Special SM	5000 points SM0~SM4999	
	Flow	General S	8000 points S0~S7999	
		Power off holding HS	1000 points HS0~HS999	
	Timer	Specification	100ms timer: 0.1~3276.7s, 10ms timer: 0.01~327.67s, 1ms timer: 0.001~32.767s	
		General T	5000 points T0~T4999	
		Power off holding HT	2000 points HT0~HT1999	
		Precise timing	40 points ET0~ET39	
	Counter	Specification	16-bit counter: K0~32767 32-bit counter: -2147483648~+2147483647	
		General C	5000 points C0~C4999	
		Power off holding HC	2000 points HC0~HC1999	
		High speed counter	40 points HSC0~HSC39	
	Special coil for WAIT instruction		32 points SEM0~SEM31	
Word soft component	Data register	General D	70000 points D0~D69999	
		Power off holding HD	25000 points HD0~HD24999	
		Special SD	5000 points SD0~SD4999	
	FlashROM register	Power off holding FD	8192 points FD0~FD8191	
		Special SFD	6000 points SFD0~SFD5999	
		Security register FS	48 points FS0~FS47	

*Note: ①The “-” in the table indicates that this model doesn't have this function；②Special refers to system occupancy, cannot be used for other purposes.

Basic unit 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 gas
Ambient temperature	0°C~55°C
Ambient humidity	5%RH~95%RH (no condensation)
Installation	Directly mounted on the guide rail
Grounding	The third kind of grounding (not common grounding with strong current system)

Power supply specification

DC power supply

Item	Specification
Rated voltage	DC24V
Allowable voltage range	DC21.6V~26.4V
Rated frequency	120mA DC24V
Allowable instantaneous power off time	10ms DC24V
Impact current	10A DC26.4V
Max power consumption	15W (16 points) / 30W (24 points and up)
Power supply for sensor	24VDC±10% 16 points max 200mA, 32 points max 400mA

Input specification

NPN mode

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 response time	About 10ms
Input signal format	Contactor input or NPN open collector transistor
Circuit insulation	Photoelectric coupling insulation
Input action display	LED lights when input is ON

PNP mode

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 response time	About 10ms
Input signal format	Contactor input or PNP open collector transistor
Circuit insulation	Photoelectric coupling insulation
Input action display	LED lights when input is ON

Note: XL5/XL5E/XLME series 64 points models have no "input ON current", "input OFF current", and its input ON voltage is below 9V, input OFF voltage is above 19V.

Differential mode

Item	Specification
Input signal	5V differential signal
Input max frequency	1MHz
Circuit insulation	Photoelectric coupling insulation
Input action display	LED lights when input is ON

Output specification

Relay output

External power supply		Below AC250V, DC30V
Circuit insulation		Mechanical insulation
Action indicator		LED light
Max load	Resistive load	3A
	Inductive load	80VA
	Lamp load	100W
Min load		DC5V 10mA
Response time	OFF→ON	10ms
	ON→OFF	10ms

Transistor output

External power supply		DC5~30V
Circuit insulation		Optocoupler insulation
Action indicator		LED light
Max load	Resistive load	0.3A
	Inductive load	7.2W/DC24V
	Lamp 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

High speed pulse output

Model	T	T4	T6	T10
High speed pulse output terminal	Y0~Y1	Y0~Y3	Y0~Y5	Y0~Y11
External power supply	Below DC5~30V			
Action indicator	LED light			
Max current	50mA			
Pulse max output frequency	100KHz			

Serial port (RS232/RS485) communication parameter specification

Item	Parameter
Communication mode	Half duplex
Baud rate	4800bps, 9600bps, 19200bps(default), 38400bps, 57600bps, 115200bps
Data type	Data bit: 5, 6, 7, 8 (default), 9. Stop bit: 1 (default), 1.5, 2. Parity bit: none, odd, even (default)
Mode	RTU (default), ASCII, free format
Station no.	1~255 (default 1)
Delay before sending	1~100ms (default 3ms)
Reply timeout	1~1000ms (default 300ms)
Retry count	1~20 times (default 3 times)

Expansion unit

In order to meet the application requirements of more occasions, XL series PLC can be equipped with rich I/O expansion module, analog input and output module, temperature control module and left expansion module. The main body can expand 10~16 different type of right expansion modules and one left expansion ED module.

[Up to 16 modules can be expanded]

Left expansion ED module

Analog and temperature expansion module

With D/A, A/D conversion and temperature measurement function.

Communication module

PLC can realize CANopen, RS232, RS485 communication.

Right expansion module

I/O expansion module

To expand the I/O points, the points include 8~32 points. The basic unit can extend to 512 points.

The output type includes transistor (T) and relay (R).

Analog and temperature expansion module

It has D/A and A/D conversion functions. XD/XL series PLC can be applied to temperature, flow, liquid level, pressure and other process control systems by expanding analog input/output module and temperature control module.

Adding PID regulation function, it has wider and more flexible use and higher control accuracy. Only four parameters need to be set.

Each channel of the temperature control module can carry out PID control independently, which can be self-tuning, and exchange information with the main body through FROM and TO instructions.

General specification

Item	Specification
Using environment	No corrosive gas
Ambient temperature	0°C ~ 55°C
Storage temperature	-20 ~ 70°C
Ambient humidity	5 ~ 95%RH
Storage humidity	5 ~ 95%RH
Installation	It is directly installed on the guide rail of DIN46277 (35mm width)

Expansion unit

Right expansion module

I/O expansion module

When the number of main body points cannot meet the use requirements, this type of expansion module can be used to expand the I/O points to 576 points at most.

European terminal: 16/32 points

Horn terminal: 16/32 points

External terminal strip is required

Digital input module

Model		Function description	Specification
NPN input	PNP input		
XL-E16X	XL-E16PX	16 channels digital input	DC24V power supply Input filter time 1~50ms optional External wiring method: 16X, 32X: built-in terminal strip 32X-A, 32PX-A: external terminal block is required The wiring method is same to PLC main body
XL-E32X	XL-E32PX	32 channels digital input	
XL-E32X-A	XL-E32PX-A	32 channels digital input, horn terminals	

Digital output module

Model	Function description	Specification
XL-E16YR	16 channels relay output, no power supply required	R: output relay T: output transistor R response time is below 10ms T response time is below 0.2ms R max load: resistive 3A inductive 80VA T max load: each point max output current is 0.3A External wiring method: 16YR, 16YT, 16PYT3, 2YT: built-in terminal strip 16YT-A, 32YT-A: external terminal block is required The wiring method is same to PLC main body
XL-E16YT	16 channels transistor output, no power supply required	
XL-E16YT-A	16 channels transistor output, no power supply required, horn terminals	
XL-E32YT	32 channels transistor output, no power supply required	
XL-E32YT-A	32 channels transistor output, no power supply required, horn terminals	
XL-E16PYT	16 channels transistor output, DC24V power supply	

Digital I/O module

Model		Function description	Specification
NPN input	PNP input		
XL-E8X8YR	XL-E8PX8YR	8 channels digital input, 8 channels relay output	DC 24V power supply Input filter time 1~50ms optional R: output relay T: output transistor R response time is below 10ms T response time is below 0.2ms R max load: resistive 3A inductive 80VA T max load: each point max output current is 0.3A External wiring method: 8X8YR, 8X8YT, 16X16YT: built-in terminal strip 16X16YT-A, 16PX16YT-A: external terminal block is required The wiring method is same to PLC main body
XL-E8X8YT	XL-E8PX8YT	8 channels digital input, 8 channels transistor output	
XL-E16X16YT	XL-E16PX16YT	16 channels digital input, 16 channels transistor output	
-	XL-E16PX16YT	16 channels digital input, 16 channels transistor output (PNP type)	
XL-E16X16YT-A	XL-E16PX16YT-A	16 channels digital input, 16 channels transistor output, horn terminals	

Analog and temperature expansion module

It has D/A and A/D conversion functions. XD/XL series PLC can be applied to temperature, flow, liquid level, pressure and other process control systems by expanding analog input/output module and temperature control module.

Adding PID regulation function, it has wider and more flexible use and higher control accuracy. Only four parameters need to be set.

Each channel of the temperature control module can carry out PID control independently, which can be self-tuning, and exchange information with the main body through FROM and TO instructions.

Temperature control module (PT&TC type)

Model	Channel	Input signal	Specification
XL-E4PT3-P	4	Pt100, PT1000 platinum thermistor (three-wire system) Measurement temperature range -100°C~500°C	Analog power supply DC24V±10%, 50mA; Resolution: 0.1°C Comprehensive accuracy: ±0.5% (relative maximum value) Conversion speed: 450ms/4 channels Filter coefficient: 0~254 Each channel is independently PID controlled and supports self-tuning function Capable of detecting power outages, disconnections, and exceeding the range
XL- E4TC-P	4	Temperature measurement range of K, S, E, N, B, T, J, and R-type thermocouples: K-type 0.0°C~1300.0°C E-type 0.0°C~600.0°C B-type 250.0°C~1800.0°C J-type 0.0°C~800.0°C S-type 0.0°C~1700.0°C N-type 0.0°C~1200.0°C T-type 0.0°C~400.0°C R-type 0.0°C~1700.0°C	Analog power supply DC24V±10%, 50mA Resolution: 0.1°C Comprehensive accuracy: ±1% (relative maximum value) Conversion speed: 420ms/4 channels Each channel is independently PID controlled and supports self-tuning function Capable of detecting power outages, disconnections, and exceeding the range
XL- E4PT3-P-H	4	1.PT100, PT1000, CU50, CU100 thermistor temperature measurement range: -200.0°C~850.0°C (PT100, PT1000) -50.0°C~150.0°C (CU50, CU1000)	Analog power supply DC24V±10%, 50mA; Resolution: 0.1°C, 0.01°C optional Comprehensive accuracy: 0.2% (relative maximum value) Conversion speed: 50ms/all channels; Filter coefficient: 0~254 Each channel is independently PID controlled and supports self-tuning function Capable of detecting power outages, disconnections, and exceeding the range Isolation between channels

Analog input module (AD type)

Model	Channel	Input signal	Specification
XL-E4AD	4	Current input: 0~20mA/4~20mA/-20~20mA Voltage input: 0~5V/0~10V/-5~5V/-10~10V	Power supply for analog DC24V ±10%, 150mA Conversion speed 2ms/channel Resolution: XL-E4AD, XL-E8AD-A, XL-E8AD-V: 1/16383 (14-bit) XL-E8AD-A-S, XL-E8AD-V-S: 1/65536 (16-bit) Comprehensive accuracy ±1% AD filter coefficient 0~254 Channel enable bit is added AD channel has the functions of short circuit, open circuit and over range detection
XL-E8AD-A	8	Current input: 0~20mA/4~20mA/-20~20mA	
XL-E8AD-V	8	Voltage input: 0~5V/0~10V/-5~5V/-10~10V	
XL-E8AD-A-S	8	Current input: 0~20mA/4~20mA/-20~20mA	
XL-E8AD-V-S	8	Voltage input: 0~5V/0~10V/-5~5V/-10~10V	

Analog output module (DA type)

Model	Channel	Output signal	Specification
XL-E4DA	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 1/4095 (12-bit) Comprehensive accuracy ±1% Channel enable bit is added

Analog output module (DA type)

Model	Channel		Input/output signal	Specification
	Input	Output		
XL-E4AD2DA	4	2	Current input: 0~20mA/4~20mA/-20~20mA Voltage input: 0~5V/0~10V/-5~5V/-10~10V 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) Comprehensive accuracy ±1% AD filter coefficient 0~254 Channel enable bit is added AD channel has the functions of short circuit, open circuit and over range detection

Expansion unit

Weighing extension module

It is used to convert the analog signal of the load cell into digital signal. The weighing module has the characteristics of dynamic weighing, small volume, stable performance, simple and applicable operation.

It can be widely used in seed, chemical industry, grain, feed weight control and other occasions.

① New algorithm, comprehensive optimization of hardware system, faster and more accurate weighing control
② Up to 4 analog voltage signals of load cells can be collected at the same time
③ High performance AD conversion, sampling speed up to 450 times/s
④ Display accuracy up to 1/300000
⑤ Automatic zero tracking function
⑥ The real-time data communicates with PLC at high speed through the bus, which does not affect the conversion speed

XL-E1WT-D/XL-E2WT-D

XL-E4WT-D

Item	Specification
Model	XL-E1WT-D,XL-E2WT-D,XL-E4WT-D
Analog input range	DC-20～20mV
AD actual resolution	1/8388607（23Bit）
Max display resolution	1/500000
Nonlinear	0.01%F.S
Conversion speed	150 times/s, 300 times/s, 450 times/s
Power supply	DC24V±10%
Sensor excitation power supply	5VDC/120mA, four 350Ω load cells can be connected in parallel

Left expansion ED module

XL series left expansion ED module has the type of DA, AD conversion, temperature measurement, RS232, RS485 communication. XL series basic unit can connect 1 ED module (XL1 cannot support).

Analog and temperature expansion ED module

Model	Input/output signal	Specification
XL-4AD-A-ED	4 channels current input: 0~20mA/4~20mA	Power supply of module: DC24V±10%, 150mA Conversion speed: 10ms (all the channels) AD/DA: Current/voltage input resolution: 1/4095 (12-bit) Current/voltage output resolution: 1/1023 (10-bit) AD/DA conversion comprehensive accuracy: ±1% AD filter coefficient: 0~254 PT: Temperature measurement range: -100~500°C Digital output range: -1000~5000 PT filter 0~254 Temperature input resolution: 0.1°C PT channel comprehensive accuracy: ±0.8% of the full scale
XL-4AD-V-ED	4 channels voltage input: 0~5V/0~10V	
XL-4DA-A-ED	4 channels current output: 0~20mA/4~20mA	
XL-4DA-V-ED	4 channels voltage output: 0~5V/0~10V	
XL-2AD2DA-A-ED	2 channels current input: 0~20mA/4~20mA 2 channels current output: 0~20mA/4~20mA	
XL-2AD2DA-V-ED	2 channels voltage input: 0~5V/0~10V 2 channels voltage output: 0~5V/0~10V	
XL-2AD2PT-A-ED	2 channels current input: 0~20mA/4~20mA 2 channels temperature input: PT100 platinum thermistor	
XL-2AD2PT-V-ED	2 channels voltage input: 0~5V/0~10V 2 channels temperature input: PT100 platinum thermistor	
XL-2PT2DA-A-ED	2 channels current output: 0~20mA/4~20mA 2 channels temperature input: PT100 platinum thermistor	
XL-2PT2DA-V-ED	2 channels voltage output: 0~5V/0~10V 2 channels temperature input: PT100 platinum thermistor	

Communication expansion ED module

Model	Description
XL-NES-ED	For the XL series PLC left side to expand RS232 or RS485 port. Only one can be used between RS232 and RS485, serial port is COM3
XL-COBOX-ED	CANopen communication module. ① The communication speed can up to 1Mbps ② 64 communication nodes ③ Support master station and slave station mode ④ The reliability of the system is improved ⑤ Heartbeat protection ⑥ Simple wiring

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Accessories

Special power supply module

XL-P50-E

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

Specification
AC85-265V
DC24V
2A
No corrosive and combustible gas
0°C~60°C
5%RH~95%RH (no condensation)
Directly mounted on the guide rail
The third kind of grounding (not common grounding with strong current system)

XL series terminal resistance

XL-ETR

XL series terminal resistance module is required when external right expansion module is connected. Only for expansion module hardware version H3.1 and up.

XL series external terminal block

Some basic units and expansion modules need external terminal blocks, Xinje provide adapter terminal and connecting cable required by the following products.

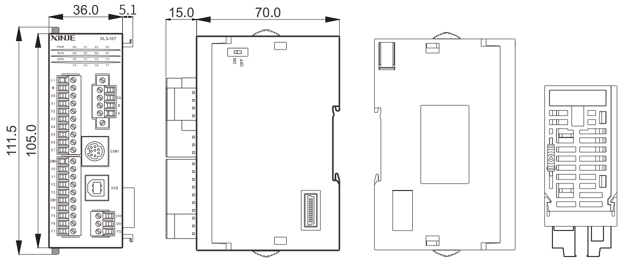
Product model	Terminal block model	Adaptive connecting cable
XL5-64T10	JT-E32X+JT-E32YT	JC-TE32-NN05（0.5m） JC-TE32-NN10（1.0m） JC-TE32-NN15（1.5m）
XL5E-64T6	JT-E32X+JT-E32YT	
XL5E-64T10	JT-E32X+JT-E32YT	
XLME-64T10	JT-E32X+JT-E32YT	
XL-E32X-A	JT-E32X	
XL-E32PX-A	JT-E32X	
XL-E16X16YT-A	JT-E16X16YT	
XL-E16PX16YT-A	JT-E16X16YT	
XL-E32YT-A	JT-E32YT	
XL-E16YT-A	JT-E16YT-A	

*Note: ① When connecting, the end closing to the transparent heat shrinkable tube and wrapping the model is connected to the PLC or module, and the other end is connected to the terminal block, which can not be reversed!!!

② One 64 points basic unit needs 2 special terminal blocks and 2 adaptive connection cables.

Dimension drawing (Unit: mm)

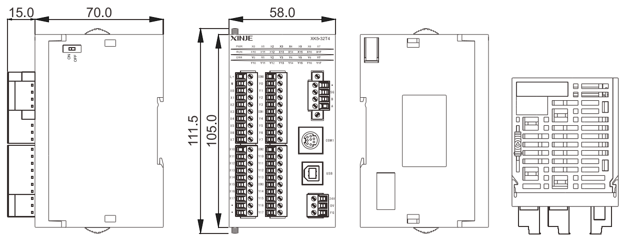
| XL series PLC basic unit


36.0
5.1
15.0
70.0
111.5
105.0

Suitable models

Series	XL1	XL3	XL5	XL5E
Points	16 points			

Note: the location of USB port for XL1-16T is RS232 port.
XL5E-16 is double Ethernet ports.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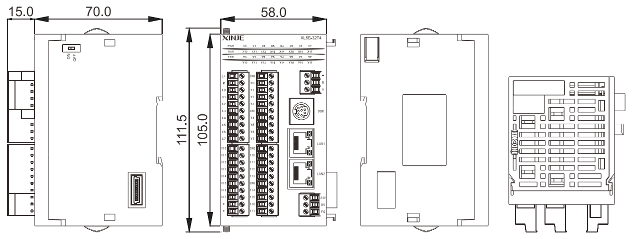
70.0
58.0
111.5
105.0

Suitable models

Series	XL3	XL5
Points	32 points	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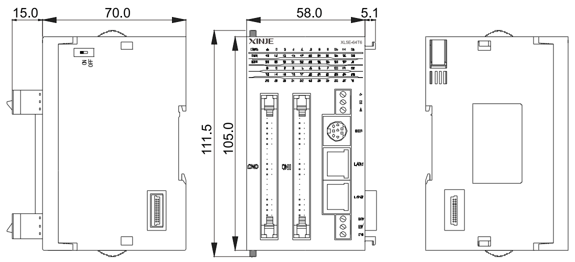
70.0
58.0
111.5
105.0

Suitable models

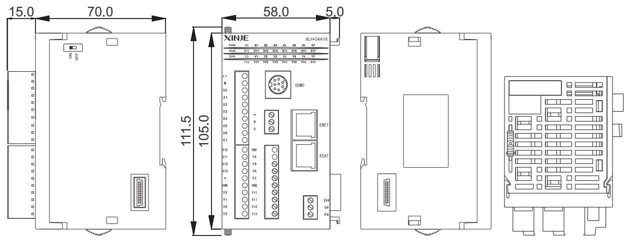
Series	XL5E	XL5N	XLME
Points	32 points		


15.0
70.0
58.0
5.1
111.5
105.0

Suitable models

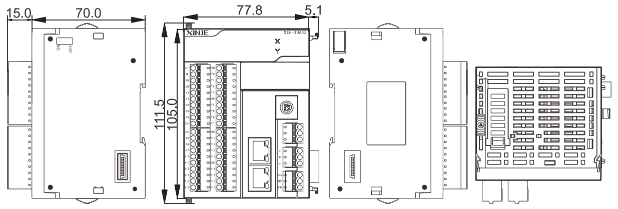
Series	XL5	XL5E	XLME
Points	64 points		

*Note: XL5-64 doesn't have two Ethernet ports.


15.0
70.0
58.0
5.0
111.5
105.0

Suitable models

Series	XLH	XL5H
Points	24 points	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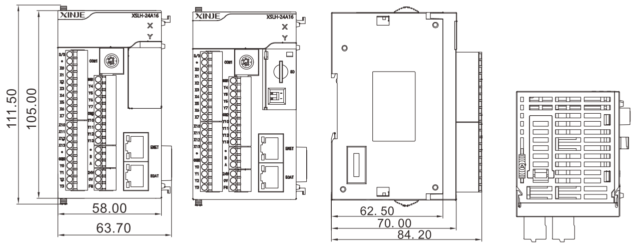
70.0
77.8
5.1
111.5
105.0

Suitable models

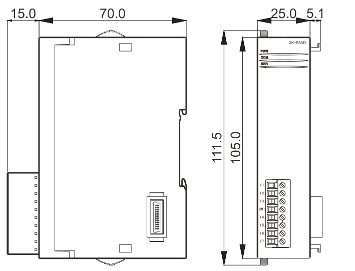
Series	XLH	XSLH
Points	30 points	


111.50
105.00
58.00
63.70
62.50
70.00
84.20

Suitable models

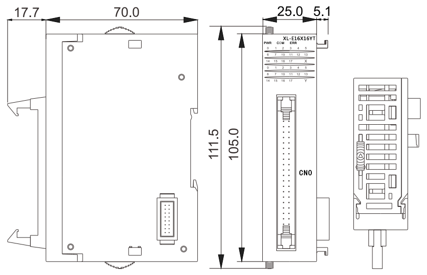
Series	XSLH
Points	24 points

| XL series right expansion module


15.0
70.0
25.0
5.1
111.5
105.0

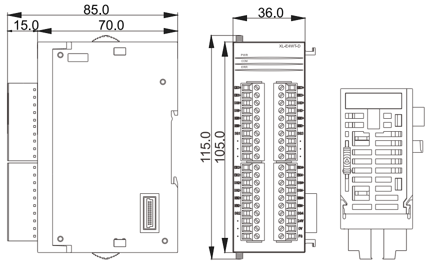
Suitable models

Module type	Digital value	Analog value
Models	8X/8Y	All
	16X	
	16Y	


17.7
70.0
25.0
5.1
111.5
105.0

Suitable models

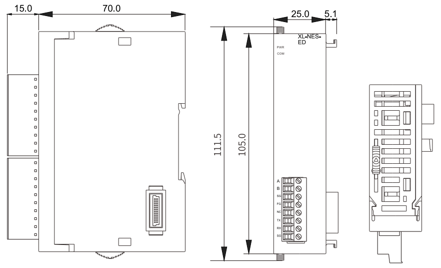
Module type	Digital value
Models	16YT-A
	16X16Y-A
	32X-A
	32YT-A


85.0
15.0
70.0
36.0
115.0
105.0

Suitable models

Module type	Digital value	Analog value
Models	16X16Y	4WT-D
	32X	
	32Y	

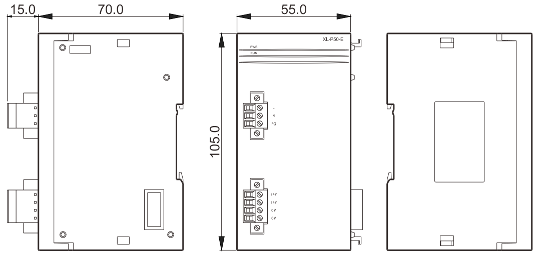
| XL series left expansion ED module


15.0
70.0
25.0
5.1
111.5
105.0

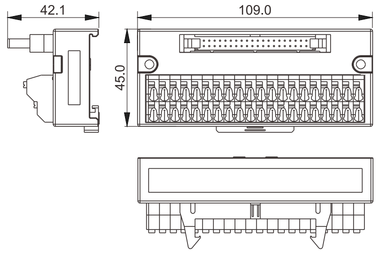
Suitable models

Module type	Analog value	Communication
Models	All	XL-NES-ED

| XL series power supply module


15.0
70.0
55.0
105.0

| JT series external terminal block


42.1
109.0
45.0

Medium PLC

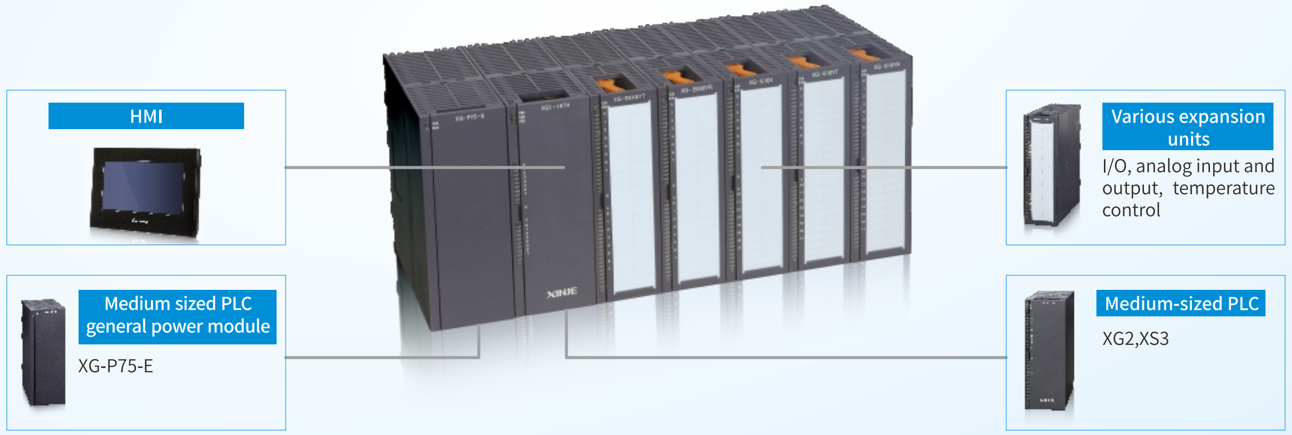
Overall improvement of speed, capacity and function

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


HMI
Medium sized PLC general power module
XG-P75-E
Various expansion units
I/O, analog input and output, temperature control
Medium-sized PLC
XG2,XS3

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 0.005~0.01μs
⑤ RS232&RS485 port
⑥ Linear/arc interpolation
⑦ Ethernet communication
⑧ EtherCAT communication
⑨ Follow up function
⑩ Support differential input
⑪ 3 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、Ethernet/IP communication, TCP communication, UPD 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 processing speed		0.005~0.01μs
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	25 points ET0~ET24 (not support right now)
	Counter	Specification	16-bit counter: K0~32767 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
	Special coil for WAIT instruction		32 points SEM0~SEM31
Word soft component	Data register	General D	700000 points D0~SD699999
		Power-off retentive HD	100000 points HD0~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% (no condensation)
Installation	It can be fixed with M3 screws or directly installed on the rail
Grounding (FG)	The third kind of grounding (not common grounding with strong current system)

Power supply specification

Item	Specification
Rated voltage	DC24V
Voltage allowable range	DC21.6V~26.4V
Input current (only for 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%

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

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 (X0, 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).

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

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

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

External terminal block

XG2-26T4, 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) JC-TG26-NN10 (1.0m) JC-TG26-NN15 (1.5m)
XG-E64X	JT-E32X	JC-TE32-NN05 (0.5m) JC-TE32-NN10 (1.0m) JC-TE32-NN15 (1.5m)
XG-E64YT	JT-E32YT	

*Note: ① When connecting, one end near the transparent heat shrinkable tube which wrapped the model name is connected to XG-E64YT, and the other end is connected to the terminal block, which cannot be reversed.

② One XG-E64X, XG-E64YT module need 2 special terminal blocks and 2 wiring cables.

U-shaped connector XG-EUC-1、XG-EUCT-1

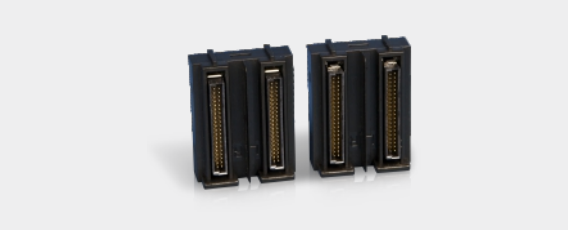
XG-EUC-1

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.



Basic unit communication port accessories

Name	Model	Description	Product drawing
Communication/ programming cable	JC-EL-Length	Elbow XVP cable is only applicable to XG2, 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, 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)	

Mounting plate XG-EB series

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

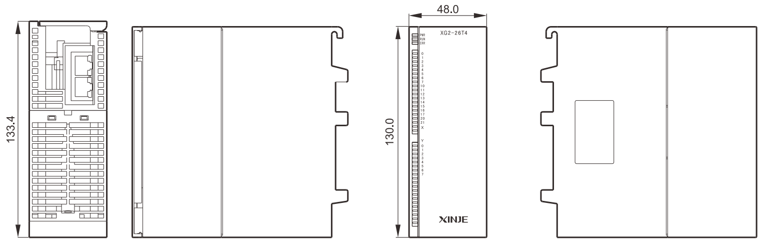
The following six specifications are available:

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

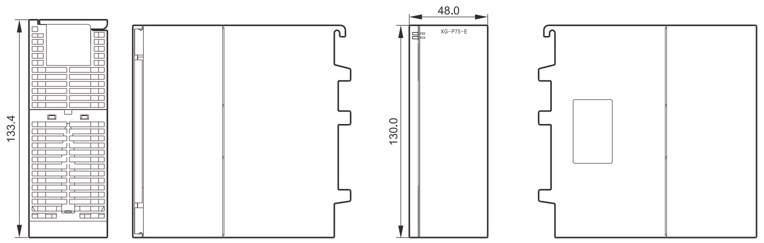
Dimension

(unit: mm)

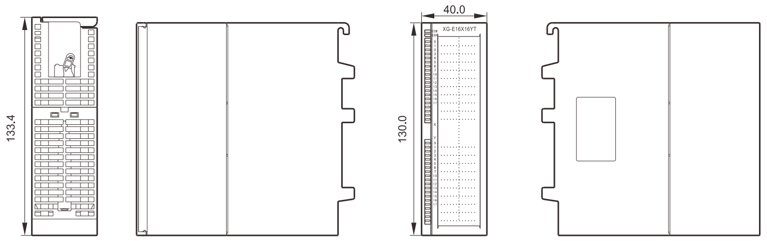
XG2 series basic unit



Power supply module



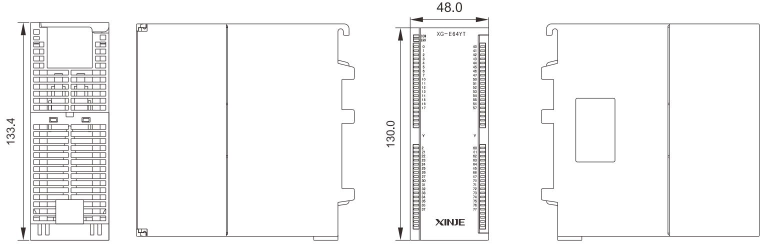
Expansion module



Suitable model

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

Expansion module



Suitable model

Module type	Digital value
Model	64X
	64Y

Bus distributed remote IO

High real-time performance, compact structure, diversified combination, meeting the application scenarios of different user needs

The new generation of Xinje distributed IO system is suitable for common bus networks, compatible with mainstream brand PLC master stations, and uses high-speed backplane bus between adapters and modules. It can quickly respond to external excitation signals for high-speed and high-precision field applications. According to different application scenarios and customer needs, the types of remote IO modules are constantly improving and enriching, providing a better experience for the "combination" needs of different customers and applications.

Distributed IO system

Features

Multi-system composition

Support Modbus TCP communication protocol and communication with master devices using EtherCAT and Profinet bus protocols.

High reliability and real-time performance

Utilize a self-developed high-speed backplane bus to achieve microsecond-level fast response in data acquisition, meeting the field requirements for high-speed and high-precision control.

Rich IO models

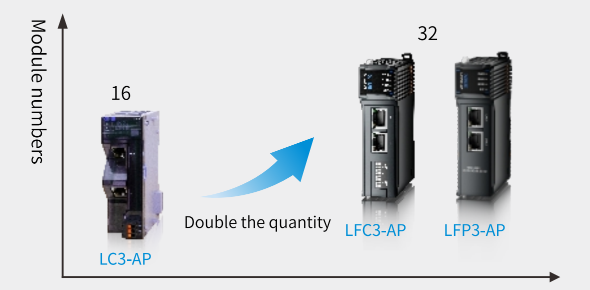
Support the expansion of digital, analog, temperature, communication, pulse, process and other unit modules.

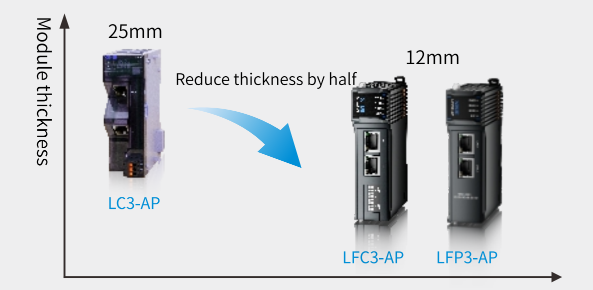
Convenient maintenance

The detachable terminal block allows for the replacement of modules of the same model without the need for complex wiring and disconnection actions, saving on-site maintenance time and costs.

Newly upgraded

- Large capacity expansion, supporting 32 expansion modules.
- Blade type structural design saves more installation space and is suitable for applications with strict volume requirements.





LF series distributed remote IO

LFC3-AP

High performance EtherCAT communication coupler

① Blade style expansion, diversified combinations
② Compact structure, saving installation space
③ Direct insertion terminal, easy and reliable wiring
④ Support network port firmware upgrade
⑤ Support hardware static station number setting
⑥ High speed bus microsecond level response
⑦ Support up to 32 IO expansion modules
⑧ Channel and backplane fault diagnosis, quickly obtain fault diagnosis information
⑨ Seamless compatibility with mainstream PLC master stations on the market

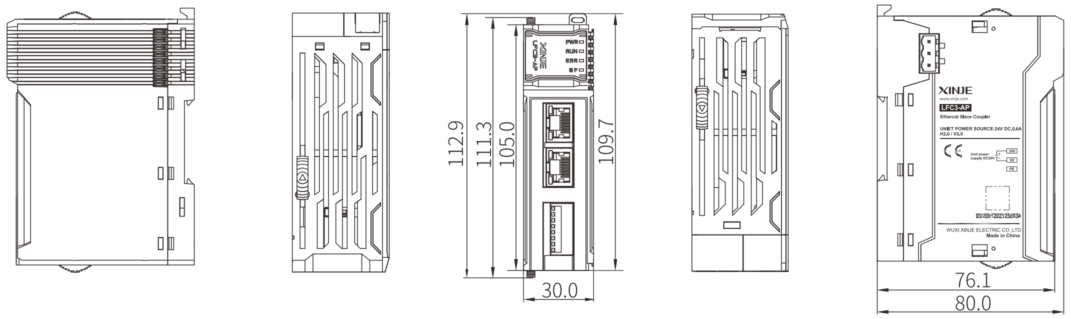
*Note: LFC3-AP can be used in conjunction with the XF right expansion modules

Performance specification

Model	LFC3-AP
Rated voltage	DC 24V
Voltage allowable range	DC 21.6V~26.4V
Input current	120mA DC24V
Allow instantaneous power outage time	10ms DC24V
Impact current	10A DC26.4V
Network protocol	EtherCAT
Cascade method	Follow the principle of 'bottom in, top out'
Single AP process data	Input maximum 1024 bytes, output maximum 1024 bytes
Network interface	2 RJ45 ports
Physical layer	100BASE-TX
Synchronization cycle	Support 250us, 500us, 1000us, 2000us, 4000us
Connection rate	100Mbps, full duplex
Transmission distance	Less than or equal to 100M between two nodes
Topology	Linear
Transmission medium	Cat5e and above
No configuration required when replacing equipment	Support (EtherCAT modules of the same type)
Number of expansion modules	Support 32 modules
Firmware upgrade	Support
Address setting	Configure by dip switch (1-255) or assigned by the main station

Appearance dimension diagram (Unit: mm)

LFC3-AP



LF series distributed remote IO

LFP3-AP

High performance PROFINET communication coupler

① Blade style expansion, diversified combinations
② Compact structure, saving installation space
③ Direct insertion terminal, easy and reliable wiring
④ Support RT and IRT transmission modes
⑤ Support MRP and MRPD redundancy
⑥ Compatible with Siemens and TIA portal
⑦ Support up to 32 expansion IO modules
⑧ Channel and backplane fault diagnosis, quickly obtain fault diagnosis information

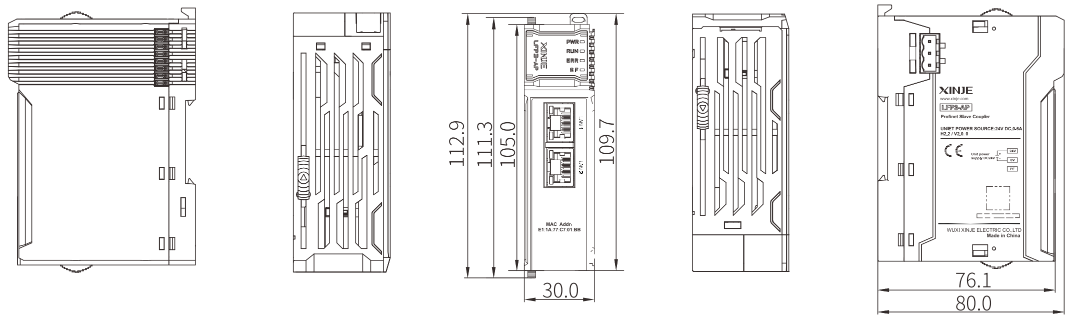
*Note: LFP3-AP can be used in conjunction with the XF right expansion modules

Performance specification

Model	LFP3-AP
Rated voltage	DC 24V
Voltage allowable range	DC 21.6V~26.4V
Input current	120mA DC24V
Allow instantaneous power outage time	10ms DC24V
Impact current	10A DC26.4V
Power protection	Anti reverse protection, overcurrent protection, surge absorption
Network protocol	Profinet
Single AP process data	Input maximum 1440 bytes, output maximum 1440 bytes
Communication mode	RT mode, IRT mode
Media redundancy (MRP)	Support
Media path redundancy planning (MRPD)	Support
Network interface	2 RJ45 ports
Connection rate	10/100Mbps adaptive, full duplex
Transmission distance	Less than or equal to 100m between two nodes
Topology	Support line type, star type, tree type, etc
Transmission medium	Cat5e and above
Number of expansion modules	Support 32 modules
Alarm, diagnosis, status information	Support, the main body supports uploading error codes to PLC
Profinet switch function	Support networking function
Firmware upgrade	Support

Appearance dimension diagram (Unit: mm)

LFP3-AP



LF series distributed remote IO

LFM3-AP

High performance Modbus TCP communication coupler

① Blade style expansion, diversified combinations
② Compact structure, saving installation space
③ Direct insertion terminal, easy and reliable wiring
④ Support network port firmware upgrade
⑤ Support Modbus TCP communication protocol
⑥ Support up to 32 expansion IO modules
⑦ Channel and backplane fault diagnosis, quickly obtain fault diagnosis information

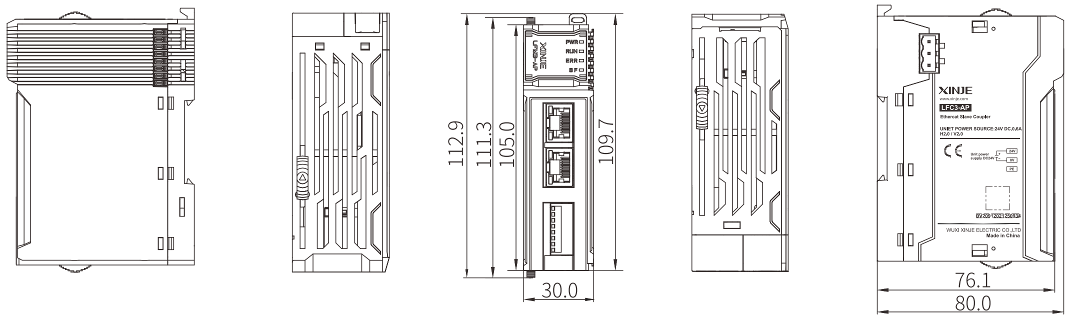
*Note: LFM3-AP can be used in conjunction with the XF right expansion modules.

Performance specification

Model	LFM3-AP
Rated voltage	DC 24V
Voltage allowable range	DC21.6V~26.4V
Input current	120mA DC24V
Allow instantaneous power outage time	10ms DC24V
Impact current	10A DC26.4V
Network protocol	Modbus TCP
High speed bus protocol	High speed backplane bus
Diagnostic function	Support
Number of client connections	8
TCP keep alive	30s
Support function code	01/03/05/06/15/16/23
Interface	2*RJ45 ports (switch form)
Physical layer	100BASE-TX
Connection rate/baud rate	10/100Mbps, adaptive, full duplex
Transmission distance/maximum bus length	Less than or equal to 100m between two nodes
Topology	Line type
Transmission medium	Cat5e and above
Number of expansion modules	Support 32 modules
Firmware upgrade	Support
IP address settings	Software configuration tool or dial code (1-254)

Appearance dimension diagram (Unit: mm)

LFM3-AP



LF series distributed remote IO

| LFI3-AP

High performance EtherNet/IP communication coupler

① Blade style expansion, diversified combinations
② Compact struction, savinginstallation space
③ Direct insertion terminal, easy and reliable wiring
④ Supoort network port firmware upgrade
⑤ Support EtherNet/IP communication protocol
⑥ Support up to 32 expansion IO modules
⑦ Channel and backplane fault diagnosis, quickly obtain fault diagnosis information

*Note: LFP3-AP can be used in conjunction with the XF right expansion modules

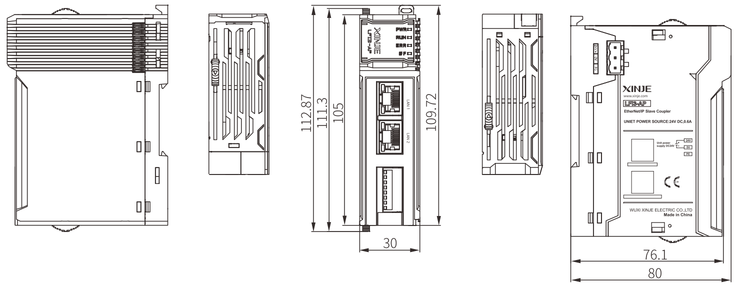
XINJE
LFI3-AP
PWR
RUN
ERR
SF
LAN 1
LAN 2

| Performance specification

Model	LFM3-AP
Rated voltage	DC 24V
Voltage allowable range	DC21.6V～26.4V
Input current	120mA DC24V
Allow instantaneous power outage time	10ms DC24V
Impact current	10A DC26.4V
Network protocol	EtherNet/IP
Single AP process data	0~1448 bytes
Network interface	2*RJ45 ports (switch form)
Physical layer	100BASE-TX
Prl communication cycle	1~65535ms
Connection rate	10/100Mbps, adaptive, full duplex
Transmission distance	Less than 100m between two nodes
Topology	Line type
Transmission medium	Cat5e and above
Number of expansion modules	Support 32 modules
Firmware upgrade	Support
Address setting	Software configuration tool or dial code (1-254)

| Appearance dimension diagram (Unit: mm)

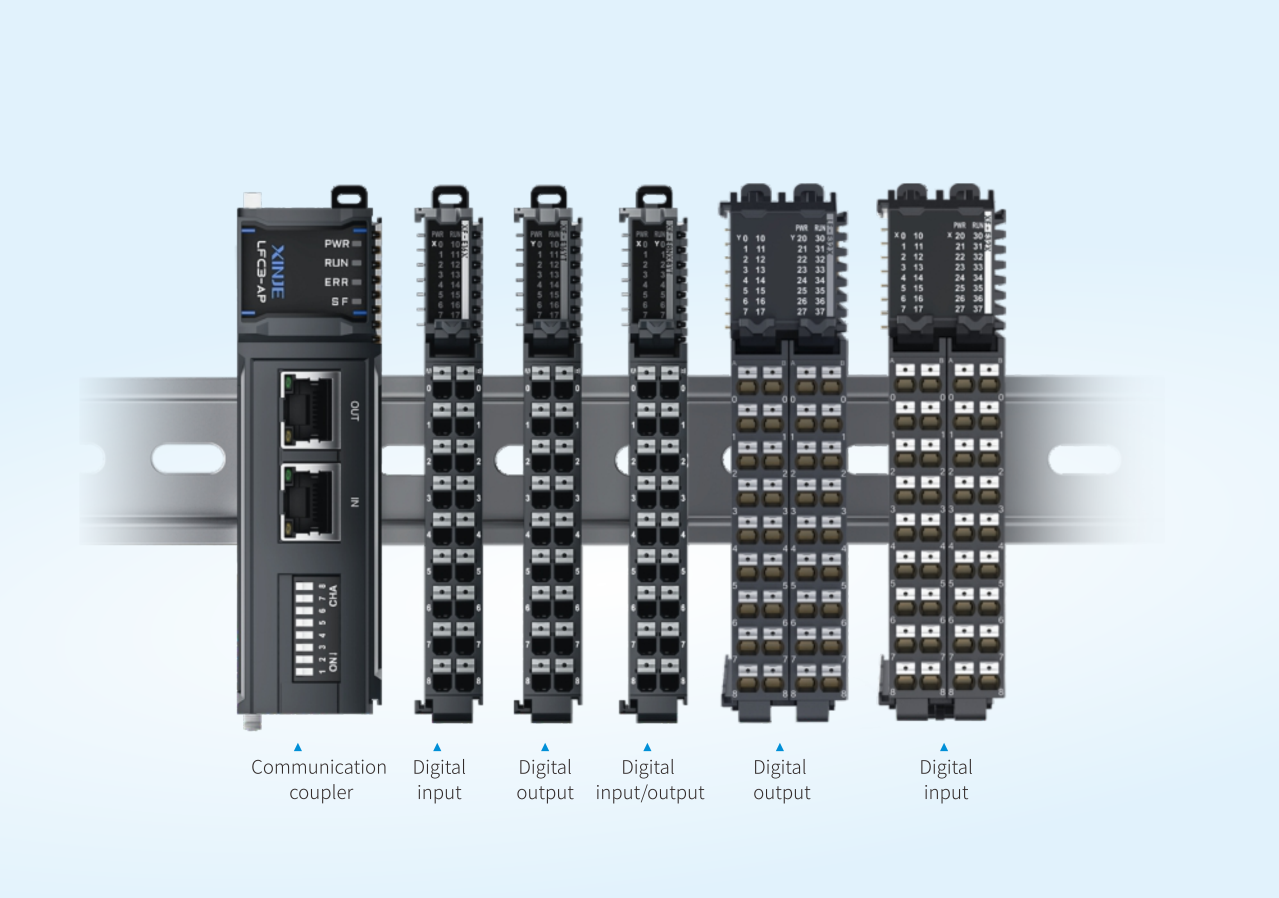
LFI3-AP



XF series I/O expansion module

Module Type	Model	Number of channels	Input/Output signal	Specification
Digital input module	XF-E16X	16	Digital input module	Rated input DC 24V Positive/Negative logic configurable Input filter time selectable 0ms~128ms NPN & PNP input compatible
	XF-E32X	32	Digital input module	
Digital output module	XF-E8YR	8	Dry contact relay output	DC24V ±10% power supply Positive/Negative logic configurable Response to CPU fault/STOP mode configurable
	XF-E16YT	16	Transistor output, NPN type	
	XF-E16PYT	16	Transistor output, PNP type	
	XF-E32YT	32	Transistor output, NPN type	
Digital input output mixed module	XF-E8NX8YT	16	8-channel digital input, 8-channel transistor output, NPN input, NPN output	DC24V ±10% power supply Positive/Negative logic configurable Input filter time selectable 0ms~128ms Response to CPU fault/STOP mode configurable
	XF-E16X16YT	16	16-channel digital input, 16-channel transistor output, NPN & PNP bipolar input, NPN output	
Temperature acquisition module	XF-E4RTD	4	Support PT100, PT1000, CU，CU00，NTC-K, NTC-0K sensor types, and measurement temperature range: PT100: -200.0~850.0°C PT1000: -200.0~850.0°C CU50: -50.0~150.0°C CU100: -50.0~150.0°C NTC-5K (B value 2000~6000): 40000Ω~400Ω NTC-10K (B value 2000~6000): 40000Ω~400Ω	DC24V ±10% power supply Resolution selectable: 0.1°C or 1°C Conversion speed (all channels): 250ms, 500ms, 1000ms selectable Accuracy: ±0.1% (at room temperature 25±5°C), ±0.2% (full temperature range -20~55°C) Filtering method selectable: first-order filter, time average, count average, moving average Features: power-off detection, thermocouple break detection, over-range detection
	XF-E4TC	4	Temperature measurement range of K, S, E, N, B, T, J and R type thermocouples: K-type: -200.0~1300.0°C S-type: -50.0~1768.0°C E-type: 200.0~1000.0°C N-type: -200.0~1300.0°C B-type: 250.0~1820.0°C T-type: -200.0~400.0°C J-type: -210.0~1200.0°C R-type: -50.0~1768.0°C Supprt -100mV~100mV voltage acquisition	
Analog input module	XF-E4AD	4	Current input: 0~20mA, 4~20mA, -20~20mA Voltage input: 0~5V, 0~10V, 1~5V, ±5V, ±10V	DC24V ±10% power supply Resolution: 16Bit Conversion speed: 60μs/channel Response speed: 60μs Accuracy: ±0.1% (at room temperature 25±5°C), ±0.2% (full temperature range -20~55°C) Filtering method selectable: first-order filter, time average, count average, moving average Features: power-off detection, thermocouple break detection, over-range detectiondetection, over-range detection
Analog output module	XF-E4DA	4	Current input: 0~20mA, 4~20mA Voltage input: 0~5V, 0~10V, 1~5V, ±5V, ±10V	DC24V ±10% power supply Resolution: 16Bit Conversion speed: 60μs/channel Response speed: 60μs Accuracy: ±0.1% (at room temperature 25±5°C), ±0.2% full temperature range -20~55°C)
Serial port	XF-E2COM24	2	independent 232/485 serial communication ports	Supports selectable 232/485 per port Supports Modbus Master, Slave, and free-format communication Channels are isolated from internal circuits, providing strong anti-interference capability
High speed counting module	XF-E1HSC	1 channel supports single-ended or differential input; features 2 input channels and 4 output channels	Supports encoder single-ended input (bipolar) or differential input (A/B/Z) on one channel 2 high-speed inputs and 4 high-speed outputs	A/B phase supports 1×, 2×, and 4× multiplier selection Differential/single-ended selectable Maximum frequency 2 MHz Supports pulse frequency measurement and pulse width measurement Supports 2 probe inputs Supports 4 comparison outputs (flying shooting function)
Pulse positioning module	XF-E2HSP	2	Two high-speed pulse outputs 8 high-speed inputs (bipolar) 6 high-speed outputs (NPN)	Pulse + direction, A/B phase 1× frequency, PWM output CW/CCW mode selectable Maximum frequency supports 200 kHz
Relay power supply module	XF-EP24	7	7-channel DC24V power supply	DC24V ±10% power supply supports short-circuit protection and overload protection

LF series coupler dedicated expansion modules



Model		Function Description
NPN type	PNP type	
LF-E16X		16-channel digital bipolar input
LF-E8YR		8-channel digital dry contact relay output
LF-E16YT	-	16-channel transistor NPN output
-	LF-E16PYT	16-channel transistor PNP output
LF-E8NX8YT	-	8-channel digital NPN transistor input; 8-channel digital NPN transistor output
LF-E32X		32-channel digital bipolar input
LF-E32YT	-	32-channel digital NPN output
LF-E16X16YT	-	16-channel digital bipolar input; 16-channel digital NPN transistor output

*Note: LF series modules are dedicated for use with the LF series coupler and do not support direct connection to XSF series PLCs. Their performance and functional parameter configuration are identical to the corresponding XF series module of the same type when used with the LF series coupler.

L series distributed remote IO

LC3-AP

EtherCAT communication coupler

① Card based expansion and diversified combinations
② Compact structure, saving installation space
③ Direct insertion terminal, easy and reliable wiring
④ Support network port firmware upgrade
⑤ Support up to 16 expansion IO modules
⑥ Adopt a 45-degree angled Ethernet port design to reduce stress on the port and enhance product reliability
⑦ Seamless compatibility with mainstream PLC master stations on the market

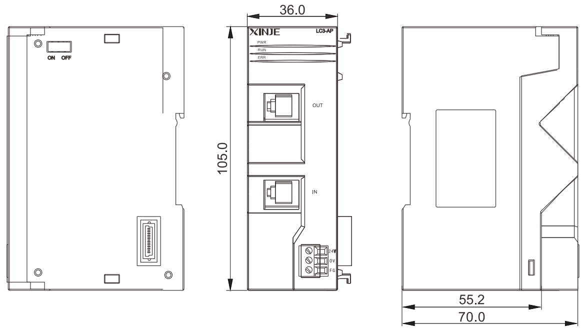
*Note: LC3-AP can be used in conjunction with the XL right expansion modules

Performance specification

Model	LC3-AP
Rated voltage	DC 24V
Voltage allowable range	DC 21.6V~26.4V
Input current	120mA DC24V
Allow instantaneous power outage time	10ms DC24V
Impact current	10A DC26.4V
Network protocol	EtherCAT
Cascade method	Follow the principle of 'bottom in, top out'
Single AP process data	938 bytes
Network interface	2*RJ45 ports
Physical layer	100BASE-TX
Synchronization cycle	Support 500us, 1000us, 2000us, 4000us
Connection rate	100Mbps, full duplex
Transmission distance	Less than or equal to 100m between two nodes
Topology	Line type
Transmission medium	Cat5e and above
No configuration required when replacing equipment	Support (EtherCAT modules of the same type)
Number of expansion modules	Support 16 modules
Firmware upgrade	Support (only for hardware versions H5.6 and above)
Address setting	Master station allocation
Termination resistor	When the number of expansion modules exceeds 5, it is necessary to cooperate with the terminal resistance module XL-ETR

Appearance dimension diagram (Unit: mm)

LC3-AP



L series distributed remote IO modules

LC3-AP can be used with XL series right expansion modules and L series remote IO modules.

Module model list

Module type	Model	Function description	Specification
Digital input	LL-E16X	16 channels digital input	LC3-AP dedicated expansion module, positive and negative logic can be set, input filtering time can be adjusted, NPN input; Power supply DC24V
	LL-E32X	32 channels digital input	LC3-AP dedicated expansion module; Expand 32 points DC input, positive and negative logic can be set, adjustable input filtering time; NPN input; Power supply DC24V
Digital output	LL-E16YT	16 channels digital output, this module does not require power supply	LC3-AP dedicated expansion module, expand 16 points transistor output; NPN output
	LL-E6PYT	16 channels digital output	LC3-AP dedicated expansion module; expand 16 points transistor output; PNP output; power supply DC24Vt
	LL-E16YR	16 channels digital output, this module does not require power supply	LC3-AP dedicated expansion module, expand 16 points relay output
	LL-E32YT	32 channels digital output, this module does not require power supply	LC3-AP dedicated expansion module, expand 32 points transistor output; NPN output
Digital IO	LL-E8X8YT	8 channels digital input, channels digital output	LC3-AP dedicated expansion module, expand 8-point DC input/8-point transistor output, positive and negative logic can be set, input filtering ime can be adjusted, NPN input; NPN output; Power supply DC24V
	LL-E16X16YT	16 channels digital input, 16 channels digital output	LC3-AP dedicated expansion module, expand 16-point DC input/16-point transistor output, positive and negative logic can be set, input filtering time can be adjusted, NPN input; NPN output; Power supply DC24V

LU Series Integrated Vertical Remote I/O

LUC3 series

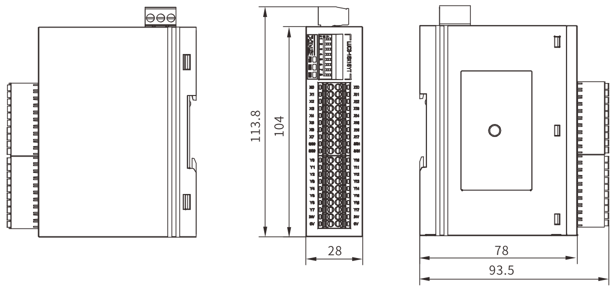
① Compact sturction, savinginstallation space
② Supoort network port firmware upgrade
③ Support hardware static station number setting
④ Reliable bus and power isolation
⑤ Operates independently as an EtherCAT slave
⑥ Seamless compatibility with mainstream PLC master stations on the market

LUC3 series model list

Model	Function description
LUC3-16X	16-channel bipolar input
LUC3-32X	32-channel bipolar input
LUC3-16YT	16-channel NPN output, DC24V power supply
LUC3-32YT	32-channel NPN output, DC24V power supply
LUC3-8X8YT	8-channel bipolar input, 8-channel NPN input, DC24V power supply
LUC3-8X8PYT	8-channel bipolar input, 8-channel PNP input, DC24V power supply
LUC3-16X16YT	16-channel bipolar input, 16-channel NPN output, DC24V power supply
LUC3-16X16PYT	16-channel bipolar input, 16-channel PNP output, DC24V power supply
LUC3-24X8YT	24-channel bipolar input, 8-channel NPN output, DC24V power supply
LUC3-16X12YR	16-channel bipolar input, 12-channel relay output, DC24V power supply

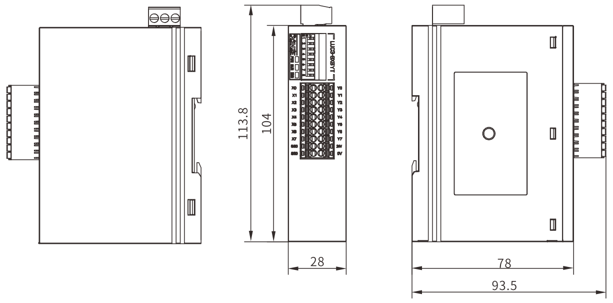
Apperance dimension diagram (Unit:mm)

LUC3-16X16YT



Suitable models	
Suitable models	LUC3-32X
	LUC3-32YT
	LUC3-16X16YT
	LUC3-16X16PYT
	LUC3-24X8YT
	LUC3-16X12YR

LUC3-8X8YT



Suitable models	LUC3-8X8YT
	LUC3-8X8PYT
	LUC3-16X
	LUC3-16YT

EtherCAT bus type

LC5E series

It is compatible with most functions of XL5E, supports EtherCAT slave station. It can interact with the master station and supports Ethernet communication, EtherCAT bus, supports the connection of expansion module and ED module.

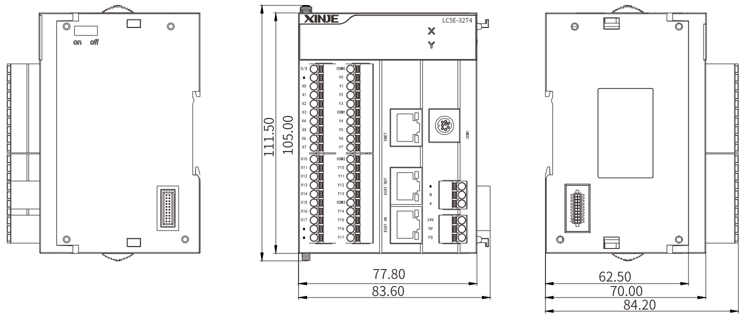
① Program capacity 1M
② Max I/O 544 points
③ Basic instruction 0.03μs
④ RS232, RS485, RJ45
⑤ Ethernet communication
⑥ X-NET fieldbus
⑦ EtherCAT bus control
⑧ 4 channels 100KHz pulse output
⑨ 4 channels high speed counter (single phase max 80K, AB phase max 50K)
⑩ Online downloading

LC5E series model list

	Model					
	AC power supply			DC power supply		
	Relay output	Transistor output	Transistor relay mixed output	Relay output	Transistor output	Transistor relay mixed output
NPN type	-	-	-	-	LC5E-32T4	-

Appearance dimension diagram (Unit: mm)

LC5E-32T4



Performance specification

Product series LC5E-			32T4
Main body I/O	Total points		32
	Input points		16
	Output points		16
Max I/O points			544
High speed positioning	General pulse output		4 axes
	Differential pulse output		-
High speed input	Single/AB phase mode		4 channels
	Input mode		OC
Expansion ability	Right expansion module		16
	Left expansion module		1
	BD board		-
Interruption	External interrupt		10
	Timing interrupt		20
	Other interrupts		High speed counting interrupt, pulse interrupt
Communication function	Communication port		1 RS232 port, 1 RS485 port, 2 EtherCAT port, 1 Ethernet port
	Communication protocol		Standard Modbus ASCII/RTU, free format communication
Bus function			X-NET fieldbus, EtherCAT bus
PWM pulse width modulation			Support
Frequency measurement			4 channels
Precise timing			Support
Multi-station control			Support
Program execution mode			Cyclic scanning mode
Programming method			Command, ladder chart, C language
Power off holding			FlashROM and lithium battery (3V button battery)
Basic instruction processing speed			0.03μs
User program memory capacity (secure download mode)			1MB
Product series LC5E-			32T4
Security function			6-bit ASCII password protection, secret download
Self-diagnosis function			Power on self-test, monitoring timer, syntax check
Real-time clock			Built-in clock, Lithium battery, power off memory
SD expansion card			-
Bit soft component	Input relay (X)		1280 points: X0~X77, X10000~X11177, X20000~X20177, X30000~X30077
	Output relay (Y)		1280 points: Y0~Y77, Y10000~Y11177, Y20000~Y20177, Y30000~Y30077
	Auxiliary relay	General M	70000 points M0~M69999
		Power off holding HM	12000 points HM0~HM11999
		Special SM	5000 points SM0~SM4999
	Flow	General S	8000 points S0~S7999
		Power off holding HS	1000 points HS0~HS999
	Timer	Specification	100ms timer: 0.1~3276.7s, 10ms timer: 0.01~327.67s, 1ms timer: 0.001~32.767s
		General T	5000 points T0~T4999
		Power off holding HT	2000 points HT0~HT1999
		Precise timing	40 points ET0~ET39
	Counter	Specification	16-bit counter: K0~32767 32-bit counter: -2147483648~+2147483647
		General C	5000 points C0~C4999
		Power off holding HC	2000 points HC0~HC1999
		High speed counter	40 points HSC0~HSC39
	Special coil for WAIT instruction		32 points SEM0~SEM31
Word soft component	Data register	General D	70000 points D0~D69999
		Power off holding HD	25000 points HD0~HD24999
		Special SD	5000 points SD0~SD4999
	FlashROM register	Power off holding FD	8192 points FD0~FD8191
		Special SFD	6000 points SFD0~SFD5999
		Security register FS	48 points FS0~FS47

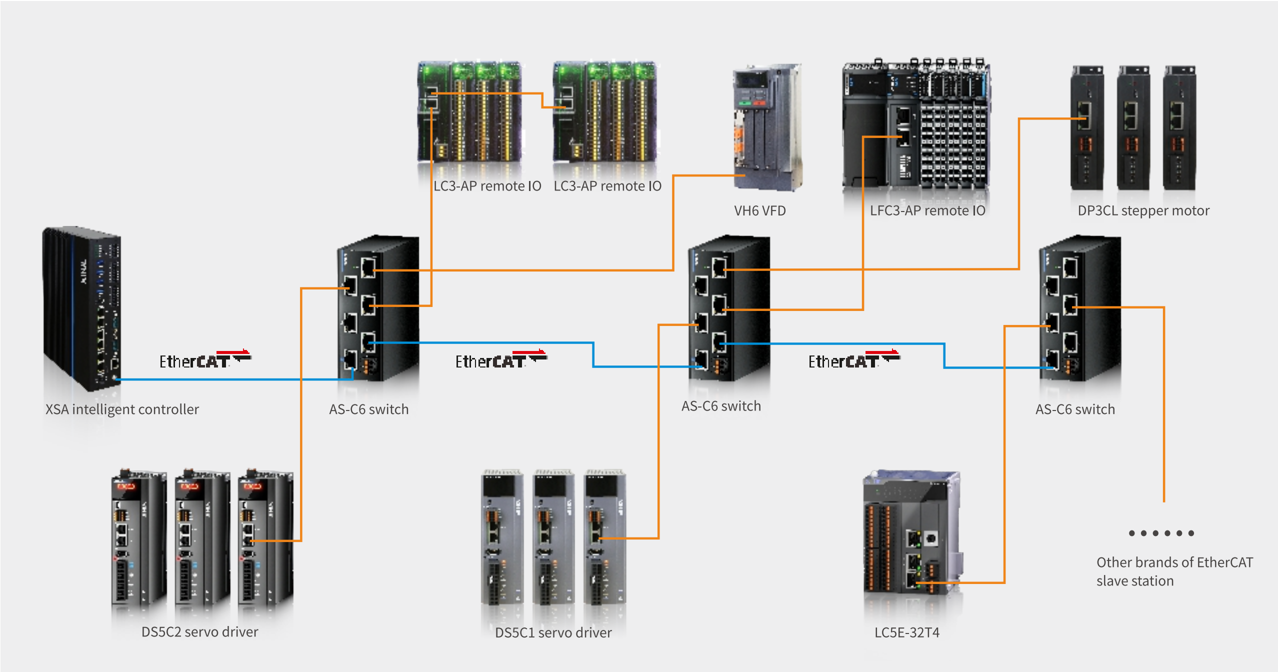
*Note: ①The “-” in the table indicates that this model doesn't have this function;②Special refers to system occupancy, cannot be used for other purposes.

EtherCAT switch

EtherCAT switch

Introducing the EtherCAT switch (AS-C6) allows for a change from a simple linear topology to a complex multi-level star topology, achieving a one-in-multi-out effect. When a device on a specific port branch in the star topology is disconnected or replugged, it does not affect the normal operation of devices on other star ports.

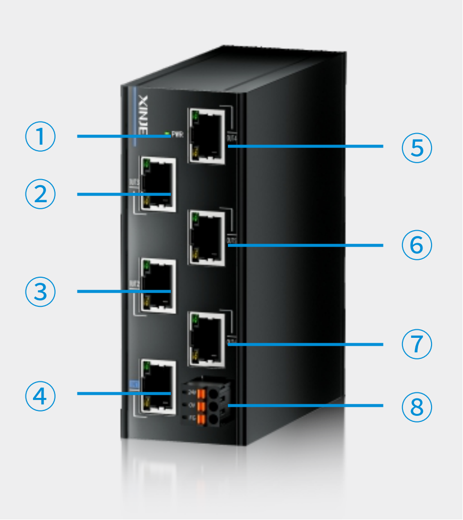
Topology example



Features

- 1 channel EtherCAT input, 5 channels EtherCAT outputs, capable of achieving star and tree topologies.
- The data flow priority of the switch output ports is: OUT2>OUT3>OUT4>OUT5>OUT6, meaning that any slave on the OUT2 branch has priority over all slaves on the OUT3 branch, and this priority is maintained during multi-level topologies.
- The switch can achieve multi-level topologies, with the connection status of each branch being mutually non-interfering. If any branch of the switch encounters a fault, it will not impact the working status of other branches.
- Each switch occupies two EtherCAT slave station numbers.
- Switch supports cascading, and the number of cascades is not related to the functionality of the switch itself, but only to the maximum number of nodes supported by the master station.

Interface definition



No.	Interface name	Mark	Explanation
①	Power indicator light	PWR	Green: illuminates when power on
②	EtherCAT input port	IN1	Port1, EtherCAT input port, connect to the previous EtherCAT master station
③	EtherCAT output port	OUT2	Port2, EtherCAT output port, connect to the next EtherCAT slave station
④		OUT3	Port3, EtherCAT output port, connect to the next EtherCAT slave station
⑤		OUT4	Port4, EtherCAT output port, connect to the next EtherCAT slave station
⑥		OUT5	Port5, EtherCAT output port, connect to the next EtherCAT slave station
⑦		OUT6	Port6, EtherCAT output port, connect to the next EtherCAT slave station
⑧	24V power input terminal	24V、0V	Module power supply input

General specification

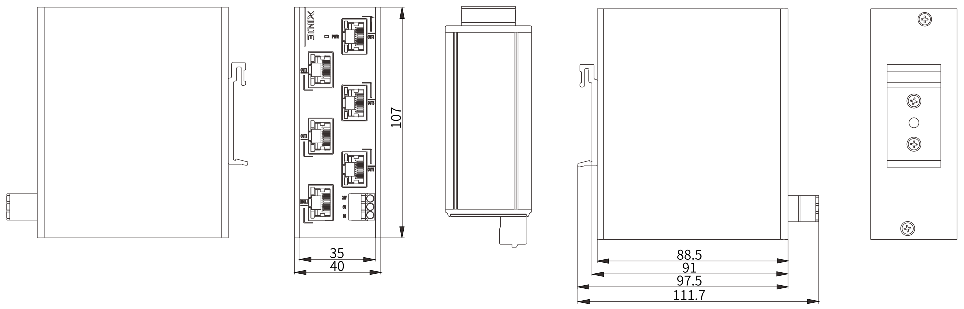
Item	Specification
Communication protocol	EtherCAT industrial real time bus protocol
EtherCAT channel	1 channel input, 5 channels output
Communication interface	6*RJ45 ports
Maximum communication speed	100Mbps
Network port/Ethernet cable	Standard Ethernet port with Cat5e Ethernet cable, cable length not exceeding 100m
Operation temperature	-20-65°C
Storage temperature	-30-70°C
Humidity	10-95%, no condensation
Installation	M35 rail fixation
Grounding (FG)	The third type of grounding (cannot be connected to the common grounding of the high-voltage system)※

EtherCAT communication specifications

Item	Specification
Communication protocol	EthereCAT industrial real time bus protocol (CIA402, 5001)
Synchronous mode	DC - distributed clock
Duplex mode	Full duplex
Physical layer	100BASE-TX (IEEE802.3)
Maximum communication speed	100 Mbit/s
Topology	Star topology
Switch cascading	Support
Network cable recognition	Auto MDI/MDIX
Cyclic time (DC communication cycle)	125,250,500,1000,2000,4000[μs]

Appearance dimension diagram (Unit: mm)

AS-C6



PLCopen standard controller

Faster speed, stronger motion control ability

XS series PLCopen standard controller has faster operation speed, stronger motion control ability, and supports multiple programming languages, which can significantly improve the programming efficiency. The process library and instruction library continue to improve and upgrade, providing more solutions for customers and creating greater value.

Function features

More types

- The XS series contains four sub-series XSA, XSF5, XSLH, XSDH, with multiple appearances and richer use scenarios.

Faster operation speed

- Based on Inter X86 processor, which can meet the requirements of high-speed operation. The minimum exeution time of bit operation is 2ns, the minimum execution time of word operation is 2ns, and the minimum execution time of floating point operation is 2ns.

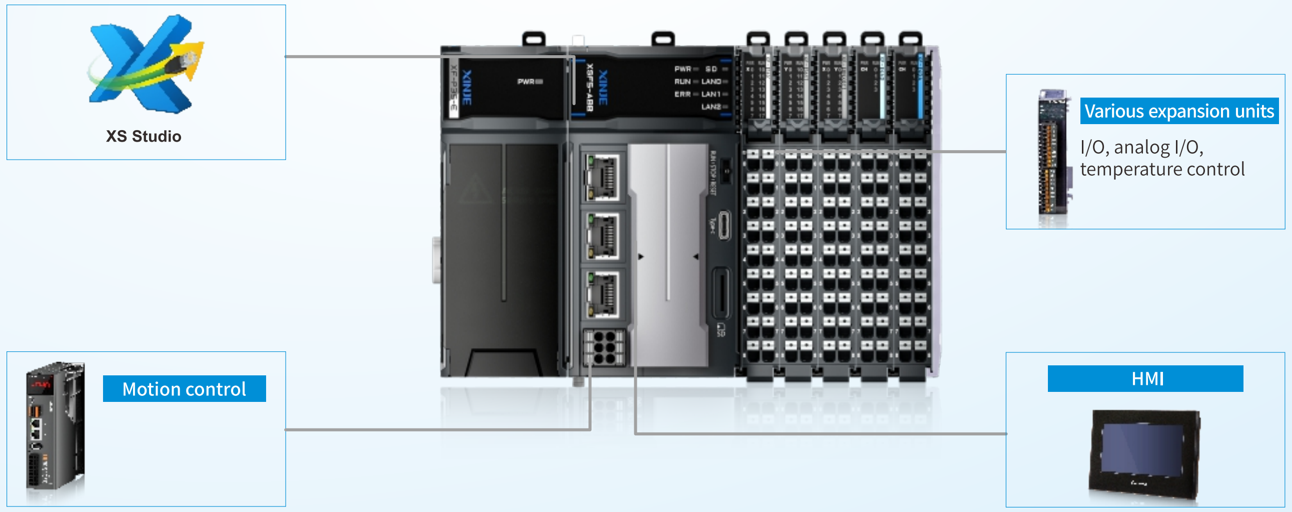
Higher performance

- Support up to 256 nodes

More communication modes

- Support multiple communication protocols including Modbus TCP/RTU ,TCP/IP, UDP, Ethernet/IP, OPC_UA, etc.

System structure



Blade type controller

XSF5 series

Using a blade-style design with a slimmer body, compliant with PLCopen programming standards, supporting six programming languages, and local expansion of up to 32 units.

① 32MB program capacity
② Support up to 32 local extensions
③ EtherCAT motion control
④ EtherCAT remote IO
⑤ Ethernet/IP communication
⑥ CAN bus

Performance specification

Product series XSF5-		A8	A16	A32	A64
Processing time	LD Bit	15ns			
	Mov Double	25ns			
Programming method		ST, SFC, FBD, CFC, LD and IL			
User program capacity		32MB			
Data capacity	Non holding	32MB			
	Holding	10MB			
	Storage capacity (files/recipes)	512MB			
Main body built-in I/O function		None			
Scalability		Right expansion module*32			
Perpetual calendar (RTC)		Battery-free operation supports 14 days (RTC battery can be added)			
Communic-ation	Communication port	1*CAN, 1*RS485, 3*RJ45 ports			
	Communication protocol	Standard MODBUS ASCII/RTU communication, Ethernet/IP, TCP/IP, OPC UA communication			
Bus function		EtherCAT bus, CANbus			
Maximum number of EtherCAT driving axis		8	16	32	64
Axial capability		8axis/1ms	16axis/1ms	16axis/1ms、32axis/2ms	32axis/2ms、64axis/4ms
Motion control	Single axis motion	Support			
	Axis group motion	Support			
	Electronic cam	Support			

XSF5 series model list

	Model			
	DC power supply			
EtherCAT bus type	XSF5-A8	XSF5-A16	XSF5-A32	XSF5-A64

X86 Industrial intelligent controller

XSA series

The self-developed XS Studio programming platform, which can reference many standard function libraries, adopt the IEC61131-3 programming standard, support six programming languages (ST, SFC, FBD, CFC, LD, IL), and develop Xinje proprietary function blocks, instruction libraries and system libraries, which can significantly improve user programming efficiency.

① 128M program capacity
② Dual EtherCAT master control
③ EtherCAT remote IO
④ Ethernet communication
⑤ Virtualization technology
⑥ Built-in UPS
⑦ Optional Windows or Linux operating system
⑧ High reliability: Exceeds IPC standards

Performance specification

Product series XSA-			XSA230	XSA330	XSA520	XSA530	XSA550	XSA620
Operating System			Windows/Linux (Supports multi-core)					
CPU Model			J6412:2.0GHz Quad-core	J3455:1.5GHz	I3-1115G4:3.0GHz Dual-core four-threads	I5-1135G7:2.4GHz Quad-core eight-threads	I7-1165G7:2.8GHz Quad-core eight-threads	I3-1215U
Storage Configuration			8G+128G	8G+128G	8G+256G	8G+256G	8G+256G	8G+256G
Programming method			IL、LD、FBD、ST、SFC、CFC					
Program capacity			128MB					
Data capacity			128MB (include power-off holding 6MB)					
Power supply			Rated voltage DC24V					
I/O	Total points		6	32	32	32	32	6
	Input points	NPN	3	16	16	16	16	3
		PNP	-	16	16	16	16	-
	Output points	Transistor	3	16	16	16	16	3
		Relay	-	-	-	-	-	-
High speed input	Encoder input	Single phase	-	2 channels (max 1MHz)				-
		AB phase	-	2 channels (max 1MHz)				-
	OC input	Single phase	-	2 channels (max 200kHz)				-
		AB phase	-	2 channels (max 200kHz)				-
Expansion ability			Only support ECAT remote expansions					
Interrupt	External interrupt		-	16	16	16	16	-
Communication function	Communication port		4 channels RJ45 (2 channels EtherCAT, 2 channels Ethernet) 2 channels USB2.0、2 channels USB3.0 1 channels RS232/RS485	4 channels Rj45 (2 channels EtherCAT, 2 channels Ethernet) 2 channels USB2.0、2 channels USB3.0 2 channels RS232/RS485 (isolated) BIOS control	6 channels RJ45 (2 channels EtherCAT, 4 channels Ethernet) 4 channels USB3.0 2 channels RS232/RS485 (isolated) BIOS control			4channelsRJ45 (2channelsEtherCAT、2channelsEthernet) 2channelsUSB2.0、2channelsUSB3.0、2channelsRS232/RS485
	free format protocol		Modbus RTU, Modbus TCP, Ethernet IP, TCP/IP, UDP, OPC UA, free format protocol, etc.					
Axis drive capacity			32轴/1ms	32axes/1ms	256axes/1ms	128axes/1ms	256axes/1ms	256axes/1ms
Data power-off holding function			Supported					
RTC function			Supported					
Motion control	Single axis motion		Supported					
	Axis group motion		Supported					
	Electronic cam		Supported					

*Note: XSA series use EtherCAT remote expansion.

XSA series product list

	Model					
	AC power			DC power		
	Relay output	Transistor output	Transistor relay mixed output	Relay output	Transistor output	Transistor relay mixed output
NPN&PNP型	-	-	-	-	XSA230-L/W	-
	-	-	-	-	XSA330-L/W	-
	-	-	-	-	XSA520-L/W	-
	-	-	-	-	XSA530-L/W	-
	-	-	-	-	XSA550-L/W	-
	-	-	-	-	XSA620-L/W	-

Slim (card type)

XSLH series

Support PLCopen programming specification, reference many standard function library functions, and develop proprietary function blocks and instruction libraries.

① EtherCAT motion control
② EtherCAT remote IO
③ 32 channels electronic cam
④ Ethernet communication
⑤ Online downloading

Performance specification

Product series XSLH-		24A8	24A16	30A32
I/O	Total points	24	24	30
	Input points	12	12	14
	Output points	12	12	16
Max I/O points		536	536	542
High speed positioning	Normal pulse output	4 axes	4 axes	4 axes (Supported in Q3 2024)
	Differential pulse output	-	-	-
High speed input	Single/AB phase	4 channels	4 channels	4 channels(Supported in Q3 2024)
	Input mode	OC	OC	2 channels differential signal + 2 channels OC
Expansion ability	Right expansion module	16		
	Left expansion module	1		
	BD board	-		
External interrupt		10		
Communication function	Communication port	1*RS232, 1*RS485, 2*RJ45 ports		1 channel RS232, 1 channel RS485, 1 channel CAN port, 2 channels RJ45 port
	Communication protocol	Standard Modbus ASCII/RTU connumication, Ethernet communication		
Bus function		EtherCAT bus (max 8 nodes)	EtherCAT bus (max 16 nodes)	EtherCAT bus control (max 32 nodes)CAN bus
Programming method		ST, SFC, FBD, CFC, LD, IL		
Main processor		Cortex-A8, dominant frequency 800MHz		Cortex-A8, dominant frequency 1GHz
User program capacity		32MB		
Data capacity		32MB (include power-off holding 6MB)		

*Note: XSLH series use XL series expansion modules.

XSLH series product list

	Model					
	AC power			DC power		
	Relay output	Transistor output	Transistor relay mixed output	Relay output	Transistor output	Transistor relay mixed output
NPN	-	-	-	-	XSLH-24A8	-
	-	-	-	-	XSLH-24A16	-
	-	-	-	-	XSLH-30A32	-

Small-sized

XSDH series

Support PLCopen programming specification, reference many standard function libraries, and develop proprietary function blocks and instruction libraries.

① EtherCAT motion control
② EtherCAT remote IO
③ 32 channels electronic cam
④ Ethernet communication
⑤ Online downloading

Performance specification

Product series XSDH-		60A32
I/O	Total points	60
	Input points	36
	Output points	24
Max I/O points		572
High speed positioning	Normal pulse output	4-axis (Supported in Q3 2024)
	Differential pulse output	-
High speed input	Single/AB phase	4 channels (Supported in Q3 2024)
	Input mode	OC
Expansion ability	Right expansion module	16
	Left expansion module	1
	BD board	1
External interrupt		10
Communication function	Communication port	1 channel RS232, 1 channel RS485, 2 channels RJ45 port
	Communication protocol	Standard Modbus ASCII/RTU, Ethernet IP, TCP/IP, UDP, OPC UA, free format protocol
Bus function		EtherCAT bus control (max 32 nodes)
Programming method		ST, SFC, FBD, CFC, LD, IL
Main processor		Cortex-A8, dominant frequency 1GHz
User program capacity		32MB
Data capacity		32MB (include power-off holding 6MB)

*Note: XSDH series use XD series expansion modules.

XSDH series product list

	Model					
	AC power			DC power		
	Relay output	Transistor output	Transistor relay mixed output	Relay output	Transistor output	Transistor relay mixed output
NPN	-	XSDH-60A32-E	-	-	-	-
PNP	-	XSDH-60PA32-E	-	-	-	-

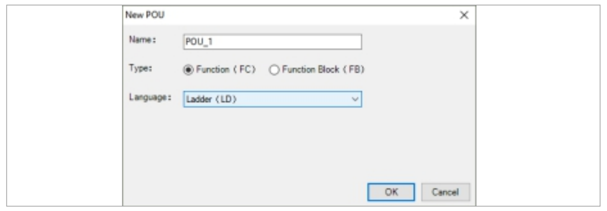
XDPPro

Support XD/XL/XG series

Structured programming

POU function

Support LD, ST, and C programming language



New POU

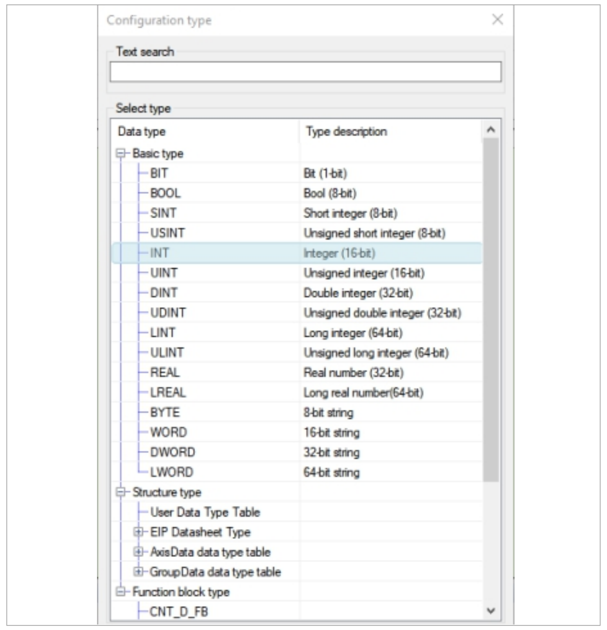
Name: POU_1

Type: ● Function（FC） ○ Function Block（FB）

Language: Ladder（LD）

Support FB monitoring

Support multiple data types



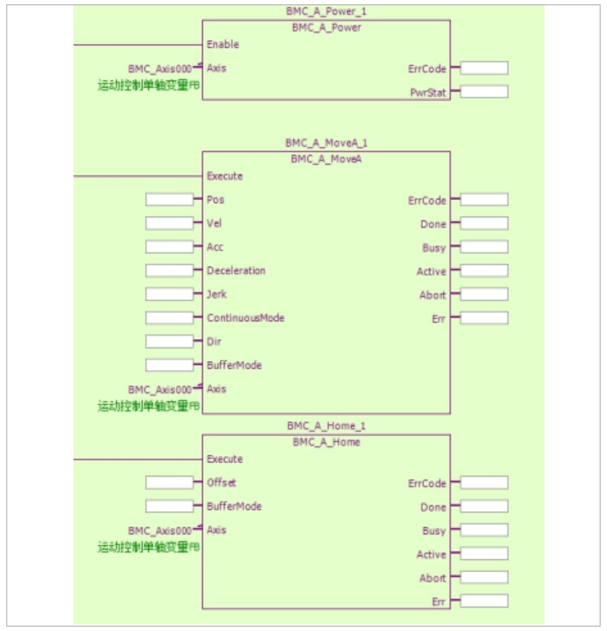
Configuration type

Text search

Select type

Data type	Type description
Basic type	
BIT	Bit (1-bit)
BOOL	Bool (8-bit)
SINT	Short integer (8-bit)
USINT	Unsigned short integer (8-bit)
INT	Integer (16-bit)
UINT	Unsigned integer (16-bit)
DINT	Double integer (32-bit)
UDINT	Unsigned double integer (32-bit)
LINT	Long integer (64-bit)
ULINT	Unsigned long integer (64-bit)
REAL	Real number (32-bit)
LREAL	Long real number(64-bit)
BYTE	8-bit string
WORD	16-bit string
DWORD	32-bit string
LWORD	64-bit string
Structure type	
User Data Type Table	
EIP Datasheet Type	
AxisData data type table	
GroupData data type table	
Function block type	
CNT_D_FB	

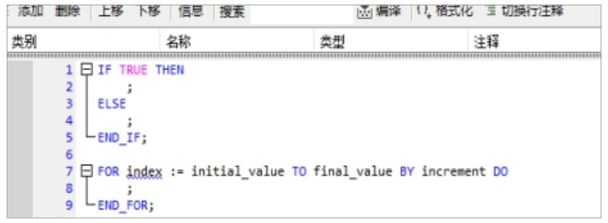
Support multiple data types


BMC_A_Power_1
BMC_A_Power
Enable
Axis
ErrCode
PwrStat
BMC_Axis000
运动控制单轴变量FB
BMC_A_MoveA_1
BMC_A_MoveA
Execute
Pos
Vel
Acc
Deceleration
Jerk
ContinuousMode
Dir
BufferMode
Axis
ErrCode
Done
Busy
Active
Abort
Err
BMC_Axis000
运动控制单轴变量FB
BMC_A_Home_1
BMC_A_Home
Execute
Offset
BufferMode
Axis
ErrCode
Done
Busy
Active
Abort
Err
BMC_Axis000
运动控制单轴变量FB

Programming language

ST language

Compliant with IEC61131-3 standard

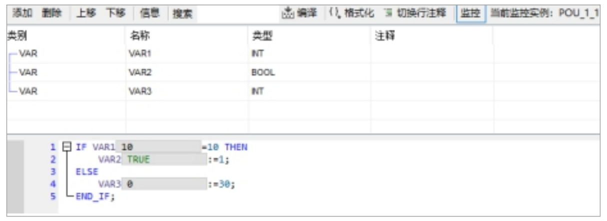

添加
删除
上移
下移
信息
搜索
编译
格式化
切换行注释

类别	名称	类型	注释

```
IF TRUE THEN
    ;
ELSE
    ;
END_IF;

FOR index := initial_value TO final_value BY increment DO
    ;
END_FOR;
```

ST monitoring

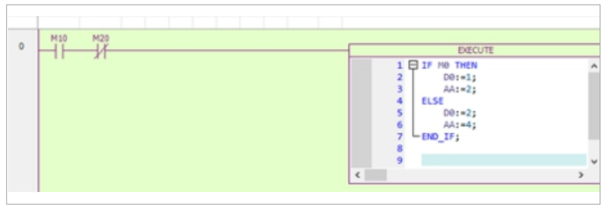

添加
删除
上移
下移
信息
搜索
编译
格式化
切换行注释
监控

当前监控实例：POU_1_1

类别	名称	类型	注释
VAR	VAR1	INT	
VAR	VAR2	BOOL	
VAR	VAR3	INT	

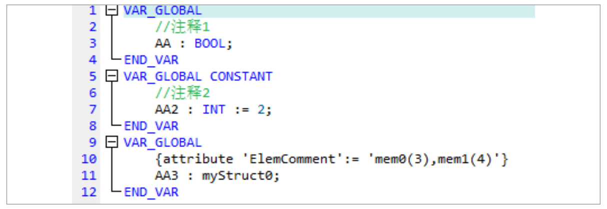
```
IF VAR1 10 =10 THEN
    VAR2 TRUE :=1;
ELSE
    VAR3 0 :=30;
END_IF;
```

Ladder diagram with embedded ST


0
M10
M20
EXECUTE

```
IF M0 THEN
    D0:=1;
    AA:=2;
ELSE
    D0:=2;
    AA:=4;
END_IF;
```

Text declaration



```
VAR_GLOBAL
    //注释1
    AA : BOOL;
END_VAR
VAR_GLOBAL CONSTANT
    //注释2
    AA2 : INT := 2;
END_VAR
VAR_GLOBAL
    {attribute 'ElemComment':= 'mem0(3),mem1(4)'}
    AA3 : myStruct0;
END_VAR
```

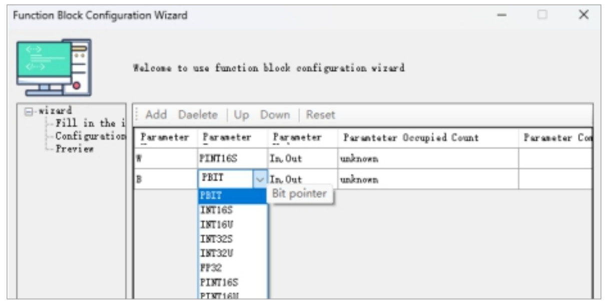
XDPPro

Programming language

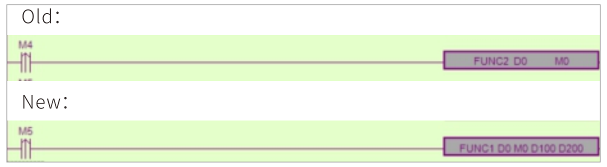
C language

User-defined function formal parameters

- Rich and diverse parameter types make data processing more convenient.

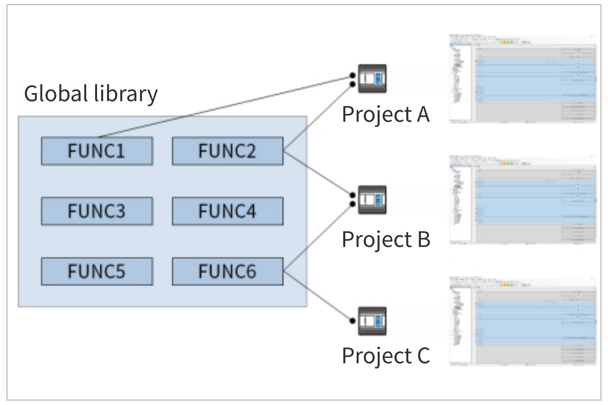

Function Block Configuration Wizard
Welcome to use function block configuration wizard
wizard
Fill in the i
Configuration
Preview
Add
Daelete
Up
Down
Reset
Parameter
Parameter
Parameter
Paramteter Occupied Count
Parameter Co
W
PINT16S
In, Out
unknown
B
PBIT
In, Out
unknown
PBIT
Bit pointer
INT16S
INT16U
INT32S
INT32U
FP32
PINT16S

- Added input and output interfaces for the function, further optimizing the function structure.


Old:
M4
FUNC2 D0 M0
New:
M5
FUNC1 D0 M0 D100 D200

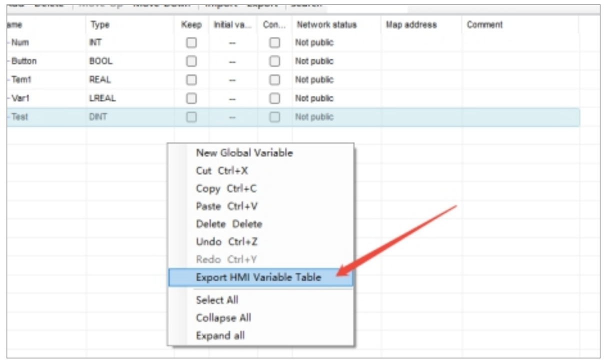
Function library

- Summarize common function components from multiple projects into one file for easy reference. The components in the library can be obtained and used in various projects.


Global library
FUNC1
FUNC2
FUNC3
FUNC4
FUNC5
FUNC6
Project A
Project B
Project C

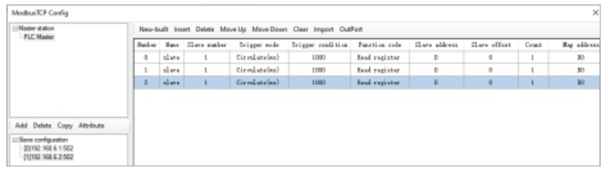
Communication function

Label communication

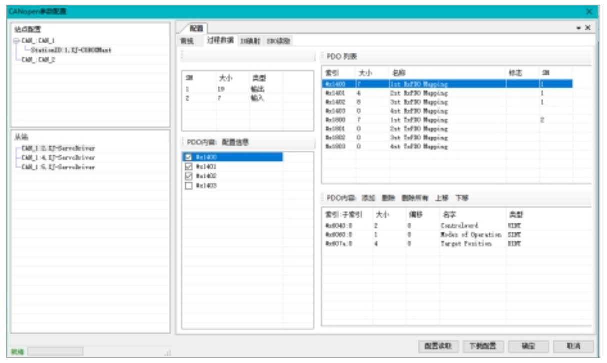

Type
Keep
Initial va...
Con...
Network status
Map address
Comment
Num
INT
Button
BOOL
Temt
REAL
Var1
LREAL
Test
DINT
Not public
New Global Variable
Cut Ctrl+X
Copy Ctrl+C
Paste Ctrl+V
Delete Delete
Undo Ctrl+Z
Redo Ctrl+Y
Export HMI Variable Table
Select All
Collapse All
Expand all

Modbus graphical configuration

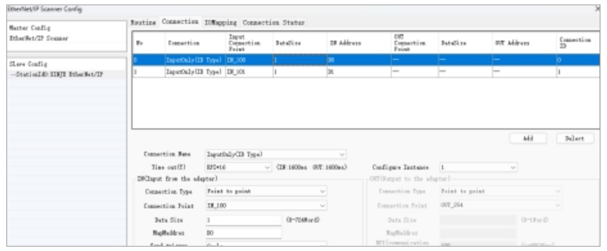
- The Modbus TCP configuration interface allows for direct configuration of slave address information and read/write instructions, making it simple, convenient, and time-saving.



Built in CANopen system configuration interface



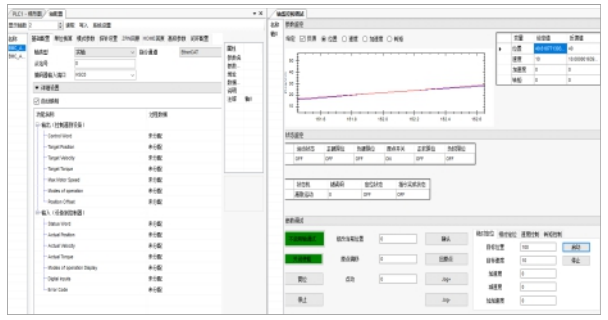
Ethernet/IP parameter configuration



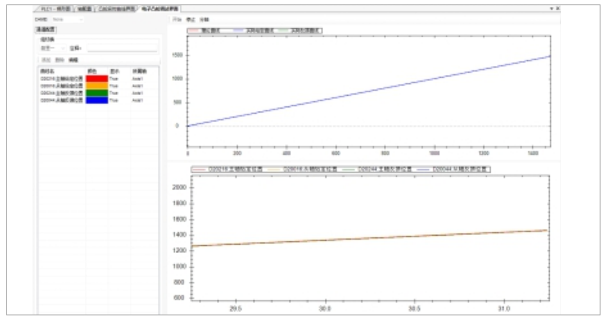
XDPPro

Motion control function

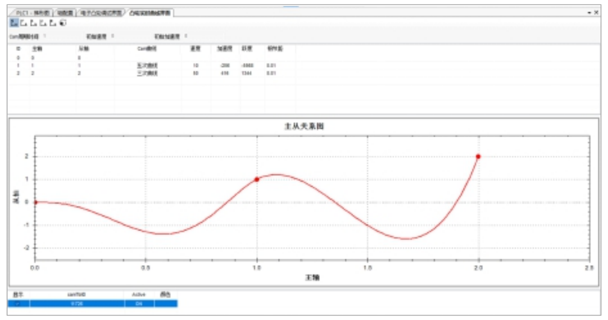
Complete axis configuration and monitoring



Convenient monitoring of cam related parameters

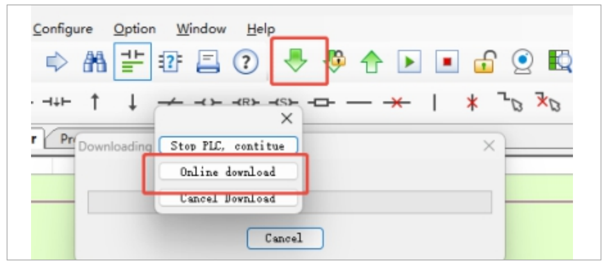


Real time cam curve monitoring



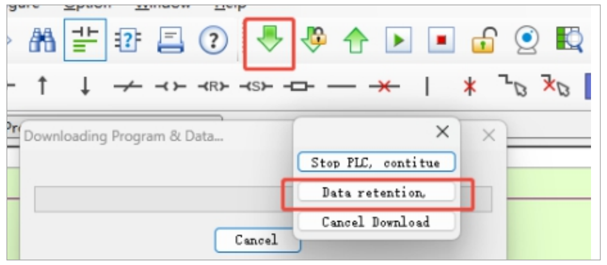
Online download

- Customers can update the program at any time, and the program operation will not be affected during the download process.
- When PLC is running, the control operation of the system will be affected immediately after the new program is downloaded online.
- Applicable model: XD5E-60T4,XD5E-60T10,XDH series, XLH series, XL5E-16T,XG2 series.


Configure
Option
Window
Help
Downloading
Stop PLC, contitue
Online download
Cancel Download
Cancel

Non online downloading

- Select data hold and continue downloading: it can keep the register state and values, and stop executing program during the download Drocess.

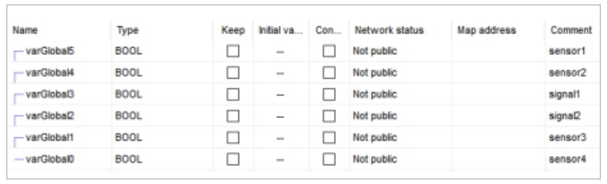

Downloading Program & Data...
Stop PLC, contitue
Data retention,
Cancel Download
Cancel

XDPPro

| Ease of use

■ Member comments

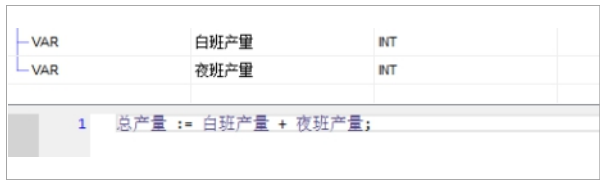
Support member annotation for global and local variables



Name	Type	Keep	Initial va...	Con...	Network status	Map address	Comment
varGlobal5	BOOL	☐	--	☐	Not public		sensor1
varGlobal4	BOOL	☐	--	☐	Not public		sensor2
varGlobal3	BOOL	☐	--	☐	Not public		signal1
varGlobal2	BOOL	☐	--	☐	Not public		signal2
varGlobal1	BOOL	☐	--	☐	Not public		sensor3
varGlobal0	BOOL	☐	--	☐	Not public		sensor4

■ Chinese variables

LD, ST, and C languages all support Chinese variables

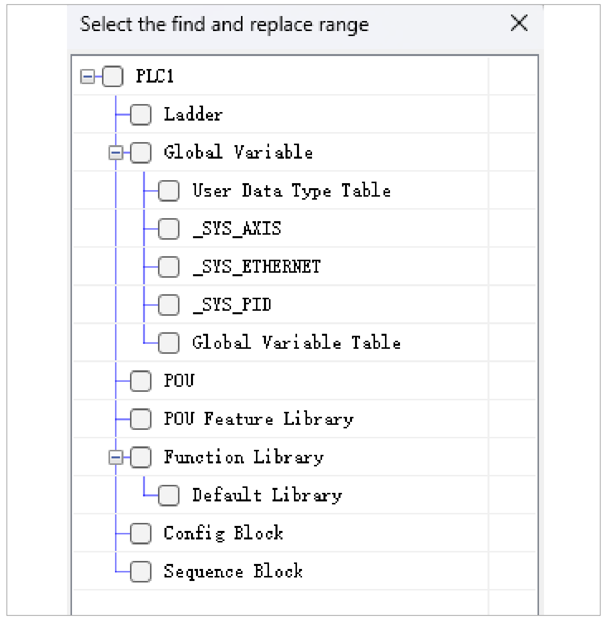


VAR	白班产量	INT
VAR	夜班产量	INT

```
总产量 := 白班产量 + 夜班产量;
```

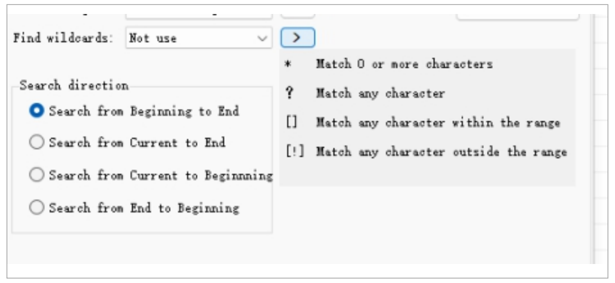
■ Search and replace

Support optional ranges and wildcard characters



Select the find and replace range

- ☐ PLC1
  - ☐ Ladder
  - ☐ Global Variable
    - ☐ User Data Type Table
    - ☐ _SYS_AXIS
    - ☐ _SYS_ETHERNET
    - ☐ _SYS_PID
    - ☐ Global Variable Table
  - ☐ POU
  - ☐ POU Feature Library
  - ☐ Function Library
    - ☐ Default Library
  - ☐ Config Block
  - ☐ Sequence Block



Find wildcards: Not use

Search direction
- ● Search from Beginning to End
- ○ Search from Current to End
- ○ Search from Current to Beginning
- ○ Search from End to Beginning

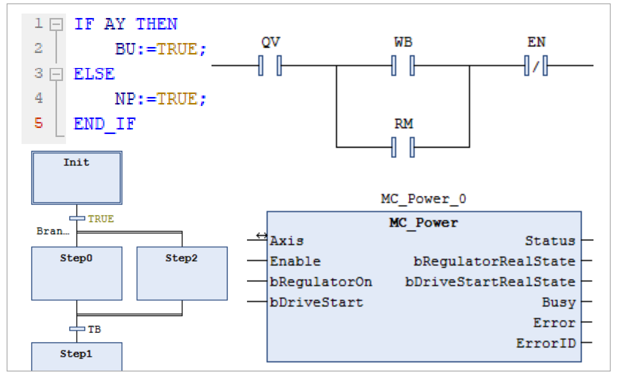
*	Match 0 or more characters
?	Match any character
[]	Match any character within the range
[!]	Match any character outside the range

XS Studio is compatible with XS series PLC

Motion control in accordance with international standard IEC61131-3 and PLCopen specification

| Programming language

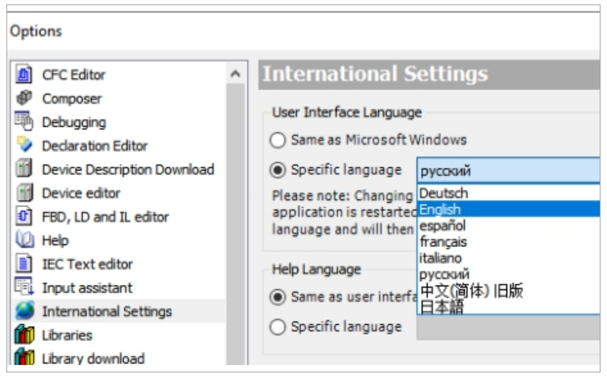
■ 4 programming languages ST, LD, SFC, CFC



```
IF AY THEN
    BU:=TRUE;
ELSE
    NP:=TRUE;
END_IF
```

QV
WB
EN
RM
Init
TRUE
Bran...
Step0
Step2
TB
Step1
MC_Power_0
MC_Power
Axis
Enable
bRegulatorOn
bDriveStart
Status
bRegulatorRealState
bDriveStartRealState
Busy
Error
ErrorID

■ Support multiple languages



Options
CFC Editor
Composer
Debugging
Declaration Editor
Device Description Download
Device editor
FBD, LD and IL editor
Help
IEC Text editor
Input assistant
International Settings
Libraries
Library download
International Settings
User Interface Language
Help Language

User Interface Language
- ○ Same as Microsoft Windows
- ● Specific language: русский

Please note: Changing application is restarted language and will then

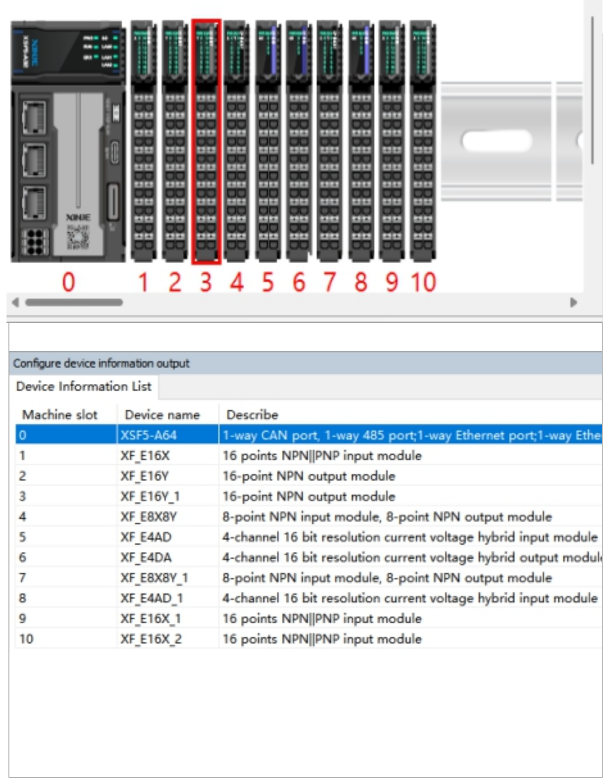
Deutsch
English
español
français
italiano
русский
中文(简体) 旧版
日本語

Help Language
- ● Same as user interfa
- ○ Specific language

| Configuration function

Multiple Configuration Functions: Hardware Configuration, Network Configuration, I/O Configuration, Module Configuration, Communication Configuration

■ Hardware configuration



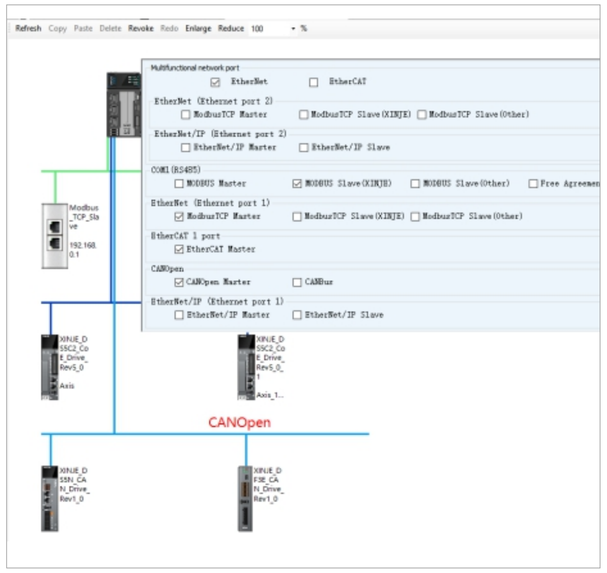
0
1
2
3
4
5
6
7
8
9
10

Configure device information output

Device Information List

Machine slot	Device name	Describe
0	XSF5-A64	1-way CAN port, 1-way 485 port;1-way Ethernet port;1-way Ethe
1	XF_E16X	16 points NPN||PNP input module
2	XF_E16Y	16-point NPN output module
3	XF_E16Y_1	16-point NPN output module
4	XF_E8X8Y	8-point NPN input module, 8-point NPN output module
5	XF_E4AD	4-channel 16 bit resolution current voltage hybrid input module
6	XF_E4DA	4-channel 16 bit resolution current voltage hybrid output modul
7	XF_E8X8Y_1	8-point NPN input module, 8-point NPN output module
8	XF_E4AD_1	4-channel 16 bit resolution current voltage hybrid input module
9	XF_E16X_1	16 points NPN||PNP input module
10	XF_E16X_2	16 points NPN||PNP input module

■ Network configuration



Refresh
Copy
Paste
Delete
Revoke
Redo
Enlarge
Reduce
100
%
Modbus_TCP_Slave
192.168.0.1
XINJE_DS5C2_CoE_Drive_Rev5_0
Axis
XINJE_DS5C2_CoE_Drive_Rev5_0_1
Axis_1...
CANOpen

Multifunctional network port
- ☑ EtherNet ☐ EtherCAT

EtherNet (Ethernet port 2)
- ☐ ModbusTCP Master ☐ ModbusTCP Slave(XINJE) ☐ ModbusTCP Slave(Other)

EtherNet/IP (Ethernet port 2)
- ☐ EtherNet/IP Master ☐ EtherNet/IP Slave

COM1 (RS485)
- ☐ MODBUS Master ☑ MODBUS Slave(XINJE) ☐ MODBUS Slave(Other) ☐ Free Agreemen

EtherNet (Ethernet port 1)
- ☑ ModbusTCP Master ☐ ModbusTCP Slave(XINJE) ☐ ModbusTCP Slave(Other)

EtherCAT 1 port
- ☑ EtherCAT Master

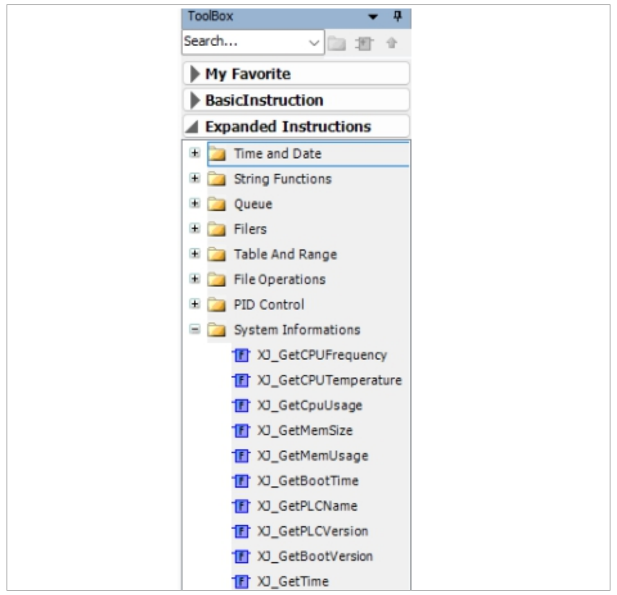
CANOpen
- ☑ CANOpen Master ☐ CANBus

EtherNet/IP (Ethernet port 1)
- ☐ EtherNet/IP Master ☐ EtherNet/IP Slave

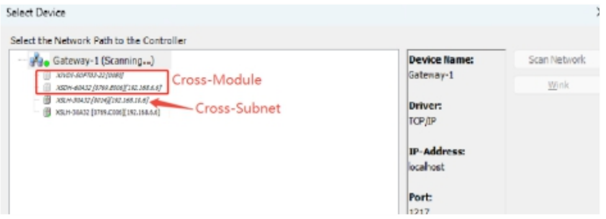
XS Studio is compatible with XS series PLC

Programming ease of use

LD, ST support tool box

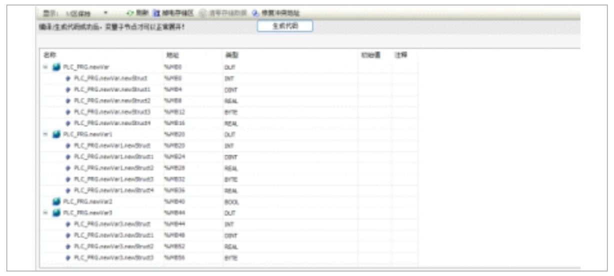

ToolBox
Search...
My Favorite
BasicInstruction
Expanded Instructions
Time and Date
String Functions
Queue
Filers
Table And Range
File Operations
PID Control
System Informations
XJ_GetCPUFrequency
XJ_GetCPUTemperature
XJ_GetCpuUsage
XJ_GetMemSize
XJ_GetMemUsage
XJ_GetBootTime
XJ_GetPLCName
XJ_GetPLCVersion
XJ_GetBootVersion
XJ_GetTime

Cross network segment scanning


Select Device
Select the Network Path to the Controller
Gateway-1 (Scanning...)
Cross-Module
Cross-Subnet
Scan Network

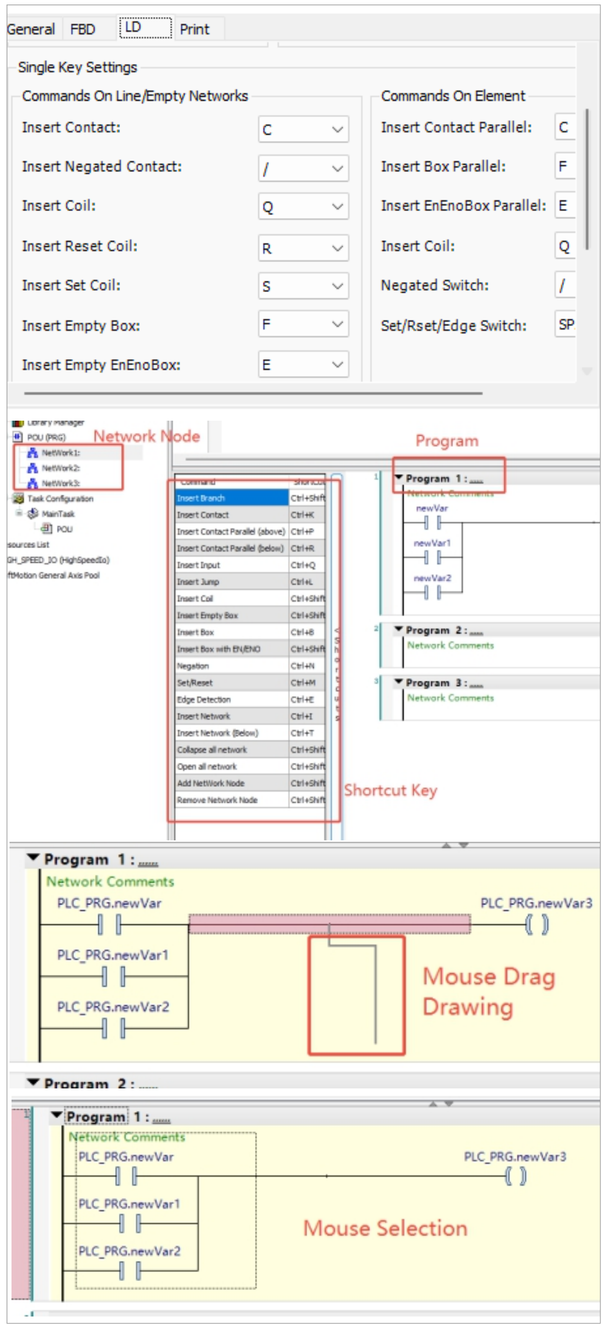
Device Name: Gateway-1
Driver: TCP/IP
IP-Address: localhost
Port: 1217

Standard hold



Ladder editor

支持程序段、鼠标绘线、鼠标框选、单键插入、变量注释修改。


General
FBD
LD
Print
Network Node
Program
Shortcut Key
Mouse Drag Drawing
Mouse Selection
Program 1 :
Network Comments
PLC_PRG.newVar
PLC_PRG.newVar1
PLC_PRG.newVar2
PLC_PRG.newVar3

Single Key Settings

Commands On Line/Empty Networks

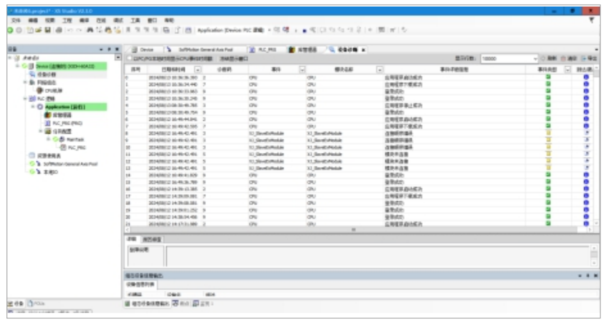
Insert Contact: C
Insert Negated Contact: /
Insert Coil: Q
Insert Reset Coil: R
Insert Set Coil: S
Insert Empty Box: F
Insert Empty EnEnoBox: E

Commands On Element

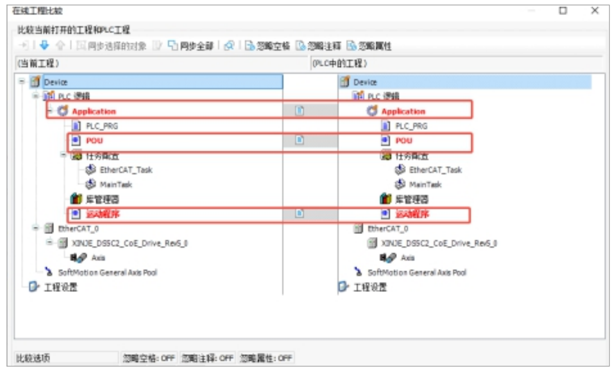
Insert Contact Parallel: C
Insert Box Parallel: F
Insert EnEnoBox Parallel: E
Insert Coil: Q
Negated Switch: /
Set/Rset/Edge Switch: SP

Diagnostic debugging

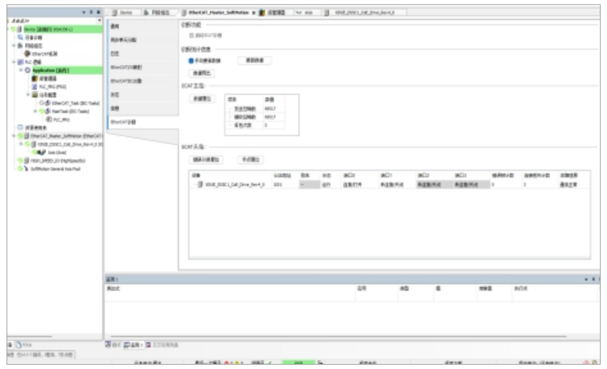
Device diagnostics



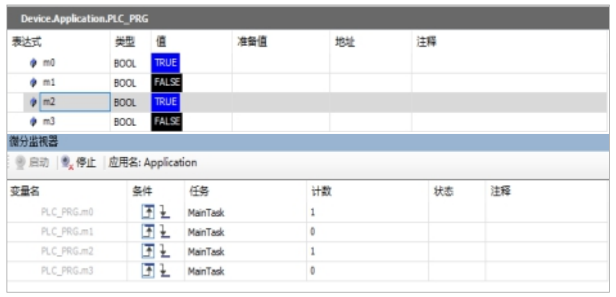
Online project comparison



EtherCAT diagnostics



Differential monitor



Device.Application.PLC_PRG

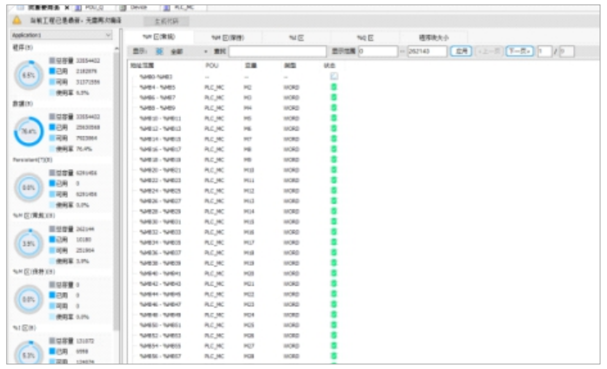
表达式	类型	值	准备值	地址	注释
m0	BOOL	TRUE			
m1	BOOL	FALSE			
m2	BOOL	TRUE			
m3	BOOL	FALSE			

微分监视器

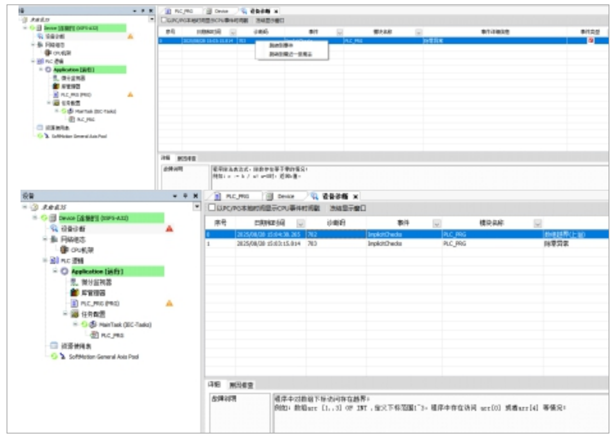
应用名: Application

变量名	条件	任务	计数	状态	注释
PLC_PRG.m0		MainTask	1		
PLC_PRG.m1		MainTask	0		
PLC_PRG.m2		MainTask	1		
PLC_PRG.m3		MainTask	0		

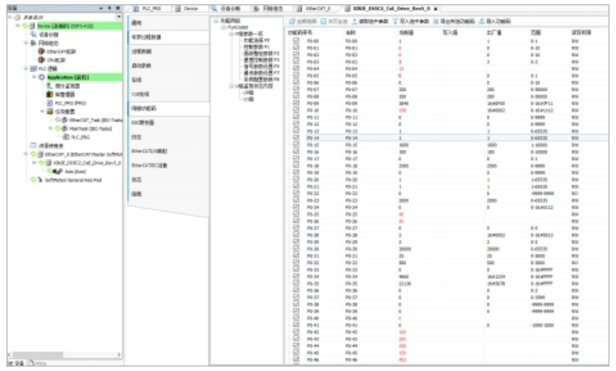
Resource usage table



Array bounds / Division by zero locator

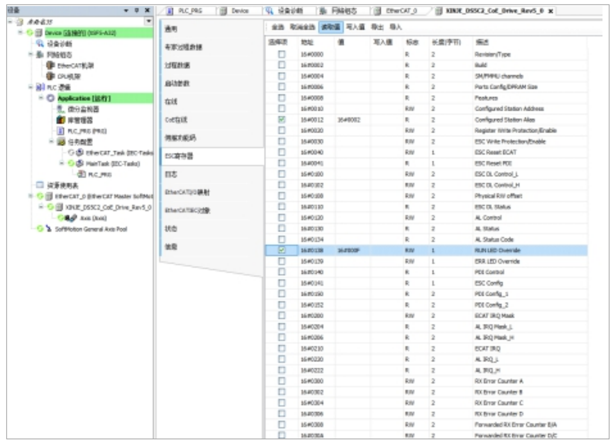


Servo function codes

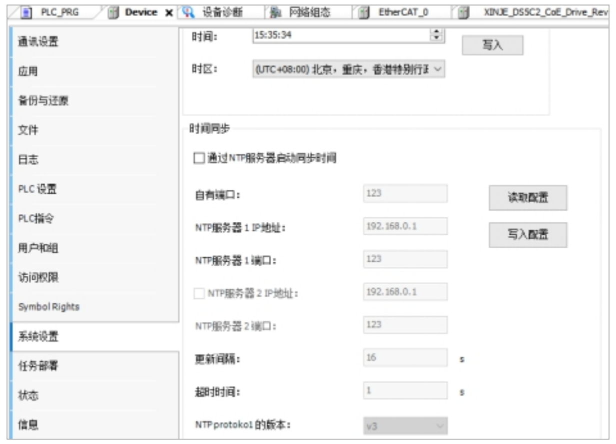


XS Studio is compatible with XS series PLC

■ ESC registers



■ NTP clock synchronization



时间: 15:35:34

时区: (UTC+08:00) 北京，重庆，香港特别行政

时间同步

☐ 通过NTP服务器启动同步时间

自有端口: 123

NTP服务器 1 IP地址: 192.168.0.1

NTP服务器 1 端口: 123

☐ NTP服务器 2 IP地址: 192.168.0.1

NTP服务器 2 端口: 123

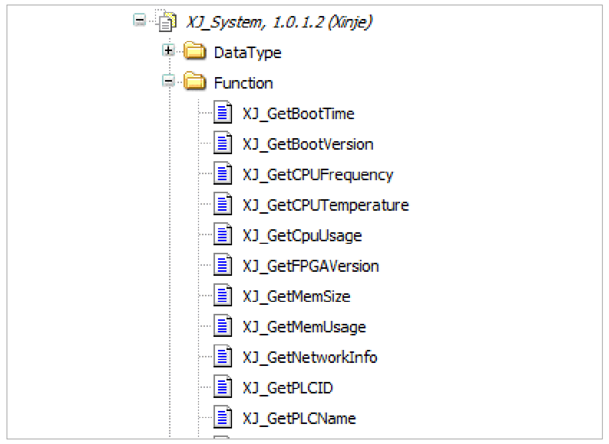
更新间隔: 16 s

超时时间: 1 s

NTP protokol 的版本: v3

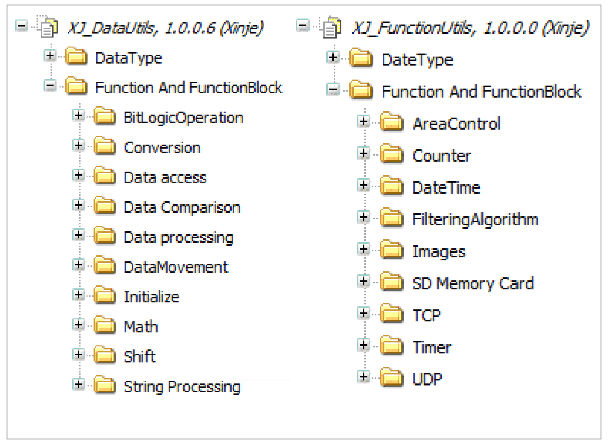
Comprehensive libraries

System libraries



- XJ_System, 1.0.1.2 (Xinje)
  - DataType
  - Function
    - XJ_GetBootTime
    - XJ_GetBootVersion
    - XJ_GetCPUFrequency
    - XJ_GetCPUTemperature
    - XJ_GetCpuUsage
    - XJ_GetFPGAVersion
    - XJ_GetMemSize
    - XJ_GetMemUsage
    - XJ_GetNetworkInfo
    - XJ_GetPLCID
    - XJ_GetPLCName

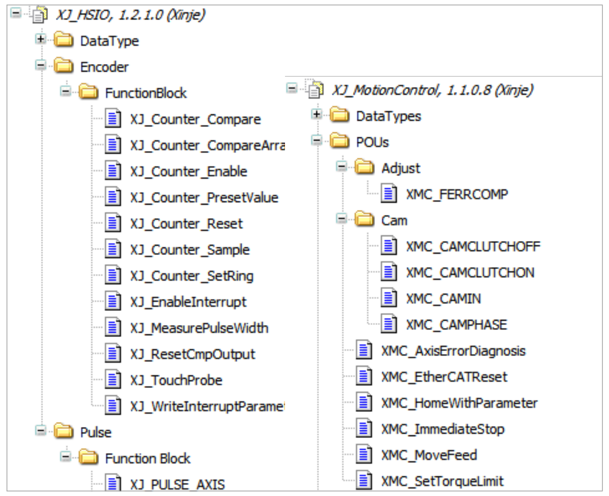
Basic instruction libraries



- XJ_DataUtils, 1.0.0.6 (Xinje)
  - DataType
  - Function And FunctionBlock
    - BitLogicOperation
    - Conversion
    - Data access
    - Data Comparison
    - Data processing
    - DataMovement
    - Initialize
    - Math
    - Shift
    - String Processing

- XJ_FunctionUtils, 1.0.0.0 (Xinje)
  - DateType
  - Function And FunctionBlock
    - AreaControl
    - Counter
    - DateTime
    - FilteringAlgorithm
    - Images
    - SD Memory Card
    - TCP
    - Timer
    - UDP

High-speed counting & motion control libraries



- XJ_HSIO, 1.2.1.0 (Xinje)
  - DataType
  - Encoder
    - FunctionBlock
      - XJ_Counter_Compare
      - XJ_Counter_CompareArra
      - XJ_Counter_Enable
      - XJ_Counter_PresetValue
      - XJ_Counter_Reset
      - XJ_Counter_Sample
      - XJ_Counter_SetRing
      - XJ_EnableInterrupt
      - XJ_MeasurePulseWidth
      - XJ_ResetCmpOutput
      - XJ_TouchProbe
      - XJ_WriteInterruptParame
  - Pulse
    - Function Block
      - XJ_PULSE_AXIS

- XJ_MotionControl, 1.1.0.8 (Xinje)
  - DataTypes
  - POUs
    - Adjust
      - XMC_FERRCOMP
    - Cam
      - XMC_CAMCLUTCHOFF
      - XMC_CAMCLUTCHON
      - XMC_CAMIN
      - XMC_CAMPHASE
    - XMC_AxisErrorDiagnosis
    - XMC_EtherCATReset
    - XMC_HomeWithParameter
    - XMC_ImmediateStop
    - XMC_MoveFeed
    - XMC_SetTorqueLimit

Upgrade tool

Supports five functions: PLC firmware upgrade, module firmware upgrade, user program management, backup/restore, and factory reset.

02

HMI

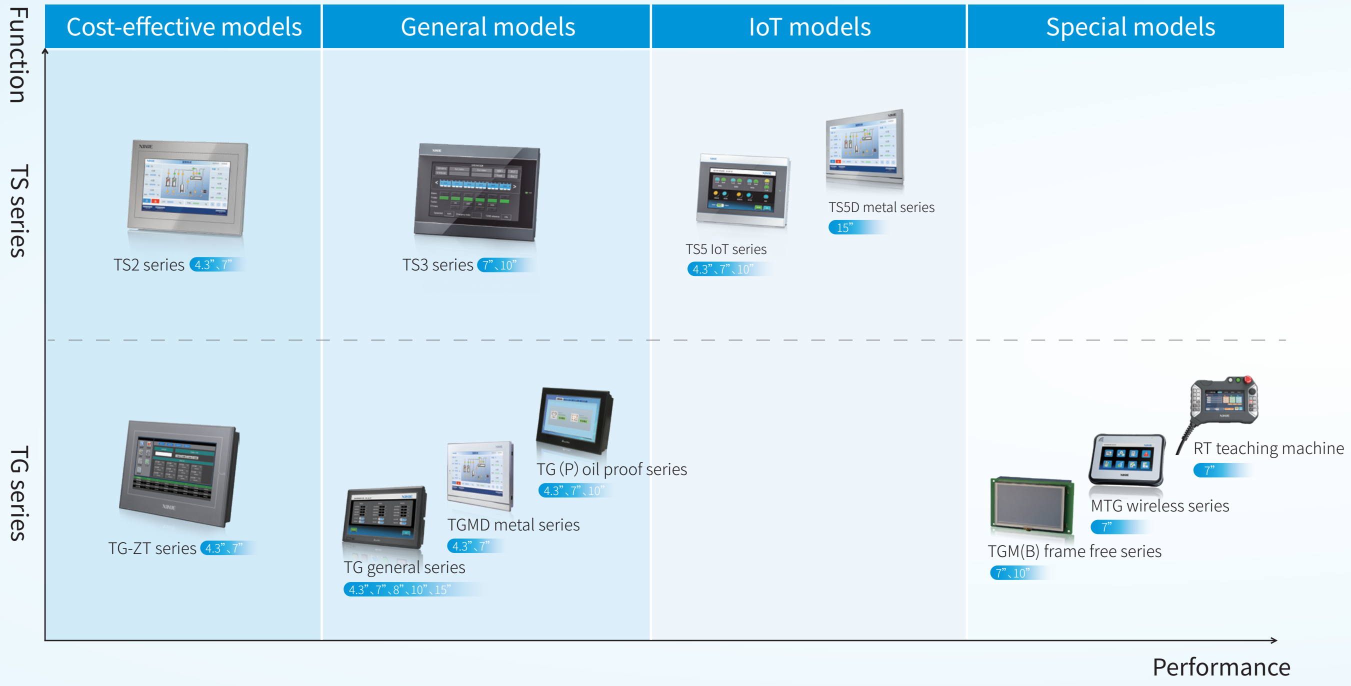
TS | TG | MTG | RT

XINJE
XINJE
XINJE

HMI model distribution

The Xinje HMI mainly includes two major series, TS and TG. The TS series is a new generation of HMI, which based on Linux system and equipped with an efficient A7 dual core processor, make touch screen operations more efficient and fast, which is beneficial for users to process data on the touch screen. Simultaneously retaining the original features of high protection and low failure rate, it has a wider range of applications. Current TS series include 4.3 inches, 7 inches, 10 inches, and 15.6 inches.more sizes are under development. Stay tuned.

The TG series general models cover sizes from 4.3 inches to 15.6 inches, with 8 sub-series that maintain consistent high protection and low failure rates. They are suitable for various occasions, as well as in trusses, robots, logistics and other industry projects.


Function
Cost-effective models
General models
IoT models
Special models
TS series
TS2 series 4.3"、7"
TS3 series 7"、10"
TS5 IoT series 4.3"、7"、10"
TS5D metal series 15"
TG series
TG-ZT series 4.3"、7"
TG general series 4.3"、7"、8"、10"、15"
TGMD metal series 4.3"、7"
TG (P) oil proof series 4.3"、7"、10"
TGM(B) frame free series 7"、10"
MTG wireless series 7"
RT teaching machine 7"
Performance

TS series high performance HMI

Adopting Linux system and equipped with efficient dual core A7 processor, the human-machine experience is smoother

TS5D series - Metal IoT HMI

- Market with high structural requirements for IoT demand

TS5 series - IoT HMI

- Targeting the IoT market

TS3 series - Standard HMI

- Targeting the general automation market

TS2 series - Entry-level HMI

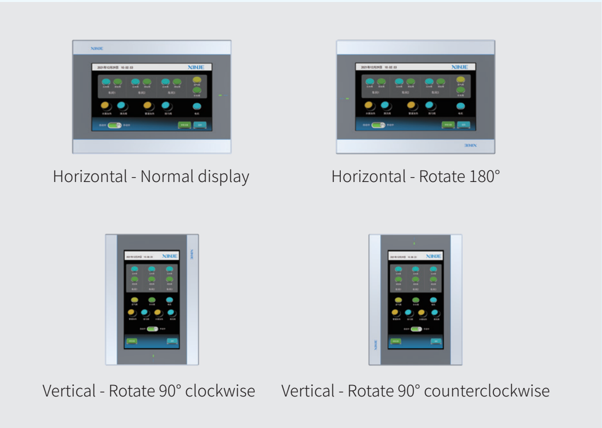
- Targeting the small single machine and electrical market

High performance processors

Adopting ARM Cortex-A7 dual core processor, 1GHz main frequency, built-in 128MB memory, expandable USB storage.

Multi-directional installation at will

Support free installation in four directions, meeting the needs of different occasions.



Horizontal - Normal display

Horizontal - Rotate 180°

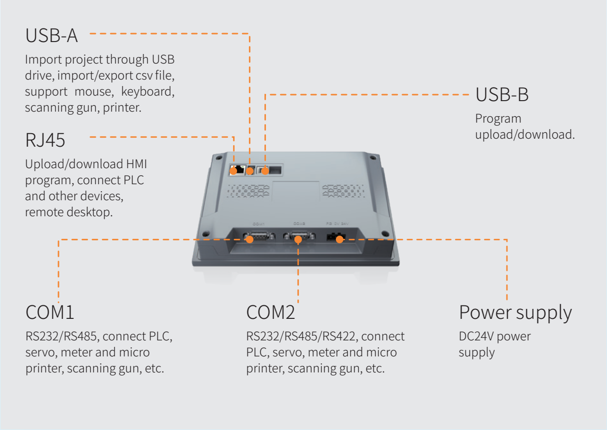
Vertical - Rotate 90° clockwise

Vertical - Rotate 90° counterclockwise

Efficient system

Based on the Linux system, the multitasking mechanism significantly improves system response speed, making operations more efficient and efficient.

Rich device connectivity



USB-A
Import project through USB drive, import/export csv file, support mouse, keyboard, scanning gun, printer.

RJ45
Upload/download HMI program, connect PLC and other devices, remote desktop.

USB-B
Program upload/download.

COM1
RS232/RS485, connect PLC, servo, meter and micro printer, scanning gun, etc.

COM2
RS232/RS485/RS422, connect PLC, servo, meter and micro printer, scanning gun, etc.

Power supply
DC24V power supply

IoT type metal HMI

TS5D series

12”、15.6”

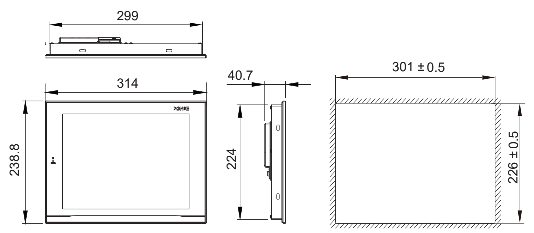
- Adopting Cortex-A7 dual core processor, with a main frequency of 1.2GHz
- Covering mainstream information exchange protocols, supporting MQTT and TCP/IP
- The metal structure of the entire machine enhances anti-interference and heat dissipation
- Support streaming media and video playback, with better performance when used in conjunction with audio
- Support network cameras for remote monitoring
- Relying on TouchWinPro software, it is easy to use and run efficiently

Product specification

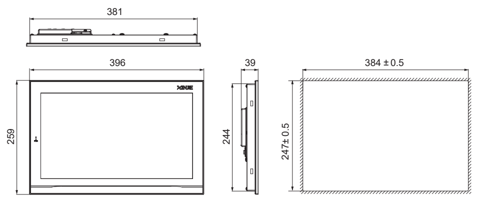
Item		TS5D-1200-E2	TS5D-1200-4G	TS5D-1200-W	TS5D-1500-E2	TS5D-1500-4G	TS5D-1500-W
Product feature	Size	15.6"					
	Type	16.77 million colors					
	Resolution	1920*1080					
	Brightness	250 cd/㎡					
	Touch panel	Four-wire resistive touch panel					
	Service life	Over 30000 hours, ambient temperature of 25°C, 24-hour operation					
	Processor	Cortex-A7 1.2GHz					
	Storage	256MB					
	Adaptive software	TouchwinPro software					
Interface	COM1	RS232/RS485					
	COM2	RS232/RS485/RS422					
	Ethernet port	Standard RJ45, 10/100M*2					
	USB port1	USB-A (compliant with USB2.0 specifications), 2 USB flash drive ports					
	USB port2	Type-C, USB download port					
	Audio	∅3.5coaxial audio interface					
	4G	/	4G LTE-FDD (Mbps) 10 (downlink) / 5 (uplink)	/	/	4G LTE-FDD (Mbps) 10 (downlink) / 5 (uplink)	/
	WiFi	/	/	IEEE 802.11 a/b/g/n IEEE 802.11 g:54Mbps	/		IEEE 802.11 a/b/g/n IEEE 802.11 g:54Mbps
Electrical feature	Input voltage	DC24V (voltage range: DC22V-DC26V)					
	Power	10W					
	Allowable instant power failure	Below 10ms (actual power loss less than 1s)					
	Withstand voltage	AC1000V, 10mA, less than 1 minute (signal to ground)					
	Insulation impedance	DC500V, above 10MΩ (signal to ground)					
Environ-ment	Operation temperature	0-50°C					
	Storage temperature	-10-60°C					
	Environmental humidity	10%RH-90%RH (without condensation)					
	Vibration resistance	10-25Hz (2G in X, Y, and Z directions for 30 minutes each)					
	Anti-interference	Voltage noise: 1500Vp-p, pulse width lus, 1 minute					
	Surrounding air	Non corrosive gas					
	Protection level	Front panel Ip65					
Structure	Cooling method	Natural air cooling					
	External dimension (mm)	396.0*259.0*39.0					
	Opening size (mm))	384.0*247.0 (±0.5)					

Dimension (unit: mm)

TS5D-1200 series



TS5D-1500 series



IoT type HMI

TS5 series

10.1” 7” 4.3”

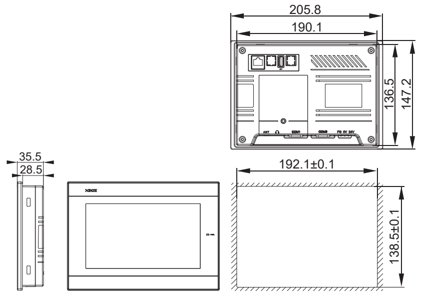
- Remote functions: remote desktop (remote control of HMI real-time screen on PC), remote transparent transmission (remote upload/download PLC program), remote download (updating HMI program)
- Support audio output and can output various types of audio through external speakers
- Covering mainstream information exchange protocols and supporting MQTT/TCP IP
- Standard network port, networking through optional WIFI/4G module
- Edge computing, conducive to data analysis and statistics

Product specification

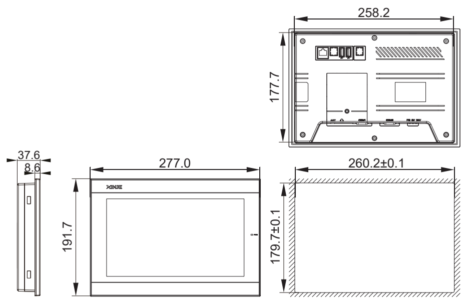
Product model		TS5-700-E TS5-700-4G TS5-700-W	TS5-1000-E TS5-1000-4G TS5-1000-W
Product features	Size	7"	10.1"
	Type	16.77 million colors	
	Resolution	800*480	1024*600
	Brightness	300 cd/m²	
	Touch panel	Four-wire resistive touch panel	
	Service life	Above 50000 hours, ambient temperature 25°C, 24 hours operation	
	Processor	Cortex-A7 1GHz	
	Memory	128MB	
Interface	COM1 port	RS232/RS485	
	COM2 port	RS232/RS485/RS422	
	Ethernet port	Standard RJ45, 10/100M	
	USB-A port	Flash disk port, USB2.0 standard	
	Audio	ø3.5Coaxial audio plug	
	4G (only supported by 4G models)	4G LTE-FDD (Mbps): 10 (downlink)/5 (uplink)	
	WiFi (only supported by W models)	IEEE 802.11 a/b/g/n IEEE 802.11g: 54Mbps	
Electrical features	Input voltage	DC24V (voltage range: DC22~DC26V)	
	Current consumption	200mA	270mA
	Allowable instantaneous power failure	Below 10ms (actual power loss less than 1s)	
	Withstand voltage	AC1000V, 10mA, less than 1 minute (signal and ground)	
	Insulation impedance	Above DC500V, 10MΩ (signal and ground)	
Environment	Operation temperature	0-50°C	
	Storage temperature	-20-60°C	
	Ambient humidity	10%RH~90%RH (no condensation)	
	Anti-interference	Voltage noise: 1500Vp-p, pulse width 1us, 1 minute	
	Ambient air	No corrosive gas	
	Protection level	Front panel IP65	
	Cooling method	Natural air cooling	
Structure	Display area (mm)	154.08*85.92	219.6*131.76
	External dimension (mm)	205.8*147.2*35.5	277.0*191.7*37.6
	Opening size (mm)	192.1*138.5(±0.1)	260.2*179.7(±0.1)
Authentication		CE marked	

Dimension (unit: mm)

TS5-700-E/4G/W



TS5-1000-E/4G/W



Standard type HMI

TS3 series

10.1” 7”

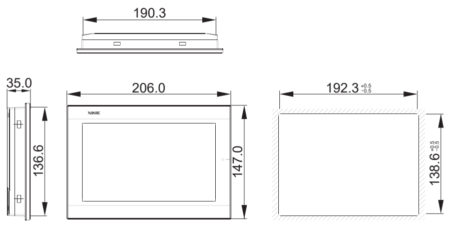
- Adopting Cortex-A7 dual core processor, with a main frequency of 1GHz and built-in 128MB memory
- Rich in functions, suitable for various occasions
- Stronger sealing performance, providing better protection against dust, water vapor, and debris
- The product structure conforms to lightweight design, making it lighter and thinner
- New TouchWinPro software with comprehensive feature upgrades

Product specification

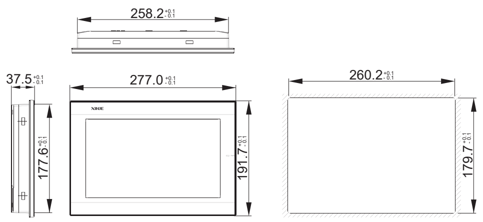
Product models		TS3-700-E	TS3-700-M	TS3-700-M3	TS3-700-E	TS3-700-Z	TS3-1000-M	TS3-1000-E	TS3-1000-Z
Product feature	Size	7.0"					10.1"		
	Resolution	1024*600	800*480				1024*600		
	LCD	TFT LCD display with LED backlight							
	Display color	16.77 million colors							
	Brightness	200 cd/m²	300 cd/m²			350 cd/m²	300 cd/m²		
	Touch panel	Four-wire resistive touch panel							
	Service life	Above 50000 hours, ambient temperature 25°C, 24 hours operation							
	Processor	Cortex-A7 1GHz							
	Memory	512MB	128MB						
Interface	COM1	RS232/RS485				RS232	RS232/RS485		RS232
	COM2	RS232/RS485/RS422				RS485	RS232/RS485/RS422		RS485
	COM3	/	/	RS485	/	/	/	/	/
	USB-A	Flash disk port, USB2.0 standard							
	USB-B	USB download port, USB2.0 standard							
	Ethernet port	Standard RJ45	/	/	Standard RJ45	/	/	Standard RJ45	/
Electrical feature	Input voltage	DC24V (voltage range: DC22V-DC26V)							
	Consumption current	200mA					270mA		
	Allowable instantaneous power failure	Below 10ms (actual power loss less than 1s)							
	Withstand voltage	AC1000V, 10mA, less than 1 minute (signal and ground)							
	Insulation impedance	DC500V, above 10MΩ							
Environment	Operation temperature	0-50°C							
	Storage temperature	-10-60°C							
	Ambient humidity	10%RH-90%RH (no condensation)							
	Anti-interference	Voltage noise: 1500Vp-p, pulse width 1us, 1 minute							
	Ambient air	No corrosive gas							
	Cooling method	Natural air cooling							
	Protection level	Front panel IP65							
Dimension	Display area (mm)	154.08*85.92					219.6*131.76		
	External dimension (mm)	206.0*147.0*35.0					277.0*191.7*37.5		
	Opening size (mm)	192.3*138.6（±0.5)					260.2*179.7（±0.5)		
	Authentication	CE marked							

Dimension (Unit: mm)

TS3-700/700H-M/E/Z



TS3-1000-M/E/Z



Economical HMI

TS2 series

4.3” 7” 10.1”

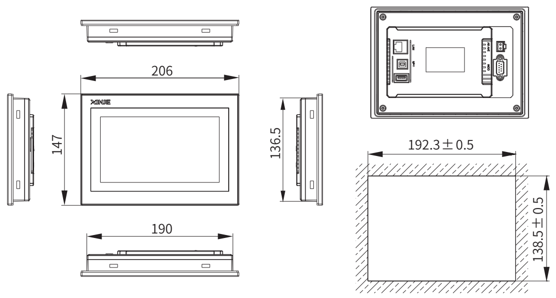
- 7-inch screen available in Black (B) and Silver
- Based on Linux systems and relying on existing TouchWinPro software
- Adopting a mature hardware design scheme, equipped with an efficient A7 dual core 1GHz processor
- Compatible with existing product opening sizes, stable, durable, efficient, and convenient
- The front panel meets the IP65 protection level and supports free installation in four directions, meeting the requirements of different occasions

Product specification

Product models		TS2-700-Z	TS2-700-Z-B	TS2-700-E	TS2-700-E-B	TS2-700H-E	TS2-700H-Z	TS2-700-W	TS2-700-4G
Product feature	Size	7.0"							
	LCD	TFT LCD display with LED backlight, 16.77 million colors							
	Resolution	800*480				1024*60		800*480	
	Brightness	300 cd/m²							
	Touch panel	Four-wire resistive touch panel							
	Service life	Above 30000 hours, ambient temperature 25°C, 24 hours operation							
	Language	Multiple language options including Simplified Chinese, Traditional Chinese, English, Japanese, Russian, German, and more (Chinese characters compatible with the Windows font library).							
	Character size	Any font and size							
	Processor	Cortex-A7 1GHz							
	Memory	128MB				256MB			
	Software	TouchwinPro programming software							
Interface	COM port	RS232/RS485						RS232/RS485/422	
	Ethernet port	/		Standard RJ45		/		Standard RJ45	
	USB-A	USB-A (compliant with USB2.0 specifications), USB port, used to connect portable storage devices such as USB drives, can import and export data, and can connect devices such as mouse and keyboards							
	USB-B	USB-B (compliant with USB2.0 specifications), USB download port, used for downloading HMI program data							
	4G (Only 4G models are supported)	/						/	4G LTE-FDD (Nbps): 10(downlink) / 5(uplink)
	WIFI (Only W models are supported)	/						IEEE 802.11 b/g/n IEEE 802.11 g:54Mbps	/
Electrical feature	Input voltage	DC24V (voltage range: DC22-26V)							
	Current consumption	200mA							
	Allowable instant power failure	Below 10ms (actual power loss less than 1s)							
	Withstand voltage	AC 1000V, 10mA, less than 1minute (single to ground)							
	Insulation impedance	DC500V, above 10MΩ (single to ground)							
Environment	Power supply	DC24V (voltage range: DC22V-DC26V)							
	Operation temperature	0-50°C							
	Storage temperature	-10-60°C							
	Ambient humidity	10%RH-90%RH (no condensation)							
	Protection level	Front panel IP65							
	Anti-interference	Voltage noise: 1500Vp-p, pluse width lus, 1minute							
	Surrounding air	Non corrosive gas							
Dimen-sion	External dimension (mm)	206*147*34.3							
	Opening size (mm)	192.3*138.6（±0.5)							
	Authentication	CE marked							

Dimension (Unit: mm)

TS2-700-W/4G
TS2-700H-E/Z
TS2-700-Z
TS2-700-Z-B
TS2-700-E
TS2-700-E/B



Economical HMI

TS2 series 4.3” 7” 10.1”

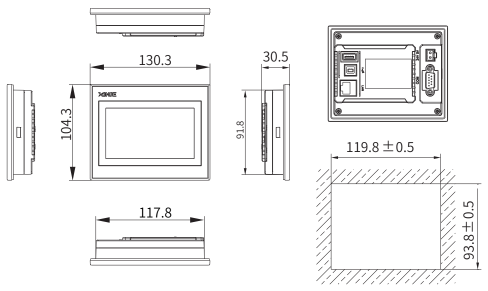
- 7-inch screen available in Black (B) and Silver
- Based on Linux systems and relying on existing TouchWinPro software
- Adopting a mature hardware design scheme, equipped with an efficient A7 dual core 1GHz processor
- Compatible with existing product opening sizes, stable, durable, efficient, and convenient
- The front panel meets the IP65 protection level and supports free installation in four directions, meeting the requirements of different occasions

| Product specification

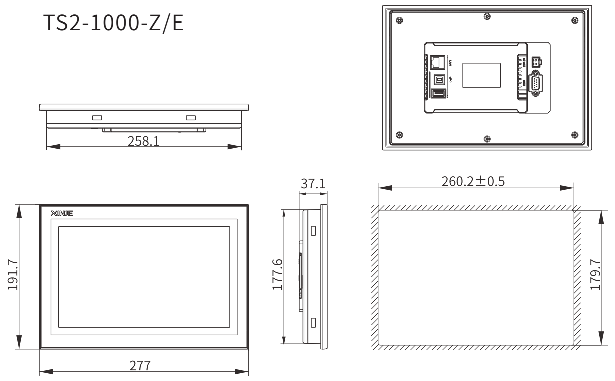
Product models		TS2-400-Z	TS2-400-E	TS2-1000-Z	TS2-1000-E
Product feature	Size	4.3"		10.1"	
	LCD	TFT LCD display with LED backlight, 16.77 million colors			
	Resolution	480*272		1024*60	
	Brightness	500cd/m²		350 cd/m²	
	Touch panel	Four-wire resistive touch panel			
	Service life	Above 30000 hours, ambient temperature 25°C, 24 hours operation			
	Language	Multiple language options including Simplified Chinese, Traditional Chinese, English, Japanese, Russian, German, and more (Chinese characters compatible with the Windows font library).			
	Character size	Any font and size			
	Processor	Cortex-A7 1GHz			
	Memory	64MB		256MB	
	Software	TouchwinPro programming software			
Interface	COM port	RS232/RS485			
	Ethernet port	/	Standard RJ45	/	Standard RJ45
	USB-A	USB-A (compliant with USB2.0 specifications), USB port, used to connect portable storage devices such as USB drives, can import and export data, and can connect devices such as mouse and keyboards			
	USB-B	USB-B (compliant with USB2.0 specifications), USB download port, used for downloading HMI program data			
Electrical feature	Input voltage	DC24V (voltage range: DC22-26V)			
	Current consumption	200mA		270mA	
	Allowable instant power failure	Below 10ms (actual power loss less than 1s)			
	Withstand voltage	AC 1000V, 10mA, less than 1minute (single to ground)			
	Insulation impedance	DC500V, above 10MΩ (single to ground)			
Environment	Power supply	DC24V (voltage range: DC22V-DC26V)			
	Operation temperature	0-50°C			
	Storage temperature	-10-60°C			
	Ambient humidity	10%RH-90%RH (no condensation)			
	Protection level	Front panel IP65			
	Anti-interference	Voltage noise: 1500Vp-p, pluse width lus, 1minute			
	Surrounding air	Non corrosive gas			
Dimension	External dimension (mm)	130.3*104.3*30.5		277*191.7*37.1	
	Opening size (mm)	119.8*93.8（±0.5）		260.2*179.7（±0.5）	
	Authentication	CE marked			

| Dimension (Unit: mm)

TS2-400-Z/E



TS2-1000-Z/E



TouchWin Pro software

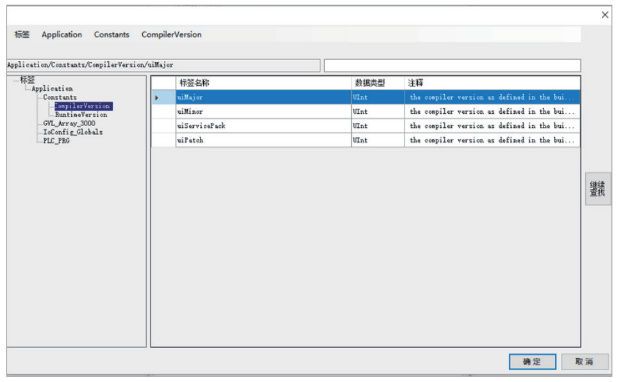
Simple and intuitive software interface

Fully considering the convenience and ease of use of user programming

Committed to reducing programming time

Tag Communication

TS series products support standard tag communication such as Codesys and PLC handler, as well as proprietary tag communication like Siemens and Inovance, enabling faster and more efficient programming.

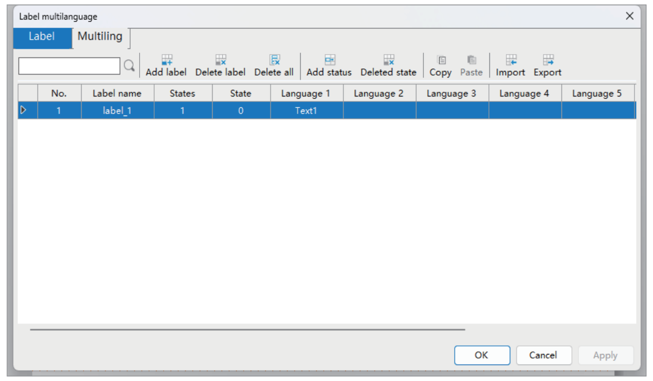


Application/Constants/CompilerVersion/uiMajor

标签名称	数据类型	注释
uiMajor	UInt	the compiler version as defined in the bui...
uiMinor	UInt	the compiler version as defined in the bui...
uiServicePack	UInt	the compiler version as defined in the bui...
uiPatch	UInt	the compiler version as defined in the bui...

Multilingual Tags

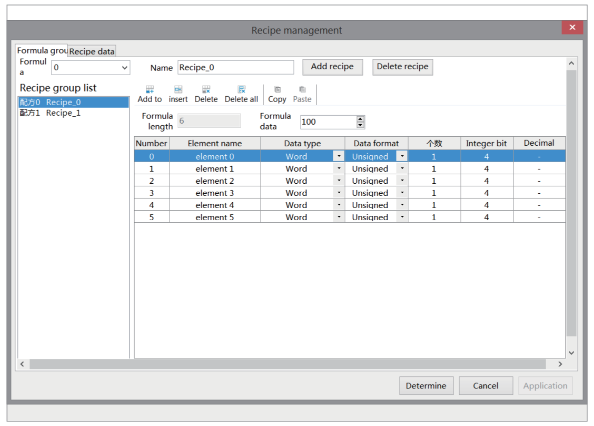
Supports mainstream foreign languages (English, Korean, Japanese, Arabic, etc.), with up to 16 languages usable simultaneously. Features table editing, import/export support, and batch one-click switching for multilingual texts.



No.	Label name	States	State	Language 1	Language 2	Language 3	Language 4	Language 5
1	label_1	1	0	Text1				

Powerful Recipe Management

The new recipe management is simple and easy to edit. It supports editing recipe data on the touch screen, including inserting, deleting, importing, exporting and other operations.



Formula: 0

Name: Recipe_0

Recipe group list

配方0 Recipe_0

配方1 Recipe_1

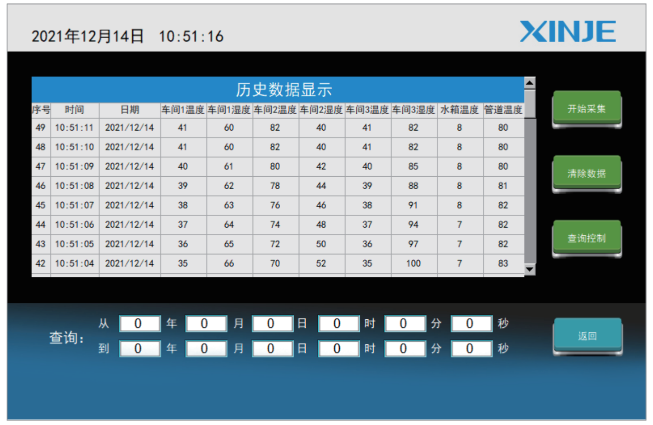
Formula length: 6

Formula data: 100

Number	Element name	Data type	Data format	个数	Integer bit	Decimal
0	element 0	Word	Unsigned	1	4	-
1	element 1	Word	Unsigned	1	4	-
2	element 2	Word	Unsigned	1	4	-
3	element 3	Word	Unsigned	1	4	-
4	element 4	Word	Unsigned	1	4	-
5	element 5	Word	Unsigned	1	4	-

Detailed Report Management

The report management method supports the display of tables in forward order/ reverse order. You can query data or alarm records by date and keyword. It can be imported/exported to USB flash disk.



2021年12月14日 10:51:16

历史数据显示

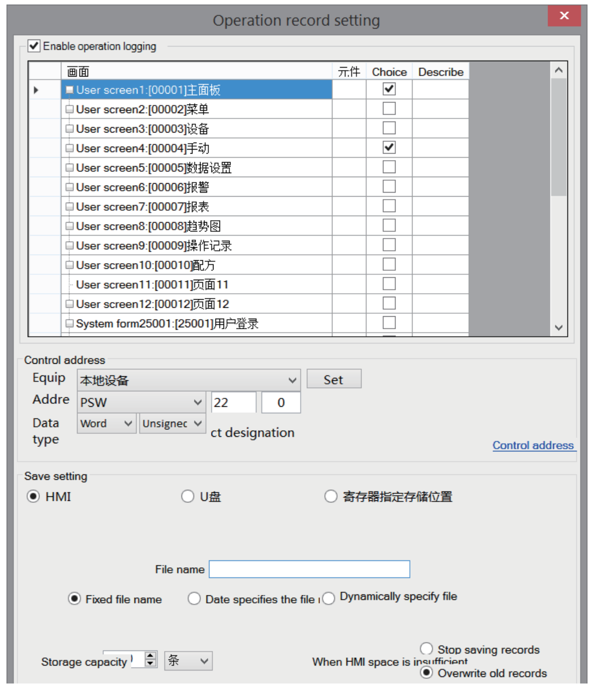
序号	时间	日期	车间1温度	车间1湿度	车间2温度	车间2湿度	车间3温度	车间3湿度	水箱温度	管道温度
49	10:51:11	2021/12/14	41	60	82	40	41	82	8	80
48	10:51:10	2021/12/14	41	60	82	40	41	82	8	80
47	10:51:09	2021/12/14	40	61	80	42	40	85	8	80
46	10:51:08	2021/12/14	39	62	78	44	39	88	8	81
45	10:51:07	2021/12/14	38	63	76	46	38	91	8	82
44	10:51:06	2021/12/14	37	64	74	48	37	94	7	82
43	10:51:05	2021/12/14	36	65	72	50	36	97	7	82
42	10:51:04	2021/12/14	35	66	70	52	35	100	7	83

查询：从 0 年 0 月 0 日 0 时 0 分 0 秒

到 0 年 0 月 0 日 0 时 0 分 0 秒

Traceable Operation Records

Record user login and operation contents, which can be exported to USB flash disk to help analyze process flow and troubleshooting.



Operation record setting

☑ Enable operation logging

画面	元件	Choice	Describe
User screen1:[00001]主面板		☑	
User screen2:[00002]菜单		☐	
User screen3:[00003]设备		☐	
User screen4:[00004]手动		☑	
User screen5:[00005]数据设置		☐	
User screen6:[00006]报警		☐	
User screen7:[00007]报表		☐	
User screen8:[00008]趋势图		☐	
User screen9:[00009]操作记录		☐	
User screen10:[00010]配方		☐	
User screen11:[00011]页面11		☐	
User screen12:[00012]页面12		☐	
System form25001:[25001]用户登录		☐	

Control address
Equip: 本地设备 Set
Addre: PSW 22 0
Data type: Word Unsignec
ct designation
Control address

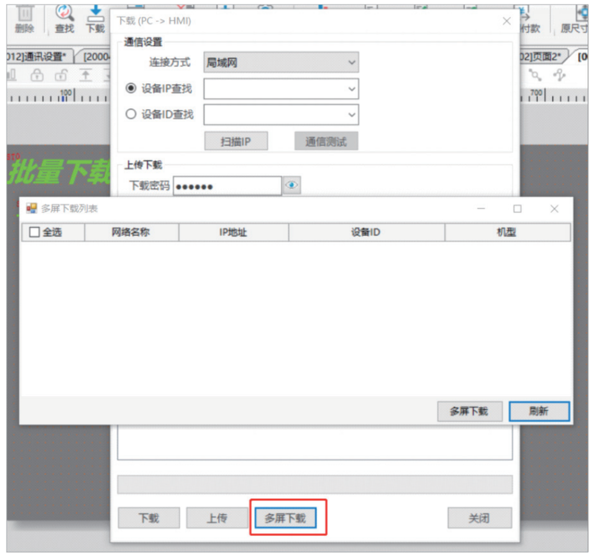
Save setting
● HMI ○ U盘 ○ 寄存器指定存储位置

File name
● Fixed file name ○ Date specifies the file ○ Dynamically specify file

Storage capacity 条
When HMI space is insufficient: ○ Stop saving records ● Overwrite old records

Multi-screen Download

Supports simultaneous project download to up to 10 touch screens within the same local area network (provided there are no devices with identical IPs in that network).



下载 (PC -> HMI)

通信设置
连接方式: 局域网
● 设备IP查找
○ 设备ID查找
扫描IP 通信测试

上传下载
下载密码: ●●●●●●

多屏下载列表

☐ 全选	网络名称	IP地址	设备ID	机型

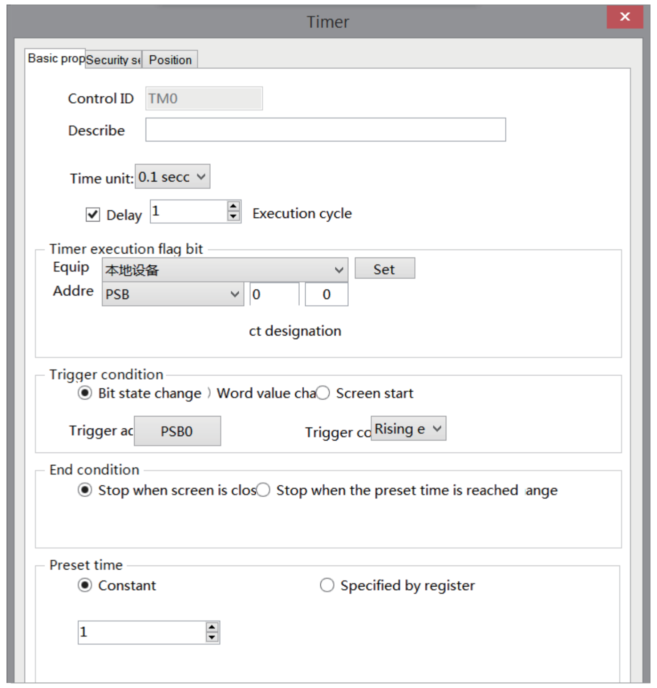
多屏下载 刷新

下载 上传 多屏下载 关闭

删除
查找
下载
批量下载

Schedule

With timer function, it can set the time and execute it regularly, making the on-site operation more efficient.



Timer

Basic prop | Security se | Position

Control ID: TM0
Describe:
Time unit: 0.1 secc
☑ Delay 1 Execution cycle

Timer execution flag bit
Equip: 本地设备 Set
Addre: PSB 0 0
ct designation

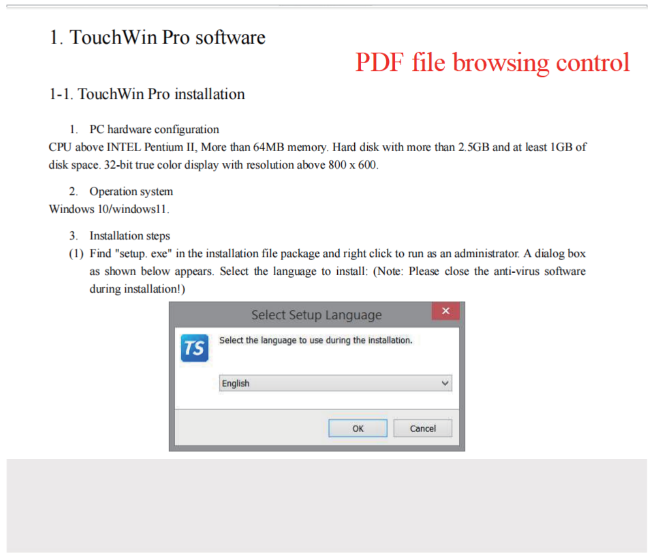
Trigger condition
● Bit state change ○ Word value cha ○ Screen start
Trigger ac: PSB0 Trigger co: Rising e

End condition
● Stop when screen is clos ○ Stop when the preset time is reached ange

Preset time
● Constant ○ Specified by register
1

PDF File Preview

Combined with the file browsing function, allows direct preview and viewing of PDF files from a USB drive on the screen, with page turning and zoom operations supported.



1. TouchWin Pro software

PDF file browsing control

1-1. TouchWin Pro installation

1. PC hardware configuration

CPU above INTEL Pentium II, More than 64MB memory. Hard disk with more than 2.5GB and at least 1GB of disk space. 32-bit true color display with resolution above 800 x 600.

2. Operation system

Windows 10/windows11.

3. Installation steps

(1) Find "setup. exe" in the installation file package and right click to run as an administrator. A dialog box as shown below appears. Select the language to install: (Note: Please close the anti-virus software during installation!)

Select Setup Language

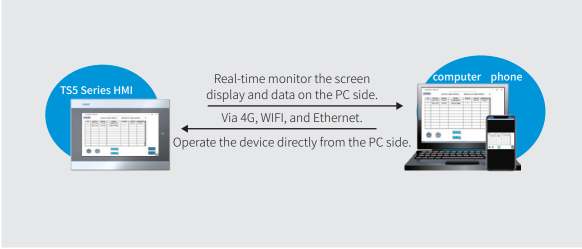
Select the language to use during the installation.

English

OK Cancel

Remote Desktop

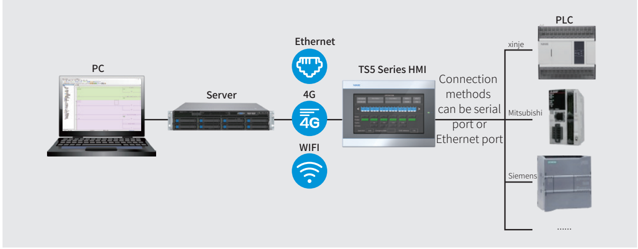
Also known as VNC functionality, supports synchronizing the touch screen's display and data on a PC or mobile device, enabling real-time HMI monitoring and remote control of the touch screen without being on-site.



TS5 Series HMI
Real-time monitor the screen display and data on the PC side.
Via 4G, WIFI, and Ethernet.
Operate the device directly from the PC side.
computer
phone

Remote Passthrough

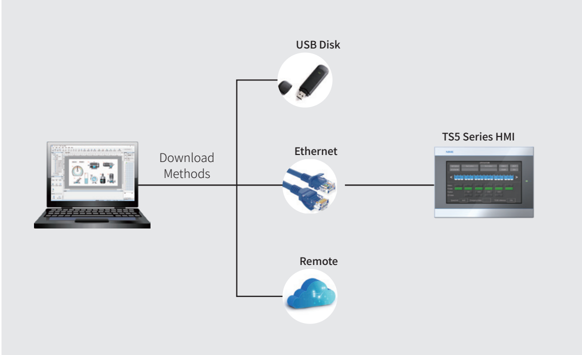
Supports remote upload and download of PLC programs, solving issues like not finding the download cable or insufficient ports. Programs can be downloaded to the PLC via network connection using 4G or WiFi modules.



PC
Server
Ethernet
4G
WIFI
TS5 Series HMI
Connection methods can be serial port or Ethernet port
PLC
xinje
Mitsubishi
Siemens
......

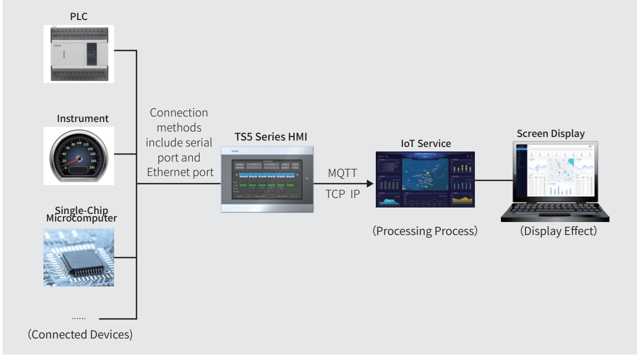
Multiple Program Download Methods

Supports uploading and downloading touch screen programs via USB drive, local area network, or remotely.



Download Methods
USB Disk
Ethernet
Remote
TS5 Series HMI

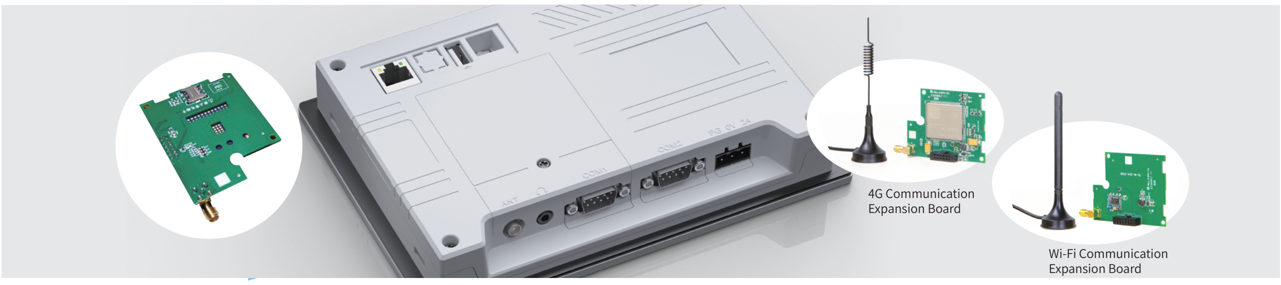
Covers mainstream information interaction protocols, supporting MQTT/TCP IP.



PLC
Instrument
Single-Chip Microcomputer
......
(Connected Devices)
Connection methods include serial port and Ethernet port
TS5 Series HMI
MQTT
TCP IP
IoT Service
(Processing Process)
Screen Display
(Display Effect)

Optional WIFI/4G Communication Expansion Board

The device comes standard with an Ethernet port and supports an optional WIFI/4G communication expansion board, which integrates seamlessly with the TS5 without occupying extra space. Users can freely switch between the 4G or WiFi communication expansion board based on the usage scenario.



4G Communication Expansion Board
Wi-Fi Communication Expansion Board

Multimedia Function

Supports streaming media and preset video playback, with enhanced effects when used in conjunction with audio.

Real-time Monitoring

Supports connecting to network cameras for remote monitoring.

Wide temperature metal HMI

TGM (D) series

10.1” 7”

- New appearance and structure design, centralized interface
- Ultra thin body
- The metal cover of the whole machine greatly improves the anti-interference and heat dissipation
- The temperature range is -20℃~70℃, suitable for the site environment with high temperature requirements
- More industrial chips are adopted, and the performance is more stable

Product specification

Product model		TGMA63D-ET	TGM765D-ET
Product features	Display size	10.1"	7"
	Resolution	1024*600	800*480
	LCD	TFT LCD display, LED backlight	
	Display color	16.77million colors	
	Brightness	200 cd/m²	
	Touch panel	Four-wire resistive touch screen	
	LCD life	Above 50000 hours, ambient temperature 25℃, 24-hour operation	
	Memory	128MB	
Interface	PLC port	RS232/RS485/RS422	
	Download port	RS232/RS485	/
	USB-A port	USB flash disk port, USB2.0 standard	
	USB-B port	USB download port, USB2.0 standard	
	Ethernet port	Standard RJ45	
Electrical features	Input voltage	DC24V（voltage range：DC22V-DC26V）	
	Consumption current	270mA	200mA
	Allowable power loss	Below 10ms (actual power loss less than 1s)	
	Withstand voltage shock	AC1000V, 10mA, less than 1 minute (signal and ground)	
	Insulation resistance	Above10MΩ，DC500V	
Environment	Operation temperature	-20-70℃	
	Storage temperature	-30-75℃	
	Operation humidity	10%RH-90%RH (no condensation)	
	Anti-interference ability	Voltage noise: 1500Vp-p, pulse width 1us, 1 minute	
	Air	No corrosive gas	
	Cooling mode	Natural air cooling	
	Protection level	Front cover IP65	
Dimension	External dimension (mm)	276.9*191.6*34.8	206.0*147.0*34.6
	Opening size (mm)	260.2*178.7	192.3*138.6
Authentication		CE marked	

Ultrathin type HMI

TG(G) / TG(S) series

10.1” 7” 4.3”

- The gray appearance design of the whole machine has strong visual impact
- Improved cover material, frosted texture
- The function and performance are the same to TG(S) series

Product specification

Product model		TGA63G-MT TGA63G-UT TGA63G-ET	TG765G-MT TG765G-UT TG765G-ET	TG465G-UT TG465G-ET	TGA63S-MT TGA63S-UT TGA63S-ET	TG765S-MT TG765S-UT TG765S-ET
Product features	Display size	10.1″	7″	4.3"	10.1″	7″
	Resolution	1024*600	800*480	480*272	1024*600	800*480
	LCD	TFT LCD display, LED backlight				
	Display color	16.77million colors				
	Brightness	200 cd/m²				
	Touch panel	Four-wire resistive touch screen				
	LCD life	Above 50000 hours, ambient temperature 25°C, 24-hour operation				
	Memory	128MB				
Interface	PLC port	RS232/RS422/RS485	RS232/RS422/RS485	RS232/RS485/RS422 (XT model cannot support RS422)	RS232/RS422/RS485	
	Download port	RS232/RS485	RS232/RS485	/	RS232/RS485	
	USB-A port	USB flash disk port, USB2.0 standard. UT/ET model can support				
	USB-B port	USB download port, USB2.0 standard				
	Ethernet port	Standard RJ45, ET model can support				
Electrical features	Input voltage	DC24V (voltage range: DC22V~DC26V)				
	Consumption current	270mA	200mA	180mA	270mA	200mA
	Allowable power loss	Below 10ms (actual power loss less than 1s)				
	Withstand voltage shock	AC1000V, 10mA, less than 1 minute				
	Insulation resistance	Above 10MΩ，DC500V				
Environment	Operation temperature	0°C～ 50°C				
	Storage temperature	-20°C～ 60°C				
	Operation humidity	10%RH-90%RH (no condensation)				
	Anti-interference ability	Voltage noise: 1500Vp-p, pulse width 1us, 1 minute				
	Air	No corrosive gas				
	Cooling mode	Natural air cooling				
	Protection level	Front cover IP65				
Dimension	External dimension (mm)	278.0*192.3*44.0	207.0*148.0*38.5	152.6*102.0*33.4	278.0*192.3*44.0	207.0*148.0*38.5
	Opening size (mm)	260.2*179.7	192.0*138.5	144 .0*94.0	260.2*179.7	192.0*138.5
Authentication		CE marked				

General HMI

TG series

10.1” 8” 7” 4.3”

- Covering complete display size, the product lineup is abundant
- It has various functions and is suitable for most industrial sites
- USB-A front port design, easy to use (GA62 support)

USB-A front interface design, more convenient operation

TGA62support

USB-A interface is used for data import and export. This interface is designed on the front of the panel. When transmitting data, there is no need to open the control cabinet. It is easy to operate and greatly improves the work efficiency.

Product specification

Product model		TGA63-MT TGA63-UT TGA63-ET	TGA62-MT TGA62-ET	TG865-MT TG865-ET	TG765-MT TG765-UT TG765-ET	TG465-MT TG465-UT TG465-ET	TG465-MT2 TG465-UT2 TG465-XT
Product features	Display size	10.1″	10.1″	8″	7″	4.3″	
	Resolution	1024*600	800*480	800*600	800*480	480*272	
	LCD	TFT LCD display, LED backlight					
	Display color	16.77 million colors					
	Brightness	200 cd/m^2					
	Touch panel	Four-wire resistive touch screen					
	LCD life	Above 50000 hours, ambient temperature 25°C, 24-hour operation					
	Memory	128MB					
Interface	PLC port	RS232/RS422/RS485					
	Download port	RS232/RS485				RS232/RS485 (only -MT2/UT2 model support)	
	USB-A port	USB flash disk port, USB2.0 standard. UT/ET model can support					
	USB-B port	USB download port, USB2.0 standard					
	Ethernet port	Standard RJ45, ET model can support					
Electrical features	Input voltage	DC24V (voltage range: DC22V~DC26V)					
	Consumption current	270mA		250mA	200mA	180mA	
	Allowable power loss	Below 10ms (actual power loss less than 1s)					
	Withstand voltage shock	AC1000V, 10mA, less than 1 minute					
	Insulation resistance	Above10MΩ，DC500V					
Environment	Operation temperature	0℃～50℃					
	Storage temperature	-20℃～60℃					
	Operation humidity	10%RH-90%RH (no condensation)					
	Anti-interference ability	Voltage noise: 1500Vp-p, pulse width 1us, 1 minute					
	Air	No corrosive gas					
	Cooling mode	Natural air cooling					
	Protection level	Front cover IP65					
Dimension	External dimension (mm)	272.2*191.7*51.2	272.2*191.7*51.2	224.4*170.8*45.5	200.4*146.9*48.5	152.0*102.0*41.8	
	Opening size (mm)	260.2*179.7	260.2*179.7	211.4*157.8	192.0*138.5	144.0*94.0	
	Authentication	CE marked					

Economic type HMI

Economic type TG series

7” 4.3”

TG-XT

- On the basis of general type TG/ultra-thin type TG(S)/new appearance TG(G) series products, one or two RS232 serial ports are reserved, with standard clock function
  Note: the serial port only supports RS232 communication mode

TG-ZT

- Remove RS422 communication mode on the basis of new appearance TG(G) series products
  Note: the internal register PFW is stored every 1 minute

Product specification

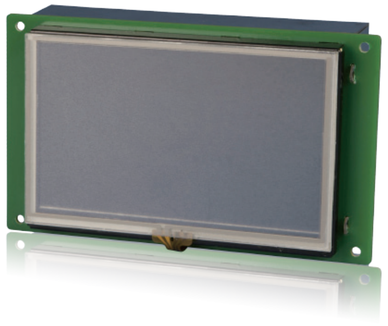
Product model		TG765-XT-C	TG765S-XT	TG765G-XT	TG765G-ZT	TG465G-ZT
Product features	Display size	7″				4.3"
	Resolution	800*480				480*272
	LCD	TFT LCD display, LED backlight				
	Display color	16.77million colors	16.77million colors	16.77 million colors	65535 colors	
	Brightness	200 cd/m^2				
	Touch panel	Four-wire resistive touch screen				
	LCD life	Above 50000 hours, ambient temperature 25°C, 24-hour operation				
	Memory	128MB	128MB	128MB	64MB	
Interface	PLC port	RS232	RS232	RS232	RS232/RS485	RS485
	Download port	/	RS232	RS232	RS232	RS232
	USB-A port	/	/	/	USB-A (USB2.0 standard), USB flash disk port	
	USB-B port	USB-B (USB2.0 standard), USB download port				
	Ethernet port	/				
Electrical features	Input voltage	DC24V (voltage range: DC22V~DC26V)				
	Consumption current	200mA				180mA
	Allowable power loss	Below 10ms (actual power loss less than 1s)			/	
	Withstand voltage shock	AC1000V, 10mA, less than 1 minute			/	
	Insulation resistance	Above10MΩ，DC500V			/	
Environment	Operation temperature	0℃～50℃				
	Storage temperature	-20℃～60℃				
	Operation humidity	10%RH-90%RH (no condensation)				
	Anti-interference ability	Voltage noise: 1500Vp-p, pulse width 1us, 1 minute				
	Air	No corrosive gas				
	Cooling mode	Natural air cooling				
	Protection level	Front cover IP65				
Dimension	External dimension (mm)	200.4*146.9*48.5	206.0*147.0*38.6	206.0*147.0*38.6	206.0*147.0*38.6	130.3*104.3*29.8
	Opening size (mm)	192.0*138.5				119.0*93.0
	Authentication	CE marked				

Embedded without border HMI

TGM(B) series

10.1” 7” 4.3”

- No front cover, rear installation, greatly reducing the installation space
- It fits closely with the surface of the equipment for better fusion
- Users can design their own mask to meet the needs of personalized customization
- It is especially suitable for vehicle, medical, testing and other applications

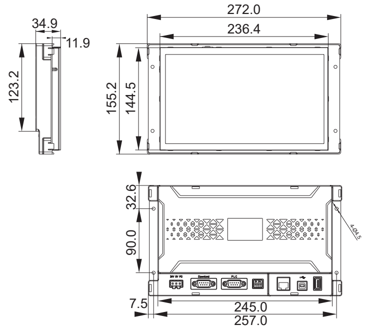


Product specification

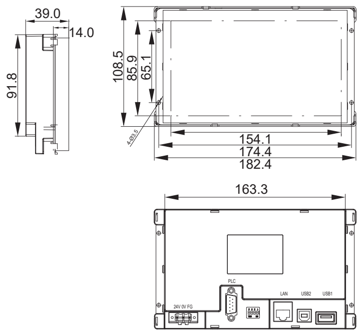
Product model		TGMA63B-ET	TGM765B-MT/UT	TGM465B
Product features	Display size	10.1"	7"	4.3"
	Resolution	1024*600	800*480	480*272
	LCD	TFT LCD display, LED backlight		
	Display color	16.77 million colors		
	Brightness	200 cd/m^2		
	Touch panel	Four-wire resistive touch screen		
	LCD life	Above 50000 hours, ambient temperature 25°C, 24-hour operation		
	Memory	128MB		64MB
Interface	PLC port	RS232/RS485/RS422		RS485
	Download port	RS232/RS485	/	RS232
	USB-A port	USB flash disk port, USB2.0 standard, ET models supportUSB		
	USB-B port	USB download port, USB2.0 standard		
	Ethernet port	Standard RJ45 port, ET models support		/
Electrical features	Input voltage	DC24V (voltage range: DC22V~DC26V)		
	Consumption current	270mA	200mA	180mA
	Allowable power loss	Below 10ms (actual power loss less than 1s)		
	Withstand voltage shock	AC1000V, 10mA, less than 1 minute		
	Insulation resistance	Above 10MΩ, DC500V		
Environment	Operation temperature	0°C～50°C		
	Storage temperature	-20°C～60°C		
	Operation humidity	10%RH～90%RH (no condensation)		
	Anti-interference ability	Voltage noise: 1500Vp-p, pulse width 1us, 1 minute		
	Air	No corrosive gas		
	Cooling mode	Natural air cooling		
	Protection level	/		
Dimension	External dimension (mm)	272.0*155.2*34.9	182.4*108.5*39.0	128.0*75.0*27.6
	Opening size (mm)	257.0*90	174.4*65.1	118.0*67.0
	Authentication	CE marked		

Appearance dimension drawing (Unit: mm)

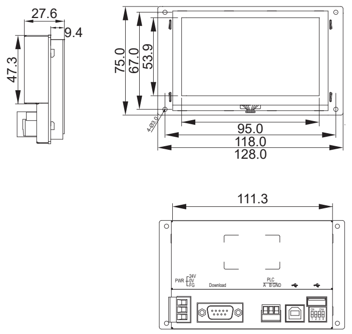
TGMA63B-ET



TGM765B-MT/ET



TGM465B



Handheld wireless HMI

MTG series

7”

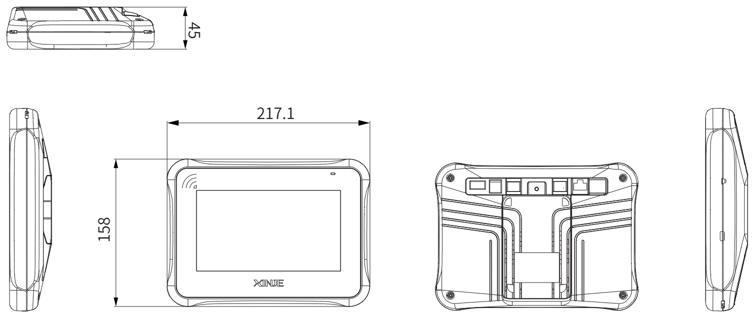
- Exquisite appearance, handheld operation, more flexible
- Built-in mobile power supply, convenient charging and long battery life
- Wireless communication with PLC, fast air transmission speed (up to 115200bps), long communication distance and strong stability

Product specification

Product model		MTG765-HT
Product specification	Display size	7.0"
	Display color	16.77 million colors
	Resolution	800*480
	Brightness	Adjustable (system register PFW100)
	Touch panel	Four-wire resistive touch panel
	Service life	Above 50000 hours, ambient temperature 25°C, 24-hour operation
	Character setting	Simplified Chinese, Traditional Chinese, English, Japanese, Russian, German, and more
	Character size	Any font and size
Memory	Memory	128MB
Screen features	Power	4W
	Charging parameters	5.0V-2.0A 9.0V-2.0A 12.0V-1.5A
	Endurance time (always on)	8 hours
	Charging time	<10 hours
Electrical features	Operation temperature	0-45°C
	Ambient humidity	10%RH-90%RH (no condensation)
	Ambient air	No corrosive gas
	Protection level	The front panel complies with IP65
	Cooling method	Natural air cooling
Structure	External dimension (mm)	217.1*158.0*36.6
Product model	PLC port (built-in)	Built-in PLC port integrated wireless communication module
	USB-A port	USB flash disk port, USB2.0 standard
	USB-B port	USB download port, USB2.0 standard
	Micro-USB	Micro-USB, USB charging port
	Ethernet port	Standard RJ45 port
	Authentication	CE marked

Appearance dimension drawing (Unit: mm)

MTG765-HT



Handheld teaching pendant

RT series 7"

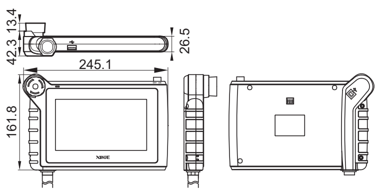
- Convenient field equipment test, widely used in manufacturing and industrial robot industry
- Fully consider the convenience of use, ergonomic holding structure, easy to hold with one hand and two hands
- The back magnet design can liberate hands and mobile operation without place limit
- All round reassuring protection, and the protection grade of the whole machine can reach IP66
- Fast and convenient programming

Product specification

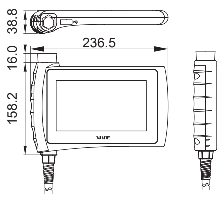
Product model		RT711	RT712	RT720	RT760
Product features	Display size	7"			
	Resolution	800*480			
	Display	16.77 million colors, TFT LCD display, LED backlight			
	Brightness	200 cd/㎡			
	Touch panel	Four-wire resistive touch panel			
	Button	20 film buttons, the function can be set freely			
	Memory	128MB			
Interface	PLC port	RS485			
	USB-A port	USB flash disk port, USB2.0 standard			
	USB-B port	USB download port, USB2.0 standard			
Electrical features	Input voltage	DC24V (voltage range: DC22V~DC26V))			
	Consumption current	200mA			
	Allowable power loss	Below 10ms (actual power loss less than 1s)			
Environment	Operation temperature	0-50°C			
	Storage temperature	-20-60°C			
	Operation humidity	10%RH-90%RH (no condensation)			
	Protection level	IP66 for the whole machine			
	Housing Material	Engineering Plastic PC+ABS			
	External dimension (mm)	161.8*245.1*26.5	174.2*236.5*38.8	163.0*245.0*60.1	191.7*270.0*85.9
	Authentication	CE marked			

Appearance dimension drawing (Unit: mm)

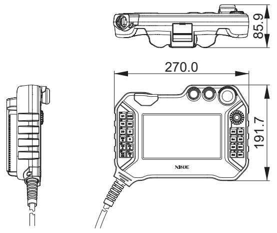
RT711



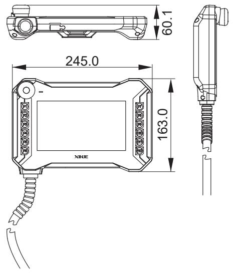
RT712



RT760



RT720



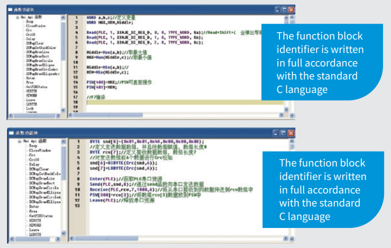
TouchWin

Rich functional components

C language function block, operation, command and communication are omnipotent

- C language function block meets more complex computing and communication needs, give full play to the system functions and better serve customers.

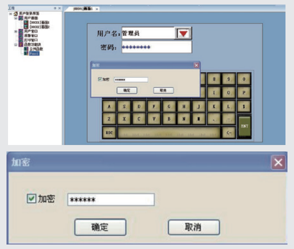
Support most standard C functions



The function block identifier is written in full accordance with the standard C language

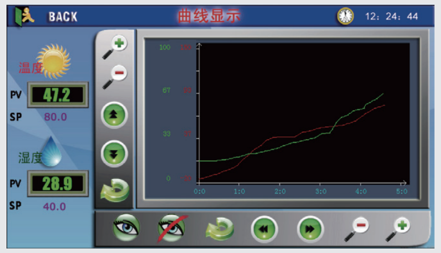
The function block identifier is written in full accordance with the standard C language

The function can be encrypted separately. You need to enter a password to view the function content, which protects the rights and interests of usersguage

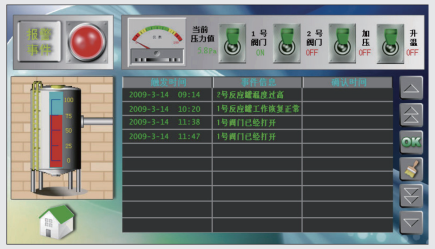


Strong data processing capability

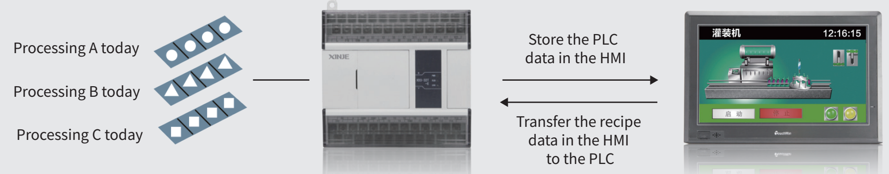
Process control data acquisition function, and the trend chart display is more intuitive



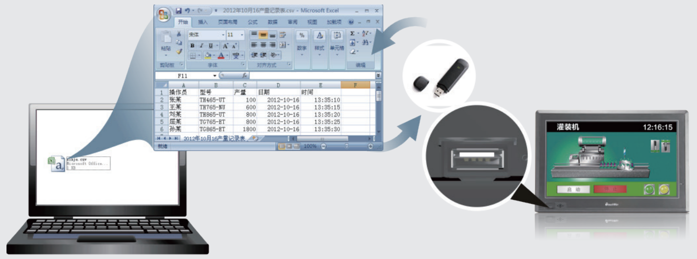
The alarm function allows the system to recover quickly



The storage and bidirectional transmission of recipe data greatly improve the work efficiency

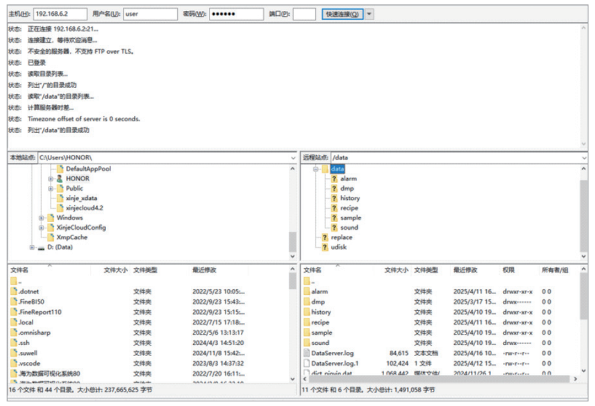

Processing A today
Processing B today
Processing C today
Store the PLC data in the HMI
Transfer the recipe data in the HMI to the PLC
灌装机
12:16:15

Export CSV format data through USB flash disk, backup important data



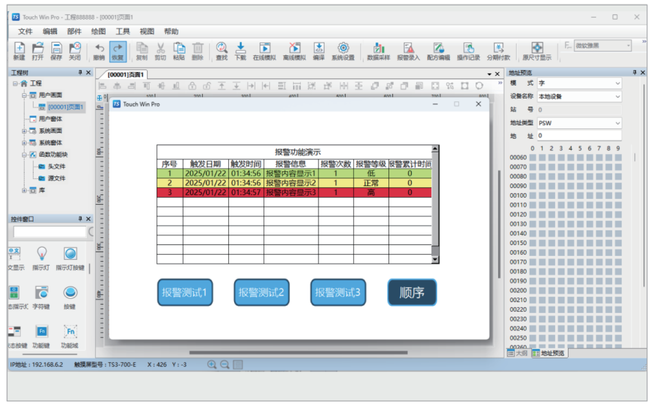
FTP File Transfer

Enables file transfer between the touch screen and a PC, allowing access to sampled data, alarm logs, and operation logs from within the touch screen. User permissions and recipe data can be modified via the FTP file replacement method.



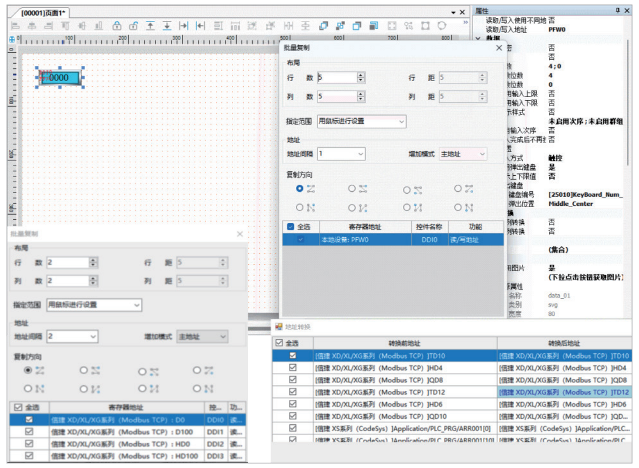
Flexible Alarm Configuration

Features a new alarm function supporting configurable flashing of alarm text and customizable background colors for alarm bars by priority level. Alarm data sorting and querying methods are more diverse.



Batch Copy, Edit, Conversion

Supports batch copying and editing of components, as well as batch address conversion. Dramatically improves efficiency—the more components, the greater time saved.



PLC
HMI
Industrial informatization
Servo system
Frequency system
Stepping system
Vision system
IOT Industrial controller

TG series general HMI

4.3-10.1inches full coverage, 8 branch products to meet a variety of interaction needs of your industrial site

Suitable for many occasions

- TG general model
- TG(G) gray ultrathin model
- TG(S) black ultrathin model

Suitable for harsh environment

- TGM(D) Site environment with severe temperature requirements

Suitable for special occasions

- TGM(B) Vehicle, medical, testing

Suitable for handheld operation

- MTG handheld wireless operation, built-in mobile power supply
- RT can be operated with one hand and two hands, which is convenient for field test equipment

Suitable for basic occasions

- TG(S/G)-XT Cost effective

High hardware configuration for higher performance

CPU	Memory	Storage	Color	Capacity
ARM9 core Main frequency 400MHz	128MB/64MB	128MB	16.77 million	4 million words Power off holding area

Download, start and run trinity ultra-high speed response

Download

USB high-speed data transmission can greatly reduce the program download time and facilitate debugging

Start

Greatly improve the startup speed and reduce the waiting time

Run

Smoother screen switching and animation effect

Flexible installation and free choice

Vertical installation or horizontal installation can be freely selected according to the actual needs of the site.

03

Industrial Informatics

Cloud Platform | Cloud Intelligent Manufacturing · XDATA
Gateway Products
4G · WIFI · Ethernet · Protocol-agnostic Transparent Transmission

智慧养殖平台
XINJE

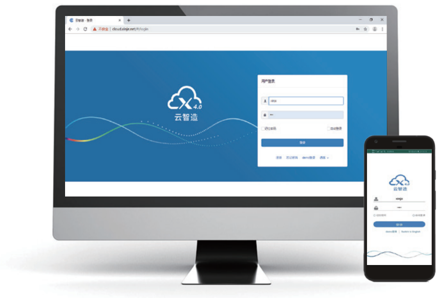
Xinje Cloud

No programming | no professional skills | create an exclusive IOT platform

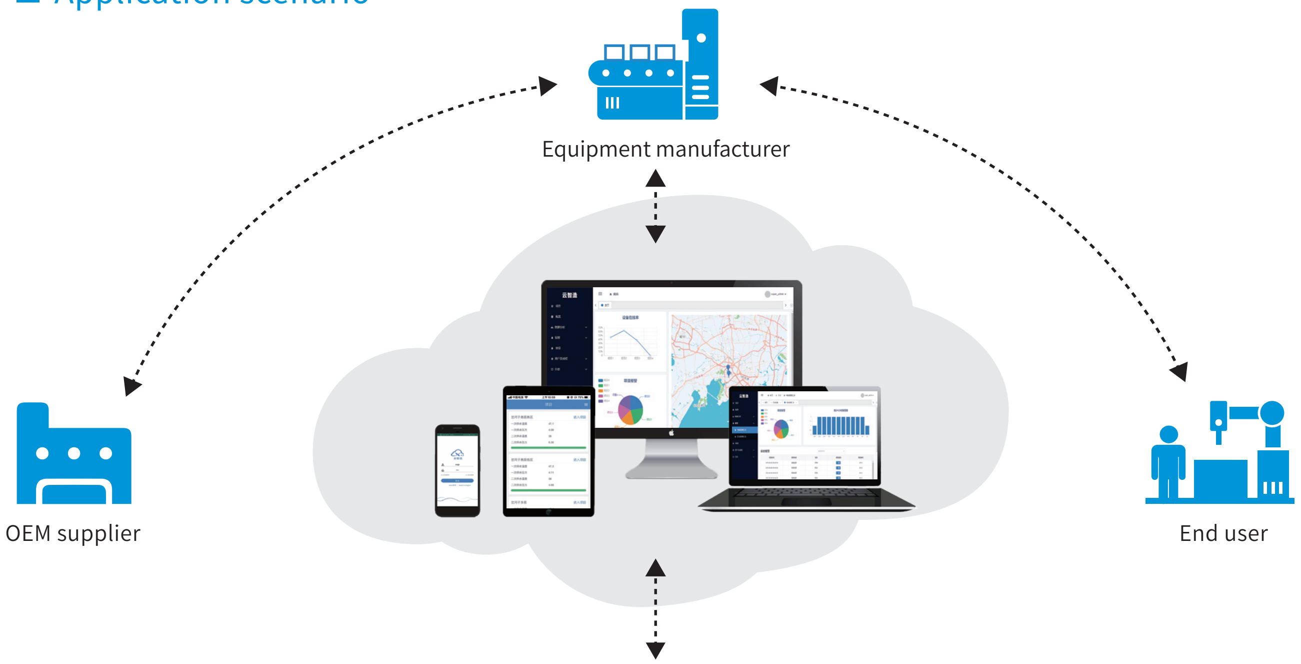
Industrial informatization solutions

Xinje Cloud is an industry application platform for remote data acquisition based on years of deep cultivation in the industry and extensive product applications. Its functions include: device access, device management, data storage, graphic configuration, data display, data analysis, user management and other parts. It supports the simultaneous monitoring of PC and mobile app.

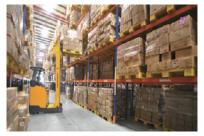
The platform is free of programming and software installation. Without professional skills, it can quickly realize the connection between products and systems and create an exclusive IOT platform. At any time, the remote data monitoring, parameter setting and function control of the equipment can be realized through web and app.



Application scenario



Smart agriculture

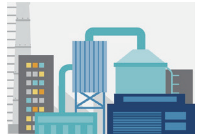


Warehousing logistics

Energy management

Animal husbandry

Smart home



Manufacturing

Equipment fault remote diagnosis and real-time monitoring

After sales reliability maintenance of equipment, such as after-sales maintenance of air compressor

Ensure the authenticity of test and detection equipment data, such as lithium battery test

Smart city construction, such as sewage treatment, waste recycling, cold storage

Smart agriculture, smart home, smart RV and other industries

Cloud V4.2.6

Overall upgrade | New functions | New experience

Remote VNC Function

Cloud-screen synchronization, enabling flexible and efficient remote control.

Alarm push

Supports SMS alarm push, app push, official account push.

Maintenance work order

Work order creation and distribution, closed-loop management of equipment operation and maintenance.

Data Analysis

Historical data, report analysis, customizable tables.

Permission management

User management, multi-level permission assignment.

Integration with Third-Party Systems

Provides interfaces for HTTP, MQTT, and other protocols, supports integration with MES, ERP, and other systems.

Cloud recipe distribution

Recipe customization, multiple methods of remote distribution.

Staging management

Staging tasks, machine locking upon expiration, convenient management.

SIM Card Management

Centralized management of IoT cards, convenient query/recharge/invoicing.

Personalized Customization

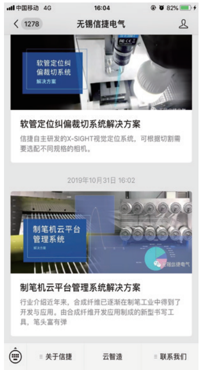
Supports local deployment of cloud platform, provides customized services.

Multiple login methods for quick registration

Add Wechat applet Cloud or scan the QR code below

Focus on Wechat official account, click Cloud menu, download app according to mobile phone system.

The PC side accesses the website http://cloud.xinje.net/ through the browser, enters the login interface, and quickly registers through the mobile phone number to log in the Cloud platform.



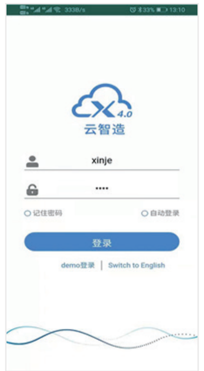
软管定位纠偏裁切系统解决方案

信捷自主研发的X-SIGHT视觉定位系统，可根据切割需要选配不同规格的相机。

2019年10月31日 16:02

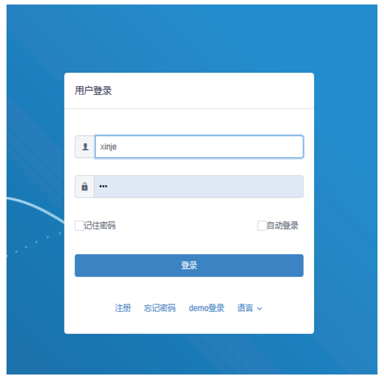
制笔机云平台管理系统解决方案

行业介绍近年来，合成纤维已逐渐在制笔工业中得到了开发与应用。由合成纤维开发应用制成的新型书写工具，笔头富有弹



xinje

○ 记住密码 ○ 自动登录



xinje

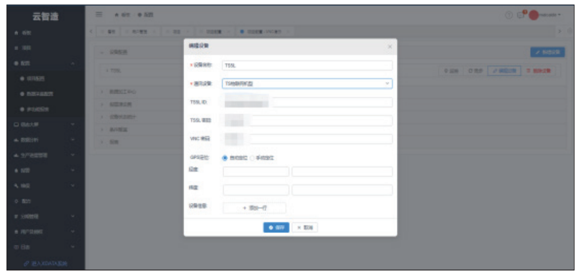
☐ 记住密码 ☐ 自动登录

Cloud V4.2.6

TS5 system HMI access

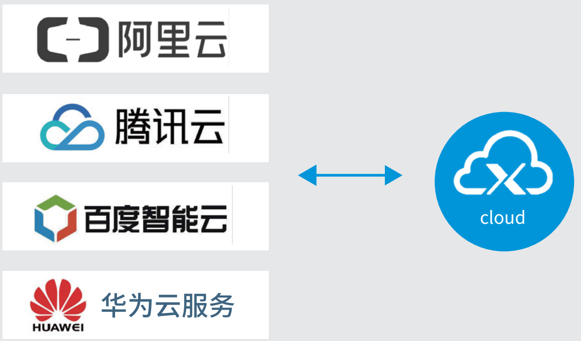
VNC Cloud and HMI synchronization control

TS5 IoT model is added to the platform access equipment, which supports VNC remote control, cloud HMI synchronization, and more flexible control.



Server deployment

The Xinje Cloud local inheritance deployment supports self-built servers and public cloud deployment. Cloud can be ported to the client's own server, we can provide customized services. Customers can build their own servers or rent third-party servers such as Alibaba cloud, Tencent cloud and Huawei cloud.



Self-built server:users need to build their own computer room, network deployment and purchase server hardware. Xinje does not provide hardware purchase, hardware installation or debugging services.The reference configuration of Xinje cloud deployment environment is shown in the following table:

Self-built server	
CPU	Intel E5 and up
Memory	8GB
Hard disk	500GB
Bandwidth	Fixed IP bandwidth 10M and up
System environment	Windows Server 2016 and above

Public cloud deployment: 188.take Alibaba cloud server as an example. It is connected to about 200 devices. The recommended configurations are as follows:

Public cloud deployment	
CPU	4-core
Memory	8GB
Hard disk	500GB
Bandwidth	5M
System environment	Windows Server 2016 and above

XDATA

“Data-Chart” Interconnection, Empowering Intelligent Manufacturing

What is XDATA?

XDATA (xdata.xinje.net) is a quick BI and data visualization tool platform launched by Xinje. It adopts BS architecture and is committed to solving the problems of data BI analysis and visualization on large screen and liberating the development manpower of data visualization system.

Data visualization through XDATA is more convenient and fast. Users don't need any programming foundation. They just need to drag and drop, which saves a lot of programming work.

Advantages of XDATA

Direct data source

Support direct connection Xinje SQL to get cloud data, uploading local Excel/csv file or connect the data through API. It can complete multi-source interaction analysis.

Drag and drop editing

Use the visual editor, what you see is what you get, drag and drop to generate a visual page, so that you can easily edit without writing code.

BI self service analysis

Both the report and the large screen support data table modeling, dragging fields to bind data, as well as flexible interaction such as filtering, drilling and linkage, so that you can easily conduct in-depth data mining.

Rich charts

Provide 30 + Echarts visualization charts based on Xinje cloud and 10 + filtering components, support professional GIS visualization and custom icon effects, and fully meet your diversified visualization needs.

Cool big screen

We integrate BI report and large screen functions, and provide multiple sets of cool large screen templates, guiding users to quickly build an intelligent data dashboard.

Authority control

Enterprise organization level management, including project space isolation, role and user-based authorization mechanism, flexible setting of resource operation authority and data authority, so as to fully ensure your data security.

How to use XDATA

Add the data source → **Create data model** → **Make large screen** → **Preview/share**

Add the data source
[data mangement]-[data source]
Connect to Xinje cloud database or local csv file

Create data model
[data mangement]-[data model]
Secondary processing and visual modeling of all data tables under the data source

Make large screen
[data large screen]-[new data large screen]
All kinds of data visualization components build a large screen with low cost and high efficiency

Preview/share
[large screen space]
Build a large screen and share it with other users through public/private connection

A-BOX series

ALL in one

Full coverage of 4G, WIFI, Ethernet, Powerful functions

Function features

Various Internet access modes

Support 4G, WIFI, Ethernet modes to access Internet. It is equipped with 4G routing function, supports WiFi, Ethernet port equipment to access the Internet.

Support Remote Transparent Transmission & Data Monitoring

In the remote transparent transmission mode, it supports the function of upload/download programs for PLC, HMI and other devices.
In the data monitoring mode, it supports more devices to access the cloud platform to realize data remote monitoring.

Stronger compatibility and support multiple device access

Support Siemens, Mitsubishi, Omron and other mainstream brands PLC.
Support industrial control equipment to access through serial port, Ethernet port and USB port to realize networking communication between various devices.
Support multiple serial communication modes: RS232, RS485, RS422.
Support MQTT, OPC DA, Modbus TCP Server, etc.

Humanized design, easy to use

Long lasting online, with disconnection redial and watchdog functions.
Support GPS and base station assisted positioning.
Support Modbus-TCP Server, easy to be networking.
Support two-way read-write function and machine locking function.
Support MQTT protocol and message caching function.

Application scenario

After sales service of remote equipment

HVAC refrigeration

Manufacturing

Warehousing logistics

Smart agriculture, breeding

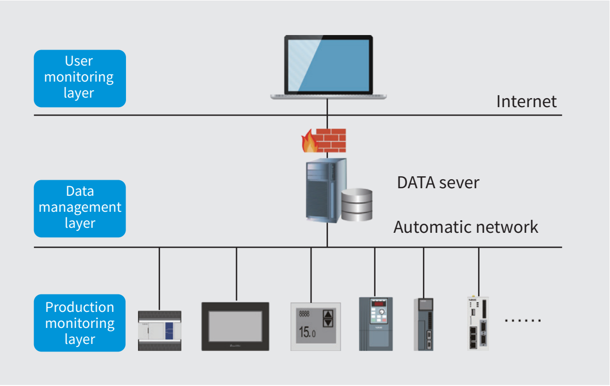
Sewage disposal

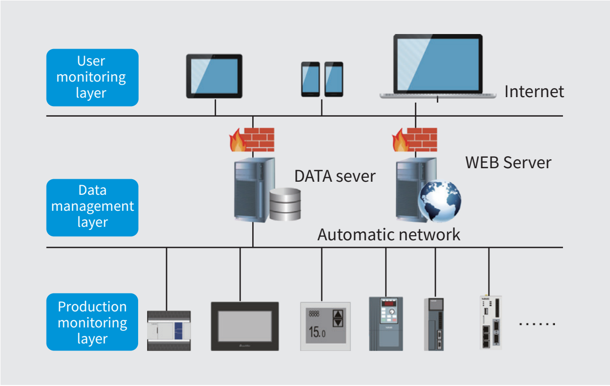
Smart building

Power monitoring

Network topology

- Achieve remote monitoring and program upload/download for controllers via ABOX


User monitoring layer
Internet
DATA sever
Data management layer
Automatic network
Production monitoring layer
……

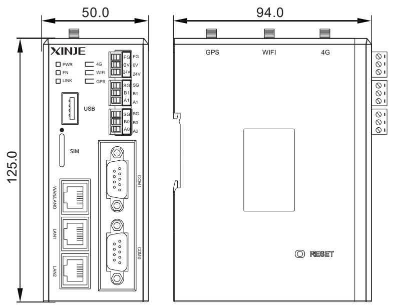

User monitoring layer
Internet
DATA sever
WEB Server
Data management layer
Automatic network
Production monitoring layer
……

Specifications

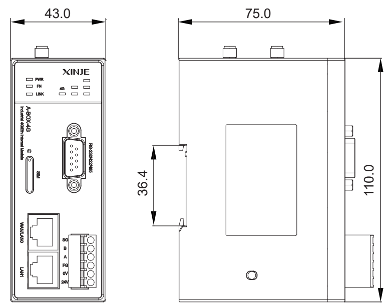
Model	A-BOX	A-BOX-U	A-BOX-4G	A-BOX-W
COU	MT7628			
FLASH	16MB SPIF FLASH			
RAM	128MB			
Working voltage	DC2V, allowed range is DC21.6V~26.4V			
Installation method	Standard guide rail installation			
4G module	EC20-CE		EC200N-CN	--
4G operating frequency band	GSM/GPRS：900、1800MHz EDGE：900、1800MHz UMTS：CDMA2000（BC0）、WCDMA（B1、B8）、TD-SCDMA（B34、B39） LTE：FDD（B1、B3、B8）TDD（B38、B39、B40、B41） GNSS：GPS、GLONASS			--
WIFI operating frequency band	2.4GHz		--	2.4GHz
Ethernet	Three 10/100M adaptive ports		Two 10/100M adaptive ports	
COM port	COM0:RS232/RS485 COM1:RS232/RS485/RS422		COM:RS232/RS485/RS422	
USB port	USB Host interface		--	
Internet access mode	4G/WIFI/Eth	4G/WIFI/Eth	4G/Eth	WIFI/Eth
Serial port transparent transmission	√	√	√	√
Ethernet port transparent transmission	√	√	√	√
USB transparent transmission	--	√	--	--
GPS positioning	√	√	--	--
Data monitoring	√	√	√	√

Dimension (Unit: mm)

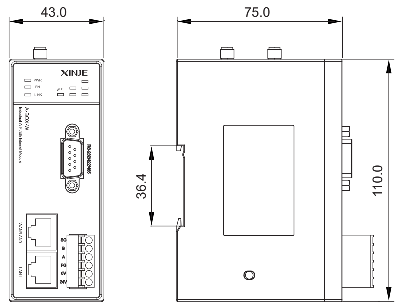
A-BOX (-U)


50.0
94.0
125.0
XINJE
PWR
FN
LINK
4G
WIFI
GPS
USB
SIM
FG
0V
24V
SG
B1
A1
SG
B0
A0
COM1
COM0
WAN/LAN0
LAN1
LAN2
GPS
WIFI
4G
RESET

A-BOX-4G


43.0
75.0
36.4
110.0
XINJE
PWR
FN
LINK
4G
A-BOX-4G
SIM
WAN/LAN0
LAN1
SG
B
A
FG
0V
24V

A-BOX-W


43.0
75.0
36.4
110.0
XINJE
PWR
FN
LINK
WIFI
A-BOX-W
WAN/LAN0
LAN1
SG
B
A
FG
0V
24V

S-BOX-HT

Protocol free, ultra short distance transmission

The S-BOX-HT series wireless transparent transmission module is a short-range wireless communication module based on wireless RF technology. The equipment data is transmitted transparently and supports the controller brands including Xinje, Delta, Mitsubishi, Omron, PPanasonic etc. It is widely used in field equipment networking communication and wireless HMI communication to realize short-distance wireless communication of automation system. The supporting wireless HMI model is MTG765-HT.

Support equipment

XINJE

MITSUBISHI ELECTRIC

OMRON 欧姆龙

DELTA 台达 中达电通股份有限公司

Panasonic

FATEK®

Product features

Carrier frequency rang

The radio frequency module S-BOX-HI is based on 433MHz Carrier Frequency Band, and the farthest communication distance can reach 2km

Rich interface modes

Support RS232, RS485, RS422, can connect various brands of PLC

Multi-channel optional

84 channels are available, which can be adjusted by users according to the actual situation on site

Communication parameters

Serial port parameters can be set according to different PLC

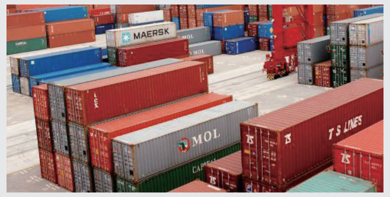
Multi-section adjustable speed

In order to meet the needs of on-site transmission distance, the air rate (4800~62500bps) can be adjusted conveniently through external dialing

I/O mode

Short distance calling and answering can be realized through I/O mode

Application scenario


Container information management

Wireless meter reading, wireless sensor

Power high temperature and high voltage monitoring

Automatic data acquisition

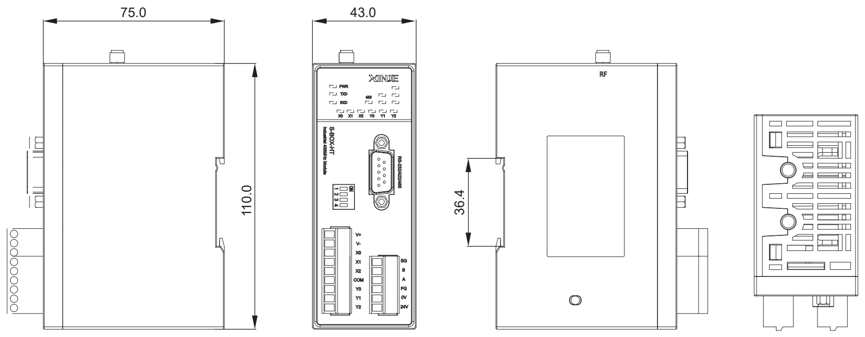
Industrial control, telemetry, remote sensing

POS system, asset management

Building community automation and security

Dimension (Unit: mm)

S-BOX-HT



IOT card

IOT card is a special flow card provided by telecom operators for the Internet of things. It adopts the special signal segment and special network element equipment of the Internet of things, which has the characteristics of safer and more efficient communication.

Xinje IOT card is applicable to all Xinje gateway products of 4G communication. It can provide functions such as querying the binding information of IOT card serial number, IOT card renewal, traffic usage, order invoicing and so on.

| Product features

Basic service

IOT card supports China mobile, China telecom and China unicom telecom operators, and the basic traffic package is 2G/12G every year

Exclusive card number

Click on a single device and the SIM card information of a single device will be displayed. The card does not belong to Xinje account name cannot be queried

Flow alarm

The threshold of flow can be set. When the remaining flow drops to the threshold, an alarm can be sent through SMS or software

Renewal query

When the balance in the card is insufficient, you can recharge/renew it, with a variety of plans to choose from.

Invoice center

Users can query the recharge status of the card in the management tool and issue invoices

Batch query

Users can check the binding relationship between the gateway and the card number/ICCID, card status, network status and flow usage on the SIM card management page

Machine card binding, directional IP

When the card is inserted and activated, it can be bound with the equipment. Replace the equipment and stop the card to ensure the safety of the equipment. Exclusive orientation, access to Xinje server only

Scope of use

Go through in China, please consult us for other regions

| Application scenario

Sewage disposal

Smart agriculture

Remote meter reading

Sluice management

Equipment positioning

Water quality monitoring

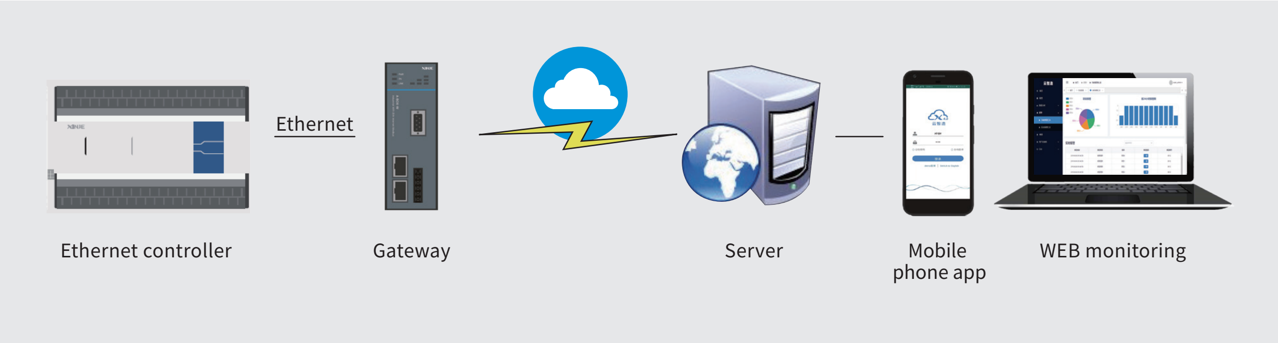
Smart city

Mechanical heavy industry IoT

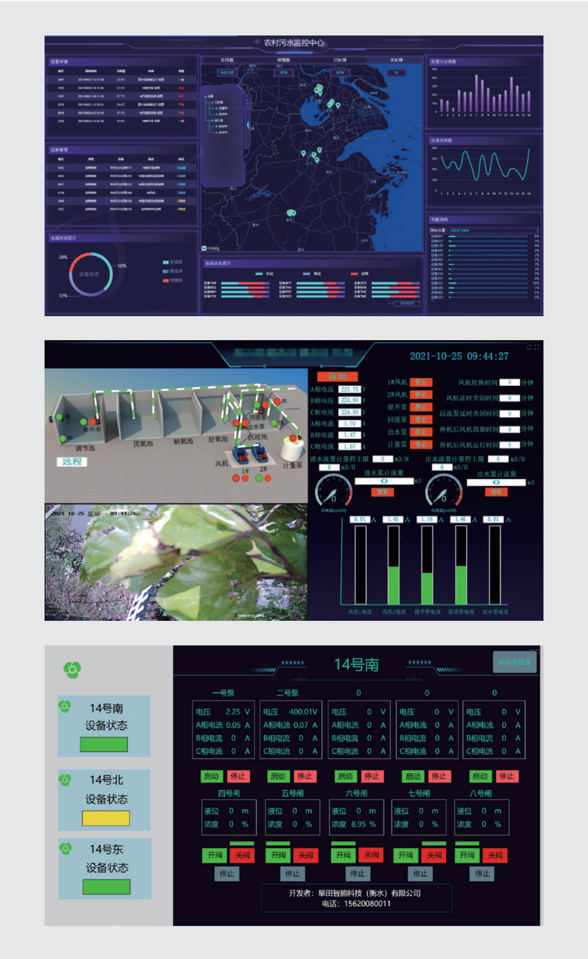
Distributed multi-site operation and maintenance solution

Traditional distributed site operation and maintenance commonly faces problems such as difficult equipment management, high reliance on personnel, and data silos., Xinje combined with modern sensing technology, automatic control technology, network transmission technology, data information and so on, launched a multi-site operation and maintenance solution. The solution integrates data acquisition, remote monitoring, intelligent alarms, equipment control, operation and maintenance management, data traceability, and BI analysis into a centralized management system.This effectively achieves the core objectives of unattended operation and cost reduction with increased efficiency.

Currently, the solution has been widely applied in multiple fields such as, smart agriculture, breeding and animal husbandry, water valve monitoring, fog pile monitoring, salt farm management, HVAC station management, etc.



| Xinje Cloud application



Multiple background variables

The same screen can be used for the control of multiple stations to reduce the difficulty and workload of screen structure. All field devices can be listed on the left and click switch to view the status of each station.

Combined control

Combined with the operation habits of on-site users, it provides the function of secondary structure screen, and implements the combined control of remote operation and local operation. It is simple and easy to understand, and the operators can learn it as soon as they learn. There is no hardware conflict between local and remote.

Multi-screen monitoring

On the same page, the on-site operation environment of multiple stations can be monitored at the same time through the SCADA and camera.

Intelligent early warning

Real time monitor the key indicators. Abnormal alarm has alarm prompts of web page voice, mobile phone messages, WeChat official account and so on. Remote operation of equipment and remote reset can be done.

Multilevel management

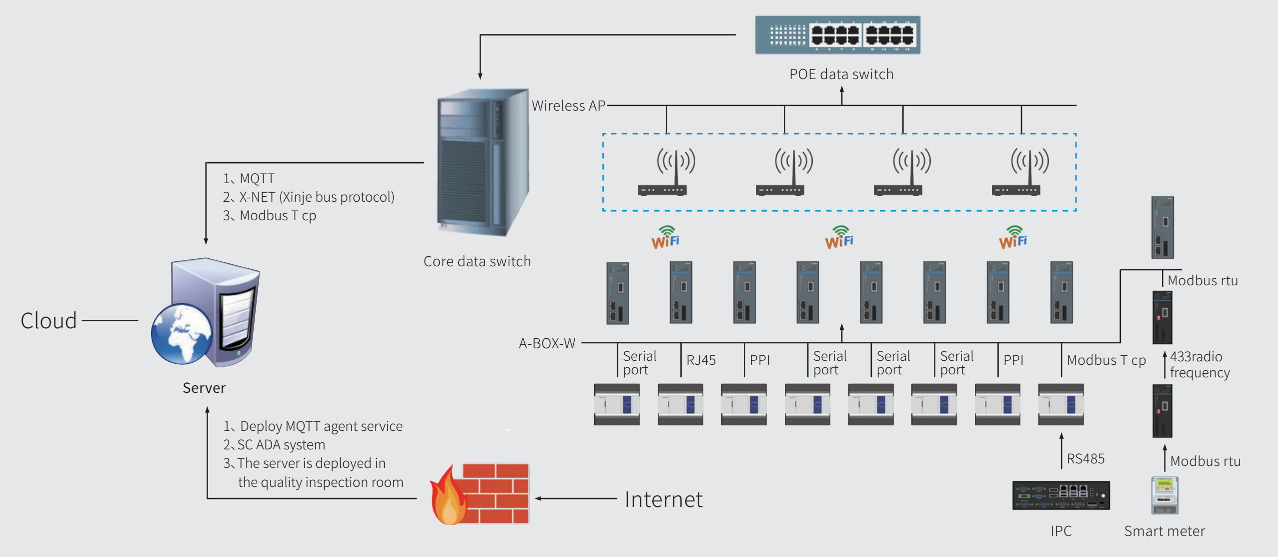
Realize the distribution management of equipment by region or personnel, and realize the management stations of mobile phone, computer and applet.

Standard protocol

It can provide the third party with data of equipment operation, maintenance, processing results and so on. including on-site collected data,

Workshop multi-equipment centralized operation and maintenance management scheme

Precisely associate devices with specific production lines, and the system automatically counts device data per line. Accurately track and compare the output data of each line, integrate equipment and production performance, and identify high-efficiency, high-quality production lines to support lean management.


POE data switch
Wireless AP
1、MQTT
2、X-NET (Xinje bus protocol)
3、Modbus T cp
Core data switch
Cloud
Server
A-BOX-W
Serial port
RJ45
PPI
Serial port
Serial port
Serial port
PPI
Modbus T cp
Modbus rtu
433radio frequency
Modbus rtu
RS485
IPC
Smart meter
1、Deploy MQTT agent service
2、SC ADA system
3、The server is deployed in the quality inspection room
Internet

Xinje Cloud application

Device management

Precisely associate devices with specific production lines, and the system automatically counts device data per line. Accurately track and compare the output data of each line, integrate equipment and production performance, and identify high-efficiency, high-quality production lines to support lean management.

Production Capacity Analysis

Create, edit, and save project tasks. Subsequently, based on custom distribution conditions, distribute the projects to machines and save key information.

Operation and Maintenance Management

Create and maintain equipment maintenance plans. Generate repair work orders upon failure, track the entire handling process, forming a traceable closed loop.

Task Dispatch

Support the creation, editing, and storage of project tasks. Users can preset dispatch rules, and the system automatically dispatches tasks as work orders to specified devices, recording key process data for later traceability.

Data monitoring

Customize data dashboards, integrate with real-time video, achieving centralized monitoring and flexible presentation of various production line equipment status.

Alarm Records

Immediate fault alarms, automatic data recording, in-depth analysis of downtime causes, precise bottleneck identification, building an improvement loop from passive response to active optimization.

04

Servo System

DS6 High-performance Servo | DS5□2 General-purpose Servo
DM6C Multi-axis Servo Drive | DL6 Direct-drive Servo
iMF5N Integrated Low-voltage Servo Drive | MS6 Motor

Servo system overview

High-Performance Servo System

The compact servo system currently has 6 subseries of products, including pulse type and bus type. In addition to all the functions of the universal series, its outstanding advantage lies in integrating minimalist commissioning, a compact structure, and multiple safety protections to achieve high-precision, high-response, and high-reliability intelligent control.

Suitable for fields such as 3C, lithium battery, photovoltaic, and semiconductor.

Compatible motor: MS6 series.

Bus type	DS6C	0.1kW~7.5kW	EtherCAT
	DS5C2	0.1kW~32kW	EtherCAT
	DS5P	0.1kW~7.5kW	PROFINET
Pulse type	DS6K	0.1kW~7.5kW	Modbus
	DS5L2	0.1kW~3kW	Modbus
	DS5K2	0.1kW~32kW	Modbus

Multi-Machine Drive Servo System

DM6C 0.4kW~160kW

The multi-axis servo system currently has one subseries, which has multiple advantages such as high dynamic response, space saving, high efficiency and energy saving, flexible configuration, and high protection. It comes standard with STO function and independent supply of 24V control electricity, making it safer and more reliable.

Suitable for fields such as printing and packaging, forging machines, wire cutting, silicon semiconductor, laser cutting, etc.

Compatible motor: MS6 series.

Rectifier Unit	DM6	22kW~160kW	
Inverter Unit			
Bus type	DM6C	0.4kW~120kW	EtherCAT

Linear drive servo system

The linear drive servo system currently has one subseries, equipped with long line drive, frequency division output, position comparison output, probe function, motor temperature sampling and other functions. It comes standard with multiple protection functions such as dynamic braking, STO safety torque off, overcurrent protection, etc. The introduction of a new gantry synchronization algorithm ensures the high synchronization of the two axes during operation. The new TYPE-C debugging port and positioning accuracy compensation function help achieve higher absolute positioning accuracy.

Suitable for applications such as lithium battery stacking, die bonder, optical inspection platforms, UV printing, etc.

Suitable motor: Linear motor.

Bus type	DL6	2.8A~6A	EtherCAT

Low voltage servo system

The iMF5N series is a highly integrated low-voltage servo drive and motor unit, designed specifically for automation scenarios with stringent requirements on space, reliability, and integration convenience. It combines advanced servo control technology with a compact physical structure, delivering outstanding motion control performance under low-voltage DC power supply.

Bus type	iMF5N	0.1kW~0.75kW	CANopen

*Note: For currently produced models, refer to the subsequent model list. Some models are under development, stay tuned.

High performance servo system

Excellent performance, safe and reliable, convenient and easy to use, compact size

XINJE
DS5L2
DS5K2
DS6C

DS6 Series High-performance Servo Drive

Analysis of Industry Pain Points

Frequent Failures and Low Reliability

Difficulty in troubleshooting failures impacts Overall Equipment Effectiveness (OEE) and production continuity, leading to significant economic losses.

编码器故障
过流、过载、过压

Limited Space Restricting Design

Bulky electrical components often become a bottleneck in equipment structural design, limiting innovation in miniaturization and modularity.

Complex Wiring and Low Efficiency

This has become one of the main bottlenecks affecting production cycle time and installation reliability.

Complex and Lengthy Commissioning

Tight delivery schedules and high labor costs mean lengthy commissioning cycles directly impact equipment delivery and payment collection.

Harsh Environment Poses Significant Challenges

Standard drives are prone to failure due to dust and moisture ingress, reducing equipment reliability.

Lack of Certification Hinders Export

Equipment manufacturers targeting overseas high-end markets or specific industries (e.g., automotive, lithium battery) may fail to obtain whole-machine certification, losing market access.

CE
c UL us
LISTED
TÜV SÜD

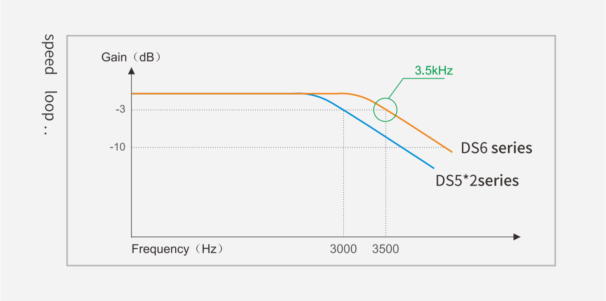
Product Features

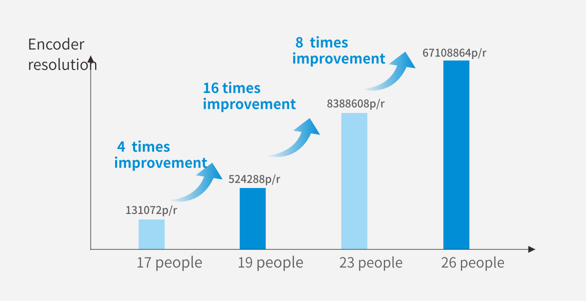
Outstanding Performance

Ultra-fast Response, Precision That Shadows Your Every Move

3.5kHz speed loop bandwidth and 125μs high-speed synchronization cycle enable precise multi-axis motion control.

Advanced control algorithms, paired with self-developed 23-bit/26-bit high-resolution absolute encoders, balance high-speed operation with positioning accuracy, delivering ultra-fast response and exceptionally smooth, jerk-free motion.



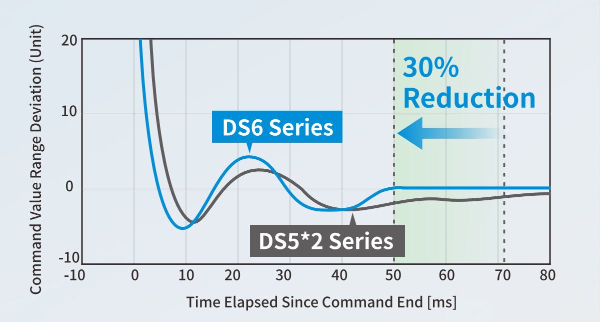


DS6 Series High-performance Servo Drive

Simplified Operation and Maintenance

One-touch Commissioning, Intelligent and Precise Control

Integrating advanced self-tuning, adaptive control, automatic inertia identification, and automatic vibration suppression functions, making commissioning smarter and more efficient.

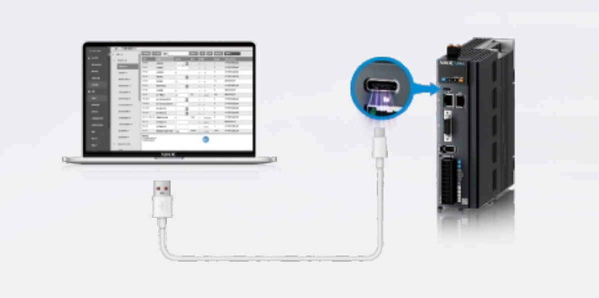


Human-centric Design

Second-level Installation, Efficiency Revolutionized

Utilizing cage-clamp, tool-less terminals significantly improves wiring efficiency, saving time and effort during installation and maintenance.

Standard Type-C interface supports parameter reading/writing and firmware upgrade in USB power supply mode, offering convenience and peace of mind.



Full-feature Integration

One Machine, Multiple Capabilities, Flexible Application

Bus Models: Feature frequency division output as standard.

Pulse Models: Integrate long-line driver, frequency division output, full-closed loop, and analog interface to meet diverse requirements.

3C

Lithium Battery

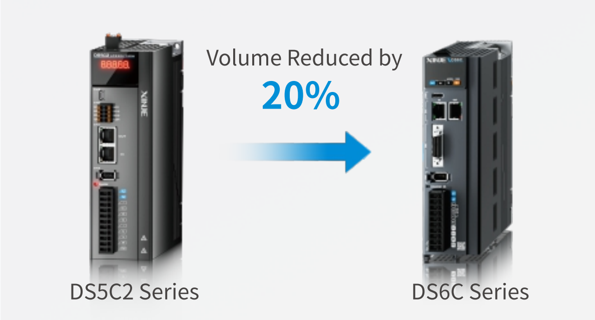
Photovoltaic (PV)

Semiconductor

Compact Structure

Small Size, Saves More Space

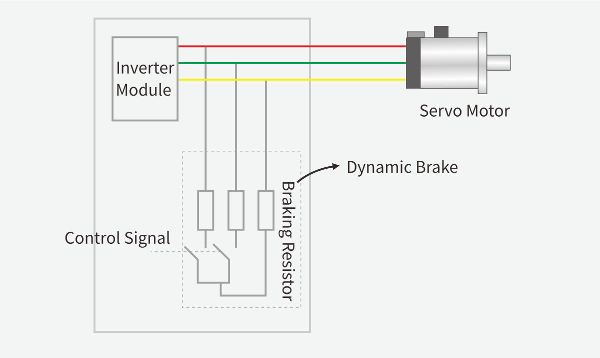
The 750W model's volume is reduced by 20% (compared to the previous generation), saving equipment installation space and facilitating high-density production line integration.



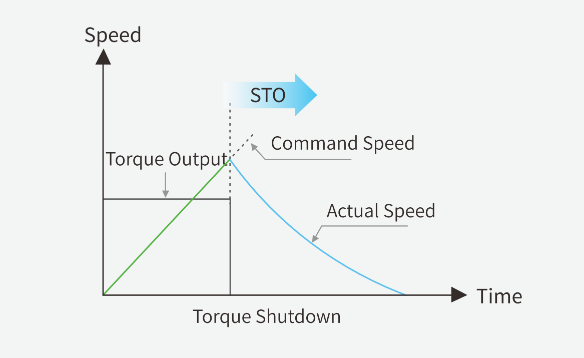
Safety Guardian

Multiple Protections, Worry-free Operation

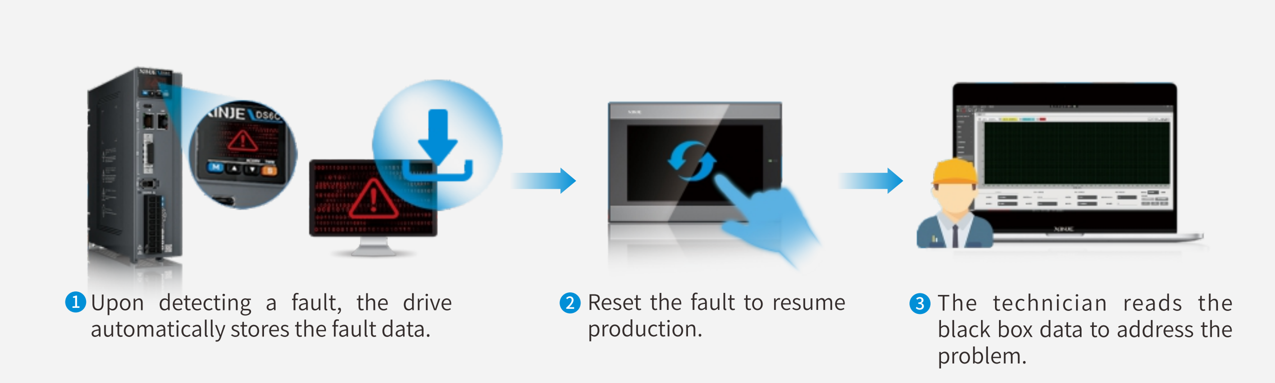
Equipped with dynamic braking as standard and optional STO (Safe Torque Off), reducing the risk associated with emergency stops.



Multiple protection mechanisms (overvoltage, overcurrent, overheating, etc.) and an ultra-low failure rate ensure continuous and stable equipment operation.



The Black Box Traceability System automatically captures operational data at the moment of failure, pinpoints issues, and assists technicians in rapid diagnosis.



① Upon detecting a fault, the drive automatically stores the fault data.

② Reset the fault to resume production.

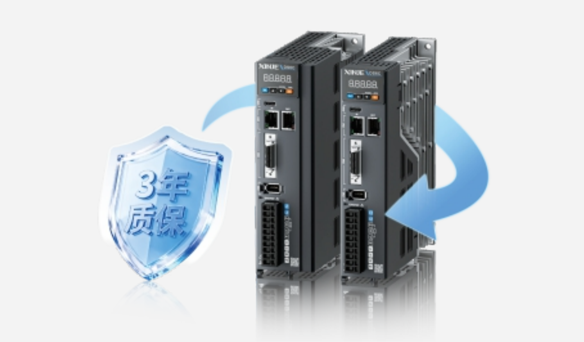
③ The technician reads the black box data to address the problem.

Comprehensive Certifications

The DS6 series servo drive standard model supports CE certification (for the EU) by default. Functional safety models additionally support UL certification (for the USA) and STO certification.

Quality Assurance

Three-year Warranty, Worry-free After-sales Service



Naming rules

DS6 Servo Drive Naming Convention

DS6 □- □ □P □-FH

① ② ③ ④ ⑤

① Name

Symbol	Product Series
DS6	DS6 Series Servo Drive

② Type

Symbol	Product Type
K	Standard Pulse Type
C	EtherCAT Bus Type

③ Voltage Specification

Symbol	Rated Input Voltage
2	AC220V
4	AC380V

⑤ Product Type

Symbol	Optional Feature
Default	Standard Type
FH	High Protection Type
FS	STO Functional Safety Type

④ Drive Power Rating

Symbol	Rated Output Power (kW)	Symbol	Rated Output Power(kW)
0P1	0.1	2P3	2.3
0P4	0.4	2P6	2.6
0P7	0.75	3P0	3.0
1P0	1.0	5P5	5.5
1P5	1.5	7P5	7.5

DS6 Series Drive Model Overview

Series / Power [kW]	DS6C Series High-performance Edition	DS6K Series High-performance Edition *Under Development
0.1	DS6C-20P1	DS6K-20P1
0.4	DS6C-20P4	DS6K-20P4
0.75	DS6C-20P7	DS6K-20P7
1.0	DS6C-21P0	DS6K-21P0
1.5	DS6C-21P5	DS6K-21P5
2.3	DS6C-22P3	DS6K-22P3
2.6	DS6C-22P6	DS6K-22P6
1.0	DS6C-41P0	DS6K-41P0
1.5	DS6C-41P5	DS6K-41P5
2.3	DS6C-42P3	DS6K-42P3
3.0	DS6C-43P0	DS6K-43P0
5.5	DS6C-45P5	DS6K-45P5
7.5	DS6C-47P5	DS6K-47P5

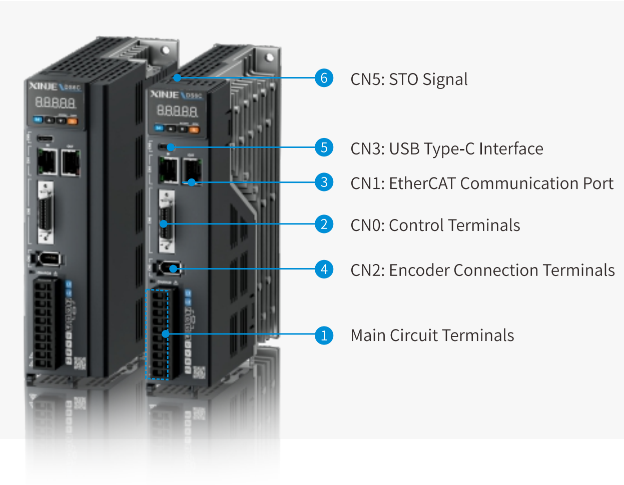
DS6 Series Drive Specifications Overview

DS6 Drive Specifications

Function	Control Mode				Control Method								
	Position Control	Speed Contro	Torque Control	Bus Control	Pulse	Long-line Driver	Analog Input	External Displacement Sensor	ABZ Differential Feedback	USB	RS485	SI Input	SO Output
EtherCAT Type DS6C Series	●	●	●	●				●	●	●		7	4
Standard Type DS6K Series	●	●	●		●	●	●	●	●	●	●	8	6

Main Circuit Terminal Definitions

DS6C Series


⑥ CN5: STO Signal
⑤ CN3: USB Type-C Interface
③ CN1: EtherCAT Communication Port
② CN0: Control Terminals
④ CN2: Encoder Connection Terminals
① Main Circuit Terminals

① Main Circuit Terminal Definitions

DS6C-20P1/20P4

Terminal	Function	Description
L1、L2	Main Circuit Power Input Terminals	Single-phase AC 200~240V, 50/60Hz
●	Empty Pin	/
P+、C	Use External Regenerative Resistor	Connect the regenerative resistor to terminals P+ and C; P0-25 = Power Value, P0-26 = Resistance Value
U、V、W、PE	Motor Connection Terminals	Connect to the motor

DS6C-20P7

Terminal	Function	Description
L1、L2	Main Circuit Power Input Terminals	Single-phase AC 200~240V, 50/60Hz
●	Empty Pin	/
P+、D、C	Use External Regenerative Resistor	Short-circuit terminals P+ and D, and disconnect P+ and C
	Use External Regenerative Resistor	Connect the regenerative resistor to terminals P+ and C, and remove the short-circuit wire between P+ and D; P0-25 = Power Value, P0-26 = Resistance Value
●	Empty Pin	/
U、V、W、PE	Motor Connection Terminals	Connect to the motor

DS6C-45P5/47P5

Terminal	Function	Description
R、S、T	Main Circuit Power Input Terminals	Three-phase AC 380~440V, 50/60Hz
P+、D、C	Use External Regenerative Resistor	Connect the regenerative resistor to terminals P+ and C, and remove the short-circuit wire between P+ and D; P0-25 = Power Value, P0-26 = Resistance Value
P+、N-	DC Bus Terminals	Measure the real-time voltage of the DC bus. Please be aware of the danger.
U、V、W	Motor Connection Terminals	Connect to the motor *OE: The ground wire is on the heatsink. Please check before powering on.
⏚	Grounding Terminal	Connect to the motor grounding terminal for grounding.

DS6C-21P0/21P5/22P3/22P6

Terminal	Function	Description
L1、L2、L3	Main Circuit Power Input Terminals	Three-phase AC 200~240V, 50/60Hz
P+、D、C	Use External Regenerative Resistor	Short-circuit terminals P+ and D, and disconnect P+ and C
	Use External Regenerative Resistor	Connect the regenerative resistor to terminals P+ and C, and remove the short-circuit wire between P+ and D; P0-25 = Power Value, P0-26 = Resistance Value
P+、N-	DC Bus Terminals	Measure the real-time voltage of the DC bus. Please be aware of the danger.
U、V、W	Motor Connection Terminals	Connect to the motor *OE: The ground wire is on the heatsink. Please check before powering on.
⏚	Grounding Terminal	Connect to the motor grounding terminal for grounding.

DS6C-41P0/41P5/42P3/43P0

Terminal	Function	Description
R、S、T	Main Circuit Power Input Terminals	Three-phase AC 380~440V, 50/60Hz
P+、D、C	Use External Regenerative Resistor	Short-circuit terminals P+ and D, and disconnect P+ and C
	Use External Regenerative Resistor	Connect the regenerative resistor to terminals P+ and C, and remove the short-circuit wire between P+ and D; P0-25 = Power Value, P0-26 = Resistance Value
P+、N-	DC Bus Terminals	Measure the real-time voltage of the DC bus. Please be aware of the danger.
U、V、W	Motor Connection Terminals	Connect to the motor *OE: The ground wire is on the heatsink. Please check before powering on.
⏚	Grounding Terminal	Connect to the motor grounding terminal for grounding.

② CN0 Port

Pin Number	Name	Description	Pin Number	Name	Description
1	SO1+	High Current Output Terminal1	14	+24V_OUT	Internal 24V external output, maximum 200mA
2	SO1-	High Current Output Terminal 1	15	+24V_COM	Internal 24V external output, maximum 200mA
3	SO2+	Output Terminal 2	16	GNDD	Frequency Division Ground
4	SO2-	Output Terminal 2	17	EXTA+	Shared Interface for Frequency Division and Full Closed Loop
5	/	/	18	EXTA-	
6	+24V_in	Input Terminal+24V	19	EXTB+	
7	SI1	Input Terminal1（High Speed）	20	EXTB-	
8	SI2	Input Terminal2（High Speed）	21	EXTZ+	
9	SI3	Input Terminal3	22	EXTZ	
10	SI4	Input Terminal4	23	SO3+	Output Termina3
11	SI5	Input Terminal5	24	SO3-	Output Termina3
12	SI6	Input Terminal6	25	SO4+	Output Termina4
13	SI7	Input Terminal7	26	SO4-	Output Termina4

③ CN1 Port

Pin Number	Name	Description
1	TX A+	TRANSMIT A+
2	TX A-	TRANSMIT A-
3	RX A+	RECEIVE A+
4	/	/
5	/	/
6	RX A-	RECEIVE A-
7	/	/
8	/	/
9	TX B+	TRANSMIT B+
10	TX B-	TRANSMIT B-
11	RX B+	RECEIVE B+
12	/	/
13	/	/
14	RX B-	RECEIVE B-
15	/	/
16	/	/

④ CN2 Port

DS6C Series 0.1~7.5kW

Pin Number	Name
1	5V
2	GND
3	/
4	/
5	485-A
6	485-B

⑤ CN3 (USB Type-C Interface)

Number	Name	Number	Name
A1	GND	B1	GND
A4	USB-VBUS	B4	USB-VBUS
A6	USB-D+	B6	USB-D+
A7	USB-D-	B7	USB-D-
A9	USB-VBUS	B9	USB-VBUS
A12	GND	B12	GND

⑥ CN5 (STO Signal)

Name	Description
1	EDM+
2	24V
3	STO1
4	EDM-
5	COM
6	STO2

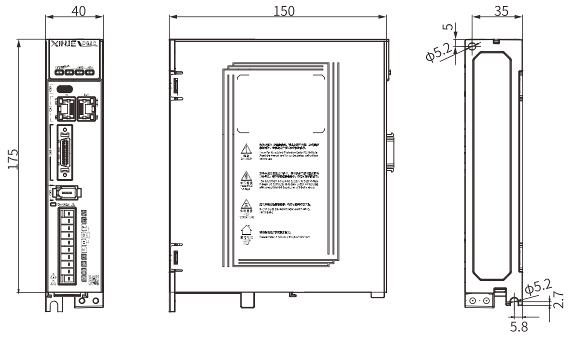
Technical Specifications

| DS6 Series Drive Technical Specifications

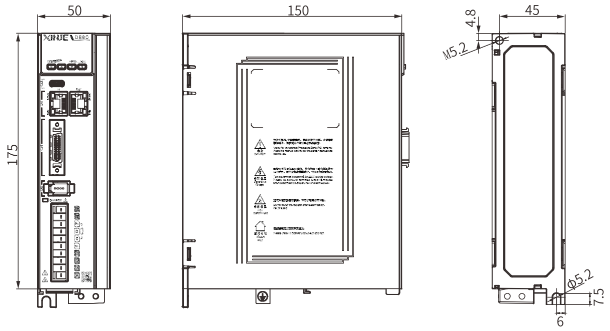
Item			DS6C Bus Type Servo
Basic Specifications		Power Range	0.1kW-7.5kW
		Input Power	Single-phase/Three-phase AC200~240V, 50Hz/60Hz: Three-phase AC380V~440V, 50Hz/60Hz
		Encoder Feedback	23-bit/26-bit Communication-type Encoder
		Control Method	Three-phase Full-wave Rectification IPM, PWM Control
		Control Mode	Position Mode, Speed Mode, Torque Mode
	Usage Environment	Operating Temperature	-10°C~55°C (When ambient temperature is between 45°C~55°C, average load factor must not exceed 80%)
		Storage Temperature	-20~65°C
		Operating/Storage Humidity	Below 90%RH (Non-condensing)
		Vibration Resistance	4.9m/s
		Shock Resistance	19.6m/s
		Altitude	Maximum altitude 2000m (Derate by 1% for every 100m above 1000m)
		Installation Location	Indoors
		Installation Method	Vertical or Horizontal Installation
	Function	Protection Functions	Overvoltage, Undervoltage, Overtemperature, Overcurrent, Overload, Overspeed, Analog Input Abnormal, Excessive Position Error, Output Short Circuit, Encoder Abnormal, Regeneration Abnormal Protection, Overtravel Protection, Oscillation Protection, Phase Loss Protection, etc.
		Dynamic Braking	Standard
		Communication Functions	Background Debugging: USB (Type-C); Multi-station Communication Protocol: EtherCAT
		Display and Operation	5-digit LED Indicator, Power Indicator, Network Port Indicator, 4-key Operation
I/O Signals	Digital Input Specifications		7 Digital Inputs (Including two high-speed inputs)Servo Enable, Alarm Clear, Forward Overtravel, Reverse Overtravel, Torque Limit Selection, Internal Speed Selection, Mode Switching, Probe, etc.
	Digital Output Specifications		4 Digital OutputsPositioning Completed, Servo Ready, Alarm Output, Rotation Detection, Torque Limit Output, Brake Control

Driver Dimensional Drawing （umit: mm）

DS6C-20P4



DS6C-20P7



ServoWpf PC Software（DS6/DL6）

Simplify the Complex, One-stop Servo Commissioning Platform

Step 1
Step 2

■ Configuration Interface

Parameter Table

Supports parameter read, modify, save, and download, covering all P-group parameters and U-group monitoring parameters with detailed descriptions. Parameters are categorized by function into Overview, Control Mode, and Gain Tuning for easy management.

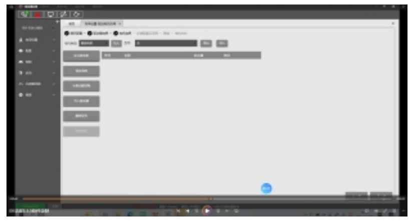
Drive, Motor Information

Supports motor parameter configuration and linear motor calibration to ensure precise system matching.

■ Wizard Setup Interface

Drive Motor Wizard

Guides users through speed, torque limit, and motor direction settings.

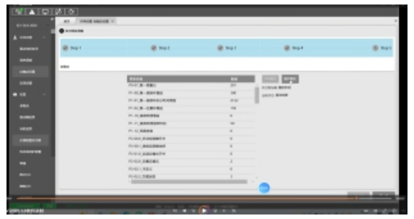


Simple Tuning

Guides inertia identification, rigidity selection, mechanical characteristic measurement, and filter configuration, simplifying the tuning process.

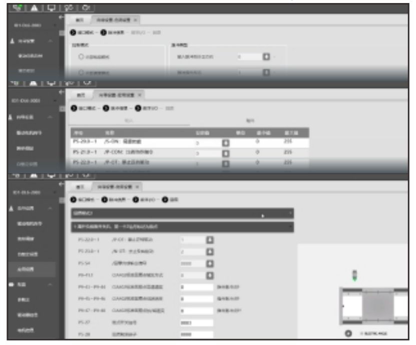
Auto-Tuning Settings

Automatically optimizes gain configuration based on parameters such as device operating state matching method, mode, and load type.



Application Settings

After the user selects pulse or bus mode, the system automatically filters and displays corresponding parameters for rapid location and configuration.

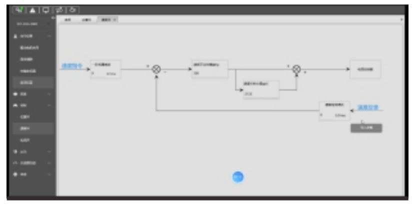


ServoWpf PC Software（DS6/DL6)

Control Interface

Real-time Dynamic Curve Observation

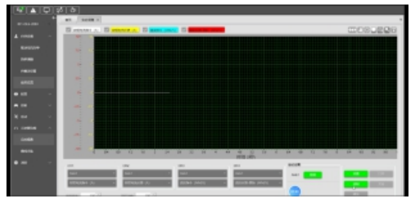
Provides an intuitive gain tuning environment for speed loop, position loop, and current loop, assisting users in achieving precise control.



Oscilloscope Function Interface

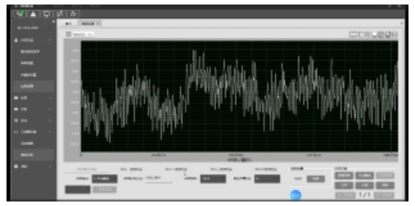
Real-time Observation

Real-time collection of key data such as speed, torque, position, and bus voltage, aiding dynamic monitoring and parameter optimization.



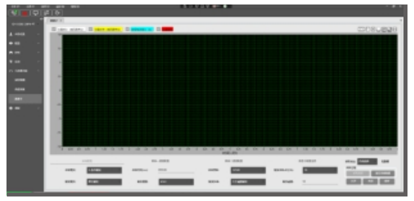
Curve Acquisition

High-precision acquisition of data such as rotational speed, position, and current for comprehensive analysis of servo operating status.



Black Box

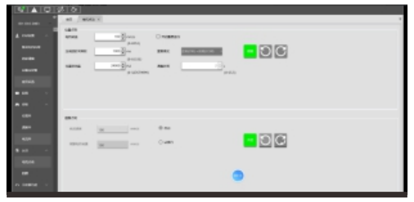
Automatically records data at the moment of failure, pinpointing issues and improving diagnostic efficiency.



Motion Interface

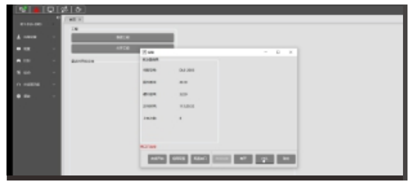
Simple and Feasible Jogging Debugging

Supports position jogging and speed jogging operations, facilitating equipment debugging and operational verification.



Communication Interface

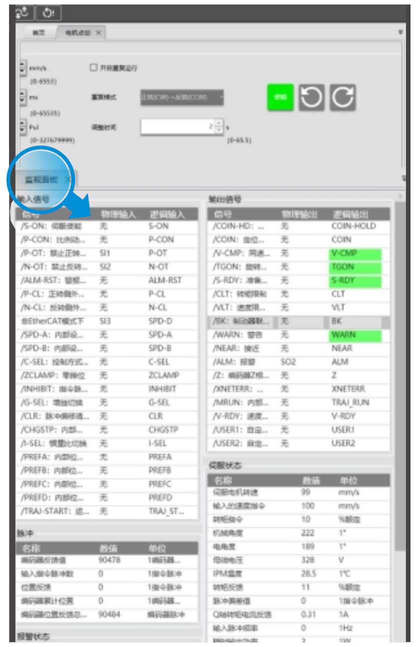
Supports quick communication with Xinje servo drives via Type-C interface, automatically identifying drive and motor information, compatible with rotary and direct-drive servos for convenient and efficient connection and data interaction.



Monitoring

Rich and Comprehensive Real-time Monitoring

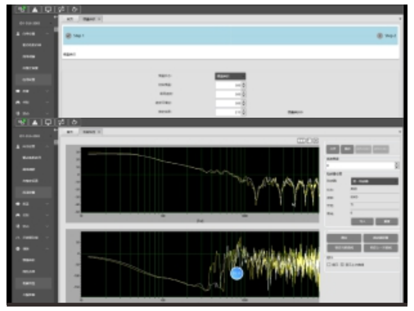
Real-time display of servo operating status, alarm information, and I/O status, ensuring full visibility and control throughout system operation.



Tuning Interface

Precise and Subtle Gain Identification

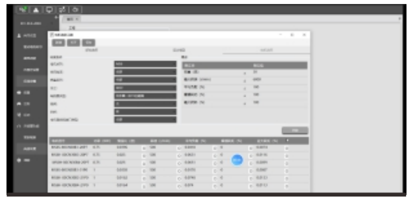
Integrates inertia identification, rigidity selection, mechanical characteristic measurement, and resonance suppression functions. Users can configure parameters based on actual equipment operating conditions to achieve optimal gain tuning and dynamic adjustment.



Tools

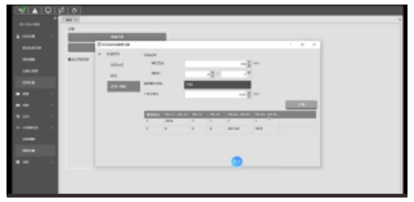
Motor Selection

Based on device component selection and motion model establishment, automatically recommends matching motor models.



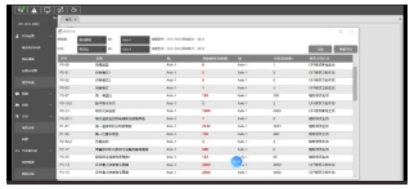
Electronic Gear Ratio Conversion

Automatically calculates pulses per revolution and electronic gear ratio based on mechanical structure (e.g., lead screw, disk, pulley).



Parameter Comparison

Supports pairwise comparison between preset values, current drive values, file values, and interface parameters for easy parameter management and version control.



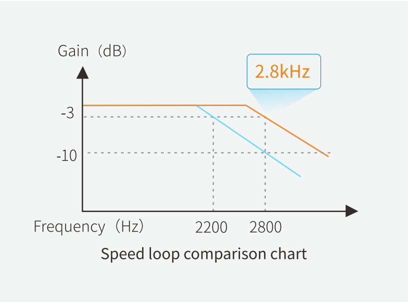
DS5L2 series Basic Pulse-Type Servo Driver

DS5L2 AC220V-100W
DS5L2 AC220V-200W
DS5L2 AC220V-400W
DS5L2 AC220V-750W
XINJE

Excellent performance

High dynamic response

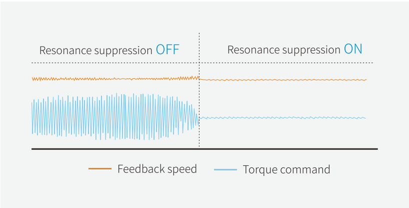
- The speed loop response bandwidth of up to 2.8kHz can meet the requirements of devices with fast response speed and high accuracy.



Speed loop comparison chart

Resonance suppression

- The resonance suppression control algorithm can effectively shorten the setting time, eliminate mechanical resonance, and make path tracking smooth and accurate.
- Resonance frequency automatic inspection, with stronger usability.
- Improved vibration frequency recognition accuracy by 50% (compared to DS5L1).
- 50% reduction in resonance frequency analysis time (compared to DS5L1).



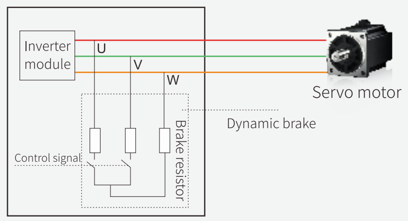
High precision positioning

- Equipped with 19-bit magnetic encoder and 23-bit optical encoder with high resolution, it can help servo motors improve low-speed vibration suppression ability, reduce speed fluctuations, and make the servo system run more smoothly and accurately.

Safe and reliable

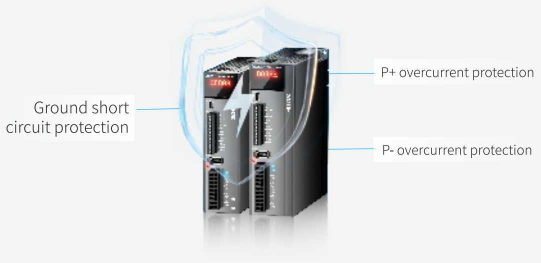
Standard dynamic braking

- When the motor is running, in the event of a power outage or alarm, the servo will be turned off and the three-phase circuit of the motor will be short circuited. The servo motor will quickly stop, ensuring the safety of operators and machine equipment.


Inverter module
U
V
W
Servo motor
Dynamic brake
Control signal
Brake resistor

Multiple protection functions

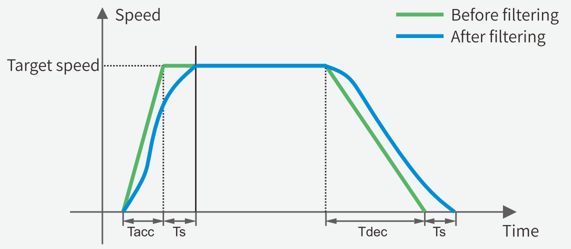
- Supports multiple protection functions, such as P+ overcurrent protection, ground short circuit protection, P- overcurrent protection, etc., with ultra-low failure rate, users can use it with peace of mind.


Ground short circuit protection
P+ overcurrent protection
P- overcurrent protection

Stable and easy to use

S-shaped acceleration and deceleration curve

- The S-shaped acceleration and deceleration curve can effectively overcome mechanical vibrations caused by sudden speed changes, making operation smoother and more stable.



Note: Only the speed mode is effective.

Quick adjustment to shorten positioning time

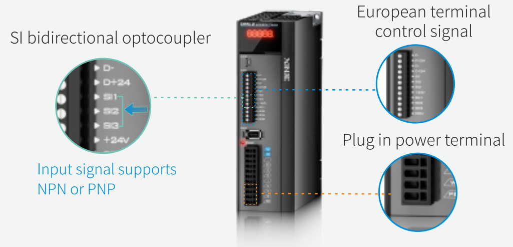
- Load inertia estimation, search for optimal gain, and complete positioning within 20ms.
- Driver panel offline adjustment.
- The rigidity level can reach up to level 41.

Parameter setting → Inertia estimation → Rigidity level

*Note: DS5L2 covers 32 levels of rigidity.

Convenient and easy to use

- Easy to operate terminal design improves wiring efficiency and saves maintenance time.
- Gain adjustment free, strong parameter applicability. Users do not need complex gain tuning, debugging is simple and convenient, and can greatly shorten debugging time.


SI bidirectional optocoupler
D-
D+24
SI1
SI2
SI3
+24V
Input signal supports NPN or PNP
European terminal control signal
Plug in power terminal

Perfectly compatible in size

- The DS5L2 series is fully compatible with the DS5L1 series (same power range), ensuring worry free replacement.

DS5L1
DS5L2
Fully compatible in size

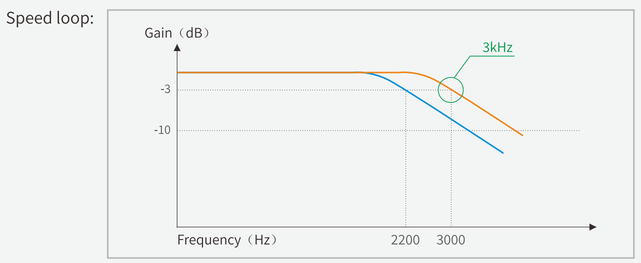
DS5K2 Series Standard Pulse-Type Servo Driver

Excellent performance
Safe and reliable
Stable and easy to use
Fully functional
XINJE

Excellent performance

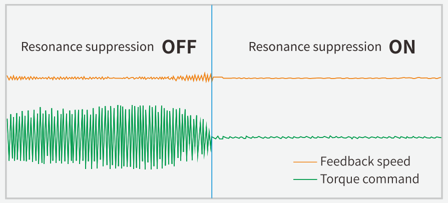
High dynamic response

- 3kHz speed loop response bandwidth. High dynamic response, improving production efficiency.
- Advanced control algorithms provide the optimal solution for achieving fast and flexible results in fast positioning systems.



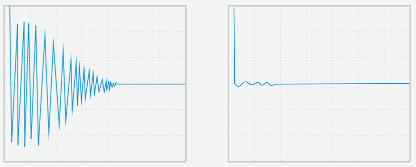
Resonance suppression

- The resonance suppression control algorithm can effectively shorten the setting time, eliminate mechanical resonance, and make path tracking smooth and accurate.
- Resonance frequency automatic inspection, with stronger usability.
- The accuracy of vibration frequency recognition has been improved by 50%.
- The resonance frequency analysis time is reduced by 50%.



Mechanical end resonance suppression

- By using advanced control algorithms, vibration and noise suppression of mechanical ends can be achieved. Effectively solve the vibration at the end of the cantilever mechanism, shorten the setting time, and improve product accuracy.

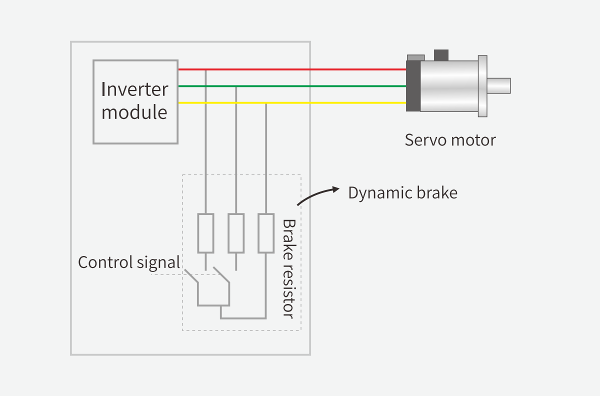

No mechanical end resonance suppression function

Enable mechanical end resonance suppression function

Safe and reliable

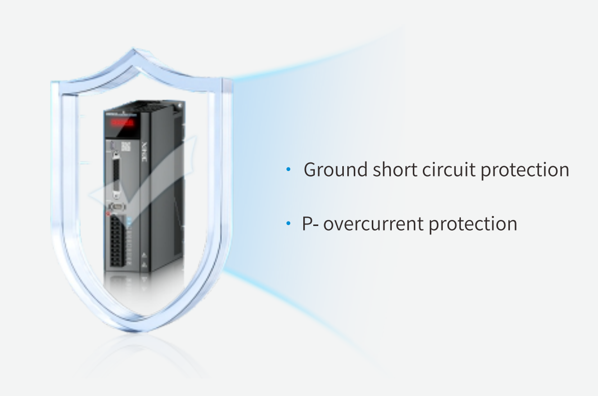
Dynamic braking

- When the motor is running, in the event of a power outage or alarm, the servo will be turned off and the three-phase circuit of the motor will be short circuited. The servo motor will quickly stop, ensuring the safety of operators and machine equipment.


Inverter module
Servo motor
Dynamic brake
Control signal
Brake resistor

Multiple protection functions

- Supports multiple protection functions, such as ground short circuit protection, P- overcurrent protection, etc., with ultra-low failure rate, users can use it with peace of mind.

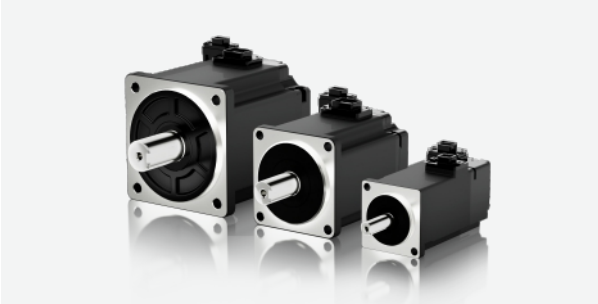

Ground short circuit protection
P- overcurrent protection

Stable and easy to use

The system runs more smoothly and has higher positioning accuracy

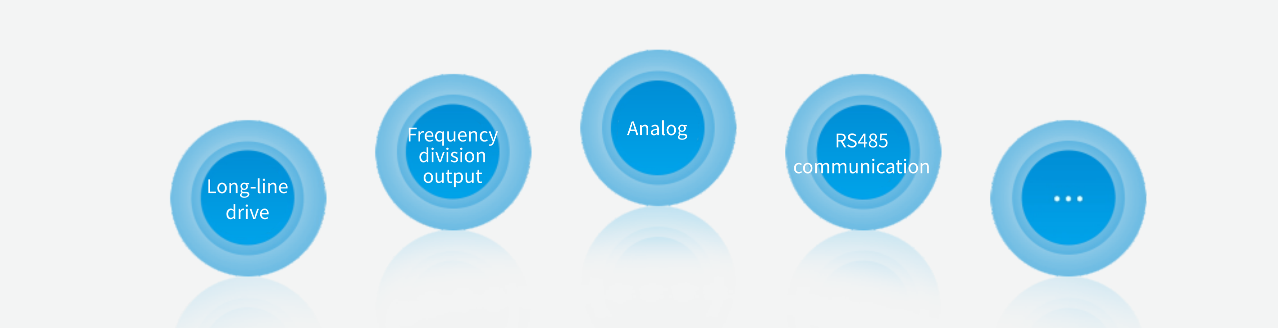
- Equipped with high-resolution encoder, 19-bit magnetic encoder and 23-bit optical encoder, it can help servo motors improve low-speed vibration suppression ability, reduce speed fluctuations, and make the servo system run more smoothly and accurately.
- Suitable for MS6-B3/MS6G series high protection single/multi turn integrated motors, with simpler and more convenient selection.
- Lower speed and torque fluctuations assist in the smooth operation of torque control equipment.

High resolution encoder
19-bit magnetic encoder
23-bit optical encoder



Fully functional

- The DS5K2 series has complete functions, including long line drive, frequency division output, analog, RS485 communication, and more.


Long-line drive
Frequency division output
Analog
RS485 communication
...

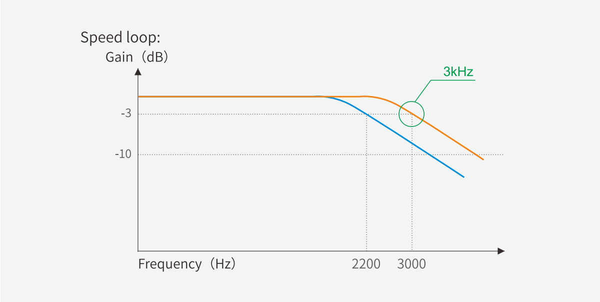
DS5C2 series EtherCAT Bus-Type Servo Driver

DS5C2
XINJE

Excellent performance

High dynamic response

- 3kHz speed loop response bandwidth, synchronization period 250us, high dynamic response, improve production efficiency.
- Advanced control algorithms provide the optimal solution for achieving fast and flexible results in fast positioning systems.



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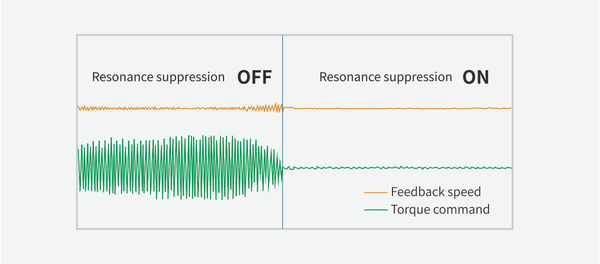
- The resonance frequency analysis time is reduced by 50%.



Mechanical end resonance suppression

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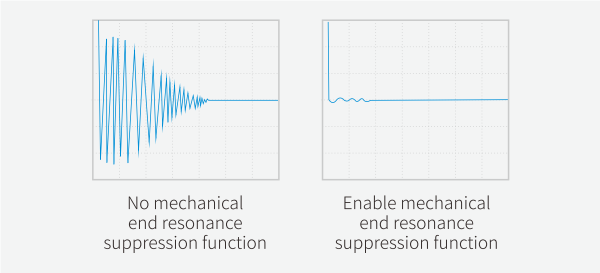
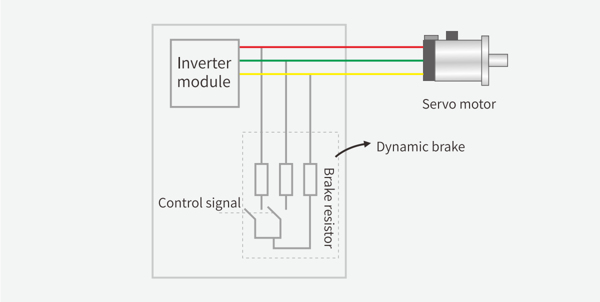

No mechanical end resonance suppression function

Enable mechanical end resonance suppression function

Safe and reliable

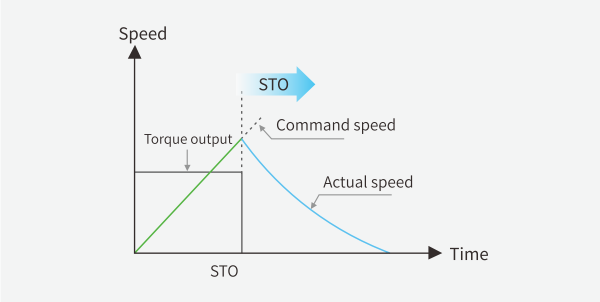
Dynamic braking

- When the motor is running, in the event of a power outage or alarm, the servo will be turned off and the three-phase circuit of the motor will be short circuited. The servo motor will quickly stop, ensuring the safety of operators and machine equipment.



Safe torque off (SIL3 level)

- Support STO. When the safe torque function is enabled, the internal hardware circuit of the driver will trigger, forcibly shutting down the power transistor of the driver, causing the motor to stop running and protecting personal and equipment safety.



Multiple protection functions

- Support multiple protection functions, such as P+ overcurrent protection, ground short circuit protection, P- overcurrent protection, etc., with ultra-low failure rate, users can use it with peace of mind.

P+ overcurrent protection
Ground short circuit protection
P- overcurrent protection

Stable and easy to use

Easy to wiring and quickly debug

- Easy to operate terminal design improves wiring efficiency and saves maintenance time.
- Adopting standard RJ45 industrial Ethernet fast interface, greatly improves wiring efficiency.
- Gain adjustment free, strong parameter applicability.
- Users do not need complex gain tuning, debugging is simple and convenient, and can greatly shorten debugging time.

SI bidirectional optocoupler
Plug in power terminal
European terminal

The system runs more smoothly and has higher positioning accuracy

- Suitable for MS6-B3 series high protection single/multi turn integrated motors, with simpler and more convenient selection.
- Lower speed and torque fluctuations assist in the smooth operation of torque control equipment.

Compatible in size and accessible for machine replacement

- The DS5C2 series is fully compatible with the DS5C1 series (same power range), ensuring worry free replacement.

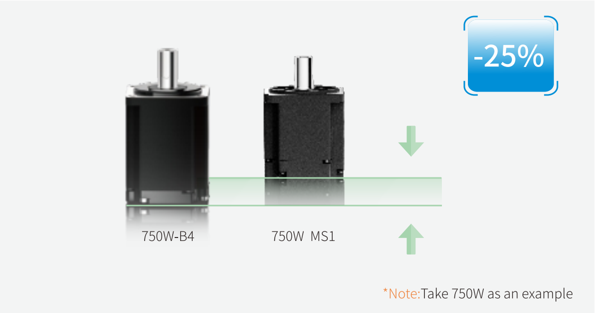
Fully compatible in size
DS5C1
DS5C2

MS1 Series Servo Motor

Miniaturization | High Performance | Flexible Configuration

Compact Body

- Designed for narrow installation spaces, featuring a small volume and compact structure; easily handles space-constrained scenarios, enhancing equipment layout flexibility.

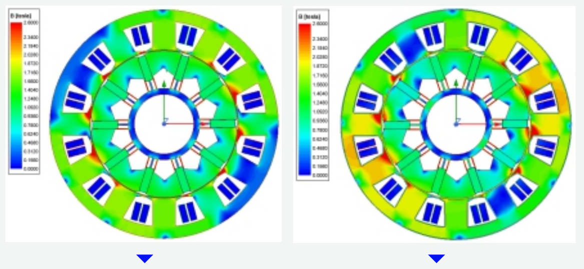


*Note:Take 750W as an example

High Power Density

- Optimized electromagnetic design achieves higher power density, delivering strong power output in a compact space to meet the demands of equipment miniaturization and high performance.

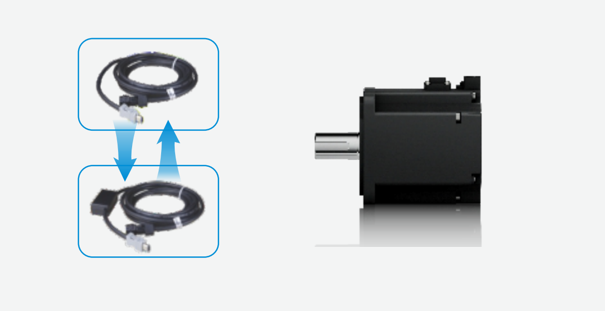
MS1H-80CM30B3-20P7 Magnetic Flux Density Cloud Diagram



- Rated Operating Point (Rated Speed - Rated Torque Point)
- Overload Operating Point (Rated Speed - 3x Torque Point)

Flexible Configuration

- Standard with single-turn/multi-turn integrated encoder. When switching between single-turn and multi-turn, only the encoder cable (battery box) needs to be replaced.



CE Certification Compliant

- The entire product series complies with CE certification standards, ensuring electromagnetic compatibility and safety, assisting customers in rapidly expanding into the EU and global markets.

MS6-B3 series servo motor

High protection level | lightweight design | high-precision positioning

Excellent Texture and Touch

- Black body with a matte texture, effectively reducing the perceived temperature of the motor.

Low Noise, Low Temperature Rise

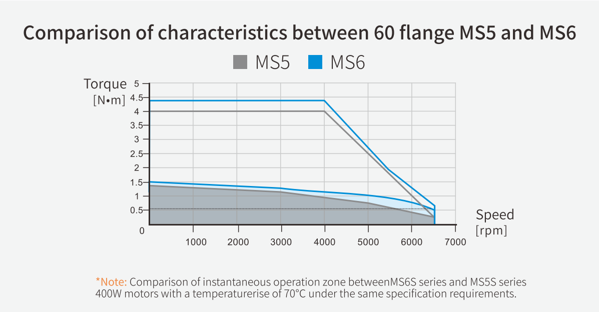
- Low noise and low temperature rise; maximum winding temperature rise can be reduced by up to 20°C.

High Protection

- Optimized structure achieves a protection rating of up to IP67.

Motor Miniaturization

- The MS6 series motor body is further shortened, with a maximum reduction of up to 18% compared to the MS5 series motor.


Comparison of characteristics between 60 flange MS5 and MS6

*Note: Comparison of instantaneous operation zone betweenMS6S series and MS5S series 400W motors with a temperaturerise of 70°C under the same specification requirements.

Lightweight motor

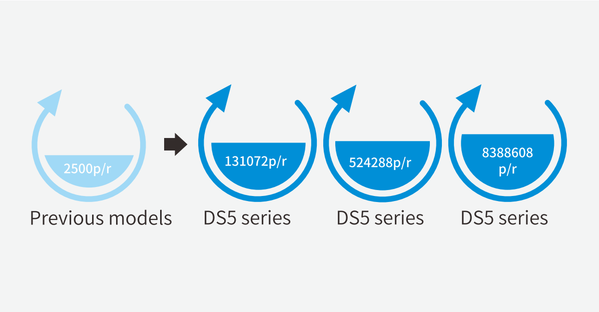
- The body of the MS6 series motor is further shortened, with a maximum reduction of 18% compared to the MS5 series motor.

-18%
MS6-B1
MS6-B3

*Note: Taking 400W as an example.

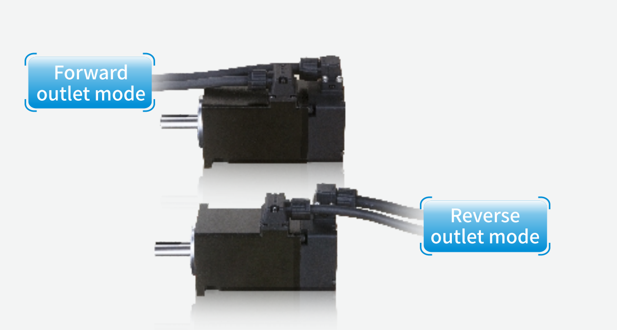
Encoder resolution

- The entire series comes standard with 17-bit, 19-bit, and 23-bit encoders to choose from.
- Realize higher precision position control and stable low-speed operation.
- The magnetic encoder has enhanced resistance to oil stains and vibration.



Flexible configuration to meet different needs

- Offers low inertia and high inertia motor options, suitable for a wider range of equipment scenarios.
- Optional power-off brake, oil seal, oil-resistant cable; configurable with connector to AMP adapter cable; forward/reverse cable exit optional.



MS6S-130 series servo motor

Instantaneous response | precision control | efficient and stable

High Precision

- 19-bit/23-bit absolute encoder optional.

High Protection

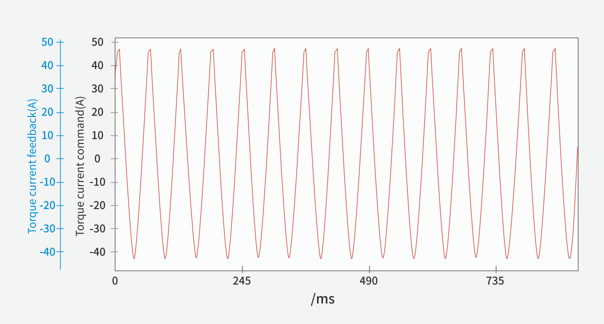
- IP67 protection rating, dustproof and waterproof

High Reliability

- Front cover bearing mounting design uses larger bearings, resulting in higher battery life.

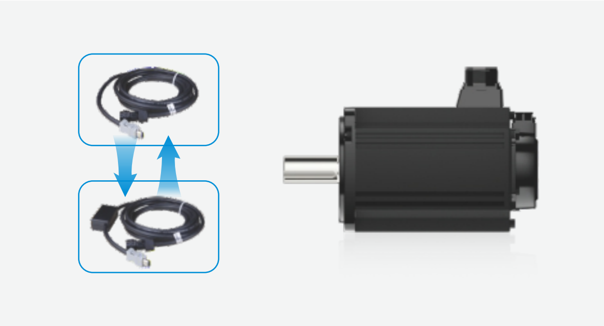
Lower inertia, higher response

- Stronger acceleration and deceleration rapid response capability, higher motor overload capacity.



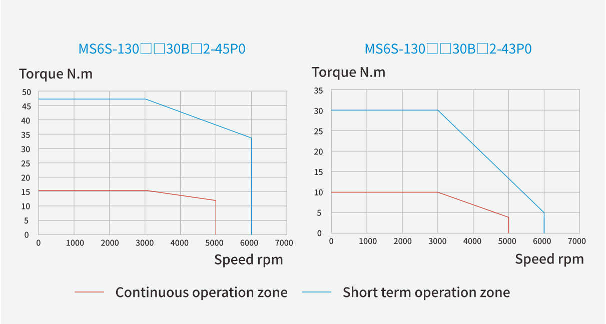
Flexible Configuration and Easy Installation/Removal

- Standard single/multi turn integrated encoder, when switching between single/multi turn, only the encoder cable (battery box) needs to be replaced.



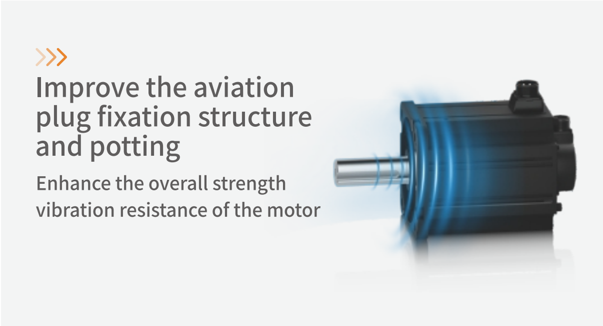
Higher speed

- The rated speed of the MS6S series 130 flange motor has been increased to 3000rpm, and the maximum speed has been increased to 6000rpm.



Optimized design for greater stability

- To enhance the overall strength and vibration resistance of the motor, a new body structure design has been adopted. Measures such as potting the stator, optimizing the rotor bearing fixation method, improving the aviation plug fixation method, and reducing the height of the aviation plug have been implemented to make the motor more stable and reliable.



Improve the aviation plug fixation structure and potting

Enhance the overall strength vibration resistance of the motor

MS6G-130 series servo motor

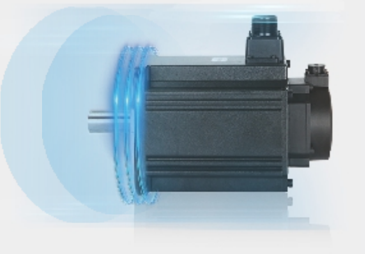
The best choice for compact device scenarios

Reliable operation

- By integrating the end cap and body, improving the fixed structure of the aviation plug and potting, the overall strength and vibration resistance ability of the motor can be enhanced.

End cap and body integration, improve the aviation plug fixation structure and potting

Enhance the overall strength
vibration resistance of the motor



- 17-bit/19-bit/23-bit absolute value encoders are optional.

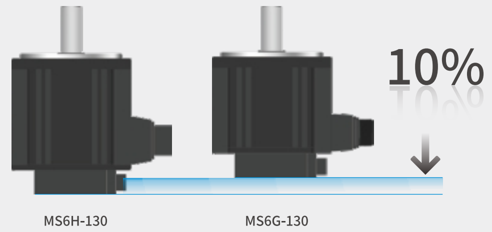
Adapt to multiple encoders

17-bit, 19-bit, 23-bit absolute value encoders are optional

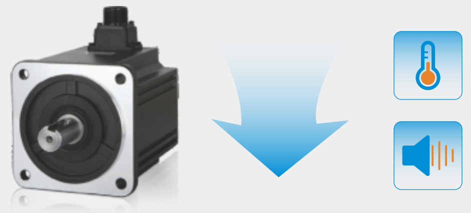
Shorter body

- Compared with the MS6H series high inertia servo motor, the MS6G series has a shorter body, about 10% shorter, making it more suitable for compact equipment scenarios.
- Black body, matte texture, effectively reduces the tactile temperature on the surface of the motor body.

*Note: Taking 1.5kW as an example.



- Low temperature rise and low noise.



Ultra protection

- The protection level of the MS6H-130 series B2 motor is IP65, and the MS6G-130 series has optimized the motor structure, raising the protection level to IP67, dustproof and waterproof, and is not afraid of harsh environments.

MS6G-180 series servo motor

Short body | High reliability | More precise positioning

Lightweight Design, Shorter Body

- Compared to the MS6H series servo motor, the MS6G series body length is reduced by approximately 25%, making it more suitable for compact equipment scenarios;
- Black body with a matte texture, effectively reducing the perceived temperature on the motor body surface.

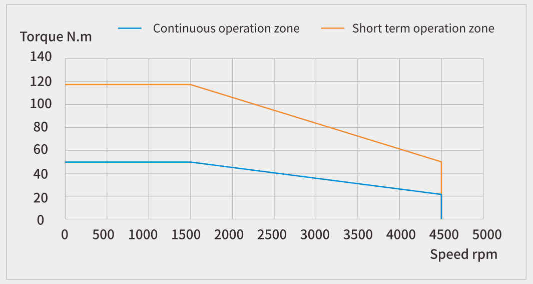
*Note: Taking 3kW as an example

25%
MS6H-180
MS6G-180

The body length of the 3kW non-brake motor is only **162mm**
The body length of the 4.4kW non-brake motor is only **185mm**

Ultra-high overspeed capability

- The motor has an ultra-high weak magnetic field expansion capability, increasing the maximum operating speed to 4500rpm.



*Note: Taking MS6G-180CN15B2-47P5 as an example.

Flexible Configuration

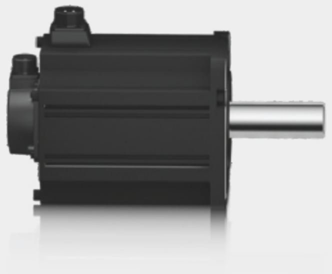
- The MS6G-180 series motor is standard with a single-turn/multi-turn integrated encoder. When switching between single-turn and multi-turn, only the encoder cable (battery box) needs to be replaced.。

High Protection Rating

- Optimized motor structure with an IP67 protection rating, providing dust and water resistance to withstand harsh environments.

High precision encoder for more accurate positioning

- 19-bit and 23-bit absolute value encoders can be selected for higher positioning accuracy.



Compatible with various encoders

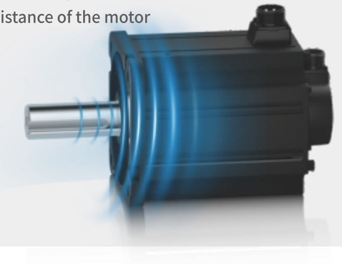
19-bit / 23-bit

Improved vibration resistance and more reliable operation

- To enhance the overall strength and vibration resistance of the motor, a new body structure design has been adopted, along with measures such as stator potting, optimizing the rotor bearing fixation method, improving the fixation method for aviation plug, and reducing the height of the aviation connectors. These measures make the motor more stable and reliable.

Improve the aviation plug fixation structure and potting

Enhance the overall strength
and vibration resistance of the motor



Liquid cooled servo motor

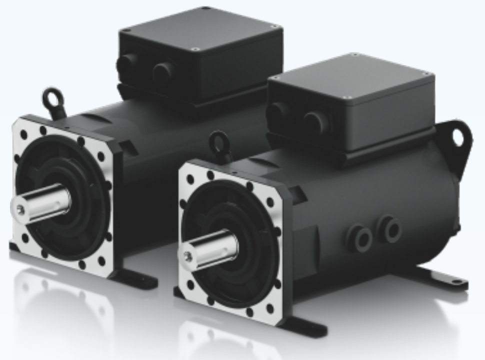
High precision | Low temperature rise
High reliability | High protection

High reliability

- Using a cross-coupling installation method for the encoder enhances vibration and impact resistance.
- The rotor features a built-in structure, significantly improving the motor's resistance to demagnetization.

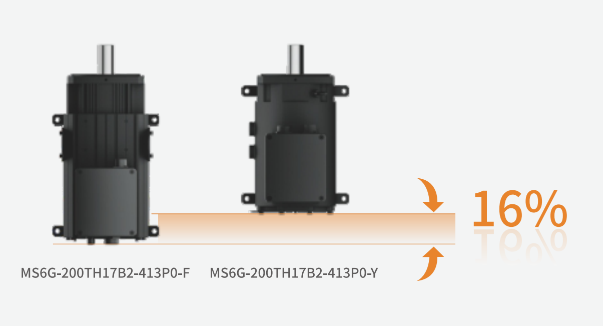
Low temperature rise

- An axial Z-shaped water channel structure design is used, with cooling fluid for heat dissipation, significantly reducing the motor's temperature rise.



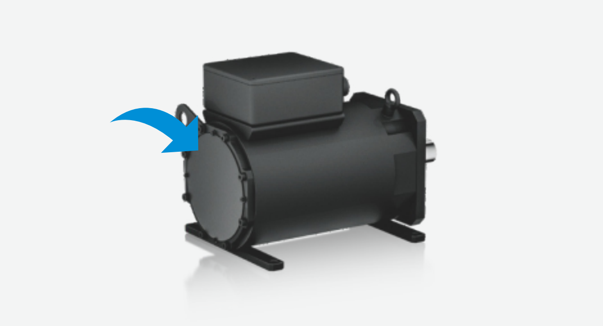
High power density

- Compact structural design, with a body length shortened by about 16% compared to air-cooled motors of the same power.



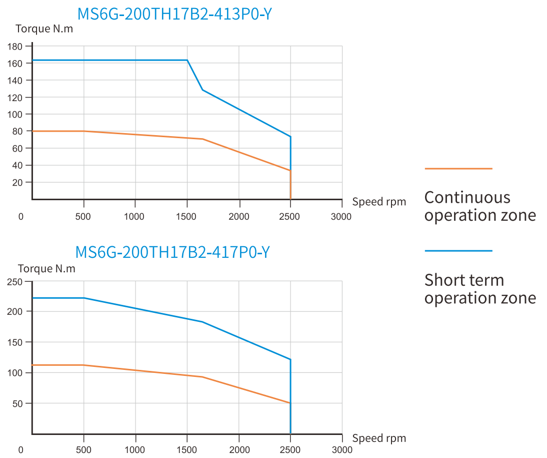
High-precision

- Standard 23-bit high-precision absolute value optical encoder.



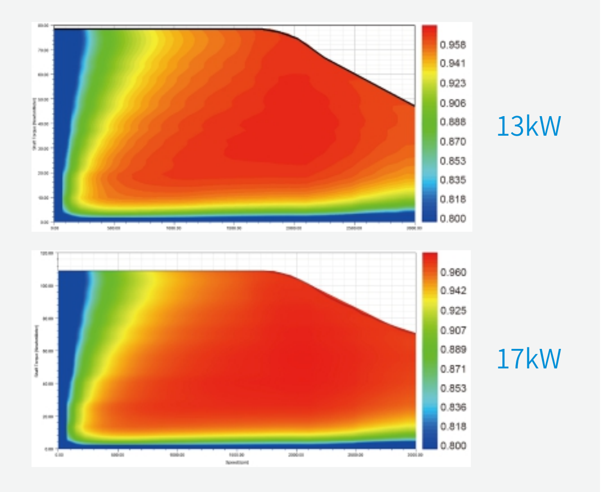
High performance

- New electromagnetic scheme design, compatible with DS5C2/DM6C series high-performance servo drivers to meet high dynamic response requirements.



High energy efficiency

- By optimizing the motor's magnetic circuit design and selectively using materials with low losses, such as silicon steel sheets and oil seals, the overall losses of the motor are effectively controlled, achieving a high-efficiency motor design.



Typical applications

Mechanical arm

The robotic arm is the most widely used automated mechanical device in the field of robotics technology, and its presence can be seen in industrial manufacturing, medical treatment, entertainment services, military, semiconductor manufacturing, and space exploration. Although they have different forms, they all share a common feature of being able to receive instructions and accurately locate a certain point in three-dimensional (or two-dimensional) space.

High speed cutting machine

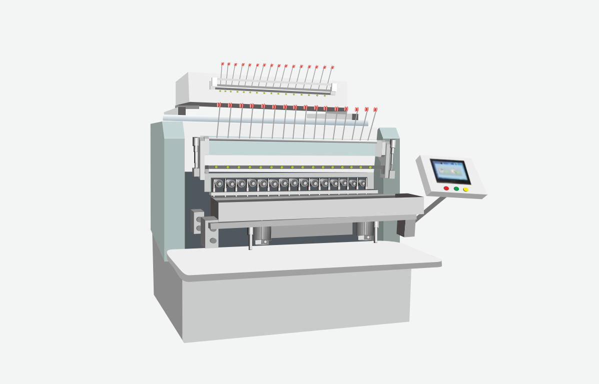
High speed cutting machine combines ultrasonic welding technology with traditional cutting. When the ultrasonic generator is working, the ultrasonic energy is transmitted to the welding head through the ultrasonic transducer and violently vibrates and rubs against the cutting die, thereby achieving the cutting effect, making the cut products more beautiful, sturdy, and efficient in production.

Rotary die cutting machine

The rotary die cutting machine performs die cutting processing with the continuous rotation of a rotary cutter and is one of the most efficient types of die cutting machines. The circular blade die cutting achieves the purpose of die cutting by compressing the material between the cutting edge and the anvil roll. This improves both the speed and precision of die cutting. Additionally, it can achieve one-time product forming through multi-axis registration die cutting, overcoming the disadvantages of traditional multiple die cutting processes.

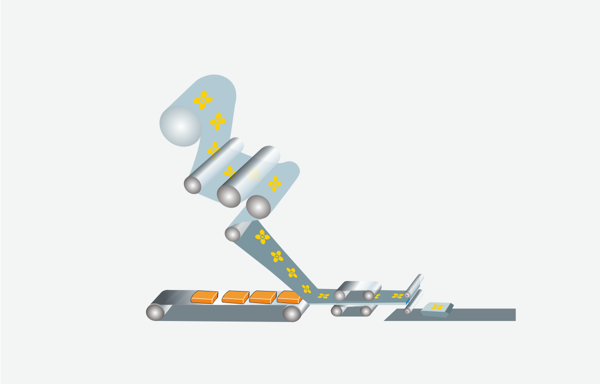
16-axis high-speed winding machine

A high-speed winding machine is equipment used to wind linear objects onto specific workpieces, commonly used for winding copper wire. Traditionally, high-speed winding was achieved by combining a variable frequency motor with a tension control system. However, with the increasing demand for efficiency in modern industry, servos can replace the original variable frequency motors to achieve high-speed and highly efficient production.



Three-servo packaging machine

Packaging machinery refers to machines that can complete all or part of the packaging process for products and goods. The packaging process includes main operations such as filling, wrapping, and sealing, as well as related pre- and post-operations like cleaning, stacking, and disassembling. Additionally, packaging can involve operations such as measuring and stamping on the package. Using machinery to package products can improve productivity, reduce labor intensity, accommodate the needs of large-scale production, and meet cleanliness and hygiene standards.



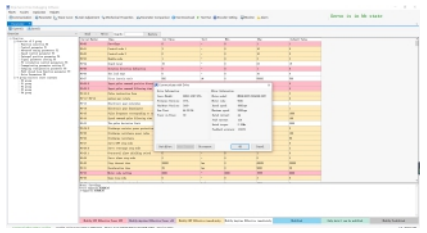
XINJE SERVO software（DS5 series）

Help users better understand the operation of the equipment

Servo communication interface

Efficient and fast communication identification

Xinje servo software can do Modbus-RTU communication with servo driver through RS232, and can automatically read motor parameters without viewing motor code.



Parameter setting interface

Intuitive and understandable parameter setting

Xinje servo software has the functions of reading, modifying, saving and downloading, and is equipped with detailed parameter description. The parameter list directly indicates the effective time of parameters with different colors, which makes the distinction more eye-catching.

Curve acquisition interface

Convenient and practical curve acquisition

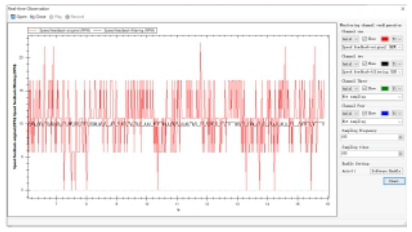
Xinje servo software has powerful servo data acquisition function, including speed, position, current, bus voltage and other basic information acquisition. Help you have a deeper and comprehensive understanding of servo operation and improve the control scheme.

XINJE SERVO software （DS5 series）

Real time observation interface

Real time dynamic curve observation

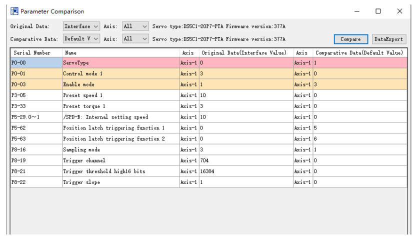
Xinje servo software can collect basic information such as speed, torque, position and bus voltage to help you understand the servo operation in real time and adjust the control scheme efficiently and timely.



Parameter comparison interface

Simple and clear parameter comparison

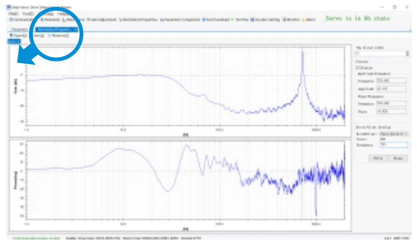
The parameter comparison function of Xinje servo software allows customers to easily compare preset values, current driver values, file values, and pairwise comparison of the current upper computer interface.



Mechanical property measurement interface

Precise resonance recognition

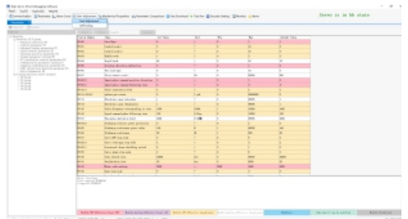
Xinje software has the function of mechanical characteristic measurement, which can automatically measure the resonance frequency according to the operation of mechanical load. It is equipped with five notch filters to ensure the stable and reliable operation of the equipment and sweep away the load vibration.

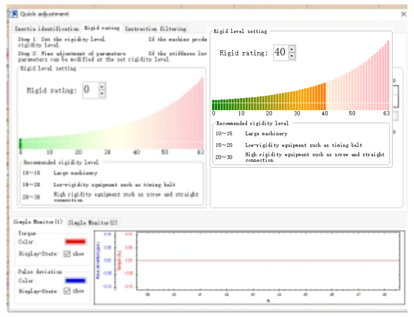


Gain adjustment interface

Fast adjustment

The fast adjustment / self-tuning mode can identify the inertia. The user can configure the appropriate mode, method, load type, foundation and other parameters according to the equipment operation status for the upper computer to set the best gain parameters, or adjust the rigidity level according to the equipment operation status.

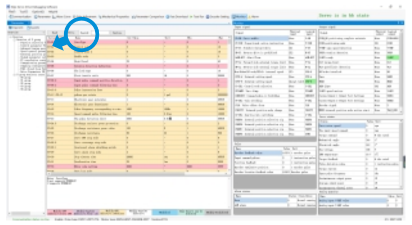




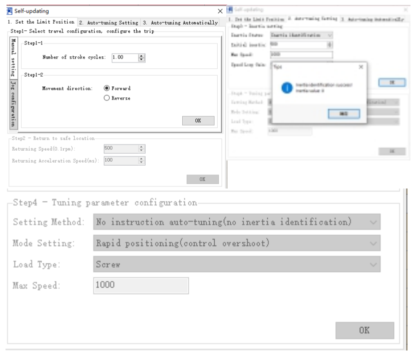
Monitor interface

Rich and comprehensive real-time monitoring

Xinje servo software has real-time status, alarm monitor and servo operation status, which are all under your control.



Self-turning interface



Self-updating

1. Set the Limit Position　2. Auto-tuning Setting　3. Auto-tuning Automatically

Step1- Select travel configuration, configure the trip

Step1-1

Number of stroke cycles: 1.00

Step1-2

Movement direction: ● Forward ○ Reverse

Step2 - Return to safe location

Returning Speed(0.1rpm): 500

Returning Acceleration Speed(ms): 100

Step4 - Tuning parameter configuration

Setting Method: No instruction auto-tuning(no inertia identification)

Mode Setting: Rapid positioning(control overshoot)

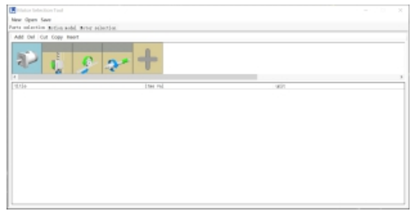
Load Type: Screw

Max Speed: 1000

Tool interface

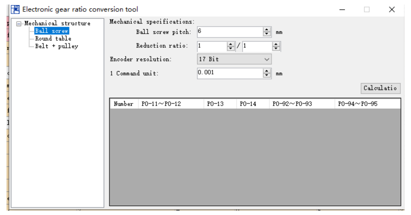
Motor selection tool

Xinje servo software has its own motor selection tool, which automatically matches the best motor model through the selection of equipment components and the establishment of motion model.



Electronic gear ratio conversion

Xinje servo software can accurately calculate the number of pulses per revolution and the electronic gear ratio of screw, disc and pulley mechanical structures according to the mechanical specifications.



Naming rule

DS5 series servo driver naming rule

DS 5□□-□ □P□-PTA-H
① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Name

Symbol	Product name
DS	Servo driver

② Series

Symbol	Product series
5	Series 5

③ Type

Symbol	Product series
L	Basic pulse type
K	Standard pulse type
C	EtherCAT bus type
P	Profinet bus type

④ Product version

Symbol	Version
1	Compact
2	High-Performance
5	Flagship

⑤ Voltage specification

Symbol	Rated input voltage
2	AC220V
4	AC380V

⑥ Driver power

Symbol	Rated output power (kW)(kW)
0P1	0.1
0P2	0.2
0P4	0.4
0P7	0.75
1P0	1.0
1P5	1.5
2P3	2.3
2P6	2.6

Symbol	Rated output power(kW)
3P0	3.0
5P5	5.5
7P5	7.5
11P0	11
15P0	15
22P0	22
32P0	32
45P0	45

⑦ Encoder specification

Symbol	Encoder specification
T	Communication type encoder

⑧ Product type

Symbol	Product type
default	Standard driver
H	Enhanced driver
FH	High protection driver
FS	STO model driver

DS5 series servo driver model list

Series / Power[kW]	DS5L2 series Small-Volume Static Pressure Type Enhanced Version	DS5C2 series Small-Volume Light-Load Type Enhanced Version	DS5K2 series Small-Volume Standard Type Enhanced Version	DS5P series PROFINET Bus Type
0.1	DS5L2-20P1-PTA	DS5C2-20P1-PTA	DS5K2-20P1-PTA	DS5P-20P1-PTA
0.2	DS5L2-20P2-PTA	/	/	DS5P-20P2-PTA
0.4	DS5L2-20P4-PTA	DS5C2-20P4-PTA	DS5K2-20P4-PTA	DS5P-20P4-PTA
0.75	DS5L2-20P7-PTA	DS5C2-20P7-PTA	DS5K2-20P7-PTA	DS5P-20P7-PTA
1.0	DS5L2-21P0-PTA	DS5C2-21P0-PTA	DS5K2-21P0-PTA	DS5P-21P0-PTA
1.5	DS5L2-21P5-PTA	DS5C2-21P5-PTA	DS5K2-21P5-PTA	DS5P-21P5-PTA
2.3	DS5L2-22P3-PTA	DS5C2-22P3-PTA	DS5K2-22P3-PTA	DS5P-22P3-PTA
2.6	DS5L2-22P6-PTA	DS5C2-22P6-PTA	DS5K2-22P6-PTA	DS5P-22P6-PTA
1.0	DS5L2-41P0-PTA	DS5C2-41P0-PTA	DS5K2-41P0-PTA	DS5P-41P0-PTA
1.5	DS5L2-41P5-PTA	DS5C2-41P5-PTA	DS5K2-41P5-PTA	DS5P-41P5-PTA
2.3	DS5L2-42P3-PTA	DS5C2-42P3-PTA	DS5K2-42P3-PTA	DS5P-42P3-PTA
3.0	DS5L2-43P0-PTA	DS5C2-43P0-PTA	DS5K2-43P0-PTA	DS5P-43P0-PTA
5.5	/	DS5C2-45P5-PTA	DS5K2-45P5-PTA	DS5P-45P5-PTA
7.5	/	DS5C2-47P5-PTA	DS5K2-47P5-PTA	DS5P-47P5-PTA
11	/	/	/	/
15	/	DS5C2-415P0-PTA	/	/
22	/	DS5C2-422P0-PTA	DS5K2-422P0-PTA	/
32	/	DS5C2-432P0-PTA	DS5K2-432P0-PTA	/
45	/	/	/	/

DS5 series servo driver specification list

DS5 driver specification

Function	Control mode				Control method								
	Position control	Speed control	Torque control	Bus control	Pulse	Long line drive	Analog input	External displacement sensor	ABZ differential feedback	RS232	RS485	SI input	SO output
Pulse type DS5L1/L2 series	●	●	●		●					●	●	3	3
EtherCAT type DS5C1/C2 series	●	●	●	●						●		3	3
Standard type DS5K2 series	●	●	●		●	●	●		●	●	●	8	6
Profinet type DS5P series	●	●	●	●						●		5	3

*Note: The DS5L1/L2/C1/C2 series 1kW-7.5kW servo drivers have 5 inputs and 3 outputs, the DS5C1/C2 series 11KW and above drivers have 5 inputs and 4 outputs, and the DS5C1/C2 series 11KW and above drivers support pulse control mode.

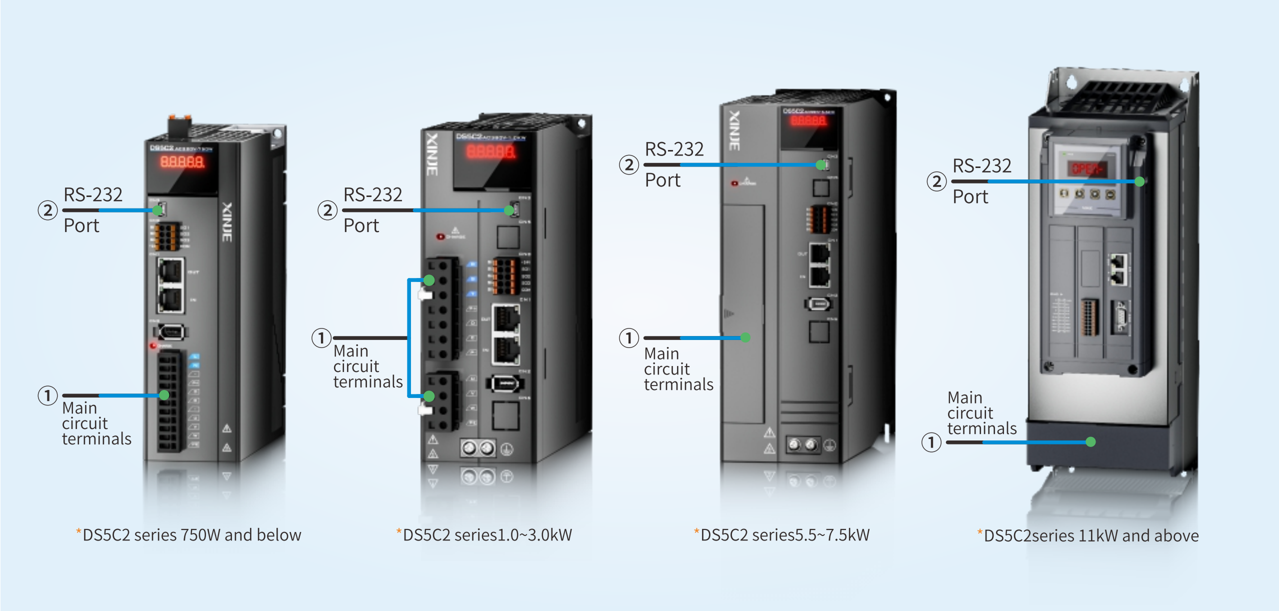
Technical specification

Ds5 Series Drive Technical Specifications

Specification			Pulse type DS5L2 series	EtherCAT bus type DS5C2 series	Standard type DS5K2 series	PROFINET bus type DS5P series
Basic specification		Power range(kW)	0.1~3.0/0.1~3.0	0.1~45.0/0.1~32.0	0.1~7.5	0.1~7.5
		Input power supply	Single phase/three-phase AC200~240V，50Hz/60Hz；Three phase AC380V~440V，50Hz/60Hz			
		Encoder feedback	17bit/19bit/23bit communication encoder			
		Control method	Three phase full wave rectification IPM, PWM control, sine wave current drive mode			
	Usage environment	Ambient temperature	Operation：-10°C~40 °C （no condensation）/ storage：-20°C~60 °C（no condensation）			
		Ambient humidity	Operation/Storage: below 90%RH (no condensation)			
		Vibration/impact resistance	4.9m/s² / 19.6m/s²			
	Function	Electronic cam	no			
		Protection function	Overvoltage, undervoltage, overheating, overcurrent, overload, overspeed, analog input abnormality, excessive position deviation, output short circuit, encoder abnormality, regeneration abnormality protection, overtravel protection, oscillation protection, phase loss protection, etc			
		Dynamic brake	DS5L2，DS5L1(1~3kW) standard configured	DS5C2，DS5C1(1~7.5kW) standard configured	DS5K2 standard configured	no
		Communication function	RS232: Standard ModbusRTU protocol RS485: Standard ModbusRTU protocol	RS232: Standard ModbusRTU protocol EtherCAT: EtherCAT bus communication	Rs232: Standard ModbusRTU protocol RS485: Standard ModbusRTU protocol	RS232: Standard ModbusRTU protocol Profinet: Profinet bus communication
		Braking resistor	750W~3.0kW with built-in resistor			21P0 and above with built-in resistor
		Display and operation	5-digit LED indicator light, power indicator light, 4 operation buttons			
	Position output	Output form	no		ABZ differential feedback output	no
		Frequency division function	no		Yes	no
		Collector Z-phase output	Yes			
		Analog input	no		Yes	no
I/O signal		Digital input (SI)	3channels (750Wand below) 5channels (above750W)	3channels (750Wand below) 5channels (above750W)	8 channels	5 channels
			Servo enable, alarm clear, prohibit forward rotation, prohibit reverse rotation, torque limit selection, internal speed selection, mode switching, pulse input prohibition, zero speed lock, position deviation clearing, internal position step change signal, internal control mode direction switching			
		Digital output (SO)	3 channels	3 channels (below11kW) 4 channels (11kW and above)	6 channels	3 channels
			Positioning completed, servo ready, alarm output, torque limit output, same speed detection, rotation detection, speed reached, brake release output, warning output			
Position control mode		Maximum input pulse frequency	Collector open circuit: 200kpps(optocoupler) Differential input: 500kpps (optocoupler)	Collector open circuit: 200kpps(optocoupler) Differential input: 500kpps (optocoupler) (11kW and above supported)	Collector open circuit: 200kpps(optocoupler) Differential input: 500kpps (optocoupler)	Not support
		Pulse command mode	3.3V-5V/18-24V pulse+direction, AB phase pulse, CW/CCW signal	3.3V-5V/18-24V pulse+direction, AB phase pulse, CW/CCW signal	3.3V-5V/18-24V pulse+direction, AB phase pulse, CW/CCW signal	Not support
		Control mode	External pulse/internal position	Internal position/EtherCAT motion bus	External pulse/internal position	PROFINET motion bus/internal position
		Feedforward compensation	0~100% (set resolution to 1%)			
		Positioning completed width setting	1~65535 instruction units (set resolution to 1 instruction unit)			
		Electronic gear ratio	1/65530≤B/A≤65535			
Speed control mode		Control mode	Analog speed control (only supported by DS5K2), internal three-stage speed, external speed mode			
		Command smoothing mode	Low-pass filter, smoothing filter			
	Analog input	Voltage range	no		-10V~+10V	no
		Input impedance	no		72KΩ	no
		Torque limit	Internal parameters		Internal parameters/external analog value	Internal parameters
		Rate of speed change	When the rated external load changes from 0 to 100%: less than ±0.01% (at rated speed)			
			Rated voltage ±10%: 0.01% (at rated speed)			
			Environmental temperature 20±25°C: less than ±0.01% (at rated speed)			
Torque control mode		Control mode	Analog torque control (only supported by DS5K2), internal torque			
	Analog input	Voltage range	no		-10V~+10V	no
		Input impedance	no		72KΩ	no
		Speed limit	Internal parameters		Internal parameters/external analog value	Internal parameters
Bus control mode		Communication protocol	no	EtherCAT protocol	no	PROFINET protocol

Terminal definition

| DS5C2 series



*DS5C2 series 750W and below *DS5C2 series1.0~3.0kW *DS5C2 series5.5~7.5kW *DS5C2series 11kW and above

① Main circuit terminal definition

DS5C2-20P1/20P2/20P4-PTA

Terminal	Function	Explanation
L/N	Main circuit power input terminal	Single phase 200～240V，50/60Hz
●	Empty pin	/
P+，C	Use external regenerative resistor	Connect the regenerative resistor to the P+ and C terminals. P0-25=power value, P0-26=resistance value
U，V，W，PE	Motor connection terminal	Connect to the motor

DS5C2-20P7-PTA

Terminal	Function	Explanation
L/N	Main circuit power input terminal	Single phase 200～240V，50/60Hz
●	Empty pin	/
P+，D，C	Use built-in regenerative resistor	Short circuit P+ and D terminals, disconnect P+ and C
	Use external regenerative resistor	Connect the regenerative resistor to the P+ and C terminals,and disconnect the P+ and D. Set P0-25=power value, P0-26=resistance value
●	Empty pin	/
U，V，W，PE	Motor connection terminal	Connect to the motor

DS5C2-45P5/47P5-PTA

Terminal	Function	Explanation
R，S，T	Main circuit power input terminal	Three phase380～440V，50/60Hz
P+，D，C	Use external regenerative resistor	Connect the regenerative resistor to the P+ and C terminals,and disconnect the P+ and D. Set P0-25=power value, P0-26=resistance value
P+，P-	Bus terminal	Real time voltage of the busbar can be measured, please be aware of the danger
U，V，W	Motor connection terminal	Connect to the motor *Note：The ground wire is on the heat sink, please check before powering on.
⏚	Grounding terminal	Connect to the motor grounding terminal and perform grounding treatment

② RS-232 port

Pin	Name	Explanation
1	TXD	RS232 send
2	RXD	RS232 receive
3	GND	RS232 signal ground

*Note：PE is the grounding terminal.

DS5C2-21P0/21P5/22P3/22P6-PTA

Terminal	Function	Explanation
L1，L2，L3	Main circuit power input terminal	Single/three-phase200~240V，50/60Hz
P+，D，C	Use built-in regenerative resistor	Short circuit P+ and D terminals, disconnect P+ and C
	Use external regenerative resistor	Connect the regenerative resistor to the P+ and C terminals, and disconnect the P+ and D. Set P0-25=power value, P0-26=resistance value
P+，P-	Bus terminal	Real time voltage of the busbar can be measured, please be aware of the danger
U，V，W	Motor connection terminal	Connect to the motor *Note：The ground wire is on the heat sink, please check before powering on.
⏚	Grounding terminal	Connect to the motor grounding terminal and perform grounding treatment

DS5C2-41P0/41P5/42P3/43P0-PTA

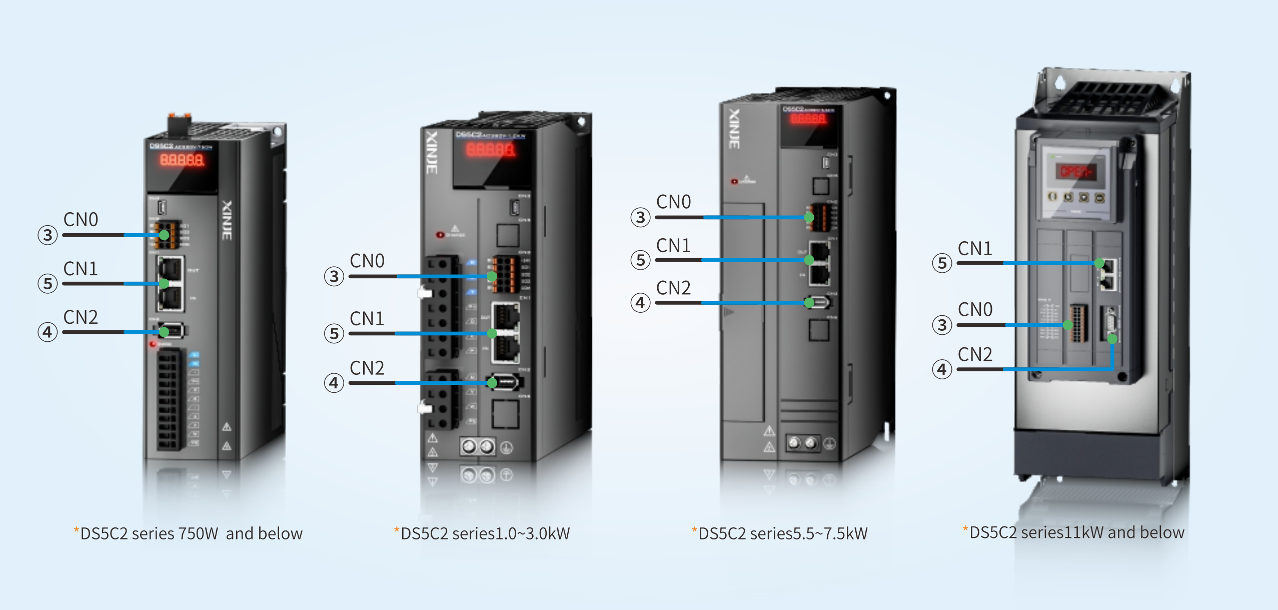
Terminal	Function	Explanation
R，S，T	Main circuit power input terminal	Three phase 380~440V，50/60Hz
P+，D，C	Use built-in regenerative resistor	Short circuit P+ and D terminals, disconnect P+ and C
	Use external regenerative resistor	Connect the regenerative resistor to the P+ and C terminals, and disconnect the P+ and D. Set P0-25=power value, P0-26=resistance value
P+，P-	Bus terminal	Real time voltage of the busbar can be measured, please be aware of the danger
U，V，W	Motor connection terminal	Connect to the motor *Note：The ground wire is on the heat sink, please check before powering on.
⏚	Grounding terminal	Connect to the motor grounding terminal and perform grounding treatment

DS5C2-411P0/415P0/422P0/432P0/445P0-PTA

Terminal	Function	Explanation
R，S，T	Main circuit power input terminal	Single phase 380～440V，50/60Hz
●	Empty pin	/
U，V，W	Motor connection terminal	Connect to the motor *Note：The ground wire is on the heat sink, please check before powering on.
P+，PB	Use external regenerative resistor	Connect the regenerative resistor to P+ and PB. Set P0-25=power value, P0-26=resistance value
P+，P-	Bus terminal	Real time voltage of the busbar can be measured, please be aware of the danger
PE，PE	Grounding terminal	Only supported by 11, 15kW

Terminal definition

| DS5C2 series



*DS5C2 series 750W and below *DS5C2 series1.0~3.0kW *DS5C2 series5.5~7.5kW *DS5C2 series11kW and below

③ CN0 port

DS5C2 series 750W and below

Pin	Name
SI1	High speed input terminal 1
SI2	High speed input terminal 2
SI3	Ordinary input terminal 3
+24V	Input terminal +24V
SO1	Output terminal 1
SO2	Output terminal 2
SO3	Output terminal 3
COM	Output terminal ground

DS5C2 series 1~7.5kW

Pin	Explanation	Name	Explanation
SI1	Input terminal 1	24V	+24 input common terminal
SI2	Input terminal 2	SO1	Output terminal 1
SI3	Input terminal 3	SO2	Output terminal 2
SI4	Input Terminal 4 (High Speed)	SO3	Output terminal 3
SI5	Input Terminal 5 (High Speed)	COM	Output terminal ground

DS5C2 series 11kW and above

Pin	Explanation	Name	Explanation
P-	Pulse-	+24V	Input terminal common terminal
P+5	Pulse +5V	SI1	Input terminal
P+24	Pulse pulse +24V	SI2	Input terminal
D-	Direction-	SI3	Input terminal
D+5	Direction +5V	SI4	Input terminal (high-speed)
D+24	Direction +24V	SI5	Input terminal (high-speed)
SO1+	Output terminal +	SO1-	Output terminal-
SO2+	Output terminal +	SO2-	Output terminal-
SO3+	Output terminal +	SO3-	Output terminal-
SO4+	Output terminal +	SO4-	Output terminal-

④ CN2 port

DS5C2 series0. 1~7.5kW

Pin	Name
1	5V
2	GND
3	/
4	/
5	485-A
6	485-B

DS5C2 series 11kW and above

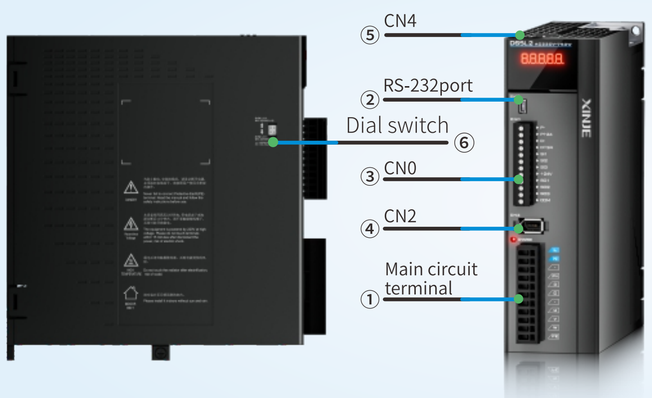
No.	Definition	No.	Definition
1	Temperature–	6	GND
2	Temperature+	7	GND
3	485-B	8	5V
4	485-A	9	5V
5	PE		

⑤ CN1 port

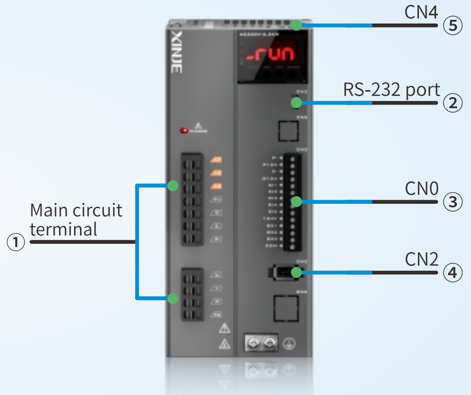
Pin	Name	Explanation
1	TX A+	TRANSMIT A+
2	TX A-	TRANSMIT A-
3	RX A+	RECEIVE A+
4	/	/
5	/	/
6	RX A-	RECEIVE A-
7	/	/
8	/	/
9	TX B+	TRANSMIT B+
10	TX B-	TRANSMIT B-
11	RX B+	RECEIVE B+
12	/	/
13	/	/
14	RX B-	RECEIVE B-
15	/	/
16	/	/

Terminal definition

| DS5L2 series



*DS5L2 series750W and below



*DS5L1/L2 series1.0~3.0kW

① Definition of main circuit terminals

DS5L2-20P1/20P2/20P4-PTA

Terminal	Function	Explanation
L/N	Main circuit power input terminal	Single phase200～240V，50/60Hz
●	Empty pin	/
P+，C	Use external regenerative resistor	Connect the regenerative resistor to the P+ and C terminals. P0-25=power value, P0-26=resistance value
U，V，W，PE	Motor connection terminal	Connect to the motor

DS5L2-20P7-PTA

Terminal	Function	Explanation
L/N	Main circuit power input terminal	Single phase200～240V，50/60Hz
●	Empty pin	/
P+，D，C	Use built-in regenerative resistor	Short circuit P+ and D terminals, disconnect P+ and C
	Use external regenerative resistor	Connect the regenerative resistor to the P+ and C terminals,and disconnect the P+ and D. Set P0-25=power value, P0-26=resistance value
●	Empty pin	/
U，V，W，PE	Motor connection terminal	Connect to the motor

② RS-232 port

Pin	Name	Explanation
1	TXD	RS232 send
2	RXD	RS232 receive
3	GND	RS232 signal ground

④ CN2 port

Pin	Name	Pin	Name
1	5V	4	/
2	GND	5	485-A
3	/	6	485-B

⑤ CN4-485 port

Pin	Name
4	485-A
5	485-B
6	485-GND
Others	RESERVED

*Note: PE is the grounding terminal.

⑥ Dial switch

Dial 1	Dial 2	Status
ON	ON	Pulse input differential 5V
OFF	OFF	Pulse input collector 24V

*Note: The directions of the two dials must be consistent. If they are not consistent, once the driver pulse terminal is powered on, the pulse terminal will be burned out.

DS5L2-21P0/21P5/22P3/22P6-PTA

Terminal	Function	Explanation
L1，L2，L3	Main circuit power input terminal	Single/three-phase200~240V，50/60Hz
P+，D，C	Use built-in regenerative resistor	Short circuit P+ and D terminals, disconnect P+ and C
	Use external regenerative resistor	Connect the regenerative resistor to the P+ and C terminals, and disconnect the P+ and D. Set P0-25=power value, P0-26=resistance value
P+，P-	Bus terminal	Real time voltage of the busbar can be measured, please be aware of the danger
U，V，W	Motor connection terminal	Connect to the motor *Note: The ground wire is on the heat sink, please checkbefore powering on.
⏚	Grounding terminal	Connect to the motor grounding terminal and perform grounding treatment

DS5L2-41P0/41P5/42P3/43P0-PTA

Terminal	Function	Explanation
R，S，T	Main circuit power input terminal	Three phase380~440V，50/60Hz
P+，D，C	Use built-in regenerative resistor	Short circuit P+ and D terminals, disconnect P+ and C
	Use external regenerative resistor	Connect the regenerative resistor to the P+ and C terminals, and disconnect the P+ and D. Set P0-25=power value, P0-26=resistance value
P+，P-	Bus terminal	Real time voltage of the busbar can be measured, please be aware of the danger
U，V，W	Motor connection terminal	Connect to the motor *Note: The ground wire is on the heat sink, please checkbefore powering on.
⏚	Grounding terminal	Connect to the motor grounding terminal and perform grounding treatment

③ CN0 port

DS5L2 series 750W and below

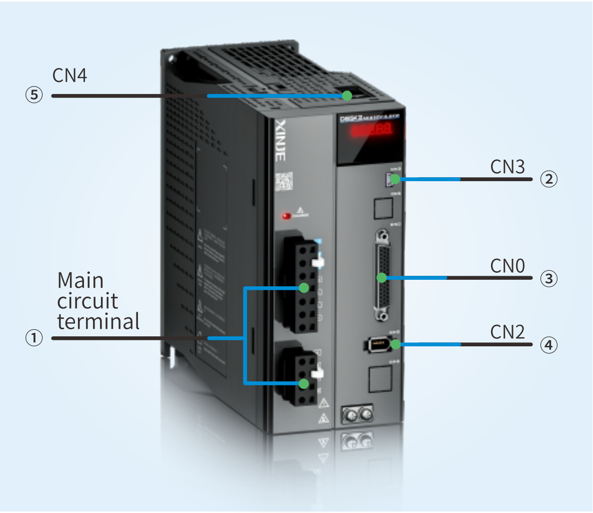
Pin	Name
P-	Pulse input PUL-
P+24(5V)	Pulse input external power supply
D-	Direction input DIR-
D+24(5V)	Directional input external power supply
SI1	Input terminal 1
SI2	Input terminal 2
SI3	Input terminal 3
+24V	Input terminal +24V
SO1	Output terminal 1
SO2	Output terminal 2
SO3	Output terminal 3
COM	Output terminal ground

DS5L2 series above750W

Pin	Name
P-	Pulse input PUL-
P+24(5V)	Collector open circuit input
D-	Direction input DIR-
D+24(5V)	Collector open circuit input
SI1	Input terminal 1
SI2	Input terminal 2
SI3	Input terminal 3
SI4	Input terminal 4
SI5	Input terminal 5
+24V	Input +24V
SO1	Output terminal 1
SO2	Output terminal 2
SO3	Output terminal 3
COM	Output terminal ground

Terminal definition

| DS5K2 series



② RS-232 port

Pin	Name	Explanation
1	TXD	RS232 send
2	RXD	RS232 receive
3	GND	RS232 signal ground

③ CN0 port

No.	Name	Explanation	No.	Name	Explanation
1	P-	Pulse-	23	SI4	Input terminal
2	P+5	Pulse +5V	24	SI6	Input terminal
3	P+24	Pulse +24V	25	SI7	Input terminal
4	D-	Direction-	26	GND	Long line drive ground
5	D+5	Direction +5V	27	SI8+	High speed input terminal
6	D+24	Direction +24V	28	SI8-	High speed input terminal
7	SO1	Output terminal	29	SI5	High speed input terminal
8	SO2	Output terminal	30	+24V	High speed input terminal
9	SO3	Output terminal	31	T-REF+	External torque analog differential input+
10	SO4	Output terminal	32	T-REF-	External torque analog differential input-
11	SO5+	Output terminal	33	V-REF+	External speed analog differential input+
12	SO5-	Output terminal	34	V-REF-	External speed analog differential input-
13	SO6+	Output terminal	35	OA+	Encoder frequency division output OA+
14	SO6-	Output terminal	36	OA-	Encoder frequency division output OA-
15	COM	Output common terminal	37	OB+	Encoder frequency division output OB+
16	NC	Reserved	38	OB-	Encoder frequency division output OB-
17	NC	Reserved	39	OZ+	Encoder frequency division output OZ+
18	NC	Reserved	40	OZ-	Encoder frequency division output OZ-
19	GND	Analog input ground	41	HPUL+	Long line drive high-speed pulse+
20	SI1	Input terminal	42	HPUL-	Long line drive high-speed pulse-
21	SI2	Input terminal	43	HDIR+	Long line drive high-speed direction+
22	SI3	Input terminal	44	HDIR-	Long line drive high-speed direction-

④ CN2 port

No.	Definition
1	5V
2	GND
3	/
4	/
5	485-A
6	485-B

① Definition of main circuit terminals

DS5K2-20P1/20P4-PTA

Terminal	Function	Explanation
L/N	Main circuit power input terminal	Single phase200～240V，50/60Hz
●	Empty pin	/
P+，C	Use external braking resistor	Connect the regenerative resistor to the P+ and C terminals, P0-25=power value, P0-26=resistance value
U，V，W	Motor connection terminal	Connect to the motor
PE	Motor grounding terminal	Connect to the motor grounding terminal and perform grounding treatment

DS5K2-20P7-PTA

Terminal	Function	Explanation
L/N	Main circuit power input terminal	Single phase200～240V，50/60Hz
●	Empty pin	/
P+，D，C	Use built-in braking resistor	Short circuit P+ and D terminals, disconnect P+ and C
	Use external braking resistor	Connect the regenerative resistor to the P+ and C terminals, and disconnect the P+ and D, P0-25=power value, P0-26=resistance value
U，V，W	Motor connection terminal	Connect to the motor
PE	Motor grounding terminal	Connect to the motor grounding terminal and perform grounding treatment

DS5K2-21P0/21P5/22P3/22P6-PTA

Terminal	Function	Explanation
L1，L2，L3	Main circuit power input terminal	Three phase (L1 · L2 · L3) AC200~240V, 50/60Hz Or single-phase (L1 · L3) AC200~240V, 50/60Hz
P+，D，C	Use built-in braking resistor	Short circuit P+ and D terminals, disconnect P+ and C
	Use external braking resistor	Connect the regenerative resistor to the P+ and C terminals, and disconnect the P+ and D, P0-25=power value, P0-26=resistance value
P+，P-	Bus terminal	Real time voltage of the busbar can be measured, please be aware of the danger
U，V，W	Motor connection terminal	Connect to the motor
PE	Motor grounding terminal	Connect to the motor grounding terminal and perform grounding treatment

DS5K2-41P0/41P5/42P3/43P0-PTA

Terminal	Function	Explanation
R，S，T	Main circuit power input terminal	Three phase AC380~440V, 50/60Hz
P+，D，C	Use built-in braking resistor	Short circuit P+ and D terminals, disconnect P+ and C
	Use external braking resistor	Connect the regenerative resistor to the P+ and C terminals, and disconnect the P+ and D, P0-25=power value, P0-26=resistance value
P+，P-	Bus terminal	Real time voltage of the busbar can be measured, please be aware of the danger
U，V，W	Motor connection terminal	Connect to the motor
PE	Motor grounding terminal	Connect to the motor grounding terminal and perform grounding treatment

DS5K2-45P5/47P5-PTA

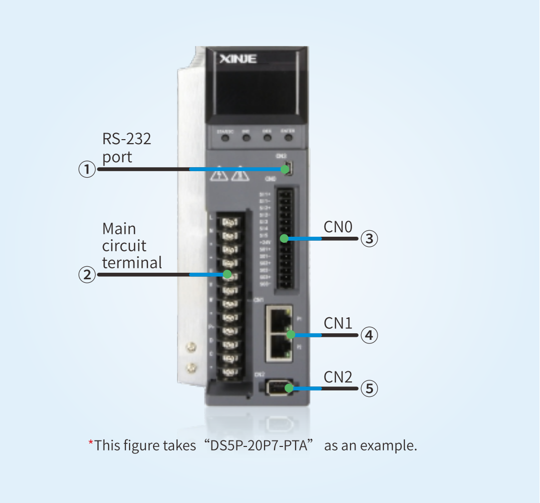
Terminal	Function	Explanation
R，S，T	Main circuit power input terminal	Three phase AC380~440V, 50/60Hz
P+，D，C	Use built-in braking resistor	Short circuit P+ and D terminals, disconnect P+ and C (This model does not have a built-in braking resistor and is not supported)
	Use external braking resistor	Connect the regenerative resistor to the P+ and C terminals, and disconnect the P+ and D, P0-25=power value, P0-26=resistance value
P+，P-	Bus terminal	Real time voltage of the busbar can be measured, please be aware of the danger
U，V，W	Motor connection terminal	Connect to the motor
PE	Motor grounding terminal	Connect to the motor grounding terminal and perform grounding treatment

⑤ CN4 port-RS485

No.	Definition
4	485-A
5	485-B
6	485GND
Others	Reserved

Terminal definition

DS5P series



*This figure takes “DS5P-20P7-PTA” as an example.

① RS-232 port

Pin	Name	Explanation
1	TXD	RS232 send
2	RXD	RS232 receive
3	GND	RS232 signal ground

② Definition of main circuit terminals

Terminal	Function	Explanation
L/N R/S/T	Main circuit power input terminal	Single/three-phase AC200~240V, 50/60Hz Three phase AC380~440V, 50/60Hz
●	Empty pin	/
U/V W/PE	Motor connection terminal	Connect to the motor Note: The ground wire is on the heat sink. Please check before powering on
P+，D，C	Use built-in regenerative resistor	Short circuit P+ and D terminals, disconnect P+ and C
	Use built-in regenerative resistor	Connect the regenerative resistor to the P+ and C terminals, and disconnect the P+ and D, P0-25=power value, P0-26=resistance value

③ CN0 port

Name	Explanation	Name	Explanation
SI1+	High speed S1+	24V	Input common terminal
SI1-	High speed S1-	SO1+	Output terminal
SI2+	High speed S1+	SO1-	Output terminal
SI2-	High speed S1-	SO2+	Output terminal
SI3	Input terminal	SO2-	Output terminal
SI4	Input terminal	SO3+	Output terminal
SI5	Input terminal	SO3-	Output terminal

④ CN1 port

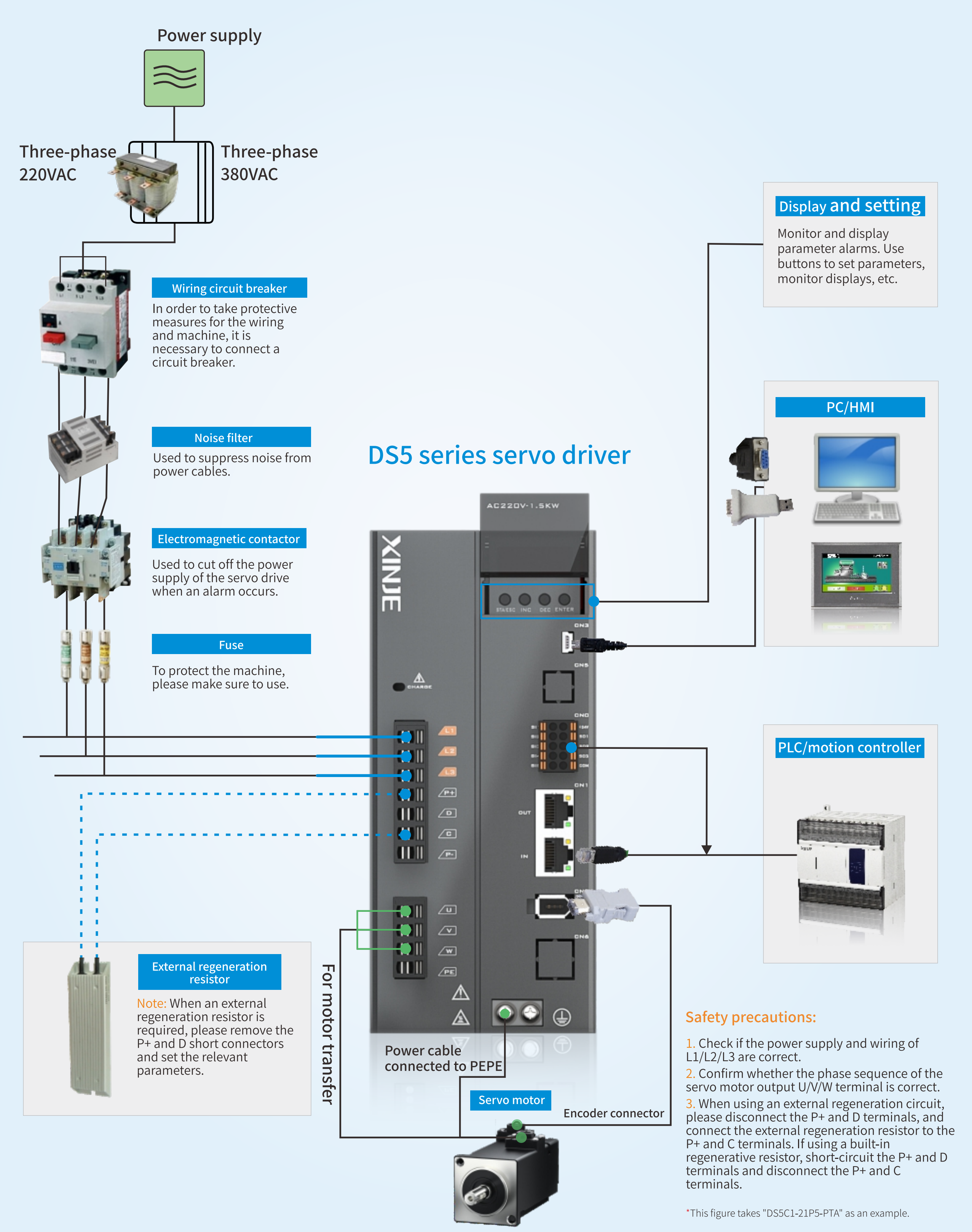
Pin	Definition	Explanation
1	TX+	Data send+
2	TX-	Data send-
3	RX+	Data receive+
4	-	–
5	-	–
6	RX-	Data receive-
7	-	–
8	-	–
Outer covering	PE	Shield

⑤ CN2 port

Pin	Name
1	5V
2	GND
3	/
4	/
5	485-A
6	485-B

Peripheral device wiring

DS5 series



Wiring circuit breaker

In order to take protective measures for the wiring and machine, it is necessary to connect a circuit breaker.

Noise filter

Used to suppress noise from power cables.

Electromagnetic contactor

Used to cut off the power supply of the servo drive when an alarm occurs.

Fuse

To protect the machine, please make sure to use.

External regeneration resistor

Note: When an external regeneration resistor is required, please remove the P+ and D short connectors and set the relevant parameters.

Display and setting

Monitor and display parameter alarms. Use buttons to set parameters, monitor displays, etc.

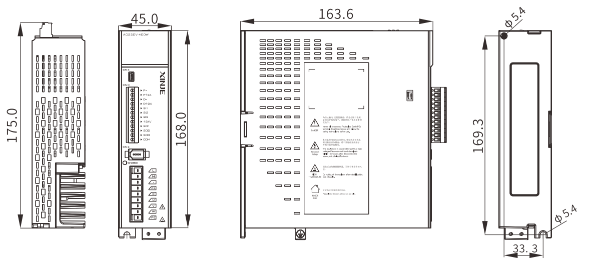
Safety precautions:

1. Check if the power supply and wiring of L1/L2/L3 are correct.
2. Confirm whether the phase sequence of the servo motor output U/V/W terminal is correct.
3. When using an external regeneration circuit, please disconnect the P+ and D terminals, and connect the external regeneration resistor to the P+ and C terminals. If using a built-in regenerative resistor, short-circuit the P+ and D terminals and disconnect the P+ and C terminals.

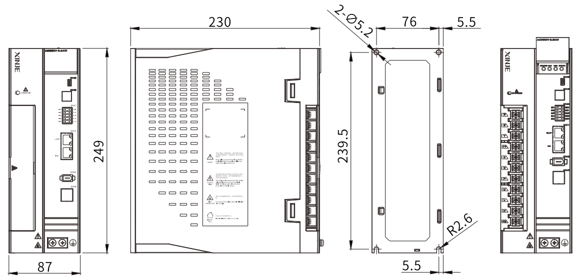
*This figure takes "DS5C1-21P5-PTA" as an example.

Driver dimension diagram (Unit: mm)

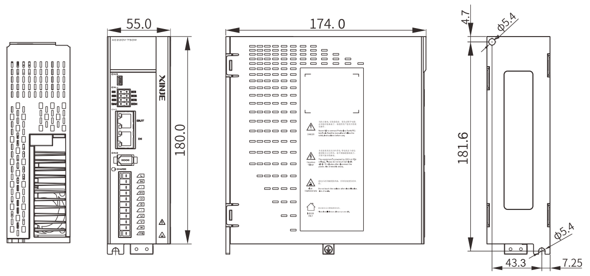
DS5L2-20P1/2/4-PTA
DS5C2-20P1/2/4-PTA
DS5K2-20P1/20P4-PTA


45.0
163.6
175.0
168.0
169.3
ϕ5.4
ϕ5.4
33.3

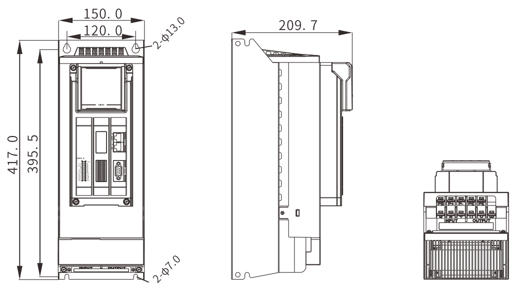
DS5C2-45P5/47P5-PTA
DS5K2-45P5/47P5-PTA


230
2-ϕ5.2
76
5.5
249
239.5
R2.6
87
5.5

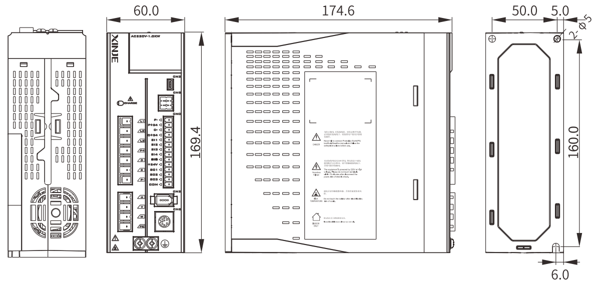
DS5L2-20P7-PTA
DS5C2-20P7-PTA
DS5K2-20P7-PTA


55.0
174.0
4.7
ϕ5.4
180.0
181.6
ϕ5.4
43.3
7.25

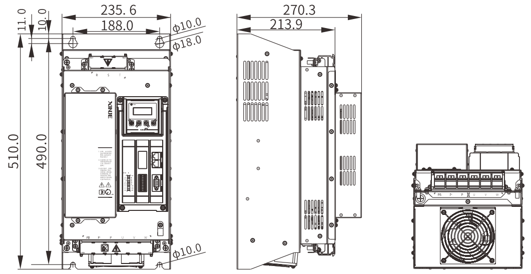
DS5C2-415P0-PTA


150.0
120.0
2-ϕ13.0
209.7
417.0
395.5
2-ϕ7.0

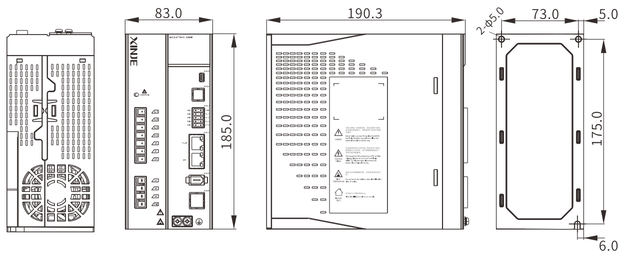
DS5L2-21P0/41P0/41P5-PTA
DS5C2-21P0/41P0/41P5-PTA
DS5K2-21P0/41P0/41P5-PTA


60.0
174.6
50.0
5.0
ϕ5
169.4
180.0
6.0

DS5C2-422P0/432P0-PTA

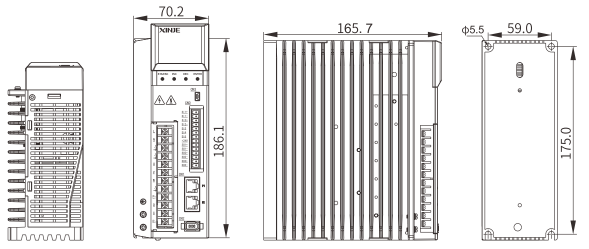

11.0
10.0
235.6
188.0
ϕ10.0
ϕ18.0
270.3
213.9
510.0
490.0
ϕ10.0

DS5L2-21P5/22P3/22P6/42P3/43P0-PTA
DS5C2-21P5/22P3/22P6/42P3/43P0-PTA
DS5K2-21P5/22P3/22P6/42P3/43P0-PTA

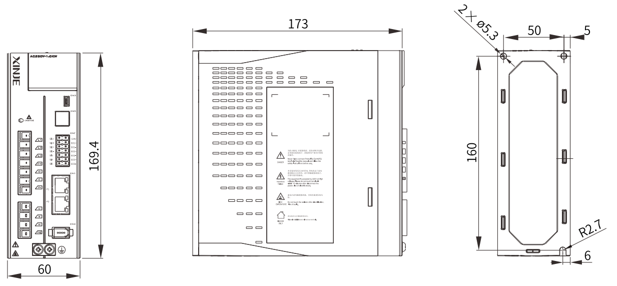

83.0
190.3
2-ϕ5.0
73.0
5.0
185.0
175.0
6.0

Driver dimension diagram (Unit: mm)

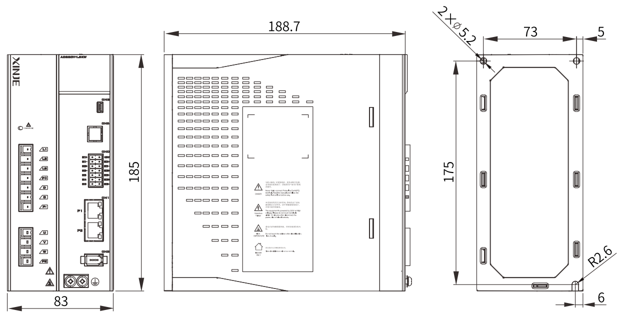
DS5P-20P1/20P2/20P4/20P7-PTA


70.2
165.7
ϕ5.5
59.0
186.1
175.0

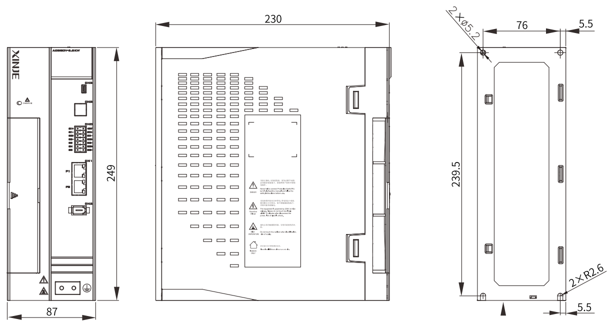
DS5P-21P0/41P0/41P5-PTA


173
2×ϕ5.3
50
5
169.4
160
R2.7
6
60

DS5P-21P5/22P3/22P6/42P3/43P0-PTA


188.7
2×ϕ5.2
73
5
185
175
R2.6
6
83

DS5P-45P5/47P5-PTA


230
2×ϕ5.2
76
5.5
249
239.5
2×R2.6
5.5
87

Naming rule

MS6 servo motor naming rule

MS6H - 80 C N 30 B Z 3 - 2 0P7 - □

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪

① Inertia type

Symbol	Inertia
MS6L	Ultra-low inertia motor
MS6S	Low inertia motor
MS6G	Medium inertia motor
MS6H	High inertia motor

② Frame

Symbol	Frame
25	Frame 25
40	Frame 40
60	Frame 60
80	Frame 80
100	Frame 100
110	Frame 110
130	Frame 130
180	Frame 180
200	Frame 200
220	Frame 220
265	Frame 265

③ Encoder structure

Symbol	Type
C	Magnetic encoder
T	Optical encoder

④ Encoder specification

Symbol	Specification
M	Multi turn 17-bit
N	Single/multi turn integrated 19-bit
L	Multi turn 23-bit
H	High performance multi turn 23-bit

⑤ speed

Symbol	Rated speed(rpm)
15	1500
20	2000
25	2500
30	3000

⑩ Rated power

Symbol	Rated power(kW)
0A5	0.05
0P1	0.1
0P2	0.2
0P4	0.4
0P7	0.75
0P8	0.85
1P0	1
1P3	1.3
1P5	1.5
1P8	1.8
2P0	2.0
2P3	2.3
3P0	3.0
4P4	4.4
5P5	5.5
7P5	7.5
11P0	11
13P0	13
17P0	17
21P0	21
27P0	27
30P0	30
48P0	48
60P0	60
75P0	75

⑥ Motor shaft specification

Symbol	Shaft specification
A	With key, no oil seal, with threaded hole
B	With key, with oil seal, with threaded hole
C	No key, no oil seal, with threaded hole
D	No key, with oil seal, with threaded hole
E	Special shaft specifications (length, shaft diameter, etc.)

⑦ Power-off brake

Symbol	Power-off brake
Z	With brake
empty	Without brake

⑧ Motor connector type

Symbol	Connector type
2	Aviation connector
3	Connection form
4	Amp plug (motor body IP67)

⑨ Power supply voltage

Symbol	Power supply voltage
2	220V
4	380V

⑪ Motor heat dissipation method

Symbol	Heat dissipation method
Default	Natural heat dissipation
F	Air cooling
Y	Liquid cooling

*NOTE: The provided explanation is only an example, please refer to the detailed parameters of the motor for specific models. Our company provides combination models of CM, CN, TL, and TH. Currently, only the MS6 series 130 flange 2.3kW and 180 flange 5.5kW and

Motor driver specification list

MS6 MOTOR

Item	50W	100W	200W	400W	750W	850W	1.0kW	1.3kW	1.5kW	1.8kW	2.3kW	2.6kW	2.5kW	3.0kW
Ultra low inertiaMS6L									🟠100			🟢100		
Low inertia MS6S	🔵25			🔵60	🔵80		🔵80 🔵100		🔵100					🟢130
Medium inertia MS6G						🟠130	🟠130		🟠110 🟠130		🟠130		🔵130	🟢180
High inertia MS6H	🔵40	🔵40	🔵60	🔵60	🔵80	🟠130	🔵80	🟢130	🔵130	🟠130	🟠130			🟢180

Item	4.4kW	5kW	5.5kW	7.0kW	7.5kW	13kW	17kW	21kW	27kW	30kW	48kW	60kW	75kW
Ultra low inertiaMS6L													
Low inertia MS6S		🟢130		🟢130									
Medium inertia MS6G	🟢180		🟢180		🟢180	🟢200	🟢200	🟢200	🟢200	🟢265	🟢265	🟢265*	🟢265*
High inertia MS6H	🟢180		🟢180		🟢180								

Note: 40/60/80/110/130/180/220/265 represents the motor base. The motor marked with "" is still under development, please stay tuned.

🔵 Provide models with a voltage level of 220V.

🟢 Provide models with a voltage level of 380V.

🟠 Provide models with a voltage level of 220V/380V.

MS6 series motor

Series	Specification	1.5kW	1.5kW	2.5kW						
	Model	100□□30B□2	100□□30B□2	100□□30B□2						
MS6L ultra low inertia	Frame [mm]	100	100	100						
	Rated torque(max torque)[N·m]	4.9(14.7)	4.9(14.7)	8(24)						
	Rated speed(max speed)[r/min]	3000(6000)	3000(6000)	3000(6000)						
	Inertia, none brake(brake)[10^{-7}Kg.m^2]	2550(3123)	2550(3123)	3840(4315)						
	Encoder bits	19/23	19/23	19/23						
	220V	√								
	380V		√	√						

Series	Specification	50W	400W	400W	750W	750W	1kW	1kW	1.5kW	3kW	5kW	7kW
	Model	25□□30B4	60□□30B□3	60□□30B□4	80□□30B□3	80□□30B□4	80□□30B□3	100□□30B□2	100□□30B□2	130□□30B□2	130□□30B□2	130□□30B□2
MS6S low inertia	Frame [mm]	25	60	60	80	80	80	100	100	130	130	130
	Rated torque(max torque)[N·m]	0.159(0.477)	1.27(4.45)	1.27(4.45)	2.39(7.17)	2.39(7.17)	3.18(9.54)	3.18(9.54)	4.8(12)	9.8(29.4)	15.8(47.4)	22.3(66.9)
	Rated speed(max speed)[r/min]	3000(6000)	3000(6500)	3000(6500)	3000(5200)	3000(5200)	3000(4000)	3000(4500)	3000(4500)	3000(6000)	3000(6000)	3000(5000)
	Inertia, none brake(brake)[10^{-7}Kg.m^2]	14	258(280)	247(279)	980(1005)	980(1004)	1182(1196)	1928(2200)	2812(2888)	5870(8500)	8570(10530)	11180(13140)
	Encoder bits	19	17/19/23	17	17/19/23	17	17/19/23	17/23	17/19/23	19/23	19/23	19/23
	220V	√	√	√	√	√	√	√	√			
	380V									√	√	√

Series	Specification	850W	850W	1kW	1.5kW	1.5kW	1.5kW	1.5kW	1.5kW	1.5kW	2.3kW	2.3kW
	Model	130□□15B□2	130□□15B□2	130□□25B□2	110□□30B□2	110□□30B□2	130□□15B□2	130□□15B□2	130□□20B□2	130□□20B□2	130□□15B□2	130□□15B□2
MS6G medium inertia	Frame [mm]	130	130	130	110	110	130	130	130	130	130	130
	Rated torque(max torque)[N·m]	5.4(16.2)	5.4(16.2)	4(12)	4.78(12.7)	4.78(13.5)	10(25)	10(25)	7.2(18)	7.2(21.6)	14.6(29.2)	14.6(36.5)
	Rated speed(max speed)[r/min]	1500(2500)	1500(3000)	2500(4000)	3000(4500)	3000(4500)	1500(2500)	1500(3000)	2000(3000)	2000(4000)	1500(2000)	1500(3000)
	Inertia, none brake(brake)[10^{-7}Kg.m^2]	11770(14480)	11770(14480)	8030(8430)	6200(6248)	6200(6248)	17320(19670)	17320(19670)	12140(14410)	12140(14410)	23020(28780)	23020(28780)
	Encoder bits	17/19/23	17/19/23	17/19/23	17/19/23	17/19/23	17/19/23	17/19/23	17/19/23	17/19/23	17/19/23	17/19/23
	220V	√		√	√		√		√		√	
	380V		√	√		√		√		√		√

Series	Specification	2.6kW	3kW	4.4kW	5.5kW	7.5kW	13kW	17kW	21kW	27kW	30kW	48kW
	Model	130□□25B□2	180□□15B□2	180□□15B□2	180□□15B□2	180□□15B□2	200□□17B□2	200□□17B□2	200□□17B□2	200□□17B□2	265□□17B□2	200□□17B□2
MS6G medium inertia	Frame [mm]	130	180	180	180	180	200	200	200	200	265	265
	Rated torque(max torque)[N·m]	10(28.5)	19.1(47.75)	28(84)	35(87.5)	48(120)	70(175)	95.5(238.75)	120(240)	150(375)	170(340)	270(540)
	Rated speed(max speed)[r/min]	2500(4000)	1500(3000)	1500(3000)	1500(3000)	1500(3000)	1700(2500)	1700(2500)	1700(2500)	1700(2500)	1700(2200)	1700(2200)
	Inertia, none brake(brake)[10^{-7}Kg.m^2]	17130(19823)	45790(47340)	67600(76770)	91360(100530)	135330(144500)	159350(165980)	195000(202056)	229611(230194)	263957(264545)	470111	602879
	Encoder bits	19/23	19/23	19/23	19/23	19/23	23	23	23	23	23	23
	220V	√										
	380V		√	√	√	√	√	√	√	√	√	√

Series	Specification	50W	100W	100W	200W	200W	400W	400W	750W	750W
		40□□30B□4	40□□30B□3	60□□30B□4	60□□30B□3	60□□30B□4	60□□30B□3	60□□30B□4	80□□30B□3	80□□30B□4
MS6H high inertia	Frame [mm]	40	40	40	60	60	60	60	80	80
	Rated torque(max torque)[N·m]	0.16(0.56)	0.32(0.96)	0.32(1.12)	0.64(2.24)	0.64(2.24)	1.27(4.45)	1.27(4.45)	2.39(7.17)	2.39(7.17)
	Rated speed(max speed)[r/min]	3000(6500)	3000(6500)	3000(6500)	3000(6500)	3000(6500)	3000(6500)	3000(6000)	3000(5200)	3000(5200)
	Inertia, none brake(brake)[10^{-7}Kg.m^2]	35.6(38.27)	64.38(67.18)	58.2(60.77)	271(281)	300(332)	530(550)	521(529)	1550(1569)	1578(1688)
	Encoder bits	17	17/19/23	17	17/19/23	17	17/19/23	17	17/19/23	17
	220V	√	√	√	√	√	√	√	√	√
	380V									

Series	Specification	1kW	1kW	850W	850W	1.3kW	1.5kW	1.8kW	1.8kW	
		80□□30B□3	80□□30B□4	130□□15B□2	130□□15B□2	130□□15B□2	130□□20B□2	130□□15B□2	130□□15B□2	
MS6H high inertia	Frame [mm]	80	80	130	130	130	130	130	130	
	Rated torque(max torque)[N·m]	3.18(9.54)	3.18(9.54)	5.41(16.23)	5.41(16.23)	8.3(24.9)	7.16(18)	11.5(34.5)	11.5(28.75)	
	Rated speed(max speed)[r/min]	3000(4000)	3000(4000)	1500(3000)	1500(3000)	1500(3000)	2000(3000)	1500(2500)	1500(3000)	
	Inertia, none brake(brake)[10^{-7}Kg.m^2]	2391(2410)	2362(2483)	13860(15340)	13860(15340)	20000(21440)	20000(21440)	28500(29940)	28500(29940)	
	Encoder bits	17/19/23	17	17/23	17/23	17/23	17/23	17/23	17/23	
	220V	√	√	√			√	√		
	380V				√	√			√	

Series	Specification	2.3kW	2.3kW	3kW	4.4kW	5.5kW	7.5kW			
		130□□15B□2	130□□15B□2	180□□15B□2	180□□15B□2	180□□15B□2	180□□15B□2			
MS6H high inertia	Frame [mm]	130	130	180	180	180	180			
	Rated torque(max torque)[N·m]	14.6(36.5)	14.6(36.5)	19(51.3)	28(84)	35(87.5)	48(120)			
	Rated speed(max speed)[r/min]	1500(2500)	1500(3000)	1500(3000)	1500(3000)	1500(3000)	1500(3000)			
	Inertia, none brake(brake)[10^{-7}Kg.m^2]	35240(36260)	35240(36260)	51000(55490)	73280(78040)	90250(95200)	132000(134690)			
	Encoder bits	17/23	17/23	17/23	17/23	17/23	17/23			
	220V	√								
	380V		√	√	√	√	√			

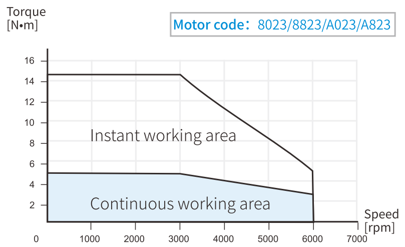
MS6L ultra low inertia

Motor specification 1.5kW/2.5kW

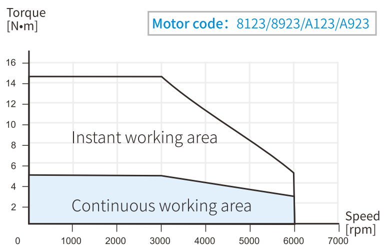
Motor model		MS6L ultra low inertia		
		100□□30B□2	100□□30B□2	100□□30B□2
		21P5	41P5	42P5
Rated power [kW]		1.5	1.5	2.5
Voltage level		AC220V	AC380V	AC380V
Rated speed [rpm]		3000	3000	3000
Maximum speed [rpm]		6000	6000	6000
Rated torque [N · m]		4.9	4.9	8
Maximum torque [N · m]		14.7	14.7	24
Rated current [mA]		9500	6700	9700
Rotor inertia [10^-7kg · m²]		2550(3123)	2550(3123)	3840(4315)
Inertia type		ultra low inertia	ultra low inertia	ultra low inertia
Recommended rotor inertia ratio		15	15	15
Electrical constant e(ms)		11.63	12.08	13.16
Mechanical constant m(ms)		0.73	0.37	0.30
Back EMF constant		48	71	77
Torque constant (Nm/A)		0.516	0.731	0.82
Pole pairs		5	5	5
Encoder bits		19/23	19/23	19/23
Encoder type		Magnetic(optical)	Magnetic(optical)	Magnetic(optical)
Motor insulation grade		ClassF(155°C)		
Protection level		IP67		
Using environment	Ambient temperature	-10-40°C (not frozen)		
	Ambient humidity	Relative humidity <90% (non condensing)		
Braking parameter	Static friction torque [N · m]	⩾10		
	Rated power [W]	17.6		
	Attraction time [ms]	⩽100		
	Release time [ms]	⩽50		
	Excitation current DC[V]	0.734		
	Attraction voltage DC[V]	⩽16.8		
	Release voltage DC[V]	1~8		
	Excitation voltage DC[V]	DC24±10%		

MS6L series T/N curve

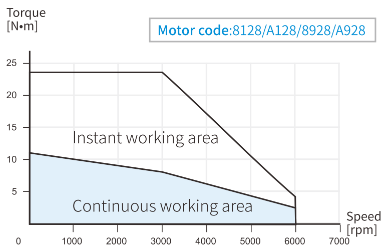
MS6L-100CN/TH30B(Z)2-21P5



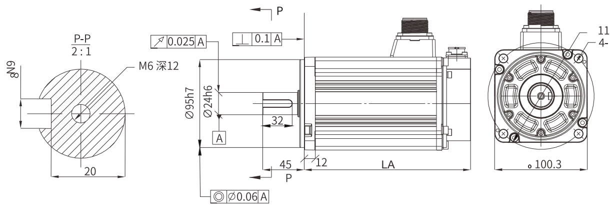
MS6L-100CN/TH30B(Z)2-41P5



MS6L-100CN/TH30B(Z)2-42P5



Motor dimension (unit: mm)



Motor model	LA±1		Inertia level
	Normal	With brake	
MS6L-100CN30B□2-21P5	180	205	Ultra low inertia
MS6L-100TH30B□2-21P5	193	218	
MS6L-100CN30B□2-41P5	180	205	
MS6L-100TH30B□2-41P5	193	218	
MS6L-100CN30B□2-42P5	228	253	
MS6L-100TH30B□2-42P5	241	266	

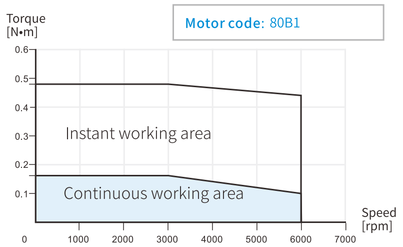
MS6S low inertia

Motor specification 50W/400W/750W/1KW/1.5KW/3KW/5KW/7KW

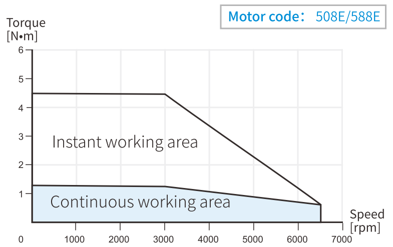
Motor model		MS6S低惯量										
		25□□30B4	60□□30B□3	60□□30B□4	80□□30B□3	80□□30B□4	80□□30B□3	100□□30B□2	100□□30B□2	130□□30B□2	130□□30B□2	130□□30B□2
		20A5	20P4	20P4	20P7	20P7	21P0	21P0	21P5	43P0	45P0	47P0
Rated power [kW]		0.05	0.4	0.4	0.75	0.75	1.0	1.0	1.5	3.0	5.0	7.0
Voltage level		AC220V								AC380V		
Rated speed [rpm]		3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
Maximum speed [rpm]		6000	6500	6500	5200	5200	4000	4500	4500	6000	6000	5000
Rated torque [N · m]		0.16	1.27	1.27	2.39	2.39	3.18	3.18	4.8	9.8	15.8	22.3
Maximum torque [N · m]		0.48	4.45	4.445	7.17	7.17	9.54	9.54	12	29.4	47.4	66.9
Rated current [mA]		900	2700	2700	4100	4100	4100	5700	8000	9200	14000	18500
Rotor inertia [10^-7kg • m2]		14	258(280)	247(279)	980(1005)	980(1104)	1182(1196)	1928(2200)	2812(2888)	5870(8500)	8570(10530)	11180(13140)
Inertia type		low inertia	low inertia	low inertia	low inertia	low inertia	low inertia	low inertia	low inertia	low inertia	low inertia	low inertia
Recommended rotor inertia ratio		30	30	30	20	20	20	15	15	10	10	10
Electrical constant e(ms)		0.22	2.96	3.11	5.53	5.53	5.89	10.34	10.791	22.13	22.13	20.88
Mechanical constant m(ms)		2.88	0.57(0.61)	0.55(0.62)	0.69(0.71)	0.69(0.78)	0.53	0.67	0.61	0.24(0.35)	0.24(0.35)	0.22
Back EMF constant		16.00	44.25	44	55	55	75	57	57	98	98	117
Torque constant (Nm/A)		0.18	0.47	0.47	0.58	0.58	0.78	0.55	0.6	1.07	1.07	1.21
Pole pairs		5										
Encoder bits		19	17/19/23	17	17/19/23	17	17/19/23	17/23	17	19/23	19/23	19/23
Encoder type		Magnetic	Magnetic (optical)	Magnetic	Magnetic (optical)	Magnetic	Magnetic (optical)	Magnetic (optical)	Magnetic	Magnetic (optical)	Magnetic (optical)	Magnetic (optical)
Motor insulation grade		ClassF(155°C)										
Protection level		IP54	IP67	IP67	IP67	IP67	IP67	IP65	IP66	IP67	IP67	IP67
Using environment	Ambient temperature	-10-40°C (not frozen)										
	Ambient humidity	Relative humidity <90% (non condensing)										
Braking parameter	Static friction torque [N • m]		⩾1.3	⩾1.3	⩾3.2	⩾3.2	⩾3.2	⩾8	⩾8	⩾15	⩾23.5	⩾23.5
	Rated power [W]		7.4	7.4	11.5	11.5	11.5	17.6	17.6	16.9	23	23
	Attraction time [ms]		⩽50	⩽50	⩽60	⩽60	⩽60	100	100	⩽100	⩽100	⩽100
	Release time [ms]		⩽30	⩽30	⩽30	⩽30	⩽30	50	50	⩽60	⩽60	⩽60
	Excitation current DC[V]		0.308	0.308	0.48	0.48	0.48	0.733	0.733	0.705	0.945	0.958
	Attraction voltage DC[V]		<16.8	<16.8	<16.8	<16.8	<16.8	⩽16.8	⩽16.8	⩽16.8	⩽16.8	⩽16.8
	Release voltage DC[V]		>1	>1	>1	>1	>1	⩾1	⩾1	⩾1	⩾1	⩾1
	Excitation voltage DC[V]	DC24±10%										

MS6S series T/N curve

MS6S-25CN30B4-20A5



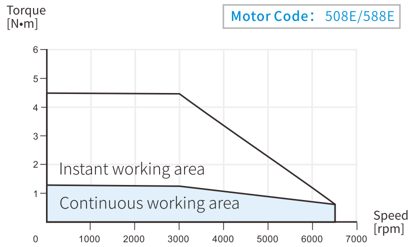
MS6S-60CM30B(Z)4-20P4



MS6S low inertia

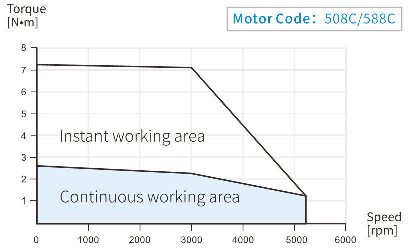
MS6S-60CM30B(Z)4-20P4

Motor Code： 508E/588E



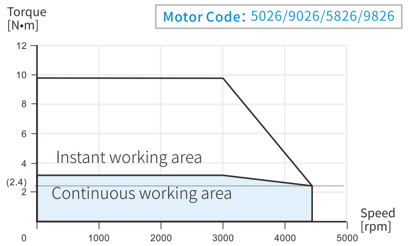
MS6S-80CM30B(Z)4-20P7

Motor Code： 508C/588C



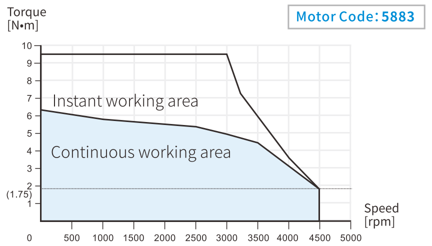
MS6S-100CM/TL30B(Z)2-21P0

Motor Code: 5026/9026/5826/9826



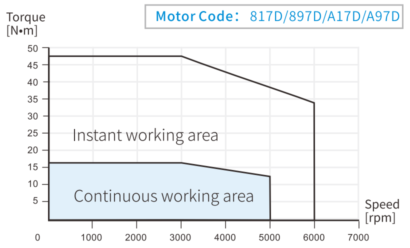
MS6S-100CM30BZ2-21P5

Motor Code: 5883



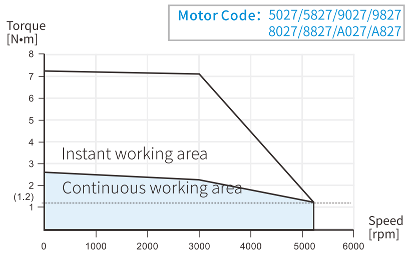
MS6S-130CN/TH30B(Z)2-45P0

Motor Code： 817D/897D/A17D/A97D



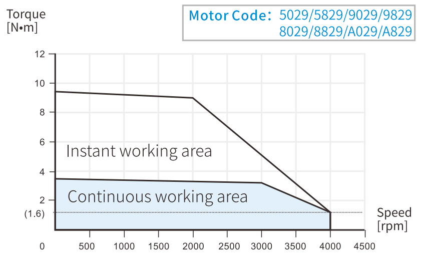
MS6S-80CM/CN/TH/TL30B(Z)3-20P7

Motor Code： 5027/5827/9027/9827
8027/8827/A027/A827



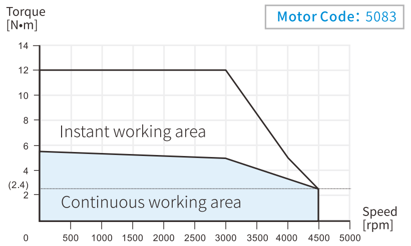
MS6S-80CM/CN/TH/TL30B(Z)3-21P0

Motor Code： 5029/5829/9029/9829
8029/8829/A029/A829



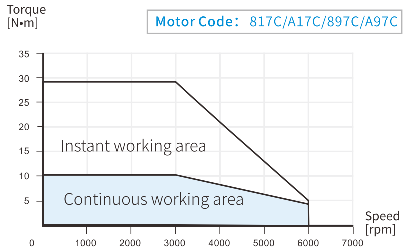
MS6S-100CM30B2-21P5

Motor Code: 5083



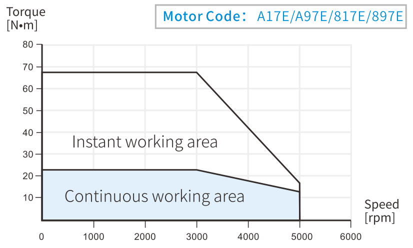
MS6S-130CN/TH30B(Z)2-43P0

Motor Code： 817C/A17C/897C/A97C



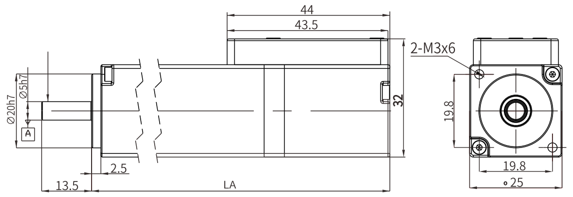
MS6S-130CN/TH30B(Z)2-47P0

Motor Code： A17E/A97E/817E/897E



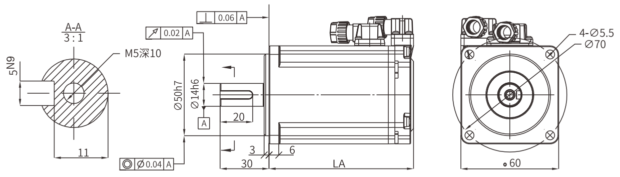
Motor dimension (unit: mm)

25flange


44
43.5
2-M3x6
32
19.8
2.5
13.5
LA
19.8
25

Motor model	LA±1		Inertia level
	Normal	With brake	
MS6S-25CN30B4-20A5	97.5	/	Low inertia

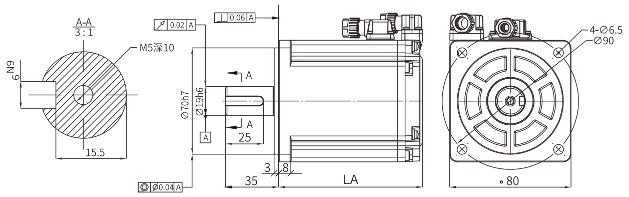
60flange


A-A
3:1
M5深10
0.02
0.06
A
11
20
3
6
30
LA
Ø0.04
60
4-Ø5.5
Ø70

B4

Motor model	LA±1		Inertia level
	Normal	With brake	
MS6S-60CM30B□4-20P4	88.7	115.5	Low inertia

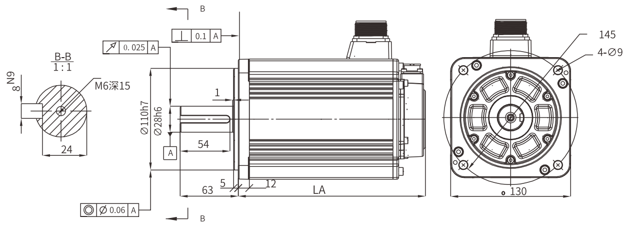
80flange


A-A
3:1
M5深10
0.02
0.06
A
15.5
25
3
8
35
LA
Ø0.04
80
4-Ø6.5
Ø90

B3 电机图

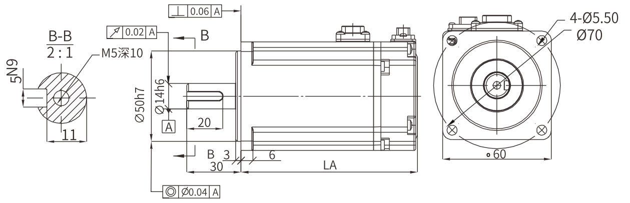
Motor model	LA±1		Inertia level
	Normal	With brake	
MS6S-80CM30B□4-20P7	95	126.9	Low inertia

130flange


B-B
1:1
M6深15
0.025
0.1
24
54
63
5
12
LA
Ø0.06
B
130
145
4-Ø9

Motor model	LA±1		Inertia level
	Normal	With brake	
MS6S-130CN30B□2-43P0	202.8	231.8	Low inertia
MS6S-130TH30B□2-43P0	219.3	248.3	
MS6S-130CN30B□2-45P0	257.8	298.5	
MS6S-130TH30B□2-45P0	274.3	315	

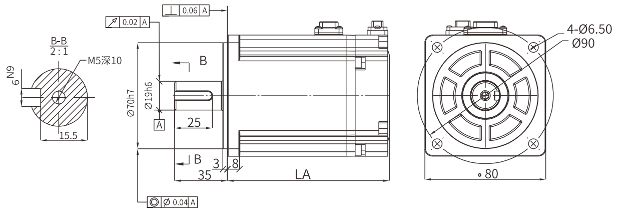
60flange


B-B
2:1
M5深10
0.02
0.06
B
20
11
B
3
30
6
LA
Ø0.04
60
4-Ø5.50
Ø70

B3 电机图

Motor model	LA±1		Inertia level
	Normal	With brake	
MS6S-60□□30B□3-20P4	98.4	121.15	Low inertia

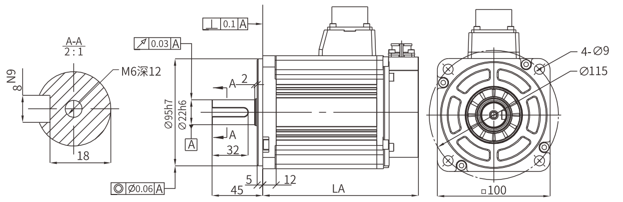
80flange


B-B
2:1
M5深10
0.02
0.06
B
15.5
25
B
3
8
35
LA
Ø0.04
80
4-Ø6.50
Ø90

B3

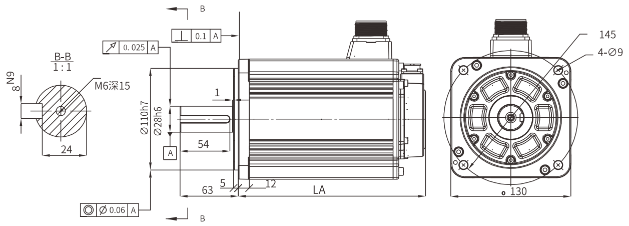
Motor model	LA±1		Inertia level
	Normal	With brake	
MS6S-80□□30B□3-20P7	107.1	132.1	Low inertia
MS6S-80□□30B□3-21P0	117.6	142.6	Low inertia

100flange


A-A
2:1
M6深12
0.03
0.1
A
18
32
45
5
12
LA
Ø0.06
100
4-Ø9
Ø115

Motor model	LA±1		Inertia level
	Normal	With brake	
MS6S-100C□30B□2-21P0	138.5	164	Low inertia
MS6S-100TL30B□2-21P0	144.2	169.7	
MS6S-100C□30B□2-21P5	154.5	183	

130flange


B-B
1:1
M6深15
0.025
0.1
24
54
63
5
12
LA
Ø0.06
B
130
145
4-Ø9

Motor model	LA±1		轴径φD	Inertia level
	Normal	With brake		
MS6S-130CN30B□2-47P0	321.8	362.5	28	Low inertia
MS6S-130TH30B□2-47P0	338.3	379	28	

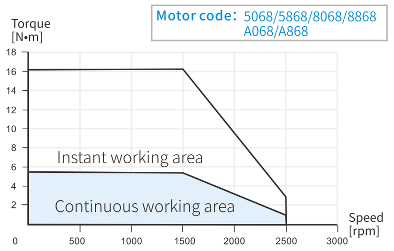
MS6G medium inertia

Motor specification of 0.8kW/1kW/1.5kW

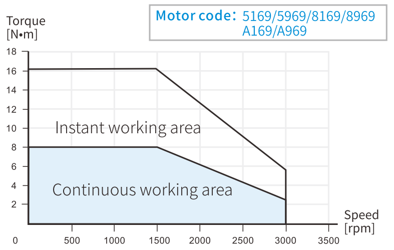
Motor model		MS6G medium inertia									
		130□□15B□2	130□□15B□2	130□□25B□2	130□□25B□2	110□□30B□2	110□□30B□2	130□□20B□2	130□□15B□2	130□□20B□2	130□□15B□2
		20P8	40P8	21P0	41P0	21P5	41P5	21P5		41P5	
Rated power [kW]		0.85	0.85	1.0	1.0	1.5	1.5	1.5	1.5	1.5	1.5
Voltage level		AC220V	AC380V	AC220V	AC380V	AC220V	AC380V	AC220V	AC220V	AC380V	AC380V
Rated speed [rpm]		1500	1500	2500	2500	3000	3000	2000	1500	2000	1500
Maximum speed [rpm]		2500	3000	4000	4000	4500	4500	3000	2500	4000	3000
Rated torque [N·m]		5.4	5.4	4	4	4.78	4.78	7.2	10	7.2	10
Maximum torque [N·m]		16.2	16.2	12	12	12.7	13.5	18	25	21.6	25
Rated current [mA]		4300	2900	5900	3200	7500	6000	8000	8000	5300	5700
Rotor inertia [10^-7kg • m2]		11770(14480)	11770(14480)	8030(8430)	8030(8430)	6200(/)	6200(/)	12140(14410)	17320(19670)	12140(14410)	17320(19670)
Inertia type		Medium inertia	Medium inertia	Medium inertia	Medium inertia	Medium inertia	Medium inertia	Medium inertia	Medium inertia	Medium inertia	Medium inertia
Recommended rotor inertia ratio		10	10	10	10	15	15	10	10	10	10
Electrical constant e(ms)		9.84	9.84	9.64	9.15	8.45	8.89	10.9	11.6	10.76	12.43
Mechanical constant m(ms)		1.63(2.01)	1.72(2.11)	2.01(2.11)	5.46(2.3)	4.05	1.36	1.39(1.65)	1.17(1.33)	1.38	1.1(1.25)
Back EMF constant		115	173	69	49.6	21	76.33	88	116	128	163
Torque constant (Nm/A)		1.26	1.86	0.68	1.25	0.64	0.8	0.9	1.25	1.36	1.75
Pole pairs		5									
Encoder bits		17/19/23									
Encoder type		Magnetic(optical)									
Motor insulation grade		ClassF(155°C)									
Protection level		IP67									
Using environment	Ambient temperature	-1°C~+40°C (not frozen)									
	Ambient humidity	Relative humidity <90% (non condensing)									
Braking parameter	Static friction torque [N • m]	⩾15				⩾6		⩾15			
	Rated power [W]	16.9				18		16.9			
	Attraction time [ms]	⩽100				⩽100		⩽100			
	Release time [ms]	⩽60				⩽50		⩽60			
	Excitation current DC[V]	0.705				0.75		0.705			
	Attraction voltage DC[V]	⩽16.8				⩽16.8		⩽16.8			
	Release voltage DC[V]	⩾1				⩾1		⩾1			
	Excitation voltage DC[V]	DC24±10%									

MS6G series T/N curve

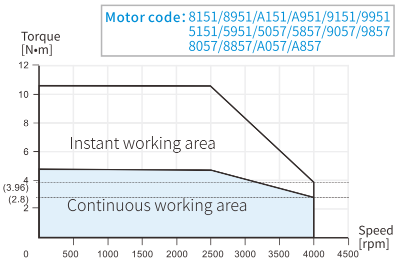
MS6G-130CM/CN/TH15B(Z)2-20P8


Motor code: 5068/5868/8068/8868 A068/A868

MS6G-130CM/CN/TH15B(Z)2-40P8

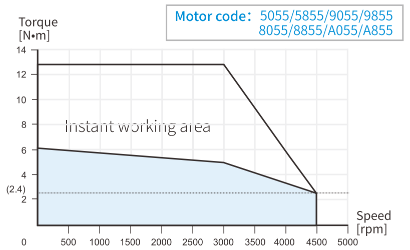

Motor code: 5169/5969/8169/8969 A169/A969

MS6G-130CM/CN/TH/TL25B(Z)2-21P0/41P0

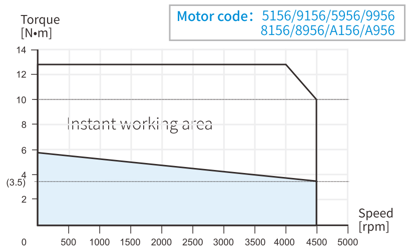

Motor code: 8151/8951/A151/A951/9151/9951 5151/5951/5057/5857/9057/9857 8057/8857/A057/A857

MS6G series T/N curve

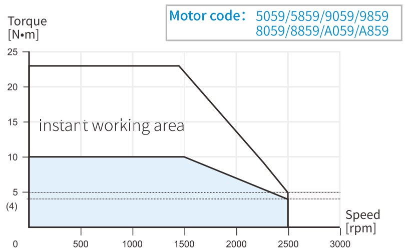
MS6G-110CM/CN/TH/TL30B2-21P5


Motor code: 5055/5855/9055/9855 8055/8855/A055/A855

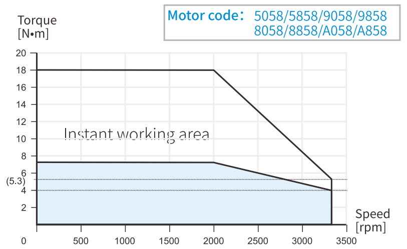
MS6G-110CM/CN/TH/TL30B2-41P5


Motor code: 5156/9156/5956/9956 8156/8956/A156/A956

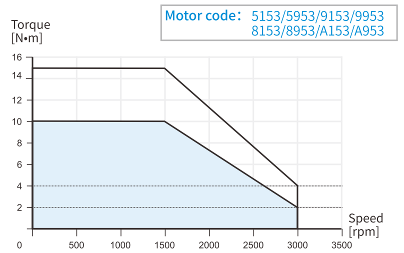
MS6G-130CM/CN/TL/TH15B(Z)2-21P5


Motor code: 5059/5859/9059/9859 8059/8859/A059/A859

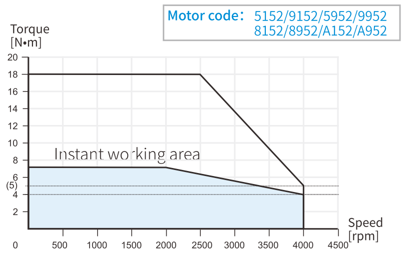
MS6G-130CM/CN/TL/TH20B(Z)2-21P5


Motor code: 5058/5858/9058/9858 8058/8858/A058/A858

MS6G-130CM/CN/TL/TH15B(Z)2-41P5

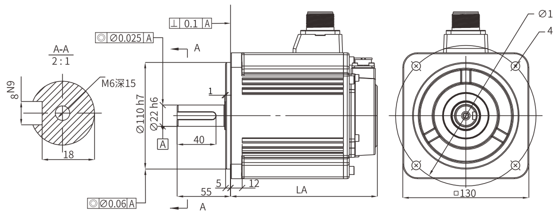

Motor code: 5153/5953/9153/9953 8153/8953/A153/A953

MS6G-130CM/CN/TL/TH20B(Z)2-41P5


Motor code: 5152/9152/5952/9952 8152/8952/A152/A952

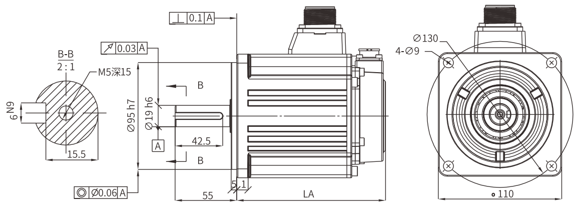
Motor dimension (unit: mm)

130 flange



Motor model	LA±1		Shaft diameter ΦD	Inertia level
	Normal	With brake		
MS6G-130C□15B□2-□0P8	133.5	162.5	22	Medium inertia
MS6G-130TH15B□2-□0P8	150	179		
MS6G-130C□25B□2-□1P0	119.5	148.5		
MS6G-130T□25B□2-□1P0	136	165		
MS6G-130C□20B□2-□1P5	133.5	162.5		
MS6G-130T□20B□2-□1P5	150	179		
MS6G-130C□15B□2-□1P5	151.5	180.5		
MS6G-130T□15B□2-□1P5	168	197		

110 flange



Motor model	LA±1		Inertia level
	Normal	With brake	
MS6G-110C□30B2-21P5/41P5	132.5	163.5	Medium inertia
MS6G-110T□30B2-21P5/41P5	149	180	

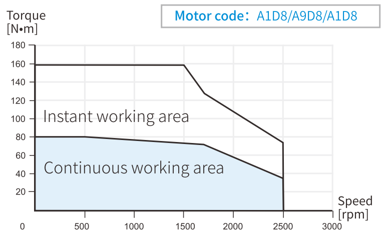
MS6G medium inertia

Motor specification of 2.3kW/3kW/4.4kW/5.5kW/7.5kW/13kW/17kW

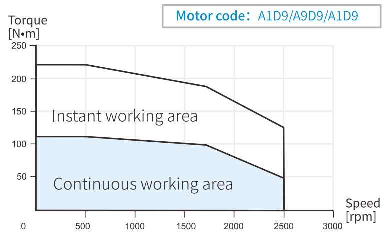
Motor model		MS6G medium inertia							
		130□□15B□2	130□□15B□2	180□□15B□2	180□□15B□2	180□□15B□2	180□□15B□2	200□□17B□2	200□□17B□2
		22P3	42P3	43P0	44P4	45P5	47P5	413P0	417P0
Rated power [kW]		2.3	2.3	3	4.4	5.5	7.5	13	17
Voltage level		AC220V	AC380V	AC380V	AC380V	AC380V	AC380V	AC380V	AC380V
Rated speed [rpm]		1500	1500	1500	1500	1500	1500	1700	1700
Maximum speed [rpm]		2000	3000	3000	3000	3000	3000	2500	2500
Rated torque [N·m]		14.6	14.6	19.1	28	35	48	70	95.5
Maximum torque [N·m]		29.2	36.5	47.75	84	87.5	120	175	238.75
Rated current [mA]		9000	8300	10500	16500	20500	25000	25000	35000
Rotor inertia [10^-7kg • m2]		23020(28780)	23020(28780)	45790(47340)	67600(76770)	91360(100530)	135330(144500)	159350(165980)	195000(202056)
Inertia type		Medium inertia	Medium inertia	Medium inertia	Medium inertia	Medium inertia	Medium inertia	Medium inertia	Medium inertia
Recommended rotor inertia ratio		10	10	10	10	10	10	10	10
Electrical constant e(ms)		12.99	13.2	21.98	24.08	24.49	24.76	32.59	32.30
Mechanical constant m(ms)		0.84(1.05)	1.29(1.62)	1.23(1.28)	0.98(1.11)	0.97(1.07)	1.24(1.33)	1.29(1.35)	1.12
Back EMF constant		151(155)	166	167	155	156.77	124	274.12	275
Torque constant (Nm/A)		1.62	1.76	1.82	1.70	1.71	1.92	2.80	2.73
Pole pairs		5	5	5	5	5	5	4	4
Encoder bits		17/19/23	17/19/23	19/23	19/23	19/23	19/23	23	23
Encoder type		Magnetic(optical)						Optical	Optical
Motor insulation grade		ClassF(155°C)	ClassF(155°C)	ClassF(155°C)	ClassF(155°C)	ClassF(155°C)	ClassF(155°C)	ClassF(155°C)	ClassF(155°C)
Protection level		IP67	IP67	IP67	IP67	IP67	IP67	IP54	IP54
Using environment	Ambient temperature	-10°C~+40°C (not frozen)							
	Ambient humidity	Relative humidity <90% (non condensing)							
Braking parameter	Static friction torque [N • m]	⩾15		⩾55				⩾150	
	Rated power [W]	16.9		31				61	
	Attraction time [ms]	⩽100		⩽200				⩽300	
	Release time [ms]	⩽60		⩽100				⩽50	
	Excitation current DC[V]	0.705		1.291				2.539	
	Attraction voltage DC[V]	⩽16.8		16.8				⩽19.2	
	Release voltage DC[V]	⩾1		⩾1				0.8	
	Excitation voltage DC[V]	DC24±10%							

MS6G series T/N curve

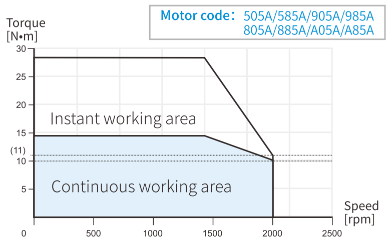
MS6G-200TH17B(Z)2-413P0-Y/F



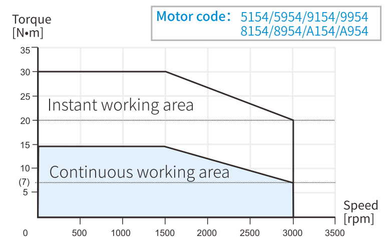
MS6G-200TH17B(Z)2-417P0-Y/F



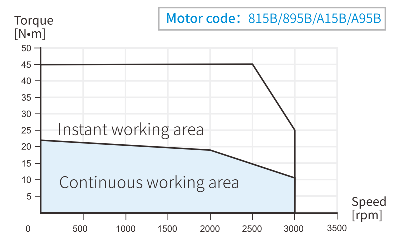
MS6G-130CM/CN/TL/TH15B(Z)2-22P3



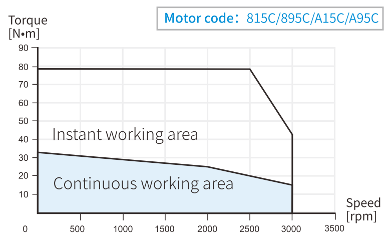
MS6G-130CM/CN/TL/TH15B(Z)2-42P3



MS6G-180CN/TH15B(Z)2-43P0

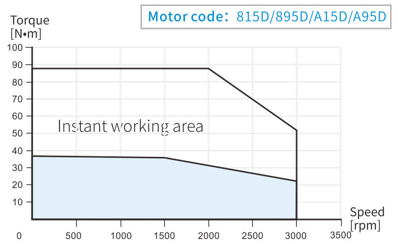


MS6G-180CN/TH15B(Z)2-44P4

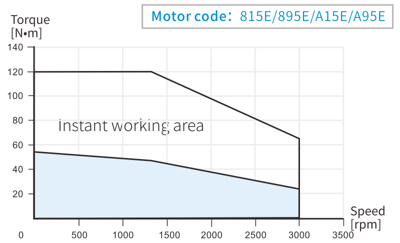


MS6G series T/N curve

MS6G-180CN/TH15B(Z)2-45P5

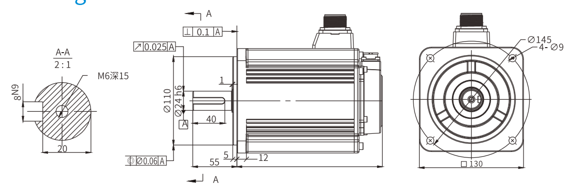


MS6G-180CN/TH15B(Z)2-47P5



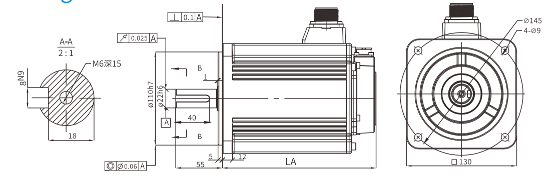
Motor dimension (unit: mm)

130 flange


A-A
2:1
M6深15
8N9
20
A
0.1 A
0.025 A
Ø110
Ø24 h6
1
40
A
Ø0.06 A
55
5
12
Ø145
4-Ø9
□130

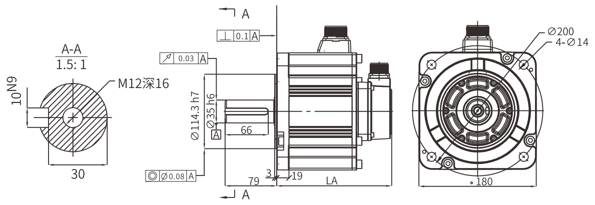
	LA±1			
MS6G-130C□15B□2-□2P3	181.5	210.5	24	Medium inertia
MS6G-130T□15B□2-□2P3	198	227		

130 flange


A-A
2:1
M6深15
8N9
18
0.1 A
0.025 A
B
1
ø110h7
ø22h6
40
A
Ø0.06 A
55
5
12
LA
ø145
4-ø9
□130

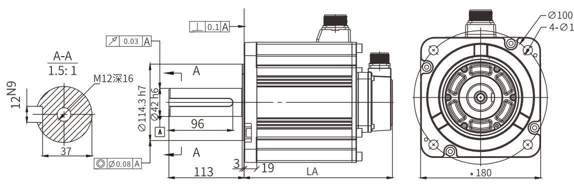
	LA±1			
MS6G-130C□15E□2-□2P3	181.5	210.5	22	Medium inertia
MS6G-130T□15E□2-□2P3	198	227		

180 flange


A-A
1.5: 1
M12深16
10N9
30
A
0.1 A
0.03 A
Ø114.3 h7
Ø35 h6
66
A
Ø0.08 A
79
3
19
LA
Ø200
4-Ø14
180

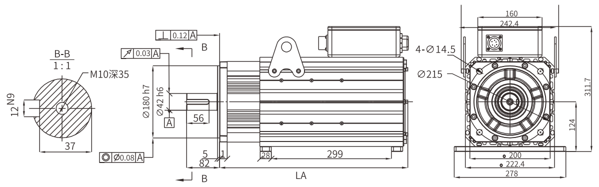
	LA±1			
MS6G-180CN15B□2-43P0	162	206.5	35	Medium inertia
MS6G-180CN15B□2-44P4	185	229.5	35	
MS6G-180TH15B□2-43P0	176.5	221.5	35	
MS6G-180TH15B□2-44P4	199.5	244	35	

180 flange


A-A
1.5: 1
M12深16
12N9
37
0.1 A
0.03 A
A
Ø114.3 h7
Ø42 h6
96
A
Ø0.08 A
113
3
19
LA
Ø100
4-Ø14
180

	LA±1			
MS6G-180CN15B□2-45P5	208	252.5	42	Medium inertia
MS6G-180CN15B□2-47P5	256	300.5	42	
MS6G-180TH15B□2-45P5	222.5	267	42	
MS6G-180TH15B□2-47P5	270.5	315	42	

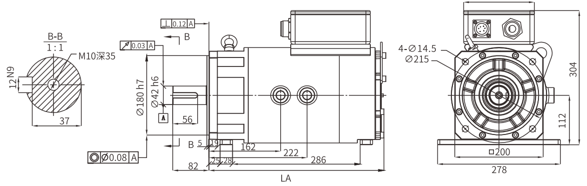
200 flange


B-B
1:1
M10深35
12N9
37
0.12 A
0.03 A
B
Ø180 h7
Ø42 h6
56
A
Ø0.08 A
5
1
82
28
299
LA
4-Ø14.5
Ø215
160
242.4
311.7
124
200
222.4
278

Air cooled motor

	LA±1		
MS6G-200TH17B□2-417P0-F	468	545.5	Medium inertia
MS6G-200TH17B□2-413P0-F	433	512	

200 flange


B-B
1:1
M10深35
12N9
37
0.12 A
0.03 A
B
Ø180 h7
Ø42 h6
56
A
Ø0.08 A
5
19
82
25
28
162
222
286
LA
4-Ø14.5
Ø215
160
304
112
□200
278

Liquid cooled motor

	LA±1		
MS6G-200TH17B2-417P0-Y	396	/	Medium inertia
MS6G-200TH17B2-413P0-Y	361	/	

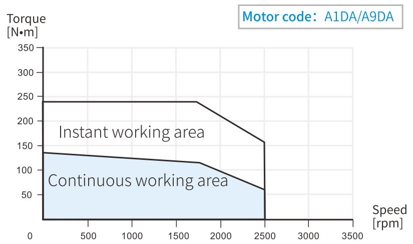
MS6G Medium Inertia

Motor Specifications 21kW/27kW/30kW/48kW

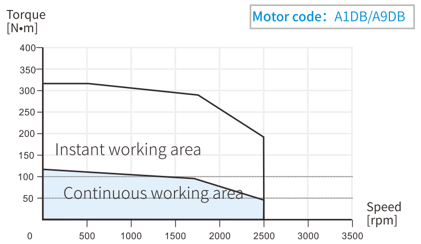
Motor model		MS6G Medium Inertia			
		200□□17B□2	200□□17B□2	265□□17B□2	265□□17B□2
		421P0	427P0	430P0	448P0
Rated power [kW]		21	27	30	48
Voltage level		AC380V	AC380V	AC380V	AC380V
Rated speed [rpm]		1700	1700	1700	1700
Maximum speed [rpm]		2500	2500	2200	2200
Rated torque [N·m]		120	150	170	270
Maximum torque [N·m]		240	375	340	540
Rated current [mA]		45000	50000	62000	100000
Rotor inertia [10^-7kg • m2]		229611(230194)	263957(264545)	470111	602879
Inertia type		Medium Inertia	Medium Inertia	Medium Inertia	Medium Inertia
Recommended rotor inertia ratio		10	10	10	10
Electrical constant e(ms)		41.57	43.06	80.00	86.19
Mechanical constant m(ms)		0.98	0.58	1.41	1.23
Back EMF constant		271	271	146	151
Torque constant (Nm/A)		2.67	4.29	2.74	2.70
Pole pairs		4	4	4	4
Encoder bits		23	23	23	23
Encoder type		Magnetism (Light)	Magnetism (Light)	Light	Light
Motor insulation grade		ClassF(155°C)	ClassF(155°C)	ClassF(155°C)	ClassF(155°C)
Protection level		Ip54	Ip54	IP54	IP54
Using environment	Ambient temperature	-10°C ~ +40°C (non-freezing)			
	Ambient humidity	Relative Humidity < 90% (non-condensing)			
Braking parameter	Static friction torque [N • m]	⩾150			
	Rated power [W]	61			
	Attraction time [ms]	⩽300			
	Release time [ms]	⩽50			
	Excitation current DC[V]	2.539			
	Attraction voltage DC[V]	⩽19.2			
	Release voltage DC[V]	0.8			
	Excitation voltage DC[V]	DC24±10%			

MS6G Series T/N Curve

MS6G-200TH17B(Z)2-421P0-Y/F

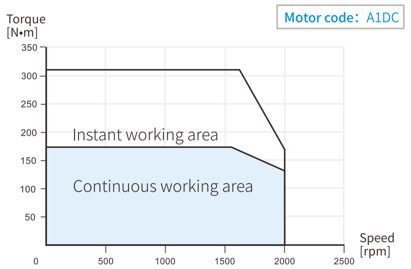


MS6G-200TH17B(Z)2-427P0-Y/F

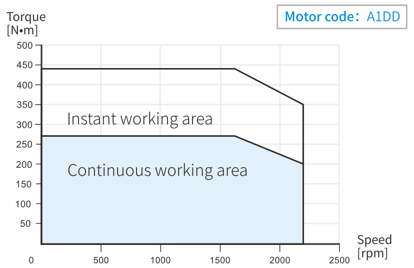


MS6G Series T/N Curve

MS6G-265TH17B2-430P0-F

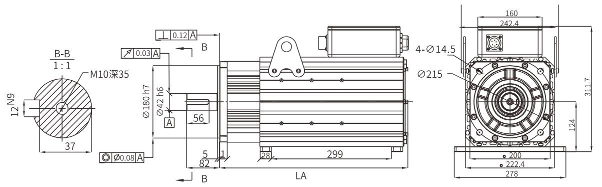


MS6G-265TH17B2-448P0-F



Motor Dimensions (unit: mm)

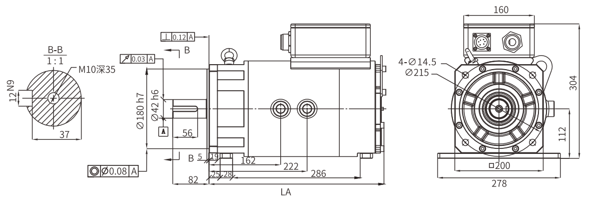
200 engine seats



Air-cooled Motor

Motor Model	LA±1		Inertia Level
	Standard	With Brake	
MS6G-200TH17B□2-421P0-F	503	580.7	Medium Inertia
MS6G-200TH17B□2-427P0-F	536.4	615.7	

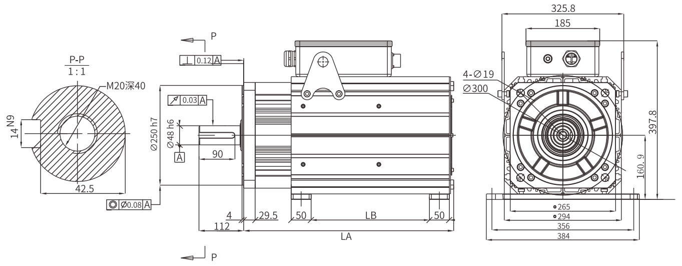
200 engine seats



Liquid-cooled Motor

Motor Model	LA±1		Inertia Level
	Standard	With Brake	
MS6G-200TH17B2-421P0-Y	431	/	Medium Inertia
MS6G-200TH17B2-427P0-Y	466	/	

265 engine seats



风冷电机

Motor Model	LA±1		LB	Inertia Level
	Standard	With Brake		
MS6G-265TH17B2-430P0-F	527.5	/	297	Medium Inertia
MS6G-265TH17B2-448P0-F	577.5	/	307	

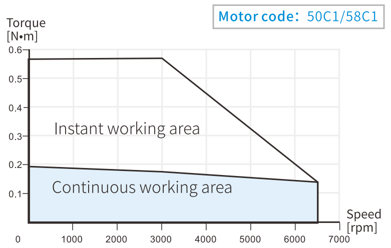
MS6H high inertia

Motor specification of 50W/100W/200W/400W/750W/1kW

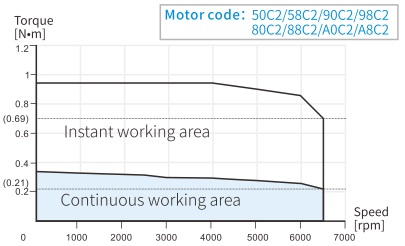
Motor model		MS6H high inertia										
		40□□30B□4	40□□30B□3	40□□30B□4	60□□30B□3	60□□30B□4	60□□30B□3	60□□30B□4	80□□30B□3	80□□30B□4	80□□30B□3	80□□30B□4
		20A5	20P1	20P1	20P2	20P2	20P4	20P4	20P7	20P7	21P0	21P0
Rated power [kW]		0.05	0.1	0.1	0.2	0.2	0.4	0.4	0.75	0.75	1.0	1.0
Voltage level		AC220V	AC220V	AC220V	AC220V	AC220V	AC220V	AC220V	AC220V	AC220V	AC220V	AC220V
Rated speed [rpm]		3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
Maximum speed [rpm]		6500	6500	6500	6500	6500	6500	6500	5200	5200	4000	4000
Rated torque [N·m]		0.16	0.32	0.32	0.64	0.64	1.27	1.27	2.39	2.39	3.18	3.18
Maximum torque [N·m]		0.56	0.96	1.12	2.24	2.24	4.45	4.45	7.17	7.17	9.54	9.54
Rated current [mA]		950	950	950	1900	1900	2800	2800	4100	4100	4100	4100
Rotor inertia [10^-7kg • m2]		35.6(38.27)	64(67)	58.2(60.77)	271(281)	300(332)	530(550)	521(529)	1550(1569)	1578(1688)	2391(2410)	2362(2483)
Inertia type		High inertia										
Recommended rotor inertia ratio		30	30	30	30	30	30	30	20	20	20	20
Electrical constant e(ms)		0.77	1.04	0.88	1.67	1.48	1.7	1.7	4.58	4.58	4.97	4.61
Mechanical constant m(ms)		1.59(1.71)	1.16(1.21)	1.06(1.11)	1.26(1.29)	1.45(1.61)	0.93	0.93	1(1.02)	1(1.02)	0.93	0.77(0.81)
Back EMF constant		17	33	33	31	32	43.98	43.98	56	56	73	76
Torque constant (Nm/A)		0.17	0.34	0.34	0.34	0.34	0.45	0.45	0.58	0.58	0.78	0.78
Pole pairs		5	5	5	5	5	5	5	5	5	5	5
Encoder bits		17	17/19/23	17	17/19/23	17	17/19/23	17	17/19/23	17	17/19/23	17
Encoder type		Magnetic	Magnetic (optical)	Magnetic	Magnetic (optical)	Magnetic	Magnetic (optical)	Magnetic	Magnetic (optical)	Magnetic	Magnetic (optical)	Magnetic
Motor insulation grade		ClassF(155°C)										
Protection level		IP67										
Using environment	Ambient temperature	-10°C~+40% (not frozen)										
	Ambient humidity	20%~90% RH (non condensing)										
Braking parameter	Static friction torque [N・m]	≥0.32			≥1.3				≥3.2			
	Rated power [W]	6.1			7.4				11.5			
	Attraction time [ms]	≤40			≤50				≤60			
	Release time [ms]	≤20			≤30				≤30			
	Excitation current DC[V]	0.254			0.308				0.48			
	Attraction voltage DC[V]	≤16.8			<16.8				<16.8			
	Release voltage DC[V]	≥1			>1				>1			
	Excitation voltage DC[V]	DC24±10%										

MS6H series T/N curve

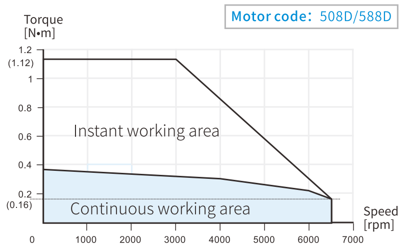
MS6H-40CM30B(Z)4-20A5


Motor code: 50C1/58C1

MS6H-40CM/CN/TH/TL30B(Z)3-20P1

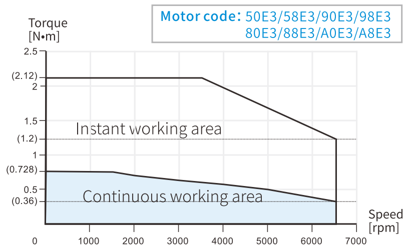

Motor code: 50C2/58C2/90C2/98C2
80C2/88C2/A0C2/A8C2

MS6H-40CM30B(Z)4-20P1

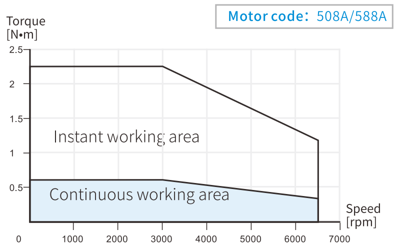

Motor code: 508D/588D

MS6H series T/N curve

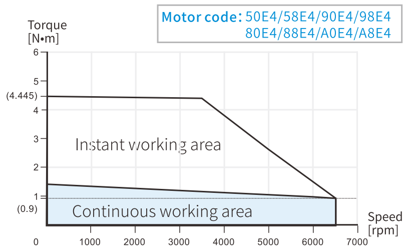
MS6H-60CM/CN/TH/TL30B(Z)3-20P2


Motor code: 50E3/58E3/90E3/98E3
80E3/88E3/A0E3/A8E3

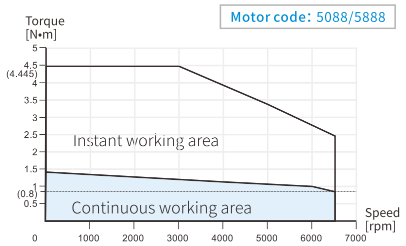
MS6H-60CM30B(Z)4-20P2


Motor code: 508A/588A

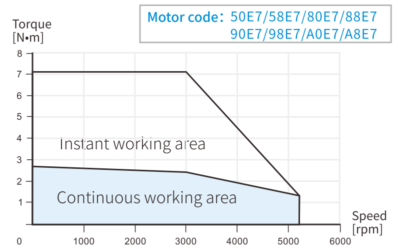
MS6H-60CM/CN/TH/TL30B(Z)3-20P4


Motor code: 50E4/58E4/90E4/98E4
80E4/88E4/A0E4/A8E4

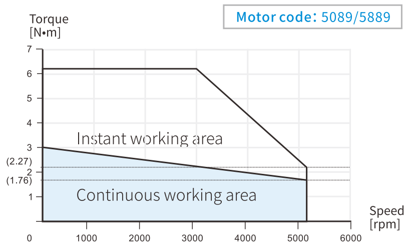
MS6H-60CM30B(Z)4-20P4


Motor code: 5088/5888

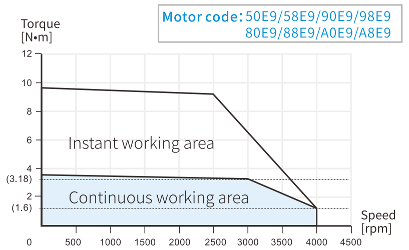
MS6H-80CM/CN/TL/TH30B(Z)3-20P7


Motor code: 50E7/58E7/80E7/88E7
90E7/98E7/A0E7/A8E7

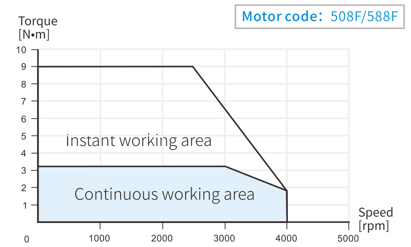
MS6H-80CM30B(Z)4-20P7


Motor code: 5089/5889

MS6H-80CM/CN/TH/TL30B(Z)3-21P0

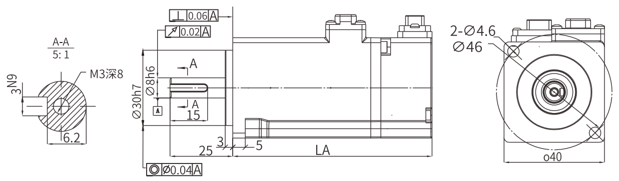

Motor code: 50E9/58E9/90E9/98E9
80E9/88E9/A0E9/A8E9

MS6H-80CM30B(Z)4-21P0

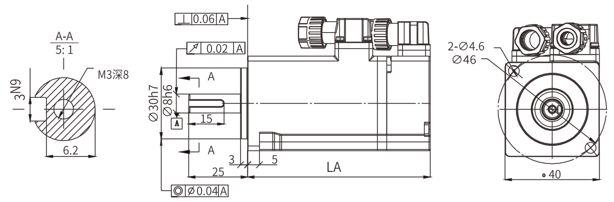

Motor code: 508F/588F

Motor dimension (unit: mm)

40 flange


A-A
5:1
M3深8
3N9
6.2
Ø30h7
Ø8h6
A
15
25
3
5
LA
0.06 A
0.02 A
Ø0.04 A
2-Ø4.6
Ø46
o40

B3 motor diagram

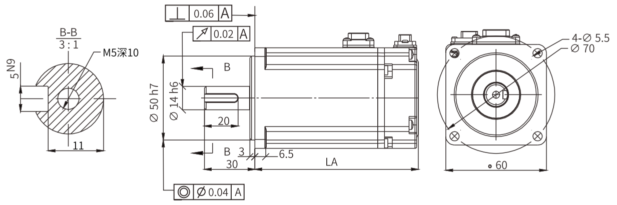

A-A
5:1
M3深8
3N9
6.2
Ø30h7
Ø8h6
A
15
25
3
5
LA
0.06 A
0.02 A
Ø0.04 A
2-Ø4.6
Ø46
40

B4 motor diagram

Motor model	LA±1		Inertia level
	Normal	With brake	
MS6H-40□□30B□3-20P1	79.4	112	High inertia

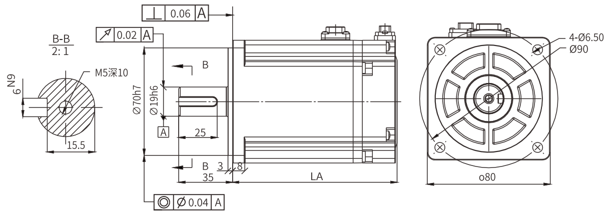
Motor model	LA±1		Inertia level
	Normal	With brake	
MS6H-40CM30B□4-20A5	60.8	93.4	High inertia
MS6H-40CM30B□4-20P1	77.4	110	

60 flange

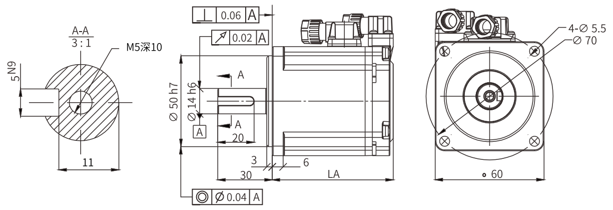

B-B
3:1
M5深10
5N9
11
Ø50h7
Ø14h6
B
20
B
3
30
6.5
LA
0.06 A
0.02 A
Ø0.04 A
4-Ø5.5
Ø70
60

B3 motor diagram

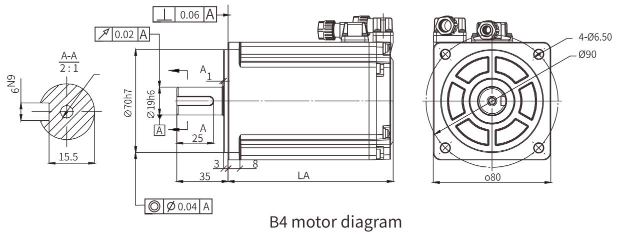
80 flange


B-B
2:1
M5深10
6N9
15.5
Ø70h7
Ø19h6
B
25
B
3
35
8
LA
0.06 A
0.02 A
Ø0.04 A
4-Ø6.50
Ø90
o80

B3 motor diagram


A-A
3:1
M5深10
5N9
11
Ø50h7
Ø14h6
A
20
A
3
30
6
LA
0.06 A
0.02 A
Ø0.04 A
4-Ø5.5
Ø70
60

B4 motor diagram


A-A
2:1
6N9
15.5
Ø70h7
Ø19h6
A
25
A
3
35
8
LA
0.06 A
0.02 A
Ø0.04 A
4-Ø6.50
Ø90
o80

B4 motor diagram

Motor model	LA±1		Inertia level
	Normal	With brake	
MS6H-60□□30B□3-20P2	76.4	99.15	High inertia
MS6H-60□□30B□3-20P4	98.4	121.15	
MS6H-60CM30B□4-20P4	80.2	106.95	
MS6H-60CM30B□4-20P2	66.7	93.5	

Motor model	LA±1		Inertia level
	Normal	With brake	
MS6H-80CM30B□4-21P0	112.5	144	High inertia
MS6H-80□□30B□3-20P7	107.1	132.1	
MS6H-80CM30B□4-20P7	89.2	121.1	
MS6H-80□□30B□3-21P0	134	159	

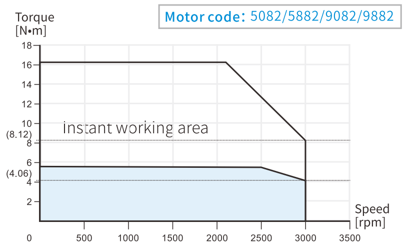
MS6H high inertia

Motor specification of 850W/1.3kW/1.5kW/1.8kW/2.3kW

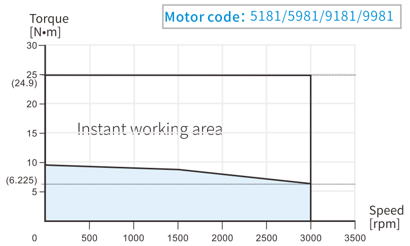
		MS6H High inertia							
		130□□15B□2	130□□15B□2	130□□15B□2	130□□20B□2	130□□15B□2	130□□15B□2	130□□15B□2	130□□15B□2
		20P8	40P8	41P3	21P5	21P8	41P8	22P3	42P3
Rated power [kW]		0.85	0.85	1.3	1.5	1.8	1.8	2.3	2.3
Voltage level		AC220V	AC380V	AC380V	AC220V	AC220V	AC380V	AC220V	AC380V
Rated speed [rpm]		1500	1500	1500	2000	1500	1500	1500	1500
Maximum speed [rpm]		3000	3000	3000	3000	2500	3000	2500	3000
Rated torque [N·m]		5.41	5.41	8.3	7.16	11.5	11.5	14.6	14.6
Maximum torque [N·m]		16.23	16.23	24.9	18	34.5	28.75	36.5	36.5
Rated current [mA]		6000	3500	6000	8000	10000	7400	11800	8500
Rotor inertia [10^-7kg • m2]		13860(15340)	13860(15340)	20000(21440)	20000(21440)	28500(29940)	28500(29940)	35240(36260)	35240(36260)
Inertia type		High inertia	High inertia	High inertia	High inertia	High inertia	High inertia	High inertia	High inertia
Recommended rotor inertia ratio		10	10	10	10	10	10	10	10
Electrical constant e(ms)		6.944	6.722	9.229	8.409	8.37	9.973	9.893	9.887
Mechanical constant m(ms)		1.823(2.017)	1.844(2.041)	1.496(1.603)	1.523(1.633)	1.414(1.486)	1.252(1.316)	1.234(1.27)	1.249(1.285)
Back EMF constant		89	149	127	86	106	144	115	155
Torque constant (Nm/A)		0.902	1.546	1.383	0.895	1.15	1.554	1.237	1.718
Pole pairs		5							
Encoder bits		17/23							
Encoder type		Magnetic(optical)							
Motor insulation grade		ClassF(155°C)							
Protection level		IP65							
Using environment	Ambient temperature	-10°C~+40% (not frozen)							
	Ambient humidity	20%~90% RH (non condensing)							
Braking parameter	Static friction torque [N • m]	⩾15							
	Rated power [W]	23							
	Attraction time [ms]	＜100							
	Release time [ms]	＜60							
	Excitation current DC[V]	0.96							
	Attraction voltage DC[V]	＜18							
	Release voltage DC[V]	＞1.5							
	Excitation voltage DC[V]	24±10%							

MS6H series T/N curve

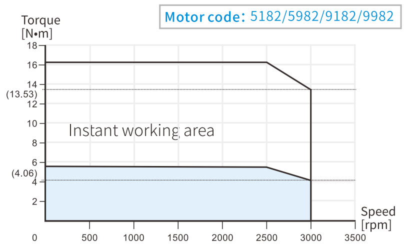
MS6H-130CM/TL15B(Z)2-20P8


Motor code: 5082/5882/9082/9882

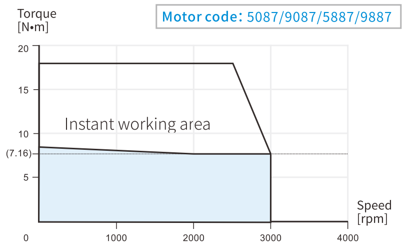
MS6H-130CM/TL15B(Z)2-41P3


Motor code: 5181/5981/9181/9981

MS6H-130CM/TL15B(Z)2-40P8

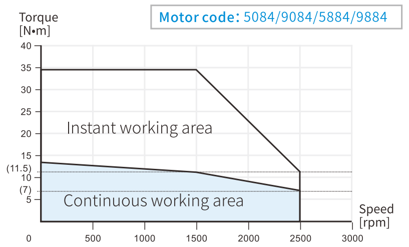

Motor code: 5182/5982/9182/9982

MS6H-130CM/TL20B(Z)2-21P5

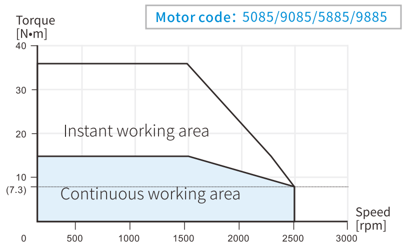

Motor code: 5087/9087/5887/9887

MS6H series T/N curve

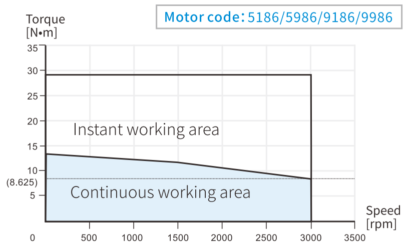
MS6H-130CM/TL15B(Z)2-21P8



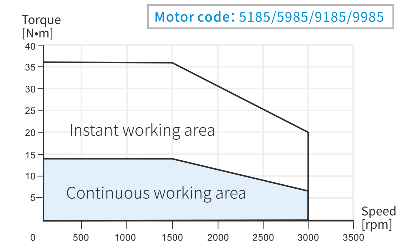
MS6H-130CM/TL15B(Z)2-22P3



MS6H-130CM/TL15B(Z)2-41P8

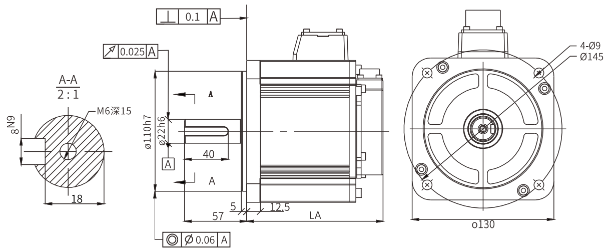


MS6H-130CM/TL15B(Z)2-42P3



Motor dimension (unit: mm)

130 flange



Motor model	LA±1		Inertia level
	Normal	With brake	
MS6H-130C☐15B☐2-20P8	126	156	High inertia
MS6H-130C☐15B☐2-40P8	126	156	
MS6H-130TL15B☐2-20P8	142	172	
MS6H-130TL15B☐2-40P8	142	172	
MS6H-130C☐20B☐2-21P5	148	178	
MS6H-130TL20B☐2-21P5	164	194	
MS6H-130C☐15B☐2-21P8	175	205	
MS6H-130TL15B☐2-21P8	191	221	
MS6H-130C☐15B☐2-22P3	195.6	225.6	
MS6H-130TL15B☐2-22P3	211.6	241.6	
MS6H-130C☐15B☐2-41P3	148	178	
MS6H-130TL15B☐2-41P3	164	194	
MS6H-130C☐15B☐2-41P8	175	205	
MS6H-130TL15B☐2-41P8	191	221	
MS6H-130C☐15B☐2-42P3	195.6	225.6	
MS6H-130TL15B☐2-42P3	211.6	241.6	

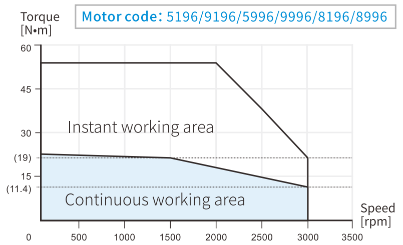
MS6H high inertia

Motor specification of 3kW/4.4kW/5.5kW/7.5kW

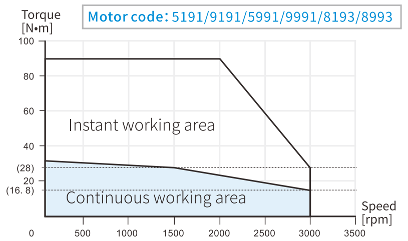
		180☐☐15B☐2	180☐☐15B☐2	180☐☐15B☐2	180☐☐15B☐2
		43P0	44P4	45P5	47P5
		3.0	4.4	5.5	7.5
		AC380V			
		1500	1500	1500	1500
		3000	3000	3000	3000
		19	28	35	48
		51.3	84	87.5	120
		11000	16500	19700	25000
		51000(55490)	73280(78040)	90250(95200)	132000(134690)
		High inertia	High inertia	High inertia	High inertia
		10	10	10	10
		22.539	25.547	26.195	25.176
		1.251(1.361)	1.023(1.09)	0.957(1.01)	0.907(0.925)
		160	160	160	172
		1.727	1.636	1.777	1.92
		5			
		17/19/23			
		Magnetic(optical)			
		ClassF(155°C)			
		IP65			
		-10°C~+40% (not frozen)			
		2.20%~90% RH (non condensing)			
		⩾58			
		30			
		⩽180			
		⩽80			
		1.25			
		＜16.8			
		＞1.5			
		24±10%			

MS6H series T/N curve

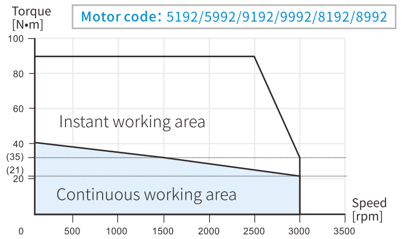
MS6H-180CN/CM/TL15B(Z)2-43P0



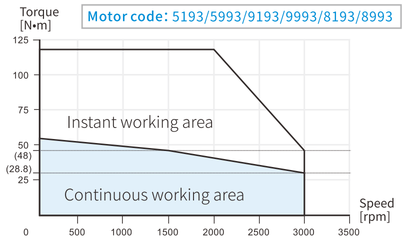
MS6H-180CN/CM/TL15B(Z)2-44P4



MS6H-180CN/CM15B/E(Z)2-45P5
MS6H-180TL15B(Z)2-45P5

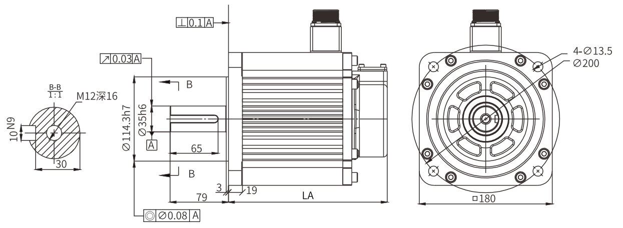


MS6H-180CN/CM15B/E(Z)2-47P5
MS6H-180TL15B/E(Z)2-47P5

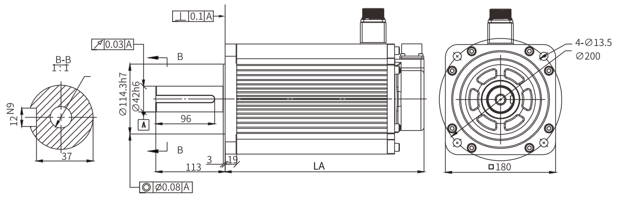


Motor dimension (unit: mm)

180 flange



Motor model	LA±1		LR±0.5	LC	X	ΦD	Key width	Inertia level
	Normal	With brake						
MS6H-180□□15B□2-43P0	215	255	79	65	16	35	10	High inertia
MS6H-180□□15B□2-44P4	247	287						
MS6H-180□□15E□2-45P5	269	309						
MS6H-180□□15E□2-47P5	325	365						



Motor model	LA±1		LR±0.5	LC	X	ΦD	Key width	Inertia level
	Normal	With brake						
MS6H-180□□15B□2-45P5	269	309	113	96	16	42	12	High inertia
MS6H-180□□15B□2-47P5	325	365						

Selection and configuration list

MS6 series

DS5 series is compatible with MS6-B4 series motors

Power[kW]	Inertia level	Motor model	Suitable driver	Voltage level	Encoder cable	Power cable	Brake cable	Cable accessory package
0.05	High inertia	MS6H-40CM30B4-20A5	DS5L1/C1/K1/N1-20P1-PTA	AC 220V	CP(T)-SP-BM-length	CM(T)-P07A-M-length	/	JAM-P9-P4
		MS6H-40CM30BZ4-20A5			CP(T)-SP-BM-length	CM(T)-P07A-M-length	CB(T)-P03-length	JAM-P9-P4-P2
0.1	High inertia	MS6H-40CM30B4-20P1	DS5L1/C1/K1/N1-20P1-PTA		CP(T)-SP-BM-length	CM(T)-P07A-M-length	/	JAM-P9-P4
		MS6H-40CM30BZ4-20P1			CP(T)-SP-BM-length	CM(T)-P07A-M-length	CB(T)-P03-length	JAM-P9-P4-P2
0.2	High inertia	MS6H-60CM30B4-20P2	DS5L1/C1/K1/N1-20P2-PTA		CP(T)-SP-BM-length	CM(T)-P07A-M-length	/	JAM-P9-P4
		MS6H-60CM30BZ4-20P2			CP(T)-SP-BM-length	CM(T)-P07A-M-length	CB(T)-P03-length	JAM-P9-P4-P2
0.4	Low inertia	MS6S-60CM30B4-20P4	DS5L1/C1/K1/N1-20P4-PTA		CP(T)-SP-BM-length	CM(T)-P07A-M-length	/	JAM-P9-P4
		MS6S-60CM30BZ4-20P4			CP(T)-SP-BM-length	CM(T)-P07A-M-length	CB(T)-P03-length	JAM-P9-P4-P2
	High inertia	MS6H-60CM30B4-20P4			CP(T)-SP-BM-length	CM(T)-P07A-M-length	/	JAM-P9-P4
		MS6H-60CM30BZ4-20P4			CP(T)-SP-BM-length	CM(T)-P07A-M-length	CB(T)-P03-length	JAM-P9-P4-P2
0.75	Low inertia	MS6S-80CM30B4-20P7	DS5L1/C1/K1/N1-20P7-PTA		CP(T)-SP-BM-length	CM(T)-P07A-M-length	/	JAM-P9-P4
		MS6S-80CM30BZ4-20P7			CP(T)-SP-BM-length	CM(T)-P07A-M-length	CB(T)-P03-length	JAM-P9-P4-P2
	High inertia	MS6H-80CM30B4-20P7			CP(T)-SP-BM-length	CM(T)-P07A-M-length	/	JAM-P9-P4
		MS6H-80CM30BZ4-20P7			CP(T)-SP-BM-length	CM(T)-P07A-M-length	CB(T)-P03-length	JAM-P9-P4-P2
1.0	High inertia	MS6H-80CM30B4-21P0	DS5L1/C1/K1/N1-20P7-PTA		CP(T)-SP-BM-length	CM(T)-P07A-M-length	/	JAM-P9-P4
		MS6H-80CM30BZ4-21P0			CP(T)-SP-BM-length	CM(T)-P07A-M-length	CB(T)-P03-length	JAM-P9-P4-P2

Selection and configuration list

DS5 series is compatible with MS6-B3 series motors

80 flange and below connector form motor

Power [kW]	Inertia level	Motor model	Suitable driver	Voltage level	Forward outlet		Reverse outlet		The adapter cable only supports forward outlet
					Encoder cable	Power cable	Encoder cable	Power cable	
0.1	High inertia	MS6H-40CM30B3-20P1	DS5L1/C1/K1-20P1-PTA DS5P-20P1-PTA	AC 220V	CP(T)-SE-BM-length	CM(T)-E03A-length	CP(T)-SF-BM-length	CM(T)-F03A-length	CPT-EP/CMT-EP03
		MS6H-40CM30BZ3-20P1			CP(T)-SE-BM-length	CMB(T)-E03A-length	CP(T)-SF-BM-length	CMB(T)-F03A-length	CPT-EP/CMBT-EP03
	High inertia	MS6H-40TL30B3-20P1			CP(T)-SE-BM-length	CM(T)-E03A-length	CP(T)-SF-BM-length	CM(T)-F03A-length	CPT-EP/CMT-EP03
		MS6H-40TL30BZ3-20P1			CP(T)-SE-BM-length	CMB(T)-E03A-length	CP(T)-SF-BM-length	CMB(T)-F03A-length	CPT-EP/CMBT-EP03
	High inertia	MS6H-40CN30B3-20P1	DS5L2/C2/K2-20P1-PTA		CP(T)-SE-BM-length	CM(T)-E03A-length	CP(T)-SF-BM-length	CM(T)-F03A-length	CPT-EP/CMT-EP03
		MS6H-40CN30BZ3-20P1			CP(T)-SE-BM-length	CMB(T)-E03A-length	CP(T)-SF-BM-length	CMB(T)-F03A-length	CPT-EP/CMBT-EP03
		MS6H-40TH30B3-20P1			CP(T)-SE-BM-length	CM(T)-E03A-length	CP(T)-SF-BM-length	CM(T)-F03A-length	CPT-EP/CMT-EP03
		MS6H-40TH30BZ3-20P1			CP(T)-SE-BM-length	CMB(T)-E03A-length	CP(T)-SF-BM-length	CMB(T)-F03A-length	CPT-EP/CMBT-EP03
0.2	High inertia	MS6H-60CM30B3-20P2	DS5L1/C1/K1-20P2-PTA DS5P-20P2-PTA		CP(T)-SE-BM-length	CM(T)-E05A-length	CP(T)-SF-BM-length	CM(T)-F05A-length	CPT-EP/CMT-EP05
		MS6H-60CM30BZ3-20P2			CP(T)-SE-BM-length	CMB(T)-E05A-length	CP(T)-SF-BM-length	CMB(T)-F05A-length	CPT-EP/CMBT-EP05
	High inertia	MS6H-60TL30B3-20P2			CP(T)-SE-BM-length	CM(T)-E05A-length	CP(T)-SF-BM-length	CM(T)-F05A-length	CPT-EP/CMT-EP05
		MS6H-60TL30BZ3-20P2			CP(T)-SE-BM-length	CMB(T)-E05A-length	CP(T)-SF-BM-length	CMB(T)-F05A-length	CPT-EP/CMBT-EP05
	High inertia	MS6H-60CN30B3-20P2	DS5L2-20P2-PTA DS5C2/K2-20P4-PTA		CP(T)-SE-BM-length	CM(T)-E05A-length	CP(T)-SF-BM-length	CM(T)-F05A-length	CPT-EP/CMT-EP05
		MS6H-60CN30BZ3-20P2			CP(T)-SE-BM-length	CMB(T)-E05A-length	CP(T)-SF-BM-length	CMB(T)-F05A-length	CPT-EP/CMBT-EP05
		MS6H-60TH30B3-20P2			CP(T)-SE-BM-length	CM(T)-E05A-length	CP(T)-SF-BM-length	CM(T)-F05A-length	CPT-EP/CMT-EP05
		MS6H-60TH30BZ3-20P2			CP(T)-SE-BM-length	CMB(T)-E05A-length	CP(T)-SF-BM-length	CMB(T)-F05A-length	CPT-EP/CMBT-EP05
0.4	Low inertia	MS6S-60CM30B3-20P4	DS5L1/C1/K1-20P4-PTA DS5P-20P4-PTA		CP(T)-SE-BM-length	CM(T)-E05A-length	CP(T)-SF-BM-length	CM(T)-F05A-length	CPT-EP/CMT-EP05
		MS6S-60CM30BZ3-20P4			CP(T)-SE-BM-length	CMB(T)-E05A-length	CP(T)-SF-BM-length	CMB(T)-F05A-length	CPT-EP/CMBT-EP05
		MS6S-60TL30B3-20P4			CP(T)-SE-BM-length	CM(T)-E05A-length	CP(T)-SF-BM-length	CM(T)-F05A-length	CPT-EP/CMT-EP05
		MS6S-60TL30BZ3-20P4			CP(T)-SE-BM-length	CMB(T)-E05A-length	CP(T)-SF-BM-length	CMB(T)-F05A-length	CPT-EP/CMBT-EP05
	High inertia	MS6H-60CM30B3-20P4			CP(T)-SE-BM-length	CM(T)-E05A-length	CP(T)-SF-BM-length	CM(T)-F05A-length	CPT-EP/CMT-EP05
		MS6H-60CM30BZ3-20P4			CP(T)-SE-BM-length	CMB(T)-E05A-length	CP(T)-SF-BM-length	CMB(T)-F05A-length	CPT-EP/CMBT-EP05
		MS6H-60TL30B3-20P4			CP(T)-SE-BM-length	CM(T)-E05A-length	CP(T)-SF-BM-length	CM(T)-F05A-length	CPT-EP/CMT-EP05
		MS6H-60TL30BZ3-20P4			CP(T)-SE-BM-length	CMB(T)-E05A-length	CP(T)-SF-BM-length	CMB(T)-F05A-length	CPT-EP/CMBT-EP05
	Low inertia	MS6S-60CN30B3-20P4	DS5L2/C2/K2-20P4-PTA		CP(T)-SE-BM-length	CM(T)-E05A-length	CP(T)-SF-BM-length	CM(T)-F05A-length	CPT-EP/CMT-EP05
		MS6S-60CN30BZ3-20P4			CP(T)-SE-BM-length	CMB(T)-E05A-length	CP(T)-SF-BM-length	CMB(T)-F05A-length	CPT-EP/CMBT-EP05
		MS6S-60TH30B3-20P4			CP(T)-SE-BM-length	CM(T)-E05A-length	CP(T)-SF-BM-length	CM(T)-F05A-length	CPT-EP/CMT-EP05
		MS6S-60TH30BZ3-20P4			CP(T)-SE-BM-length	CMB(T)-E05A-length	CP(T)-SF-BM-length	CMB(T)-F05A-length	CPT-EP/CMBT-EP05
	High inertia	MS6H-60CN30B3-20P4			CP(T)-SE-BM-length	CM(T)-E05A-length	CP(T)-SF-BM-length	CM(T)-F05A-length	CPT-EP/CMT-EP05
		MS6H-60CN30BZ3-20P4			CP(T)-SE-BM-length	CMB(T)-E05A-length	CP(T)-SF-BM-length	CMB(T)-F05A-length	CPT-EP/CMBT-EP05
		MS6H-60TH30B3-20P4			CP(T)-SE-BM-length	CM(T)-E05A-length	CP(T)-SF-BM-length	CM(T)-F05A-length	CPT-EP/CMT-EP05
		MS6H-60TH30BZ3-20P4			CP(T)-SE-BM-length	CMB(T)-E05A-length	CP(T)-SF-BM-length	CMB(T)-F05A-length	CPT-EP/CMBT-EP05
0.75	Low inertia	MS6S-80CM30B3-20P7	DS5L1/C1/K1-20P7-PTA DS5P-20P7-PTA		CP(T)-SE-BM-length	CM(T)-E05A-length	CP(T)-SF-BM-length	CM(T)-F05A-length	CPT-EP/CMT-EP05
		MS6S-80CM30BZ3-20P7			CP(T)-SE-BM-length	CMB(T)-E05A-length	CP(T)-SF-BM-length	CMB(T)-F05A-length	CPT-EP/CMBT-EP05
		MS6S-80TL30B3-20P7			CP(T)-SE-BM-length	CM(T)-E05A-length	CP(T)-SF-BM-length	CM(T)-F05A-length	CPT-EP/CMT-EP05
		MS6S-80TL30BZ3-20P7			CP(T)-SE-BM-length	CMB(T)-E05A-length	CP(T)-SF-BM-length	CMB(T)-F05A-length	CPT-EP/CMBT-EP05
	High inertia	MS6H-80CM30B3-20P7			CP(T)-SE-BM-length	CM(T)-E05A-length	CP(T)-SF-BM-length	CM(T)-F05A-length	CPT-EP/CMT-EP05
		MS6H-80CM30BZ3-20P7			CP(T)-SE-BM-length	CMB(T)-E05A-length	CP(T)-SF-BM-length	CMB(T)-F05A-length	CPT-EP/CMBT-EP05
		MS6H-80TL30B3-20P7			CP(T)-SE-BM-length	CM(T)-E05A-length	CP(T)-SF-BM-length	CM(T)-F05A-length	CPT-EP/CMT-EP05
		MS6H-80TL30BZ3-20P7			CP(T)-SE-BM-length	CMB(T)-E05A-length	CP(T)-SF-BM-length	CMB(T)-F05A-length	CPT-EP/CMBT-EP05
	Low inertia	MS6S-80CN30B3-20P7	DS5L2/C2/K2-20P7-PTA		CP(T)-SE-BM-length	CM(T)-E05A-length	CP(T)-SF-BM-length	CM(T)-F05A-length	CPT-EP/CMT-EP05
		MS6S-80CN30BZ3-20P7			CP(T)-SE-BM-length	CMB(T)-E05A-length	CP(T)-SF-BM-length	CMB(T)-F05A-length	CPT-EP/CMBT-EP05
		MS6S-80TH30B3-21P0			CP(T)-SE-BM-length	CM(T)-E05A-length	CP(T)-SF-BM-length	CM(T)-F05A-length	CPT-EP/CMT-EP05
		MS6S-80TH30BZ3-21P0			CP(T)-SE-BM-length	CMB(T)-E05A-length	CP(T)-SF-BM-length	CMB(T)-F05A-length	CPT-EP/CMBT-EP05
	High inertia	MS6H-80CN30B3-20P7			CP(T)-SE-BM-length	CM(T)-E05A-length	CP(T)-SF-BM-length	CM(T)-F05A-length	CPT-EP/CMT-EP05
		MS6H-80CN30BZ3-20P7			CP(T)-SE-BM-length	CMB(T)-E05A-length	CP(T)-SF-BM-length	CMB(T)-F05A-length	CPT-EP/CMBT-EP05
		MS6H-80TH30B3-20P7			CP(T)-SE-BM-length	CM(T)-E05A-length	CP(T)-SF-BM-length	CM(T)-F05A-length	CPT-EP/CMT-EP05
		MS6H-80TH30BZ3-20P7			CP(T)-SE-BM-length	CMB(T)-E05A-length	CP(T)-SF-BM-length	CMB(T)-F05A-length	CPT-EP/CMBT-EP05
1.0	Low inertia	MS6S-80CM30B3-21P0	DS5L1/C1/K1-20P7-PTA		CP(T)-SE-BM-length	CM(T)-E05A-length	CP(T)-SF-BM-length	CM(T)-F05A-length	CPT-EP/CMT-EP05
		MS6S-80CM30BZ3-21P0			CP(T)-SE-BM-length	CMB(T)-E05A-length	CP(T)-SF-BM-length	CMB(T)-F05A-length	CPT-EP/CMBT-EP05
		MS6S-80TL30B3-21P0			CP(T)-SE-BM-length	CM(T)-E05A-length	CP(T)-SF-BM-length	CM(T)-F05A-length	CPT-EP/CMT-EP05
		MS6S-80TL30BZ3-21P0			CP(T)-SE-BM-length	CMB(T)-E05A-length	CP(T)-SF-BM-length	CMB(T)-F05A-length	CPT-EP/CMBT-EP05
	High inertia	MS6H-80CM30B3-21P0			CP(T)-SE-BM-length	CM(T)-E05A-length	CP(T)-SF-BM-length	CM(T)-F05A-length	CPT-EP/CMT-EP05
		MS6H-80CM30BZ3-21P0			CP(T)-SE-BM-length	CMB(T)-E05A-length	CP(T)-SF-BM-length	CMB(T)-F05A-length	CPT-EP/CMBT-EP05
		MS6H-80TL30B3-21P0			CP(T)-SE-BM-length	CM(T)-E05A-length	CP(T)-SF-BM-length	CM(T)-F05A-length	CPT-EP/CMT-EP05
		MS6H-80TL30BZ3-21P0			CP(T)-SE-BM-length	CMB(T)-E05A-length	CP(T)-SF-BM-length	CMB(T)-F05A-length	CPT-EP/CMBT-EP05
	Low inertia	MS6S-80CN30B3-21P0	DS5L2/C2/K2-20P7-PTA		CP(T)-SE-BM-length	CM(T)-E05A-length	CP(T)-SF-BM-length	CM(T)-F05A-length	CPT-EP/CMT-EP05
		MS6S-80CN30BZ3-21P0			CP(T)-SE-BM-length	CMB(T)-E05A-length	CP(T)-SF-BM-length	CMB(T)-F05A-length	CPT-EP/CMBT-EP05
		MS6S-80TH30B3-21P0			CP(T)-SE-BM-length	CM(T)-E05A-length	CP(T)-SF-BM-length	CM(T)-F05A-length	CPT-EP/CMT-EP05
		MS6S-80TH30BZ3-21P0			CP(T)-SE-BM-length	CMB(T)-E05A-length	CP(T)-SF-BM-length	CMB(T)-F05A-length	CPT-EP/CMBT-EP05
	High inertia	MS6H-80CN30B3-21P0			CP(T)-SE-BM-length	CM(T)-E05A-length	CP(T)-SF-BM-length	CM(T)-F05A-length	CPT-EP/CMT-EP05
		MS6H-80CN30BZ3-21P0			CP(T)-SE-BM-length	CMB(T)-E05A-length	CP(T)-SF-BM-length	CMB(T)-F05A-length	CPT-EP/CMBT-EP05
		MS6H-80TH30B3-21P0			CP(T)-SE-BM-length	CM(T)-E05A-length	CP(T)-SF-BM-length	CM(T)-F05A-length	CPT-EP/CMT-EP05
		MS6H-80TH30BZ3-21P0			CP(T)-SE-BM-length	CMB(T)-E05A-length	CP(T)-SF-BM-length	CMB(T)-F05A-length	CPT-EP/CMBT-EP05

*Note: 1. Choose either forward outlet or reverse outlet.
2. Select either CMT or CMBT for connection cables, choose CMT for non-brake models and CMBT for brake models.
3. CPT-SCT-M-length refers to the encoder cable length, where "T" in CPT stands for high-flex encoder cable, and "T" in SCT stands for encoder aviation plug with threaded hole.
4. If using an adapter cable, purchase the corresponding B1 motor encoder cable and power cable.
5. For forward outlet, optional oil-resistant cable materials include CPG-SE-M/BM-length, CMG-E03A-length, and CMG-E05A-length.
6. High protection models can choose FH series drivers.

Selection and configuration list

MS6 series

DS5 series is compatible with MS6-B2 series motors

Power[kW]	Inertia level	Motor model	Suitable driver	Voltage level	Encoder cable	Power cable	Brake cable	Cable accessory package
0.85	High inertia	MS6H-130CM15B2-20P8	DS5L1/C1/P-21P0-PTA	AC 220V	CP(T)-SC(T)-B-length	CM(T)-L15B-length	/	JAM-C10(T)-L4
		MS6H-130CM15BZ2-20P8			CP(T)-SC(T)-B-length	CMB(T)-L15B-length	/	JAM-C10(T)-L7
		MS6H-130TL15B2-20P8			CP(T)-SC(T)-B-length	CM(T)-L15B-length	/	JAM-C10(T)-L4
		MS6H-130TL15BZ2-20P8			CP(T)-SC(T)-B-length	CMB(T)-L15B-length	/	JAM-C10(T)-L7
	Medium inertia	MS6G-130CN15B2-20P8	DS5C2/L2/K2-20P7-PTA		CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130CN15BZ2-20P8			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130TH15B2-20P8			CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130TH15BZ2-20P8			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
	High inertia	MS6H-130CM15B2-40P8	DS5L1/C1/P-41P0-PTA	AC 380V	CP(T)-SC(T)-B-length	CM(T)-L15B-length	/	JAM-C10(T)-L4
		MS6H-130CM15BZ2-40P8			CP(T)-SC(T)-B-length	CMB(T)-L15B-length	/	JAM-C10(T)-L7
		MS6H-130TL15B2-40P8			CP(T)-SC(T)-B-length	CM(T)-L15B-length	/	JAM-C10(T)-L4
		MS6H-130TL15BZ2-40P8			CP(T)-SC(T)-B-length	CMB(T)-L15B-length	/	JAM-C10(T)-L7
	Medium inertia	MS6G-130CN15B2-40P8	DS5L2/C2/K2-41P0-PTA		CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130CN15BZ2-40P8			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130TH15B2-40P8			CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130TH15BZ2-40P8			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
1.0	Low inertia	MS6S-100CM30B2-21P0	DS5L1/C1-21P0-PTA DS5P-21P0-PTA	AC 220V	CP(T)-SC(T)-B-length	CM(T)-L15B-length	/	JAM-C10(T)-L4
		MS6S-100TL30B2-21P0			CP(T)-SC(T)-B-length	CM(T)-L15B-length	/	JAM-C10(T)-L4
		MS6S-100CM30BZ2-21P0			CP(T)-SC(T)-B-length	CMB(T)-L15B-length	/	JAM-C10(T)-L7
		MS6S-100TL30BZ2-21P0			CP(T)-SC(T)-B-length	CMB(T)-L15B-length	/	JAM-C10(T)-L7
	Medium inertia	MS6G-130CM25B2-21P0	DS5L1/C1-21P0-PTA DS5P-21P0-PTA		CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130TL25B2-21P0			CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130CM25BZ2-21P0			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130TL25BZ2-21P0			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130CM25B2-41P0	DS5L1/C1/P-41P0-PTA	AC 380V	CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130TL25B2-41P0			CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130CM25BZ2-41P0			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130TL25BZ2-41P0			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130CN25B2-21P0	DS5L2/C2/K2-21P0-PTA	AC 220V	CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130CN25BZ2-21P0			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130TH25B2-21P0			CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130TH25BZ2-21P0			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130CN25B2-41P0	DS5L2/C2/K2-41P0-PTA	AC 380V	CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130CN25BZ2-41P0			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130TH25B2-41P0			CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130TH25BZ2-41P0			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
1.3	High inertia	MS6H-130CM15B2-41P3	DS5L1/C1/P-41P5-PTA	AC 380V	CP(T)-SC(T)-B-length	CM(T)-L15B-length	/	JAM-C10(T)-L4
		MS6H-130CM15BZ2-41P3			CP(T)-SC(T)-B-length	CMB(T)-L15B-length	/	JAM-C10(T)-L7
		MS6H-130TL15B2-41P3			CP(T)-SC(T)-B-length	CM(T)-L15B-length	/	JAM-C10(T)-L4
		MS6H-130TL15BZ2-41P3			CP(T)-SC(T)-B-length	CMB(T)-L15B-length	/	JAM-C10(T)-L7
1.5	ultra low inertia	MS6L-100CN30B2-21P5	DS5L2/C2/K2-22P6-PTA	AC 220V	CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6L-100CN30BZ2-21P5			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6L-100TH30B2-21P5			CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6L-100TH30BZ2-21P5			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6L-100CN30B2-41P5	DS5L2/C2/K2-42P3-PTA	AC 380V	CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6L-100CN30BZ2-41P5			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6L-100TH30B2-41P5			CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6L-100TH30BZ2-41P5			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
	Low inertia	MS6S-100CM30B2-21P5	DS5L1/C1/P-21P5-PTA	AC 220V	CP(T)-SC(T)-B-length	CM(T)-L15B-length	/	JAM-C10(T)-L4
		MS6S-100CM30BZ2-21P5			CP(T)-SC(T)-B-length	CMB(T)-L15B-length	/	JAM-C10(T)-L7
	Medium inertia	MS6G-110CM30B2-21P5	DS5L1/C1/P-21P5-PTA DS5L1/C1/P-22P3-PTA	AC 220V	CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-110TL30B2-21P5			CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-110CM30BZ2-21P5			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-110TL30BZ2-21P5			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-110CN30B2-21P5	DS5L2/C2/K2-21P5-PTA		CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-110CN30BZ2-21P5			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-110TH30B2-21P5			CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-110TH30BZ2-21P5			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T

Selection and configuration list

DS5 series is compatible with MS6-B2 series motors

Power[kW]	Inertia level	Motor model	Suitable driver	Voltage level	Encoder cable	Power cable	Brake cable	Cable accessory package
1.5	Medium inertia	MS6G-110CM30B2-41P5	DS5L1/C1/P-41P5-PTA DS5L1/C1/P-42P3-PTA	AC 380V	CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-110TL30B2-41P5			CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-110CM30BZ2-41P5			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-110TL30BZ2-41P5			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-110CN30B2-41P5	DS5L2/C2/K2-41P5-PTA		CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-110CN30BZ2-41P5			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-110TH30B2-41P5			CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-110TH30BZ2-41P5			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130CM20B2-21P5	DS5L1/C1/P-21P5-PTA DS5L1/C1/P-22P3-PTA	AC 220V	CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130TL20B2-21P5			CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130CM20BZ2-21P5			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130TL20BZ2-21P5			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130CM15B2-21P5			CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130TL15B2-21P5			CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130CM15BZ2-21P5			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130TL15BZ2-21P5			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130CN20B2-21P5	DS5L2/C2/K2-21P5-PTA		CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130CN20BZ2-21P5			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130CN15B2-21P5			CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130CN15BZ2-21P5			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130TH20B2-21P5			CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130TH20BZ2-21P5			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130TH15B2-21P5			CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130TH15BZ2-21P5			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130CM20B2-41P5	DS5C1/L1/P-41P5-PTA DS5C1/L1/P-42P3-PTA	AC 380V	CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130CM20BZ2-41P5			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130TL20B2-41P5			CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130TL20BZ2-41P5			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130CM15B2-41P5			CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130TL15B2-41P5			CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130CM15BZ2-41P5			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130TL15BZ2-41P5			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130CN20B2-41P5	DS5L2/C2/K2-41P5-PTA		CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130CN20BZ2-41P5			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130CN15B2-41P5			CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130CN15BZ2-41P5			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130TH20B2-41P5			CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130TH20BZ2-41P5			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130TH15B2-41P5			CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130TH15BZ2-41P5			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
	High inertia	MS6H-130CM20B2-21P5	DS5L1/C1/P-21P5-PTA	AC 220V	CP(T)-SC(T)-B-length	CM(T)-L15B-length	/	JAM-C10(T)-L4
		MS6H-130CM20BZ2-21P5			CP(T)-SC(T)-B-length	CMB(T)-L15B-length	/	JAM-C10(T)-L7
		MS6H-130TL20B2-21P5			CP(T)-SC(T)-B-length	CM(T)-L15B-length	/	JAM-C10(T)-L4
		MS6H-130TL20BZ2-21P5			CP(T)-SC(T)-B-length	CMB(T)-L15B-length	/	JAM-C10(T)-L7
1.8	High inertia	MS6H-130CM15B2-21P8	DS5L1/C1/P-22P6-PTA	AC 220V	CP(T)-SC(T)-B-length	CM(T)-L15B-length	/	JAM-C10(T)-L4
		MS6H-130CM15BZ2-21P8			CP(T)-SC(T)-B-length	CMB(T)-L15B-length	/	JAM-C10(T)-L7
		MS6H-130TL15B2-21P8			CP(T)-SC(T)-B-length	CM(T)-L15B-length	/	JAM-C10(T)-L4
		MS6H-130TL15BZ2-21P8			CP(T)-SC(T)-B-length	CMB(T)-L15B-length	/	JAM-C10(T)-L7
		MS6H-130CM15B2-41P8	DS5L1/C1/P-42P3-PTA	AC 380V	CP(T)-SC(T)-B-length	CM(T)-L15B-length	/	JAM-C10(T)-L4
		MS6H-130CM15BZ2-41P8			CP(T)-SC(T)-B-length	CMB(T)-L15B-length	/	JAM-C10(T)-L7
		MS6H-130TL15B2-41P8			CP(T)-SC(T)-B-length	CM(T)-L15B-length	/	JAM-C10(T)-L4
		MS6H-130TL15BZ2-41P8			CP(T)-SC(T)-B-length	CMB(T)-L15B-length	/	JAM-C10(T)-L7
2.3	Medium inertia	MS6G-130CM15B2-42P3	DS5L1/C1/P-42P3-PTA DS5L1/C1/P-43P0-PTA	AC 380V	CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130TL15B2-42P3			CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130CM15BZ2-42P3			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130TL15BZ2-42P3			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T

Selection and configuration list

MS6 series

DS5 series is compatible with MS6-B2 series motors

Power[kW]	Inertia level	Motor model	Suitable driver	Voltage level	Encoder cable	Power cable	Brake cable	Cable accessory package
2.3	Medium inertia	MS6G-130CM15B2-22P3	DS5L1/C1/P-22P3-PTA	AC 220V	CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130TL15B2-22P3			CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130CM15BZ2-22P3			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130TL15BZ2-22P3			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130CM15E2-42P3	DS5L1/C1/P-42P3-PTA DS5L1/C1/P-43P0-PTA	AC 380V	CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130TL15E2-42P3			CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130CM15EZ2-42P3			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130TL15EZ2-42P3			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130CM15E2-22P3	DS5L1/C1/P-22P3-PTA	AC 220V	CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130TL15E2-22P3			CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130CM15EZ2-22P3			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130TL15EZ2-22P3			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
	High inertia	MS6H-130CM15B2-22P3	DS5L1/C1/P-22P6-PTA	AC 220V	CP(T)-SC(T)-B-length	CM(T)-L15B-length	/	JAM-C10(T)-L4
		MS6H-130CM15BZ2-22P3			CP(T)-SC(T)-B-length	CMB(T)-L15B-length	/	JAM-C10(T)-L7
		MS6H-130TL15B2-22P3			CP(T)-SC(T)-B-length	CM(T)-L15B-length	/	JAM-C10(T)-L4
		MS6H-130TL15BZ2-22P3			CP(T)-SC(T)-B-length	CMB(T)-L15B-length	/	JAM-C10(T)-L7
		MS6H-130CM15B2-42P3	DS5L1/C1/P-42P3-PTA DS5L1/C1/P-43P0-PTA	AC 380V	CP(T)-SC(T)-B-length	CM(T)-L15B-length	/	JAM-C10(T)-L4
		MS6H-130CM15BZ2-42P3			CP(T)-SC(T)-B-length	CMB(T)-L15B-length	/	JAM-C10(T)-L7
		MS6H-130TL15B2-42P3			CP(T)-SC(T)-B-length	CM(T)-L15B-length	/	JAM-C10(T)-L4
		MS6H-130TL15BZ2-42P3			CP(T)-SC(T)-B-length	CMB(T)-L15B-length	/	JAM-C10(T)-L7
	Medium inertia	MS6G-130CN15B2-42P3	DS5L2/C2/K2-42P3-PTA	AC 380V	CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130CN15BZ2-42P3			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130TH15B2-42P3			CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130TH15BZ2-42P3			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130CN15B2-22P3	DS5L2/C2/K2-22P3-PTA	AC 220V	CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130CN15BZ2-22P3			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6G-130TH15B2-22P3			CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6G-130TH15BZ2-22P3			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
2.5	ultra low inertia	MS6L-100CN30B2-42P5	DS5L2/C2/K2-43P0-PTA	AC 380V	CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6L-100CN30BZ2-42P5			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
		MS6L-100TH30B2-42P5			CP(T)-SCT-B-length	CM(T)-L15T-length	/	JAM-C10T-L4T
		MS6L-100TH30BZ2-42P5			CP(T)-SCT-B-length	CMB(T)-L15T-length	/	JAM-C10T-L6T
3.0	High inertia	MS6H-180CM15B2-43P0	DS5L1/C1/P-43P0-PTA	AC 380V	CP(T)-SL-B-length	CM(T)-XL20A-length	/	JAM-L15-XL4
		MS6H-180CM15BZ2-43P0			CP(T)-SL-B-length	CMB(T)-XL20A-length	/	JAM-L15-XL6
		MS6H-180TL15B2-43P0			CP(T)-SL-B-length	CM(T)-XL20A-length	/	JAM-L15-XL4
		MS6H-180TL15BZ2-43P0			CP(T)-SL-B-length	CMB(T)-XL20A-length	/	JAM-L15-XL6
	High inertia	MS6H-180CN15B2-43P0	DS5L2/C2/K2-43P0-PTA	AC 380V	CP(T)-SL-B-length	CM(T)-XL20A-length	/	JAM-L15-XL4
		MS6H-180CN15BZ2-43P0			CP(T)-SL-B-length	CMB(T)-XL20A-length	/	JAM-L15-XL6
	Medium inertia	MS6G-180CN15B2-43P0			CP(T)-SLT-B-length	CM(T)-XL20T-length	/	JAM-L15T-XL4T
		MS6G-180CN15BZ2-43P0			CP(T)-SLT-B-length	CMB(T)-XL20T-length	/	JAM-L15T-XL6T
		MS6G-180TH15B2-43P0			CP(T)-SLT-B-length	CM(T)-XL20T-length	/	JAM-L15T-XL4T
		MS6G-180TH15BZ2-43P0			CP(T)-SLT-B-length	CMB(T)-XL20T-length	/	JAM-L15T-XL6T
	Low inertia	MS6S-130CN30B2-43P0			CP(T)-SCT-B-length	CM(T)-XL20T-length	/	JAM-C10T-XL4T
		MS6S-130TH30B2-43P0			CP(T)-SCT-B-length	CM(T)-XL20T-length	/	JAM-C10T-XL4T
		MS6S-130CN30BZ2-43P0			CP(T)-SCT-B-length	CMB(T)-XL20T-length	/	JAM-C10T-XL6T
		MS6S-130TH30BZ2-43P0			CP(T)-SCT-B-length	CMB(T)-XL20T-length	/	JAM-C10T-XL6T
4.4	High inertia	MS6H-180CM15B2-44P4	DS5C1/P-45P5-PTA	AC 380V	CP(T)-SL-B-length	CM(T)-XL60-length	/	JAM-L15-XL4
		MS6H-180TL15B2-44P4			CP(T)-SL-B-length	CM(T)-XL60-length	/	JAM-L15-XL4
		MS6H-180CM15BZ2-44P4			CP(T)-SL-B-length	CMB(T)-XL60-length	/	JAM-L15-XL6
		MS6H-180TL15BZ2-44P4			CP(T)-SL-B-length	CMB(T)-XL60-length	/	JAM-L15-XL6
	High inertia	MS6H-180CN15B2-44P4	DS5C2/K2-45P5-PTA		CP(T)-SL-B-length	CM(T)-XL60-length	/	JAM-L15-XL4
		MS6H-180CN15BZ2-44P4			CP(T)-SL-B-length	CMB(T)-XL60-length	/	JAM-L15-XL6
	Medium inertia	MS6G-180CN15B2-44P4			CP(T)-SLT-B-length	CM(T)-XL60T-length	/	JAM-L15T-XL4T
		MS6G-180CN15BZ2-44P4			CP(T)-SLT-B-length	CMB(T)-XL60T-length	/	JAM-L15T-XL6T
		MS6G-180TH15B2-44P4			CP(T)-SLT-B-length	CM(T)-XL60T-length	/	JAM-L15T-XL4T
		MS6G-180TH15BZ2-44P4			CP(T)-SLT-B-length	CMB(T)-XL60T-length	/	JAM-L15T-XL6T
5.0	Low inertia	MS6S-130CN30B2-45P0			CP(T)-SCT-B-length	CM(T)-XL60T-length	/	JAM-C10T-XL4T
		MS6S-130CN30BZ2-45P0			CP(T)-SCT-B-length	CMB(T)-XL60T-length	/	JAM-C10T-XL6T
		MS6S-130TH30B2-45P0			CP(T)-SCT-B-length	CM(T)-XL60T-length	/	JAM-C10T-XL4T
		MS6S-130TH30BZ2-45P0			CP(T)-SCT-B-length	CMB(T)-XL60T-length	/	JAM-C10T-XL6T

Selection and configuration list

MS6 series

DS5 series is compatible with MS6-B2 series motors

Power[kW]	Inertia level	Motor model	Suitable driver	Voltage level	Encoder cable	Power cable	Brake cable	Cable accessory package
5.5	High inertia	MS6H-180CM15B2-45P5	DS5C1/P-45P5-PTA	AC 380V	CP(T)-SL-B-length	CM(T)-XL60-length	/	JAM-L15-XL4
		MS6H-180CM15BZ2-45P5			CP(T)-SL-B-length	CMB(T)-XL60-length	/	JAM-L15-XL6
		MS6H-180TL15B2-45P5			CP(T)-SL-B-length	CM(T)-XL60-length	/	JAM-L15-XL4
		MS6H-180TL15BZ2-45P5			CP(T)-SL-B-length	CMB(T)-XL60-length	/	JAM-L15-XL6
		MS6H-180CM15E2-45P5			CP(T)-SL-B-length	CM(T)-XL60-length	/	JAM-L15-XL4
		MS6H-180CM15EZ2-45P5			CP(T)-SL-B-length	CMB(T)-XL60-length	/	JAM-L15-XL6
	High inertia	MS6H-180CN15B2-45P5	DS5C2/K2-45P5-PTA		CP(T)-SL-B-length	CM(T)-XL60-length	/	JAM-L15-XL4
		MS6H-180CN15BZ2-45P5			CP(T)-SL-B-length	CMB(T)-XL60-length	/	JAM-L15-XL6
		MS6H-180CN15E2-45P5			CP(T)-SL-B-length	CM(T)-XL60-length	/	JAM-L15-XL4
		MS6H-180CN15EZ2-45P5			CP(T)-SL-B-length	CMB(T)-XL60-length	/	JAM-L15-XL6
	Medium inertia	MS6G-180CN15B2-45P5	DS5C2/K2-45P5-PTA		CP(T)-SLT-B-length	CM(T)-XL60T-length	/	JAM-L15T-XL4T
		MS6G-180CN15BZ2-45P5			CP(T)-SLT-B-length	CMB(T)-XL60T-length	/	JAM-L15T-XL6T
		MS6G-180TH15B2-45P5			CP(T)-SLT-B-length	CM(T)-XL60T-length	/	JAM-L15T-XL4T
		MS6G-180TH15BZ2-45P5			CP(T)-SLT-B-length	CMB(T)-XL60T-length	/	JAM-L15T-XL6T
7.5	High inertia	MS6H-180CM15B2-47P5	DS5C1/P-47P5-PTA		CP(T)-SL-B-length	CM(T)-XL60-length	/	JAM-L15-XL4
		MS6H-180TL15B2-47P5			CP(T)-SL-B-length	CM(T)-XL60-length	/	JAM-L15-XL4
		MS6H-180CM15BZ2-47P5			CP(T)-SL-B-length	CMB(T)-XL60-length	/	JAM-L15-XL6
		MS6H-180TL15BZ2-47P5			CP(T)-SL-B-length	CMB(T)-XL60-length	/	JAM-L15-XL6
		MS6H-180CM15E2-47P5			CP(T)-SL-B-length	CM(T)-XL60-length	/	JAM-L15-XL4
		MS6H-180CM15EZ2-47P5			CP(T)-SL-B-length	CMB(T)-XL60-length	/	JAM-L15-XL6
	High inertia	MS6H-180CN15B2-47P5	DS5C2/K2-47P5-PTA		CP(T)-SL-B-length	CM(T)-XL60-length	/	JAM-L15-XL4
		MS6H-180CN15BZ2-47P5			CP(T)-SL-B-length	CMB(T)-XL60-length	/	JAM-L15-XL6
		MS6H-180CN15E2-47P5			CP(T)-SL-B-length	CM(T)-XL60-length	/	JAM-L15-XL4
		MS6H-180CN15EZ2-47P5			CP(T)-SL-B-length	CMB(T)-XL60-length	/	JAM-L15-XL6
	Medium inertia	MS6G-180CN15B2-47P5			CP(T)-SLT-B-length	CM(T)-XL60T-length	/	JAM-L15T-XL4T
		MS6G-180CN15BZ2-47P5			CP(T)-SLT-B-length	CMB(T)-XL60T-length	/	JAM-L15T-XL6T
		MS6G-180TH15B2-47P5			CP(T)-SLT-B-length	CM(T)-XL60T-length	/	JAM-L15T-XL4T
		MS6G-180TH15BZ2-47P5			CP(T)-SLT-B-length	CMB(T)-XL60T-length	/	JAM-L15T-XL6T
13	Medium inertia	MS6G-200TH17B2-413P0-F	DS5C2-415P0-PTA		CPT-ZDL-B-length	CM(T)-D60-length	/	JAM-L15-D4
		MS6G-200TH17BZ2-413P0-F			CPT-ZDL-B-length	CM(T)-D60-length	/	JAM-L15-D4
		MS6G-200TH17B2-413P0-Y			CPT-ZDL-B-length	CM(T)-D60-length	/	JAM-L15-D4
17	Medium inertia	MS6G-200TH17B2-417P0-F	DS5C2-415P0-PTA		CPT-ZDL-B-length	CM(T)-D60-length	/	JAM-L15-D4
		MS6G-200TH17BZ2-417P0-F			CPT-ZDL-B-length	CM(T)-D60-length	/	JAM-L15-D4
		MS6G-200TH17B2-417P0-Y			CPT-ZDL-B-length	CM(T)-D60-length	/	JAM-L15-D4
21	Medium inertia	MS6G-200TH17B2-421P0-F	DS5C2/K2-422P0-PTA		CPT-ZDL-B-length	CM(T)-D100-length	/	JAM-L15-D4
		MS6G-200TH17BZ2-421P0-F			CPT-ZDL-B-length	CM(T)-D100-length	/	JAM-L15-D4
		MS6G-200TH17B2-421P0-Y			CPT-ZDL-B-length	CM(T)-D100-length	/	JAM-L15-D4
27	Medium inertia	MS6G-200TH17B2-427P0-F	DS5C2/K2-432P0-PTA		CPT-ZDL-B-length	CM(T)-D100-length	/	JAM-L15-D4
		MS6G-200TH17BZ2-427P0-F			CPT-ZDL-B-length	CM(T)-D100-length	/	JAM-L15-D4
		MS6G-200TH17B2-427P0-Y			CPT-ZDL-B-length	CM(T)-D100-length	/	JAM-L15-D4
30		MS6G-265TH17B2-430P0-F	DS5C2/K2-432P0-PTA		CPT-ZDL-B-length	CM(T)-D160-length	/	
48	Medium inertia	MS6G-265TH17B2-448P0-F	DS5C2-445P0-PTA (Under Search)		CPT-ZDL-B-length	CM-D300-length	/	

*NOTE: E2 motor is a special shaft diameter motor. The special shaft diameter for 2.3kW motor is 22mm, and for 5.5kW and 7.5kW motors, it is 35mm.

Product accessories

Quick connector

- Provide convenient wiring terminals
- For 100W~15kW drivers.

Absolute value battery box

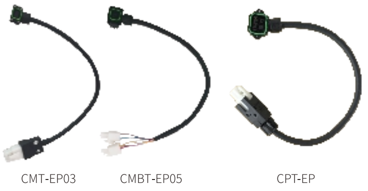
- Battery box model: CP-B-BATT
- The battery is not rechargeable

JC-CB bus cable

- EtherCAT motion bus dedicated communication cable
- Adopting industrial grade Category 5e four-core Ethernet cable

Adapter cable

- Power cable
- Encoder cable



Power cable

Encoder cable

Power cable

- Provide standard cable length specifications: 2/3/5/8/10/12/16/20/25/30 meters
- Customizable length
- Optional purchase of cable connectors (excluding cables)

Encoder cable

- Provide standard cable length specifications: 2/3/5/8/10/12/16/20/25/30 meters
- Customizable length
- Optional purchase of cable connectors (excluding cables)

Regenerative resistor

- Release bus capacitor regeneration voltage
- Please refer to the user manual for the selection of regeneration resistors

DB9F side cable

- Provide cable specifications of 1.5 meters
- Can be connected to a PC to achieve control of the servo upper computer

DM6C series multi-axis servo driver

Powerful performance | precise intelligent control | quality choice

XINJE
EtherCAT

Product characteristics

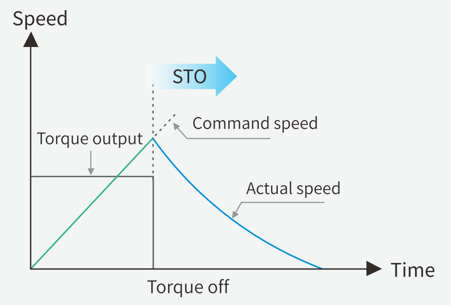
Safe and reliable

Standard STO function

- Support STO. When the safe torque function is enabled, the internal hardware circuit of the drive will trigger, forcibly shutting down the power transistor of the drive, causing the motor to stop running and protecting personal and equipment safety.

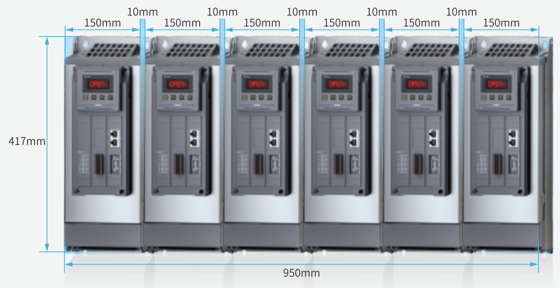
24V control power supply independent supply

- The panel supports independent 24V control power supply, and can still communicate with the upper computer even when the main circuit is not powered.

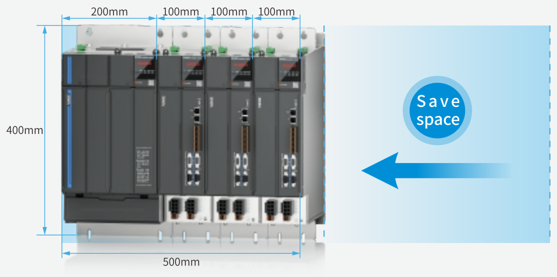


Space saving, convenient wiring, flexible configuration

- The design of equal-height and equal-depth book-style modular units allows for compact side-by-side installation, maximizing cabinet space utilization.
- Only one set of power cables is needed. Inside, a reliable connection between modules is achieved through a common bus with copper bars and screw locking.
- Inverter modules of 15KW and below use plug-in power terminals, saving approximately 30% in wiring time.


150mm
10mm
150mm
10mm
150mm
10mm
150mm
10mm
150mm
10mm
150mm
417mm
950mm

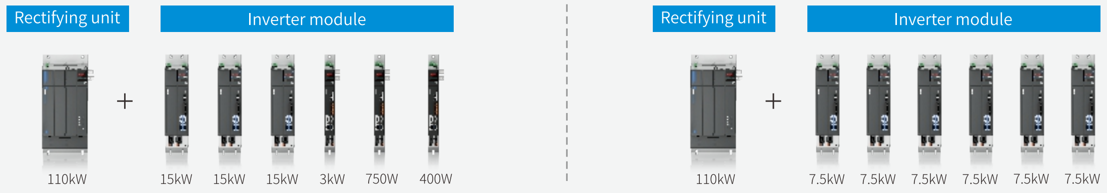
6*DS5C2-415P0-PTA


200mm
100mm
100mm
100mm
400mm
500mm
Save space

DM6-4110P0-R+3*DM6C-415P0-M

Flexible combination

- By using a combination of rectifier and inverter modules, taking the 110kW rectifier unit as an example, the following inverter module combinations are possible:

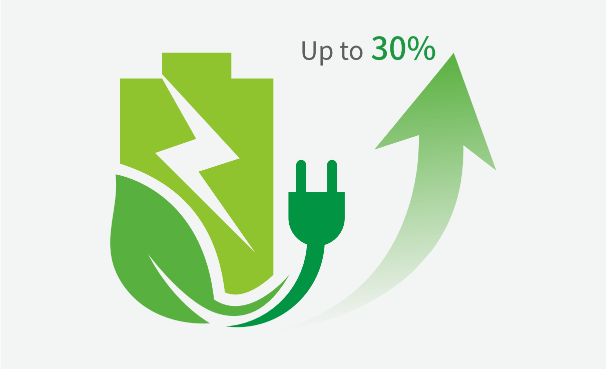

Rectifying unit
Inverter module
110kW
+
15kW
15kW
15kW
3kW
750W
400W
Rectifying unit
Inverter module
110kW
+
7.5kW
7.5kW
7.5kW
7.5kW
7.5kW
7.5kW

Product characteristics

Efficient and energy-saving

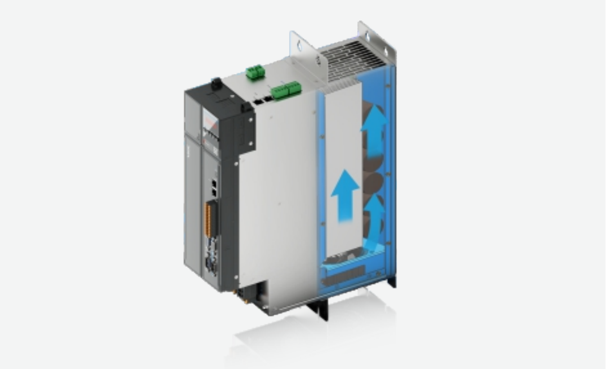
DC common busbar, energy-saving and environmentally friendly

- Using common DC bus technology for energy exchange, reducing energy loss of the driver, expected to save up to 30% electricity, more energy-efficient.



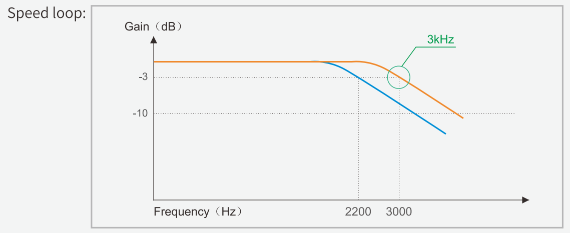
High protection

- Independent air duct design to prevent dust or foreign objects from entering the control circuit.
- Enhance the three proofings to improve the environmental resistance of the driver.



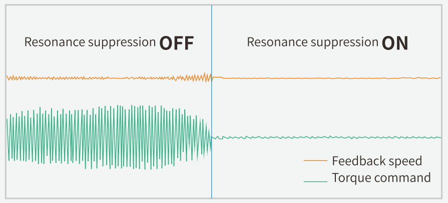
High dynamic response, vibration suppression, and efficient tuning

- 3kHz speed loop response bandwidth. Synchronization cycle 250μs. High dynamic response, improving production efficiency.
- Advanced control algorithms provide the optimal solution for achieving fast and flexible results in fast positioning systems.



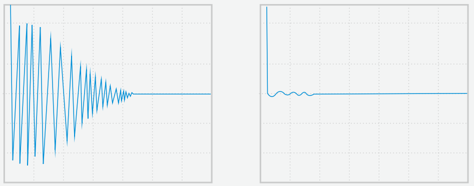
Resonance suppression

- The resonance suppression control algorithm can effectively shorten the tuning time, eliminate mechanical resonance, and make path tracking smooth and accurate.
- Resonance frequency automatic inspection, with stronger usability.
- The accuracy of vibration frequency recognition has been improved by 50%.
- The resonance frequency analysis time is reduced by 50%.



Mechanical end vibration suppression

- By using advanced control algorithms, vibration and noise suppression at the mechanical end can be achieved. Effectively solve the vibration at the end of the cantilever beam mechanism, shorten the tuning time, and improve product accuracy.



No mechanical end vibration suppression function

Enable mechanical end vibration suppression function

Model naming rule

DM6 C- □ □P□ □ - □

① ② ③ ④ ⑤ ⑥

No.	Item	Content
①	Product series	DM6: DM6 series
②	Product type	C: EtherCAT bus type Default: Rectification unit and braking unit
③	Voltage level	4: AC380V
④	Driver power	0P4: 400W 0P7: 750W 1P5: 1.5kW 3P0: 3kW 5P5: 5.5KW 7P5: 7.5kW 11P0: 11KW 15P0: 15kW 22P0: 22KW 32P0: 32kW 45P0: 45KW 55P0: 55kW 75P0: 75kW 110P0: 110kW 160P0: 160KW
⑤	Inversion axes	S: single axis Default: two axes
⑥	Unit type	R: rectification unit M: inverter unit

Driver model list

Power(kW)	Rated output current(A)	Rectifier module
22.0	56	DM6-422P0-R (in development)
45.0	107	DM6-445P0-R
75.0	152	DM6-475P0-R (in development)
110.0	240	DM6-4110P0-R
160.0	358	DM6-4160P0-R (in development)

Power(kW)	Inverter module	Axis number	Axis power (power*axis number)	Rated current (A)	Maximum current (A)	Suitable motor (recommended)
0.4	DM6C-40P4-M	2	0.4*2	2.8	8.4	MS6S-60CN30B3-20P4 MS6S-60CN30BZ3-20P4 MS6S-60TH30B3-20P4 MS6S-60TH30BZ3-20P4 MS6H-60CN30B3-20P4 MS6H-60CN30BZ3-20P4 MS6H-60TH30B3-20P4 MS6H-60TH30BZ3-20P4
0.7	DM6C-40P7-M	2	0.75*2	4.8	14.4	MS6S-80CN30B3-20P7 MS6S-80CN30BZ3-20P7 MS6S-80TH30B3-20P7 MS6S-80TH30BZ3-20P7 MS6H-80CN30B3-20P7 MS6H-80CN30BZ3-20P7 MS6H-80TH30B3-20P7 MS6H-80TH30BZ3-20P7
1.5	DM6C-41P5-M	2	1.5*2	6	18	MS6G-110CN30B2-41P5 MS6G-110CN30BZ2-41P5 MS6G-110TH30B2-41P5 MS6G-110TH30BZ2-41P5 MS6G-130CN20B2-41P5 MS6G-130CN20BZ2-41P5 MS6G-130CN15B2-41P5 MS6G-130CN15BZ2-41P5 MS6G-130TH20B2-41P5 MS6G-130TH20BZ2-41P5 MS6G-130TH15B2-41P5 MS6G-130TH15BZ2-41P5
3.0	DM6C-43P0-M	2	3.0*2	11	29.7	MS6H-180CN15B2-43P0 MS6H-180CN15BZ2-43P0 MS6G-180CN15B2-43P0 MS6G-180CN15BZ2-43P0 MS6G-180TH15B2-43P0 MS6G-180TH15BZ2-43P0 MS6S-130CN30B2-43P0 MS6S-130TH30B2-43P0 MS6S-130CN30BZ2-43P0 MS6S-130TH30BZ2-43P0

Driver model list

Power(kW)	Inverter module	Axis number	Axis power (power*axis number)	Rated current (A)	Maximum current (A)	Suitable motor (recommended)
5.5	DM6C-45P5-M	2	5.5*2	20	50	MS6H-180CN15B2-44P4
						MS6H-180CN15BZ2-44P4
						MS6G-180CN15B2-44P4
						MS6G-180CN15BZ2-44P4
						MS6G-180TH15B2-44P4
						MS6G-180TH15BZ2-44P4
						MS6S-130CN30B2-45P0
						MS6S-130TH30B2-45P0
						MS6H-180CN15B2-45P5
						MS6H-180CN15BZ2-45P5
						MS6H-180CN15E2-45P5
						MS6H-180CN15EZ2-45P5
						MS6G-180CN15B2-45P5
						MS6G-180CN15BZ2-45P5
						MS6G-180TH15B2-45P5
						MS6G-180TH15BZ2-45P5
7.5	DM6C-47P5-M	2	7.5*2	25	62.5	MS6H-180CN15B2-47P5
						MS6H-180CN15BZ2-47P5
						MS6H-180CN15E2-47P5
						MS6H-180CN15EZ2-47P5
						MS6G-180CN15B2-47P5
						MS6G-180CN15BZ2-47P5
						MS6G-180TH15B2-47P5
						MS6G-180TH15BZ2-47P5
15.0	DM6C-415P0-M	2	15.0*2	37	77.7	MS6G-200TH17B2-417P0-F
						MS6G-200TH17B2-413P0-F
						MS6G-200TH17BZ2-417P0-F
						MS6G-200TH17BZ2-413P0-F
						MS6G-200TH17B2-417P0-Y
						MS6G-200TH17B2-413P0-Y
						MS6G-200TH30B2-422P0-YL01
						MS6G-200TH30B2-415P0-YL01
32.0	DM6C-432P0S-M	1	32.0*1	65	130	MS6G-200TH17B2-421P0-F
						MS6G-200TH17BZ2-421P0-F
						MS6G-200TH17B2-421P0-Y
						MS6G-200TH17B2-427P0-F
						MS6G-200TH17BZ2-427P0-F
						MS6G-200TH17B2-427P0-Y
						MS6G-265TH17B2-430P0-F
						MS6G-265TH17B2-430P0-Y
45.0	DM6C-445P0S-M	1	45.0*1	100	250	MS6G-265TH17B2-448P0-F
						MS6G-265TH17B2-448P0-Y
55.0	DM6C-455P0S-M	1	55.0*1	126	315	MS6G-265TH20B2-456P0-Y01
						MS6G-265TH17B2-460P0-F
						MS6G-265TH17B2-460P0-Y
75.0	DM6C-475P0S-M	1	75.0*1	152	380	MS6G-265TH17B2-475P0-F
						MS6G-265TH17B2-475P0-Y

Driver specification list

Function	Control mode			
	Position control	Speed control	Torque control	Bus control
EtherCAT type DM6C series	●	●	●	●

Function	Control method								
	Pulse	Long line drive	Analog input	External displacement sensor	ABZ differential encoder	USB Type-C	RS485	SI input	SO output
EtherCAT type DM6C series					●	●	●	6	4

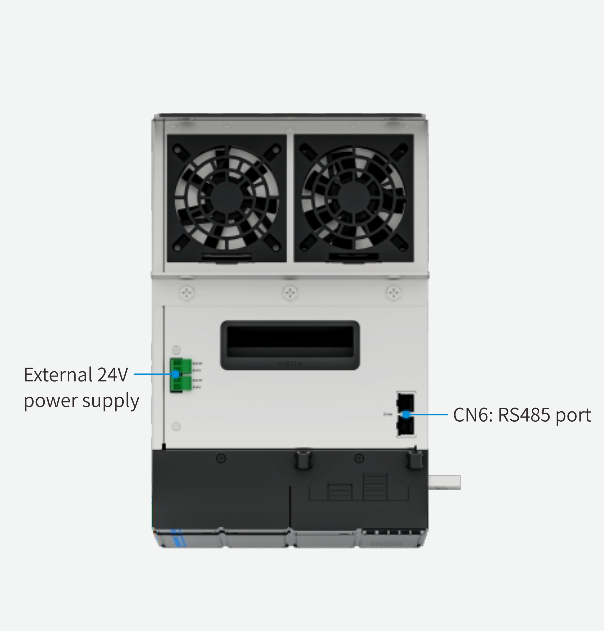
Technical specification

Specification			Model: Inverter unit
			DM6C-M series
Basic specification	Power range (KW)		0.4KW-75KW
	Input power supply		DC537V-679V
	Control circuit power supply		DC24V
	Encoder feedback		19-bit/23-bit communication encoder
	Control mode		PWM control, sine wave current drive mode
	Using environment	Ambient temperature	Operation:-10°C~40°C (no condensation)/Storage:-20°C~60°C (no condensation)
		Ambient humidity	Operation/Storage: Below 90%RH (no condensation)
		Vibration/impact resistance	4.9m/s²/19.6m/s²
	Function	Protection function	Overvoltage, undervoltage, overheating, overcurrent, overload, overspeed, excessive position deviation, output short circuit, encoder abnormality, overtravel protection, oscillation protection, etc.
		STO	Standard configured
		Communication interface	USB Type-C，RS-485，EtherCAT
		Display and operation	6-digit LED indicator light, power indicator light, 5 buttons operation
	Position output	Frequency division function	Yes
		Collector Z-phase output	Yes
	Analog input		No
I/O signal	Digital input (SI)		6 channels
			Servo enable, alarm clear, prohibit forward rotation, prohibit reverse rotation, torque limit selection, internal speed selection, mode switching
			Pulse input prohibition, zero speed locking, position deviation clearing, internal position step change signal, internal control mode direction switching
	Digital output (SO)		4 channels
			Positioning completed, servo ready, alarm output, torque limit output, same speed detection, rotation detection, speed reached
			Brake release output, warning output
Position control mode	Pulse command mode		Not support
	Control mode		Internal position/EtherCAT motion bus
	Feedforward compensation		0~100% (set the resolution to 1%)
	Positioning completed width setting		1~65535 instruction units (set resolution to 1 instruction unit)
	Electronic gear ratio		1/65530⩽B/A⩽65535
Speed control mode	Control method		Internal three-segment speed, external speed mode
	Instruction smoothing method		Low-pass filter, smoothing filter
	Analog input	Voltage range	NO
		Input impedance	NO
	Torque limit		Internal parameters
	Speed change rate		When the rated external load changes from 0% to 100%: below ±0.01% (at rated speed)
			Rated voltage ±10%: 0.01%(at rated speed)
			Environmental temperature of 20 ± 25°C: below ±0.01% (at rated speed)
Torque control mode	Control mode		Internal torque
	Analog input	Voltage range	NO
		Input impedance	NO
	Speed limit		Internal parameters
Bus control mode	Communication protocol		EtherCAT protocol

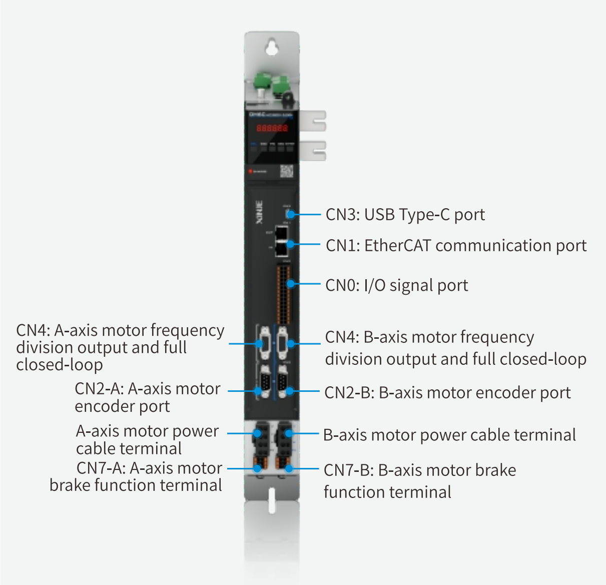
Specification			Model: Rectifying unit
			DM6-R series
Basic specification	Power range (KW)		22KW，45KW，75KW，110KW，160KW
	Input power supply		Three phase AC380V~440V, 50Hz/60Hz
	Control circuit power supply		DC24V
	Control mode		Three phase full wave rectification IPM, PWM control, sine wave current drive mode
	Using environment	Ambient temperature	Operation:-10°C~40°C (no condensation)/Storage:-20°C~60°C (no condensation)
		Ambient humidity	Operation/Storage: Below 90%RH (no condensation)
		Vibration/impact resistance	4.9M/S²/19.6M/S²
	Protection function		Overvoltage, undervoltage, overheating, oscillation protection, phase loss protection, etc

Terminal definition

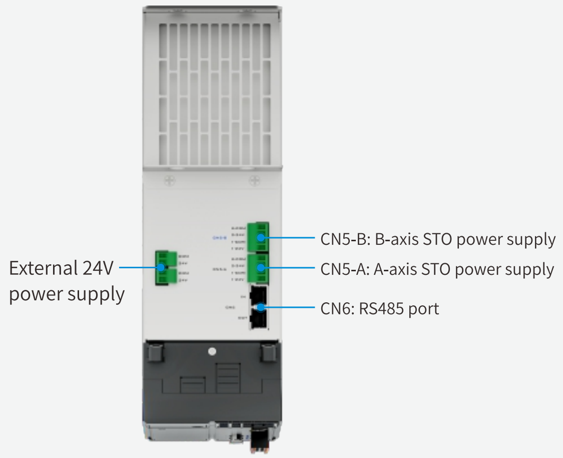
Terminal arrangement of rectifier unit DM6-4110P0-R


External 24V power supply
CN6: RS485 port

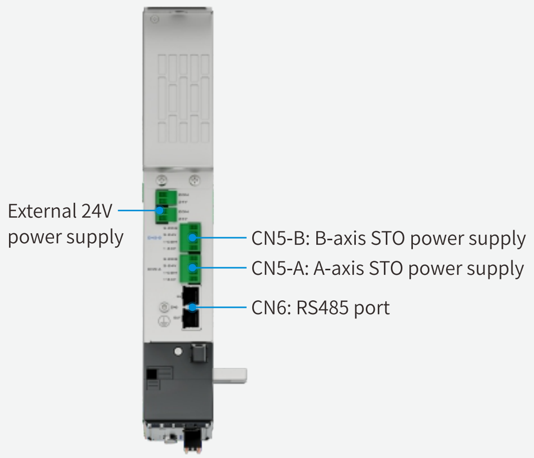
Front terminal layout of inverter module DM6C 15kW/7.5kW/5.5kW/3kW/1.5kW/750W/400W


CN3: USB Type-C port
CN1: EtherCAT communication port
CN0: I/O signal port
CN4: A-axis motor frequency division output and full closed-loop
CN4: B-axis motor frequency division output and full closed-loop
CN2-A: A-axis motor encoder port
CN2-B: B-axis motor encoder port
A-axis motor power cable terminal
B-axis motor power cable terminal
CN7-A: A-axis motor brake function terminal
CN7-B: B-axis motor brake function terminal

Top view terminal layout of inverter module DM6C 15kW/7.5kW/5.5kW/3kW/1.5kW/750W/400W

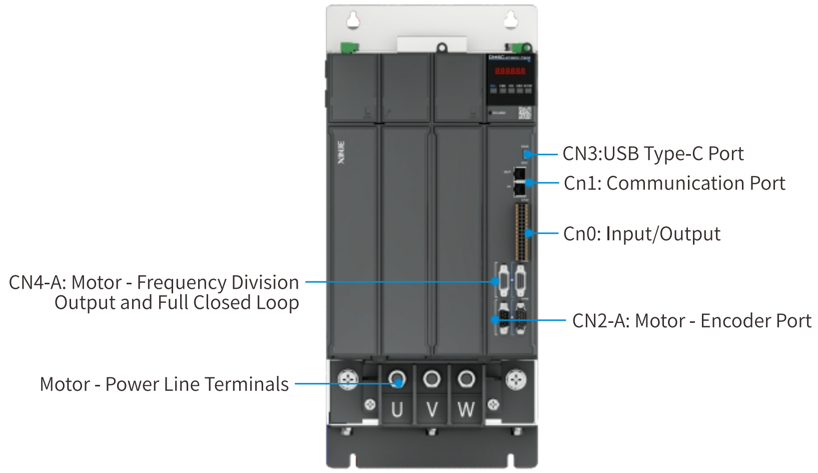

External 24V power supply
CN5-B: B-axis STO power supply
CN5-A: A-axis STO power supply
CN6: RS485 port

7.5/15kW inverter axis top view terminal layout

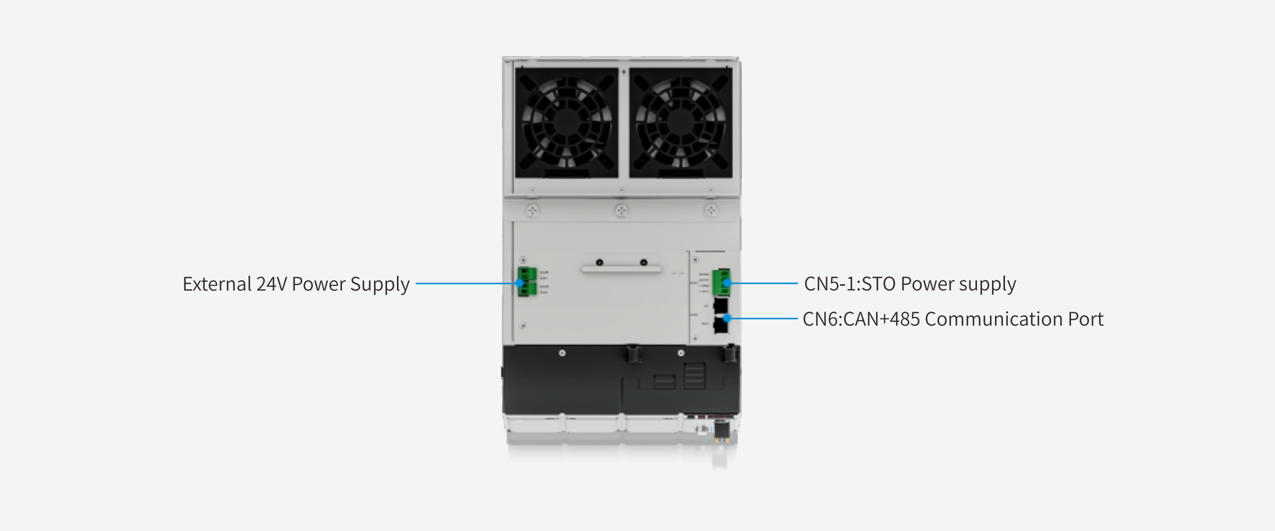

External 24V power supply
CN5-B: B-axis STO power supply
CN5-A: A-axis STO power supply
CN6: RS485 port

400W/750W/1.5kW/3kW inverter axis top view terminal layout

DM6C-44P0S/455P0S/475P0S-M Front Terminal Layout of the Inverter Module


CN3:USB Type-C Port
Cn1: Communication Port
Cn0: Input/Output
CN4-A: Motor - Frequency Division Output and Full Closed Loop
CN2-A: Motor - Encoder Port
Motor - Power Line Terminals
U
V
W

DM6C-44P0S/455P0S/475P0S-M Inverter module top view terminal layout


External 24V Power Supply
CN5-1:STO Power supply
CN6:CAN+485 Communication Port

Terminal definition

① CN0（I/O terminals）

No.	Name	Explanation	No.	Name	Explanation
1	SI1+	Axis A SI1+ (high-speed)	16	SO4-	Axis B SO4-
2	SI1-	Axis A SI1- (high Speed)	17	SO4+	Axis B SO4+
3	SI2+	Axis A SI2+ (high speed)	18	COM	Axis B output terminal ground
4	SI2-	Axis A SI2- (high speed)	19	SO3	Axis B SO3
5	SI3	Axis A SI3	20	SO2	Axis B SO2
6	SI4	Axis A SI4	21	SO1	Axis B SO1
7	SI5	Axis A SI5	22	+24VI	Axis B input +24V
8	SI6	Axis A SI6	23	SI6	Axis B SI6
9	+24V	Axis A input +24V	24	SI5	Axis B SI5
10	SO1	Axis A SO1	25	SI4	Axis B SI4
11	SO2	Axis A SO2	26	SI3	Axis B SI3
12	SO3	Axis A SO3	27	SI2-	Axis B SI2- (high speed)
13	COM	Axis A output terminal ground	28	SI2+	Axis B SI2+ (high speed)
14	SO4+	Axis A SO4+	29	SI1-	Axis B SI1- (high speed)
15	SO4-	Axis A SO4-	30	SI1+	Axis B SI1+ (high speed)

② CN1（EtherCAT port）

No.	Name	No.	Name
1	TX A+	9	TX B+
2	TX A-	10	TX B-
3	RX A+	11	RX B+
4	-	12	-
5	-	13	-
6	RX A-	14	RX B-
7	-	15	-
8	-	16	-

③ CN2（encoder）

No.	Definition	No.	Definition
1	Motor temperature detection	6	GND
2	Motor temperature detection	7	/
3	485-B	8	+5V
4	485-A	9	/
5	PE	/	/

④ CN3（USB Type-C port）

No.	Name	No.	Name
A1	GND	B1	GND
A4	USB-VBUS	B4	USB-VBUS
A6	USB-D+	B6	USB-D+
A7	USB-D-	B7	USB-D-
A9	USB-VBUS	B9	USB-VBUS
A12	GND	B12	GND

⑤ CN4（frequency division output and fully closed-loop signal）

No.	Name	Explanation	No.	Name	Explanation
1	QBH-A+	Fully closed-loop input A+	9	FPA+	Encoder frequency division output A+
2	QBH-A-	Fully closed-loop input A-	10	FPA-	Encoder frequency division output A-
3	GND	Grating ruler GND	11	FPB+	Encoder frequency division output B+
4	QBH-B+	Fully closed-loop input B+	12	FPB-	Encoder frequency division output B-
5	QBH-B-	Fully closed-loop input B-	13	FPZ+	Encoder frequency division output Z+
6	QBH-Z+	Fully closed-loop input Z+	14	FPZ-	Encoder frequency division output Z-
7	QBH-Z-	Fully closed-loop input Z-	15	5V	Grating ruler power supply 5V
8	GND	Grating ruler GND	/	/	Idle pins

⑥ CN5（STO signal）

Name	Explanation
1	STO1-COM
2	STO1-24V
3	STO2-COM
4	STO2-24V

⑦ CN6（CAN+RS485+station number allocation）

No.	Name	No.	Definition
1	CANH	9	CANH
2	CANL	10	CANL
3	GND	11	GND
4	485-A	12	485-A
5	485-B	13	485-B
6	485GND	14	485GND
7	OUT-TX	15	IN-TX
8	OUT-RX	16	IN-RX

⑧ CN7（brake terminals）

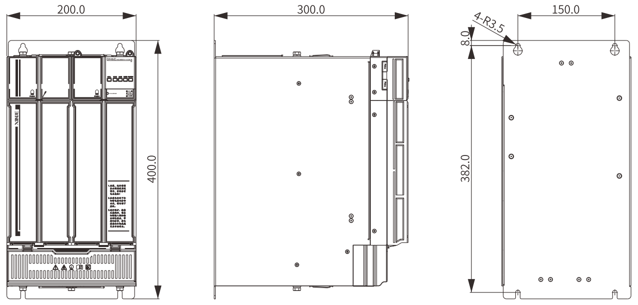
No.	Name	No.	Name
1	/	4	/
2	BK-	5	BK+
3	/	6	/

Installation dimension

(unit: mm)

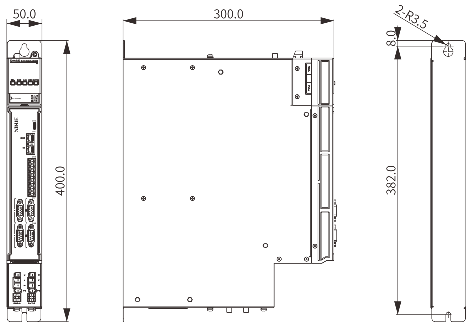
■ Rectifying unit

DM6-4110P0-R

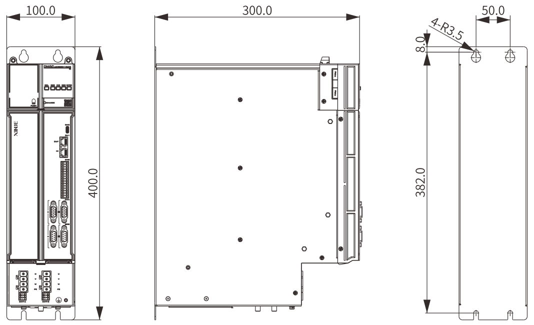


■ Inverter unit

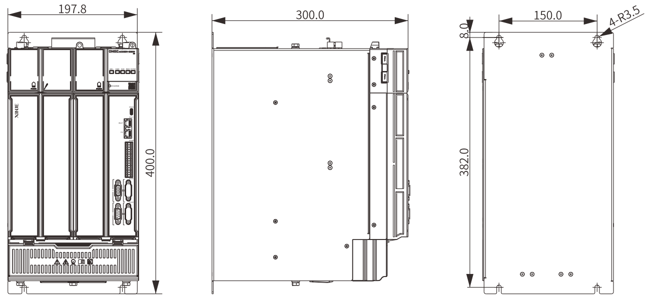
DM6C-40P4/40P7/41P5/43P0-M



DM6C-45P5/47P5/415P0-M



DM6C-445P0/455P0S/475P0S-M



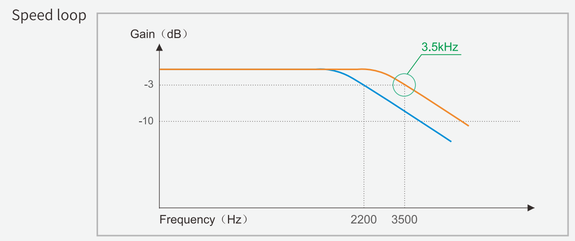
DL6 series
fully functional linear drive servo driver

High positioning accuracy
Reliable operation
Newly debugging serial port
High dynamic response
Efficient tuning
Fully functional
Gantry function
XINJE
DL6 AC220V-2.8A
DL6 AC220V-6.0A

Product features

High dynamic response

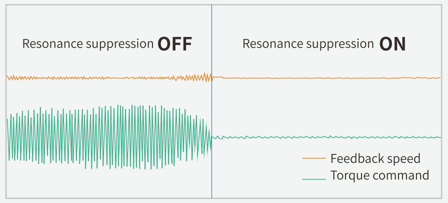
- 3.8kHz speed loop response bandwidth. Synchronization period 250μs. High dynamic response improves production efficiency.
- Advanced control algorithms provide the optimal solution for achieving fast and flexible results in fast positioning systems.



Suppress vibration, Efficient tuning

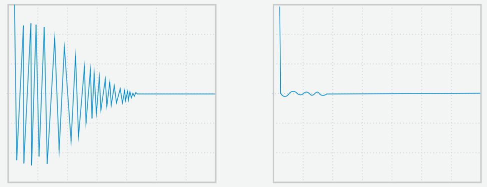
Resonance suppression

- The resonance suppression control algorithm can effectively shorten the tuning time, eliminate mechanical resonance, and make path tracking smooth and accurate.
- Resonance frequency automatic inspection, with stronger usability.
- The accuracy of vibration frequency recognition has been improved by 50%.
- The resonance frequency analysis time is reduced by 50%.



Mechanical end vibration suppression

- By using advanced control algorithms, vibration and noise suppression of mechanical ends can be achieved. Effectively solve the vibration at the end of the cantilever beam mechanism, shorten the tuning time, and improve product accuracy.

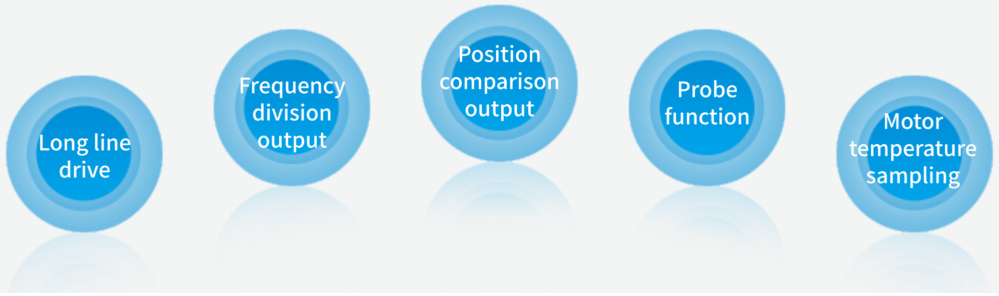


No mechanical end vibration suppression function

Enable mechanical end vibration suppression function

Fully functional

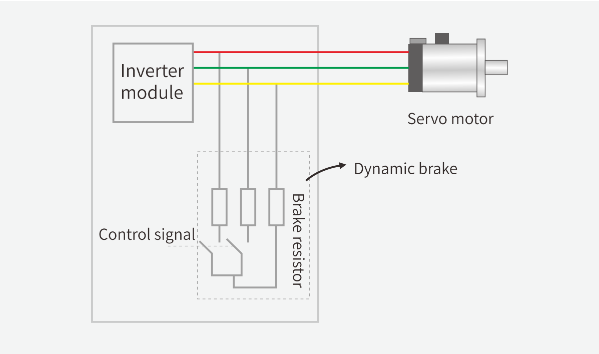
- The DL6 series is equipped with long line drive, frequency division output, position comparison output, probe function, motor temperature sampling and other functions.


Long line drive
Frequency division output
Position comparison output
Probe function
Motor temperature sampling

Reliable operation

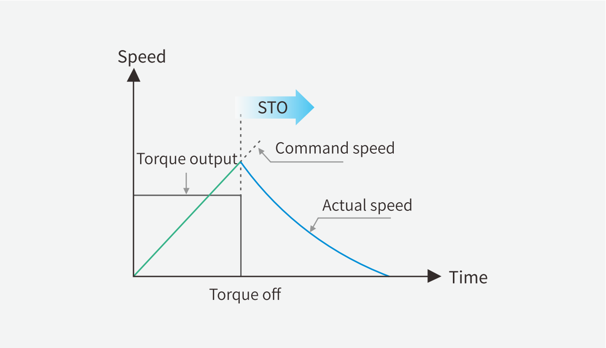
Dynamic braking

- When there is a power outage or alarm during the operation of the motor, the servo will be turned off, and the three-phase circuit of the motor will be short circuited. The servo motor will quickly stop, thus protecting the safety of people and machines.



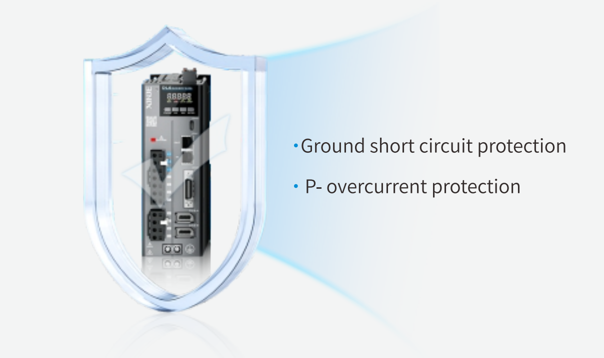
STO function

- Support STO. When the safety torque function is enabled, the internal hardware circuit of the driver will trigger, forcibly shutting down the power transistor of the driver, causing the motor to stop running and protecting personal and equipment safety.



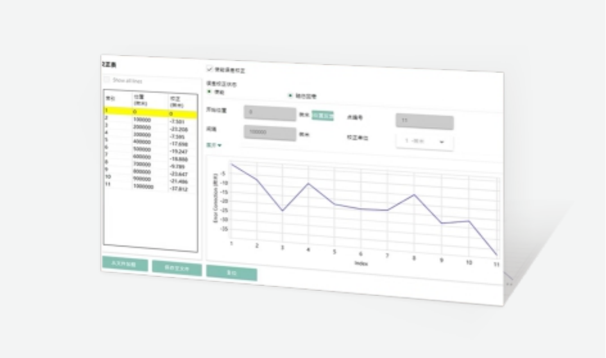
Multiple protection functions

- Support multiple protection functions, such as ground short circuit protection, P- overcurrent protection, etc., with ultra-low failure rate, users can use it with more peace of mind.



Higher positioning accuracy

- The positioning accuracy compensation function helps achieve higher absolute positioning accuracy.



Equipped with a brand new upper computer debugging serial port

- Standard Type-C debugging port.

Gantry function

- Introducing a new gantry synchronization algorithm, the two axes are highly synchronized during motion, ensuring high response and synchronization performance even at high speed.

Naming rule

DL 6 □ - 2 □□ □ - GS

① ② ③ ④ ⑤ ⑥

①	Symbol	Product name
	DL	Linear drive servo driver

②	Symbol	Product series
	6	6 series
	5	5 series

③	Symbol	Product type
	Default	Standard
	C	EtherCATBus Type
	K	Pulse Type

④	Symbol	Rated input voltage
	2	AC220V
	4	AC380V

⑤	Symbol	Rated output current
	003	2.8A
	006	6A
	010	10A
	012	12A
	020	20A

⑥	Symbol	Special function
	Default	Standard type
	GS	Gantry synchronization

Driver model list

Series Current	DL6 series
2.8A	DL6-2003
2.8A	DL6-2003-GS
6A	DL6-2006
6A	DL6-2006-GS
10A	DL6-4010
12A	DL6-4012
20A	DL6-4020

Driver specification list

Function	Driver specification list			
	Position control	Speed control	Torque control	Bus control
DL6 series	●	●	●	●

Function	Control method								
	Pulse	Long line drive	Analog input	External displacement sensor	ABZ differential feedback	USB Type-C	RS485	SI input	SO output
DL6 series	●	●		●	●	●		7	4

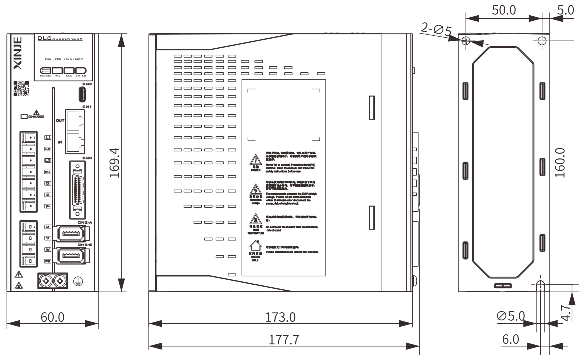
Technical specification

Item			DL6 series linear drive servo driver
Basic specification	Input current		Single phase/three-phase AC200~240V, 50Hz/60Hz;three-phase AC380V~440V,50Hz/60Hz
	Encoder feedback		ABZ incremental encoder, absolute Biss-c encoder
	Control method		Three phase full wave rectification IPM, PWM control, sine wave current drive mode
	Control mode		Position mode, speed mode, torque mode
	Using environment	Ambient temperature	Operation:-10°C~40°C (no condensation)/Storage:-20°C ~60°C (no condensation)
		Ambient humidity	Operation/storage: below 90% RH (no condensation)
		Vibration/impact resistance	4.9m/s² / 19.6m/s²
		Installation site	A place without dust, dry, vibration, or corrosive substances
		Installation method	Vertical or horizontal installation
	Function	Protection function	Overvoltage, undervoltage, overheating, overcurrent, overload, overspeed, analog input abnormality, excessive position deviation, output short circuit, encoder abnormality, regeneration abnormality protection, overtravel protection, oscillation protection, phase loss protection, etc
		Dynamic brake	Standard configured
		Communication function	EtherCAT bus communication
		Braking resistor	Built-in braking resistor, external braking resistor available
		Display and operation	5-digit LED indicator light, power indicator light, 4 buttons operation
I/O signal	Digital input		7 channels input
			Two channels of high-speed SI support probe function
	Digital output		4 channels digital output
			Positioning completed, servo ready, alarm output, speed reached, rotation detection, torque limit output, same speed detection, brake release output

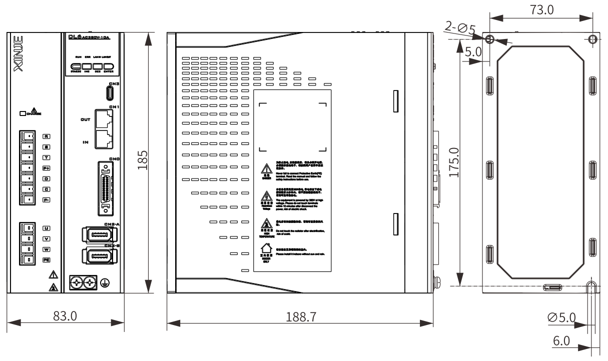
Outline dimension

(unit：mm)

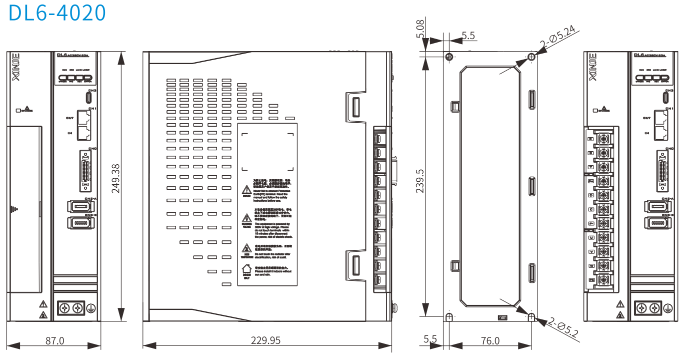
DL6-2003/2006



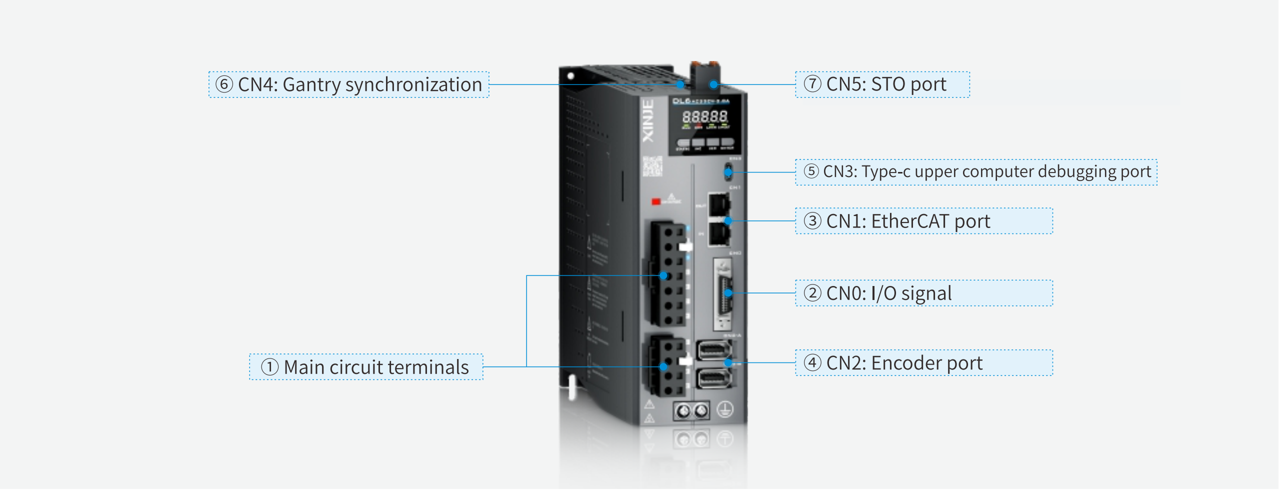
DL6-4010/4012



DL6-4020



Port distribution



① Main circuit terminals

Terminal	Function	Explanation
L1，L2，L3	Main circuit power input terminal	Single phase/three-phase AC200~240V, 50/60Hz (If single phase power supply is used, please connect L1/L3, otherwise it will affect parameter memory when power of)
P+，D，C	Use built-in braking resistor	Short circuit P+ and D terminals, disconnect P+ and C
	Use external braking resistor	Connect the braking resistor to the P+ and C terminals, and disconnect the P+ and D short-circuit wires: set P0-25=power value, P0-26=resistance value
P+，P-	Bus terminal	Real time voltage of the busbar can be measured, please be aware of the danger
U，V，W，PE	Motor connection terminal	Connect to the motor
⏚	Grounding terminal	The ground wire is on the heat sink. Please confirm a good grounding before powering on

② CN0

No.	Name	Explanation	No.	Name	Explanation
1	+24V	+24V Common Terminal	14	SI3	Ordinary input terminal 3
2	SI4	Ordinary input terminal 4	15	SI5	Ordinary input terminal 5
3	SI6	Ordinary input terminal 6	16	SI7	Ordinary input terminal 7
4	COM	Output common terminal	17	SO3	Ordinary output terminal 3
5	SO4	Ordinary output terminal 4	18	SO1	High speed output terminal 1
6	SO2	High speed output terminal 2	19	DO_24V	High speed output +24V power supply
7	OA+	Encoder frequency division output OA+	20	OA-	Encoder frequency division output OA-
8	OB+	Encoder frequency division output OB+	21	OB-	Encoder frequency division output OB-
9	OZ+	Encoder frequency division output OZ+	22	OZ-	Encoder frequency division output OZ-
10	P+5V	Pulse +5V	23	P-	Pulse-
11	D+5V	Direction +5V	24	D-	Direction-
12	SI1	High speed input terminal 1	25	SI2	High speed input terminal 2
13	P+/D+24V	Pulse/direction +24V	26	GND	Frequency division output ground

⑤ CN3

No.	Definition	No.	Definition
A1	GND	B1	GND
A4	USB-VBUS	B4	USB-VBUS
A6	USB-D+	B6	USB-D+
A7	USB-D-	B7	USB-D-
A9	USB-VBUS	B9	USB-VBUS
A12	GND	B12	GND

⑦ CN5

No.	Name	Explanation	No.	Name	Explanation
1	EDM+	EDM output+	4	EDM-	EDM output-
2	24V	24V output	5	COM	Public ground
3	STO1	STO1 circuit input	6	STO2	STO2 circuit input

③ CN1

No.	Name	No.	Name
1	TX A+	9	TX B+
2	TX A-	10	TX B-
3	RX A+	11	RX B+
4	-	12	-
5	-	13	-
6	RX A-	14	RX B-
7	-	15	-
8	-	16	-

④ CN2（CN2-A)

No.	Definition	No.	Definition
1	Power supply+5V	6	Incremental encoder B- Biss-C encoder DATA-
2	GND	7	Incremental encoder Z+
3	Incremental encoder A+ Biss-C encoder CLK+	8	Incremental encoder Z-
4	Incremental encoder A- Biss-C encoder CLK	9	Motor temperature+
5	Incremental encoder B+ Biss-C encoder DATA+	10	Motor temperature-

(CN2-B)

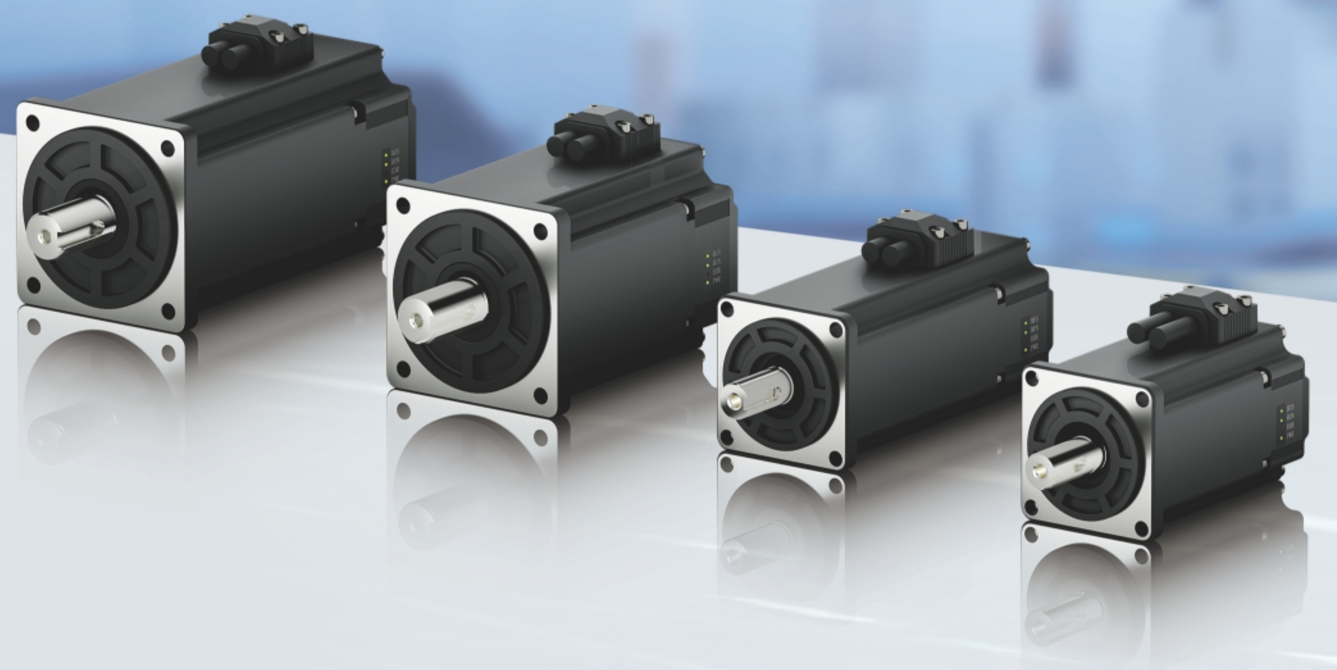
No.	Definition	No.	Definition
1	Power supply+5V	6	-
2	GND	7	Rotary encoder A
3	Hall U+	8	Rotary encoder B
4	Hall V+	9	-
5	Hall W+	10	-

⑥ CN4

Name	Explanation
1	TX A+
2	TX A-
3	RX A+
4	-
5	-
6	RX A-
7	-
8	-

Low voltage servo system

iMF5 Series
Integrated Low-voltage Servo Drive Motor



*Note: The models that have been put into production can be found in the subsequent model list. Some models have not yet been put into production, please stay tuned.

PLC
HMI
Industrial informatization
Servo system
Frequency inverter
Stepping system
Vision system
IoT Industrial Controller

iMF5 Series Integrated Low-voltage Servo Drive Motor

■ Comprehensive Protection

Built-in overvoltage, undervoltage, short circuit, and dual over-temperature protection (built-in thermistor), creating multiple safety barriers.

■ Strong Overload Capacity

Triple overload capacity ensures stable operation during heavy load startup and instantaneous impacts.

■ Worry-free Wiring

Built-in 24V brake power supply simplifies wiring, saving time and effort.

■ Integrated and Compact

Integrated drive and control design, compact structure, effectively saving space and installation wiring.

■ Wide-range Power Supply

24-60VDC wide voltage input, adaptable to various industrial environments, reducing power supply configuration complexity.

■ Multi-protocol Integration

Integrates CANopen and Modbus RTU for easy system integration and networking.

Naming Convention

| Integrated Low-voltage Servo Drive Motor Naming Convention

iMF5 N - 60 C N 30 B Z □- 5 04
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪

① Series

Symbol	Series
iMF5	iMF5 Series

② Type

Symbol	Communication Method
N	CANopen

③ Frame Size

Symbol	Frame Size
40	40 Flange
60	60 Flange
80	80 Flange

④ Encoder Type

Symbol	Type
C	Magnetic Encoder

⑤ Encoder Accuracy

Symbol	Specification
N	Single/Multi-turn Integrated 19-bit

⑥ Rated Speed

Symbol	Rated Speed
30	3000rpm

⑦ Motor Shaft Specification

Symbol	Keyed Shaft, Oil Seal
B	With Key, With Oil Seal

⑧ Power-off Brake

Symbol	Specification
Z	With Brake
空	Without Brake

⑨Motor Connector Type

Symbol	Plug Type
2	Aviation Plug Connector

⑩ Voltage Class

Symbol	Voltage
5	48V

⑪ Rated Power

Symbol	Power
01	100W
02	200W
04	400W
07	750W

Model Overview

Integrated Low-voltage Servo Drive Motor Model Overview

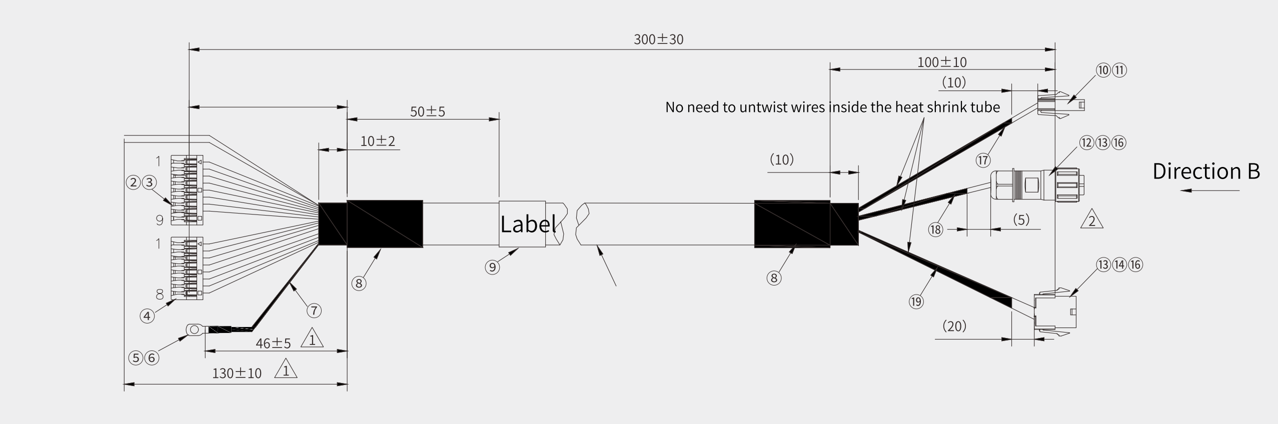
Series	Power supply voltage	Communication Method	Specification Model	Power (W)	Rated Torque (N.m)	Rated Speed (rpm)	Rated Current [A]	Encoder Type
iMF5 Series	DC48	CANopen	iMF5N-40CN30B(Z)2-501	100	0.32	3000	3.0	Magnetic Encoder 19-bit
			iMF5N-60CN30B(Z)2-502	200	0.64	3000	6.0	
			iMF5N-60CN30B(Z)2-504	400	1.27	3000	10	
			iMF5N-80CN30B(Z)2-507	750	2.39	3000	20	

Technical Parameters Table

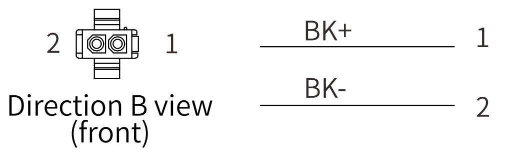
Integrated Low-voltage Servo Drive Motor Technical Parameters

Voltage Class		DC48V			
Motor Model iMF		5N-40 *Under research	5N-60	5N-60	5N-80
		CN30B(Z)2	CN30B(Z)2	CN30B(Z)2	CN30B(Z)2
		501	502	504	507
Rated Power (W)		100	200	400	750
Rated Current (A)		3	6	10	20
Rated Speed (RPM)		3000	3000	3000	3000
Maximum Speed (RPM)		3500	3500	3500	3500
Rated Torque (N.m)		0.32	0.64	1.27	2.39
Maximum Torque (N.m)		0.96	1.92	3.81	7.17
Rotor Inertia[10^7kg·m²]		64(67)	142(171)	252.1(265.3)	978(1031)
Bearing Axial Force (N)		54	74	74	147
Bearing Radial Force (N)		78	245	245	392
Inertia Type		High inertia	High inertia	High inertia	High inertia
Number of Pole Pairs		5	5	5	5
Encoder Bit Count		19	19	19	19
Encoder Type		Magnetic	Magnetic	Magnetic	Magnetic
Cooling Method		Natural cooling			
Motor Insulation Class		CLASSF(155°C)			
Protection Rating		IP65	IP65		IP65
Operating Environment	Ambient Temperature	-10°C~+40°C(Does not freeze)			
	Ambient Humidity	20%~90%RH(Does not condense)			

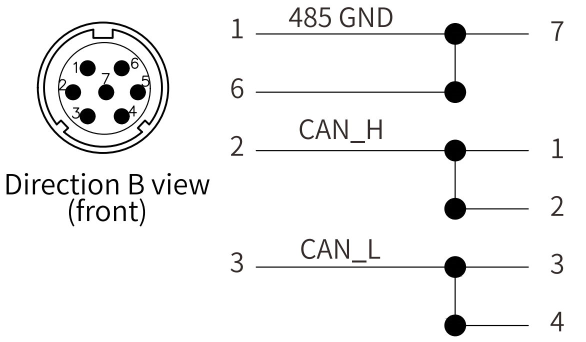
Terminal Definitions


300±30
100±10
(10)
⑩⑪
50±5
10±2
No need to untwist wires inside the heat shrink tube
⑫⑬⑯
②③
1
9
1
8
④
(10)
⑰
Direction B
Label
(5)
⑱
⑨
⑧
⑧
⑦
⑬⑭⑯
⑲
(20)
⑤⑥
46±5
130±10
1
1
2

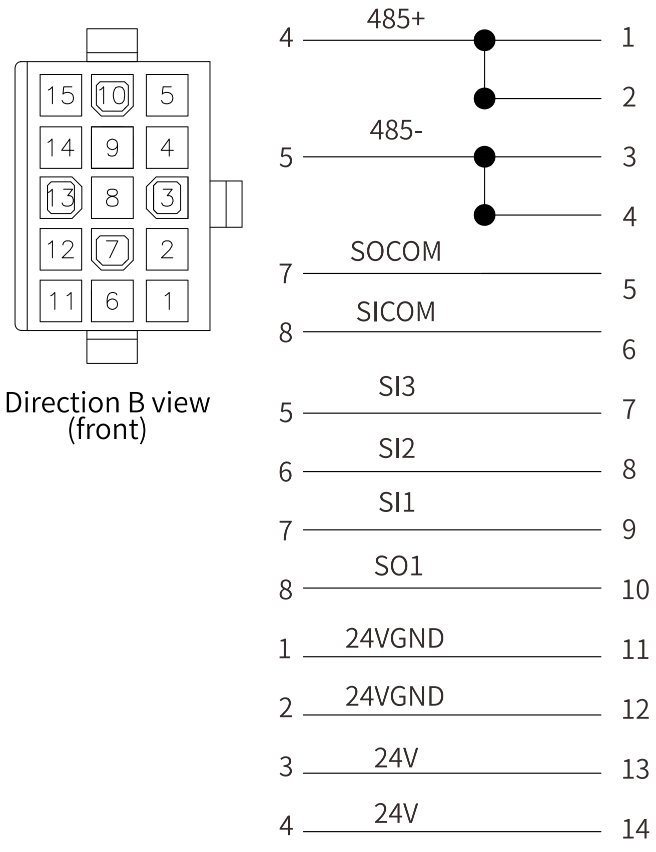
Brake interface


2
1
BK+
1
BK-
2
Direction B view
(front)

Communication interface

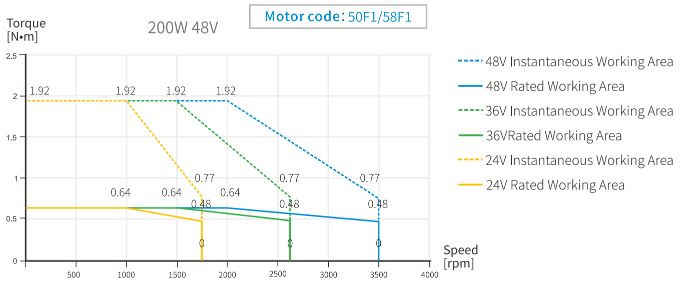

1
2
3
4
5
6
7
Direction B view
(front)
1
485 GND
7
6
2
CAN_H
1
2
3
CAN_L
3
4

IO interface

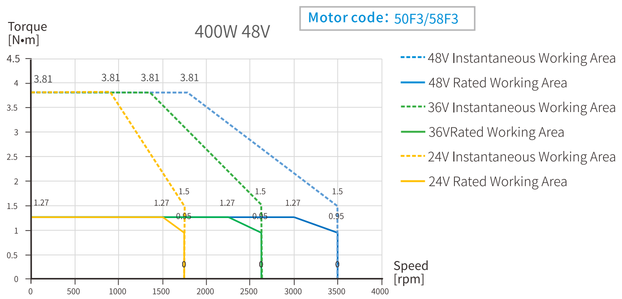

15
10
5
14
9
4
13
8
3
12
7
2
11
6
1
Direction B view
(front)
4
485+
1
2
5
485-
3
4
7
SOCOM
5
8
SICOM
6
5
SI3
7
6
SI2
8
7
SI1
9
8
SO1
10
1
24VGND
11
2
24VGND
12
3
24V
13
4
24V
14

Torque-Speed Characteristic Curve

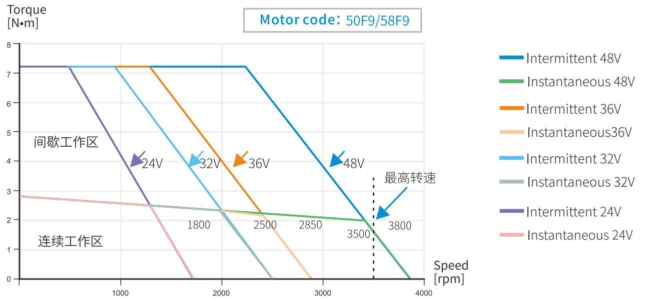
iMF5N-60CN30B(Z)2-502



iMF5N-60CN30B(Z)2-504



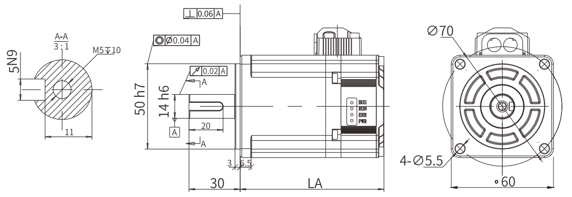
iMF5N-80CN30B(Z)2-507



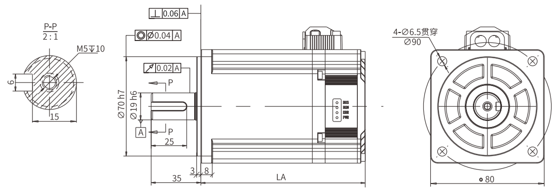
Installation Dimension Diagram

(unit: mm)

60 Flange



80 Flange



Model	LA±1	
	Standard	With Brake
iMF5N-60CN30B(Z)2-502	84.4	116.9
iMF5N-60CN30B(Z)2-504	101.7	134.2

Model	LA±1	
	Standard	With Brake
iMF5N-80CN30B(Z)2-507	84.4	116.9

*Note: The models that have been put into production can be found in the subsequent model list. Some models have not yet been put into production, please stay tuned.

PLC
HMI
Industrial informatization
Servo system
Frequency inverter
Stepping system
Vision system
IoT Industrial Controller

DF3 series low voltage servo driver

■ Appearance innovation

New appearance design, rich interfaces, compact size, lightweight body, meeting the equipment installation requirements of the AGV industry

■ Powerful functionality

Support multiple control modes, built-in 24V brake output, alarm synchronous braking and other functions to meet customer usage requirements

■ Diverse communication

Support multiple communication protocols such as CANopen and MODBUS to meet different communication function requirements of users

■ Easy debugging

Gain adjustment only requires three steps, greatly reducing equipment debugging time and greatly improving on-site debugging efficiency

MF series low voltage servo motor

■ The body is shorter

Optimize magnetic circuit structure, further shorten motor size, MF5H has a 30% reduction in body compared to MF3S

■ Overload capacity

The entire series comes standard with triple overload, making it faster and more stable to start and stop under overload conditions

■ Accuracy guarantee

The motor comes standard with a self-developed 17-bit magnetic encoder, greatly improving positioning accuracy

■ Excellent performance

The insulation level has reached the highest F level in the industry, fully ensuring the stability of on-site applications

■ Protective capability

The protection level reaches IP67, making it easy to cope with harsh environments such as oil, water vapor, and dust, ensuring the reliability of the motor

Naming rule and model list

Low voltage servo driver naming rule

DF 3 E - 04 10 Z - A

① ② ③ ④ ⑤ ⑥ ⑦

① Name

Symbol	Product name
DF	Low voltage servo driver

② Series number

Symbol	Specification
3	Series number

③ Control function

Symbol	Function
E	Pulse, RS485, CANopen
C	EtherCAT Under development

④ Driver power

Symbol	Rated output power
02	200W
04	400W
07	750W
15	1.5kW

⑤ Rated current

Symbol	Rated output current
06	6A
10	10A
20	20A
40	40A

⑥ Driver function

Symbol	Driver function
Z	Servo directly driving brake
Vacant	Cannot directly driving brake

⑦ Series

Symbol	Specification
A	Small size 400W driver

Low voltage servo driver model list

Series	Driver name	Power (W)	Maximum continuous output current (A)	Peak current(A)	Control mode
DF3 series DC24V~70V	DF3E-0206	200	6	18	RS485, PULSE, CANOPEN
	DF3E-0410-A	400	10	30	RS485, PULSE, CANOPEN
	DF3E-0410				RS485, PULSE, CANOPEN
	DF3E-0410Z				RS485, PULSE, CANOPEN
	DF3E-0720	750	20	60	RS485, PULSE, CANOPEN
	DF3E-0720Z				RS485, PULSE, CANOPEN
	DF3E-1540	1500	40	120	RS485, PULSE, CANOPEN

Low voltage servo cable naming rule

CP - SP - M - Length

① ② ③ ④

① Cable type

Symbol	Specification
CP	Normal encoder cable

② Plug type

Symbol	Specification
SP	9-pin Amp plug
SV	7-core waterproof small aviation plug
SC	10-core small aviation plug

③ Battery box type

Symbol	Battery box type
M	Without battery box
BM	With battery box

④ Cable length

Symbol	Length (m)
01	1
02	2
03	3
05	5

CM - P 15 A - Length

① ② ③ ④ ⑤

① Cable type

Symbol	Specification
CM	Normal power cable

② Plug type

Symbol	Specification
P	4-core Amp plug
V	6-core waterproof small aviation plug
XL	4-core medium-sized aviation plug

③ Cable diameter type

Symbol	Cable diameter (mm^2)
15	1.5
20	2
60	6

④ Termial type

Symbol	Type
Vacant	U-shaped terminal
A	Pin terminal

⑤ Cable length

Symbol	Length (m)
01	1
02	2
03	3
05	5

Naming rule and model list

Low voltage servo adaptation table

Series	Power (W)	Servo motor	Suitable driver	Encoder cable	Power cable	Brake cable
High inertia 48VDC	200	MF5H-60CM30B1-502	DF3E-0206	CP-SP-M- Length	CM-P15A-Length	
		MF5H-60CM30BZ1-502	DF3E-0206	CP-SP-M-Length	CM-P15A-Length	CB-P03-Length
High inertia 48VDC	400	MF5H-60CM30B1-504	DF3E-0410-A DF3E-0410 DF3E-0410-Z	CP-SP-BM-Length	CM-P15A-Length	-
		MF5H-60CM30BZ1-504	DF3E-0410-A DF3E-0410 DF3E-0410-Z	CP-SP-BM-Length	CM-P15A-Length	CB-P03-Length
High inertia 48VDC	750	MF5H-80CM30B2-507	DF3E-0720 DF3E-0720Z	CP-SV-BM-Length	CM-V20-Length	-
High inertia 48VDC	750	MF5H-80CM30BZ2-507	DF3E-0720 DF3E-0720Z	CP-SV-BM-Length	CMB-V20-Length	-
High inertia 48VDC	1200	MF5H-80CM30B2-512	DF3E-1540	CP-SV-BM-Length	CM-V40-Length	-
		MF5H-80CM30BZ2-512	DF3E-1540	CP-SV-BM-Length	CMB-V40-Length	-
Low inertia 48VDC	1500	MF3S-130CM30B2-515	DF3E-1540	CP-SC-B-Length	CM-XL60-Length	-
		MF3S-130CM30BZ2-515		CP-SC-B-Length	CMB-XL60-Length	-

*Note: The MF5H series motor adopts a single multi turn integrated encoder. If you need to use the multi turn function, please purchase a cable with a battery box.

Technical parameter table

Driver technical parameters

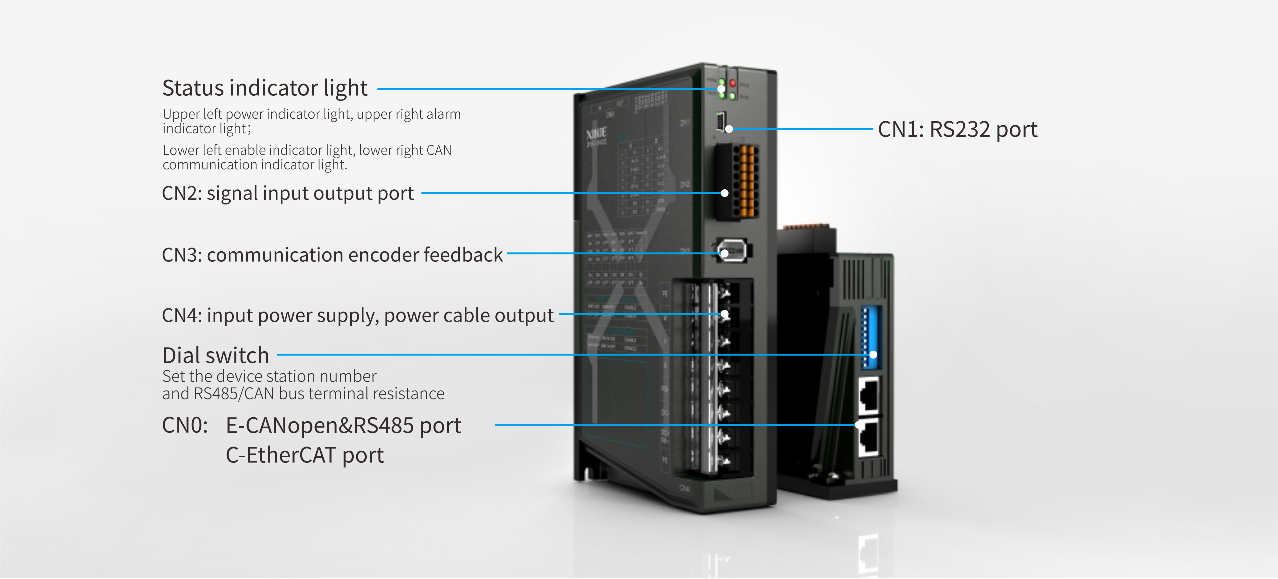
Item			DF3E-0206	DF3E-0410	DF3E-0720	DF3E-1540
Basic specification	Power		200W	400W	750W	1500W
	Input power supply		DC24V-70V			
	Rated output current	Maximum continuous output current (Arms)	6	10	20	40
		Peak current (PEAK)	18	30	60	120
	Encoder feedback		17-bit communication encoder			
	Communication mode		RS232，RS485，CANopen			
	Using environment	Ambient temperature	Operation:-10°C~40°C (no condensation)/Storage:-20°C ~60°C (no condensation)			
		Ambient humidity	Operation/storage: 20%~90% RH (no condensation)			
		Vibration/impact resistance	$4.9m/s^2$ / $19.6m/s^2$			
		Installation site	A place without dust, dry, vibration, or corrosive substances			
		Installation method	Vertical or horizontal installation			
	Energy consumption braking		External brake resistor can be connected			
	Protection function		Overvoltage, undervoltage, overheating, overcurrent, overload, overspeed, excessive position deviation, output short circuit, encoder abnormality, regeneration abnormality protection, overtravel protection, oscillation protection, operation disconnection protection, etc			
	Load variation rate		At 0~100% load: below ±0.1% (at rated speed)			
	Voltage variation rate		Rated voltage ±10%: 0.01% (at rated speed)			
	Temperature change rate		20±25°C: below ±0.1% (at rated speed)			
I/O signal	Digital input		4 channels digital input (brake models have 3 channels digital input)			
			Servo enable, alarm clear, prohibit forward rotation, prohibit reverse rotation, torque limit selection, internal speed selection, gear ratio switching, mode switching, pulse input prohibition, position deviation clearing, internal position step change signal			
	Digital output		3 channels digital output			
			Positioning completed, servo ready, alarm output, speed reached, rotation detection, torque limit output, same speed detection, brake release output			
	Pulse control		Support pulse+direction, AB phase, CW/CCW			

Technical parameter table

Motor technical parameters

Voltage level		DC48V			
Motor model MF		3S-130	5H-60	5H-60	5H-80
		130CM30B(Z)2	CM30B(Z)1	CM30B(Z)1	CM30B(Z)2
		515	502	504	507
Rated power (W)		1500	200	400	750
Rated current (A)		31.5	6	11	20
Rated speed (PRM)		3000	3000	3000	3000
Maximum speed (PRM)		3500	3500	3500	3500
Rated torque (N · M)		4.8	0.64	1.27	2.39
Maximum torque (N · M)		14.4	1.92	3.81	7.17
Rotor inertia (10 ^ -7KGM)		15018(15275)	320(332)	556(562)	1437(1500)
Axial force of bearing (N)		300	74	74	147
Radial force of bearing (N)		600	245	245	392
Inertia type		Low inertia	High inertia	High inertia	High inertia
Pole pairs		5	5	5	5
Encoder bit		17	17	17	17
Encoder type		Magnetic	Magnetic	Magnetic	Magnetic
Cooling method		Natural cooling			
Motor insulation grade		CLASSF(155°C)			
Protection level		IP66	IP67		IP65
Using environment	Ambient temperature	-10°C~+40°C (not frozen)			
	Ambient humidity	20%~90% RH (non condensing)			

Terminal definition


Status indicator light

Upper left power indicator light, upper right alarm indicator light;

Lower left enable indicator light, lower right CAN communication indicator light.

CN2: signal input output port

CN3: communication encoder feedback

CN4: input power supply, power cable output

Dial switch

Set the device station number and RS485/CAN bus terminal resistance

CN0: E-CANopen&RS485 port
C-EtherCAT port

CN1: RS232 port

CN0 port (E type port)

Pin	Definition
1	CAN_H
2	CAN_L
3	CGND
4	485+
5	485-
6	GND
Others	Reserved

CN1 port

Pin	Definition	Explanation
1	TXD	RS232 send
2	RXD	RS232 receive
3	GND	RS232 signal ground

CN2 port (taking DF3E-0410 as an example)

Pin	Definition
1	P-
2	P+5V
3	P+24V
4	D-
5	D+5V
6	D+24V
7	SI1
8	SI2
9	SI3
10	SI4/+24VS
11	+24V
12	SO1
13	SO2
14	SO3
15	COM
16	-/GNDS

*Note:The terminal function of CN2 is divided into two types. One is the non brake type, with terminal 10 serving as SI4 and terminal 16 as an empty terminal. Another type is the brake type, where the 10th terminal has a +24VS function and the 16th terminal is GNDS, which can be used for brake control.

CN4 port (main circuit terminals)

Pin	Definition
1	PE
2	W
3	V
4	U
5	RB-
6	DC-
7	DC+/RB+
8	PE

*Note: ① RB+ and RB- connected to external resistors
② Taking DF3E-0410 as an example.

CN3 port (communication encoder feedback)

Pin	Definition
1	5V
2	GND
3	/
4	/
5	485+
6	485-

Adjust the communication station number of the low-voltage servo by using the DIP switches SW1-SW6 (Excluding DF3E-0410-A, DF3E-0206)

Station number	SW1	SW2	SW3	SW4	SW5	SW6
1	ON	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF
...	...	...	...	...	...	...
63	ON	ON	ON	ON	ON	ON
64	OFF	OFF	OFF	OFF	OFF	OFF

Adjust the communication station number of the low-voltage servo by using the DIP switches SW1-SW4 (Excluding DF3E-0410-A, DF3E-0206)

Station number	SW1	SW2	SW3	SW4
1	ON	OFF	OFF	OFF
2	OFF	ON	OFF	OFF
3	ON	ON	OFF	OFF
...	...	...	...	...
15	ON	ON	ON	ON
16	OFF	OFF	OFF	OFF

SW7 and SW8 control whether the internal terminal resistance of RS485 is turned on

RS485 internal terminal resistance	
SW7=ON SW8=ON	Turn ON
SW7=OFF SW8=OFF	Turn OFF

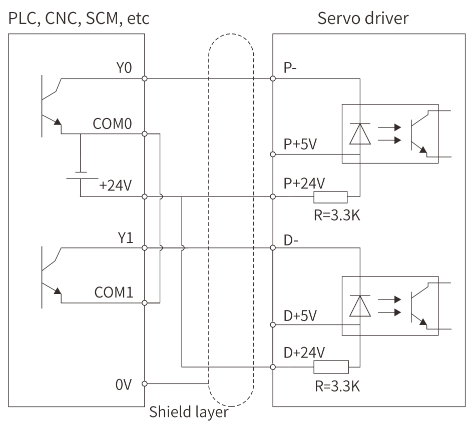
SW9 and SW10 control whether the internal terminal resistance of CAN is turned on

CAN internal terminal resistance	
SW9=ON SW10=ON	Turn ON
SW9=OFF SW10=OFF	Turn OFF

Typical wiring diagram

The interface circuit for open collector/differential signal pulse input is shown in the wiring diagram below:

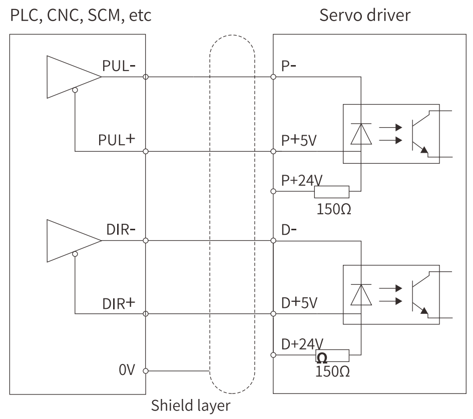
Open collector type (24V)


PLC, CNC, SCM, etc
Servo driver
Y0
COM0
+24V
Y1
COM1
0V
P-
P+5V
P+24V
R=3.3K
D-
D+5V
D+24V
R=3.3K
Shield layer

When the higher-level device adopts open collector output, please note to suspend P+5V and D+5V when using this connection method.

*Note: ① The power supply voltage range for P-/P+24V and D-/D+24V is 18V~28V. If it is below 18V, there may be pulse and direction abnormalities.
② To resist interference, please make sure to use twisted pair shielded wires.

Differential type (5V)

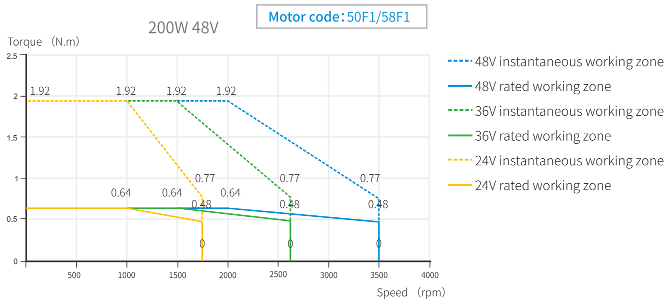

PLC, CNC, SCM, etc
Servo driver
PUL-
PUL+
DIR-
DIR+
0V
P-
P+5V
P+24V
150Ω
D-
D+5V
D+24V
150Ω
Shield layer

When the higher-level device uses 5V differential signal output, use the diagram connection method. Please note to suspend P+24V and D+24V.

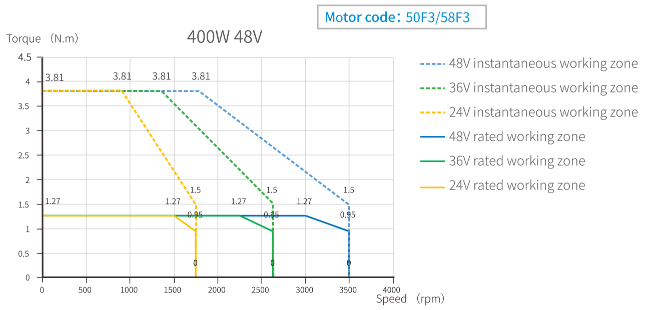
*Note: ① The power supply voltage range for P-/P+5V and D-/D+5V is 3.3V~5V. If it is lower than 3.3V, there may be pulse and direction abnormalities.
② To resist interference, please make sure to use twisted pair shielded wires.
③ The servo pulse input port is conducting at 10mA.

Torque frequency characteristic curve

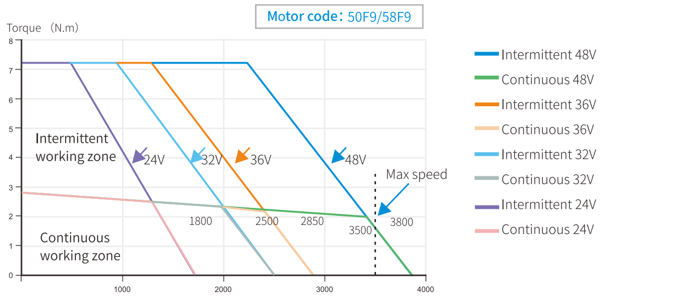
MF5H-60CM30B1-502
MF5H-60CM30BZ1-502



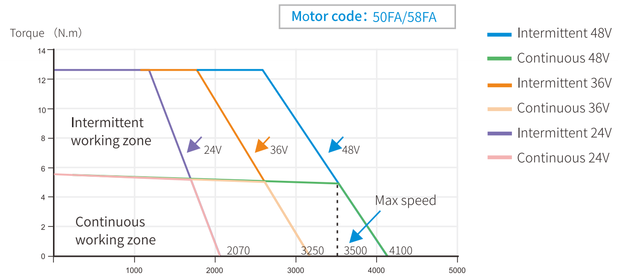
MF5H-60CM30B1-504
MF5H-60CM30BZ1-504



MF5H--80CM30B2-507
MF5H--80CM30BZ2-507



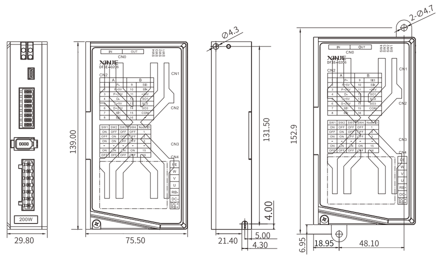
MF3S-130CM30B2-515
MF3S-130CM30BZ2-515



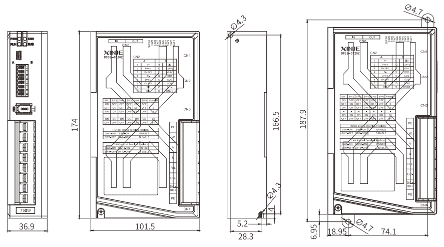
Installation dimension (unit: mm)

Low voltage servo driver

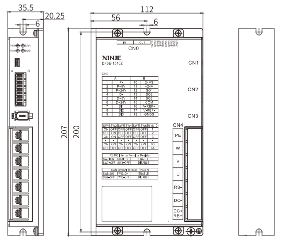
DF3E-0206/ DF3E-0410-A



DF3E-0410(Z)/ DF3E-0720(Z)

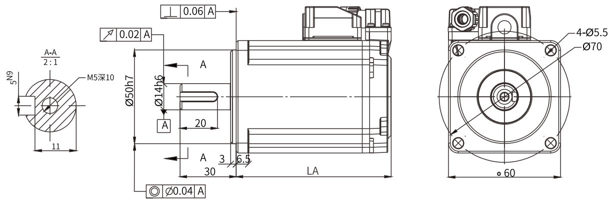


DF3E-1540(Z)



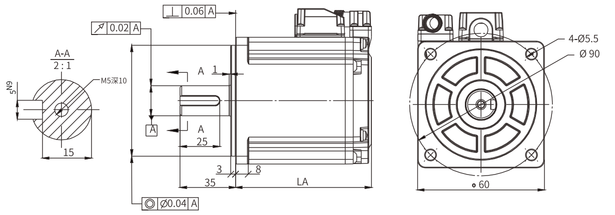
Low voltage servo motor

60 series motor


A-A 2:1
M5深10
Ø50h7
Ø14h6
20
30
LA
4-Ø5.5
Ø70
60
Ø0.04 A
0.02 A
0.06 A

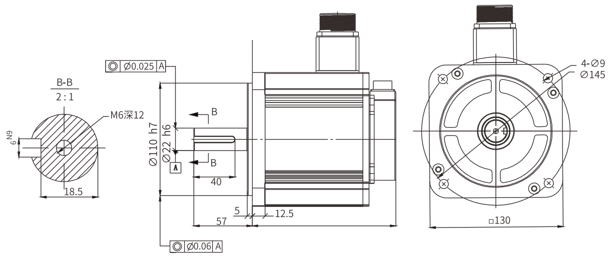
Motor type	Motor model	LA	Inertia type	Series
Non brake type	MF5H-60CM30B1-502	66.9	High inertia	MF5H Series
Brake type	MF5H-60CM30BZ1-502	93.7		
Non brake type	MF5H-60CM30B1-504	82.9		
Brake type	MF5H-60CM30BZ1-504	109.65		

80 series motor


A-A 2:1
M5深10
15
25
35
LA
4-Ø5.5
Ø90
60
Ø0.04 A
0.02 A
0.06 A

Motor type	Motor model	LA	Inertia type	Series
Non brake type	MF5H-80CM30B2-507	85.7	High inertia	MF5H Series
Brake type	MF5H-80CM30BZ2-507	117.6		

130 series motor


B-B 2:1
M6深12
18.5
40
57
5
12.5
4-Ø9
Ø145
130
Ø0.025 A
Ø0.06 A

Motor type	Motor model	LA	Inertia type	Series
Non brake type	MF3S-130CM30B2-515	140	Low inertia	MF3S Series
Brake type	MF3S-130CM30BZ2-515	168		

05

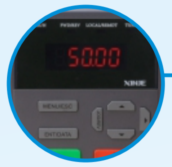
Variable Frequency Drive

VH6 | VH1 | VHL | VH5

VH6 fully functional closed-loop vector inverter

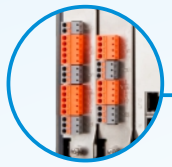
VH6 series is a fully functional closed-loop vector converter developed by Xinje company. The product adopts vector control technology, which realizes the open-loop and closed-loop vector control of asynchronous and synchronous motors, and also strengthens the reliability and environmental adaptability of the product. In addition, the product provides a wealth of expansion cards for customers to choose from to meet customers' diversified needs.

It is suitable for machine tools, air compressors, papermaking, oil fields, municipal engineering, plastic machinery industry, metal processing, textile industry, printing and packaging, ceramic machinery, wood processing, cable processing, sewage treatment, and other fields.



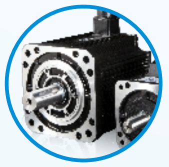
Panel

- Chinese/English LCD display keyboard and LED keyboard are rich in information and convenient for debugging
- It has multi-functional combination keys, which can realize remote and local switching,emergency shutdown, etc
- The LCD panel contains a parameter storage chip, which is convenient for users to store,upload and download parameters. It is especially suitable for batch supporting customers, which can greatly save debugging time and improve installation efficiency
- Support up to 5m extension cable



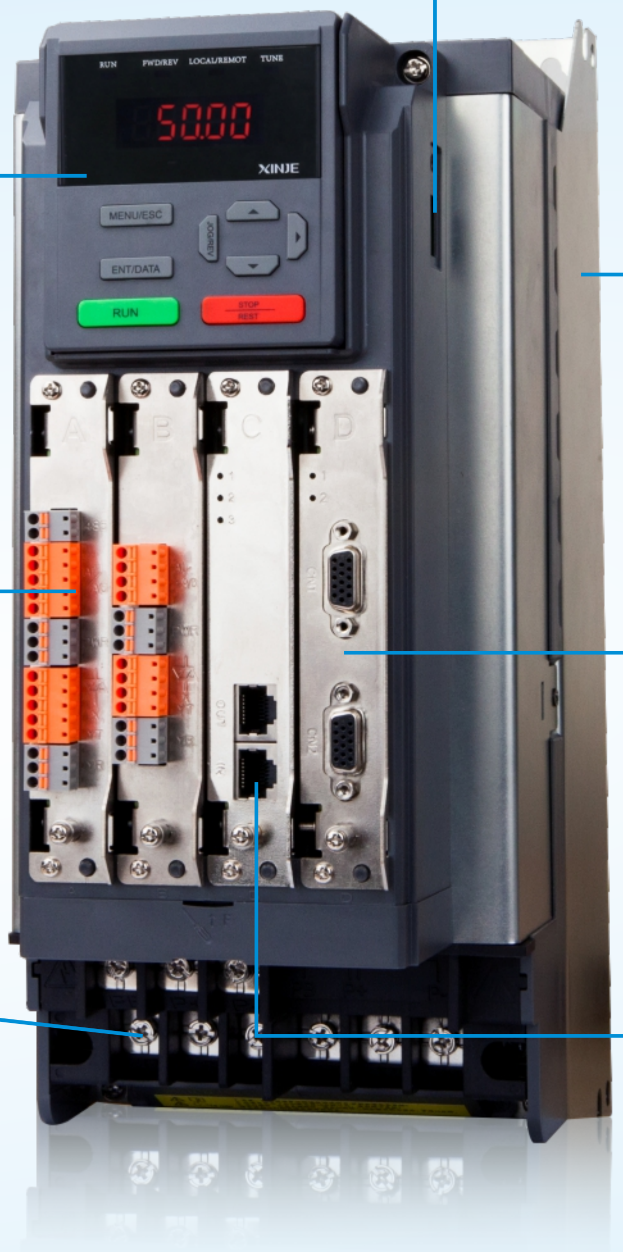
I/O Expansion Card

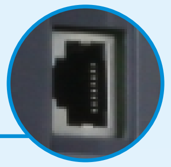
- I/O terminals with different functions are designed in different colors, which greatly reduces the probability of user wiring errors
- The terminals are pluggable for easy maintenance and replacement
- Quick wiring of spring terminals, no need to worry about screw slip



Motor adaptability

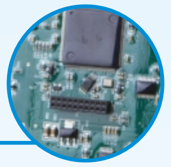
- Support asynchronous motor, synchronous motor
- Support three control modes VF / open loop vector / closed loop vector





Multifunctional Network Port

- Connect the LCD panel to realize dialogue interaction
- Connect the debugging software, observe the motion waveform and effectively analyze the problem
- The inverter software is easy to upgrade

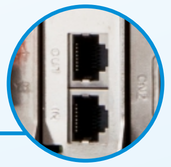


Appearance and protection

- The new narrow book body design saves installation space
- EMC and high protection design, stable operation of equipment
- The built-in circuit board has enhanced protection, which can effectively resist the harsh environment such as humidity, corrosion and dust

PG card feedback

- Support photoelectric encoder and rotary encoder, suitable for high-precision driving occasions
- PG card supports 0 to 255 arbitrary frequency division multiple output
- Support differential, collector and push-pull signal input



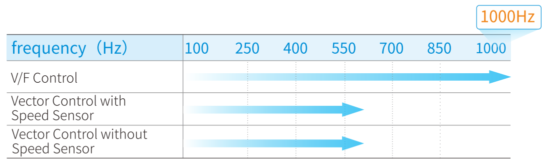
Networking function

- Optional communication card CANopen， EtherCAT,Profinet, thernet/IP networking with control products
- Modbus communication is equipped with 32 groups of customer free mapping addresses to realize continuous reading of parameters
- The two-channel network ports are in from the bottom and out from the top, with switch function, and the wiring is clean and concise

Outstanding Product Performance

High-speed Operation

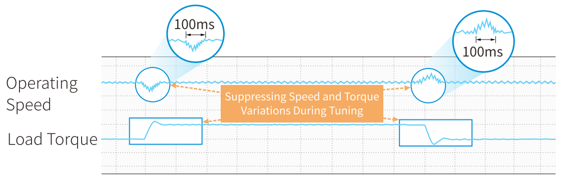
The maximum output frequency of the VH6 series has been increased to 1000Hz, suitable for applications requiring high-speed rotation and maximum control over speed and torque variations. High-frequency output is a primary focus of Xinje's long-term research.



*Note: Maximum output frequency is 1000Hz for asynchronous motors, 600Hz for synchronous motors.

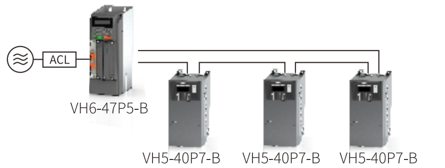
Enhanced Adaptability to Impact Loads

- Achieves the highest level of torque response to sudden, severe load changes.
- Using the motor's current feedback, the motor rotor's speed and position are used to regulate the motor's output current and torque, thereby minimizing changes in the motor's operating speed, which can suppress vibration.



Energy Saving and Environmental Protection

- The DC reactor not only improves the power factor to achieve energy-saving effects but also weakens the initial power-on impact and reduces harmonic interference.
- Using a common DC bus allows multiple inverters to be connected. During deceleration, the regenerative energy is shared and can be consumed by other inverters, thereby achieving energy savings.

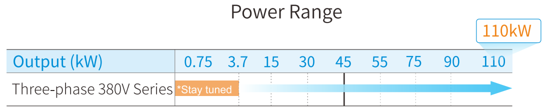


*Note: Models 18.5kW and above have built-in DC reactors.

Braking Unit Power Range Expanded

The standard configuration power range has been expanded, making the control cabinet structure more compact and cost-saving.

Power Range



High Speed Regulation Accuracy

Expanded speed control range helps stabilize speed fluctuations and improves the precision of mechanical actions.

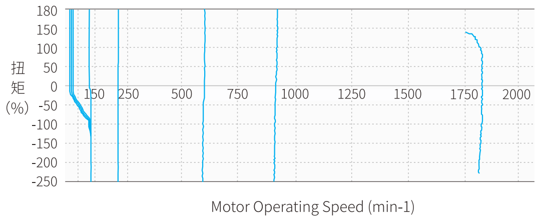
Speed Control Range (consistent with technical specifications)

	Control Method	Speed Ratio	Base Speed
Asynchronous Motor	V/F Control	1：50	90rpm~1500rpm
	Vector Control without Speed Sensor	1：100	9rpm~1500rpm
	Vector Control with Speed Sensor	1：2000	3rpm~1500rpm

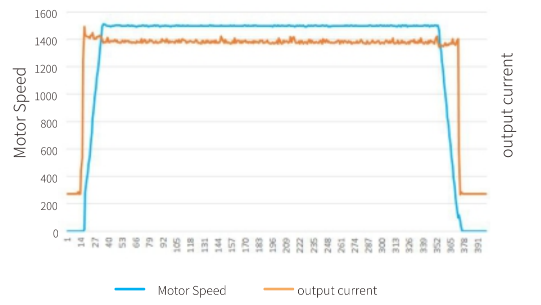
More Advanced Torque Vector Control

- The VH6 series is equipped with IGBT integrated modules, achieving up to 180% torque output when starting at 0.5Hz, while also supporting 150% heavy-duty output for 1 minute and 180% overload for 3 seconds every 300 seconds.
- Low frequency 0.5Hz — Starting torque 180%.

Torque Characteristic Example (Representative Model: 22kW)

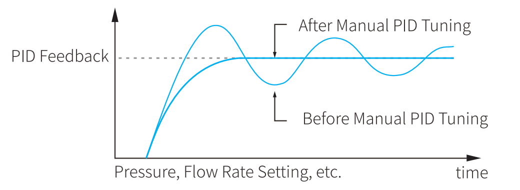


Superior Overload Capability



PID Function

Optimization can be achieved through manual adjustment of proportional and integral gains, making the PID set target value consistent with the PID feedback, shortening system startup time, etc.

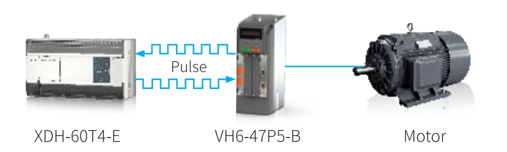


Positioning Function (Internal Testing Phase)

High-precision positioning control through pulse input and encoder feedback of pulse commands helps improve the accuracy, production efficiency, energy utilization, and safety of mechanical equipment.

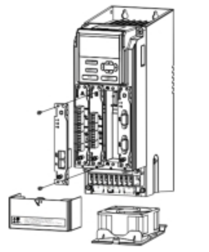
Main Modes

- Pulse Synchronization
- Spindle I/O / Precise Stop



Multiple Communication Methods

- Standard built-in isolated 485 communication interface supports Modbus-RTU communication protocol.ncy, energy utilization, and safety of mechanical equipment.
- Supports expansion with various mainstream bus communications.

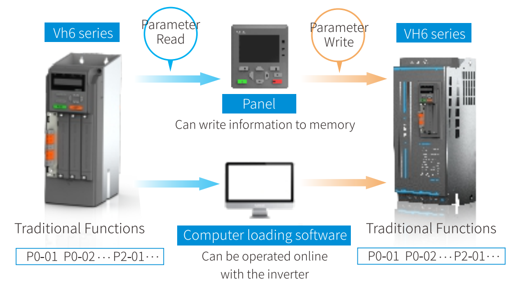


Optional Communication Card Types

1. CANopen：VH6-CN100
2. EtherCAT：VH6-CC100
3. Profinet：VH6-CP100
4. Ethernet/IP：VH6-CE100
5. Modbus-TCP *Coming soon

Easy Parameter Transfer

Features a compatibility mode, allowing parameters from old models to be directly written into new models.



Optional External Panel

In addition to the standard 7-segment LED 5-digit display operator panel, optional operator panels with LCD screens and knob speed adjustment are also available.

LCD Panel VH6-PC100

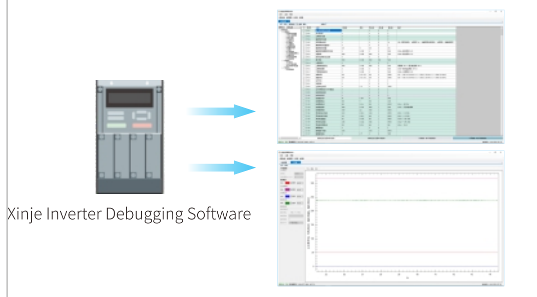
1. **Text Display**
   Equipped with an LCD screen of excellent clarity. Supports Chinese and English display and switching. Monitors inverter operating status.
2. **USB Interface**
   Powers the LCD panel using a 5V power supply, e.g., a power bank. The inverter does not need to be powered on to perform operations such as adjusting parameters and downloading parameter sets.
3. **Built-in MCU Storage Chip**
   One-click download and upload of backup parameters, supporting up to 10 sets of parameter backups. Allows parameter adjustments guided by Chinese prompts without the manual.

Knob Panel VH6-PE200

1. **Indicator Light Display**
   Newly added current, voltage, and frequency display indicator lights for comprehensive monitoring of inverter operating status.
2. **Easy Operation**
   The panel uses a potentiometer knob for speed adjustment, facilitating inverter debugging.

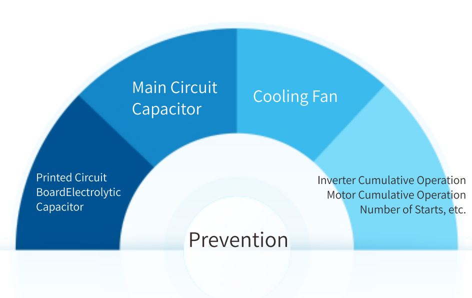
Convenient and Fast PC Debugging

- Using Xinje USB-to-serial converter and JC-EV-15 to connect the inverter to a PC, debugging through "Xinje Inverter Debugging Software" is more convenient,Improves debugging efficiency, and has file saving functionality.
- As a software accessory for the inverter, it enhances the product's overall capabilities.



Life Diagnosis and Maintenance Functions

As standard, all inverters have internal temperature monitoring and can detect ambient temperature. Furthermore, the machine's status can be easily confirmed through the operator panel and PC software, allowing for early detection of potential faults, effectively reducing production equipment maintenance time and downtime.


Main Circuit Capacitor
Cooling Fan
Printed Circuit BoardElectrolytic Capacitor
Inverter Cumulative Operation
Motor Cumulative Operation
Number of Starts, etc.
Prevention

Naming Rule

VH6 frequency inverter naming rule

VH 6 - 4 5P5 - B

① ② ③ ④ ⑤

① Product code

Sign	Name
VH	General frequency inverter

② Product series

Sign	Name
6	Fully functional closed-loop vector converter (asynchronous motor)

④ Power level

Sign	Power level (kW)
0P7	0.75
1P5	1.5
…	…
5P5	5.5
…	…
011	11
018	18.5
055	55
075	75
090	90
110	110

③ Input voltage level

Sign	Power supply voltage
4	380V

⑤ Brake unit

Sign	Brake unit
B	Built-in brake unit
Vacant	No

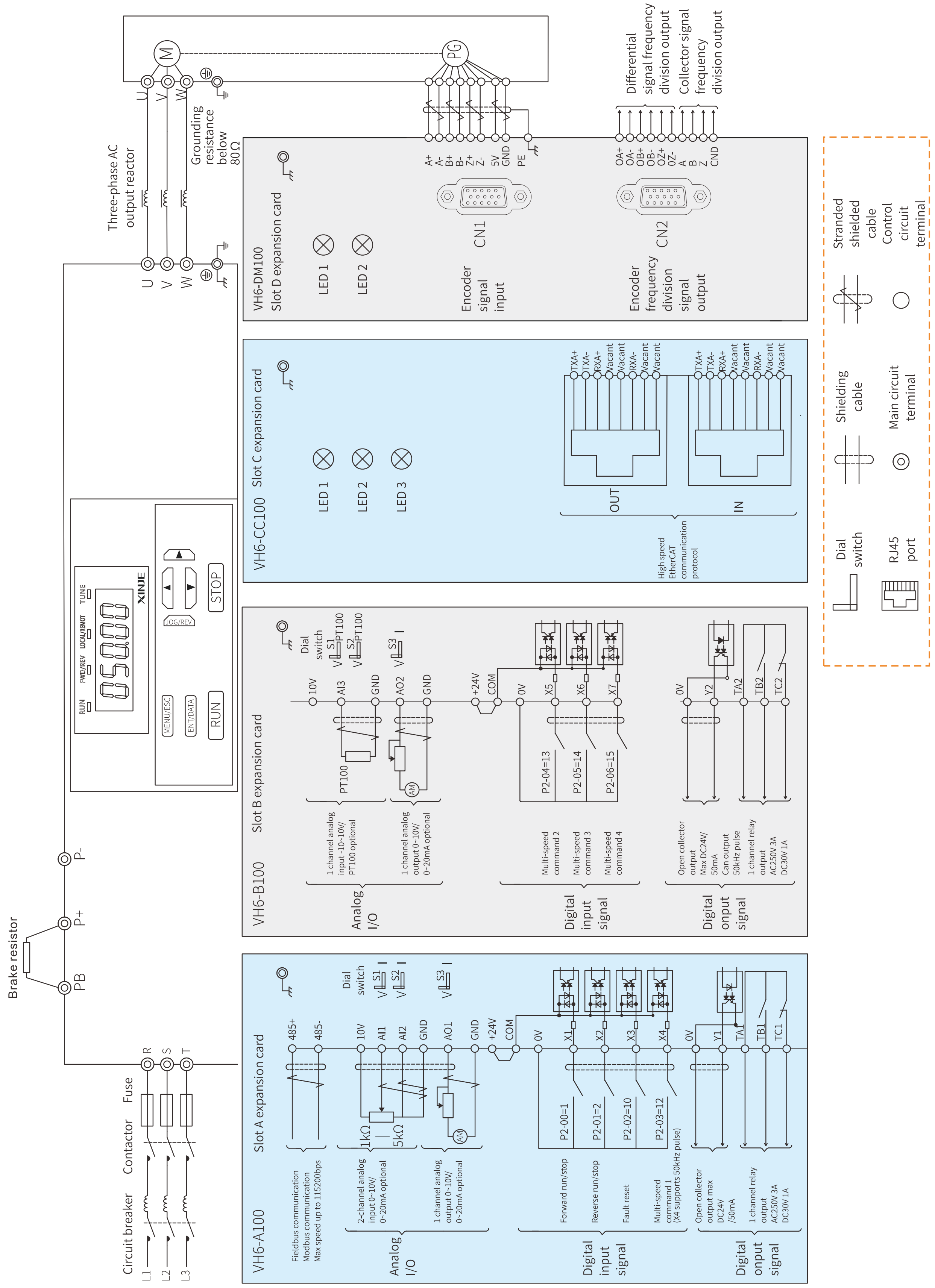
Technical Parameters

Model	Power supply capacity (KVA)	Input current (A)	Output current (A)	Adaptive motor (kW)
Three-phase 380V 50/60Hz				
VH6-43P7-B	5.9	11.0	9.0	3.7
VH6-45P5-B	8.9	14.6	13.0	5.5
VH6-47P5-B	11.0	20.5	17.0	7.5
VH6-4011-B	17.0	26.0	25.0	11.0
VH6-4015-B	21.0	35.0	32.0	15.0
VH6-4018-B	24.0	38.5	37.0	18.5
VH6-4022-B	30.0	46.5	45.0	22.0
VH6-4030-B	40.0	62.0	60.0	30.0
VH6-4037-B	63.0	69.0	75.0	37.0
VH6-4045-B	81.0	89.0	90.0	45.0
VH6-4055-B	97.0	106.0	110.0	55.0
VH6-4075-B	127.0	139.0	152.0	75.0
VH6-4090-B	150.0	164.0	176.0	90.0
VH6-4110-B	179.0	196.0	210.0	110.0
VH6-4132	220.0	240.0	253.0	132.0
VH6-4160	263.0	287.0	304.0	160.0
VH6-4185	293.0	343.0	360.0	185.0
VH6-4200	334.0	365.0	377.0	200.0
VH6-4220	375.0	410.0	426.0	220.0
VH6-4250	404.0	441.0	465.0	250.0
VH6-4280	453.0	495.0	520.0	280.0
VH6-4315	517.0	565.0	585.0	315.0
VH6-4355	565.0	617.0	650.0	355.0
VH6-4400	629.0	687.0	725.0	400.0
VH6-4450	716.0	782.0	820.0	450.0

Technical Specifications

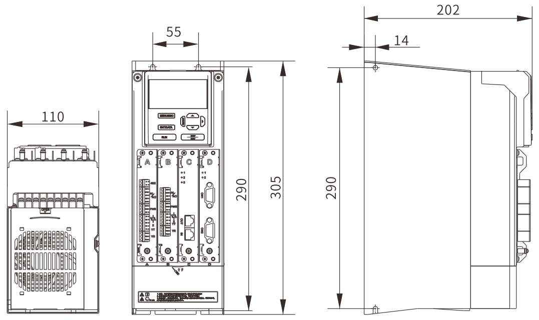
Item name		VH6 high performance closed loop vector frequency inverter specification		
Power range		3.7kW~450kW		
Input	Rated voltage, frequency	Three-phase 380V: three-phase 380V, 50/60Hz		
	Allowable voltage fluctuation range	Three-phase 380V: 320~440V		
Output	Voltage	0~input voltage		
	Frequency	0~1000Hz		
Control performance	Control motor type	Asynchronous motor, permanent magnet synchronous motor, variable frequency motor		
	Control mode	Vector control with speed sensor (FVC)	Vector control without speed sensor (SVC)	V/F control (VF)
	Speed precision	±0.2%	±0.5%	±1%
	Speed fluctuation	±0.2%	±0.3%	±0.5%
	Speed regulation range	1:2000	1:100	1:50
	Startup torque	0Hz:180%	0.5Hz:150%	1.0Hz:150%
	Torque accuracy	±5% rated torque	±10% rated torque	/
	Torque response	≤10ms	≤20ms	/
	Overload ability	150% rated current 60s		
	Frequency precision	Low frequency operation mode: 0.01Hz, high frequency operation mode: 0.1Hz		
	Frequency resolution	Low frequency operation mode: digital setting-- 0.01Hz, analog setting - - max frequency ×0.1% High frequency operation mode: digital setting - - 0.1Hz, analog setting - - max frequency ×0.1%		
Control terminal input	Digital input channel	Up to 7-channel digital input X, card A has 4-channel (X1~X4), resolution is less than 2ms, card B has 3-channel (X5~X7), X4 can support max 50kHz high speed pulse input		
	Analog input channel	Up to 3-channel analog input AI, card A has 2-channel (AI1, AI2), resolution is less than 20mV, card B has 1 channel (AI3). AI1, AI2 support 0~10V or 0~20mA input , AI3 support -10~10V input, can support PT100 input		
Control terminal output	Digital output channel	Up to 4-channel digital output Y, card A has 1 channel (Y1) + 1 channel (TA1TB1TC1), card B has 1 channel (Y2) + 1 channel (TA2TB2TC2).Y2 can support max 50kHz high speed pulse output		
	Analog analog channel	Up to 2-channel analog output AO, card A has 1 channel (AO1), card B has 1 channel (AO2) AO1, AO2 support the output 0~10V or 0~20mA		
Product performance	Start command given mode	Communication given (Modbus、CANopen、EtherCAT、Profinet、Ethernet/IP), operate panel given, terminal given		
	Frequency given mode	Communication given (Modbus, CANopen, EtherCAT), operate panel given, terminal given, analog AI given, multi-speed given, simple PLC given, PID main and auxiliary given		
	Typical function	Frequency main and auxiliary operation, no reverse rotation, torque increase, nine VF curve settings, five section AI curve settings, acceleration and deceleration curve settings, terminal delay and filtering, terminal multi-functional input and output, DC braking, dynamic braking, jog operation, 16-section speed, built-in two-channel PID, speed tracking restart, carrier modulation, fault recording, fault self reset, pre-excitation start, 30 groups of user-defined parameters		
	Important function	Carrier modulation, torque control, motor self-tuning, current limiting control, overvoltage control, undervoltage control, speed tracking, droop control, oscillation suppression, overvoltage overcurrent stall control, automatic voltage regulation (AVR), automatic energy-saving operation, etc		
	Protection function	Power on motor short circuit detection, input and output phase loss protection, overcurrent protection, overvoltage protection, undervoltage protection, overheat protection, overload protection, underload protection, overcurrent overvoltage stall protection, relay pull in protection, terminal protection, instantaneous power failure nonstop, etc		
	Dynamic braking	380V level driver: brake unit braking voltage: 650~750V. 3.7kW~110kW models have built-in brake unit, please connect brake resistor between P+ and PB		
	DC reactor	18.5kw and above models are built-in DC reactors		
	Common DC bus	Share the regenerative energy when the frequency converter decelerates, improve the braking capacity, achieve the purpose of energy saving and save the additional space and cost required by the resistance		
Features function	Multiple bus support	Standard Modbus, can expand EtherCAT、CANopen、Profinet、Ethernet/IP		
	Multiple encoder support	Incremental Encoder/Tamagawa Serial Encoder		
	LCD panel	LCD display, parameter setting, status monitoring, parameter copy, fault analysis and location, program download, mass storage of parameters		
	Instant stop nonstop	In case of instantaneous power failure, the load feedback energy compensates for the reduction of voltage to maintain the continuous operation of the frequency converter in a short time		
	Timing control	Timing control function: time range 0.1min~6500min		
	Multi-motor switching	Two groups of motor parameters can realize the switching control of two motors		
	Motor overheating protection	AI3 supports PT100 sensor signal input		
	Flexible and diversified terminal functions	There are 51 kinds of multifunctional terminals X, 41 kinds of terminals Y, and 19 kinds of logic function options AO, which meet the requirements of general frequency converter control functions		
	Communication customization parameters	It is convenient for users to read and write the parameters of the frequency converter continuously		
	Software	Rich background monitoring functions to facilitate on-site data acquisition and debugging		
Display and keyboard	Keyboard display	It can display the set frequency, output frequency, output voltage, output current, input and output status and other parameters		
	Key lock	Realize partial or full locking of keys to prevent false triggering		
	Parameter copy	Standard LED display digital potentiometer keyboard, optional LCD English display keyboard (parameter upload/download)		
	Optional accessories	LCD keyboard, communication card (EtherCAT, CANopen,Profinet,Ethernet/IP), encoder PG card (incremental pulse, resolver)		
Environment	Place of use	Indoor, free from direct sunlight, no dust, corrosive gas, combustible gas, oil mist, water vapor, drip or salt		
	Altitude	Less than 1000m (When it is higher than 1000m, the output current needs to be reduced by about 10% of the rated current for each increase of 1000m)		
	Ambient temperature	-10°C~+40°C(please derate to use or enhance the heat dissipation when ambient temperature is 40°C~50°C)		
	Ambient humidity	Less than 95%RH, no condensation of water droplets		
	Vibration	Less than 5.9m/s2 (0.6g)		
	Storage temperature	-40°C~+70°C		
	Protection level	IP20		
	Cooling mode	Forced air cooling		
Installation mode		Wall mounted and embedded		

Terminal Wiring Diagram

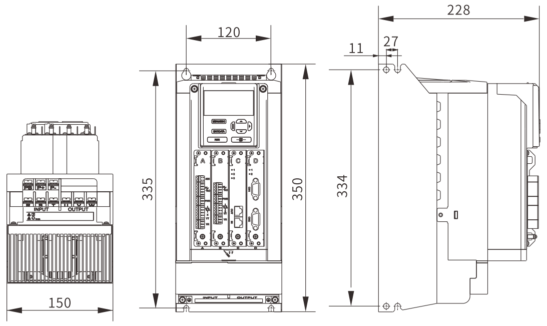

M
PG
U V W
Grounding resistance below 80Ω
Three-phase AC output reactor
A+ A- B+ B- Z+ Z- 5V GND PE
OA+ OA- OB+ OB- OZ+ OZ- A B Z GND
Differential signal frequency division output
Collector signal frequency division output
VH6-DM100 Slot D expansion card
LED 1
LED 2
CN1
Encoder signal input
CN2
Encoder frequency division signal output
VH6-CC100 Slot C expansion card
LED 1
LED 2
LED 3
TXA+ TXA- RXA+ Vacant RXA- Vacant Vacant
OUT
IN
High speed EtherCAT communication protocol
VH6-B100 Slot B expansion card
Dial switch
S1 PT100
S2 PT100
S3
10V AI3 GND AO2 GND +24V COM 0V X5 X6 X7 0V Y2 TA2 TB2 TC2
PT100
AM
P2-04=13
P2-05=14
P2-06=15
1 channel analog input -10~10V/ PT100 optional
1 channel analog output 0~10V/ 0~20mA optional
Multi-speed command 2
Multi-speed command 3
Multi-speed command 4
Open collector output Max DC24V/ 50mA Can output 50kHz pulse
1 channel relay output AC250V 3A DC30V 1A
Analog I/O
Digital input signal
Digital onput signal
VH6-A100 Slot A expansion card
Dial switch
S1 S2 S3
485+ 485- 10V AI1 AI2 GND AO1 GND +24V COM 0V X1 X2 X3 X4 0V Y1 TA1 TB1 TC1
1kΩ
5kΩ
AM
P2-00=1
P2-01=2
P2-02=10
P2-03=12
Fieldbus communication Modbus communication Max speed up to 115200bps
2-channel analog input 0~10V/ 0~20mA optional
1 channel analog output 0~10V/ 0~20mA optional
Forward run/stop
Reverse run/stop
Fault reset
Multi-speed command 1 (X4 supports 50kHz pulse)
Open collector output max DC24V /50mA
1 channel relay output AC250V 3A DC30V 1A
Analog I/O
Digital input signal
Digital onput signal
RUN FWD/REV LOCAL/REMOT TUNE
XINJE
MENU/ESC
ENT/DATA
RUN
JOG/REV
STOP
P-
P+
PB
Brake resistor
R S T
Fuse
Contactor
Circuit breaker
L1 L2 L3
Stranded shielded cable
Control circuit terminal
Shielding cable
Main circuit terminal
Dial switch
RJ45 port

Installation Dimension (Unit: mm)

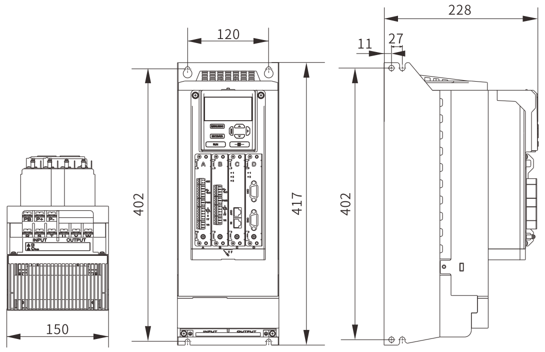
X1 model: 3.7~7.5kW


110
55
290
305
202
14
290

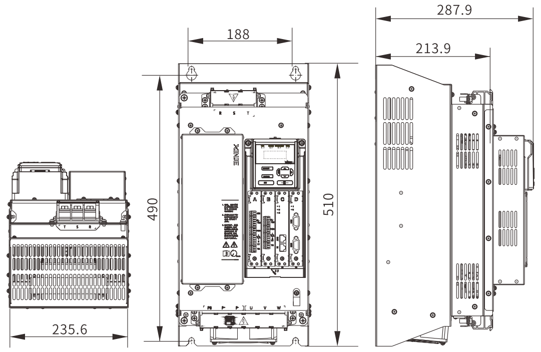
X2 model: 11-15kW


120
335
350
150
228
11
27
334

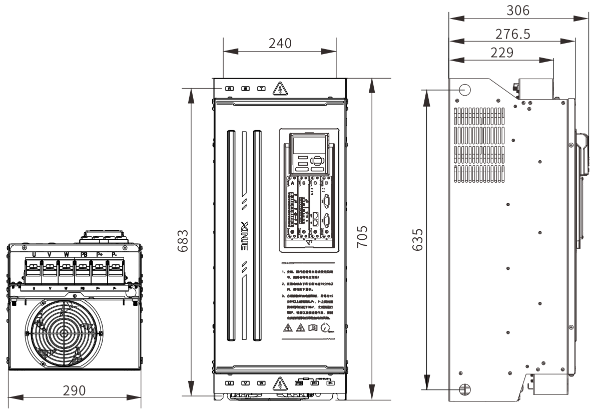
X3 model: 18-30kW


120
402
417
150
228
11
27
402

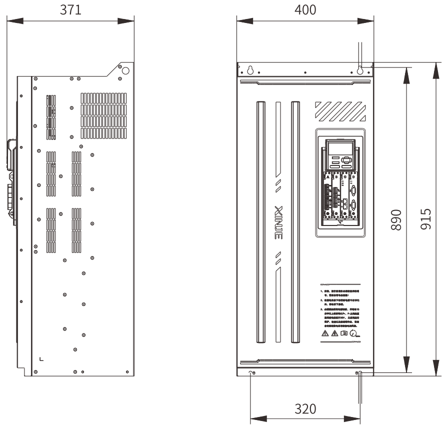
X4 model: 37~55kW


188
490
510
235.6
287.9
213.9

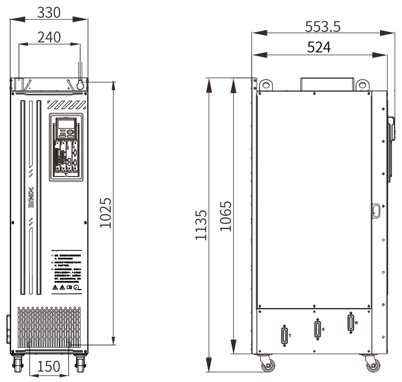
X5 model: 75-110kW


240
683
705
290
306
276.5
229
635

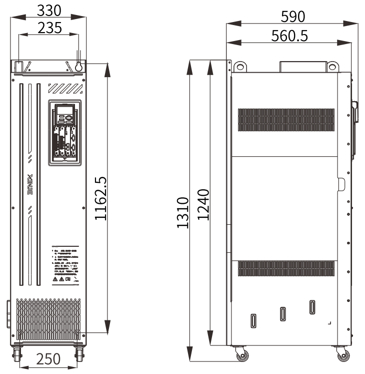
X6 model：132~160kW


371
400
890
915
320

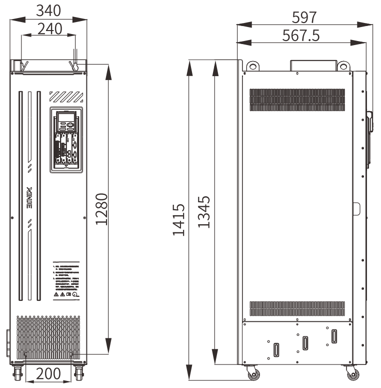
X7 model：185~220kW


330
240
553.5
524
1025
1135
1065
150

X8 model：250~280kW


330
235
590
560.5
1162.5
1310
1240
250

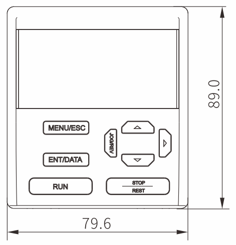
X9 model：315~450kW


340
240
597
567.5
1280
1415
1345
200

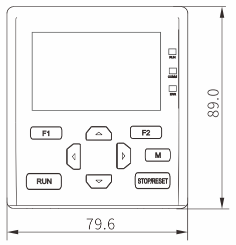
Voltage level	Driver model	Overall installation dimension (width×height×depth)										Mounting screw specification	Weight (Kg)
		Body code	W	H	D	W1	W2	H1	H2	D1	D2		
380V	VH6-43P7-B	X1	110	305	202	55	/	290	290	14	/	M5	4
	VH6-45P5-B												
	VH6-47P5-B												
	VH6-4011-B	X2	150	350	228	120	/	335	334	27	11	M6	5.7
	VH6-4015-B												
	VH6-4018-B	X3	150	417	228	120	/	402	402	27	11	M6	10
	VH6-4022-B												
	VH6-4030-B												
	VH6-4037-B	X4	235.6	510	287.9	188	/	490	/	213.9	/	M8	25
	VH6-4045-B												
	VH6-4055-B												
	VH6-4075-B	X5	290	705	306	240	/	683	635	276.5	229	M8	45
	VH6-4090-B												
	VH6-4110-B												
	VH6-4132	X6	400	915	371	320	/	890	/	/	/	M8	80
	VH6-4160												
	VH6-4185	X7	300	1135	553.5	240	150	1065	1025	524	/	M12	100
	VH6-4200												
	VH6-4220												
	VH6-4250	X8	330	1310	590	235	250	1240	1162.5	560.5	/	M12	120
	VH6-4280												
	VH6-4315	X9	340	1415	597	240	200	1345	1280	567.5	/	M12	155
	VH6-4355												
	VH6-4400												
	VH6-4450												

Panel size

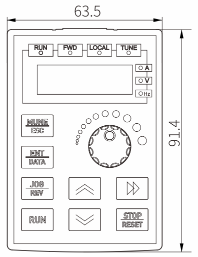
VH6-PE100


MENU/ESC
ENT/DATA
RUN
STOP RESET
89.0
79.6

VH6-PC100

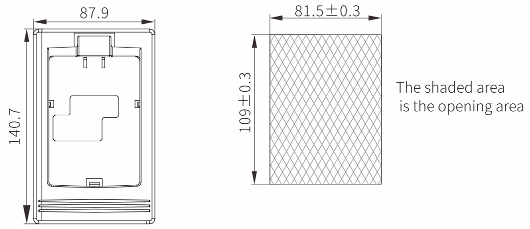

F1
F2
M
RUN
STOP/RESET
89.0
79.6

VH6-PE200

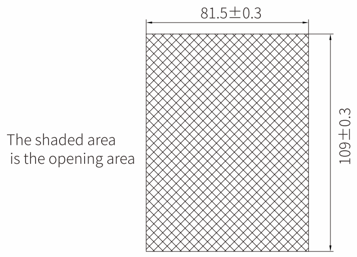

63.5
RUN
FWD
LOCAL
TUNE
MENU ESC
ENT DATA
JOG REV
RUN
STOP RESET
91.4

Panel mounting bracket drawing

VH6-PE200 Shipped as Standard


87.9
140.7
81.5±0.3
109±0.3
The shaded area
is the opening area

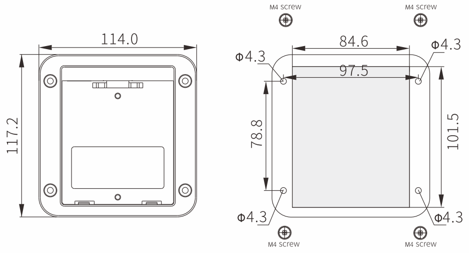
VH6-PE200 Optional Base


81.5±0.3
109±0.3
The shaded area
is the opening area

Panel mounting bracket instructions

Make holes on the outer surface of the required installation position according to the dimensions on the drawing, then remove the panel from the slot on the body and install it on the panel base. Then, install the panel into the hole and gently push it into place to complete the installation.

VH6-PE100/VH6-PC100 Optional Base


114.0
117.2
M4 screw
Φ4.3
84.6
97.5
78.8
101.5

Panel mounting bracket instructions

The gray area represents the hollowed out area, with a central hollowed out area of 84.6× 101.5 and a four corner hollowed out area with a diameter of 4.34 circle. M4 screws and nuts are placed to fix the bracket on the door panel.

Accessory Description

Standard I/O card
VH6-A100

1 channel RS485 communication + 2 channels AI +1 channel AO + 4 channels bipolar input + 1 channel YT + 1 channel YR

Expansion I/O card
VH6-B100

1 channel AI + 1 channel AO + 3 channels bipolar input + 1 channel YT + 1 channel YR

CANopen communication card
VH6-CN100

The expansion interface card specially designed for CANopen protocol is suitable for Xinje frequency converter. Xinje frequency converter can be connected to CANopen network and exist as a slave station through this card.

EtherCAT communication card
VH6-CC100

The expansion interface card specially designed for EtherCAT protocol is suitable for Xinje frequency converter. Xinje frequency converter can be connected to EtherCAT network and exist as a slave station through this card.

Profinet Communication Card
VH6-CP100

This is an expansion interface card specifically designed by Xinje for the Profinet protocol, tailored for Xinje inverters. Through this card, Xinje inverters can be connected to the industrial Ethernet communication standard led by Siemens, enabling efficient and reliable data communication between devices.

Ethernet/IP Communication Card
VH6-CE100

This is an expansion interface card specifically designed by Xinje for the Ethernet/IP protocol, tailored for Xinje inverters. Through this card, Xinje inverters can be connected to the Ethernet-based communication protocol, mainly used for communication between industrial automation devices. The specific implementation mechanism of the Ethernet/IP protocol is primarily based on the combination of CIP (Control and Information Protocol), TCP/IP, and Ethernet.

Simple incremental encoder PG card
VH6-DM200

It is used for receiving and detecting motor encoder signal by frequency converter. The frequency converter can control the motor speed and torque more accurately. The types of encoder signals that this PG card can receive are: differential type, NPN collector open circuit, push-pull type. However, this PG card does not support frequency division output function.

Multi-function Incremental Encoder PG Card
VH6-DM100

This is an upgraded version of VH6-DM200, supporting incremental encoder signals with signal types: differential, NPN open-collector output.Key Upgrade: Receives pulse input signals from the host PC (Pulse+Direction, AB Phase, CW/CCW pulse forms), enabling the inverter to perform position control, while the motor encoder signal can be output externally through the frequency division function.

Simple Tamagawa Protocol Communication-type Encoder PG Card
VH6-DC200

Can adapt to Tamagawa communication protocol absolute encoders, supporting 17-bit/21-bit/23-bit resolution. Does not support pulse input + frequency division output function.

LCD panel
VH6-PE100

The panel is LED display, which can set parameters, monitor the operation status of the frequency converter and operate the frequency converter.

Knob panel
VH6-PE200

The panel uses a knob to adjust the speed, which can set parameters, monitor the operation status and facilitate the speed control of the frequency converter.

LCD panel
VH6-PC100

The panel adopts LCD display, which can set parameters, upload and download parameters, monitor the operation status of the frequency converter, and facilitate the debugging of the frequency converter.

Upper computer connection cable
JC-EV-15

To connect the frequency inverter and PC, to connect the frequency inverter software and update the firmware.

Panel expansion cable
JC-RD-30

The extension cable of the operation panel is a standard network cable, which only provides 2 or 3 meters. Users can also make other lengths of network cables by themselves.

Mounting base
VH6-DPANEL

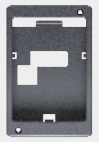
Base of VH6 frequency converter operation panel during extension installation.
Model: VH6-DPANEL

Expansion card protection cover
VH6-A100-PC

It can be used for protection of VH6 converter A/B expansion card.

Optional Mounting Base
VH6-PE200-DPANEL-HC

Optional base for VH6-PE200 knob panel external mounting
VH6-PE200-DPANEL-HC



VH1 open-loop vector VFD

The VH1 series is a single-phase 220VAC and three-phase 380VAC open-loop vector frequency converter launched by Xinje Company based on the market demand for small power, small volume, and simple speed regulation. As an economical frequency converter with small volume and large capacity, the VH1 series has significant advantages such as high EMC specification design and high protection. It can be widely used in small automated application machinery represented by woodworking carving, food canning, automated production lines, packaging equipment, logistics conveyor lines, edge banding machines, etc.

50.00
MENU
ENT
RUN
STOP
FREQUENCY INVERTER

Operate panel

- Adjustable knob design for simpler speed regulation
- Multifunctional indicator light, rich in information and impressions

Appearance and protection

- Small volume, compact and exquisite design
- Guide rails side by side installation, saving time and effort
- Strengthening the coating to improve product protection, easily facing oil mist, moisture, and corrosion environment

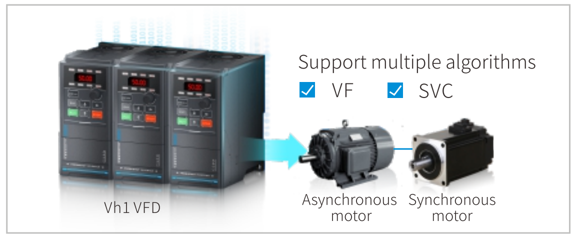
- Support 150% overload for 1 minute every 300 seconds and 180% overload for 3 seconds
- Standard RS485 communication, building a multi-axis control system
- A brand new ARM platform system that supports both asynchronous and synchronous motors

- The entire series is equipped with built-in RFI filters, effectively reducing EMC external interference and ensuring stable equipment operation
- Full range of modular machines to enhance product stability
- Supports external LCD panels, enabling one click parameter download and upload

Excellent product performance

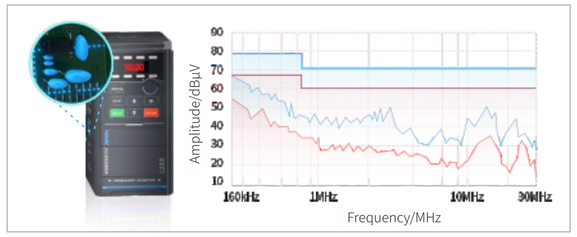
Integrated and versatile

- Support VF and SVC algorithms.
- Based on a brand new ARM platform, it supports synchronous and asynchronous simultaneously. (2.2KW and above support).



High specification EMC design

The entire series is equipped with built-in RFI filters, effectively reducing EMC external interference and meeting precision control requirements.



Debugging is easy and fast

- The potentiometer type adjustable knob makes speed regulation easier.
- Support external LCD panel for one click parameter download upload.
- Support upper computer software debugging, making on-site frequency converter debugging and monitoring more convenient and efficient.

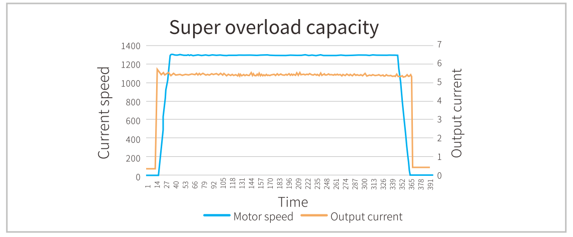
Adjustable knob
External LCD panel
Debugging software

The air duct is completely isolated from the PCB board

Independent air duct design, smooth heat dissipation, ensuring long-term stable operation of electronic components.

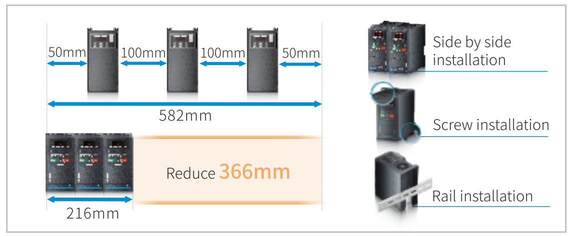
Heavy load output

- The VH1 series comes standard with an IGBT integrated module, achieving 150% overload output for 1 minute.
- The VH1 series comes standard with braking function to ensure stable equipment shutdown for a long time.



Compact design

- Optimal power density design to minimize product volume.
- Support seamless parallel installation in the smallest space (ambient temperature below 40°C).
- Support screw installation and rail installation.



Full coverage of PCB board coating

Adopting automatic spraying line equipment with three-proofing paint, different spraying strategies can be designed according to different circuit boards, achieve full coverage of the three-proofing paint coating, without fear of oil and moisture erosion.

Obtaining EU CE certification

CE
EU CE certification

Naming rule

VH1 VFD naming rule

VH 1 - 4 1P5 - B
① ② ③ ④ ⑤

① Product code

Symbol	Name
VH	General VFD

② Product series

Symbol	Name
1	Open-loop vector VFD

③ Input voltage level

Symbol	Power supply voltage
4	380V
2	220V

④ Power level

Symbol	Power level (kW)
0P7	0.75
1P5	1.5

⑤ Brake unit

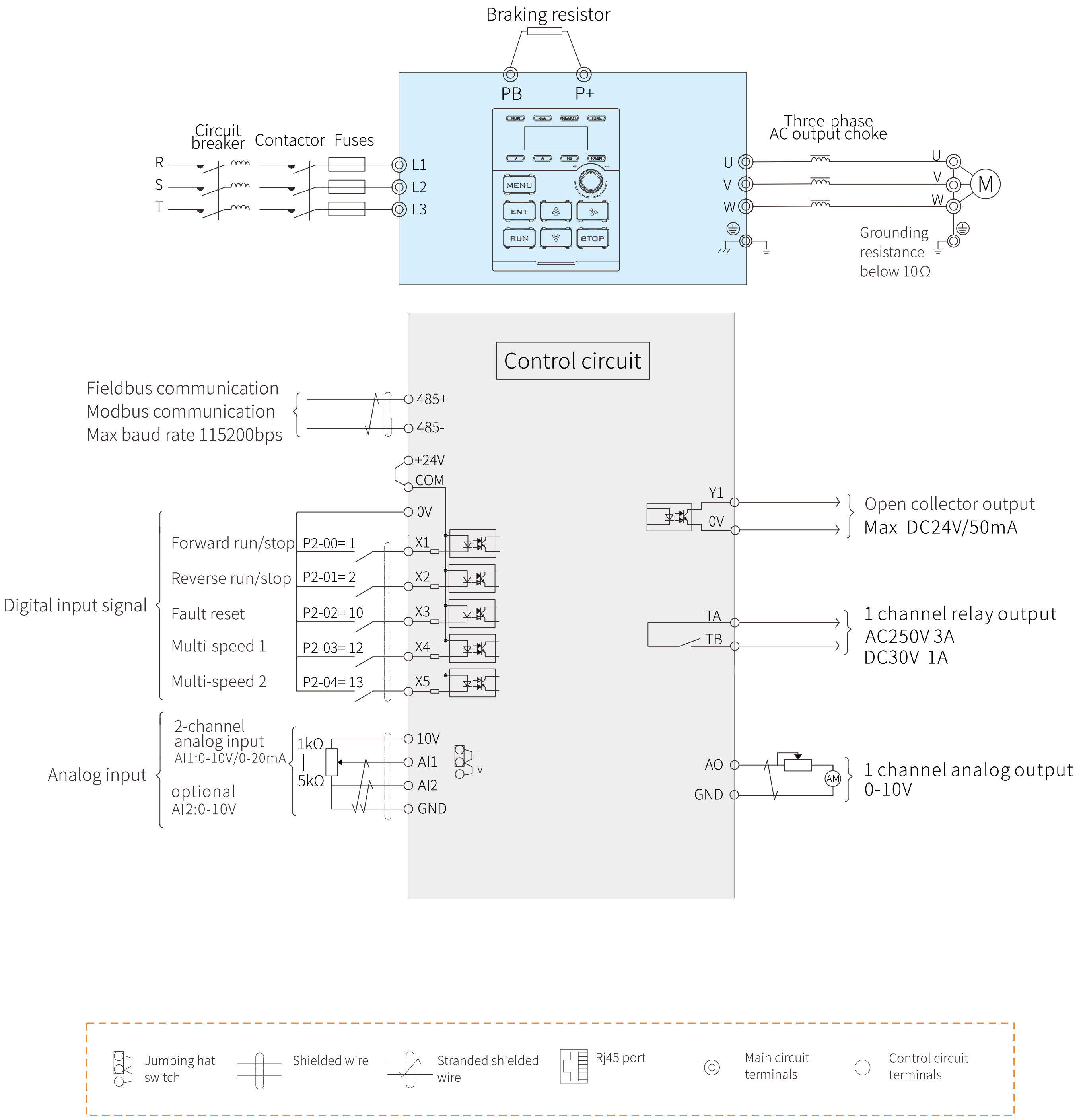
Symbol	Brake unit
B	Built-in brake unit
Vacant	None

Technical parameters

VFD model	Power supply capacity (KVA)	Input current (A)	Output current (A)	Adaptive motor
Single phase 220V 50/60Hz				
VH1-20P4-B	1.0	5.4	2.3	0.4
VH1-20P7-B	1.5	5.6	4.0	0.75
VH1-21P5-B	3.0	9.3	7.0	1.5
VH1-22P2-B	4.5	12.7	9.6	2.2
Three phase 380V 50/60Hz				
VH1-40P4-B	1.0	1.8	1.5	0.4
VH1-40P7-B	1.5	2.3	2.1	0.75
VH1-41P5-B	3.0	4.4	3.8	1.5
VH1-42P2-B/VH1-42P2-B(S)	4.0	5.8	5.1	2.2
VH1-43P7-B	5.9	10.5	9.0	3.7
VH1-45P5-B	8.9	14.6	13.0	5.5
VH1-47P5-B	11.0	20.5	17.0	7.5
VH1-4011-B	17.0	26.0	25.0	11.0
VH1-4015-B	21.0	35.0	32.0	15.0
VH1-4018-B	24.0	38.5	37.0	18.5
VH1-4022-B	30.0	46.5	45.0	22.0
VH1-4030-B	40.0	62.0	60.0	30.0
VH1-4037-B	63.0	69.0	75.0	37.0
VH1-4045	81.0	89.0	90.0	45.0
VH1-4055	97.0	106.0	110.0	55.0
VH1-4075	127.0	139.0	152.0	75.0

PLC
HMI
Industrial informatization
Servo system
Frequency inverter
Stepping system
Vision system
IoT Industrial Controller

Wiring diagram

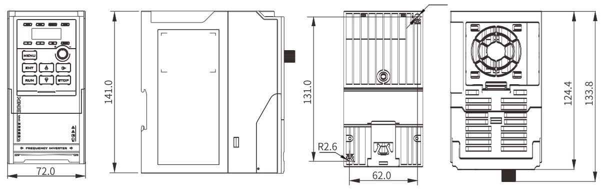

Braking resistor
PB
P+
Circuit breaker
Contactor
Fuses
R
S
T
L1
L2
L3
MENU
ENT
RUN
STOP
Three-phase AC output choke
U
V
W
M
Grounding resistance below 10Ω
Control circuit
Fieldbus communication
Modbus communication
Max baud rate 115200bps
485+
485-
+24V
COM
0V
Digital input signal
Forward run/stop
Reverse run/stop
Fault reset
Multi-speed 1
Multi-speed 2
P2-00= 1
P2-01= 2
P2-02= 10
P2-03= 12
P2-04= 13
X1
X2
X3
X4
X5
Analog input
2-channel analog input
AI1:0-10V/0-20mA
optional
AI2:0-10V
1kΩ
5kΩ
10V
AI1
AI2
GND
I
V
Y1
0V
Open collector output
Max DC24V/50mA
TA
TB
1 channel relay output
AC250V 3A
DC30V 1A
AO
GND
AM
1 channel analog output
0-10V
Jumping hat switch
Shielded wire
Stranded shielded wire
Rj45 port
Main circuit terminals
Control circuit terminals

Technical specification

Item		VH1 open-loop vector VFD
Power range		0.4kW～75kW
Input	Rated voltage, frequency	3AC 380V；50/60Hz 1AC 220V；50/60Hz
	Permissible voltage fluctuation range	±15%
Output	Voltage	0~input voltage
	frequency	0～600Hz
Control performance	Control motor type	Asynchronous motor, synchronous motor
	Control mode	V/F control (VF), vector
	Speed accuracy	±1%
	Speed fluctuations	±0.5%
	Speed regulation range	1：50
	Starting torque	1.0Hz：150%
	Torque accuracy	/
	Torque response	/
	Overload capacity	G-type 150% rated current 60 seconds, P-type 120% rated current 60 seconds
	Frequency accuracy	Low frequency operation mode: 0.01Hz, High frequency operation mode: 0.1Hz
	Frequency resolution	Digital setting -0.01Hz, analog setting - maximum frequency × 0.1%
Control terminal input	Digital input channel	Standard configuration: 5 digital inputs X, supports NPN and PNP inputs
	Analog input channel	Standard configuration: 2 analog inputs AI, AI1 supports 0-10V and 0-20mA, AI2 supports 0-10V
Control terminal output	Digital output channel	Standard configuration: 1 digital output Y and 1 relay output (supports one pair of normally open)
	Analog output channel	Standard configuration: 1 analog output AO, supports 0-10V voltage output
Function	Starting command setting mode	Setting through communication(Modbus), operate panel and terminals
	Frequency setting mode	Setting through communication(Modbus), operate panel, terminals, analog input, multi-speed, simple PLC, PID, main and auxiliary
	Typical functions	Frequency main and auxiliary operation, reverse run prohibition, torque improving, nine V/F curve settings, five segments AI curve settings, acceleration and deceleration curve settings, terminal delay and filtering, terminal multifunctional input and output, DC braking, energy consumption braking, jog operation, 16 multi-speeds, built-in two channels PID , speed tracking restart, carrier modulation, fault recording, fault self reset, preexcitation start, 30 sets of user-defined parameters
	Key functions	Carrier modulation, torque control, motor self-tuning, current limiting control, overvoltage control, undervoltage control, speed tracking, droop control, oscillation suppression, overvoltage overcurrent stall control, automatic voltage regulation (AVR), automatic energy-saving operation, etc
	Protection function	Power on motor short circuit detection, input/output phase loss protection, overcurrent protection, overvoltage protection, undervoltage protection, overheating protection, overload protection, underload protection, overcurrent and overvoltage stall protection, relay excitation protection, terminal protection, instantaneous power failure without stopping, etc
	Energy consumption braking	under 37kW Built in braking unit, suitable braking resistor needs to be selected
Feature	Fieldbus	Modbus
	LCD panel	LCD display, parameter setting, status monitoring, parameter copying, fault analysis, program download, and high-capacity storage of parameters
	Instantly stop without stopping	During an instantaneous power outage, the reduction in voltage is compensated through load feedback energy to maintain the frequency converter's continued operation for a short period of time
	Timing control	Timing control function: Set the time range from 0.1Min to 6500.0Min
	Multi-motor switching	Two sets of motor parameters can achieve switching control between two motors
	Diversified terminal functions	The multifunctional terminals X have 51 types, Y has 41 types, and AO has 19 logical function options, meeting the conventional control function requirements of general VFD
	Communication customization parameters	Convenient for users to continuously read and write VFD parameters
	Software	Rich backend monitoring functions, convenient for on-site data collection and debugging
Display and keyboard	Keyboard display	It can display various parameters such as set frequency, output frequency, output voltage, output current, input/output status, etc
	Key lock	Implement partial or complete locking of buttons to prevent accidental triggering
	Parameter copying	Standard LED digital potentiometer keyboard, optional LCD display keyboard (parameter download)
	Optional accessories	LCD keyboard
Environment	Place of use	Indoor, not exposed to direct sunlight, without dust, corrosive gases, flammable gases, oil mist, water vapor, dripping water or salt, etc
	Altitude	Below 1000 meters. (When the height exceeds 1000 meters, it needs to be used with a reduced rating. For every additional 1000 meters of height, the output current will decrease by about 10% of the rated current.)
	Surrounding temperature	-10°C~+40°C (ambient temperature between 40°C~50°C, please reduce the rating or enhance heat dissipation)
	Surrounding humidity	Less than 95% RH, no water droplet condensation
	Vibration	Less than 5.9m/s2(0.6g)
	Storage temperature	-40°C～+70°C
	Protection level	IP20
	Cooling method	Forced air cooling
Installation		Wall-mounted and DIN-rail mount (2.2 kW and above), DIN-rail mount (below 2.2 kW). The DIN-rail width is 35 mm.

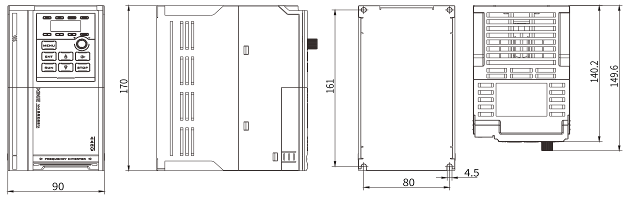
Dimension (unit: mm)

VH1-20P4/20P7/21P5/40P4/40P7/41P5-B
VH1-42P2-B(S)

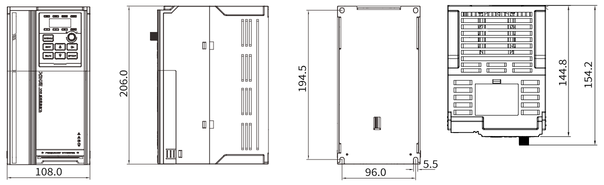

72.0
141.0
131.0
R2.6
62.0
124.4
133.8

*Note: the installation screws are all M4.

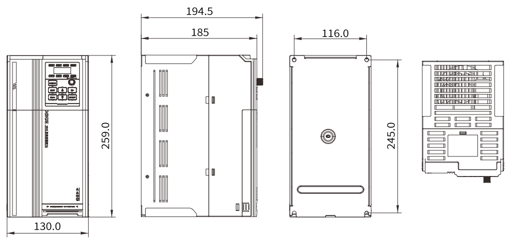
VH1-22P2/42P2/43P7-B


90
170
161
80
4.5
140.2
149.6

VH1-45P5/47P5-B

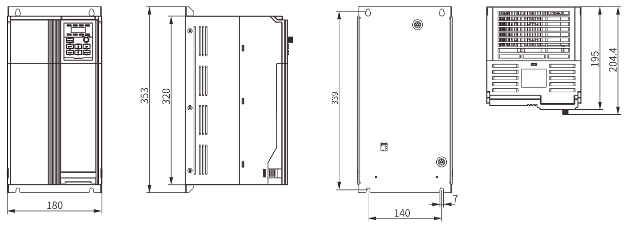

108.0
206.0
194.5
96.0
5.5
144.8
154.2

VH1-4011/4015-B


194.5
185
116.0
259.0
130.0
245.0

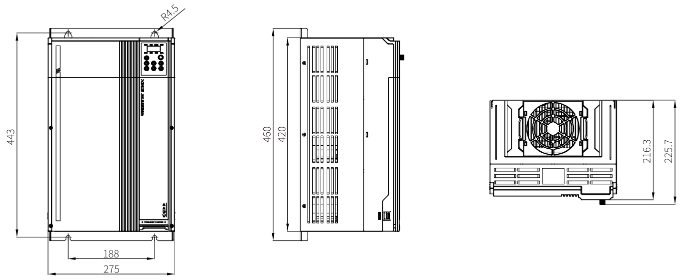
*Note: the installation screws are all M5.

VH1-4018/4022-B

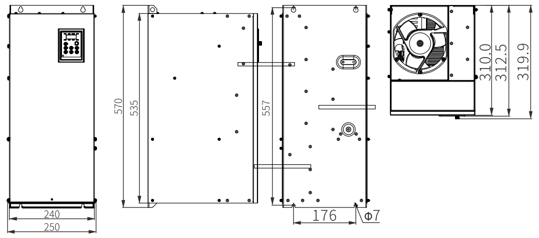

180
353
320
339
140
7
195
204.4

*Note: the installation screws are all M6.

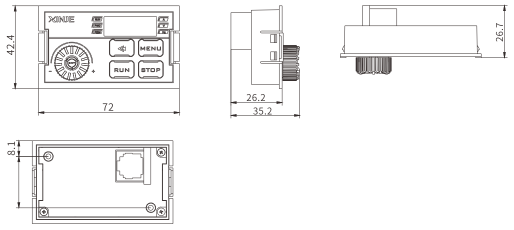
VH1-4030/4037-B


R4.5
443
188
275
460
420
216.3
225.7

VH1-4045/4055/4075

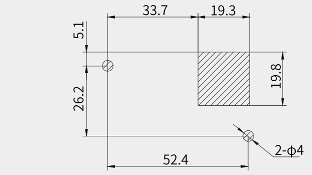

570
535
557
240
250
176
Φ7
310.0
312.5
319.9

VH1-PE100


42.4
72
26.2
35.2
26.7
8.1
MENU
RUN
STOP

VH1-PE100 installation dimension

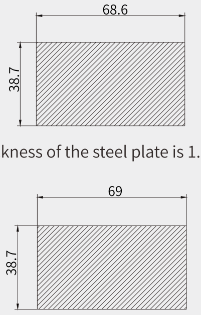
① Suggested screw installation size


33.7
19.3
5.1
26.2
19.8
52.4
2-ϕ4

The shaded area is the open area viewed from the back

*Note: dimensions related to screw installation method (dimension tolerance ±0.3)

② Suggested buckle installation size

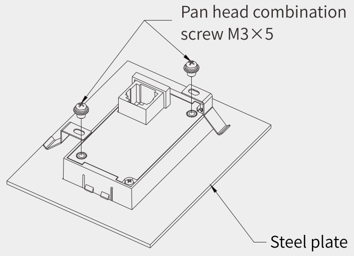

68.6
38.7
69
38.7

The thickness of the steel plate is 1.2mm

The thickness of the steel plate is 1.2-2mm

*Note: dimensions related to buckle installation method (dimension tolerance ±0.3)

③ Leaf spring installation


Pan head combination screw M3×5
Steel plate

*Note: If the customer's open accuracy cannot be met, the installation method of leaf spring can be chosen

Driver model	Overall installation dimension (width×height×depth)										Mounting screw specification	Weight (Kg)
	Body code	W	H	D	W1	W2	H1	H2	D1	D2		
VH1-20P4-B	S1	72	141	133.8	62	/	132	/	124.4	/	M4	0.9
VH1-20P7-B												
VH1-21P5-B												
VH1-40P4-B												
VH1-40P7-B												
VH1-41P5-B												
VH1-42P2-B(S)												
VH1-22P2-B	S2	90	170	149.6	80	/	161	/	140.2	/	M4	1.4
VH1-42P2-B												
VH1-43P7-B												
VH1-45P5-B	S3	103	206	154.2	96	/	194.5	/	144.8	/	M5	1.96
VH1-47P5-B												
VH1-4011-B	S4	130	259	194.5	116	/	245	/	185	/	M5	4.42
VH1-4015-B												
VH1-4018-B	S5	130	353	204.4	140	/	320	/	195	/	M6	7.12
VH1-4022-B												
VH1-4030-B	S6	275	460	225.7	188	/	443	420	216.3	/	M8	14.15
VH1-4037-B												
VH1-4045	S7	250	570	319.9	240	176	557	535	312.5	310	M6	27
VH1-4055												
VH1-4075												

Accessory

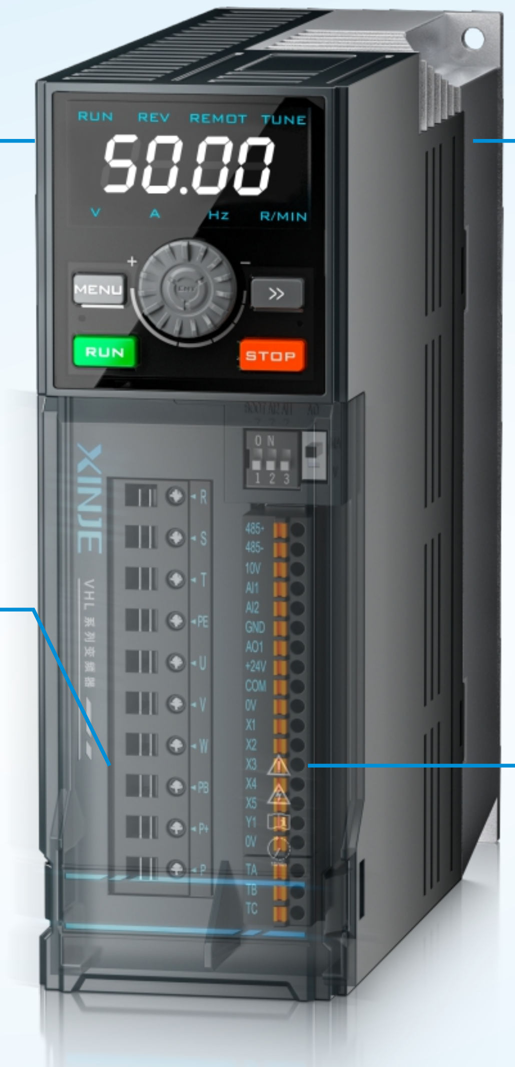
Knob panel VH1-PE100

The panel adopts a knob for speed regulation, which can set parameters, monitor the VFD operation status, and facilitate VFD debugging.

XINJE
MENU
RUN
STOP

VHL general open-loop vector converter

VHL series is a general open-loop vector converter developed by Xinje Company. With the book structure design, the volume is greatly reduced compared with the previous generation of products, and at the same time, the appearance value and protection level are significantly improved. The internal coating is strengthened, which conforms to the 3C3 standard. The whole system is equipped with IGBT integrated module, which can achieve 150% heavy load output. It can be widely used in wire drawing machines, air compressors, livestock farms, grinders, wire cutting, edge banding machines and other application machinery.



Operation Panel

- Shuttle keyboard design, easy for customers to adjust speed
- Silicone key design, greatly improved touch feeling
- White LED and blue indicator light, full of sense of technology

Motor terminal UVW

- Support 150% 60s interval 300s overload
- Support asynchronous synchronous motor control

Appearance and protection

- Book structure design, saving installation space
- Independent air duct design can prevent dust from entering the inverter to cause short circuit and other faults, and improve reliability
- Close the body to prevent foreign matters and ensure the long-term stable operation of electronic components
- The coating is strengthened to prevent oil mist and moisture corrosion, meeting 3C3 standard

Control terminals

- Quick wiring of spring terminals, no need to worry about screw slipping

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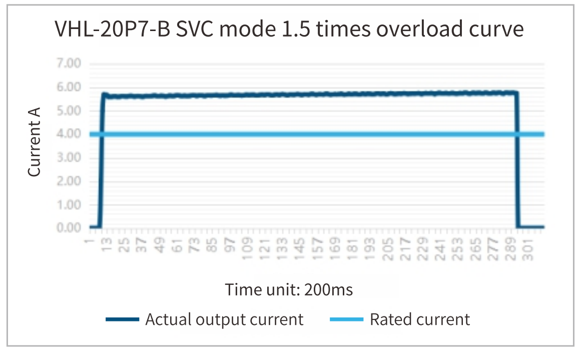
Excellent Product Performance

Overload capacity



VHL inverter 1.5 times overload time 60s

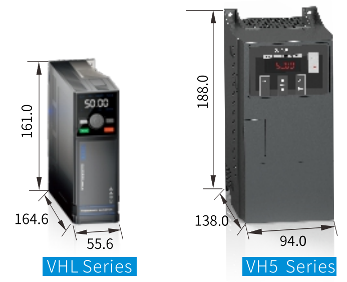
Debugging is easy and quick

- The flywheel keyboard design makes speed adjustment easier.
- Silicone keyboard design, significantly enhancing the tactile sensation and making it more effortless to use;
- Supports imported LCD liquid crystal panels and enables one-click download of parameters.

Shuttle keyboard design
Silicone keyboard design
Support for imported LCD liquid crystal panels

Book-style structural design

- Book-style structure design, reducing the volume by 30%.
- The installation area has been reduced by 70%.



The installation area has been reduced by70%
and the volume has decreased by 30%

Stable and reliable

- Strengthen the three-layer anti-corrosion coating to meet the 3C3
- and 3S2 environmental requirements; independent air duct design.

Obtain the EU CE certification

CE

EU CE Certification

Naming Rule

VHL inverter naming rule

VH L - 2 0P4 - B

① ② ③ ④ ⑤

① Product code

Symbol	Name
VH	General VFD

② Product series

Symbol	Name
L	Book-type open-loop vector converter

③ Input voltage level

Symbol	Power supply voltage
4	380V
2	220V

④ Power level

Symbol	Power level (kW)
0P4	0.4
0P7	0.75

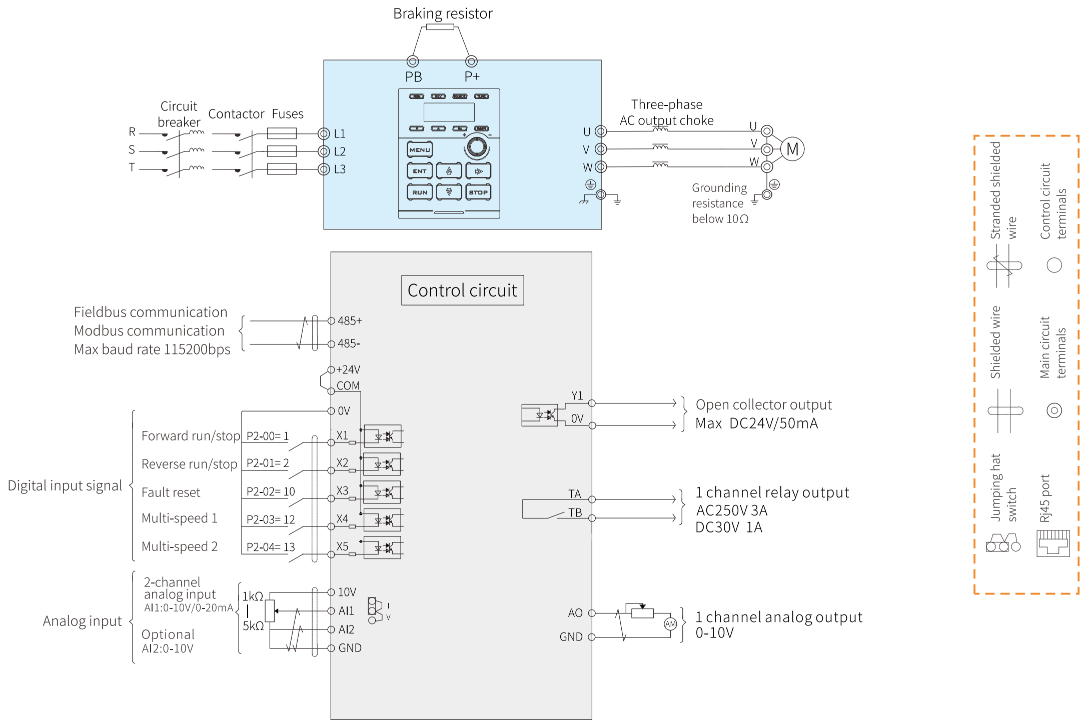
⑤ Brake unit

Symbol	Brake unit
B	Built-in brake unit
Vacant	None

Technical Parameters

VFD model	Power supply capacity (KVA)	Input current (A)	Output current (A)	Adaptive motor
Single phase 220V 50/60Hz				
VHL-20P4-B	1	5.4	2.3	0.4
VHL-20P7-B	1.5	5.6	4	0.7
Three phase 380V 50/60Hz				
VHL-40P4-B	1	1.9	1.5	0.4
VHL-40P7-B	1.5	3.4	2.1	0.7
VHL-41P5-B	3	5.0	3.8	1.5

Wiring diagram

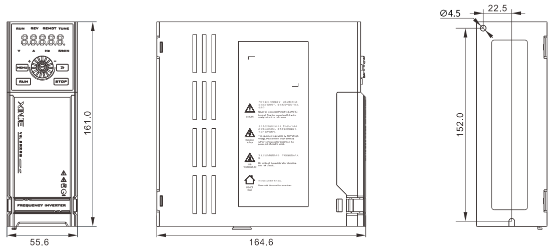

Braking resistor
PB
P+
Circuit breaker
Contactor
Fuses
R
S
T
L1
L2
L3
MENU
ENT
RUN
STOP
U
V
W
Three-phase AC output choke
M
Grounding resistance below 10Ω
Control circuit
Fieldbus communication
Modbus communication
Max baud rate 115200bps
485+
485-
+24V
COM
0V
Digital input signal
Forward run/stop
Reverse run/stop
Fault reset
Multi-speed 1
Multi-speed 2
P2-00= 1
P2-01= 2
P2-02= 10
P2-03= 12
P2-04= 13
X1
X2
X3
X4
X5
Analog input
2-channel analog input
AI1:0-10V/0-20mA
Optional
AI2:0-10V
1kΩ
5kΩ
10V
AI1
AI2
GND
I
V
Y1
0V
Open collector output
Max DC24V/50mA
TA
TB
1 channel relay output
AC250V 3A
DC30V 1A
AO
GND
AM
1 channel analog output
0-10V
Stranded shielded wire
Control circuit terminals
Shielded wire
Main circuit terminals
Jumping hat switch
Rj45 port

Technical Specification

Item name		VHL general open-loop vector converter	
Power range		0.4kW~5.5kW	
Input	Rated voltage, frequency	3AC 380V;50/60Hz 1AC 220V;50/60Hz	
	Allowable voltage fluctuation range	±15%	
Output	Voltage	0~input voltage	
	Frequency	0~600Hz	
Control performance	Control motor type	Asynchronous motor, synchronous motor	
	Control mode	Vector control without speed sensor (SVC)	V/F control (VF)
	Speed precision	±0.5%	±1%
	Speed fluctuation	±0.3%	±0.5%
	Speed regulation range	1:100	1:50
	Startup torque	0.5Hz:150%	1.0Hz:150%
	Torque accuracy	±10% rated torque	/
	Torque response	⩽20ms	/
	Overload ability	150% rated current 60s	
	Frequency precision	0.01Hz	
	Frequency resolution	Digital setting-- 0.01Hz, analog setting - - max frequency ×0.1%	
Control terminal input	Digital input channel	Standard: 5 digital bipolar input X terminal	
	Analog input channel	Standard: 2 analog input AI1/AI2, support 0~10V voltage input or 0~20mA current input	
Control terminal output	Digital output channel	Standard: 1 multi-functional Y1 output terminal, 1 group of TA TB TC relay output terminal	
	Analog analog channel	Standard: 1 analog output terminal AO1, support 0~10V voltage output or 0~20mA current output	
Product performance	Start command given mode	Communication given (Modbus), operate panel given, terminal given	
	Frequency given mode	Communication given (Modbus), operate panel given, terminal given, analog AI given, multi-speed given, simple PLC given, PID main and auxiliary given	
	Typical function	Frequency main and auxiliary operation, no reverse rotation, torque increase, nine VF curve settings, five section AI curve settings, acceleration and deceleration curve settings, terminal delay and filtering, terminal multi-functional input and output, DC braking, energy consumption braking, jog operation, 16-section speed, built-in two-channel PID, speed tracking restart, carrier modulation, fault recording, fault self reset, pre-excitation start, 30 groups of user-defined parameters	
	Important function	Carrier modulation, torque control, motor self-tuning, current limiting control, overvoltage control, undervoltage control, speed tracking, droop control, oscillation suppression, overvoltage overcurrent stall control, automatic voltage regulation (AVR), automatic energy-saving operation, etc	
	Protection function	Power on motor short circuit detection, input and output phase loss protection, overcurrent protection, overvoltage protection, undervoltage protection, overheat protection, overload protection, underload protection, overcurrent overvoltage stall protection, relay pull in protection, terminal protection, instantaneous power failure nonstop, etc	
	Dynamic braking	Built-in brake unit, please select suitable brake resistor	
Features function	Multiple bus support	Standard Modbus	
	Multiple encoder support	LCD display, parameter setting, status monitoring, parameter copy, fault analysis and location, program download, mass storage of parameters	
	Instant stop nonstop	In case of instantaneous power failure, the load feedback energy compensates for the reduction of voltage to maintain the continuous operation of the frequency converter in a short time	
	Timing control	Timing control function: time range 0.1min~6500min	
	Multi-motor switching	Two groups of motor parameters can realize the switching control of two motors	
	Flexible and diversified terminal functions	There are 51 kinds of multifunctional terminals X, 41 kinds of terminals Y, and 19 kinds of logic function options AO, which meet the requirements of general frequency converter control functions	
	Communication customization parameters	It is convenient for users to read and write the parameters of the frequency converter continuously	
	Software	Rich background monitoring functions to facilitate on-site data acquisition and debugging	
Display and keyboard	Keyboard display	It can display the set frequency, output frequency, output voltage, output current, input and output status and other parameters	
	Key lock	Realize partial or full locking of keys to prevent false triggering	
	Parameter copy	Standard LED display digital potentiometer keyboard, optional LCD English display keyboard (parameter upload/download)	
	Optional accessories	LCD keyboard	
Environment	Place of use	Indoor, free from direct sunlight, no dust, corrosive gas, combustible gas, oil mist, water vapor, drip or salt	
	Altitude	Less than 1000m (When it is higher than 1000m, the output current needs to be reduced by about 10% of the rated current for each increase of 1000m)	
	Ambient temperature	-10°C~+40°C (please derate to use or enhance the heat dissipation when ambient temperature is 40°C~50°C)	
	Ambient humidity	Less than 95%RH, no condensation of water droplets	
	Vibration	Less than 5.9m/s2 (0.6g)	
	Storage temperature	-40°C~+70°C	
	Protection level	IP20	
	Cooling mode	Forced air cooling	
Installation mode		Wall mounted and embedded	

Installation Dimension Drawing (unit: mm)

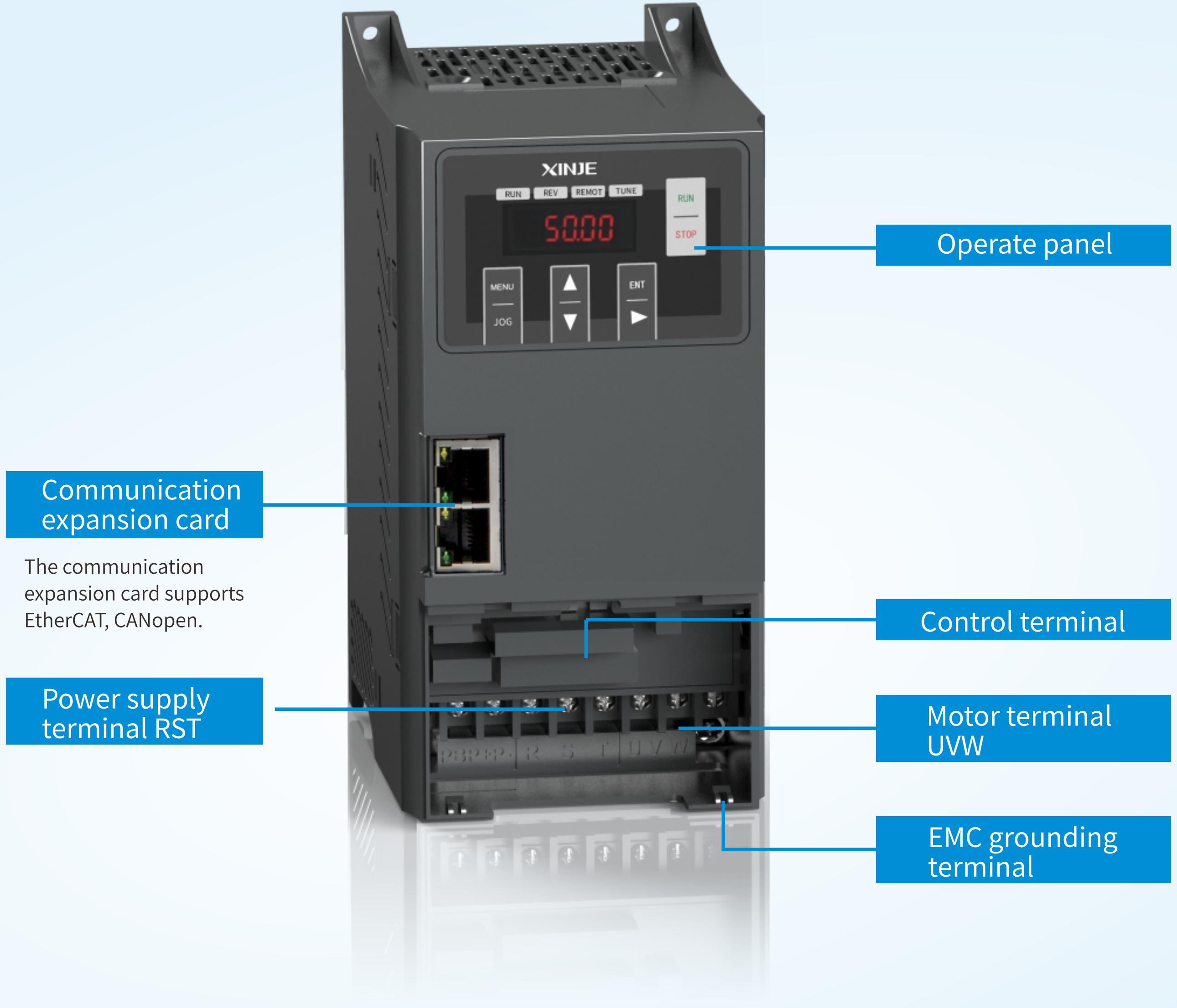
VHL-20P4/20P7/40P4/40P7/41P5-B


55.6
161.0
164.6
Ø4.5
22.5
152.0

VH5 general type open loop vector frequency inverter

VH5 series is a general-purpose open-loop vector frequency converter developed by Xinje company. It has the remarkable characteristics of small volume, better cost performance and high reliability. At the same time, VH5 series can be combined with communication expansion card to realize EtherCAT, CANopen and other high-speed bus networking.

VH5 can be widely used in automatic production lines, textile, woodworking, engraving machines, logistics equipment, food filling, food packaging and other miniaturized mechanical equipment.

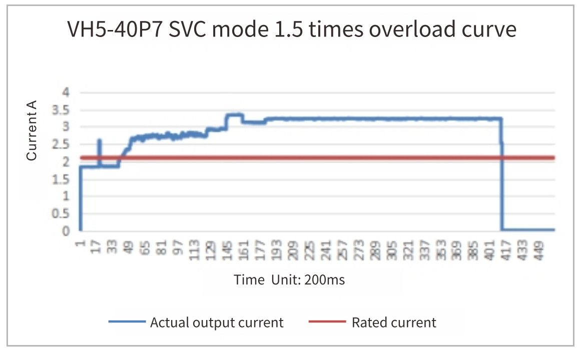

XINJE
RUN
REV
REMOT
TUNE
50.00
RUN
STOP
MENU
JOG
ENT
Operate panel
Communication expansion card
Control terminal
Power supply terminal RST
Motor terminal UVW
EMC grounding terminal

The communication expansion card supports EtherCAT, CANopen.

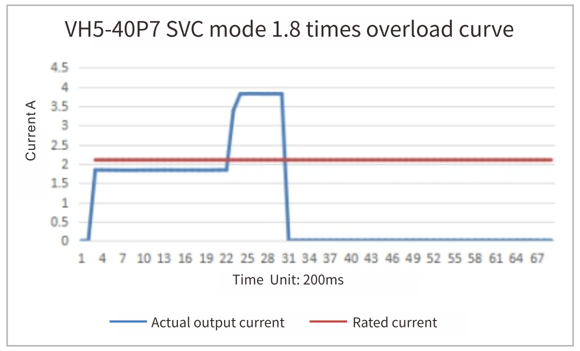
VH5 frequency converter is equipped with one RS485 communication port as standard. In addition,it can be added to EtherCAT and CANopen networks through the special communication expansion card and exist as a slave station.

Excellent Product Performance

Overload ability

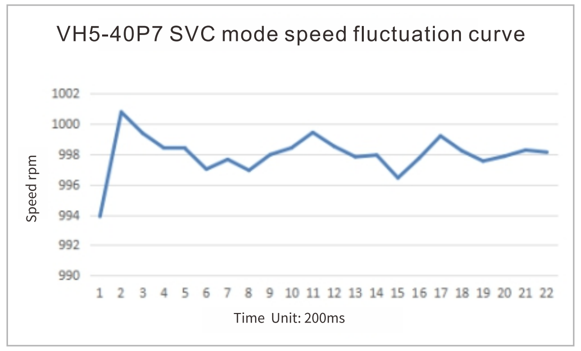


VH5 frequency converter 1.5 times overload time 60 seconds



VH5 frequency converter 1.8 times overload time 1 second

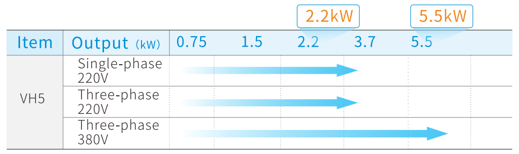
Speed fluctuation



VH5 frequency inverter speed fluctuation ±0.3%

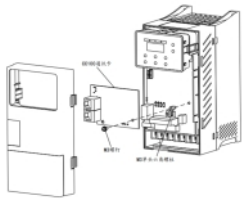
Built-in Braking Transistor

Further expands the standard configuration power range, helping to make the control cabinet structure more compact and save costs.


2.2kW
5.5kW
Item
Output (kW)
0.75
1.5
2.2
3.7
5.5
VH5
Single-phase 220V
Three-phase 220V
Three-phase 380V

Rich Network Functions

- Standard built-in 485 communication interface supports Modbus communication protocol.
- Supports expansion with various mainstream bus communications.



Optional Communication Card Types

1 CANopen：VH5-CN100

2 EtherCAT：VH5-CC100

Globally Applicable

Complies with various standard certifications and meets overseas safety standards.

European Region	North America / Canada
EC Directive (CE Mark)	UL Standard / CUL Standard
CE	C ETL LISTED US Intertek Note: VH5 series 0.75~3.7kW inverters comply with ETL certification, supporting equipment export to North America. Please contact us if needed.

Naming Rule

VH5 frequency inverter naming rule

VH 5 - 4 0P7 - B
① ② ③ ④ ⑤

① Product code

Sign	Name
VH	Frequency inverter

② Product series

Sign	Name
5	General type open loop vector frequency inverter

③ Input voltage level

Sign	Power supply voltage
4	380V
2	220V

④ Power level

Sign	Power level (kW)
0P7	0.75
1P5	1.5
...	...
5P5	5.5

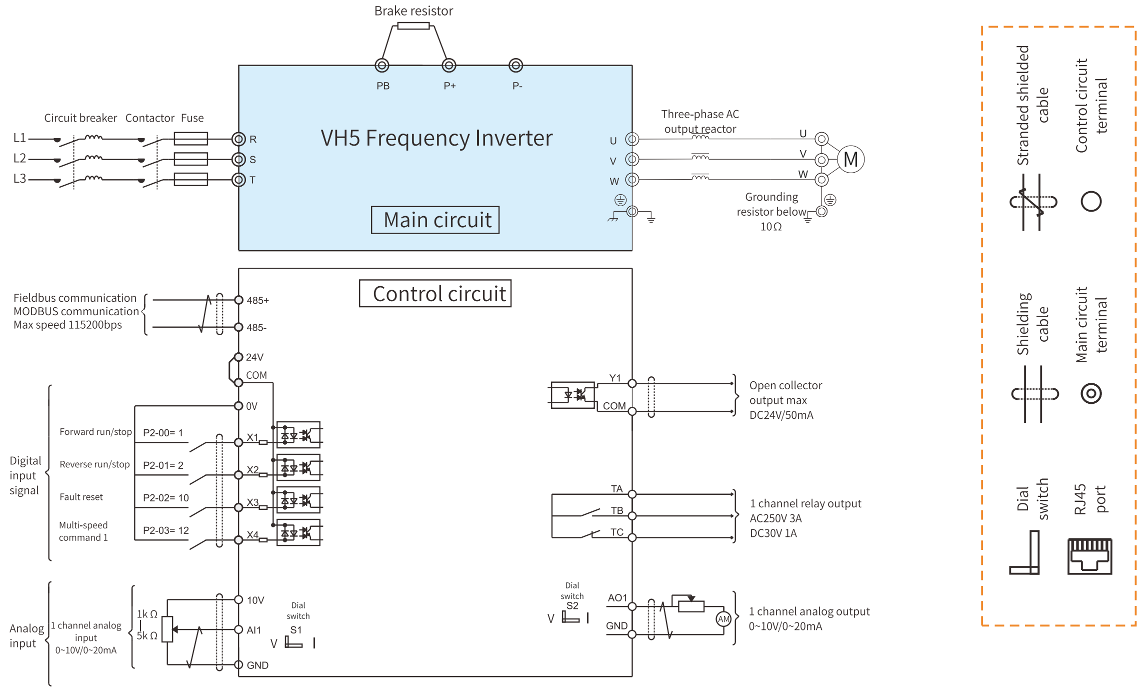
⑤ Brake unit

Sign	Brake unit
B	Built-in brake unit
Vacant	No

Technical Parameter

Model	Power supply capacity (KVA)	Input current (A)	Output current (A)	Adaptive motor (kW)
Single phase 220V 50/60Hz				
VH5-20P7-B	1.5	5.6	4.7	0.75
VH5-21P5-B	3.0	9.3	7.5	1.5
VH5-22P2-B	4.5	12.7	10.0	2.2
Three-phase 380V 50/60Hz				
VH5-40P7-B	1.5	3.4	2.1	0.75
VH5-41P5-B	3.0	5.0	3.8	1.5
VH5-42P2-B	4.0	5.8	5.1	2.2
VH5-43P7-B	5.9	10.5	9.0	3.7
VH5-45P5-B	8.9	14.6	13.0	5.5

Terminal Wiring Diagram

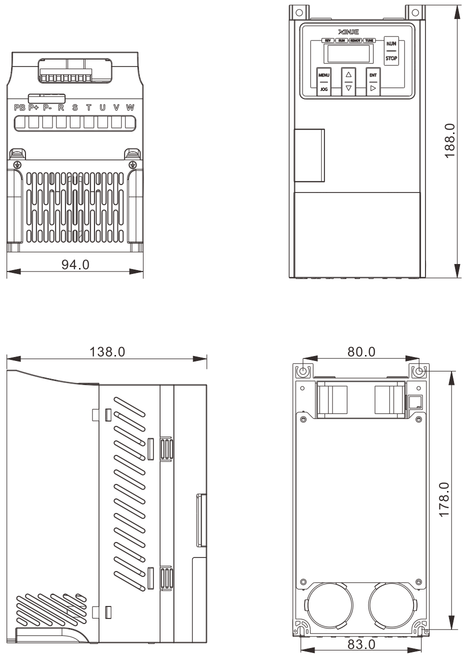

Brake resistor
PB
P+
P-
Circuit breaker
Contactor
Fuse
L1
L2
L3
R
S
T
VH5 Frequency Inverter
Main circuit
U
V
W
Three-phase AC output reactor
M
Grounding resistor below 10Ω
Control circuit
Fieldbus communication
MODBUS communication
Max speed 115200bps
485+
485-
24V
COM
0V
Digital input signal
Forward run/stop
P2-00= 1
Reverse run/stop
P2-01= 2
Fault reset
P2-02= 10
Multi-speed command 1
P2-03= 12
X1
X2
X3
X4
Analog input
1 channel analog input 0~10V/0~20mA
1k Ω
5k Ω
10V
AI1
GND
Dial switch
S1
V
I
Y1
COM
Open collector output max DC24V/50mA
TA
TB
TC
1 channel relay output AC250V 3A DC30V 1A
Dial switch
S2
AO1
GND
AM
1 channel analog output 0~10V/0~20mA
Stranded shielded cable
Control circuit terminal
Shielding cable
Main circuit terminal
Dial switch
RJ45 port

Technical Specifications

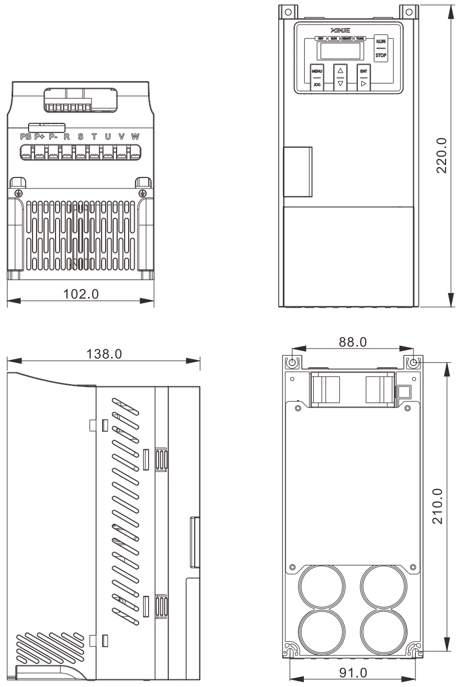
Item name		VH5 general type open loop vector frequency inverter		
Power range		0.75kW~5.5kW		
Input	Rated voltage, frequency	3AC 380V;50/60Hz	3AC 220V;50/60Hz	1AC 220V;50/60Hz
	Allowable voltage fluctuation range	±15%		
Output	Voltage	0~input voltage		
	Frequency	0~600Hz		
Control performance	Control motor type	Asynchronous motor		
	Control mode	Vector control without speed sensor (SVC)	V/F control (VF)	
	Speed precision	±0.5%	±1%	
	Speed fluctuation	±0.3%	±0.5%	
	Speed regulation range	1:100	1:50	
	Startup torque	0.5Hz:150%	1.0Hz:150%	
	Torque accuracy	±10% rated torque	/	
	Torque response	⩽20ms	/	
	Overload ability	150% rated current 60s, 180% rated current 10s, 200% rated current 2s		
	Frequency precision	0.01Hz		
	Frequency resolution	Digital setting - - 0.01Hz, analog setting - - max frequency ×0.1%		
Control terminal input	Digital input channel	Standard: 4 digital X bipolar input terminals		
	Analog input channel	Standard: 1 analog input terminal AI1, support 0~10V or 0~20mA		
Control terminal output	Digital output channel	Standard: 1 multi-functional Y1 output terminal, 1 group TA TB TC relay output terminal		
	Analog output channel	Standard: 1 analog output terminal AO1, support 0~10V or 0~20mA		
Product function	Start command given mode	Communication given (Modbus, CANopen, EtherCAT), operate panel given, terminal given		
	Frequency given mode	Communication given (Modbus, CANopen, EtherCAT), operate panel given, terminal given, analog AI given, multi-speed given, simple PLC given, PID main and auxiliary given		
	Typical function	Frequency main and auxiliary operation, no reverse rotation, torque increase, nine VF curve settings, five section AI curve settings, acceleration and deceleration curve settings , terminal delay and filtering, terminal multi-functional input and output, DC braking, dynamic braking , jog operation, 16-section speed, built-in two-channel PID, speed tracking restart, carrier modulation, fault recording, fault self reset, pre-excitation start, 30 groups of user-defined parameters		
	Important function	Carrier modulation, torque control, motor self-tuning, current limiting control, overvoltage control, undervoltage control, speed tracking, droop control, oscillation suppression, overvoltage overcurrent stall control, automatic voltage regulation (AVR), automatic energy-saving operation, etc		
	Protection function	Power on motor short circuit detection, input and output phase loss protection, overcurrent protection, overvoltage protection, undervoltage protection, overheat protection, overload protection, underload protection, overcurrent overvoltage stall protection, relay pull in protection, terminal protection, instantaneous power failure nonstop, etc		
	Dynamic braking	Built-in brake unit, please select suitable brake resistor		
Features function	Multiple bus support	Standard Modbus, can expand EtherCAT, CANopen		
	Multiple encoder support	LCD display, parameter setting, status monitoring, parameter copy, fault analysis and location, program download, mass storage of parameters		
	Instant stop nonstop	In case of instantaneous power failure, the load feedback energy compensates for the reduction of voltage to maintain the continuous operation of the frequency converter in a short time		
	Timing control	Timing control function: time range 0.1min~6500min		
	Multi-motor switching	Two groups of motor parameters can realize the switching control of two motors		
	Flexible and diversified terminal functions	There are 51 kinds of multifunctional terminals X, 41 kinds of terminals Y, and 19 kinds of logic function options AO, which meet the requirements of general frequency converter control functions		
	Communication customization parameters	It is convenient for users to read and write the parameters of the frequency converter continuously		
	Software	Rich background monitoring functions to facilitate on-site data acquisition and debugging		
Display and keyboard	Keyboard display	It can display the set frequency, output frequency, output voltage, output current, input and output status and other parameters		
	Key lock	Realize partial or full locking of keys to prevent false triggering		
	Parameter copy	Standard LED display digital potentiometer keyboard, optional LCD English display keyboard (parameter upload/download)		
	Optional accessories	LCD keyboard, communication card (EtherCAT, CANopen)		
Environment	Place of use	Indoor, free from direct sunlight, no dust, corrosive gas, combustible gas, oil mist, water vapor, drip or salt		
	Altitude	Less than 1000m (When it is higher than 1000m, the output current needs to be reduced by about 10% of the rated current for each increase of 1000m)		
	Ambient temperature	-10°C+40°C (please derate to use or enhance the heat dissipation when ambient temperature is 40°C~50°C)		
	Ambient humidity	Less than 95%RH, no condensation of water droplets		
	Vibration	Less than 5.9m/s2 (0.6g)		
	Storage temperature	-40°C~+70°C		
	Protection level	IP20		
	Cooling mode	Forced air cooling		
Installation mode		Wall mounted and embedded		

Installation Dimension (Unit: mm)

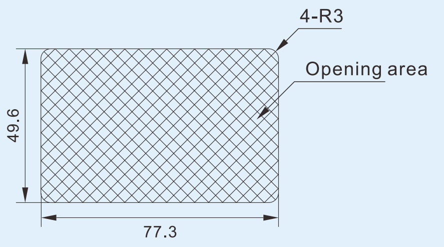
VH5-20P7/21P5/22P2/40P7/41P5/42P2/43P7-B



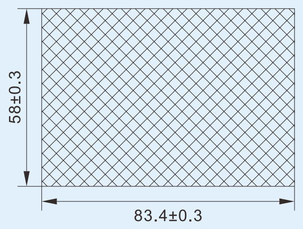
VH5-45P5-B



Panel extension

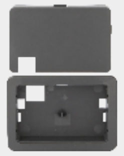


- Not use the panel mounting base, the opening size of the extended panel



- Use the panel mounting base, the opening size of the extended panel

VH5 series VFD operate panel can be extended, users can install the VFD panel in the hole slot according to the two opening sizes provided above.

CANopen communication card VH5-CN100	EtherCAT communication card VH5-CC100	LED operate panel VH5-PE100	Mounting base VH5-DPANEL
The expansion interface card specially designed for CANopen protocol is suitable for Xinje frequency converter. Xinje frequency converter can be connected to CANopen network and exist as a slave station through this card.	The expansion interface card specially designed for EtherCAT protocol is suitable for Xinje frequency converter. Xinje frequency converter can be connected to EtherCAT network and exist as a slave station through this card.	The panel is a single-row LED display, which can set parameters, monitor the operation status and operate the converter.	VH5 series VFD extension panel installation base. Model: VH5-DPANEL
		XINJE 50.00 STOP	

HSV6 Series Ring Spinning Machine Specific Inverter

This is a specialized product developed by Xinje for the application characteristics of the textile industry. Through a through-wall structural design, it reduces the secondary pollution of the inverter, thereby improving the temperature and air flow inside the electrical cabinet. The product adopts vector control technology and provides expansion cards for customer selection, maximizing the customer's product competitiveness.

50.00
XINJE
MENU/ESC
ENT/DATA
RUN
XINJE HIGH-PERFORMANCE

Excellent Product Performance

Enlarged Heat Sink

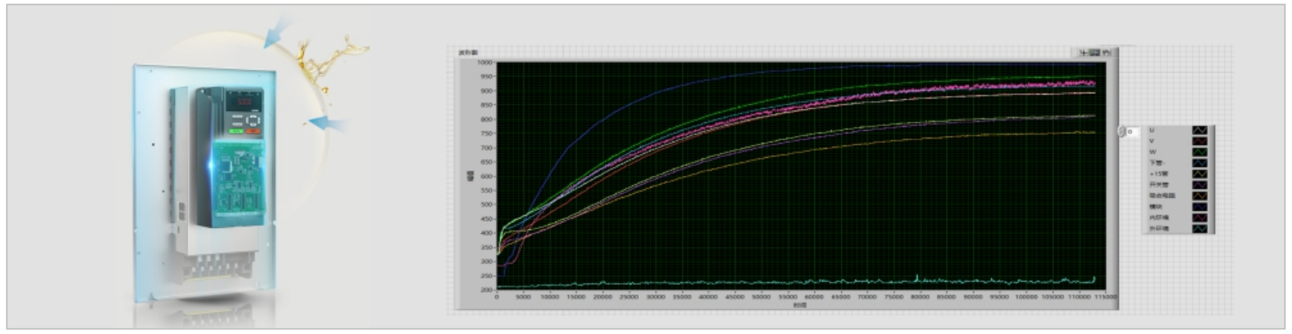
The use of heat pipe process heat sinks and phase-change material thermal grease provides stronger heat dissipation and ensures long-term stable operation under temperature. The increase in heat dissipation area helps improve heat port flow, thereby increasing heat dissipation and allowing it to easily handle fanless situations.

Capacitor Capacity Doubled

- To meet the textile dust and lint protection requirement, the inverter's fan has been removed.
- To meet the high-temperature environment application requirement in textiles, capacitor temperature resistance is rated for 125°C for 3000 hours.
- To meet the heat dissipation requirement in textiles, the inverter's reactor has been removed, and the capacitor capacity is suitable for stable shutdown in common bus power failure scenarios.

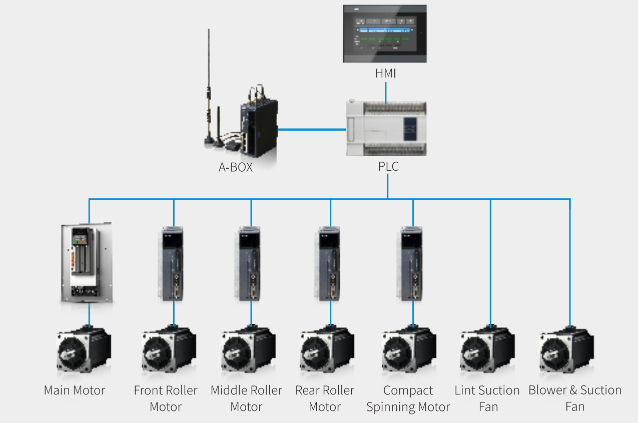
Triple-protection Enhanced

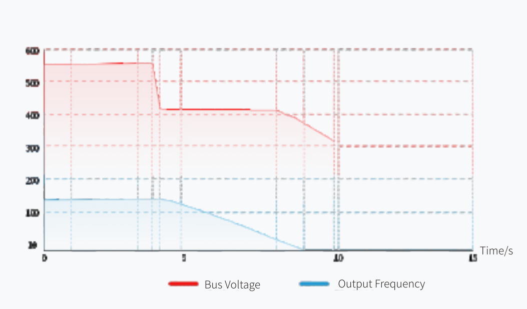
Based on the IP20 protection rating, triple-protection is enhanced. All components are temperature resistant to 125°C, allowing it to easily handle high-temperature and humid conditions in the textile industry.



Common Bus System

- The adoption of common bus technology can reduce the number and cost of equipment while also lowering maintenance costs.
- The inverter integrates a power failure ride-through function. In the event of an unexpected system power outage, the inverter can use feedback energy to operate without stopping for an effective period, while ensuring the equipment shuts down steadily, thereby improving the production efficiency of textile equipment.


HMI
A-BOX
PLC
Main Motor
Front Roller Motor
Middle Roller Motor
Rear Roller Motor
Compact Spinning Motor
Lint Suction Fan
Blower & Suction Fan



Function of non-stop operation during momentary power interruption

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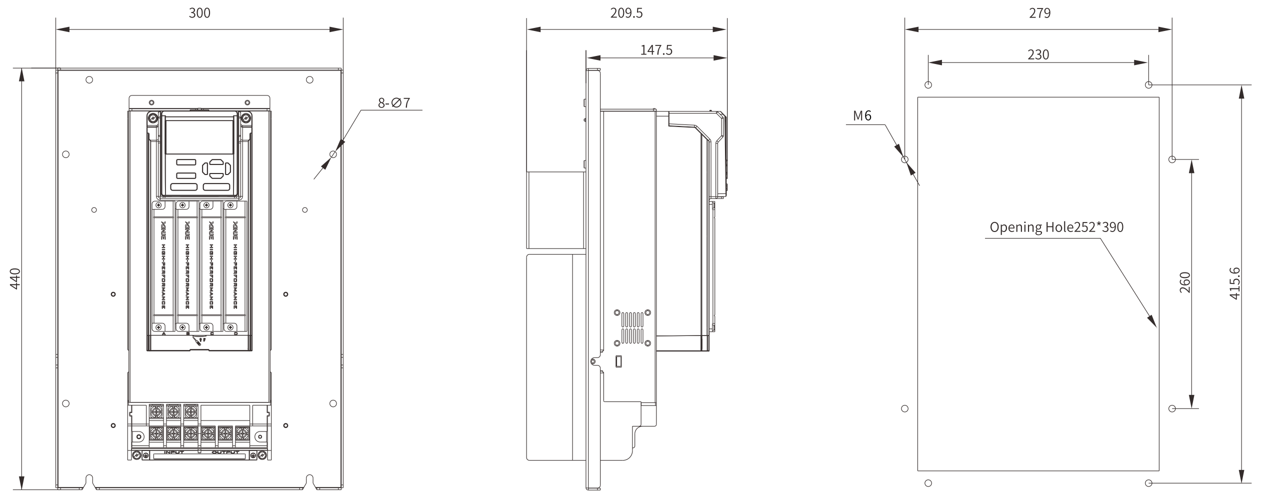
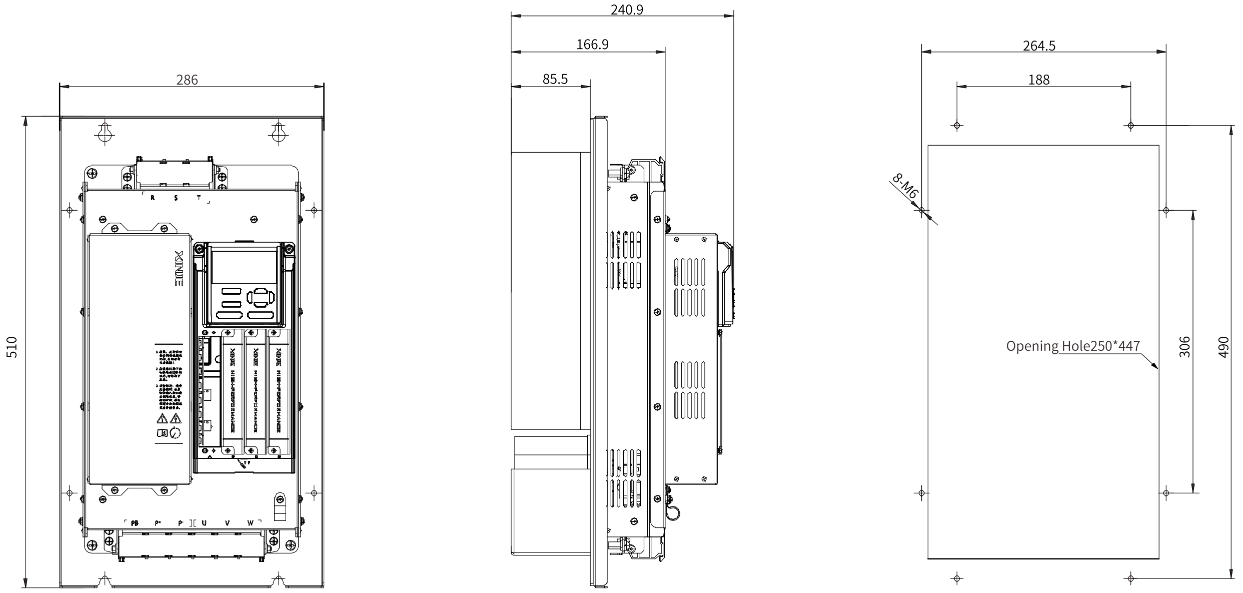
Installation Dimensions (unit : mm)

HSV6-4018/4022-B


300
8-Ø7
440
209.5
147.5
279
230
M6
Opening Hole252*390
260
415.6

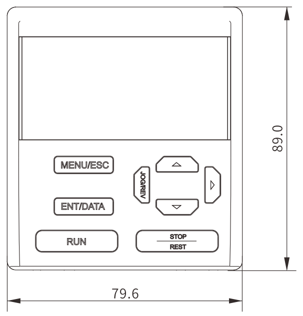
Drive Model	Mounting Hole Pattern (mm)				Overall Dimensions (Width/Height/Depth)				Mounting Screw Specification	Weight)
	A1	B1	A2	B2	W	H	D	D1		
HSV6-4018-B	230	415.6	279	260	300	440	209.5	147.5	M6	11
HSV6-4022-B	230	415.6	279	260	300	440	209.5	147.5	M6	11

HSV6-4055-B

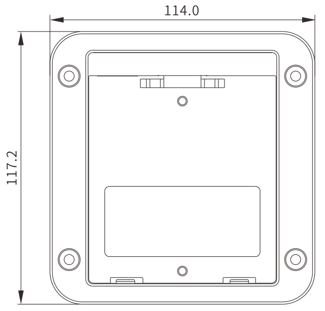

240.9
166.9
85.5
286
510
264.5
188
8-M6
Opening Hole250*447
306
490

Drive Model	Mounting Hole Pattern (mm)				Overall Dimensions (Width/Height/Depth)					Mounting Screw Specification	Weight
	A1	B1	A2	B2	W	H	D	D1	D2		
HSV6-4055-B	188	490	264.5	306	286	510	240.9	166.9	85.5	M6	19.08

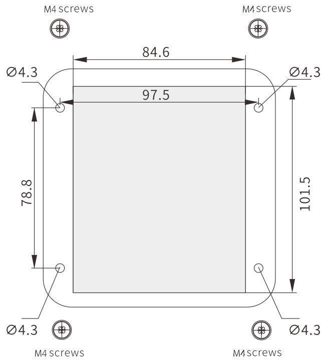
Panel Dimensions (unit : mm)


MENU/ESC
ENT/DATA
JOG/REV
RUN
STOP
REST
89.0
79.6

Panel Mounting Bracket Drawing (unit : mm)



Panel Mounting Bracket


M4 screws
M4 screws
84.6
Ø4.3
Ø4.3
97.5
78.8
101.5
Ø4.3
Ø4.3
M4 screws
M4 screws

Panel Mounting Bracket Instruction

The gray areas are the cut-out sections. The central cut-out measures 84.6 × 101.5 mm, and the four corner cut-outs are circular with a diameter of 4.34 mm. M4 screws and nuts are inserted into these cut-outs to secure the bracket to the door panel.

06

Stepper System

Fieldbus Stepper | RS485Integrated Drive & Control Stepper
Pulse-type Stepper | Stepper Motor

Bus type stepping driver

DP3C closed-loop bus stepping driver

- Integrating EtherCAT bus technology
- Fast response
- Strong anti-interference ability
- Significantly improved performance

DP3CL open loop bus stepping driver

- Excellent value
- Low cost while retaining the high performance and stability of DP3C

Integrating EtherCAT bus technology, the communication is faster

Support COE (CANopen over EtherCAT) protocol, conform to the CiA402 standard and support 32 axes. Support the master stationwith standard EtherCAT protocol. The communication cycle between the master station and the slave station can reach 32 axes 1ms at most.

Simple wiring and convenient equipment maintenance

A network cable replaces the traditional pulse direction signal cable, and is equipped with power cable and encoder cable, making the wiring simpler. It can greatly reduce the cable cost, labor cost and maintenance cost.

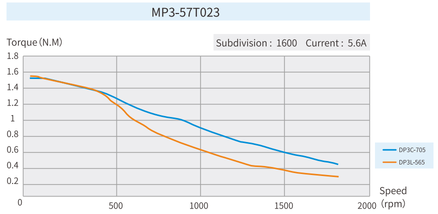
Higher reliability and anti-interference

Relying on the low bus load and point-to-point physical layer of EtherCAT bus, it can greatly suppress the generation of interference and clutter, and significantly improve the reliability and anti-interference ability of the system.

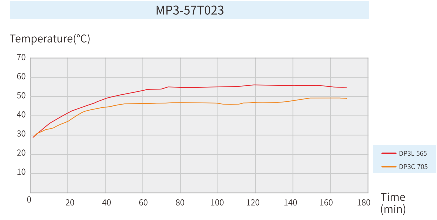
A new generation of control algorithm with better performance

EtherCAT bus technology combined with the latest control algorithm, greatly improves the performance

The torque is increased, which significantly improves the high-speed performance of the motor, up to 2000rpm.



The motor runs more smoothly and the temperature ising is significantly reduced



Application scenario

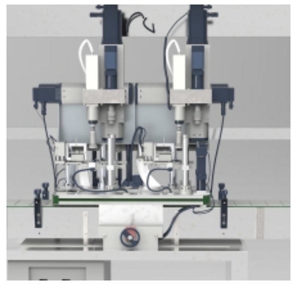
DP3C,DP3CL series bus stepping driver

It is suitable for electronics, laser and occasions requiring multi-axis control.

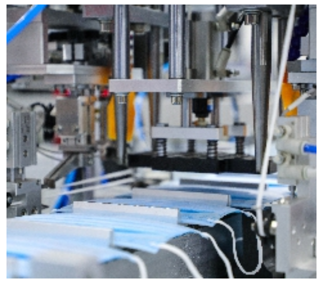
01 Stripping machine
02 Marking machine
03 Graph plotter
04 Medical equipment
05 Electronic processing equipment
06 Engraving machine
07 Laser machine
08 Cutting machine
09 Numerical control machine
10 Automatic assembly equipment

Graph plotter

Filling machine



Capping machine

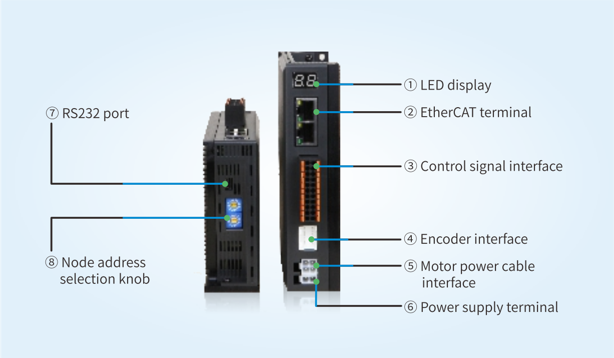


Mask machine

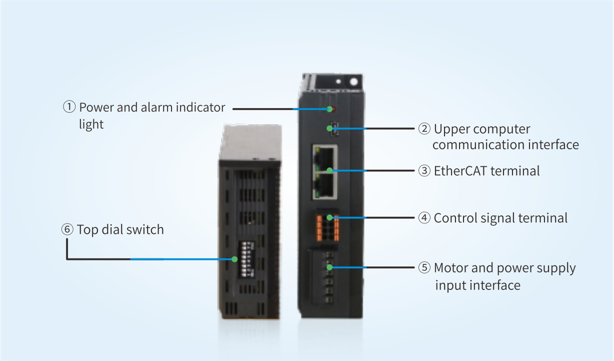
PLC
HMI
Industrial informatization
Servo system
Frequency inverter
Stepping system
Vision system
IoT Industrial Controller

Hardware interface

DP3C series


① LED display
② EtherCAT terminal
③ Control signal interface
④ Encoder interface
⑤ Motor power cable interface
⑥ Power supply terminal
⑦ RS232 port
⑧ Node address selection knob

DP3CL series


① Power and alarm indicator light
② Upper computer communication interface
③ EtherCAT terminal
④ Control signal terminal
⑤ Motor and power supply input interface
⑥ Top dial switch

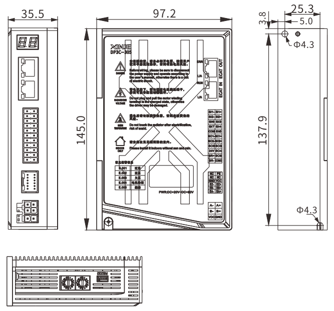
Driver specification

Driver model		DP3C-305	DP3C-705	DP3C-808	DP3CL-305	DP3CL-705	DP3CL-808	DP3CL-808A
Input power supply voltage (VDC)		DC20~50	DC20~50	DC20~80	DC20~50	DC20~50	DC20~80	AC20~80 DC20~110
Recommended power supply voltage(VDC)		24~36	57motor recommended 24~36;86 or high-speed motor recommend48V	48Above	24~36	57motor recommended 24~36;86 or high-speed motor recommend48V	48Above	
Using environment(A)		1~3	1~7	1~8.4	1~3	1~7	1~8.4	
Adaptive motor (base)		42	57/60	86	42	57/60	86	
External dimension (mm)		97.2*145.0*35.5			92.2*125.0*35.5			
Input signal		Alarm output, in place output, brake signal output, user-defined output			Origin input, positive/negative limit, alarm clear, user-defined input			
Output signal		Alarm output, brake signal output, user-defined output			Alarm output, brake signal output, user-defined output			
Alarm function		Over current, over voltage, out of tolerance, communication error, etc						
Debugging software		Xinje stepping driver software						
Using environment	Use occasion	Try to avoid dust, oil mist and corrosive gas. Combustible gas and conductive dust are prohibited in places with high humidity and strong vibration						
	Ambient temperature	0°C～50°C						
	Max working temperature	60°C						
	Humidity	40%～90% RH(no condensation or water droplets)						
	Vibration	5.9m/s² Max						
	Storage temperature	−20°C～65°C						

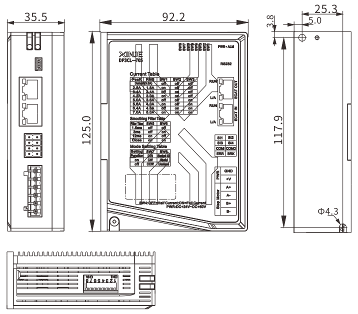
Driver dimension

(Unit: mm)

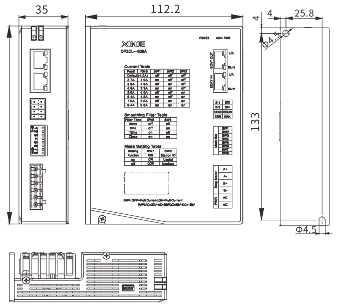
DP3C-305/DP3C-705/DP3C-808


35.5
97.2
25.3
5.0
3.8
Φ4.3
145.0
137.9
Φ4.3

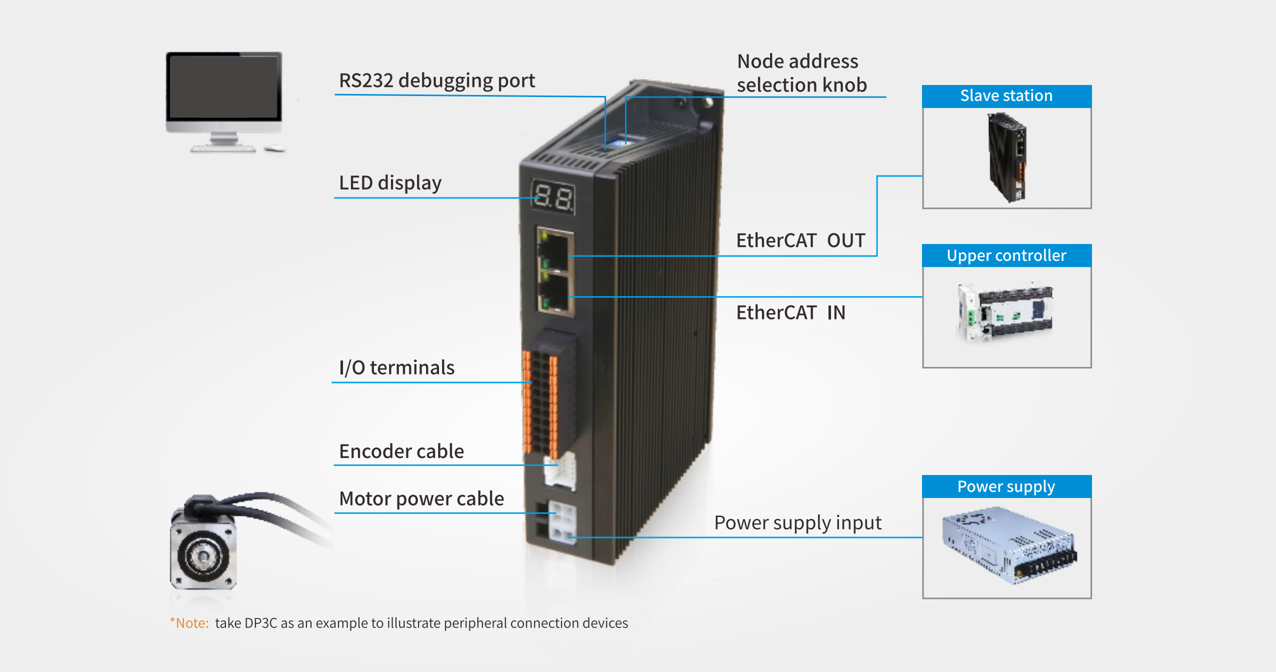
DP3CL-305/DP3CL-705/DP3CL-808


35.5
92.2
25.3
5.0
3.8
125.0
117.9
Φ4.3

DP3CL-808A

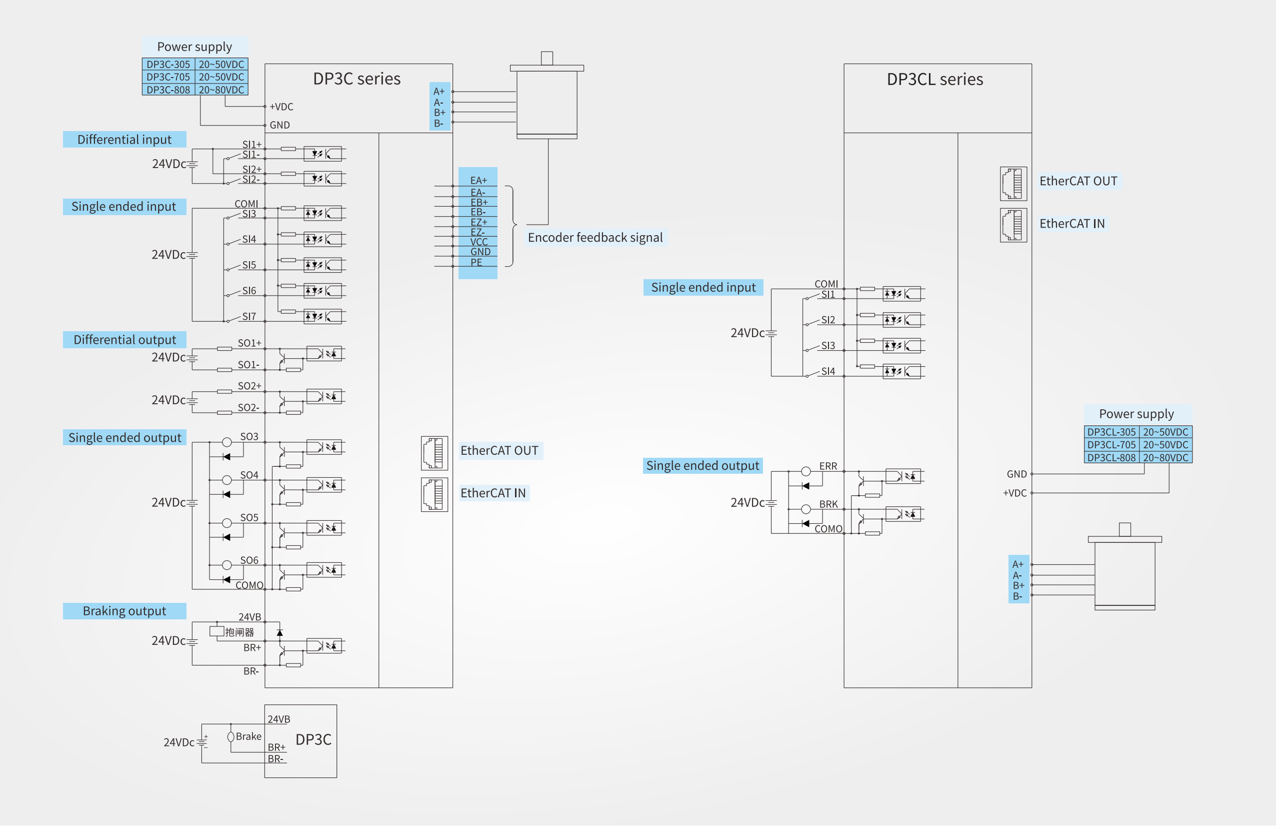

35
112.2
4
4
25.8
Φ4.5
133
Φ4.5

Driver peripheral circuit


RS232 debugging port
Node address selection knob
Slave station
LED display
EtherCAT OUT
Upper controller
EtherCAT IN
I/O terminals
Encoder cable
Motor power cable
Power supply input
Power supply

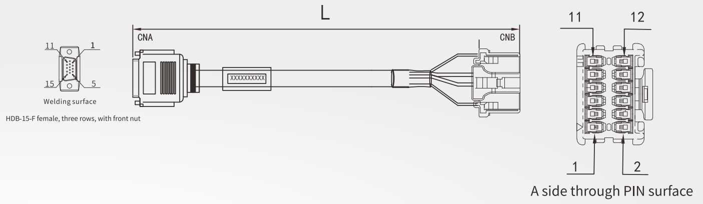
*Note: take DP3C as an example to illustrate peripheral connection devices

Driver wiring diagram


Power supply
DP3C-305 20~50VDC
DP3C-705 20~50VDC
DP3C-808 20~80VDC
DP3C series
+VDC
GND
A+
A-
B+
B-
Differential input
24VDc
SI1+
SI1-
SI2+
SI2-
Single ended input
COMI
SI3
SI4
SI5
SI6
SI7
EA+
EA-
EB+
EB-
EZ+
EZ-
VCC
GND
PE
Encoder feedback signal
Differential output
SO1+
SO1-
SO2+
SO2-
Single ended output
SO3
SO4
SO5
SO6
COMO
EtherCAT OUT
EtherCAT IN
Braking output
24VB
抱闸器
BR+
BR-
Brake
DP3C
DP3CL series
EtherCAT OUT
EtherCAT IN
Single ended input
COMI
SI1
SI2
SI3
SI4
Single ended output
ERR
BRK
COMO
Power supply
DP3CL-305 20~50VDC
DP3CL-705 20~50VDC
DP3CL-808 20~80VDC
GND
+VDC
A+
A-
B+
B-

Accessories

Encoder cable

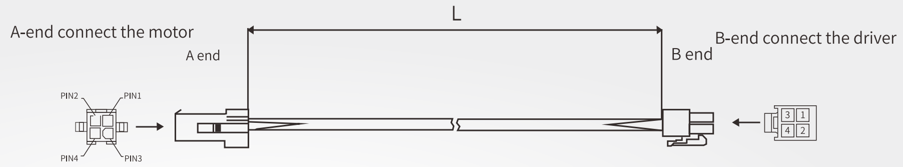

L
CNA
CNB
11
1
15
5
Welding surface
HDB-15-F female, three rows, with front nut
XXXXXXXXXX
11
12
1
2
A side through PIN surface

CNAside	1	2	3	11	12	13
Color	Blue	Yellow	Yellow black	Green	Green black	Blue black
Definition	A+	VCC	GND	B+	B-	A-
CNBside	11	5	6	9	10	12

*Note: If Z signal output is required, please use encoder cable [CP-MD-Z-length].

Model	Length L(m)
CP-MD-2	2
CP-MD-3	3
CP-MD-5	5
CP-MD-8	8
CP-MD-10	10
CP-MD-12	12
CP-MD-16	16
CP-MD-20	20

Power cable



A end PIN	1	2	3	4
Definition	B+	A+	A-	B-
Color	Black	Brown	Blue	Yellow green
B end PIN	2	1	3	4

*Note: For customers who want to make cable by themselves, they can choose JAMP-M4-P4 accessory package, which contains the terminals of driver and motor, and can press the cables by themselves. If you need this bus driver with open-loop motor, please choose JAMP-M4 accessories, including the driver terminal, which can press the cable by yourself.

Model	Length L(m)
CM-MP07-2	2
CM-MP07-3	3
CM-MP07-5	5
CM-MP07-8	8
CM-MP07-10	10
CM-MP07-12	12
CM-MP07-16	16
CM-MP07-20	20

EtherCAT bus cable

Model	Length (m)
JC-CB-0P1	0.1
JC-CB-0P2	0.2
JC-CB-0P3	0.3
JC-CB-0P5	0.5
JC-CB-1	1
JC-CB-3	3
JC-CB-5	5
JC-CB-10	10
JC-CB-20	20

Power supply cable

Each driver will be delivered with a power cable for free. For additional needs, the purchase models are as follows:

Model	Length (m)
JC-PM-20	2

Bus-type Stepper Drive

DP3C1 Series Closed-loop EtherCAT Bus Stepper Drive

- **Compact Design, Space-saving:**
  Thin and compact body, effectively saves control cabinet installation volume, better suited for high-density layout requirements.
- **Convenient Wiring, Efficient Maintenance:**
  Optimized wiring method, significantly improves wiring efficiency, reduces maintenance time, and lowers operating costs.
- **Intelligent Current Regulation, Stable Temperature Control:**
  Real-time current adjustment based on load and speed for smoother operation and significantly reduced motor heating.
- **Rich Interfaces, Flexible Configuration:**
  Equipped with 6 input and 2 output signal interfaces, supporting various function settings such as probe, limit, home, alarm, and brake to meet diverse application needs.
- **EtherCAT Bus, Strong Anti-interference:**
  Relies on low bus load and point-to-point physical layer architecture to effectively suppress interference and noise, enhancing system reliability and anti-interference capability.
- **Encoder Feedback, Eliminates Lost Steps:**
  Uses real-time encoder position feedback and deviation compensation to fundamentally solve the lost-step problem of traditional stepper motors for more precise positioning.

DP3CL1 Series Open-loop EtherCAT Bus Stepper Drive

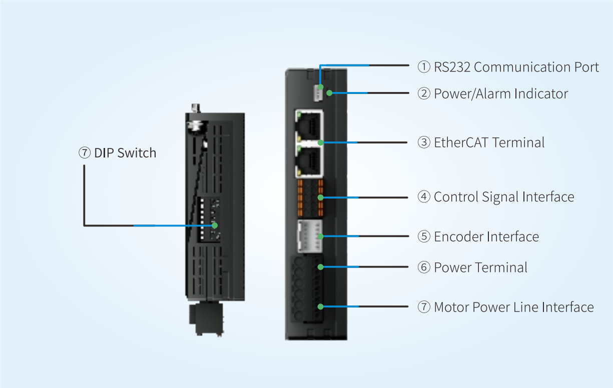
- **Compact Structure, Flexible Layout:**
  The new generation product is significantly optimized in size. Taking the DP3CL1-705 as an example, the body thickness is only 28mm, reducing volume by about 20% compared to the previous generation, effectively saving control cabinet installation space and providing greater flexibility for equipment structural design.
- **Bus Communication, Stable and Reliable:**
  EtherCAT bus communication based on the CIA402 standard, paired with shielded network cable connection, offers stronger anti-interference capability compared to traditional pulse interfaces, adapts to complex industrial electromagnetic environments, making system operation more stable and reliable.
- **Intelligent Temperature Control, Lower Heat Generation:**
  Features dynamic current adjustment function, automatically adjusting output current based on load, significantly improving motor temperature rise during medium to high-speed operation. Supports automatic half-current and 128 micro-stepping technology, reducing current to 50% during standstill or low speed, minimizing vibration and loss, and extending motor and drive lifespan.
- **Integrated Wiring, Cost-saving:**
  Uses bus-type connection, where one network cable replaces multiple pulse wires, greatly simplifying wiring work, reducing cable and labor costs. Supports hot-plug functionality for easy troubleshooting and maintenance, effectively lowering the total lifecycle cost.

Application Scenarios

Wire strippers, marking machines, plotters, medical equipment, electronic processing, engraving machines, laser machines, cutting machines, etc.

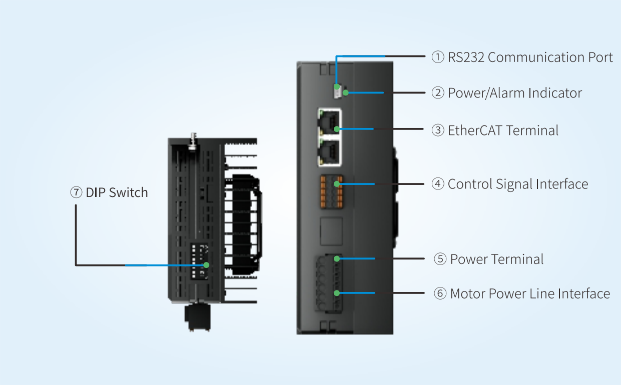
Hardware Interface

DP3C1 Series



① RS232 Communication Port
② Power/Alarm Indicator
③ EtherCAT Terminal
④ Control Signal Interface
⑤ Encoder Interface
⑥ Power Terminal
⑦ Motor Power Line Interface
⑦ DIP Switch

DP3CL1 Series



① RS232 Communication Port
② Power/Alarm Indicator
③ EtherCAT Terminal
④ Control Signal Interface
⑤ Power Terminal
⑥ Motor Power Line Interface
⑦ DIP Switch

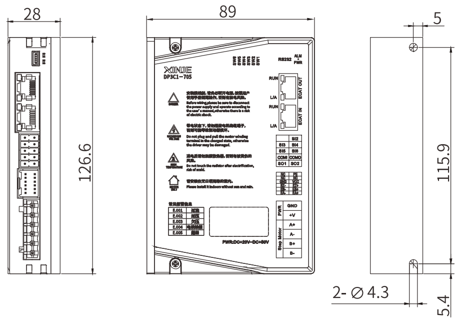
Drive Specifications

Drive Model		DP3C1-305	DP3C1-705	DP3C1-808A	DP3CL1-305	DP3CL1-705	DP3CL1-808A
Input Power Voltage (V)		DC20~50	DC20~50	DC20~80	DC20~50	DC20~50	AC20~80 DC20~110
Recommended Power Voltage (V)		24~36	Recommended value for 57 motor: 24~36; For 86 or high-speed applications, 48V is recommended.	Above 48	24~36	Recommended value for 57 motor: 24~36; For 86 or high-speed applications, 48V is recommended.	Above 48
Peak Output Current (A)		1~3	1~7	1~8.4	1~3	1~7	1~8.4
Matching Motor (Frame)		42	57/60	86	42	57/60	86
Overall Dimensions (mm)		89*126.6*28	89*126.6*28	97.5*150.0*52.6	89*126.6*28	89*126.6*28	97.5*150.0*52.6
Input Signal		Probe Input, Home Input, Positive/Negative Limit, Emergency Stop, Custom Input			Home Input, Positive/Negative Limit, Alarm Clear, Custom Input		
Output Signal		Alarm Output, Positioning Completed Output, Brake Signal Output, Custom Output			Alarm Output, Brake Signal Output, Custom Output		
Alarm Function		Overcurrent, Overvoltage, Excessive Error, Communication Error, etc.			Overcurrent, Overvoltage, Communication Error, etc.		
Configuration Software		Xinje Stepper Drive Configuration Tool Software					
Operating Environment	Application Occasion	“Avoid environments with excessive dust, oil mist, corrosive gases, high humidity, and strong vibration. Flammable gases and conductive dust are prohibited. "					
	Ambient Temperature	0°C~50°C					
	Maximum Operating Temperature	60°C					
	Humidity	40%～90%RH(No condensation or water droplets allowed.)					
	Vibration	5.9m/s²Max					
	Storage Temperature	-20°C~65°C					

Drive Dimensions

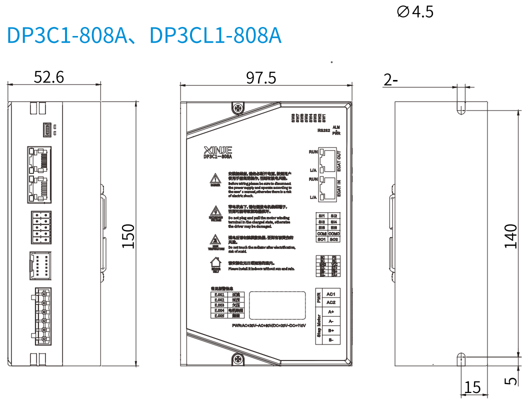
(unit: mm)

DP3C1-305/705、DP3CL1-305/705



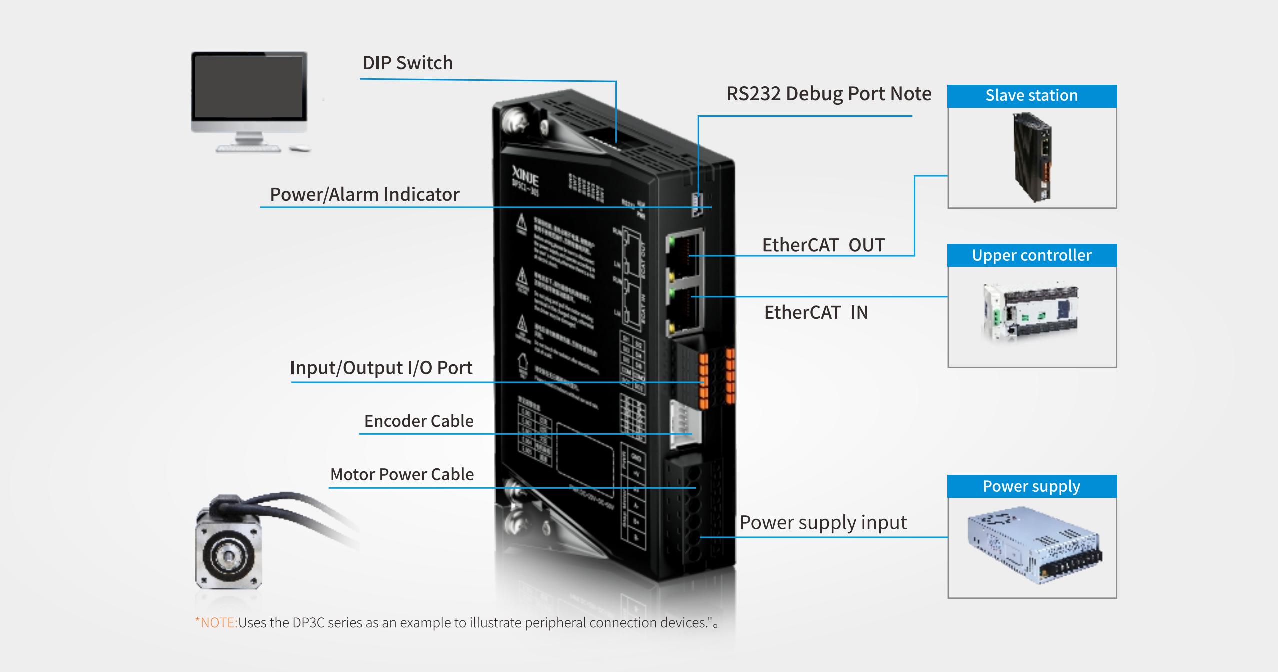
28
89
5
126.6
115.9
2-Ø4.3
5.4

DP3C1-808A、DP3CL1-808A



52.6
97.5
2-
Ø4.5
150
140
15
5

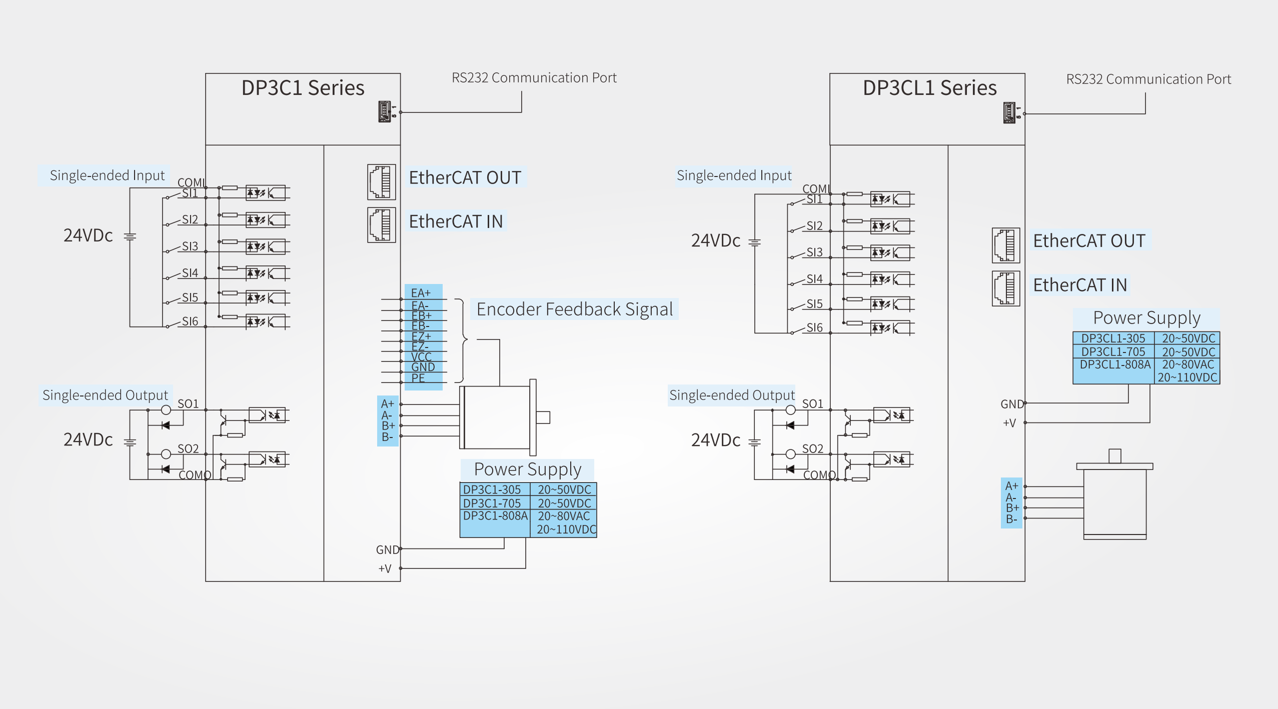
Drive Peripheral Circuit



DIP Switch
RS232 Debug Port Note
Slave station
Power/Alarm Indicator
EtherCAT OUT
Upper controller
EtherCAT IN
Input/Output I/O Port
Encoder Cable
Motor Power Cable
Power supply
Power supply input

*NOTE: Uses the DP3C series as an example to illustrate peripheral connection devices."。

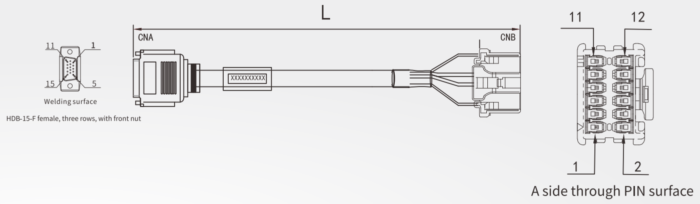
Drive Wiring Diagram



DP3C1 Series
RS232 Communication Port
Single-ended Input
COMI
SI1
SI2
SI3
SI4
SI5
SI6
24VDc
EtherCAT OUT
EtherCAT IN
EA+
EA-
EB+
EB-
EZ+
EZ-
VCC
GND
PE
Encoder Feedback Signal
Single-ended Output
SO1
SO2
COMO
24VDc
A+
A-
B+
B-
Power Supply
DP3C1-305 20~50VDC
DP3C1-705 20~50VDC
DP3C1-808A 20~80VAC 20~110VDC
GND
+V
DP3CL1 Series
RS232 Communication Port
Single-ended Input
COMI
SI1
SI2
SI3
SI4
SI5
SI6
24VDc
EtherCAT OUT
EtherCAT IN
Power Supply
DP3CL1-305 20~50VDC
DP3CL1-705 20~50VDC
DP3CL1-808A 20~80VAC 20~110VDC
Single-ended Output
SO1
SO2
COMO
24VDc
GND
+V
A+
A-
B+
B-

Accessories

Encoder Cable

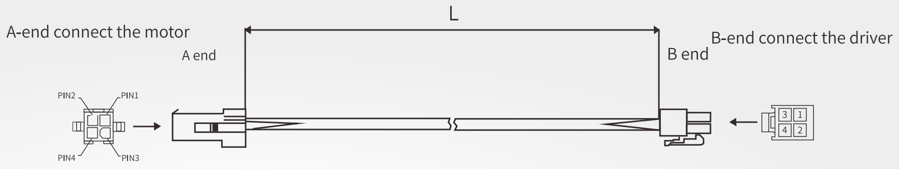

L
CNA
CNB
11
1
15
5
Welding surface
HDB-15-F female, three rows, with front nut
XXXXXXXXXX
11
12
1
2
A side through PIN surface

CNA Side	1	2	3	11	12	13
Color	Blue	Yellow	Yellow-Black	Green	Green-Black	Blue-Black
Definition	A+	VCC	GND	B+	B-	A-
CNB Side	11	5	6	9	10	12

*Note: If the Z-signal output function is required, please use the 【CP-MD-Z-K length】 encoder cable.

Model	Length (m)
CP-MD-01	1
CP-MD-02	2
CP-MD-03	3
CP-MD-05	5
CP-MD-08	8
CP-MD-10	10
CP-MD-12	12
CP-MD-16	16
CP-MD-20	20

Power cable



A end PIN	1	2	3	4
Definition	B+	A+	A-	B-
Color	Black	Brown	Blue	Yellow green
B end PIN	2	1	3	4

*Note: For customers who want to make cable by themselves, they can choose JAMP-M4-P4 accessory package, which contains the terminals of driver and motor, and can press the cables by themselves. If you need this bus driver with open-loop motor, please choose JAMP-M4 accessories, including the driver terminal, which can press the cable by yourself.

Model	Length (m)
CM-MP07-01	1
CM-MP07-02	2
CM-MP07-03	3
CM-MP07-05	5
CM-MP07-08	8
CM-MP07-10	10
CM-MP07-12	12
CM-MP07-16	16
CM-MP07-20	20

EtherCAT bus cable

Model	Length (m)
JC-CB-0P2	0.2
JC-CB-0P3	0.3
JC-CB-0P5	0.5
JC-CB-1	1
JC-CB-3	3
JC-CB-5	5
JC-CB-10	10
JC-CB-20	20

Power supply cable

Each driver will be delivered with a power cable for free. For additional needs, the purchase models are as follows:

Model	Length (m)
JC-PM-20	2

RS485 Integrated Control Stepper Driver

DP3S Series Closed-loop RS485 Communication Stepper Driver

- Featuring isolated RS485 design for reliable communication
- Built-in single-axis controller (PR) saves pulse output points of PLC
- Closed-loop control prevents missed steps
- Configurable 16-segment motion paths, supporting homing/position limit/positioning/speed/JOG functions
- Supports IO control for multi-speed control
- Supports broadcast control, one master multiple slaves

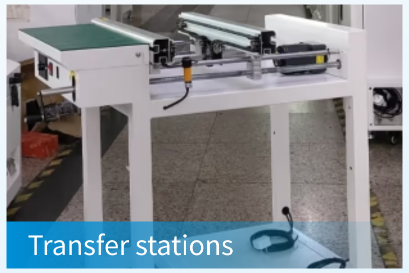
DP3SL Series Open-loop RS485 Communication Stepper Driver

- Featuring isolated RS485 design for reliable communication
- Built-in single-axis controller (PR) saves pulse output points of PLC
- Supports station number settings for up to 31 axes
- Configurable 16-segment motion paths, supporting homing/position limit/positioning/speed/JOG functions
- Supports IO control for multi-speed control.

Application Scenarios

DP3S and DP3SL series drivers are suitable for conveyor systems, transfer stations, textile industry, etc.

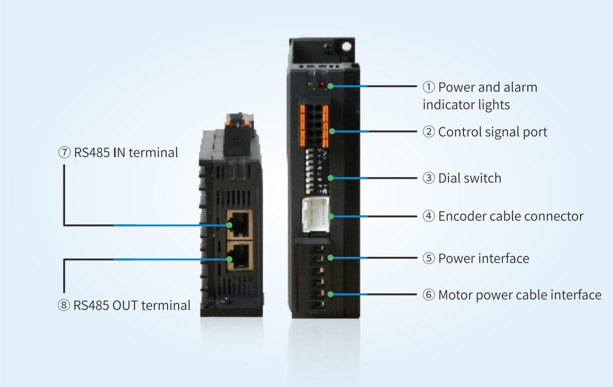
Conveyor systems


Transfer stations

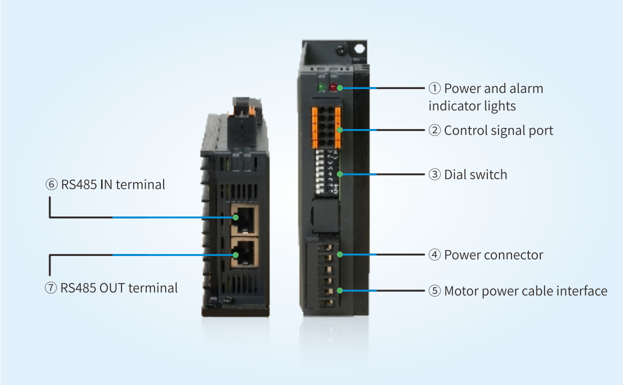
Textile industry

Hardware interface

DP3S series


① Power and alarm indicator lights
② Control signal port
③ Dial switch
④ Encoder cable connector
⑤ Power interface
⑥ Motor power cable interface
⑦ RS485 IN terminal
⑧ RS485 OUT terminal

DP3SL series

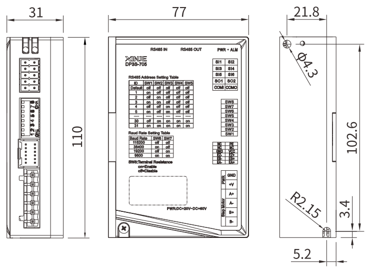

① Power and alarm indicator lights
② Control signal port
③ Dial switch
④ Power connector
⑤ Motor power cable interface
⑥ RS485 IN terminal
⑦ RS485 OUT terminal

Driver specification

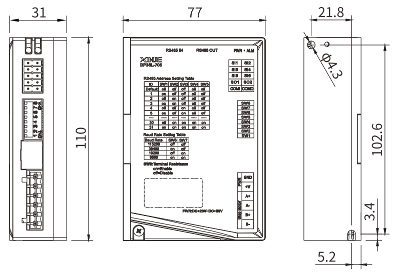
Driver model		DP3S-705	DP3S-808A	DP3SL-705	DP3SL-808A
Input power supply voltage (V)		20V~50VDC	20V~80VAC/20V~110VDC	20V~50VDC	20V~80VAC/20V~110VDC
Peak output current (A)		1-7	1-8.4	1-7	1-8.4
Matching motor (base)		42/57/60	86	42/57/60	86
Electrical specification	Station address setting	Parameter/DIP switch			
	Digital input interface	6-channel single ended input, input voltage is 12-24V			
	Digital output interface	2-channel single ended output, supporting a maximum of 50mA			
	Serial port debugging	Can be connected to the upper computer via 485 network port for debugging			
Usage environment	Use occasion	Try to avoid dust, oil stains, and corrosive gases, as well as places with high humidity and strong vibrations. Combustible gases and conductive dust are prohibited			
	Ambient temperature	0°C～50°C			
	Maximum operating temperature	60°C			
	Humidity	40%～90% RH (No condensation or water droplets)			
	Vibration	5.9m/s2 Max			
	Storage temperature	—25°C～70°C			

Driver dimension (Unit: mm)

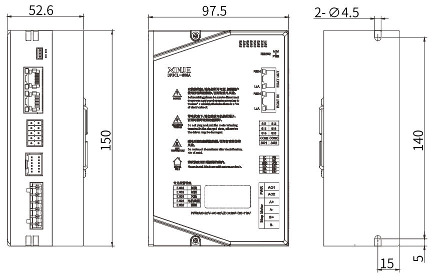
DP3S-705


31
77
21.8
110
102.6
Ø4.3
R2.15
3.4
5.2

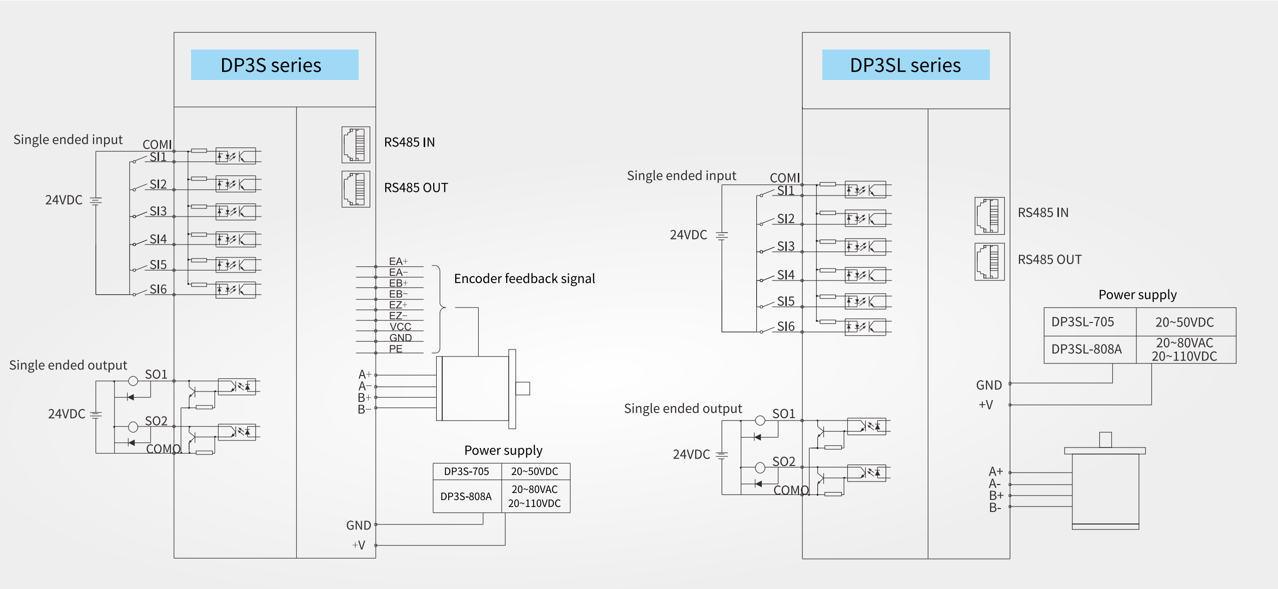
DP3SL-705


31
77
21.8
110
102.6
Ø4.3
3.4
5.2

DP3S-808A、DP3SL-808A

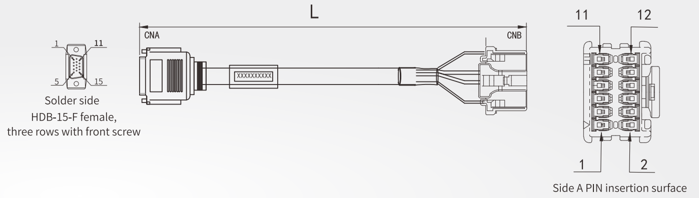

52.6
97.5
2-Ø4.5
150
140
15
5

Driver wiring diagram


DP3S series
Single ended input
COMI
SI1
SI2
SI3
SI4
SI5
SI6
24VDC
Single ended output
SO1
SO2
COMO
RS485 IN
RS485 OUT
EA+
EA-
EB+
EB-
EZ+
EZ-
VCC
GND
PE
Encoder feedback signal
A+
A-
B+
B-
Power supply
DP3S-705
20~50VDC
DP3S-808A
20~80VAC
20~110VDC
GND
+V
DP3SL series
DP3SL-705
DP3SL-808A

Accessories

Encoder cable


L
CNA
CNB
1
5
11
15
Solder side
HDB-15-F female,
three rows with front screw
11
12
1
2
Side A PIN insertion surface

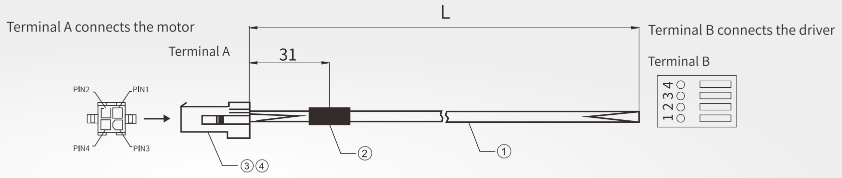
CAN side	1	2	3	11	12	13
Color	Blue	Yellow	Yellow black	Green	Green black	Blue black
Definition	A+	VCC	GND	B+	B-	A-
CNB side	11	5	6	9	10	12

*Note: If Z-signal output function is required, please equip the encoder cable CP-MD-Z-length.

Model	Length L (m)
CP-MD-2	2
CP-MD-3	3
CP-MD-5	5
CP-MD-8	8

Model	Length L (m)
CP-MD-10	10
CP-MD-12	12
CP-MD-16	16
CP-MD-20	20

Power cable


Terminal A connects the motor
Terminal A
L
31
Terminal B connects the driver
Terminal B
PIN2
PIN1
PIN4
PIN3
1 2 3 4
③④
②
①

Terminal A PIN	1	2	3	4
Definition	B+	A+	A -	B-

*Note: For customers who need to make their own power cables, they can choose the accessory kit JA-CM-P4, which includes terminals that match the motor.

Model	Length L (m)
CM-P07B-2	2
CM-P07B-3	3
CM-P07B-5	5
CM-P07B-8	8

Model	Length L (m)
CM-P07B-10	10
CM-P07B-12	12
CM-P07B-16	16
CM-P07B-20	20

Pulse type stepping driver

DP3F1 closed-loop pulse stepping driver

- Closed loop control and torque lifting to prevent step loss
- Higher running speed and acceleration
- More stable operation at low speed
- The plug-in wiring is simple and fast
- Pulse and direction input voltage support 5V and 24V
- Comprehensive overvoltage,overcurrent, undervoltage and short circuit protection functions

Applicable occasions: various small and medium-sized automation equipment and instruments, such as engraving machine, stripping machine, cutting machine, etc.

DP3L1 open loop pulse stepping driver

- Smaller size and space saving
- Reliable quality and excellent performance
- Large output, fast speed, stable operation and low temperature rising
- Pulse direction supports 5~24V
- New open loop IO stepping driver:
  Dial code speed regulation, IO trigger, stable start and stop, uniform speed, widely used in conveying equipment, docking station, PCB feeder

Applicable occasions:all kinds of small and medium-sized automation equipment and instruments, such as labeling machine,3C, photovoltaic, lithium battery, bearing, labeling canned, winding machine

DP3L high voltage open loop pulse stepping driver

- Supply voltage 220~240VAC
- Pulse and direction input voltage support 5V and 24V
- New control algorithm, significantly improved performance
  The medium and high speed torque is 10 ~ 30% higher than the original product

Applicable occasions: slicer, clothing packaging machine, non-woven bag making machine, glove machine, etc.

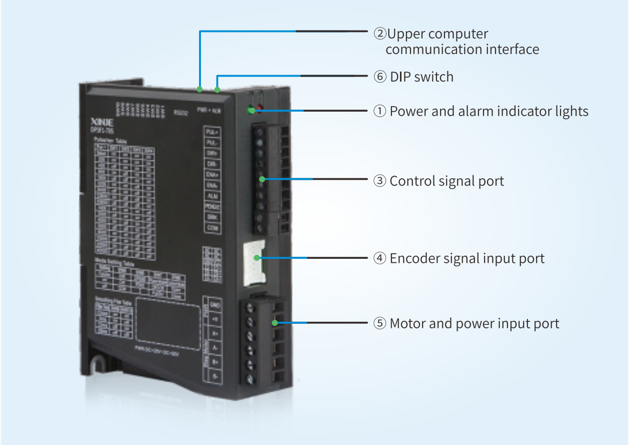
Driver specification

		DP3F closed-loop pulse type			
Driver model		DP3F1-305	DP3F1-705	DP3F1-805A	DP3F1-808A
Basic specification	Input power supply voltage (V)	DC 20~50	DC 20~50	DC 20~80/AC20~50	AC 20~100/AC20~80
	Output current peak value (A)	1~4	1~7	1~8.4	1~8.4
	Adaptive motor (base)	42	57/86	86	86
	Dimension (mm)	110*77*31	110*77*31	141.5*97.5*56.0	141.5*97.5*56.0
	Stepping pulse frequency (kHz)	24V signal 150K, 5V differential signal 150K			
	Control signal input voltage (VDC)	Support 5V and 24V (DC)			
Use environment	Use occasion	Avoid dust, oil mist and corrosive gas			
	Ambient temperature	-10°C~50°C			
	Max working temperature	60°C			
	Humidity	40%～90% RH (no condensation or water droplets)			
	Vibration	5.9m/s² Max			
	Storage temperature	-20°C~65°C			

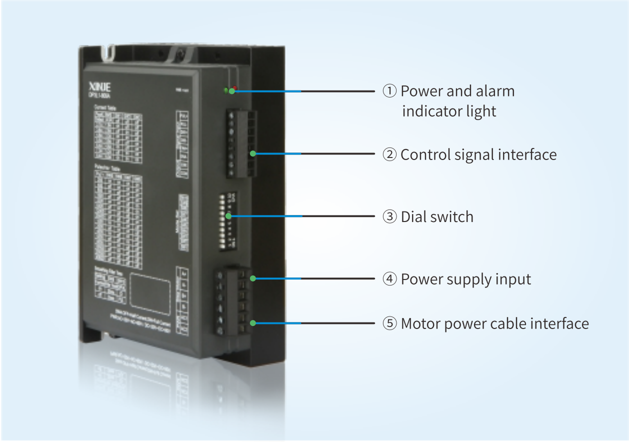
		DP3L1 economic open-loop pulse type					DP3L1 open loop IO type	DP3L high voltage open loop pulse type
Driver model		DP3L1-224	DP3L1-565	DP3L1-565A	DP3L1-805A	DP3L1-808A	DP3L1-565-IO	DP3L-11022A3
Basic specification	Input power supply voltage (V)	DC20~40	DC20~50	DC20~80/AC20~50	DC20-80/AC20-50	DC20~110/AC20~80	DC20~50	AC200~240
	Output current peak value (A)	0.5~2.2	1.4~5.6	1.4~5.6	2.7~8.4	2.7~8.4	1.4~5.6	3.1~11.3
	Adaptive motor (base)	42	57/86	42/57	86	86	57/86	86/110/130
	Dimension (mm)	80*55*21.3	105*75.8*27.8	105*75.8*27.8	150*97.5*52.6	150*97.5*56	105*75.8*27.8	199.5*137*79
	Stepping pulse frequency (kHz)	150 Khz						
	Control signal input voltage (VDC)	5-24V						5/24V(dial switch)
Use environment	Use occasion	Avoid dust, oil mist and corrosive gas						
	Ambient temperature	0°C~50°C						
	Max working temperature	60°C						
	Humidity	40%～90% RH(no condensation or water droplets)						
	Vibration	5.9m/s² Max						
	Storage temperature	-20°C~65°C						

Hardware interface

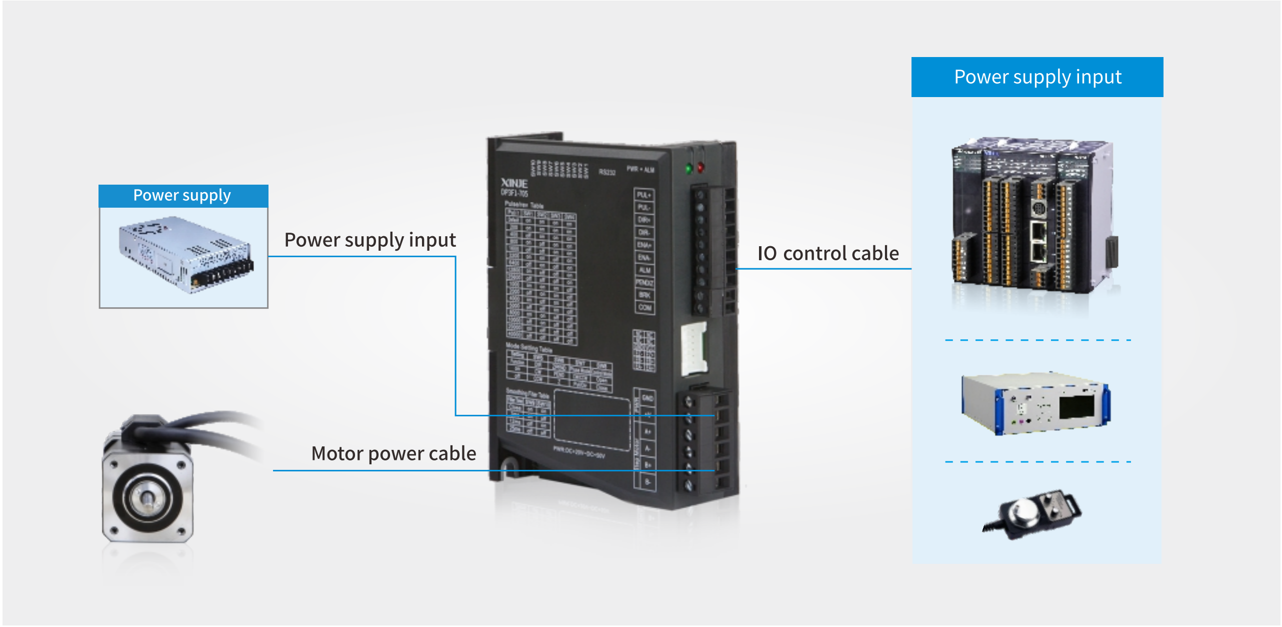
DP3F1 series


②Upper computer communication interface
⑥ DIP switch
① Power and alarm indicator lights
③ Control signal port
④ Encoder signal input port
⑤ Motor and power input port

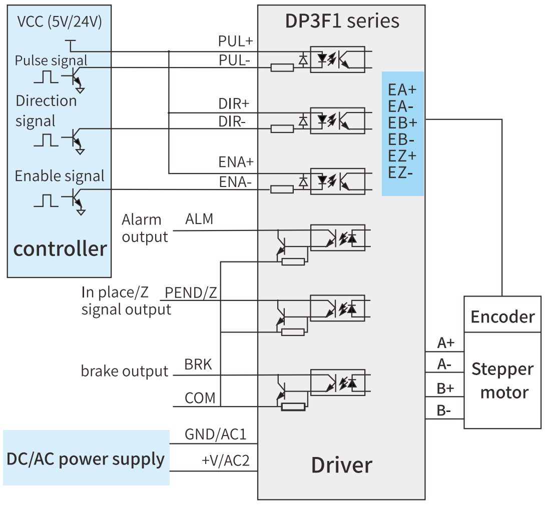
DP3L1 series


① Power and alarm indicator light
② Control signal interface
③ Dial switch
④ Power supply input
⑤ Motor power cable interface

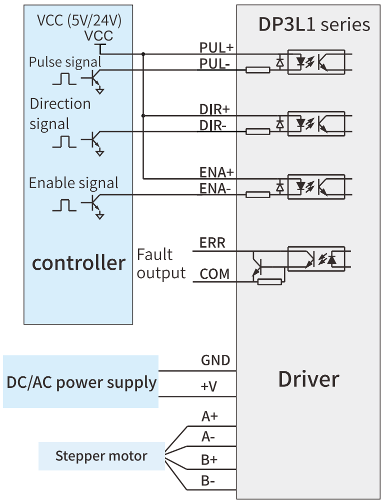
Driver peripheral circuit


Power supply
Power supply input
Motor power cable
IO control cable
Power supply input

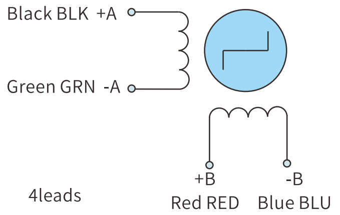
Driver wiring diagram


VCC (5V/24V)
Pulse signal
Direction signal
Enable signal
controller
Alarm output
In place/Z signal output
brake output
DC/AC power supply
PUL+
PUL-
DIR+
DIR-
ENA+
ENA-
ALM
PEND/Z
BRK
COM
GND/AC1
+V/AC2
DP3F1 series
EA+
EA-
EB+
EB-
EZ+
EZ-
Encoder
A+
A-
B+
B-
Stepper motor
Driver

Closed-loop system wiring diagram


VCC (5V/24V)
VCC
Pulse signal
Direction signal
Enable signal
controller
Fault output
PUL+
PUL-
DIR+
DIR-
ENA+
ENA-
ERR
COM
DP3L1 series
DC/AC power supply
GND
+V
Driver
Stepper motor
A+
A-
B+
B-

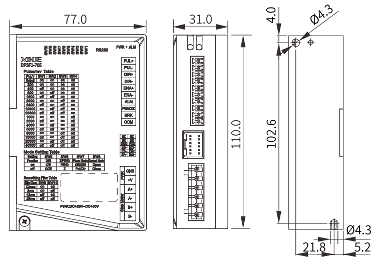
Open loop system wiring diagram


Black BLK +A
Green GRN -A
4leads
+B
Red RED
-B
Blue BLU

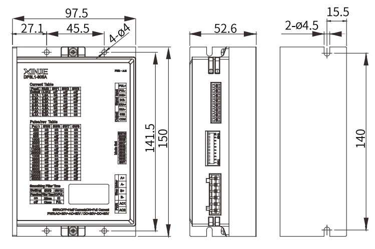
Motor wiring diagram

Driver dimension (Unit: mm)

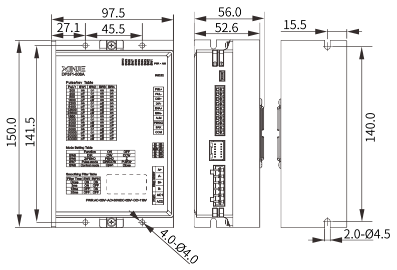
DP3F1-305/DP3F1-705


77.0
31.0
4.0
Ø4.3
110.0
102.6
Ø4.3
21.8
5.2

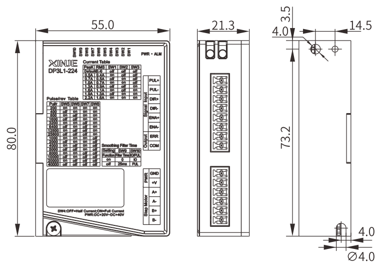
DP3F1-805A


97.5
27.1
45.5
4-Ø4
52.6
2-Ø4.5
15.5
141.5
150
140

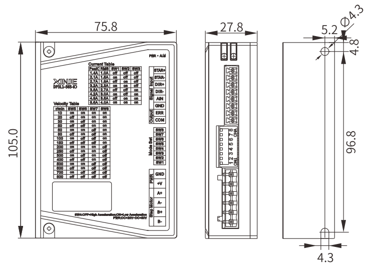
DP3F1-808A


97.5
27.1
45.5
56.0
52.6
15.5
150.0
141.5
140.0
4.0-Ø4.0
2.0-Ø4.5

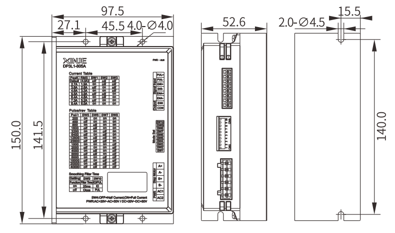
DP3L1-224


55.0
21.3
3.5
4.0
14.5
80.0
73.2
4.0
Ø4.0

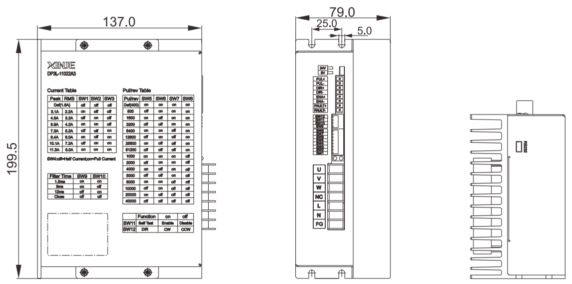
DP3L1-565/DP3L1-565-IO/DP3L1-565A


75.8
27.8
5.2
Ø4.3
4.8
105.0
96.8
4.3

DP3L1-805A/DP3L1-808A


97.5
27.1
45.5
4.0-Ø4.0
52.6
2.0-Ø4.5
15.5
150.0
141.5
140.0

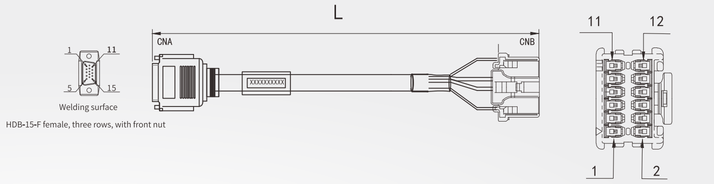
DP3L-11022A3


137.0
199.5
79.0
25.0
5.0

Accessories

*Note: suitable for DP3F1 series

Encoder cable



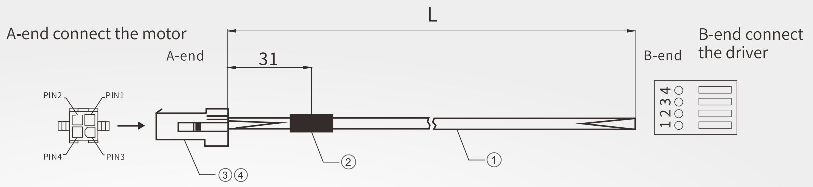
A side through PIN surface

Model	Length L(m)
CP-MD-2	2
CP-MD-3	3
CP-MD-5	5
CP-MD-8	8
CP-MD-10	10
CP-MD-12	12
CP-MD-16	16
CP-MD-20	20

CNAside	1	2	3	11	12	13
Color	Blue	Yellow	Yellow black	Green	Green black	Blue black
Definition	A+	VCC	GND	B+	B-	A-
CNBside	11	5	6	9	10	12

*Note: If Z signal output function is required, please use encoder cable [CP-MD-Z-length].

Length



A-endPIN	1	2	3	4
Definition	B+	A+	A-	B-

*Note: For customers who need make cable by themseleves, they can buy accessory package JA-CM-P4, which includes the terminals suitable for the motor.

Model	Length L(m)
CM-P07B-2	2
CM-P07B-3	3
CM-P07B-5	5
CM-P07B-8	8
CM-P07B-10	10
CM-P07B-12	12
CM-P07B-16	16
CM-P07B-20	20

Stepping motor

Motor naming rule

MP3- 57 H □ □ 080 -□

① ② ③ ④ ⑤ ⑥ ⑦

① Name

Sign	Product name
MP3	Stepping motor

⑦ General customized code

Sign	Type
Vacant	Standard
B	Right angle flat (without keyway)shaft
D	Shaft diameter change
L	Shaft length change
Z	Z phase output closed-loop motor

② Base number

Sign	Base number
20	20 base
28	28 base
35	35 base
42	42 base
57	57 base
60	60 base
86	86 base
110	110 base
130	130 base

③ Open close loop type

Sign	Type
H	Standard open loop motor
T	Optical encoder closed-loop motor

④ Special motor type

Sign	Type
I	Waterproof motor
S	Double output shaft motor

⑤ Brake type

Sign	Power-off brake
Vacant	Brake type
Z	Power-off brake

⑥ Holding torque

Sign	Static moment
0028	0.028N.m
0115	0.115N.m
005	0.5 N.m
008	0.8 N.m
013	1.3 N.m
023	2.3 N.m
030	3.0 N.m
042	4.2 N.m
045	4.5 N.m

Sign	Static moment
080	8.0 N.m
085	8.5 N.m
100	10 N.m
120	12 N.m
160	16 N.m
200	20 N.m
280	28 N.m
350	35 N.m
500	50 N.m

*Note: The body length of the closed-loop motor needs to add the encoder length based on the open-loop motor.
The encoder cable lengths include: 42 motor 18mm, 57 motor 20mm, 60 motor 22mm, 86 motor 26mm.

Adaptation table of closed-loop motor and driver

Closed loop motor model		Step angle (°)	Static moment (N.m)	Phase current (A)	Motor shaft	Shaft diameter (mm)	Matched driver
Standard series	Brake series						
MP3-42T002	MP3-42TZ002	1.8	0.2	1.33	Flat	5	DP3F1/C/C1-305 DP3S-705
MP3-42T004	MP3-42TZ004	1.8	0.5	1.70	Flat	5	
MP3-42T005	MP3-42TZ005	1.8	0.5	1.68	Flat	5	
MP3-42T008	MP3-42TZ008	1.8	0.8	1.7	Flat	5	
MP3-57T013	MP3-57TZ013	1.8	1.3	4	Flat	8	DP3F1/C/C1/S-705
MP3-57T013-D6.35	MP3-57TZ013-D6.35	1.8	1.3	4	Flat	6.35	
MP3-57T023	MP3-57TZ023	1.8	2.3	5	Flat	8	
MP3-57T030	MP3-57TZ030	1.8	3	5	Flat	8	
MP3-57T030-4A	MP3-57TZ030-4A	1.8	3	4	Flat	8	
MP3-60T022	MP3-60TZ022	1.8	2	5	Flat	8	
MP3-60T030	MP3-60TZ030	1.8	3	5	Flat	8	
MP3-60T040	MP3-60TZ040	1.8	4.0	5	Flat	8	
MP3-86T045	MP3-86TZ045	1.8	4.5	6	Flat Key 5*25	14	DP3C-808 DP3F1-805A DP3F1/C1/S-808A
MP3-86T080	MP3-86TZ080	1.8	8	6	Flat Key 5*25	14	
MP3-86T085	MP3-86TZ085	1.8	8.5	6	Flat Key 5*25	14	
MP3-86T085-D12.7	MP3-86TZ085-D12.7	1.8	8.5	6A	Flat Key 5*25	12.7	
MP3-86T100	MP3-86TZ100	1.8	10	6	Flat Key 5*25	14	
MP3-86T120	MP3-86TZ120	1.8	12	6	Flat Key 5*25	14	

Adaptation table of three-phase open loop motor and driver

Three phase open loop motor model		Step angle (°)	Static moment (N.m)	Phase current (A)	Motor shaft	Shaft diameter (mm)	Matched driver
Standard series	Brake series						
MP3-110H120	MP3-110HZ120	1.2	12	6	Flat Key 6*30	19	DP3L-11022A3
MP3-110H160	MP3-110HZ160	1.2	16	6.4	Flat Key 6*30	19	
MP3-110H200	MP3-110HZ200	1.2	20	6.9	Flat Key6*30	19	
MP3-110H250	MP3-110HZ250	1.2	25	6	Flat Key6*25	19	
MP3-130H280	MP3-130HZ280	1.2	28	6.9	Flat Key 8*36	24	
MP3-130H350	MP3-130HZ350	1.2	35	6.9	Flat Key 8*36	24	
MP3-130H500	MP3-130HZ500	1.2	50	6.9	Flat Key 8*36	24	

Adaptation table of two-phase open loop motor and driver

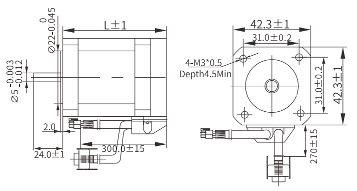
Open loop motor model		Step angle (°)	Static moment (N.m)	Phase current (A)	Motor shaft	Shaft diameter (mm)	Matched driver
Standard series	Brake series						
MP3-20H0028	/	1.8	0.028	0.2	Flat	4	DP3CL-305 DP3L1-224 DP3CL1-305 DP3SL-705
MP3-20H0048	/	1.8	0.048	0.65	Flat	4	
MP3-28H0085	MP3-28HZ0085	1.8	0.085	0.7	Flat	5	
MP3-28H0115	MP3-28HZ0115	1.8	0.115	1	Flat	5	
MP3-28H017	MP3-28HZ017	1.8	0.17	1	Flat	5	
MP3-35H017	MP3-35HZ017	1.8	0.17	1	Flat	5	
MP3-35H026	MP3-35HZ026	1.8	0.26	1	Flat	5	
MP3-35H042	MP3-35HZ042	1.8	0.42	1.00	Flat	5	
MP3-42H002	MP3-42HZ002	1.8	0.22	1.33	Flat	5	
MP3-42H004	MP3-42HZ004	1.8	0.46	1.7	Flat	5	
MP3-42H005	MP3-42HZ005	1.8	0.5	1.68	Flat	5	
MP3-42H008	MP3-42HZ008	1.8	0.8	1.7	Flat	5	
MP3-57H006	MP3-57HZ006	1.8	0.6	3	Flat	6.35	DP3L1-565 DP3CL-705 DP3CL1-705 DP3SL-705
MP3-57H013	MP3-57HZ013	1.8	1.3	4	Flat	8	
MP3-57H013-D6.35	MP3-57HZ013-D6.35	1.8	1.2	4	Flat	6.35	
MP3-57H023	MP3-57HZ023	1.8	2.3	5	Flat	8	
MP3-57H030	MP3-57HZ030	1.8	3	5	Flat	8	
MP3-57H030-4A	MP3-57HZ030-4A	1.8	3	4	Flat	8	
MP3-60H022	MP3-60HZ022	1.8	2	5	Flat	8	
MP3-60H030	MP3-60HZ030	1.8	3	5	Flat	8	
MP3-86H035	MP3-86HZ035	1.8	3.5	4	Flat Key 5*25	14	DP3L1-808A DP3CL-808 DP3CL-808A DP3CL1-808A DP3SL-808A
MP3-86H035-D12.7	MP3-86HZ035-D12.7	1.8	3.5	4	Flat Key 5*25	12.7	
MP3-86H045	MP3-86HZ045	1.8	4.5	6	Flat Key 5*25	14	
MP3-86H045-D12.7	MP3-86HZ045-D12.7	1.8	4.5	6	Flat Key 5*25	12.7	
MP3-86H080	MP3-86HZ080	1.8	8	5	Flat Key 5*25	14	
MP3-86H080-D12.7	MP3-86HZ080-D12.7	1.8	8	5	Flat Key 5*25	12.7	
MP3-86H085	MP3-86HZ085	1.8	8.5	6	Flat Key 5*25	14	
MP3-86H085-D12.7	MP3-86HZ085-D12.7	1.8	8.5	6	Flat Key 5*25	12.7	
MP3-86H100	MP3-86HZ100	1.8	10	6	Flat Key 5*25	14	
MP3-86H120	MP3-86HZ120	1.8	12	6	Flat Key 5*25	14	

Motor mounting dimension (Unit: mm)

Closed-loop motor

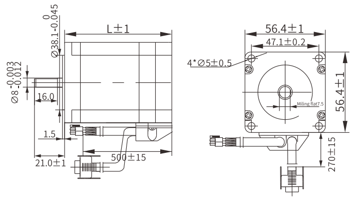
42 series

Model	L(mm)	
	General	With brake
MP3-42T002	53	84
MP3-42T004	60	91
MP3-42T005	66	97
MP3-42T008	78	109


L±1
42.3±1
31.0±0.2
4-M3*0.5
Depth4.5Min
2.0
24.0±1
300.0±15
270±15

57 series

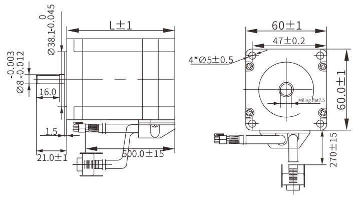
Model	L(mm)	
	General	With brake
MP3-57T013	75	115
MP3-57T023	95	135
MP3-57T030-4A	130	170


L±1
56.4±1
47.1±0.2
4*Ø5±0.5
16.0
1.5
21.0±1
500±15
56.4±1
270±15

Large 57 series

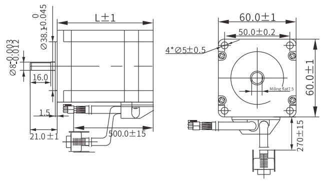
Model	L(mm)	
	General	With brake
MP3-57T030	107	147

*Note: This motor adopts the body width of 60 motor and the front cover of 57 motor. The installation method is the same as that of 57 motor. With a relatively short body length, the holding torque of 3N can be achieved, which improves the stability of the motor.


L±1
60±1
47±0.2
4*Ø5±0.5
16.0
1.5
21.0±1
500.0±15
60.0±1
270±15

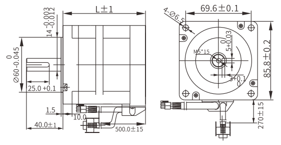
60 series

Model	L(mm)	
	General	With brake
MP3-60T022	87	117
MP3-60T030	107	147
MP3-60T040	130	160


L±1
60.0±1
50.0±0.2
4*Ø5±0.5
16.0
1.5
21.0±1
500.0±15
60.0±1
270±15

86 series

Model	L(mm)	
	General	With brake
MP3-86T045	106	143
MP3-86T080	124	161
MP3-86T085	144	181
MP3-86T100	155	192
MP3-86T120	176	213

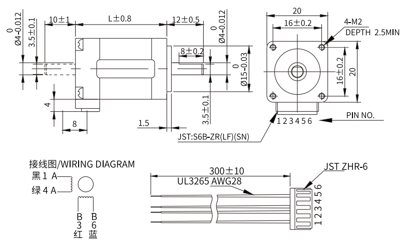

L±1
69.6±0.1
85.8±0.2
270±15

Motor mounting dimension (Unit: mm)

Two-phase open loop motor

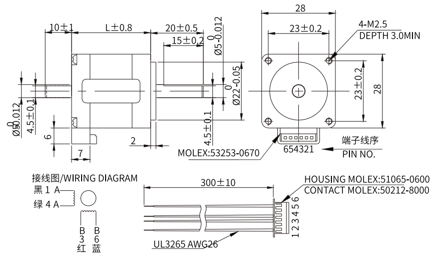
20 series

Model	L(mm)	
	Normal	With brake
MP3-20H0028	27.2	/
MP3-20H0048	37.8	/


L±0.8
4-M2
DEPTH 2.5MIN
16±0.2
20
123456
PIN NO.
JST:S6B-ZR(LF)(SN)
接线图/WIRING DIAGRAM
300±10
UL3265 AWG28
JST ZHR-6

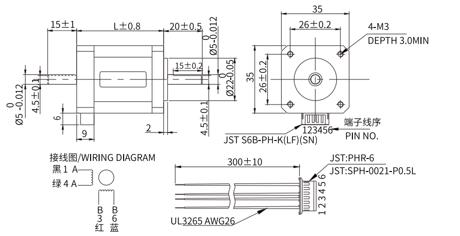
28 series

Model	L(mm)	
	Normal	With brake
MP3-28H0085	30.1	62.1
MP3-28H0115	39.2	71.2
MP3-28H017	50.4	82.4


L±0.8
28
23±0.2
4-M2.5
DEPTH 3.0MIN
MOLEX:53253-0670
654321
PIN NO.
接线图/WIRING DIAGRAM
300±10
HOUSING MOLEX:51065-0600
CONTACT MOLEX:50212-8000
UL3265 AWG26

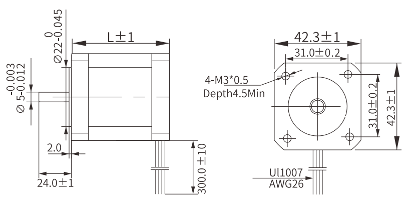
35 series

Model	L(mm)	
	Normal	With brake
MP3-35H017	31.4	58.4
MP3-35H026	42.3	69.3
MP3-35H042	51.7	78.7


L±0.8
35
26±0.2
4-M3
DEPTH 3.0MIN
JST S6B-PH-K(LF)(SN)
PIN NO.
接线图/WIRING DIAGRAM
300±10
UL3265 AWG26
JST:PHR-6
JST:SPH-002T-P0.5L

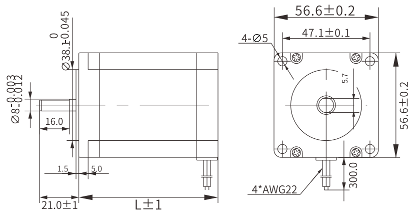
42 series

Model	L(mm)	
	Normal	With brake
MP3-42H002	33	64
MP3-42H004	40	71
MP3-42H005	48	79
MP3-42H008	60	91


L±1
42.3±1
31.0±0.2
4-M3*0.5
Depth4.5Min
2.0
24.0±1
300.0±10
UI1007
AWG26

57 series

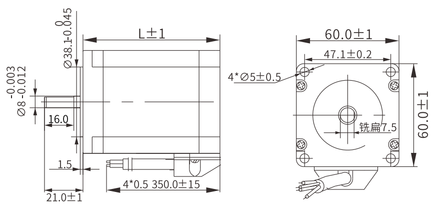
Model	L(mm)	
	Normal	With brake
MP3-57H013	56	96
MP3-57H023	76	115
MP3-57H030-4A	110	150


56.6±0.2
47.1±0.1
4-Ø5
16.0
1.5
21.0±1
L±1
4*AWG22
300.0
56.6±0.2

Large 57 series

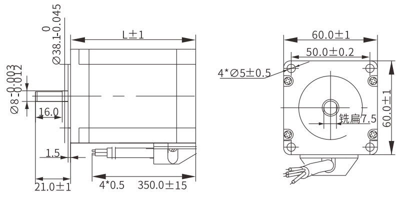
Model	L(mm)	
	Normal	With brake
MP3-57H030	88	127

*Note: This motor has a body width of 60 motors, a front cover of 57 motors, installation method is same to 57 motors. The holding torque of 3N can be achieved by using a relatively short body length, improving the motor stability.


L±1
60.0±1
47.1±0.2
4*Ø5±0.5
16.0
1.5
21.0±1
4*0.5 350.0±15
60.0±1

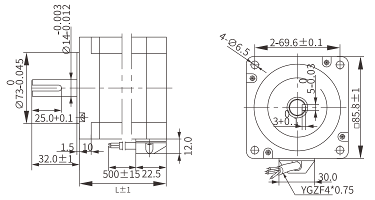
60 series

Model	L(mm)	
	Normal	With brake
MP3-60H022	67	106
MP3-60H030	88	127


L±1
60.0±1
50.0±0.2
4*Ø5±0.5
16.0
1.5
21.0±1
4*0.5
350.0±15
60.0±1

86 series

Model	L(mm)	
	Normal	With brake
MP3-86H035	65	108
MP3-86H045	80	123
MP3-86H080	98	141
MP3-86H085	118	161
MP3-86H100	129	172
MP3-86H120	150	193


25.0±0.1
1.5
10
32.0±1
500±15
22.5
L±1
12.0
2-69.6±0.1
85.8±1
30.0
YGZF4*0.75

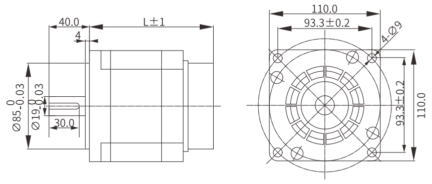
Three-phase open loop motor

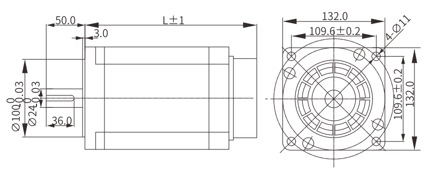
110 series

Model	L(mm)	
	Normal	With brake
MP3-110H120	151	219
MP3-110H160	185	253
MP3-110H200	219	287
MP3-110H250	194	/

130 series

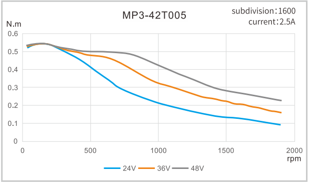
Model	L(mm)	
	Normal	With brake
MP3-130H280	222	275
MP3-130H350	254	307
MP3-130H500	319	352

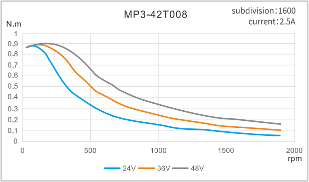

40.0
4
L±1
Ø85-0.03 0
Ø19-0.03 0
30.0
110.0
93.3±0.2
4-Ø9
93.3±0.2
110.0

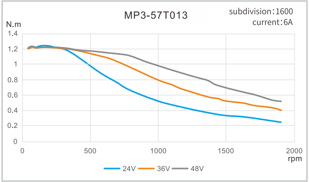

50.0
3.0
L±1
Ø100-0.03 0
Ø24-0.03 0
36.0
132.0
109.6±0.2
4-Ø11
109.6±0.2
132.0

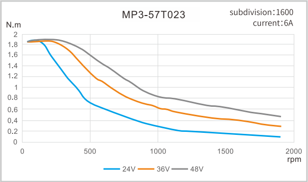
Motor torque frequency characteristic diagram

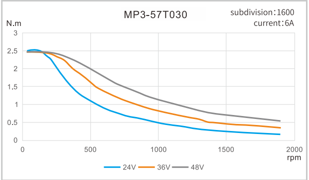
Closed-loop series (the follow current is peak current)

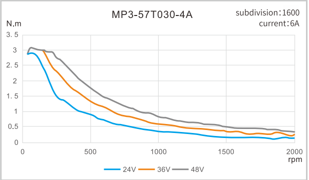


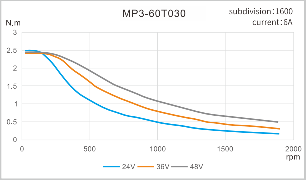


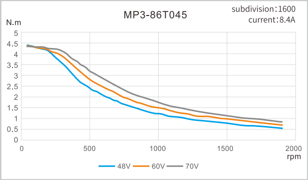


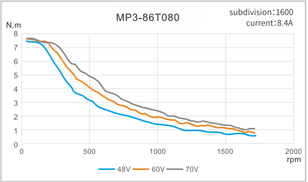


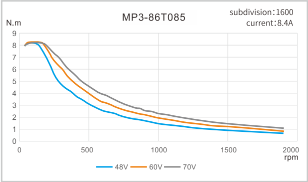


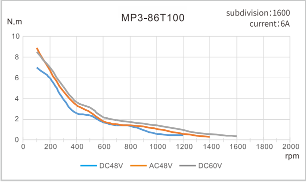


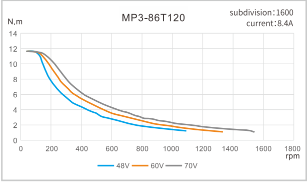






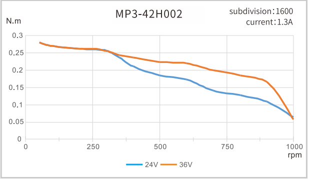


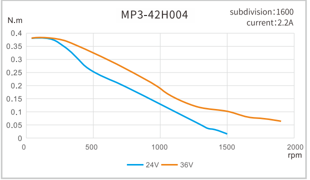


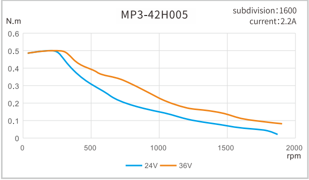


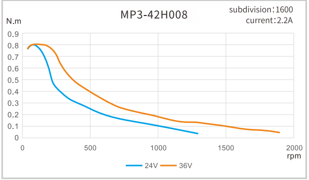
Motor torque frequency characteristic diagram

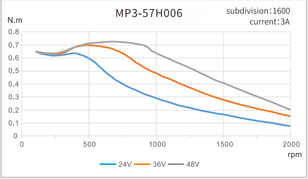
Two-phase open loop series (the follow current is peak current)

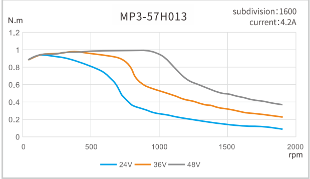


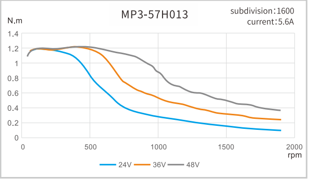


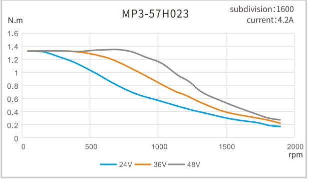


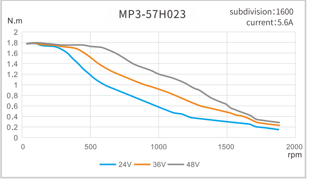


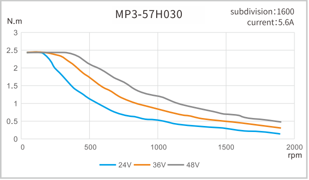


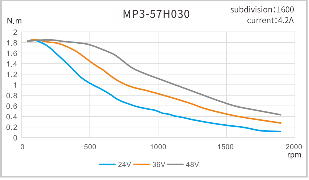


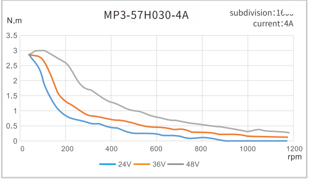


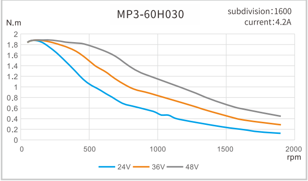


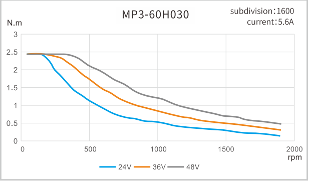


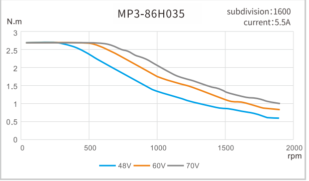


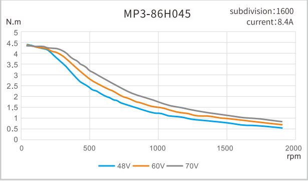


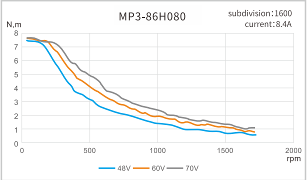


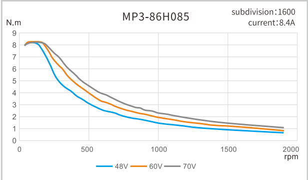


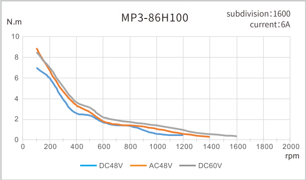


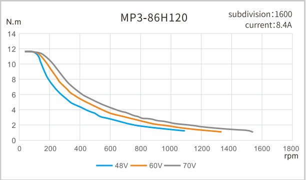




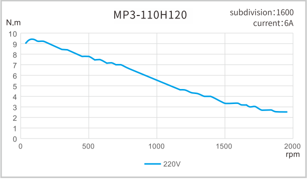


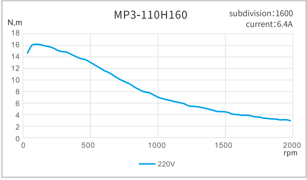


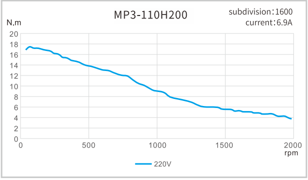


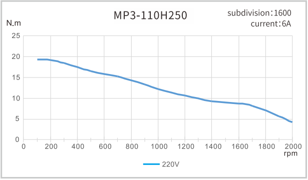


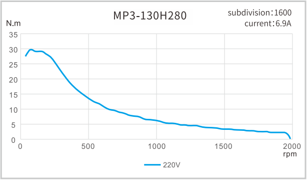
Three-phase open loop series (the follow current is peak current)

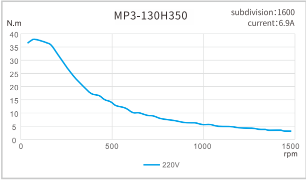


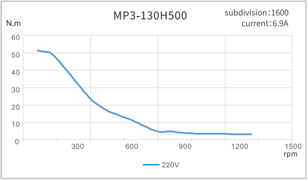












07

Vision System

XINJE VISION STUDIO | Vision System Components

XINJE VISION STUDIO 3.7

Designed Specifically for Machine Vision Engineers

XINJEVISION STUDIO 3.7, as Xinje's self-developed new-generation machine vision application development platform, boasts powerful functionality and flexibility, capable of meeting various complex machine vision application needs. Through drag-and-drop programming and rich HMI interactive modules, it lowers the development barrier, improves development efficiency, and injects new vitality into the development of the machine vision field.

100+	Industry Solutions	*5 Years*	Dedicated R&D
Millisecond-level	Execution Speed	*Hundreds of Millions of Times*	Stable Operation

Advantages

- Drag-and-drop programming, no coding required. Simple dataflow linking and an intuitive, user-friendly interface.
- Built-in calibration algorithms for hand-eye calibration with robots, efficiently achieving pick-and-place and other functions.
- Integrated HMI functionality supports communication with PLCs, enabling mixed programming of PLC interfaces and vision interfaces, reducing costs and improving integration.
- Supports JS script programming, offering powerful functionality and high degree of freedom.
- Provides comprehensive learning material packages to help users get started quickly.

No Programming Required

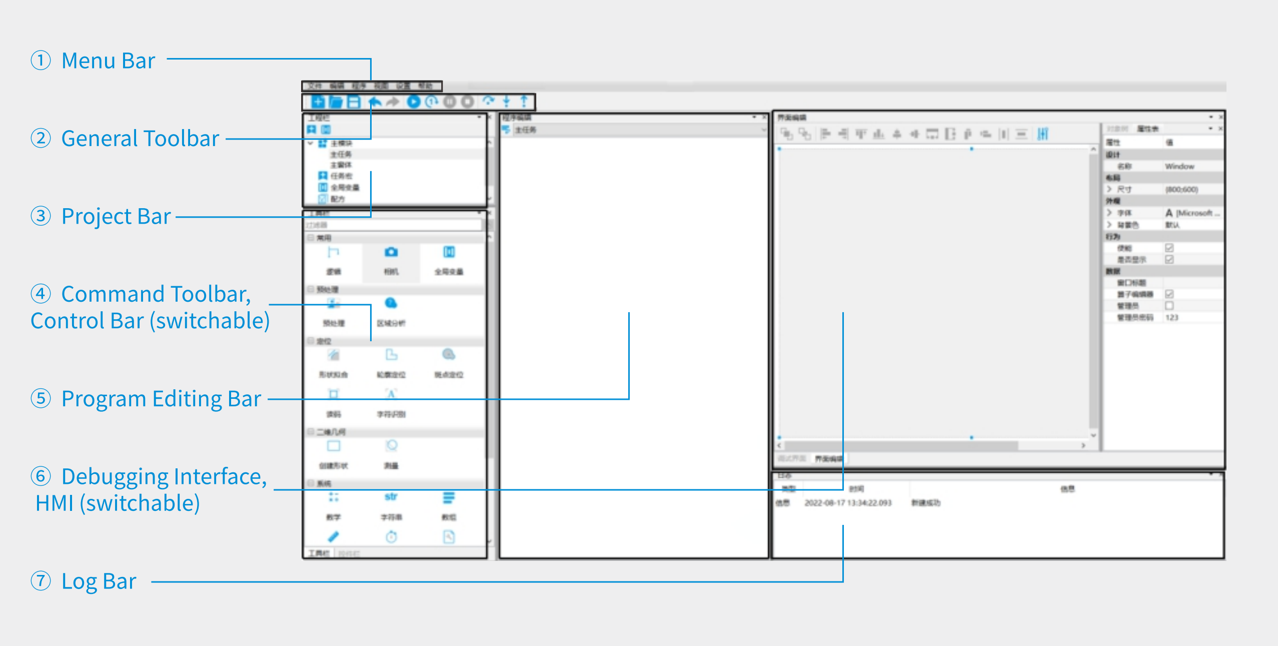
Drag Icons

Easy Creation

XINJE VISION STUDIO 3.7

Software Interface

XINJEVISION STUDIO 3.7 possesses various functions such as camera acquisition, image preprocessing, region analysis, detection and positioning, etc.


① Menu Bar
② General Toolbar
③ Project Bar
④ Command Toolbar, Control Bar (switchable)
⑤ Program Editing Bar
⑥ Debugging Interface, HMI (switchable)
⑦ Log Bar

Tool Types

Common

- Logic
- Camera
- Variable

Preprocessing

- Preprocessing
- Region Analysis
- Drawing

Positioning

- Shape Fitting
- Contour Positioning
- Blob Positioning
- Grayscale Matching
- Motion Calibration
- Code Reading
- Character Recognition

2D Geometry

- Create Shape
- Measurement

System

- Math
- String
- Array
- Unit Conversion
- Time Manager
- Other

Communication

- Modbus Communication
- Serial Port
- TCP/IP

Accessories

Area Scan Industrial Camera

The series of area scan industrial cameras offers multiple resolution options from 0.4MP to 20MP, supporting both global shutter and rolling shutter modes. Its powerful ISP algorithm functions include Gamma correction, noise reduction, sharpening, and SPC correction, ensuring excellent image quality.
Furthermore, the SV series cameras are compatible with GigEVision, USB3.0, and CameraLink protocols, support POE functionality, and adhere to the GenICam standard, enabling high-quality image mixing and processing.

Model Parameters

Name	Model	Resolution	CMOS Size(")	Frame Rate (fps)	Shutter Mode	Color	Power Interface	Lens Interface
Area Scan Industrial Camera	SV-H40M-C07	40万(720 × 540)	1/2.9	300	Global Shutter	Monochrome	6pin Hirose Interface	C-Mount
	SV-H40C-C07	40万(720 × 540)	1/2.9	300	Global Shutter	Color	6pin Hirose Interface	C-Mount
	SV-H130M-C	130万(1280×1024)	1/2	60	Global Shutter	Monochrome	6pin Hirose Interface	C-Mount
	SV-H130C-C	130万(1280×1024)	1/2	60	Global Shutter	Color	6pin Hirose Interface	C-Mount
	SV-H500M-C	500万(2448×2048)	2/3	24	Global Shutter	Monochrome	6pin Hirose Interface	C-Mount
	SV-H500C-C	500万(2448×2048)	2/3	24	Global Shutter	Color	6pin Hirose Interface	C-Mount
	SV-H600M-C	600万(3072×2048)	1/1.8	19	Rolling Shutter	Monochrome	6pin Hirose Interface	C-Mount
	SV-H600C-C	600万(3072×2048)	1/1.8	19	Rolling Shutter	Color	6pin Hirose Interface	C-Mount
	SV-HA20M-GC	1200万(4096×3000)	1.1	9	Global Shutter	Monochrome	6pin Hirose Interface	C-Mount
	SV-HA20C-GC	1200万(4096×3000)	1.1	9	Global Shutter	Color	6pin Hirose Interface	C-Mount
	SV-HA20M-C05	1200万(4000×3000)	1/1.7	10	Rolling Shutter	Monochrome	6pin Hirose Interface	C-Mount
	SV-HA20C-C03	1200万(4000×3000)	1/1.7	10	Rolling Shutter	Color	6pin Hirose Interface	C-Mount
	SV-HB00M-C	2000万(5472×3648)	1	6	Rolling Shutter	Monochrome	6pin Hirose Interface	C-Mount
	SV-HB00C-C	2000万(5472×3648)	1	6	Rolling Shutter	Color	6pin Hirose Interface	C-Mount

Matrix Industrial Camera

SVThe series matrix industrial cameras are compatible with GigEVision/CameraLink protocols and the GenICam standard. The GigE interface supports lossless compression for higher frame rate transmission. The CameraLink interface supports various image format outputs such as Base, Medium, Full, and Deca modes, and supports flat-field correction and wide voltage input.

Model Parameters

Name	Model	Resolution	Pixel Size(um×um)	Line Rate(kHz)	Color	Power Interface	Lens Interface
Line Scan Camera	SV-HL2048M-M42-V2	2K(2048×2)	14×14	49	Monochrome	12-pin Hirose Interface	M42 Mount
	SV-HL2048C-M42-V2	2K(2048×2)	14×14	49	Color	12-pin Hirose Interface	M42 Mount
	SV-HL4096M-M42	4K(4096×2)	7×7	28	Monochrome	12-pin Hirose Interface	M42 Mount
	SV-HL4096C-M42	4K(4096×2)	7×7	28	Color	12-pin Hirose Interface	M42 Mount
	SV-HL8192M-M72	8K(8192×1)	7×7	13	Monochrome	6-pin Hirose Interface	M42 Mount

Industrial Lens

The main function of the SL series industrial lenses is to image the target onto the photosensitive surface of the image sensor. Important parameters for lens selection are resolution, focal length, aperture size, interface type, etc. Rational selection and installation of the lens is a crucial part of vision system design.

Accessories

Fixed-Focus Lens

- Specially designed FA fixed-focus lens for small-pixel cameras, offering excellent imaging quality;
- EF large-aperture universal series & SF positioning hand-eye series, featuring low-light large-aperture, distortion <2%, adjustable aperture, high relative illumination, compact size

Model Parameters

Name	Model	Focal Length(mm)	Maximum Compatible CMOS Size(")	TV Distortion	Minimum Working Distance (mm)	Maximum Aperture	Lens Interface
Fixed-Focus Lens	SL-DF04-C	4	1/1.8	<0.5%	100	2	C-mount
	SL-DF08-C	8	2/3	<1%	100	1.4	C-mount
	SL-EF08-C	8	2/3	<0.1%	100	2	C-mount
	SL-EF12-C	12	2/3	<0.1%	100	1.6	C-mount
	SL-EF16-C	16	2/3	<0.1%	100	1.6	C-mount
	SL-EF25-C	25	2/3	<0.12%	100	1.6	C-mount
	SL-EF35-C	35	2/3	<0.15%	150	1.6	C-mount
	SL-EF50-C	50	2/3	<0.3%	300	2	C-mount
	SL-SF06-C	6	1/1.8	<0.1%	80	2.8	C-mount
	SL-SF08-C	8	2/3	<0.5%	110	2.8	C-mount
	SL-SF12-C	12	2/3	<0.12%	110	2.8	C-mount
	SL-SF16-C	16	2/3	<0.06%	110	2.8	C-mount
	SL-SF25-C	25	2/3	<0.15%	150	2.8	C-mount
	SL-SF35-C	35	2/3	<0.001%	180	2.8	C-mount
	SL-SF50-C	50	2/3	<0.03%	300	2.8	C-mount
	SL-SF75-C	75	2/3	<0.2%	400	2.8	C-mount
	SL-EF08-C12M	8	1/1.7"	<0.1%	100	2.4	C-mount
	SL-EF12-C12M	12	1/1.7"	<0.1%	100	2.4	C-mount
	SL-EF16-C12M	16	1/1.7"	<0.1%	100	2.4	C-mount
	SL-EF25-C12M	25	1/1.7"	<0.1%	100	2.4	C-mount
	SL-EF35-C12M	35	1/1.7"	<0.1%	100	2.4	C-mount
	SL-EF50-C12M	50	1/1.7"	<0.05%	300	2.4	C-mount
	SL-EF08-C20M	8	1.1	<1.5%	100	2.4	C-mount
	SL-EF12-C20M	12	1.1	<1%	100	2.4	C-mount
	SL-EF16-C20M	16	1.1	<0.5%	100	2.4	C-mount
	SL-EF25-C20M	25	1.1	<0.2%	100	2.4	C-mount
	SL-EF35-C20M	35	1.1	<0.1%	100	2.4	C-mount
	SL-EF50-C20M	50	1.1	<0.1%	200	2.4	C-mount
	SL-EF75-C20M	75	1.1	<0.1%	600	2.4	C-mount
	SL-SF12-C25M	12	1.1"	<0.33%	100	2.85	C-mount
	SL-SF16-C25M	16	1.1"	<0.5	100	2.8	C-mount
	SL-SF18-C25M	18	1.2"	<0.5	100	4	C-mount
	SL-SF25-C25M	25	1.2	<0.1	100	4	C-mount
	SL-SF35-C25M	35	1.2	<0.01	180	4	C-mount
	SL-SF50-C25M	50	1.2	<0.05	300	4	C-mount

Telecentric Lens

- Adopts object-space telecentric design to ensure measurement accuracy
- Various working distances provide convenience for different spatial scenarios
- Magnification covers 0.1–4×
- Applicable to high-precision workpiece positioning, etc.

Name	Model	Magnification	Maximum Compatible CMOS Size(")	Working Distance (mm)	Distortion	Depth of Field (mm)	Aperture	Lens Interface
Telecentric Lens	SL-RT01N250-C	0.1	2/3	250	<0.065%	88.2	F8	C-Mount
	SL-ST0184N238-C	0.184	1.1	238	<0.1%	13	F6.2	C-Mount
	SL-RT03N195-C	0.3	1.1	195	<0.014%	6.6	F6	C-Mount
	SL-RT05N65-C	0.5	2/3	65	<0.001%	4.2	F9.6	C-Mount
	SL-RT05N150-C	0.5	1/2	150	<0.2%	7.4	F17.9	C-Mount
	SL-RT08N110-C	0.8	2/3	110	<0.012%	1.7	F10	C-Mount
	SL-RT10N65-C	1	2/3	65	<0.038%	1.2	F11.1	C-Mount
	SL-RT15N110-C	1.5	1.1	110	<0.082%	0.57	F11.5	C-Mount
	SL-RT20N65-C	2	2/3	65	<0.041%	0.35	F14.4	C-Mount
	SL-RT40N65-C	4	2/3	65	<0.064%	0.11	F17.8	C-Mount

Line Scan Lens

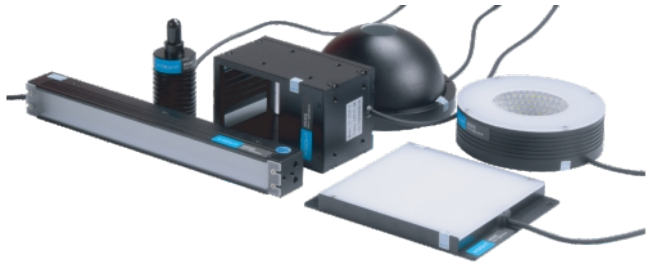
- Meets the needs of high-speed, high-precision inspection fields;
- Full series offers high resolution, high brightness, and excellent imaging consistency.

Name	Model	Resolution	Focal Length (mm)	Maximum Image Circle (mm)	Center Magnification Range	Center Working Distance	Center Conjugate Distance	Magnification Range	Working Distance	Conjugate Distance	Mount
Line Scan Lens	SL-EL25-0.15-M42-4K	4K7u	25	32	0.15	160	248	0.125-0.175	130-187	223-179	M42
	SL-EL35-0.5-M42-4K	4K7u	35	32	0.5	84	169	0.3-0.7	63-123	155-202	M42
	SL-EL35-0.2-M42-4K	4K7u	35	32	0.2	190	264	0.15-0.25	152-245	229-318	M42
	SL-EL35-0.1-M42-4K	4K7u	35	32	0.1	350	421	0.05-0.15	240-700	312-769	M42
	SL-EL50-0.13-M72-8K	8K7u	50	62	0.13	408	499	0.03-0.3	190-1685	289-1771	M72
	SL-EL60-0.1-M72-8K	8K7u	60	62	0.1	635	723	0.03-0.18	370-2050	526-1330	M72

Accessories

| Light Source

The SJ series light source, as an important component of machine vision systems, has advantages such as fast response speed, long service life, and strong anti-interference capability. Its main function is to improve the brightness of the device under inspection and the image contrast, ensure image stability, reduce the pressure on algorithm processing, and improve the accuracy of visual recognition.



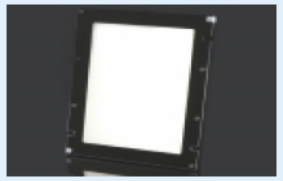
Ring Light

PCB substrate inspection, microscope illumination, liquid crystal calibration

Backlight

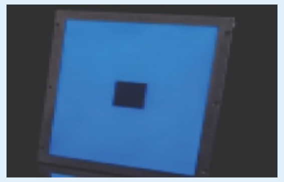
Mechanical part dimension measurement, electronic component and IC outline inspection, film spot detection

Parallel Backlight



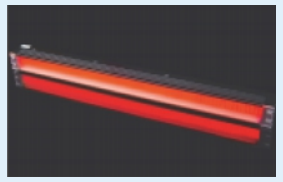
Circuit board component detection and recognition, transparent object dimension measurement, LED ring/dot detection

Aperture-type Parallel Backlight



Circuit board component detection and recognition, electronic component character recognition, Mark point positioning

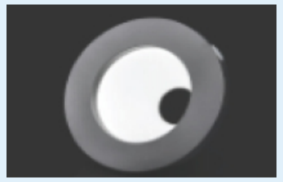
Bar Light



Metal surface inspection, image scanning, surface crack detection, LCD panel inspection

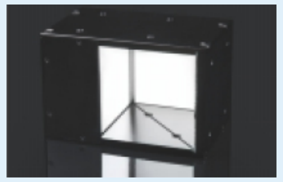
Dome Light

(Integrating Sphere Light Source)



Curved surface, concave/convex surface, arc surface inspection, inspection of surfaces with strong reflection

Coaxial Light



Surface scratch detection, chip and silicon wafer defect detection, packaging barcode recognition

Spot Light

Used with telecentric lenses, Mark point positioning, lens and LCD glass calibration

■ Common Light Source Model Overview

Name	Model	Voltage (V)/Power (W)	Outer Diameter (mm)	Inner Diameter (mm)	Angle(°)	Color	Interface
Ring Light	SI-JD54A00-W	24/2	54	23.5	0	White	SM2.54mm 3P(1, 3)
	SI-JD54A30-W	24/2.4	54	23.5	30	White	SM2.54mm 3P(1, 3)
	SI-JD54A45-W	24/2.3	54	25	45	White	SM2.54mm 3P(1, 3)
	SI-JD70A00-W	24/4.3	70	30	0	White	SM2.54mm 3P(1, 3)
	SI-JD70A15-W	24/4.6	70	32	15	White	SM2.54mm 3P(1, 3)
	SI-JD70A30-W	24/5.5	70	36	30	White	SM2.54mm 3P(1, 3)
	SI-JD70A45-W	24/4.6	70	35	45	White	SM2.54mm 3P(1, 3)
	SI-JD70A90-W	24/3.1	70	34	90	White	SM2.54mm 3P(1, 3)
	SI-JD92A00-W	24/6.4	92	40	0	White	SM2.54mm 3P(1, 3)
	SI-JD92A30-W	24/7.2	92	48	30	White	SM2.54mm 3P(1, 3)
	SI-JD92A45-W	24/8.1	92	52	45	White	SM2.54mm 3P(1, 3)
	SI-JD120A00-W	24/11.5	120	50	0	White	SM2.54mm 3P(1, 3)
	SI-JD120A30-W	24/11.6	120	60	30	White	SM2.54mm 3P(1, 3)
	SI-JD120A60-W	24/9.0	120	80	60	White	SM2.54mm 3P(1, 3)
	SI-JD120A90-W	24/3.6	120	90	90	White	SM2.54mm 3P(1, 3)
	SI-JD150A00-W	24/17.3	150	72	0	White	SM2.54mm 3P(1, 3)
	SI-JD150A60-W	24/10.8	151	114	60	White	SM2.54mm 3P(1, 3)
	SI-JD150A75-W	24/9.6	150	112	75	White	SM2.54mm 3P(1, 3)
	SI-JD150A90-W	24/5.1	151	121	90	White	SM2.54mm 3P(1, 3)
	SI-JD180A00-W	24/26.88	180	60	0	White	SM2.54mm 3P(1, 3)
	SI-JD180A30-W	24/18.3	180	120	30	White	SM2.54mm 3P(1, 3)
	SI-JD180A60-W	24/16.8	180	132	60	White	SM2.54mm 3P(1, 3)
	SI-JD180A90-W	24/6.4	181	151	90	White	SM2.54mm 3P(1, 3)
	SI-JD210A00-W	24/31	210	60	0	White	SM2.54mm 3P(1, 3)
	SI-JD210A30-W	24/26	220	160	30	White	SM2.54mm 3P(1, 3)
	SI-JD210A90-W	24/6.8	211	180	90	White	SM2.54mm 3P(1, 3)

Name	Model	Voltage (V)/ Power (W)	Illumination Length (mm)	Housing Length (mm)	LED Arrangement	Color	Interface
Bar Light	SI-JL050R3-W	24/0.75	43	60	3	White	SM2.54mm 3P(1, 3)
	SI-JL100R3-W	24/2.4	100	117	3	White	SM2.54mm 3P(1, 3)
	SI-JL100R6-W	24/4.8	100	117	6	White	SM2.54mm 3P(1, 3)
	SI-JL150R6-W	24/7.1	150	167	6	White	SM2.54mm 3P(1, 3)
	SI-JL200R3-W	24/4.8	200	217	3	White	SM2.54mm 3P(1, 3)
	SI-JL200R6-W	24/9.5	200	217	6	White	SM2.54mm 3P(1, 3)
	SI-JL300R3-W	24/7.1	300	317	3	White	SM2.54mm 3P(1, 3)
	SI-JL300R6-W	24/14.3	300	317	6	White	SM2.54mm 3P(1, 3)
	SI-JL400R3-W	24/9.5	400	417	3	White	SM2.54mm 3P(1, 3)
	SI-JL400R6-W	24/19	400	417	6	White	SM2.54mm 3P(1, 3)
	SI-JL600R6-W	24/28.5	600	617	6	White	SM2.54mm 3P(1, 3)
	SI-JL800R6-W	24/38	800	817	6	White	SM2.54mm 3P(1, 3)
	SI-JL900R6-W	24/42.8	900	917	6	White	SM2.54mm 3P(1, 3)

Name	Model	Voltage (V)/ Power (W)	Illumination Area(mm²)	Housing Area(mm²)	Color	Interface
Area Light	SI-JB030030-W	24/3.5	32×32	43×41	White	SM2.54mm 3P(1, 3)
	SI-JB050050-W	24/4.89	55×51.5	78×60.5	White	SM2.54mm 3P(1, 3)
	SI-JB070030-W	24/4.08	70×30	88×39	White	SM2.54mm 3P(1, 3)
	SI-JB080080-W	24/7.7	84×82	108×91	White	SM2.54mm 3P(1, 3)
	SI-JB100100-W	24/8.5	100×100	128×109	White	SM2.54mm 3P(1, 3)
	SI-JB160160-W	24/16	160×160	186×170	White	SM2.54mm 3P(1, 3)
	SI-JB200150-W	24/18.8	200×150	225×160	White	SM2.54mm 3P(1, 3)
	SI-JB240240-W	24/36	240×240	266×250	White	SM2.54mm 3P(1, 3)
	SI-JB300028-W	24/8.5	300×28	312×33.5	White	SM2.54mm 3P(1, 3)
	SI-JB400028-W	24/14.5	400×28	412×33.5	White	SM2.54mm 3P(1, 3)
	SI-JB500028-W	24/21.5	500×28	512×33.5	White	SM2.54mm 3P(1, 3)
	SI-JB240160-W	24/24	240×160	266×170	White	SM2.54mm 3P(1, 3)
	SI-JB320320-W	24/72	320×320	345×330	White	SM2.54mm 3P(1, 3)
	SI-JB400320-W	24/84	400×320	426×330	White	SM2.54mm 3P(1, 3)
	SI-JB600060-B	24/-	600×60	633×696	White	SM2.54mm 3P(1, 3)
	SI-JB600034-BB	24/10X1.6W	600×34	31×43	White	SM3.6mm 3P(1, 3)
	SI-JB800034-BB	24/10*2	800×34	831×43	White	SM3.6mm 3P(1, 3)

Name	Model	Voltage (V)/Power (W)	Illumination Area(mm²)	Housing Area(mm²)	Color	Interface
Parallel Area Light	SI-JPB050050-W	24/9	50×50	84×84	White	SM2.54mm 3P(1, 3)
	SI-JPB090090-W	24/13.2	90×90	124×124	White	SM2.54mm 3P(1, 3)
	SI-JPB110110-W	24/17.5	110×110	144×144	White	SM2.54mm 3P(1, 3)
	SI-JPB150100-W	24/17.8	150×100	134×184	White	SM2.54mm 3P(1, 3)
	SI-JPB200200-W	24/30	200×200	234×234	White	SM2.54mm 3P(1, 3)

Name	Model	Voltage (V)/Power (W)	Illumination Area(mm²)	Housing Area(mm²)	Middle aperture area (mm²)	Color	Interface
Aperture-type Area Light	SI-DHB120120-W	24/72	120×120	140×140	628	White	SM2.54mm 3P(1, 3)
	SI-JHB120120-W	24/15	120×120	145×124	Ø40	White	SM2.54mm 3P(1, 3)
	SI-JHB150100-W	24/18	100×150	134×184	40×40	White	SM2.54mm 3P(1, 3)
	SI-JHB200200-W	24/30	200×200	234×234	40×40	White	SM2.54mm 3P(1, 3)
	SI-JHB250200-W	24/22.5	200×250	234×284	45×45	White	SM2.54mm 3P(1, 3)
	SI-JHB300300-W	24/39.2	300×300	334×334	40×40	White	SM2.54mm 3P(1, 3)
	SI-JHB350350-W	24/43.2	350×350	384×384	40×40	White	SM2.54mm 3P(1, 3)

Name	Model	Voltage (V)/Power (W)	Outer Diameter/Inner Diameter (mm	Color	Interface
Dome Light (Integrating Sphere Light Source)	SI-JS70-W	24/5	70/45	White	SM2.54mm 3P(1, 3)
	SI-JS100-W	24/5.6	114/65.5	White	SM2.54mm 3P(1, 3)
	SI-JS120-W	24/9.7	134/84	White	SM2.54mm 3P(1, 3)
	SI-JS175-W	24/11.5	175/116	White	SM2.54mm 3P(1, 3)
	SI-JS212-W	24/14.1	232/160	White	SM2.54mm 3P(1, 3)
	SI-JS262-W	24/17.4	284/212	White	SM2.54mm 3P(1, 3)

Common Light Source Model Overview

Name	Model	Voltage (V)/Power (W)	Outer Diameter/Inner Diameter (mm)	Color	Interface
Coaxial Light Source	SI-JC50-W	24/5.78	50×50	White	SM2.54mm 3P(1, 3)
	SI-JC60-W	24/8.45	60×60	White	SM2.54mm 3P(1, 3)
	SI-JC70-W	24/10.97	70×70	White	SM2.54mm 3P(1, 3)
	SI-JC100-W	24/16.4	100×100	White	SM2.54mm 3P(1, 3)
	SI-JC150120-W	24/23	150×120	White	SM2.54mm 3P(1, 3)
	SI-JC300-W	24/173.5	308×318	White	SM2.54mm 3P(1, 3)

Name	Model	Current (mA)/Power (W)	Illumination Area Diameter/ Housing Diameter (mm)	Color	Interface
Spot Light	SI-JP22W03-W	700/3	7/22	White	SM2.54mm 3P(2, 3)
	SI-JP30W03-R	700/3	6/30	red	SM2.54mm 3P(2, 3)

Name	Model	Voltage (V)/Power (W)	Length (mm)	Width (mm)	Height (mm)	Interface
Line Scan Light Source	SI-JX100-W	24/24	142	41	80.1	6-pin aviation connector
	SI-JX200-W	24/48	242	41	80.1	6-pin aviation connector
	SI-JX300-W	24/72	342	41	80.1	6-pin aviation connector
	SI-JX500-W	24/120	542	41	80.1	6-pin aviation connector

Accessories

Light Source Controller

The SIC series light source controller is mainly used to supply power to the light source, control the brightness and illumination state (on/off) of the light source. It can also enable strobe lighting by sending trigger signals to the controller, thereby extending the lifespan of the light source.

All XINJE vision controllers are digital controllers. Digital controllers can be remotely controlled via PC devices, allowing users to select different types of controllers based on actual production conditions.

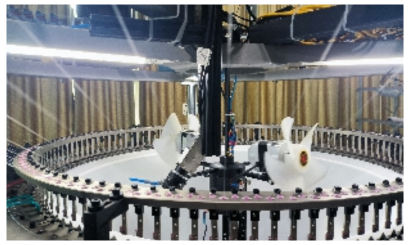
Model Parameters

Name	Model	Number of Channels	Output Voltage (V)	Maximum Output Power (W)/ Current (A) per Channel	Maximum TotalOutput Power (W)	Type	Compatible Light Source Interface
Standard Digital	SIC-J242-DCV48	2	24	24W	48	Digital Constant Voltage - Standard	SM2.54mm 3P(1, 3)
	SIC-J244-DCV60	4	24	24W	60	Digital Constant Voltage - Standard	SM2.54mm 3P(1, 3)
	SIC-J244-DCV150	4	24	72W	150	Digital Constant Voltage - Standard	SM2.54mm 3P(1, 3)
	SIC-J244-STS94	4	24	24W	96	Mini Digital Constant Voltage - Standard	SM2.54mm 3P(1, 3)
	SIC-J242-DCV48-B	2	24	24W	48	Digital Constant Voltage - with Serial Port	SM2.54mm 3P(1, 3)
	SIC-J244-DCV60-B	4	24	24W	60	Digital Constant Voltage - with Serial Port	SM2.54mm 3P(1, 3)
	SIC-J244-DCV150-B	4	24	72W	150	Digital Constant Voltage - with Serial Port	SM2.54mm 3P(1, 3)
	SIC-J2416-DCV350-B	16	24	72W	350	Digital Constant Voltage - with Serial Port	SM2.54mm 3P(1, 3)

Name	Model	Number of Channels	Output Voltage (V)	Maximum Output Power (W)/ Current (A) per Channel	Maximum Total Output Power (W)	Compatible Light Source Interface
Standard Digital	SIC-J241-ACC5-B	1	24	5A	Adaptive Constant Current - with Serial Port	6-pin aviation connector
	SIC-J242-ACC5-B	2	24	5A	Adaptive Constant Current - with Serial Port	6-pin aviation connector
	SIC-J241-ACC10-B	1	24	10A	Adaptive Constant Current - with Serial Port	6-pin aviation connector
	SIC-J242-ACC10-B	2	24	10A	Adaptive Constant Current - with Serial Port	6-pin aviation connector

Typical Applications of Vision Systems

Large Circular Knitting Machine Intelligent Inspection System



This system achieves real-time and precise inspection of the large circular knitting machine's manufacturing process. It can detect various defects including holes, oil stains, damaged needles, broken needles, and broken yarn. It operates 24/7 uninterrupted, automatically stopping when defects are encountered to prevent further production of defective products, thereby improving product quality.

The inspection accuracy is up to 95% or higher, with a false detection rate below 5%, reducing defect-related losses by 80%. Its application will bring significant production benefits and competitive advantages to enterprises.

Vision-Guided 3D Depalletizing System

AI + 3D vision-guided robots handle the handling and loading/unloading of various logistics units (cartons, sacks, totes, etc.). They feature fast installation and commissioning. For standard box-type depalletizing, they enable rapid deployment, intelligently recognize different pallet patterns, automatically plan optimal paths, and eliminate the need for recipe switching. This solves the challenge traditional automation faces in handling complex and variable depalletizing scenarios, significantly improving logistics turnover efficiency in fields such as food, consumer goods, supermarkets, express delivery, pharmaceuticals, and chemicals.

Vision-Based Lamination System

The vision-based lamination system is based on the self-developed Xinje Vision Studio platform. It employs CCD visual intelligent positioning in the laminator solution to achieve high-precision alignment, offering high flexibility and compatibility. It can perform rapid parameter adjustment and program optimization according to different production needs and process requirements, adapting to diverse lamination tasks. Traditional manual lamination operations are costly. The vision-based laminator can operate continuously 24/7, saving significant labor. For example, in the mobile phone/3C industry, a vision-based film applicator can save 70% of labor costs compared to manual film application.

08

IoT Industrial Controller

UE | UF | UG | UP Series

XINJE
XINJE
XINJE
XINJE
XINJE

Embedded IoT Industrial Controller

UE Series

The UE series embedded IoT industrial controllers adopt Intel Elkhart Lake and Alder Lake-N processors, providing highly reliable core processing units and rich interface resources for equipment. They can be flexibly customized according to actual needs and feature extremely low overall power consumption. Widely used in edge-cloud data processing, smart factories, industrial automation, and other fields.

Selection Rules

U E 10 H -J 3 7
① ② ③ ④ ⑤ ⑥ ⑦

① Product Identification	U	Industrial Computer
② Platform Type	E	Embedded Low-Power Platform
③ Motherboard Type	10	10
④ Product Identification	-	Standard Heat Sink
	H	Large Heat Sink

⑤ CPU	J	J6412
	N	N97
⑥Memory (MEM)	N	Capacity: 2^NGB
⑦Solid State Drive (SSD)	N	Capacity2^NGB

Model Parameters

Series	Model	CPU	MEM（G)	SSD（G)	Recommended Model
UE1	UE10-J37	Intel®Celeron® J6412	8	128	★
	UE10-J38	Intel®Celeron® J6412	8	256	
	UE10-J39	Intel®Celeron® J6412	8	512	
	UE11-J37	Intel®Celeron® J6412	8	128	
	UE11-J38	Intel®Celeron® J6412	8	256	
	UE11-J39	Intel®Celeron® J6412	8	512	
UE2	UE20-N37	Intel® N97	8	128	★
	UE20-N38	Intel® N97	8	256	
	UE20-N39	Intel® N97	8	512	
	UE22H-N37	Intel® N97	8	128	
	UE22H-N38	Intel® N97	8	256	
	UE22H-N39	Intel® N97	8	512	

Ue1 Series

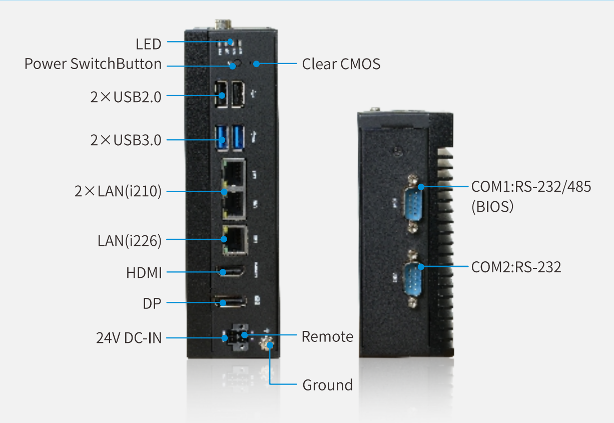
① Adopts Intel Elkhart Lake platform
② 3x LAN (2x Intel i210、1x Intel i226)
③ Multiple serial port solutions are optional, supporting interface customization
④ Supports wireless modules
⑤ Compact structure, flexible deployment

Specifications

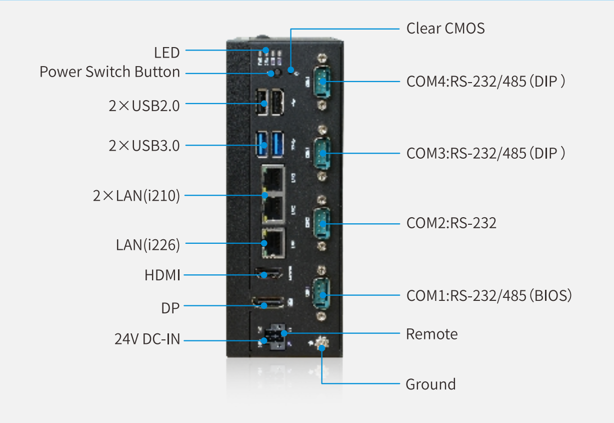
Attributes		UE10	UE11
System parameters	CPU	Intel®Celeron® J6412, Quad-core, four-thread, 2GHz	
	BIOS	AMI 128Mbit	
	Memory	DDR4 3200MHz 2x SO-DIMM, max 32GB	
	Storage	1xM.2, M-Key 2280	
External IO	Display	1xDP, Maximum resolution up to4096x2304 @60Hz; 1xHDMI, Maximum resolution up to4096x2160 @30Hz; Supports independent dual display	
	Network port	2xLAN, Intel i210;1xLAN, Intel i226	
	Serial port	1xRS-232;1xRS-232/485(BIOS)	1xRS-232;1xRS-232/485(BIOS); 2xRS-232/485(dialing)
	USB	2xUSB3.0;2xUSB2.0	
Extended IO	Uinternal USB	/	1xUSB2.0, Type-A, Supports dongle
	M.2	1xM.2, E-Key 2230, support WiFi	
	M.2	1xM.2, B-Key 3052, support 4G/5G	
	SIM	1xNano SIM	
Power Supply	Input voltage	9~36V DC IN, 4PIN Phoenix, 24V Standard adapter included	
	Power	max 60W	
	Switch	1xPower switch button	
	Clear CMOS	1xClear CMOS Button	
	Remote	1xRemote, Integrated in the power supply section	
	Indicator lights	4xLED (Power\SATA\USER1\USER2)	
System	OS	Windows 10/11、Linux	
Physical parameters	Dimensions	172x125x50mm	172x125x62.5mm
	Weight	1.1kg	1.2kg
	Installation method	Wall-mounted, includes dual mounting brackets	
Environmental parameters	Operating temperature	0~60°C, With 0.7m/s airflow	
	Storage temperature	-40°C~85°C	
	Relative humidity	10~95%@40°C (Non-condensing)	
	Certification standards	CE、FCC	

Interface Description

UE10

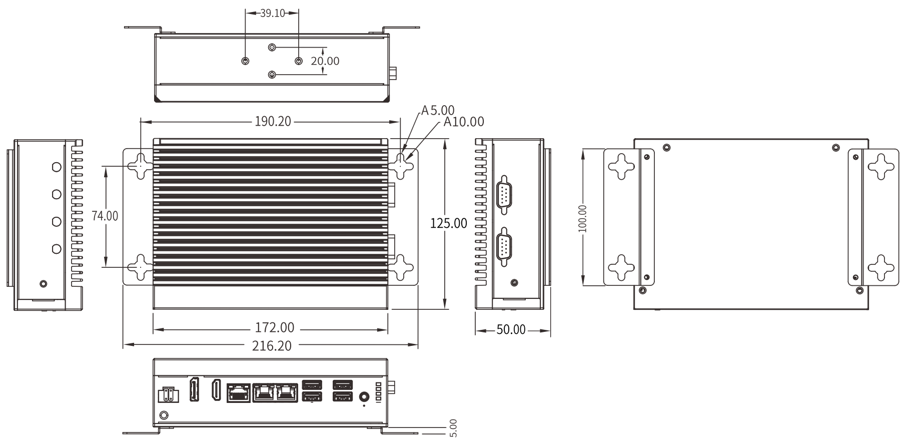

LED
Power SwitchButton
2×USB2.0
2×USB3.0
2×LAN(i210)
LAN(i226)
HDMI
DP
24V DC-IN
Clear CMOS
Remote
Ground
COM1:RS-232/485 (BIOS)
COM2:RS-232

UE11


LED
Power Switch Button
2×USB2.0
2×USB3.0
2×LAN(i210)
LAN(i226)
HDMI
DP
24V DC-IN
Clear CMOS
COM4:RS-232/485 (DIP)
COM3:RS-232/485 (DIP)
COM2:RS-232
COM1:RS-232/485 (BIOS)
Remote
Ground

Dimension Description (unit：mm)

UE10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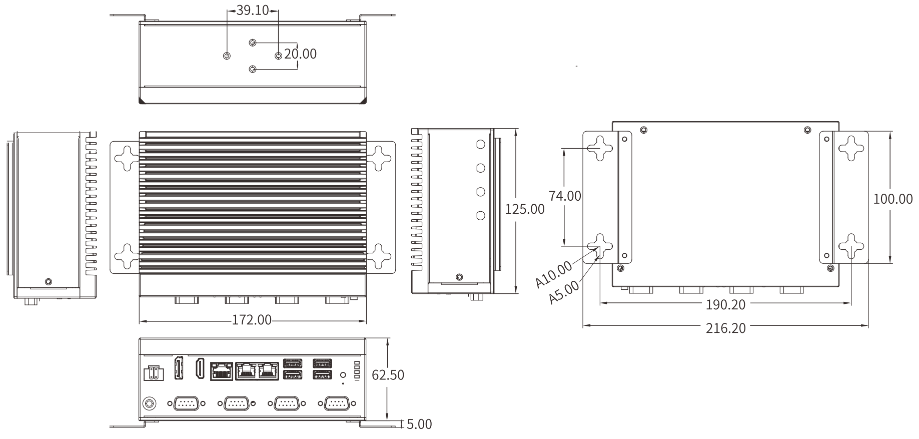
UE11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A5.00
172.00
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216.20
62.50
5.00

UE2 Series

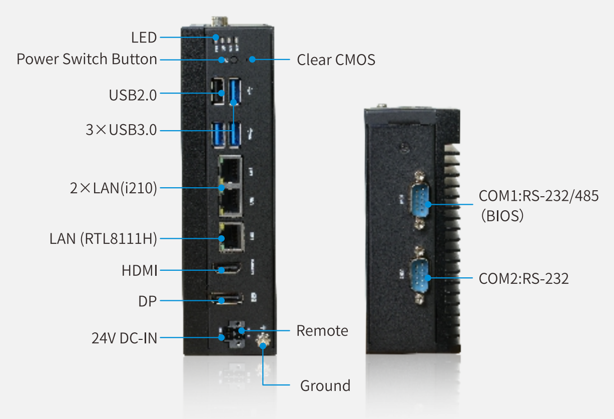
① Adopts high-performance Alder Lake-N platform
② 3x LAN (2x Intel i210, 1x RTL8111H)
③ Multiple network port solutions optional, supporting interface customization
④ Supports 4G/5G/WiFi wireless modules
⑤ Compact structure, flexible deployment

Specifications

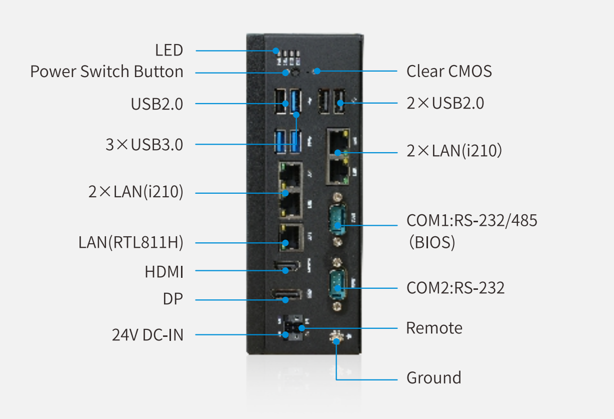
Attributes		UE20	UE22H
System parameters	CPU	Intel®N97, Quad-core, four-thread, 3.6GHzTurbo Boost	
	BIOS	AMI 128Mbit	
	Memory	DDR5 4800MHz SO-DIMM, max 16GB	
	Storage	1xM.2, M-Key 2280	
External IO	Display	1xDP, Maximum Resolution Up To4096x2304 @60Hz; 1xHDMI, Maximum Resolution Up To4096x2160@30Hz; Supports Independent Dual Display	
	Network port	2xLAN, Intel i210; 1xLAN, Realtek RTL8111H	4xLAN, Intel i210; 1xLAN, Realtek RTL8111H
	Serial port	1xRS-232;1xRS-232/485(BIOS)	
	USB	3xUSB3.0;1xUSB2.0	3xUSB3.0;3xUSB2.0
Extended IO	Internal USB	/	2xUSB2.0, Type-A, Supports dongle
	M.2	1xM.2, E-Key 2230, supportWiFi	
	M.2	1xM.2, B-Key 3052, support4G/5G	
	SIM	1xNano SIM	
Power Supply	Input voltage	9~36V DC IN, 4PIN Phoenix, Standard 24V Adapter Included	
	Power	max 60W	
	Switch	1xPower Switch Button	
	Clear CMOS	1xClear CMOS Button	
	Remote	1xRemote, Integrated in the power supply section	
	Indicator lights	4xLED (Power\SATA\USER1\USER2)	
System	OS	Windows 10/11、Linux	
Physical parameters	Dimensions	172x125x50mm	180x165x67mm
	Weight	1.1kg	1.5kg
	Installation method	Wall-Mounted, Standard Dual Mounting Brackets Included	
Environmental parameters	Operating temperature	0~50°C, With 0.7m/s Air Flow	
	Storage temperature	-40°C~85°C	
	Relative humidity	10~95%@40°C (Non-Condensing)	
	Certification standards	CE、FCC	

Interface Description

UE20

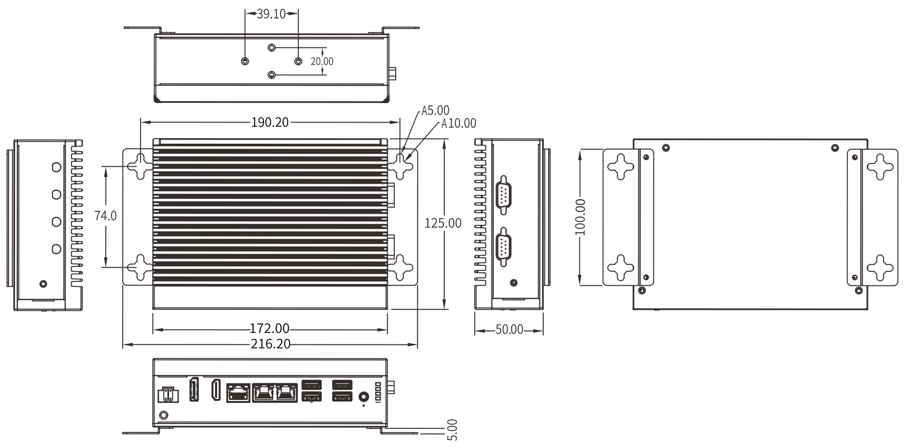

LED
Power Switch Button
USB2.0
3×USB3.0
2×LAN(i210)
LAN (RTL8111H)
HDMI
DP
24V DC-IN
Clear CMOS
Remote
Ground
COM1:RS-232/485
(BIOS)
COM2:RS-232

UE22H


LED
Power Switch Button
USB2.0
3×USB3.0
2×LAN(i210)
LAN(RTL811H)
HDMI
DP
24V DC-IN
Clear CMOS
2×USB2.0
2×LAN(i210)
COM1:RS-232/485
(BIOS)
COM2:RS-232
Remote
Ground

Dimension Description (unit: mm)

UE20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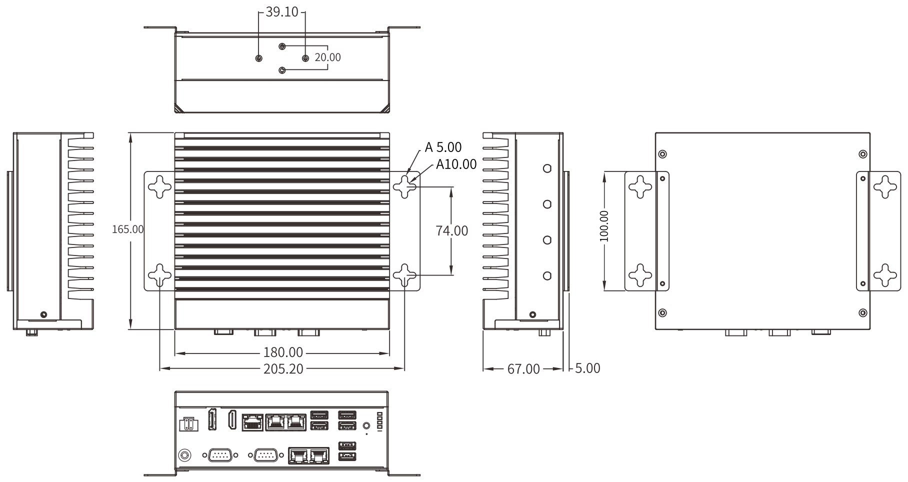
UE22H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A 5.00
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67.00
5.00

Expandable IoT Industrial Controller

UF Series

The UF series expandable IoT industrial controller utilizes Intel Coffee Lake processors, allowing users to select the processor type according to actual needs. It delivers powerful computing performance and excellent image processing capabilities. With a wide range of external interfaces, it supports the maximum number of device connections, providing core control unit support for comprehensive solutions in industrial automation and machine vision.

Selection Rules

U F 10 X F -C 3 7 0
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① Product Identification	U	Industrial Control Computer
② Platform Type	F	Embedded High-Performance Computing Platform
③ Motherboard Type	10	10
④ Expandable Solution	-	No Expansion
	X	Four-Port Expansion

⑤ Heat Sink Configuration	-	Standard Heat Sink
	F	Finned Fan
⑥ CPU	C	i5-9400
	M	i7-9700
⑦ Memory (MEM)	N	Capacity2^N GB
⑧ Solid State Drive SSD	N	Capacity2^NGB
⑨ Hard Disk Drive HDD	N	CapacityNTB

Model Parameters

Series	Model	CPU	MEM（G)	SSD（G)	HDD（T)	Recommended Model
UF1	UF10-C370	Intel® Core™ i5-9400	8	128	/	★
	UF10-C371	Intel® Core™ i5-9400	8	128	1	
	UF10-C380	Intel® Core™ i5-9400	8	256	/	
	UF10-C390	Intel® Core™ i5-9400	8	512	/	
	UF10-C480	Intel® Core™ i5-9400	16	256	/	
	UF10-C481	Intel® Core™ i5-9400	16	256	1	
	UF10-C490	Intel® Core™ i5-9400	16	512	/	
	UF11-C370	Intel® Core™ i5-9400	8	128	/	
	UF11-C371	Intel® Core™ i5-9400	8	128	1	
	UF11-C380	Intel® Core™ i5-9400	8	256	/	★
	UF11-C390	Intel® Core™ i5-9400	8	512	/	
	UF11-C480	Intel® Core™ i5-9400	16	256	/	
	UF11-C481	Intel® Core™ i5-9400	16	256	1	
	UF11-C490	Intel® Core™ i5-9400	16	512	/	
	UF11-M480	Intel® Core™ i7-9700	16	256	/	
	UF11-M481	Intel® Core™ i7-9700	16	256	1	
	UF11-M490	Intel® Core™ i7-9700	16	512	/	
	UF11X-C370	Intel® Core™ i5-9400	8	128	/	
	UF11X-C371	Intel® Core™ i5-9400	8	128	1	
	UF11X-C380	Intel® Core™ i5-9400	8	256	/	★
	UF11X-C390	Intel® Core™ i5-9400	8	512	/	
	UF11X-C480	Intel® Core™ i5-9400	16	256	/	
	UF11X-C481	Intel® Core™ i5-9400	16	256	1	
	UF11X-C490	Intel® Core™ i5-9400	16	512	/	
	UF11X-M480	Intel® Core™ i7-9700	16	256	/	
	UF11X-M481	Intel® Core™ i7-9700	16	256	1	
	UF11X-M490	Intel® Core™ i7-9700	16	512	/	

UF1 Series

①Multiple-performance Coffee Lake processors available

②Multiple interface solutions available, supporting up to 10 network ports

③Supports 4G/WIFI wireless modules

④Customizable fan version with high heat dissipation efficiency

⑤Strong anti-interference capability, capable of stable and efficient operation in complex environments

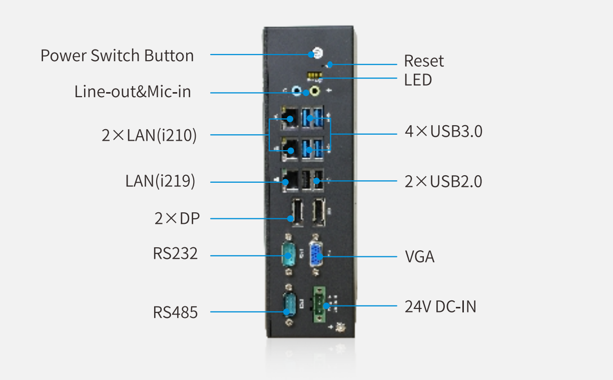
XINJE
XINJE
XINJE

Specification Parameters

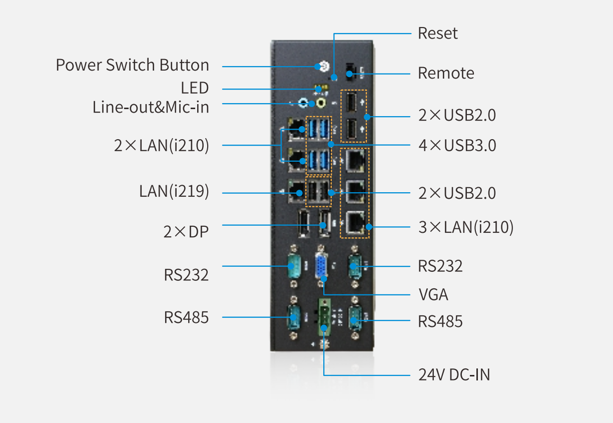
Attributes		UF10	UF11	UF11X
System Parameters	CPU	Intel® Core™ i5-9400 / i7-9700		
	BIOS	AMI 64Mbit		
	Memory	DDR4 3200MHz 2x SO-DIMM, max 32GB		
	Storage	1xM.2, M-Key 2280；1xSATA		
External IO	Display	2xDP, maximum resolution up to4096x2304 @60Hz； 1xVGA, maximum resolution up to1920x1080 @30Hz； Supports DP+DP, DP+VGA independent dual display		
	Network Ports	1xLAN, Intel i219, Supports network wake-up； 2xLAN, Intel i210	1xLAN, Intel i219, Supports network wake-up； 5xLAN,Intel i210	
	Serial Ports	1xRS-232；1xRS-485	2xRS-232；2xRS-485	
	USB	4xUSB3.0；2xUSB2.0	4xUSB3.0；4xUSB2.0	
	Audio	1xLine-out；1xMic-in, RealtekALC662		
Extended IO	Internal USB	-	1xUSB2.0, Type-A, Supports dongle	
	miniPCIe	1xminiPCIe, Supports WiFi		
	SIM	1xUSIM, Supports 3G/4G		
	PCIe	-	-	1xPCIe 16x, Gen3； 1xPCIe 4x, Gen2, x2 signal
	PCI	-	-	2xPCI
Power	Input Voltage	9-36V DC IN, 3PIN Phoenix, Standard 24V Adapter Included		
	Power	max 120W		
	Switch	1x power switch button		
	Reset	1x Reset button, touch to restart		
	Remote	-	1xRemote	
	Indicator Lights	4xLED (DG/Standby Indicator/SATA/WD)		
System	OS	Windows 10/11、Linux		
Physical Parameters	Dimensions	220x226x66mm	220x226x75mm	220x226x176mm
	Weight	3.0kg	3.4kg	4.2kg
	Installation Method	Wall-mounted, includes dual mounting brackets		
Environmental Parameters	Operating Temperature	0~60°C, with 0.7m/s airflow		
	Storage Temperature	-40°C~85°C		
	Relative Humidity	10~95%@40°C (non-condensing)		
	Certification Standard	CE、FCC		

Interface Description

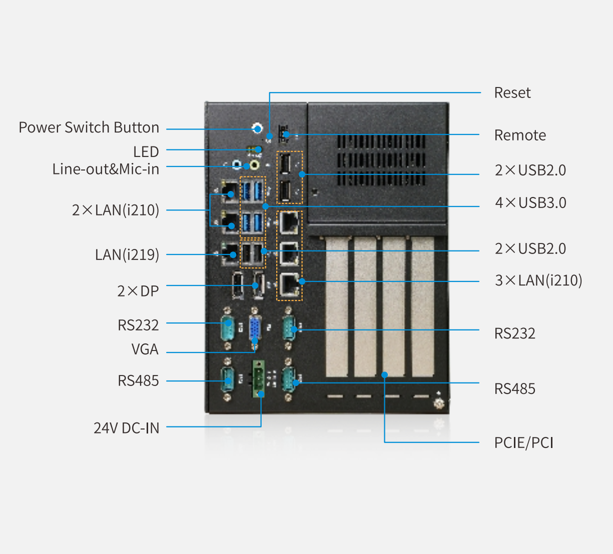
UF10


Power Switch Button
Line-out&Mic-in
2×LAN(i210)
LAN(i219)
2×DP
RS232
RS485
Reset
LED
4×USB3.0
2×USB2.0
VGA
24V DC-IN

UF11

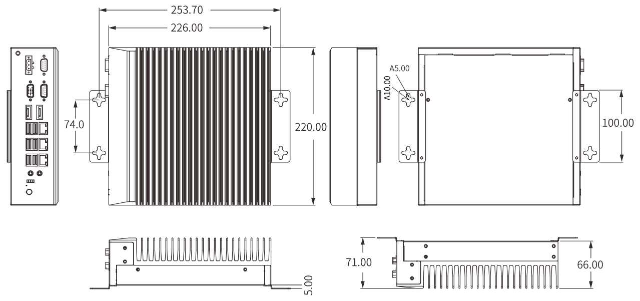

Power Switch Button
LED
Line-out&Mic-in
2×LAN(i210)
LAN(i219)
2×DP
RS232
RS485
Reset
Remote
2×USB2.0
4×USB3.0
2×USB2.0
3×LAN(i210)
RS232
VGA
RS485
24V DC-IN

UF11X


Power Switch Button
LED
Line-out&Mic-in
2×LAN(i210)
LAN(i219)
2×DP
RS232
VGA
RS485
24V DC-IN
Reset
Remote
2×USB2.0
4×USB3.0
2×USB2.0
3×LAN(i210)
RS232
RS485
PCIE/PCI

Dimension Description (unit：mm)

UF10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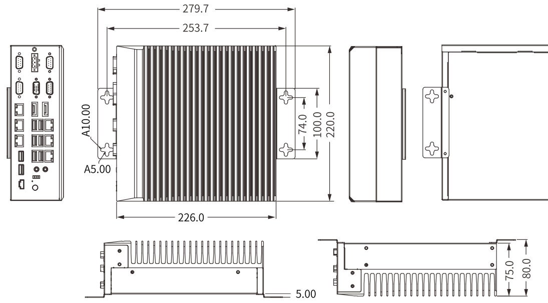
UF11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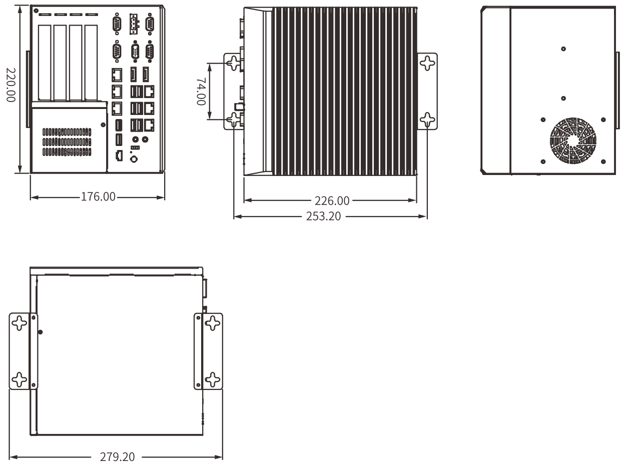
UF11X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279.20

Rack-Mounted Industrial Controller

UG Series

The UG series IoT industrial controller adopts the latest Alder Lake processor, housed in a standard 4U rack-mounted industrial chassis. It supports multiple high-performance configuration combinations, offering ultra-high stability and expandability. The large chassis provides efficient cooling space for the motherboard, meeting various usage scenarios and delivering highly reliable processing solutions for industries such as industrial automation, medical, and laser applications.

Selection Rules

U G 11 - C 3 7 0 A

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Product Identification	U	Industrial Control Computer
② Platform Type	G	Rack-Mounted Industrial Control Platform
③ Motherboard Type	11	11
④ CPU	C	i5-12400/i5-12600K
	M	i7-12700/i7-12700K
⑤ Memory (MEM)	N	Capacity2^NGB

⑥ Solid State Drive (SSD)	N	Capacity2^NGB
⑦ Hard Disk Drive (HDD)	N	Capacity NTB
⑧ Power	A	300W
	B	650W
	C	800W
	D	1000W

Model Parameters

Series	Model	CPU	MEM（G）	SSD（G）	HDD（T）	Power (W)	Recommended Model
UG1	UG11-C370A	Intel® Core™ i5-12400	8	128	/	300	★
	UG11-C371A	Intel® Core™ i5-12400	8	128	1	300	
	UG11-C380A	Intel® Core™ i5-12400	8	256	/	300	
	UG11-C390A	Intel® Core™ i5-12400	8	512	/	300	
	UG11-C471A	Intel® Core™ i5-12400	16	128	1	300	
	UG11-C480A	Intel® Core™ i5-12400	16	256	/	300	
	UG11-C490A	Intel® Core™ i5-12400	16	512	/	300	
	UG11-M480A	Intel® Core™ i7-12700	16	256	/	300	
	UG11-M481A	Intel® Core™ i7-12700	16	256	1	300	
	UG11-M490A	Intel® Core™ i7-12700	16	512	/	300	
	UG12-C370C	Intel® Core™ i5-12600K	8	128	/	800	
	UG12-C371C	Intel® Core™ i5-12600K	8	128	1	800	
	UG12-C380C	Intel® Core™ i5-12600K	8	256	/	800	
	UG12-C390C	Intel® Core™ i5-12600K	8	512	/	800	
	UG12-C480C	Intel® Core™ i5-12600K	16	256	/	800	★
	UG12-C481C	Intel® Core™ i5-12600K	16	256	1	800	
	UG12-C490C	Intel® Core™ i5-12600K	16	512	/	800	
	UG12-M480C	Intel® Core™ i7-12700K	16	256	/	800	
	UG12-M481C	Intel® Core™ i7-12700K	16	256	1	800	
	UG12-M490C	Intel® Core™ i7-12700K	16	512	/	800	

UG1 Series

①Adopts the latest Alder Lake processors, with full-performance CPUs available

②Standard ATX motherboard solution, supports multiple PCIe/PCI expansions

③Expandable graphics card RTX-4090, supports deep learning AI applications

④Made from high-quality steel plate molding for ultra-high stability

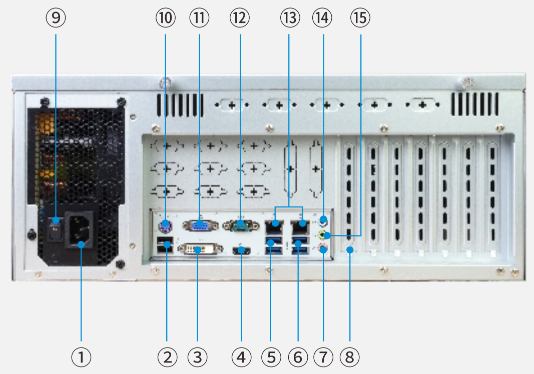
⑤Active cooling solution for excellent performance

Specification Parameters

Attributes		UG11	UG12
System Parameters	CPU	Intel® Core™ i5-12400/ i7-12700/ i9-12900	Intel® Core™ i5-12600K/ i7-12700K
	BIOS	AMI 128Mbit	
	Memory	DDR4 3200MHz 2x U-DIMM, max 64GB	DDR4 3200MHz 4x U-DIMM, max 128GB
	Storage	1xM.2, M-Key 2280；3xSATA3.0	1xM.2, M-Key 2280；4xSATA3.0
External IO	Display	1xDVI，maximum resolution up to1920x1200 @60Hz； 1xHDMI，maximum resolution up to4096x2160 @30Hz； 1xVGA，maximum resolution up to1920x1200 @60Hz； independent dual display	
	Network Ports	1xLAN，Intel i219； 1xLAN，Intel i225	
	Serial Ports	1xRS-232	
	USB	4xUSB3.0；2xUSB2.0；2xUSB2.0，Front panel	6xUSB3.0；2xUSB2.0，Front panel
	PS/2	1xPS/2	
	Audio	1xLine-out；1xMic-in	
Expanded IO	Internal USB	1xUSB2.0，Type-A，Supports dongle	
	Serial port expandable	3xRS232；2xRS232/485（Jumper cap）	
	M.2	-	1xM.2，2230，support WIFI
	PCIe	1xPCIe 16x，Gen4； 3xPCIe 4x，Gen3	2xPCIe 16x，Gen4； 3xPCIe 4x，Gen4； 1xPCIe 4x，Gen3
	PCI	3xPCI	1xPCI
Power	Input Voltage	220VAC In，Three-hole figure-8 plug	
	Power	300/650/800/1000WOptional，ATX	
	Switch	1x power switch button	
	Indicator Lights	2xLED（Power\SATA）	
System	OS	Windows 10/11、Linux	
Physical Parameters	Dimensions	176x430x471.4mm，With handle176x430x509.4mm	
	Weight	12.6kg	
	Installation Method	Standard rack-mounted installation	
Environmental Parameters	Operating Temperature	0~60°C, with 0.7m/s airflow	
	Storage Temperature	-40°C~85°C	
	Relative Humidity	10~95%@40°C (non-condensing)	
	Certification Standard	CE、FCC	

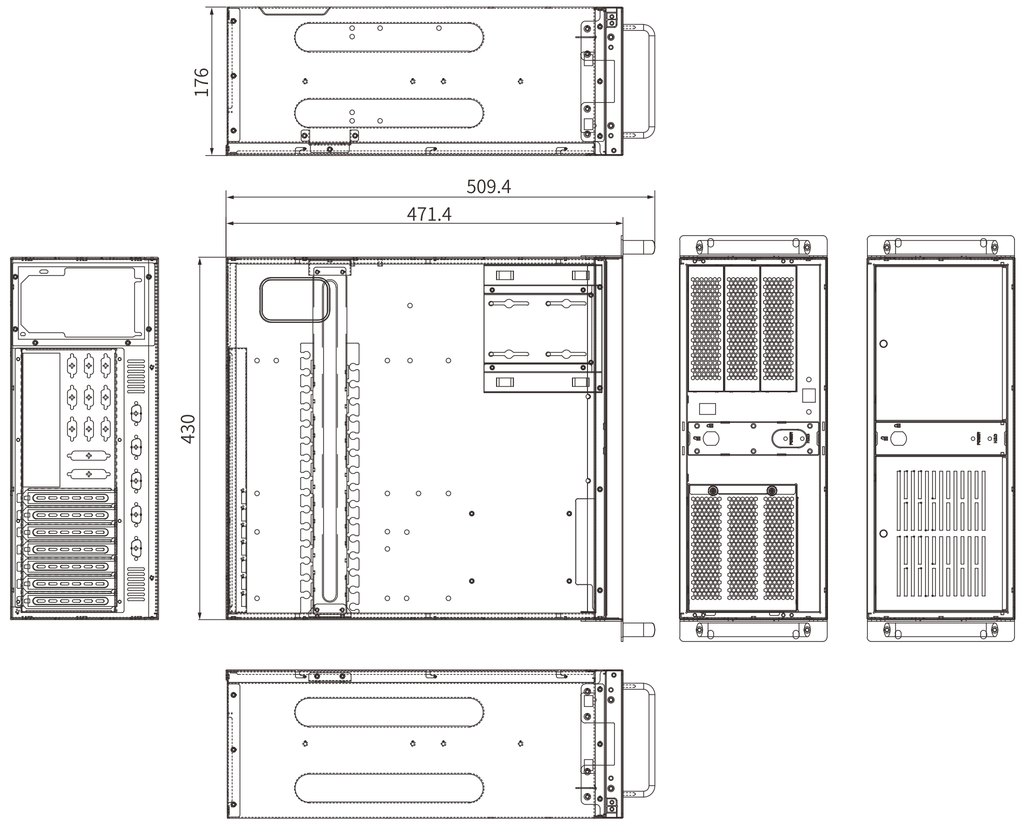
Interface description

UG1



① Power input (220V AC IN)	⑨ Power switch
② 2×USB2.0/USB3.0	⑩ PS/2
③ DVI	⑪ VGA
④ HDMI	⑫ RS-232
⑤ 2×USB3.0	⑬ 2×LAN
⑥ 2×USB3.0	⑭ Mic-in
⑦ Mic-in	⑮ Line-out
⑧ PCI/PCIe	

Dimension description (unit: mm)



Touch All-in-One Machine

UP Series

The UP series embedded touch all-in-one machine adopts Intel Elkhart Lake and Whiskey Lake-U series processors, and features 10.1"/12.1"/15.6"/21.5" industrial-grade high-brightness TFT LCD displays. It supports 10-wire projected capacitive touch, with the entire front panel rated IP65 for water and interference resistance. It is suitable for automation industries such as CNC machinery, CNC processing, 3C, and trajectory guidance.

Selection Rules

U P 1 F-C 101 -J 3 7

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① Product Identification	U	Industrial Control Computer
② Platform Type	P	Touch All-in-One Machine
③ Motherboard Type	1	1
④ Heat Sink Selection	-	Standard Heat Sink
	H	Large Heat Sink
	F	Fan

⑤ Touch Screen Type	C	Capacitive Screen
	R	Resistive Screen
⑥ Touch Screen Size	101	10.1
	121	12.1
	156	15.6
	215	21.5

⑦ CPU	J	J6412
	S	i3-8145U
	C	i5-8265U
⑧ Memory (MEM)	N	Capacity2^N GB
⑨ Solid State Drive (SSD)	N	Capacity2^NGB

Model Parameters

Series	Model	CPU	MEM (G)	SSD (G)	Screen (")	Recommended Model
UP1	UP1-C101-J37	Intel®Celeron® J6412	8	128	10.1	★
	UP1-C101-J38	Intel®Celeron® J6412	8	256	10.1	
	UP1-C101-J39	Intel®Celeron® J6412	8	512	10.1	
	UP1-C121-J37	Intel®Celeron® J6412	8	128	12.1	★
	UP1-C121-J38	Intel®Celeron® J6412	8	256	12.1	
	UP1-C121-J39	Intel®Celeron® J6412	8	512	12.1	
	UP1-C156-J37	Intel®Celeron® J6412	8	128	15.6	★
	UP1-C156-J38	Intel®Celeron® J6412	8	256	15.6	
	UP1-C156-J39	Intel®Celeron® J6412	8	512	15.6	
	UP1-C215-J37	Intel®Celeron® J6412	8	128	21.5	★
	UP1-C215-J38	Intel®Celeron® J6412	8	256	21.5	
	UP1-C215-J39	Intel®Celeron® J6412	8	512	21.5	
UP3	UP3-C121-S37	Intel® Core™ i3-8145U	8	128	12.1	★
	UP3-C121-S38	Intel® Core™ i3-8145U	8	256	12.1	
	UP3-C121-S39	Intel® Core™ i3-8145U	8	512	12.1	
	UP3-C121-C37	Intel® Core™ i5-8265U	8	128	12.1	★
	UP3-C121-C38	Intel® Core™ i5-8265U	8	256	12.1	
	UP3-C121-C39	Intel® Core™ i5-8265U	8	512	12.1	
	UP3-C121-C48	Intel® Core™ i5-8265U	16	256	12.1	
	UP3-C121-C49	Intel® Core™ i5-8265U	16	512	12.1	
	UP3-C156-S37	Intel® Core™ i3-8145U	8	128	15.6	★
	UP3-C156-S38	Intel® Core™ i3-8145U	8	256	15.6	
	UP3-C156-S39	Intel® Core™ i3-8145U	8	512	15.6	
	UP3-C156-C37	Intel® Core™ i5-8265U	8	128	15.6	★
	UP3-C156-C38	Intel® Core™ i5-8265U	8	256	15.6	
	UP3-C156-C39	Intel® Core™ i5-8265U	8	512	15.6	
	UP3-C156-C48	Intel® Core™ i5-8265U	16	256	15.6	
	UP3-C156-C49	Intel® Core™ i5-8265U	16	512	15.6	
	UP3-C215-S37	Intel® Core™ i3-8145U	8	128	21.5	★
	UP3-C215-S38	Intel® Core™ i3-8145U	8	256	21.5	
	UP3-C215-S39	Intel® Core™ i3-8145U	8	512	21.5	
	UP3-C215-C37	Intel® Core™ i5-8265U	8	128	21.5	★
	UP3-C215-C38	Intel® Core™ i5-8265U	8	256	21.5	
	UP3-C215-C39	Intel® Core™ i5-8265U	8	512	21.5	
	UP3-C215-C48	Intel® Core™ i5-8265U	16	256	21.5	
	UP3-C215-C49	Intel® Core™ i5-8265U	16	512	21.5	

UP1 Series

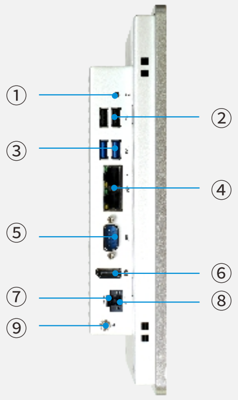
① Adopts Intel Elkhart Lake platform
② 10-wire capacitive multi-touch screen
③ Supports 4G/5G/WIFI wireless modules
④ Front panel IP65 protection, supports embedded installation
⑤ Supports configuration software for intelligent interaction

Specification Parameters

Attributes		UP1-C101	UP1-C121	UP1-C156	UP1-C215
System Parameters	CPU	Intel®Celeron® J6412, quad-core quad-thread, 2GHz			
	BIOS	AMI 128Mbit			
	Memory	DDR4 3200MHz 2x SO-DIMM, max 32GB			
	Storage	1x M.2, M-Key 2280			
LCD Screen	Screen Type	TFT LCD 10.1"	TFT LCD 12.1"	TFT LCD 15.6"	TFT LCD 21.5"
	Resolution	1280x800	1280x800	1366x768	1920x1080
	Display Area	216.58x135.36mm	261.12x163.2mm	344.23x193.54mm	475.2×267.3mm
	Maximum Colors	16.7M	16.2M	262K	16.7M
	Brightness	400cd/m^2	400cd/m^2	220cd/m^2	250cd/m^2
	Viewing Angle	178°/178°	178°/178°	178°/178°	178°/178°
	Contrast Ratio	800:1	1000:1	400:1	1000:1
Touch Screen	Touch Screen Type	10-wire capacitive multi-touch screen			
	Transmittance	85%			
	Interface Type	USB			
External IO	Display	1xDP, maximum resolution up to4096x2304 @60Hz	1xDP, maximum resolution up to4096x2304 @60Hz; 1xHDMI, maximum resolution up to4096x2160@30Hz		
	Network Port	2xLAN, Intel i210	2xLAN, Intel i210; 1xLAN, Intel i226		
	Serial Port	1xRS-232/485(BIOS)	1xRS-232;1xRS-232/485(BIOS)		
	USB	2xUSB3.0;2xUSB2.0			
Expansion IO	M.2	1xM.2, E-Key 2230, support WiFi			
	M.2	1xM.2, B-Key 3052, support4G/5G			
	SIM	1xNano SIM			
Power	Input Voltage	9~36V DC input, 4PIN Phoenix interface, standard 24V adapter included			
	Power	max 60W			
	Switch	1x power switch button			
	Clear CMOS	1xClear CMOSbutton			
	Remote	1x Remote (remote control), integrated in power section			
	Indicator Lights	4xLED (Power\SATA\USER1\USER2)			
System	OS	Windows10/11、Linux			
Physical Parameters	Dimensions	265x185x51.8mm	320x219x65.2mm	390x245x65.2mm	528x322.5x69.2mm
	Weight	1.7kg	3.1kg	3.6kg	6.7kg
	Installation Method	Embedded installation, standard mounting clips included; supports VESA mount installation			
Environmental Parameters	Operating Temperature	0~60°C, with 0.7m/s airflow			
	Storage Temperature	-40°C~85°C			
	Relative Humidity	10~95%@40°C (Non-condensing)			
	Certification Standards	CE、FCC			

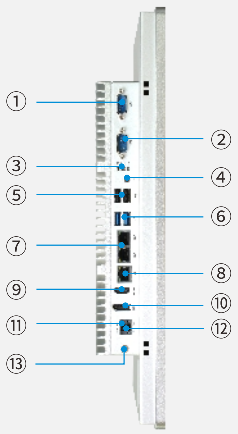
Interface Description

UP1-C101



① Power Switch Button
② 2×USB2.0
③ 2×USB3.0
④ 2×LAN(i210)
⑤ RS-232/485
⑥ DP
⑦ 24V DC IN
⑧ Remote
⑨ Ground

UP1-C121/C156/C215


①
③
⑤
⑦
⑨
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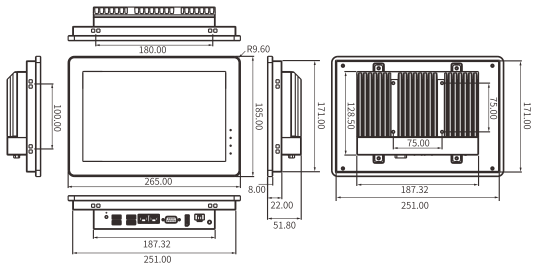
④
⑥
⑧
⑩
⑫

① COM2:RS232
② COM1:RS232/485
③ LED
④ Power Switch Button
⑤ 2×USB2.0
⑥ 2×USB3.0
⑦2×LAN(i210)
⑧ LAN(i226)
⑨ HDMI
⑩ DP
⑪24V DC IN
⑫ Remote
⑬ Ground

Dimension Description (unit:mm)

UP1-C101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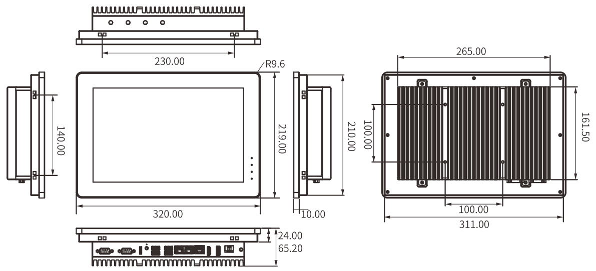
251.00

UP1-C121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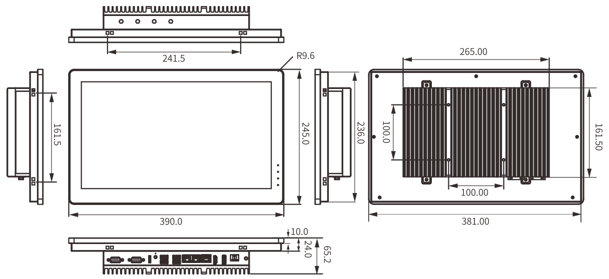
UP1-C156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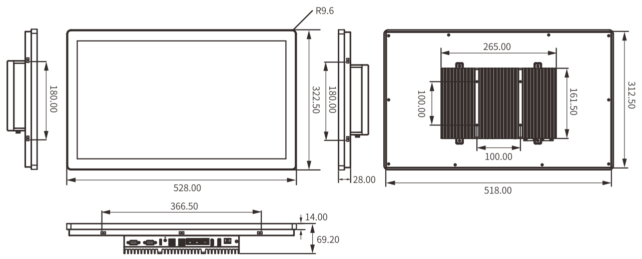
24.0
65.2

UP1-C215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322.50
180.00
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161.50
312.50
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28.00
518.00
366.50
14.00
69.20

UP3 Series

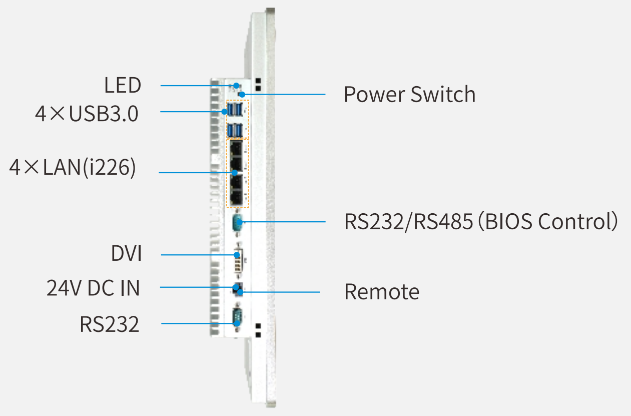
① Adopts Intel Whiskey Lake-U processor
② 10-wire capacitive multi-touch screen
③ Supports 4G/5G/WIFI wireless modules
④Front panel IP65 protection, supports embedded installation
⑤Supports configuration software for intelligent interaction

Specification Parameters

Attributes		UP3-C121	UP3-C156	UP3-C215
System Parameters	CPU	Intel® Core™ i3-8145U/i5-8265U		
	BIOS	AMI 64Mbit		
	Memory	DDR4 2400MHz 2xSO-DIMM, max 32GB		
	Storage	1xM.2, M-Key 2280		
LCD Screen	Screen Type	TFT LCD 12.1"	TFT LCD 15.6"	TFT LCD 21.5"
	Resolution	1280x800	1366x768	1920x1080
	Display Area	261.12x163.2mm	344.23x193.54mm	475.2x267.3mm
	Maximum Colors	16.2M	262K	16.7M
	Brightness	400cd/m²	220cd/m²	250cd/m²
	Viewing Angle	178°/178°	178°/178°	178°/178°
	Contrast Ratio	1000:1	400:1	1000:1
Touch Screen	Touch Screen Type	10-wire capacitive multi-touch screen		
	Transmittance	85%		
	Interface Type	USB		
External IO	Display	1xDVI, maximum resolution up to 1920x1200 @60Hz		
	Network Port	4xLAN, Intel i226		
	Serial Port	1xRS-232; 1xRS-232/485 (BIOS)		
	USB	4xUSB3.0		
Expansion IO	M.2	1xM.2, E-Key 2230, support WiFi		
	M.2	1xM.2, B-Key 3052, support 4G/5G		
Power	Input Voltage	9~36V DC input, 4PIN Phoenix, includes standard 24V adapter		
	Power	max 120W		
	Switch	1x power switch button		
	Reset	1x Reset button, touch to restart		
	Remote	1x Remote, integrated in power section		
	Indicator Lights	4xLED (Power\SATA\USER1\USER2)		
System	OS	Windows10/11、Linux		
Physical Parameters	Dimensions	320x219x65.2mm	390x245x65.2mm	528x322.5x69.2mm
	Weight	3.1kg	3.8kg	6.8kg
	Installation Method	Embedded installation, includes standard mounting clips; supports VESA mount installation		
Environmental Parameters	Operating Temperature	0~60℃, with 0.7m/s airflow		
	Storage Temperature	-40℃~85℃		
	Relative Humidity	10~95% @40℃ (non-condensing)		
	Certification Standards	CE、FCC		

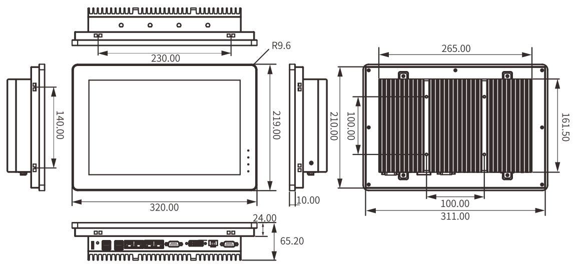
Interface Description

UP3-C121/C156/C215


LED
4×USB3.0
4×LAN(i226)
DVI
24V DC IN
RS232
Power Switch
RS232/RS485 (BIOS Control)
Remote

Dimension Description (unit: mm)

UP3-C121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100.00
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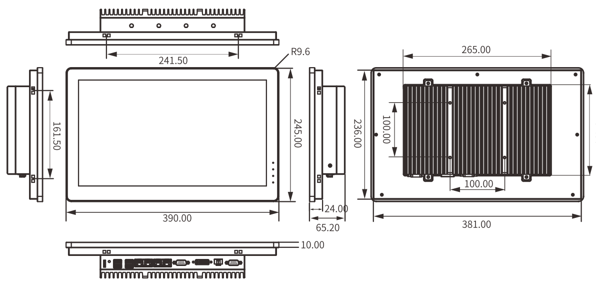
24.00
65.20

UP3-C156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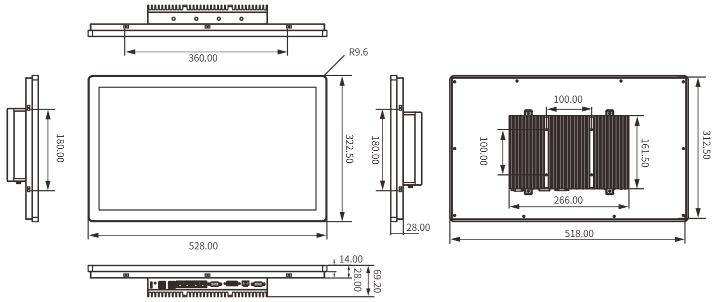
100.00
381.00

UP3-C215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R9.6
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322.50
528.00
180.00
28.00
14.00
28.00
69.20
100.00
100.00
161.50
312.50
266.00
518.00

PCIe Expansion Card

UZ-P Series

Extends image acquisition functionality through the PCIe interface, providing high-speed image transmission channels to meet the demands of high-speed image data transfer.

Specifications

Attributes	UZ-PL4	UZ-PL4E
Bus Interface	PCI Express x4 Gen2	
Ethernet	4x10/100/1000M bps RJ45 Network Interfaces Full-Duplex, Half-Duplex Intelligent Detection and Auto-Adaptation	
Chip	Intel i210	
Compatible Slots	PCIe 16x/8x/4x	
Network Environment	Gigabit and Below Networks	
Features	Compliant with IEEE 802.1P/802.1Q/802.3 0Base-T/802.3u 100Base-TX/802.3ab 1000Base-T Supports 9KB Jumbo Frames Supports Multi-Card Multi-Camera	Power over Ethernet, Compliant with IEEE 802.3af/at Supports 9KB Jumbo Frames Supports Multi-Card Multi-Camera PoE Power Management PoE Protection
Indicator Lights	ACT: Indicator blinks when the port is transmitting or receiving data LINK: Indicator stays on when the link is normal	ACT: Indicator blinks when the port is transmitting or receiving data LINK: Indicator stays on when the link is normal PoE: Indicator stays on when external devices are powered normally
Power Requirements	-	Using 4-pin power connector, maximum 100W PoE power (+12V@8A) Using PCIe slot, maximum 20W PoE power (+12V@2.1A)
Product Dimensions	140 x 100mm	168 x 112mm
System Support	Windows 10/11、Linux	
Operating Environment	Operating Temperature: 0~70°C	
	Storage Temperature: -40~85°C	
	Relative Humidity: 10~95% @40°C (Non-Condensing)	