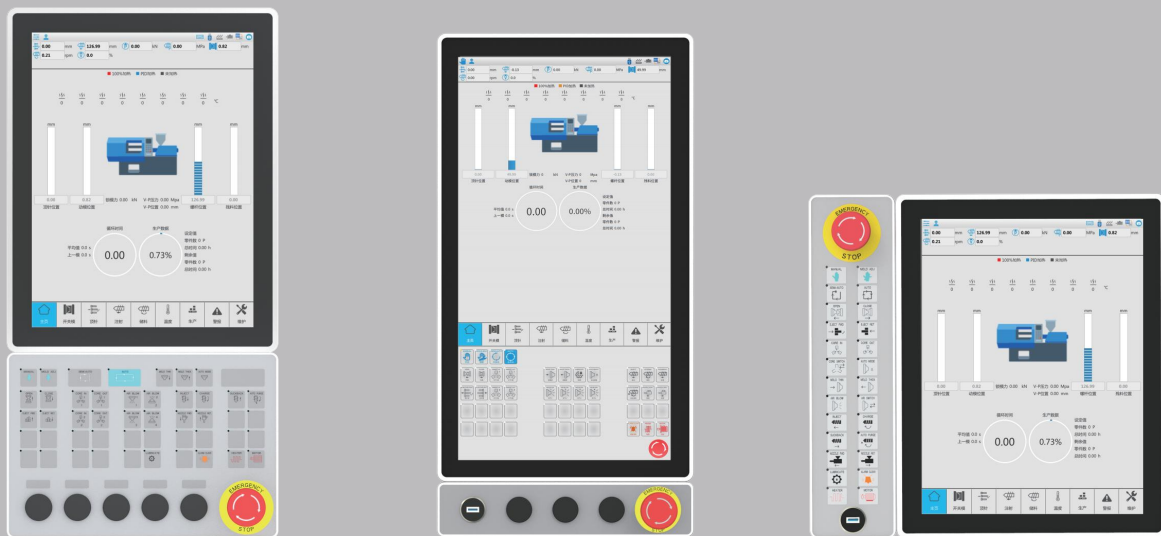


All-Electric & Hybrid Injection Molding Solutions

Product Selection Manual

EtherCAT®

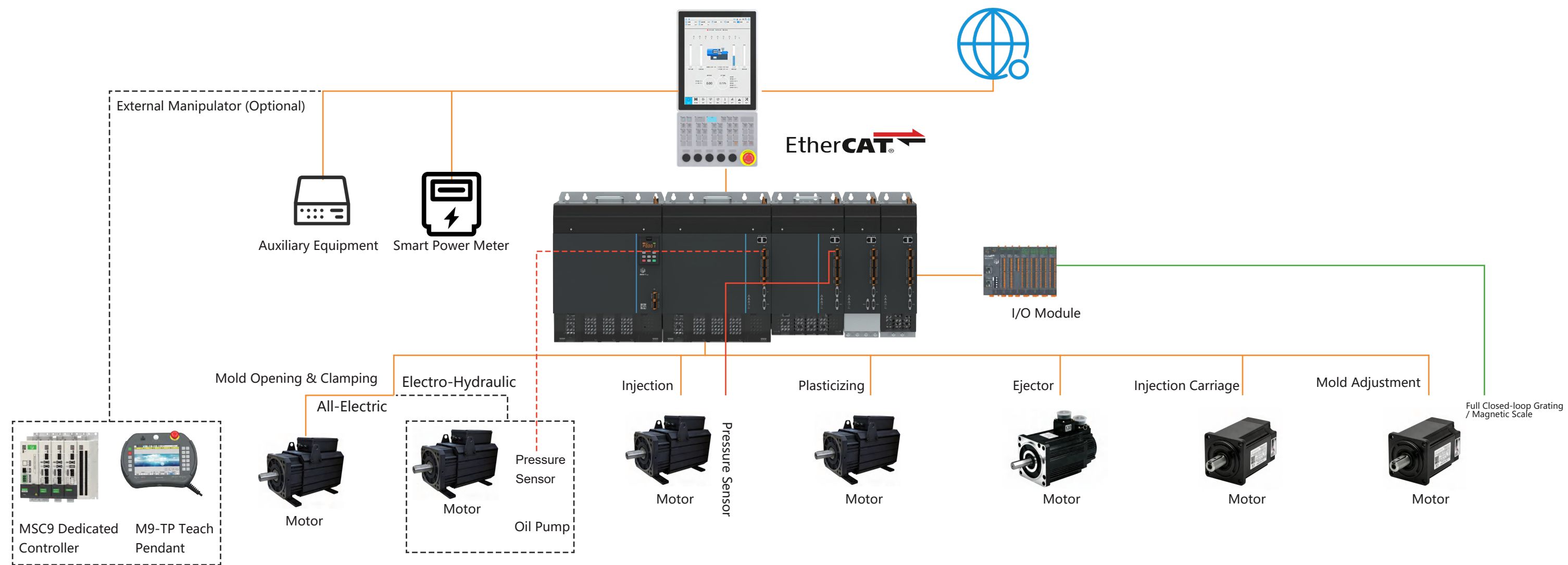


EPC501/EPC801 Series Injection Molding Machine Control System

E900-T Series Medium Power Servo Drives for Injection Molding Machines

MB6 Series Plug-in Bus I/O Modules

All-Electric & Hybrid Injection Molding Solution



Applicable models: Suitable for horizontal machines, vertical machines and electro-hydraulic hybrid machines with clamping force from 10 to 1800 tons.

Injection speed: 0 - 500 mm/s.

Temperature control accuracy: Steady-state fluctuation $\leq 0.5\text{ }^{\circ}\text{C}$.

Pressure control accuracy: High-precision closed-loop control at 0.01 mm level, pressure accuracy up to 1 bar.

Modular software design: It supports configuration programming and industry-standard customized controls. Adopting object-oriented programming architecture and equipped with abundant application libraries including injection process library, temperature control library and motion control library, it can quickly build machine-specific application projects, support secondary development and is easy to operate.

Multiple control algorithms: Injection pressure closed-loop, back pressure closed-loop control, full position closed-loop and multi-axis synchronous injection.

System Safety:
It is standard equipped with STO (Safe Torque Off) function and adopts European-standard dual power supply design.
An optional dynamic safety module can reliably lock the mold clamping axis, injection axis and plasticizing axis in case of sudden power failure or abnormal faults during high-pressure injection, prevent shaft rebound and protect the safety of personnel and equipment.

High-speed response: Communication refresh cycle is 125 μs ; speed loop bandwidth is 3.8 kHz.

High efficiency and energy saving: It adopts common DC bus architecture to reduce average energy consumption by about 30% and achieve a total power saving rate of 30% to 50%. The ultra-low braking rate greatly reduces the internal temperature of the electric cabinet and lowers the failure rate of internal electrical components.

EPC501 Series

Special System for Injection Molding Machines

As a dedicated control platform for horizontal, vertical all-electric and electro-hydraulic hybrid injection molding machines, the EPC501 series is applicable to precision injection molding scenarios such as 3C electronics, optical components, medical consumables, food packaging and auto parts.

The system realizes 0.01 mm-level high-precision closed-loop control. Relying on EtherCAT real-time bus, it achieves efficient coordination of multi-axis motions to improve molding stability and production efficiency.

It supports one-click automatic mold adjustment and fast parameter configuration for convenient and efficient commissioning. It is equipped with hierarchical authority management, power-on self-test and safety early warning functions to ensure reliable equipment operation.

Compared with traditional hydraulic systems, the all-electric solution delivers better product consistency and faster response, with an overall power saving rate of 30%~50%. It operates with low noise, no oil pollution and is environmentally friendly.

The modular architecture supports secondary development and system expansion, providing core control solutions for injection molding enterprises to realize precision, high-efficiency and green intelligent manufacturing.



Technical Indicators

Core Control System

- Machine parameters: Injection speed 0~500 mm/s, clamping force 10 ~ 1800 tons.
- Temperature control accuracy: Steady-state fluctuation $\leq 0.5\text{ }^{\circ}\text{C}$.
- Pressure control accuracy: Position accuracy higher than 0.01 mm, pressure accuracy 1 bar.
- Position feedback: 23-bit absolute encoder, realizing 0.01 mm repeat positioning accuracy.
- Openness: It supports secondary development and is easy to operate.

Servo System

- **Voltage grade: Three-phase AC 380 V.**
- **Single-axis power range of the servo system: 0.4-135 kW.**
- **Outstanding performance: Communication refresh cycle 125 μs ; speed loop bandwidth 3.8 kHz.**
- **Multiple control algorithms: Multi-axis synchronous injection and built-in closed-loop control (internal control cycle: 62.5 μs).**
- **High efficiency and energy saving: Common DC bus architecture and ultra-low braking rate greatly reduce the temperature of the electric cabinet and power consumption.**
- **System Safety**

The system is standard equipped with STO (Safe Torque Off) function and adopts European-standard dual power supply design. The optional dynamic safety module can reliably lock the mold clamping axis, injection axis and plasticizing axis in case of sudden power failure or abnormal faults during high-pressure injection, prevent shaft rebound and protect the safety of personnel and equipment.

Applicable Machine Types

Horizontal injection molding machine

- It covers clamping force from 10 to 1800 tons and can meet the control requirements of small, medium and large tonnage all-electric equipment.
- It supports high-volume dual-axis synchronous injection, with dual-axis position synchronization error ≤ 0.01 mm and pressure synchronous response difference < 10 ms.
- It natively supports rotary mold, two-color /multi-color and multi-material injection molding with accurate mold shifting positioning.
- Adopting EtherCAT real-time bus for multi-axis coordinated control, the molding repeat accuracy reaches ± 0.01 mm.
- One-click automatic mold adjustment, pressure auto-tuning and temperature auto-tuning make commissioning simple and efficient.
- It is energy-saving, low-noise and oil-free. The standard STO safety function prevents shaft rebound after power failure.

Electro-hydraulic hybrid injection molding machine

- It is suitable for large-tonnage and high-injection-volume hybrid machines with better stability than conventional control systems.
- It is compatible with rotary mold, two-color /multi-color and multi-component injection processes for stable molding quality.
- The common DC bus realizes energy recovery, making the whole machine save 30%~50% of electricity and run with lower noise.
- The pressure and flow closed-loop respond quickly, which significantly reduces product defects such as flash and sink mark.
- Automatic mold adjustment and parameter auto-tuning simplify commissioning and reduce reliance on senior technicians.
- It reduces oil pollution and balances production efficiency and workshop environmental protection requirements.

Vertical injection molding machine

- The system integrates turntable control algorithm, and an external controller is optional.
- The turntable positioning accuracy is ± 0.01 mm. It runs stably without impact and is suitable for multi-station insert molding and overmolding.
- It adapts to the typical working conditions of vertical machines, ensuring stable insert molding and high dimensional consistency.
- Servo parameters and I/O configuration can be debugged directly on site for easier operation.
- All-electric drive realizes clean production, suitable for high-standard scenarios such as 3C products, medical devices and connectors.
- It has complete safety logic and reliable interlock for mold clamping, injection and turntable to ensure man-machine safety.

Two-color & multi-color injection molding machine

- It professionally realizes dual-axis high-precision synchronous injection with synchronization control accuracy of ± 0.01 mm.
- It supports large-tonnage and high-injection-volume multi-nozzle equipment with interference-free and impact-free multi-axis linkage.
- It adapts to complex special injection machines for two-color, multi-color, multi-material and multi-station processes.
- It supports seamless switching between multi-axis independent control and coordinated control with strong process compatibility.
- The highly integrated system allows direct configuration of servo and I/O parameters, which greatly shortens the commissioning cycle.
- Flexible modular expansion meets the demands of high-end customized equipment and future upgrading.

Solution Highlights



Pressure Closed-loop

The servo has built-in pressure closed-loop which runs at a cycle of 62.5 μ s. Compared with the traditional mode that calculates pressure via analog signals on the controller side and then executes by servo, this mode features higher real-time performance, higher precision and smaller fluctuation.



Back Pressure Control

The servo has built-in back pressure control with a shorter control link, achieving rapid response at 250 μ s level and higher control precision, as well as optimizing motor heat dissipation and safety protection.



Full Position Closed-loop

The servo supports full closed-loop control. The full closed-loop signal is connected to the servo side for real-time control. Compared with controller-side closed-loop control, it has higher safety level, smaller dynamic deviation, faster response and higher precision.



Multi-axis Synchronous Injection

The servo is embedded with multi-axis synchronous injection control and inter-axis synchronization compensation. With microsecond-level inter-axis synchronization cycle, the synchronization accuracy and reliability are greatly improved. It avoids inter-axis motion interference and position coupling conflict caused by EtherCAT cycle delay in large-tonnage electric injection scenarios.



Process Tracking

By self-learning the pressure, temperature, position and other curves in the injection process, the software can effectively identify and reject defective



Modular Software

It supports configuration programming and industry-standard customized controls. With object-oriented programming architecture and abundant application libraries including injection process library, temperature control library and motion control library, it can quickly build machine-specific application projects, support secondary development and is easy to operate.



Easy Commissioning

Four core configurations including servo debugging, I/O setup, servo parameters and process debugging can be completed directly on the system side. Especially for difficult key links such as pressure control, automatic mold adjustment and temperature auto-tuning, it realizes one-click and visual debugging, which greatly simplifies the operation process and reduces the commissioning difficulty and reliance on professional personnel.



Energy Saving & Environmental Protection

It adopts common DC bus technology to recover regenerative braking energy, reduce power consumption and equipment heat with remarkable energy-saving effect. Different from traditional hydraulic structure, all-electric injection molding has no hydraulic station and runs with lower noise, which effectively reduces noise pollution and realizes energy conservation and low-carbon operation.

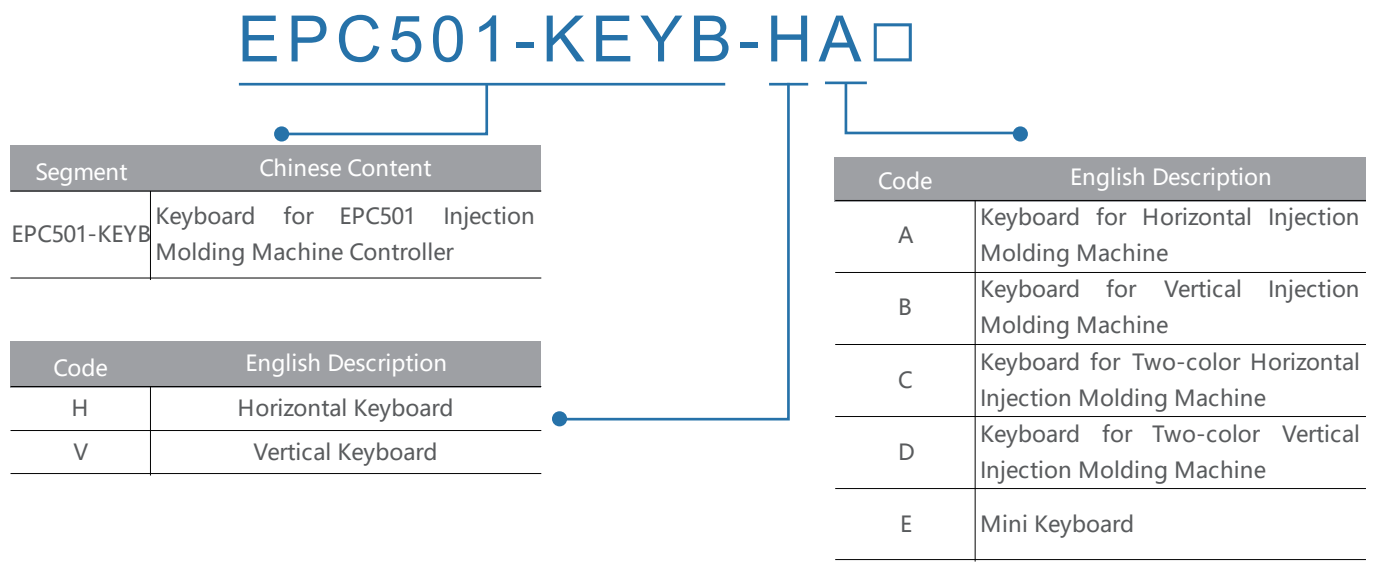
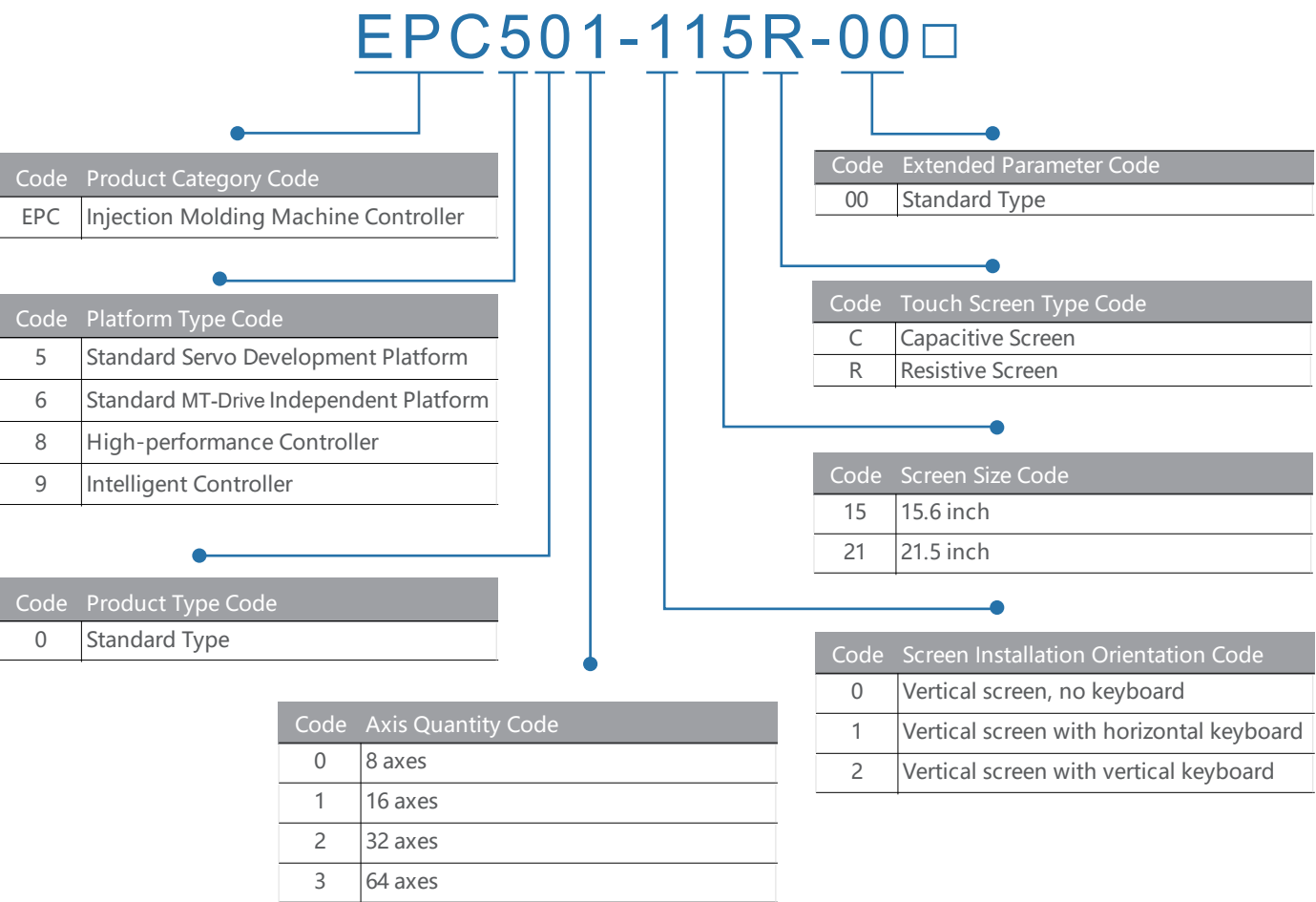


System Safety

It is standard equipped with STO (Safe Torque Off) function and adopts European-standard dual power supply design.

The optional dynamic safety module can reliably lock the mold clamping axis, injection axis and plasticizing axis in case of sudden power failure or abnormal faults during high-pressure injection, prevent shaft rebound and protect the safety of personnel and equipment.

Naming Rules



Technical Specifications

Category	Item	Specification
System	CPU Main Frequency	4-core × 2 GHz
	Memory Capacity	2 GB
	Storage Capacity	16 GB
	Programming Standard	IEC 61131-3 (LD, ST, SFC, CFC)
	Program Execution Mode	Compiled Execution
	Power-off Retention Memory	512 KB
	SD Card	Max. 32 GB, supports data logging & user program download
Power Supply	Input Voltage	24 VDC (-15% ~ +20%)
	Rated Input Current	Max. 3.0 A
	Protection Feature	Reverse Polarity Protection
Interfaces	Ethernet Port	1 Channel
	EtherCAT Port	1 Channel
	USB Port	2 Channels
	RS485 Port	2 Channels
	Digital I/O	8 Digital Inputs + 8 Digital Outputs
Display & Touch	Display Size	15.6 inch / 21.5 inch
	Aspect Ratio	4:03
	Display Resolution	1024 × 768
	Brightness Adjustment	Supported
	Touch Calibration Function	Supported
	Touch Panel Type	Resistive Touch Screen
EtherCAT Communication	Maximum Slave Nodes	128
	Supported Axes under 1ms Cycle	8 axes
	Synchronization Jitter	1 μs
	Communication Rate	100 Mbps Full-duplex
Environmental Conditions	IP Rating	Front Panel IP65, Backplane IP20
	Pollution Degree	Degree 3
	Max. Operating Altitude	2000 m
	Operating Temperature	-10 ℃ ~ 55 ℃

E900-T Series Medium Power Servo Drives for Injection Molding Machines

The E900-T series is a high-performance servo platform exclusively for all-electric injection molding machines developed by MT-Drive for medium-power multi-axis transmission applications. It delivers efficient and reliable integrated drive solutions for horizontal, vertical and electro-hydraulic hybrid machines with clamping force ranging from 10 tons to 1800 tons.

Embedded with dedicated control algorithms for all-electric injection molding, the product deeply integrates injection pressure closed-loop control, back pressure closed-loop control, full position closed-loop control and multi-axis synchronous injection functions. Adopting modular design with high reliability and high power density and supporting wall-penetrating mounting, it significantly improves overall equipment reliability and user experience.



Stable heavy-load drive & precise closed-loop control,
empowering large-tonnage all-electric injection molding

Product Features

Applicable Machine Types

Compatible with horizontal, vertical and electro-hydraulic hybrid injection molding machines with clamping force from 10 to 1800 tons.

Injection Speed

0 - 500 mm/s

Pressure Control Accuracy

High-precision closed-loop control at 0.01 mm level, with pressure accuracy up to 1 bar.

High-speed Response

Communication refresh cycle: 125 μ s; speed loop bandwidth: 3.8 kHz.

Multiple Control Algorithms

Embedded with injection pressure closed-loop, back pressure closed-loop, full position closed-loop and multi-axis synchronous injection control algorithms.

High Efficiency & Energy Saving

Adopts common DC bus architecture to cut average power consumption by about 30%, delivering an overall power saving rate of 30% - 50%.

Ultra-low braking rate drastically reduces the internal temperature of electric cabinets and lowers the failure rate of internal electrical components.

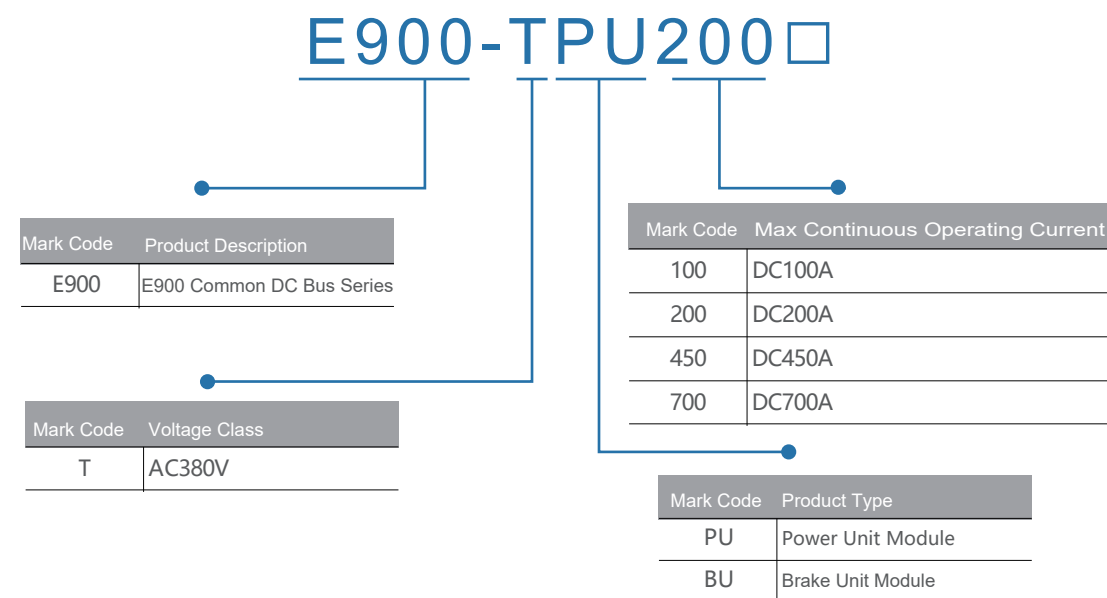
System Safety

Standardly equipped with STO (Safe Torque Off) function.

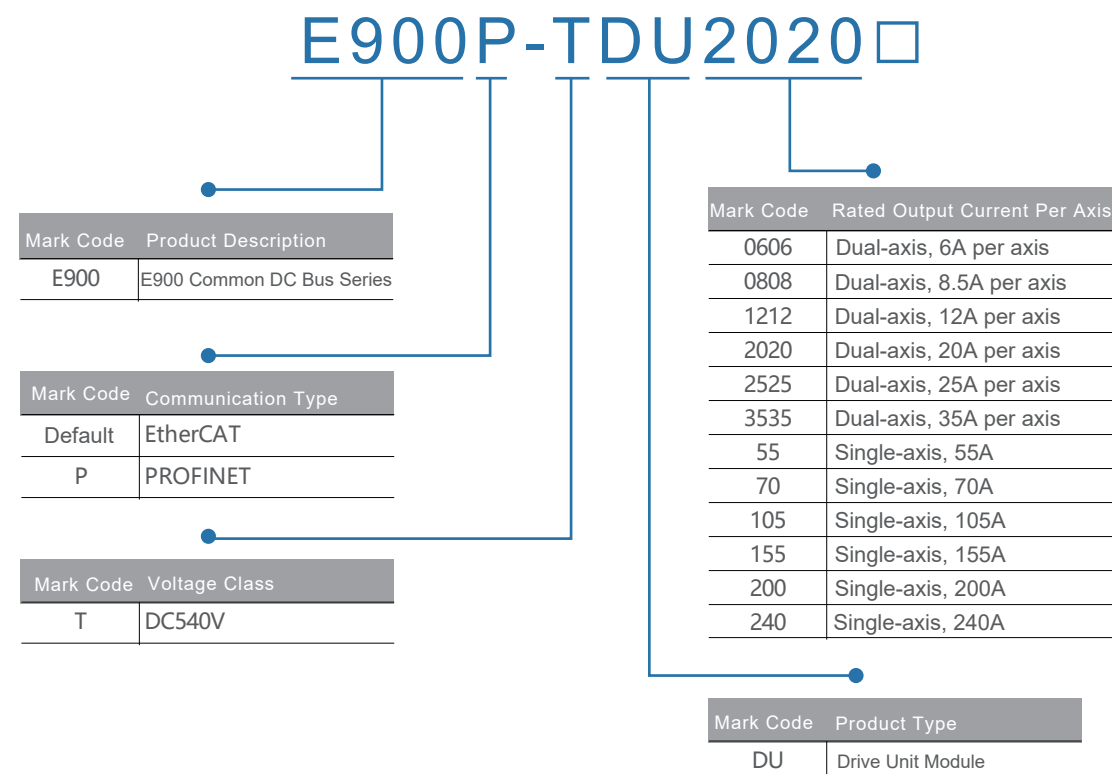
Adopts European-standard dual power supply design.

Optional dynamic safety module reliably locks the mold clamping axis, injection axis and plasticizing axis in case of sudden power failure or abnormal faults during high-pressure injection, preventing shaft rebound and protecting the safety of personnel and equipment.

Power Module Naming Rules



Drive Module Naming Rules



Power Module Electrical Specifications

Frame Size	Frame Width (mm)	Power Unit Model	Max Continuous DC Operating Current (A)	Brake Unit
Size-A	60	E900-TPU110	100	Built-in Brake Unit
Size-A	60	E900-TPU200	200	
Size-C	200	E900-TPU450	450	
Size-D	300	E900-TPU700	700	External Brake Unit

Frame Size	Frame Width (mm)	Brake Unit Model	Max Continuous DC Operating Current (A)
Size-A	60	E900-TBU200	200

Electrical Specifications of Drive Module

Frame Size	Frame Width (mm)	Drive Unit Model	Rated Current (A)	Peak Current (A)
Size-A	60 Dual-axis	E900-TDU06/06	6	18
		E900-TDU08/08	8.5	25.5
		E900-TDU12/12	12	36
Size-B	100 Dual-axis	E900-TDU20/20	20	60
		E900-TDU25/25	25	75
		E900-TDU35/35	35	105
	100	E900-TDU55	55	110
		E900-TDU70	70	140
Size-C	200	E900-TDU105	105	210
		E900-TDU155	155	310
Size-D	300	E900-TDU200	200	400
		E900-TDU240	240	410

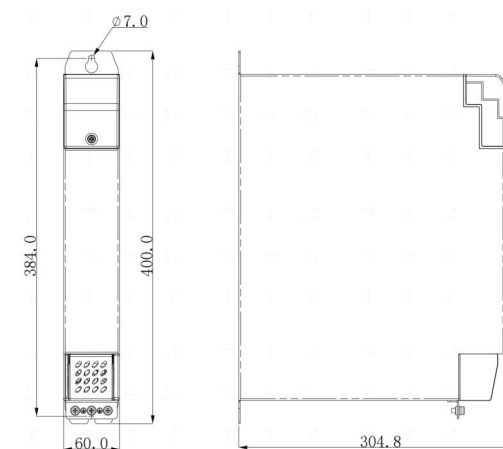
Technical Specifications

Item	Technical Specification
Main Power Voltage	Three-phase AC 380V ~ 480V (-15% ~ +10%)
Control Voltage	Independent 24V control power supply available (DC24V±10%)
Power Range	Power module capacity: 100A ~ 700A (DC540V); Drive module: 0.4kW ~ 135kW
Control Interfaces	EtherCAT: Minimum communication cycle 125μs, max cable length 100m, supports 100Mbps full-duplex
	PROFINET: Max transmission rate 100Mbps, max cable length 100m
Debug Software	IMOTO_Studio
Encoder Port	Absolute encoder support
	Full closed-loop port: compatible with absolute encoders and ABZ encoders
Debug Interface	USB Type-C port
Digital I/O (DI DO)	9 Digital Inputs / 4 Digital Outputs (DO supports NPN & PNP wiring), accessible via EtherCAT bus
Analog I/O (AI AO)	Each drive module equipped with 3 AI channels (AI3 is 16-bit high-precision, supports voltage & current input)
	Each drive module equipped with 1 AO channel (supports voltage & current output)
Motor Temperature Detection	Compatible with KTY84, PT100, PT1000, PTC sensors
Brake Output	Built-in brake relay (5A 250VAC/30VDC)
STO Interface & Safety Circuit	2 channels (Safe Torque Off)
Mounting Method	Backplane mounting, wall-penetrating mounting
Heat Dissipation	Forced air cooling
Operating Ambient Temperature	-10℃ ~ 50℃
Humidity (Operation)	10% ~ 90% RH (Non-condensing)
Storage Temperature	-20℃ ~ 65℃
Storage Humidity	10% ~ 90% RH (Non-condensing)
Max Operating Altitude	Below 1000m
IP Rating	Drive unit: IP20; IP54 when installed inside electrical cabinet
Certifications	CE, RoHS

Module Outline & Mounting Dimensions

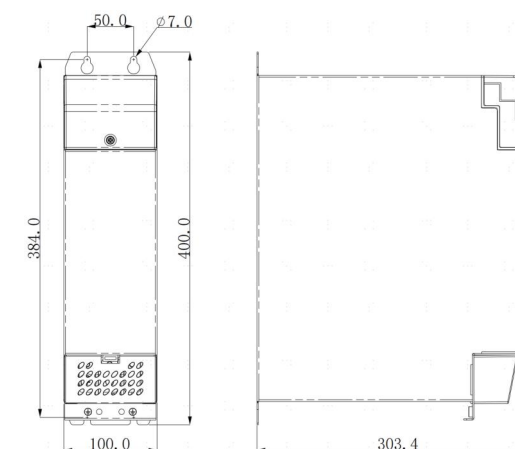
Size-A

Model with 60mm Width



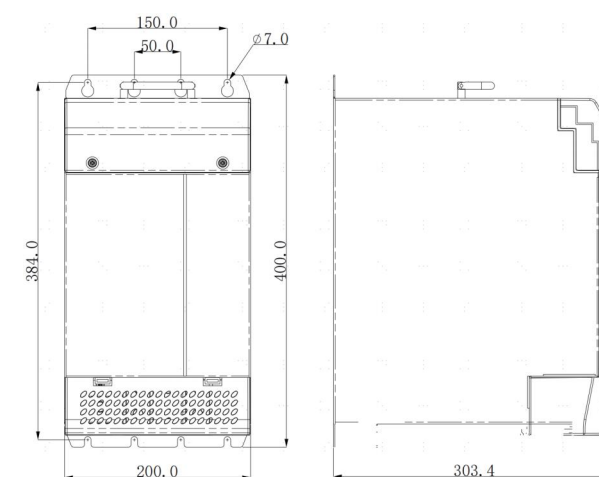
Size-B

Model with 100mm Width



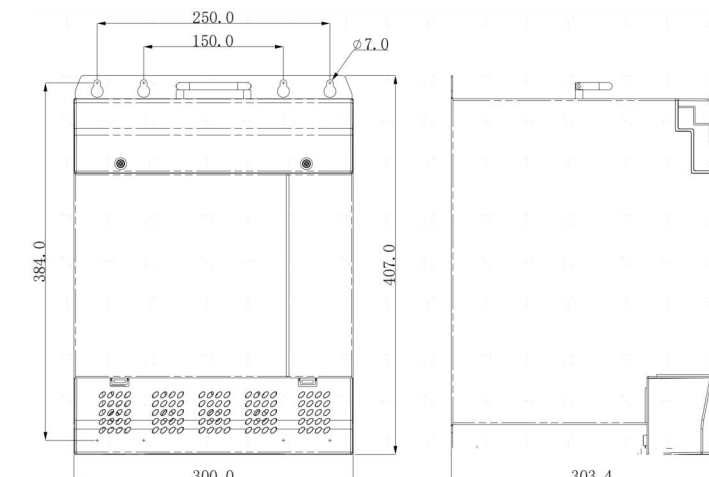
Size-C

Model with 200mm Width



Size-D

Model with 300mm Width



MB6 Series Plug-in Bus I/O Modules

The MB6 series plug-in bus I/O modules support the mainstream EtherCAT communication protocol. The system consists of coupler modules, I/O function modules, relay power modules and terminal end caps. It provides multi-segment temperature control, high-precision analog input, digital input and digital output functions specially for injection molding machines, featuring higher flexibility and expandability, so users can configure modules according to actual on-site requirements.



- MB6-EC2002 Coupler Module
Supports a maximum input data length of 512 bytes and maximum output data length of 512 bytes, and allows up to 32 expandable I/O modules to be connected.
- MB6-TM0400 Temperature Module
Supports 4-channel RTD (PT100) temperature acquisition and multiple thermocouple types (K, J, T, E, N, R, S, B, C). Opto-isolation is adopted for internal bus and input circuits, with 16-bit ADC resolution.
- MB6-A0400V Analog Input Module
Supports 4-channel voltage signal input with 16-bit resolution, high speed and high precision. Collectable voltage ranges include -10~10V (default), 0~10V, -5~5V, 0~5V, 1~5V; filter time is configurable.
- MB6-3200N/PT Digital Input Module
Provides 32-channel digital input. Compatible with NPN sensors (low level active) and PNP sensors (high level active). The internal bus and input circuits are opto-isolated. Digital signal filter time (0~20ms) is adjustable, and each channel can be configured independently.
- MB6-0032PT Digital Output Module
32-channel PNP digital output (high level active). Each DO channel can output a maximum current of 0.8A to drive relays and solenoid valves. Internal bus and output circuits adopt opto-isolation, and short-circuit protection is built-in.

Coupler Naming Rules

MB6-EC2002

Code	Description
MB	Plug-in I/O Module

Code	Description
6	Standard Product Series
5	Product Series with UL Certification

Code	Description
EC	EtherCAT Protocol

Code	Description
2	Design Serial Number

Code	Power Capacity
20	2.0 A
40	4.0 A

I/O Module Naming Rules

MB6-A0400V ☐

Code	Description
MB	Plug-in I/O Module

Code	Description
Default	Digital I/O Module
A	Analog Module
P	Pulse Output Module
TM	Thermocouple & RTD Temperature Module
MR	Temperature Control Module
PU	Relay Power Module
COM	Common Terminal Module

Code	Type	Code	Type
N	NPN	V	Voltage: 0~5V, -5~5V, 1~5V, 0~10V, -10~10V
P	PNP	C	Current: 0~20mA, 4~20mA
T	Transistor	VC	Voltage & Current: 0~5V, -5~5V, 1~5V, 0~10V, -10~10V (default), -20~20mA, 0~20mA, 4~20mA
R	Relay	/	Composite identification for multiple types
D	Differential	—	—

Signal Type	Available Channel Quantities
Digital	0, 8, 16, 32
Analog	0, 4, 8

Signal Type	Available Channel Quantities
Digital	0, 8, 16, 32
Analog	0, 4, 8

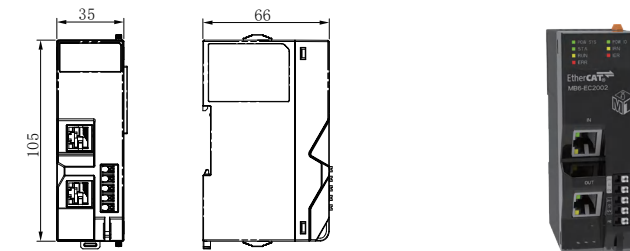
MB6 Series Plug-in Bus I/O Modules

Quick Selection Table

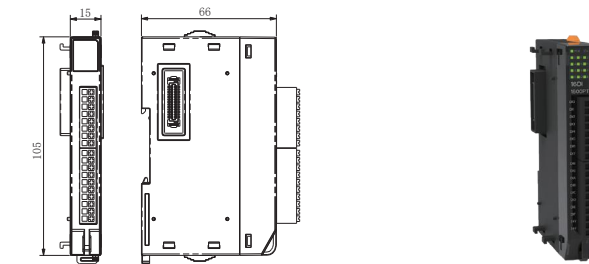
Module Category		Specification Code	Current Consumption (mA@5V)		Output Bytes	Remarks
Coupler	MB6-EC2002	-	200	2	2	EtherCAT coupler, 2A power supply, max supports 32 modules
Coupler	MB6-PN2002	-	200	2	2	PROFINET coupler, 2A power supply, max supports 32 modules
Coupler	MB6-EI2002	-	200	2	2	EtherNet/IP coupler, 2A power supply, max supports 32 modules
Coupler	MB6-MT2002	-	200	2	2	Modbus TCP coupler, 2A power supply, max supports 32 modules
Coupler	MB6-CF2002	-	200	2	2	CC-Link IE Field Basic coupler, 2A power supply, max supports 32 modules
Digital Input	MB6-1600NT	-	65	2	0	16-channel digital input, NPN type, opto-isolated input
Digital Input	MB6-1600PT	-	65	2	0	16-channel digital input, PNP type, opto-isolated input
Digital Input	MB6-3200N/PT	-	130	4	0	32-channel digital input, NPN/PNP type, opto-isolated input
Digital Input	MB6-3200N/PT(H)	-	130	4	0	32-channel digital input, NPN/PNP type, opto-isolated input, horn terminal
Digital Output	MB6-0016NT	-	140	0	2	16-channel digital output, NPN transistor output, 0.8A per channel
Digital Output	MB6-0016PT	-	140	0	2	16-channel digital output, PNP transistor output, 0.8A per channel
Digital Output	MB6-0032NT	-	280	0	4	32-channel digital output, NPN transistor output, 0.8A per channel
Digital Output	MB6-0032NT(H)	-	280	0	4	32-channel digital output, NPN transistor output, 0.5A per channel, horn terminal block
Digital Output	MB6-0032PT	-	280	0	4	32-channel digital output, PNP transistor output, 0.8A per channel
Digital Output	MB6-0032PT(H)	-	280	0	4	32-channel digital output, PNP transistor output, 0.5A per channel, horn terminal block
Digital Input & Output	MB6-0808NT	-	80	1	1	8-channel digital input (NPN opto-isolated) + 8-channel digital output (NPN transistor, 0.8A per channel)
Digital Input & Output	MB6-0808PT	-	80	1	1	8-channel digital input (PNP opto-isolated) + 8-channel digital output (PNP transistor, 0.8A per channel)
Relay Output	MB6-0008R	-	100	0	1	8-channel relay output, rated contact current 2A
Analog Input	MB6-A0400V	-	110	8	0	4-channel voltage input: -10~10V / 0~10V / -5~5V / 0~5V / 1~5V, 16-bit resolution, ±0.1% accuracy
Analog Input	MB6-A0800V	-	110	16	0	8-channel voltage input: -10~10V / 0~10V / -5~5V / 0~5V / 1~5V, 16-bit resolution, ±0.1% accuracy
Analog Input	MB6-A0400C	-	90	8	0	4-channel current input: 0~20mA / 4~20mA, 16-bit resolution, ±0.1% accuracy
Analog Input	MB6-A0800C	-	90	16	0	8-channel current input: 0~20mA / 4~20mA, 16-bit resolution, ±0.1% accuracy
Analog Input	MB6-A0400VC	-	140	8	0	4-channel universal input, each channel configurable as voltage or current signal; input range: -10~10V / 0~10V / -5~5V / 0~5V / 1~5V / -20~20mA / 0~20mA / 4~20mA, 16-bit resolution, ±0.1% accuracy
Temperature Acquisition	MB6-TM0400	-	70	16	0	4-channel temperature acquisition, supports thermocouple & RTD, 2-wire / 3-wire
Analog Output	MB6-A0004V	-	230	0	8	4-channel voltage output: -10~10V / 0~10V / -5~5V / 0~5V / 1~5V, 16-bit resolution, ±0.1% accuracy
Analog Output	MB6-A0008V	-	230	0	16	8-channel voltage output: -10~10V / 0~10V / -5~5V / 0~5V / 1~5V, 16-bit resolution, ±0.1% accuracy
Analog Output	MB6-A0004C	-	55	0	8	4-channel current output: 0~20mA / 4~20mA, 16-bit resolution, ±0.1% accuracy
Analog Output	MB6-A0008C	-	55	0	16	8-channel current output: 0~20mA / 4~20mA, 16-bit resolution, ±0.1% accuracy
Analog Output	MB6-A0004VC	-	50	0	8	4-channel universal output, each channel configurable as voltage or current signal; output range: -10~10V / 0~10V / -5~5V / 0~5V / 1~5V / -20~20mA / 4~20mA, 16-bit resolution, ±0.1% accuracy
Pulse Input	MB6-C0200T	-	50	48	16	2-channel encoder input, pulse counting, supports NPN / PNP, up to 1.5MHz
Pulse Input	MB6-C0200D	-	50	48	16	2-channel differential encoder input, max frequency 10MHz
Relay Power Module	MB6-PU0201	-	60	0	0	Relay power supply module, 2A output, DC 24V
Communication Module	MB6-MR01	-	50	14	18	1-channel serial communication module, supports Modbus RTU/ASCII / free protocol, auto-switch
Common Terminal Module	MB6-COM0909	-	0	0	0	COM1: 9-pin, COM2: 9-pin
Common Terminal Module	MB6-COM1800	-	0	0	0	COM1: 18-pin, COM2: none

MB6 Module Dimensions & Outline

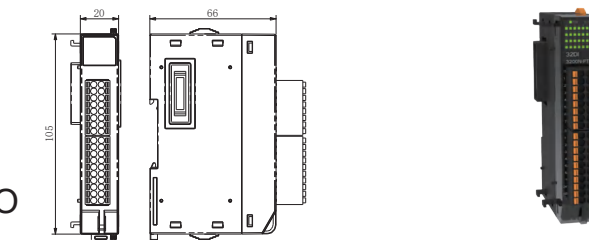
Coupler Module



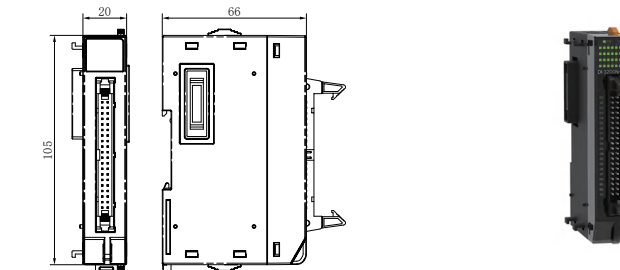
I/O Module (1)



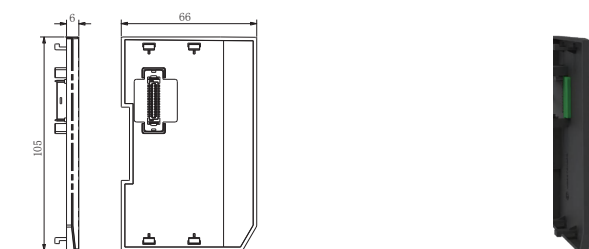
I/O Module (2) Exclusive for 32-channel I/O



I/O Module (3) Exclusive for 32-channel horn terminal I/O

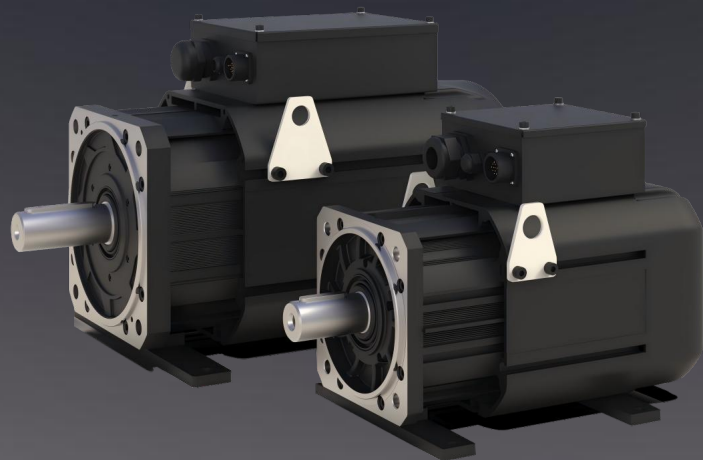


End Cap



MT7 Series Servo Motors

Exclusively for All-Electric Injection Molding Machines



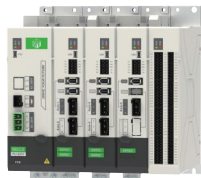
Item	Specification
Power Range	3.0kW ~ 90kW
Flange Frame Sizes	80#, 100#, 130#, 180#, 200#, 250#, 350#
Motor Performance	High Kt constant, high power density; low inertia, high angular acceleration
Overload Capacity	2x ~ 3.8x high overload
Encoder	23-bit multi-turn absolute encoder; battery-free absolute encoder technology under development
IP Rating	IP65



Scan the QR code for more motor documentation, or consult MT-Drive sales representatives.

MT-Drive Product Matrix — General Products

Control



MSC9 Series Integrated Motion & Drive System



M9-TP Handheld Teach Pendant

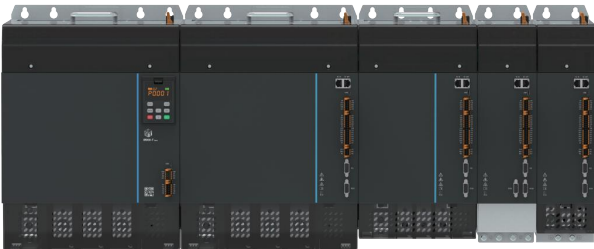


MC500 Series Motion PLC



MC800 Series Motion PLC

Drive



M900T Series



M900 Series



D900 Series

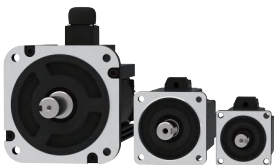


M800 Series



M800-T High Power Series

Actuator & Sensing



Servo Motors (50W~90kW)



25bit Optical Encoders



Integrated Remote I/O



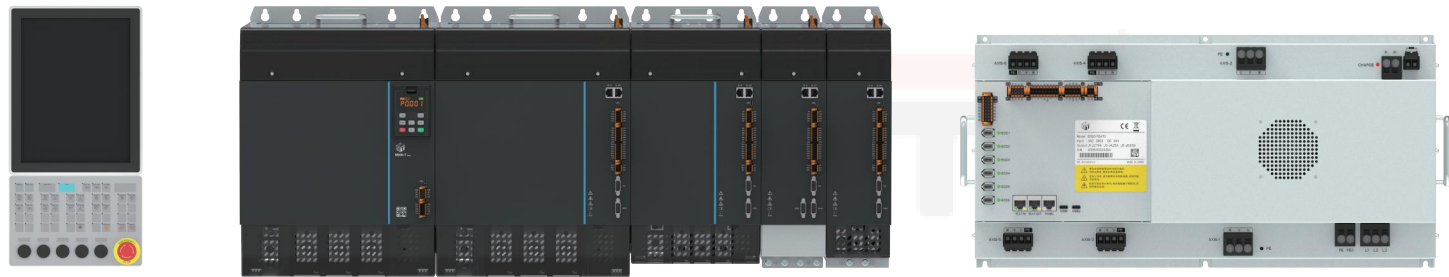
Plug-in Remote I/O



IP67 Remote I/O

Special Machine Products

All-Electric Injection Molding Machine Product Line



EPC501 Series E900-T Series E920-T Series

Coming Soon: New Product Releases

EPC801 System Introduction

It delivers superior motion control performance with control cycle shortened to 250μs, enabling precise execution of high-speed molding processes. It features a higher refresh rate for faster HMI response and finer display visuals. Integrated with NFC and cloud connectivity, it supports remote debugging and intelligent diagnostics to realize data intercommunication and predictive maintenance, serving as the next-generation intelligent control hub for all-electric injection molding machines.

MDE Series Injection Molding Dedicated I/O (Compact & Economy Versions)

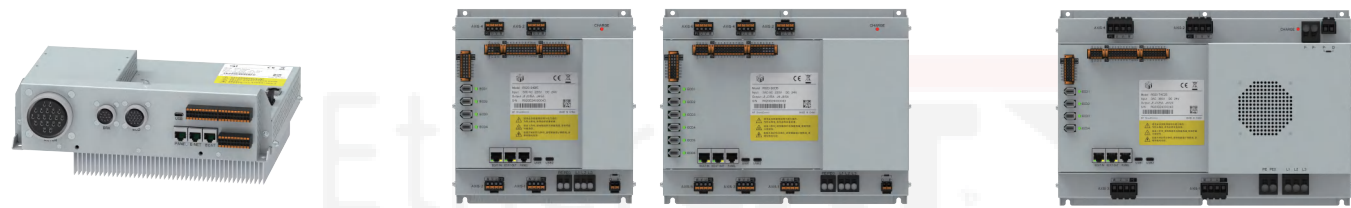
Custom-designed exclusively for all-electric injection molding machines, the single board integrates full digital/analog/temperature control interfaces to replace traditional discrete modules. Adopting industrial-grade isolation anti-interference design, it performs stably under complex working conditions. With simplified wiring and compact layout, it drastically cuts BOM and assembly costs. Plug-and-play design enables convenient commissioning and maintenance, improving overall machine reliability while lowering total costs and boosting productivity.

Logistics & Warehousing Industry Product Line



MDL580 Single-axis Series MDL580 Dual-axis Series

Robotics Industry Product Line



R910-S Series R920-S Series (4-axis / 6-axis) R920-T Series

About Us

MT Drive & Control (Shenzhen) Co., Ltd.
We are a national high-tech enterprise focusing on core components and turnkey complete solutions for advanced manufacturing. Upholding the core values of Focus, Innovation, Leadership, we have built a three-tier industrial product architecture covering control, servo and sensors. We are committed to delivering more advanced, reliable, efficient and competitive full-set industry solutions.

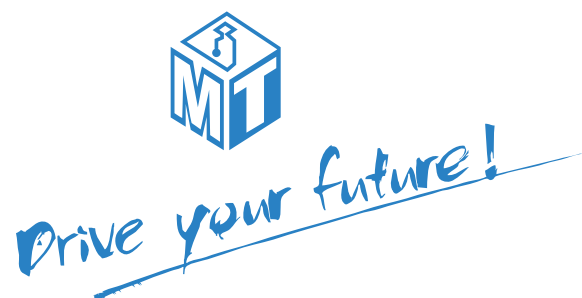
Headquartered in Shenzhen, China's innovation hub, the company operates a R&D Center, Quality Center, Production Center, Administration Center, Marketing Center and a Suzhou Sales Branch. As a pioneer and leader in multi-axis transmission technology, our product portfolio includes motion PLCs, servo systems, integrated drive-control systems, remote I/O modules and other core compo

nents. Our products support mainstream industrial fieldbus protocols including PROF-INET, EtherCAT and EtherNet/IP. With proprietary technical architecture and outstanding performance, they are widely applied in photovoltaic, lithium battery, robotics, CNC & metalworking/woodworking/glass/semiconductor processing, logistics warehousing, 3C, automotive manufacturing, printing & packaging, tobacco and other industries.

Adhering to long-term value-oriented development, MT-Drive synchronously develops core industrial components and customized industry turnkey solutions. As our product lineup continues to expand, we provide all-round industrial services and actively drive the development of the manufacturing sector.



- Over 85 intellectual property rights obtained
- Certified by CE, UL, RoHS, FCC and other international product standards
- ISO9001 quality management system certified



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