

Break through technical limitations
Persist in the modularization of multi-axis
systems to the end

Product Selection Manual

EtherCAT[®]  



M900 Series Modular Multi-axis Bus Servo System

Break through technical bottlenecks, deliver diversified solutions for industrial scenarios.

Advance factory digitalization and flexibility, and support industrial dual-carbon eco-civilization.

- Optional 16/32/64-axis motion control modules available
- Multi communication protocols supported
- Compatible with multiple motor types simultaneously
- Adopts advanced DC bus technology for energy conservation and efficiency improvement

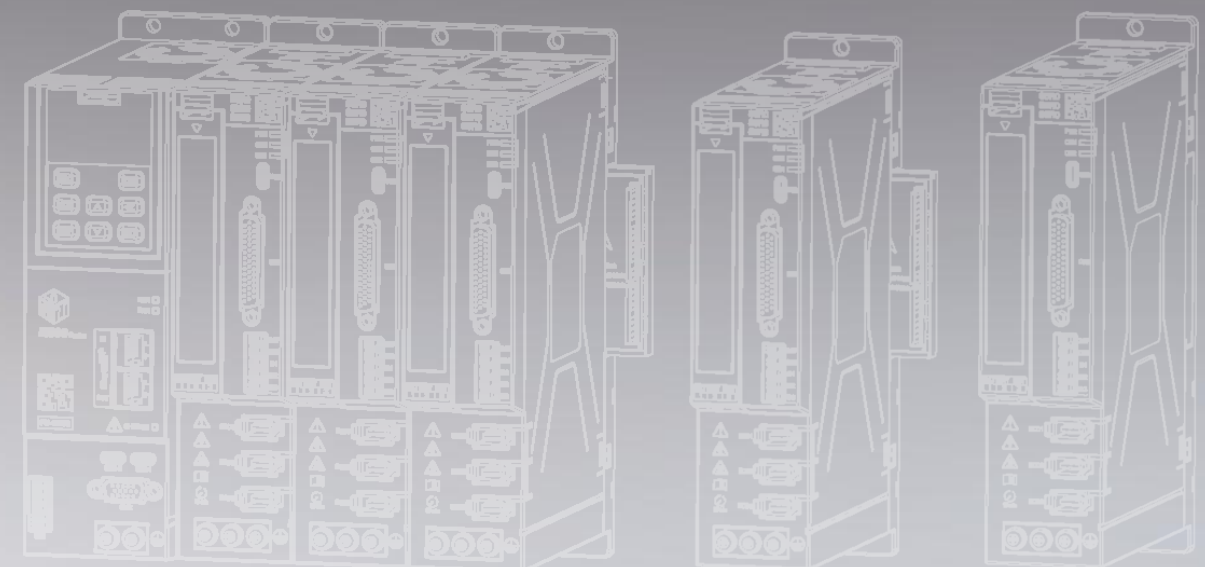


Carry modularization to the extreme,
Accelerate the innovation of next-generation drive technology

- Revolutionize the traditional standalone servo architecture
- Pre-assembly free, fully modular solution
- Screw-free efficient construction & fast modular combination (Patented)

Outstanding Performance, Safety & Reliability

- Gantry synchronization supported
- 125μs communication refresh cycle
- 3.8kHz speed loop bandwidth
- IEC Class A EMC compliance



M900 Series

Modular Multi-Drive Bus Servo System

The M900 Series is a new-generation high-performance modular multi-drive bus servo system developed by MT-Drive. It overturns the traditional standalone servo architecture, ideal for multi-axis motion control applications. Accelerating the revolution of next-generation drive technology, it is fully compatible with multiple motor types (rotary motors, DD motors, linear motors), delivers diversified options for industrial automation solutions, advances factory digitalization and flexibility, and contributes to industrial dual-carbon ecological development.

Built on an innovative common DC bus architecture, the M900 Series supports up to 3 axes per single drive module and a maximum of 15 axes per power module, with a power range from 50W to 3.8kW. It drastically reduces installation footprint, simplifies on-site assembly and wiring complexity, lowers upper-level control difficulty, and cuts cabinet integration labor and overall costs. Meanwhile, it completely eliminates inter-axis crosstalk issues found in traditional standalone servos, delivering significantly improved system reliability.



- ① Power Module
- ② Debug Keypad
- ③ Fan Assembly
- ④ Battery Box
- ⑤ Connector Base Assembly
- ⑥ Baseplate Assembly
- ⑦ 3-Axis Drive Module
- ⑧ 2-Axis Drive Module
- ⑨ Single-Axis Drive Module
- ⑩ End Cover



Power Modules

M9XX-PU35

35A Power Module
INPUT: Single-phase AC220V
OUTPUT: 35A / 310V DC

M9XX-PU50

50A Power Module
INPUT: Single-phase / Three-phase AC220V
OUTPUT: 50A / 310V DC

M9XX-PU100

100A Power Module
INPUT: Single-phase / Three-phase AC220V
OUTPUT: 100A / 310V DC

M9XX-PUXXCX

CX: Optional Codesys Platform16 /
32 / 64-Axis Motion Control

C1: 16-Axis Motion Control Unit
C2: 32-Axis Motion Control Unit
C3: 64-Axis Motion Control Unit



3-Axis Drive Module

M9XXX-DU050505

Axis 1 Reference Power: 50W ~ 750W, 5A
Axis 2 Reference Power: 50W ~ 750W, 5A
Axis 3 Reference Power: 50W ~ 750W, 5A



Dual-Axis Drive Modules

M9XXX-DU1505

Axis 1 Reference Power: 1.8kW ~ 3.8kW, 15A
Axis 2 Reference Power: 50W ~ 750W, 5A

M9XXX-DU0808

Axis 1 Reference Power: 850W ~ 1.5kW, 8A
Axis 2 Reference Power: 850W ~ 1.5kW, 8A

M9XXX-DU0805

Axis 1 Reference Power: 850W ~ 1.5kW, 8A
Axis 2 Reference Power: 50W ~ 750W, 5A

M9XXX-DU0505

Axis 1 Reference Power: 50W ~ 750W, 5A
Axis 2 Reference Power: 50W ~ 750W, 5A



Single-Axis Drive Modules

M9XXX-DU15

Axis 1 Reference Power: 1.8kW ~ 3.8kW, 15A

M9XXX-DU08

Axis 1 Reference Power: 850W ~ 1.5kW, 8A

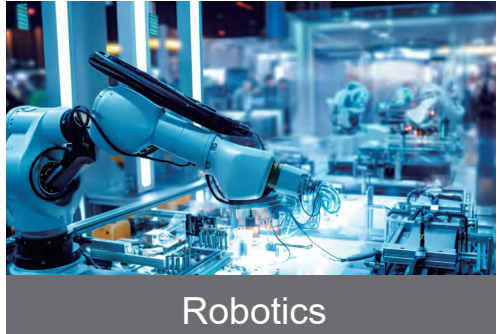
M9XXX-DU05

Axis 1 Reference Power: 50W ~ 750W, 5A

Notes:

For detailed power ratings and supported axis quantities, please refer to the M900 host PC software.
M9XX/M9XXX refers to modules of the M900/M900P, M930/M930P and other derivative series.

Industry Application



Robotics

- Perfectly eliminates robot end-jitter, TCP jitter, start-up drift and other abnormal phenomena;
- Equipped with safety-linked emergency stop mechanism, cable break detection, built-in STO safety function and dynamic braking, delivering superior professional protection for robots and on-site personnel;
- Adopts dedicated robotics industry algorithm, minimizes acceleration/deceleration time and greatly boosts operational cycle efficiency.



3C Electronics Industry

- Simultaneously compatible with servo motors, linear motors and rotary DD motors;
- Integrated 16/32/64-axis control, enabling modularization, standardization and platform-based construction of production lines.



Printing & Packaging

- Position + tension composite control, lowering requirements for the master controller;
- Built-in high-speed probe, supports high-speed flying color mark detection;
- Memory sharing among 3-axis modules, optimizing rotary printing performance and efficiency.



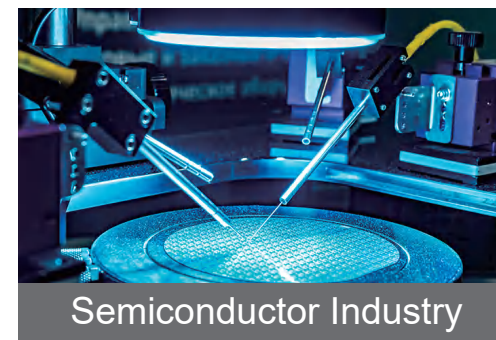
Logistics

- Fully modular design with IP40 protection grade, high integration and simple wiring, delivering optimal solutions for multi-axis transmission applications such as swivel wheel sorting and parcel separation;
- Dual support for PROFINET/EtherCAT fieldbus, which greatly improves on-site data throughput and reduces application costs;
- Common DC bus architecture, enabling approximately 30% power saving for end users.



CNC & CNC-like Applications

- Multi-dimensional curve surface generation function, enables rapid identification and troubleshooting of process issues;
- Visual quadrant compensation, delivering a true what-you-see-is-what-you-get operation experience.



Semiconductor Industry

- Standardized modular design with high reliability and outstanding stability;
- Ultra-high response performance: 125μs communication refresh period and 3.8kHz speed loop bandwidth. It realizes microsecond-level high-precision closed-loop control, and guarantees the accuracy of wafer dicing, grinding, polishing and other processes;
- Equipped with multi-layer safety protection mechanisms, including Safe Torque Off (STO), linked alarm output, external emergency stop and dynamic braking, to deliver all-round safety protection for equipment and workpieces.



Photovoltaic (PV)

- Compatible with multiple manufacturing processes including string welding, buffering and screen printing;
- Offers greater cost reduction and efficiency improvement potential compared with traditional standalone servo drives.



Lithium Battery Industry

- Built-in black box function enables efficient analysis of process control and motion control technical issues under unattended operation;
- Flexible modular deployment, perfectly adapted to winding, cutting & stacking, PACK and other production processes;
- STO and interlocked safety functions ensure the safe and reliable operation of the entire production line.



Safety & Reliability

- Compliant with EU CE and RoHS environmental protection certifications
- Unique common DC bus architecture, completely eliminates crosstalk between traditional standalone servo drives
- Built-in STO (Safe Torque Off) safety torque off function
- Standard dynamic braking, multi-axis interlocked emergency stop mechanism, and IP40 protection grade



Outstanding Performance

- 125μs communication refresh cycle
- 3.8kHz speed loop bandwidth
- Native gantry synchronization (62.5μs internal control period)



Richer Interfaces

- Each drive module equipped with: **16DI + 8DO + 1AD**
- Encoder interface supports full closed-loop function



Cost Saving

- Standardized modules to improve customer inventory turnover rate
- Reduces electrical cabinet space cost by 50%~70%
- Dramatically cuts costs of peripheral auxiliary components
- Screw-less modular design greatly lowers overall maintenance expenses



High Power Density

- Single drive module supports expansion up to 3 axes
- Single power module supports a maximum of 15 axes
- The complete 15-axis unit only occupies an installation area of A4 paper size
- Industry-leading power density



Easy Installation

- Standardized module dimensions
- Screw-free design for highly efficient system assembly
- Patented rapid modular combination structure
- Dramatically reduces electrical cabinet assembly labor hours



Easy Maintenance

- Tool-free hot-swappable module replacement on site for highly efficient maintenance
- Automatic parameter recovery, no professional personnel required for operation
- Removable plug-in fan design to greatly reduce fan maintenance difficulty



High Efficiency & Energy Saving

- Adopting common DC bus architecture, delivering approximately 30% average energy consumption reduction. Ultra-low braking ratio, effectively lowering the internal temperature of the electrical cabinet.



Battery Compartment

- Integrated built-in battery compartment, no extra installation space required
- Replaces external cable-mounted battery boxes to reduce overall costs
- Standard supercapacitor retains zero position memory, enabling worry-free battery replacement



Motor

- Self-developed 25-bit optical absolute encoder
- Potting process design, featuring low temperature rise and low electromagnetic noise
- IP65 high ingress protection rating



Easy Commissioning

- Multiple debugging tools available, supporting three commissioning modes: host PC, keypad and master network
- One-click copy and download of multi-axis parameters via single USB (Type-C) port for batch duplication, simple and highly efficient
- Host software supports multi-dimensional curve generation, enabling rapid troubleshooting of process issues



Optional Control Components

- The power module is optional to be equipped with 16/32/64-axis CODESYS platform control units.



Brake Terminal

- DO direct drive for motor brake control; no intermediate relay needed for cost reduction and efficiency improvement
- Built-in short circuit and foolproof protection functions to safeguard the whole equipment



Keypad

- Built-in commissioning keypad, supports easy synchronous parameter tuning of multiple drive modules
- External extension design (max. 20 meters), enabling intuitive debugging from a safe zone

Greater Performance Technological Breakthrough, Continuous Innovation

125 μ s

Communication Refresh Cycle

3.8kHz

Speed Loop Bandwidth

62.5 μ s

Internal Control Period



Max. 15 axes
supported per single unit

Single drive module
expandable up to 3 axes

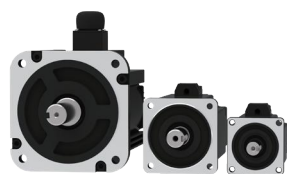
- Native gantry synchronization (62.5 μ s internal control period)
- Supports rotary motors, DD direct drive motors and linear motors
- Single drive module expands up to 3 axes; maximum 15 axes per complete unit

Motion Control Components

- Power module is optional with 16/32/64-axis CODESYS platform control assemblies

Abundant Onboard Interfaces

- Standard configuration per drive module: 16-channel digital input, 8-channel digital output, 1-channel analog input, 3-channel direct motor brake drive ports
- Encoder interface supports full closed-loop operation
- DO direct motor brake output, with built-in short-circuit and foolproof misoperation protection



Rotary Motor



DD (Direct Drive) Motor



Linear Motor

Note: Compatible with multiple motor types.

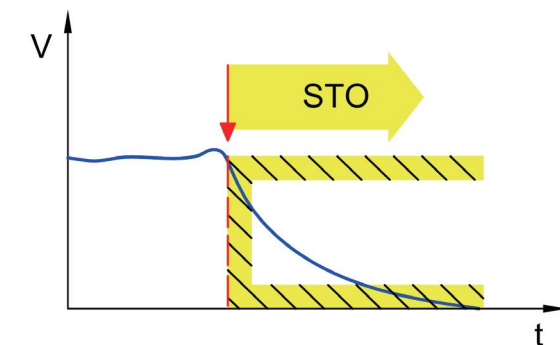
Higher Safety Multiple Certifications, Reliable & Trustworthy

Features international authoritative certifications including CE and RoHS.
All products are developed and manufactured under ISO 9001 quality management system.



STO Safety Function Compliant with National Design Specifications

- Complies with EN/IEC 61800-5-2 standard
- Complies with IEC 61508 ed.2: SIL3 standard
- Complies with EN/IEC 62061: SIL CL3 standard
- Complies with EN ISO 13849-1: PL e standard



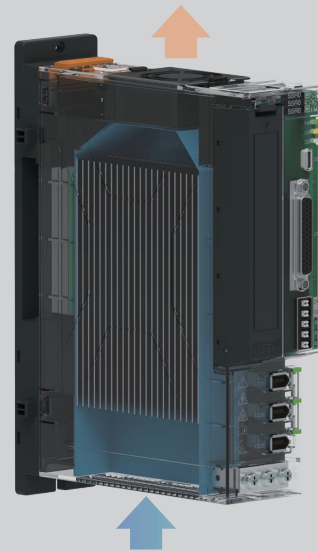
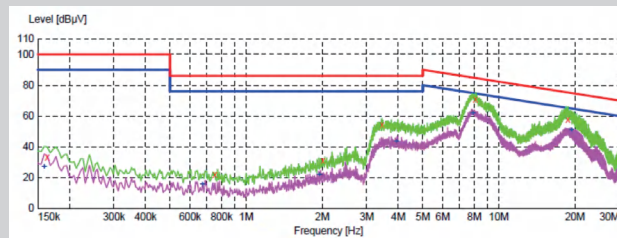
Dynamic Braking Safety Function

- Effectively ensures safe and controlled mechanical equipment shutdown in case of power-off or abnormal conditions during high-speed operation, delivering solid protection for production safety.

Linked Emergency Stop

- Single-point emergency stop for the complete machine unit

Greater Stability Craftsmanship Design, Consistent & Reliable Performance



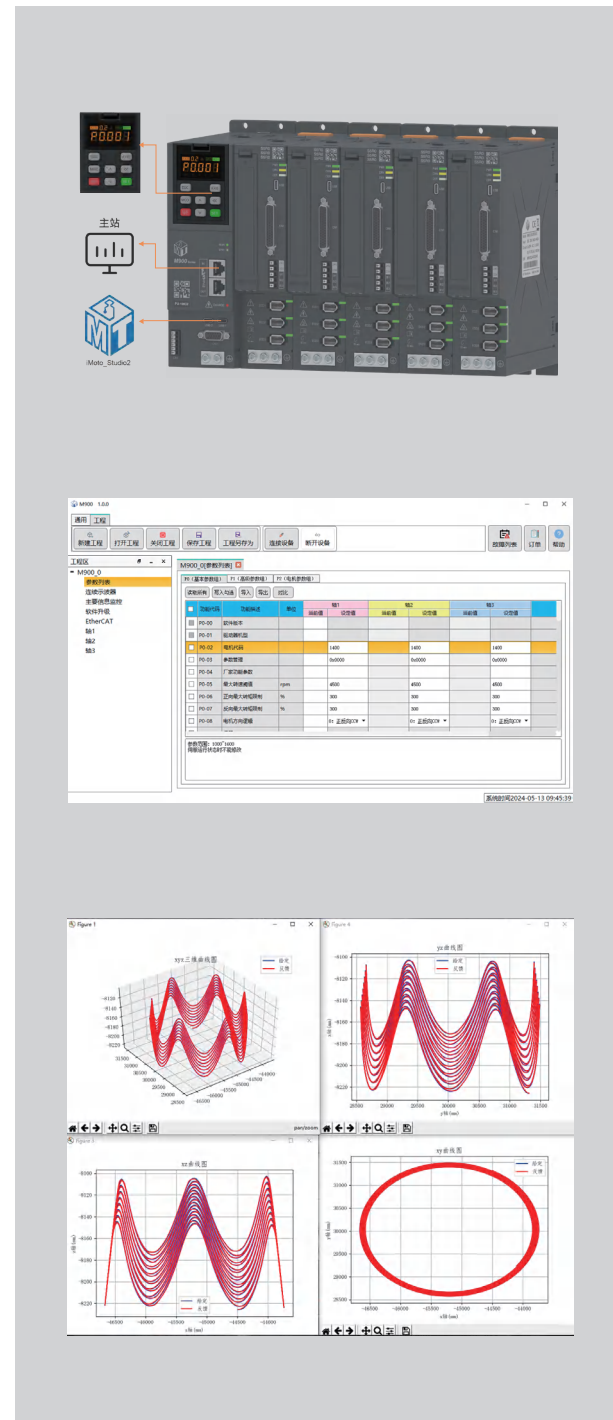
- Excellent EMC Performance
Only the power module couples with power grid, fully compliant with EN 61800-3 certification.
- DC Bus Architecture & Wide Voltage Adaptability
Wide AC input range: 155V~250V, strong immunity to grid fluctuation.
Ultra-low braking power reduces electrical cabinet heat generation and lowers failure
- High Protection & Reliable Cooling
IP40 ingress protection rating with dedicated
- Long Design Service Life
24-hour continuous operation: Up to 11 years
12-hour daily operation: Up to 20 years

Easy Installation, Save Up to 2/3 Assembly Time



- Standardized module dimensions simplify electrical cabinet design work
- Screw-free high-efficiency setup, patented rapid modular assembly system
- Tool-free quick-plug terminals, drastically reduce wiring workload

Easy Commissioning



- Three available commissioning methods: EtherCAT Master debugging (open SDO + cross-platform monitoring kernel), dedicated iMoto_Studio2 commissioning software, and remote keypad debugging.
- Built-in commissioning keypad enables easy synchronous parameter tuning for multiple drive modules. With external extension up to 20 meters, it supports intuitive and safe debugging from designated secure zones.
- Single USB Type-C port supports one-click copy & download of multi-axis parameters for batch duplication, delivering ultimate simplicity and high efficiency.
- Host PC Software Capabilities
Project sizing & selection function: Once the motor is selected, related components including servo drives, cables and braking resistors will be matched automatically, and a BOM/selection order can be generated with one click.
- Multi-axis curve generation function enables rapid identification and troubleshooting of process issues.

Easy Maintenance

Cut maintenance time by up to two-thirds



- Tool-free hot-swap module replacement at site for highly efficient maintenance
- Automatic parameter restore for modules, no professional technician required
- Pull-plug fan structure, greatly simplifies fan maintenance work
- Built-in battery compartment. Standard supercapacitor retains home position memory, enabling worry-free battery replacement
- Black Box Function
Stores critical data for 10 seconds before an alarm is triggered, including host command data, feedback position, speed, torque, temperature, load rate, DC bus voltage and other variable parameters. The upper computer generates dynamic waveforms to pinpoint fault locations accurately, enabling rapid production recovery. It is especially ideal for troubleshooting unattended operations and intermittent random anomalies.

Space Saving Save Up to 2/3 Cabinet Space

- 50% space saved for 6 axes, and 70% space saved for 15 axes, compared with traditional standalone servo drives, greatly improves cabinet space utilization.
- Reduces requirement of peripheral components including cable trunking, terminal blocks, low-voltage components and braking resistors, minimizing internal cabinet occupancy.
- Seamless splicing and assembly between modules.



*At the same number of axes, the M900 delivers superior cabinet space utilization efficiency.

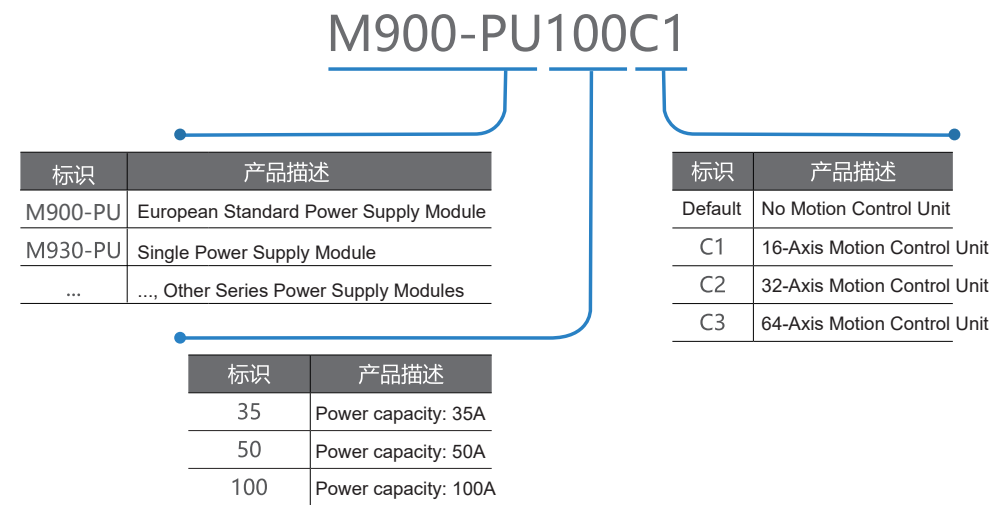
Cost Saving Dramatically Reduce Overall Expenses

- **Procurement Cost**
Standardized modular design with simplified part numbers, improves customer inventory turnover and cuts inventory holding cost (around 3 times higher turnover rate than industry average).
- **Application & Operation Cost**
Compact cabinet design saves 50%~70% cabinet space and related costs
Eliminates massive peripheral components including cables, battery boxes, braking resistors, intermediate relays, greatly reduces spare part expenses
Cuts on-site wiring and installation labor time by over 50%, improves cabinet assembly efficiency and lowers installation cost
Built-in braking resistor, no external braking resistor required for general industry applications

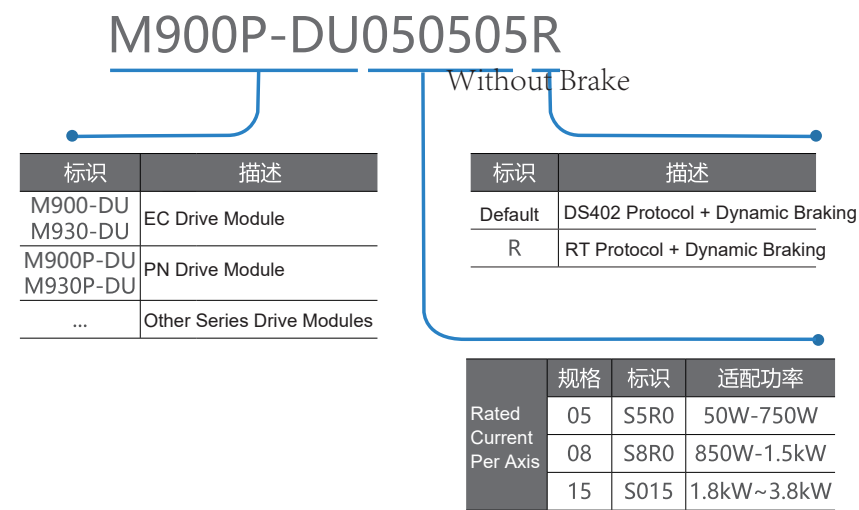


- **Commissioning Cost**
Advanced upper computer software with full functions: multi-axis interpolation, multi-dimensional curve processing and quadrant point control. It generates multi-axis curves to locate process issues rapidly. One-click multi-axis parameter copy & download enables easy mass deployment.
- **Operation & Energy Cost**
Achieves approximately 30% average power saving, helping end users reduce costs and improve overall efficiency.
- **Maintenance Cost**
Tool-free hot-swap module replacement on site for highly efficient servicing. Automatic parameter restore function, no professional technician required for operation.

Power Module Naming Specification

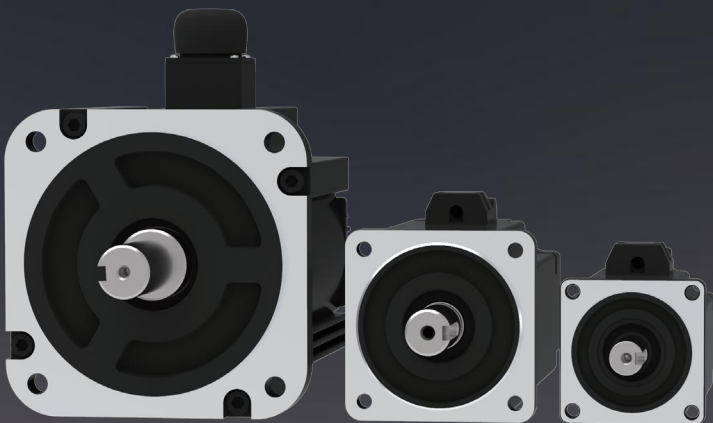


Power Module Naming Specification

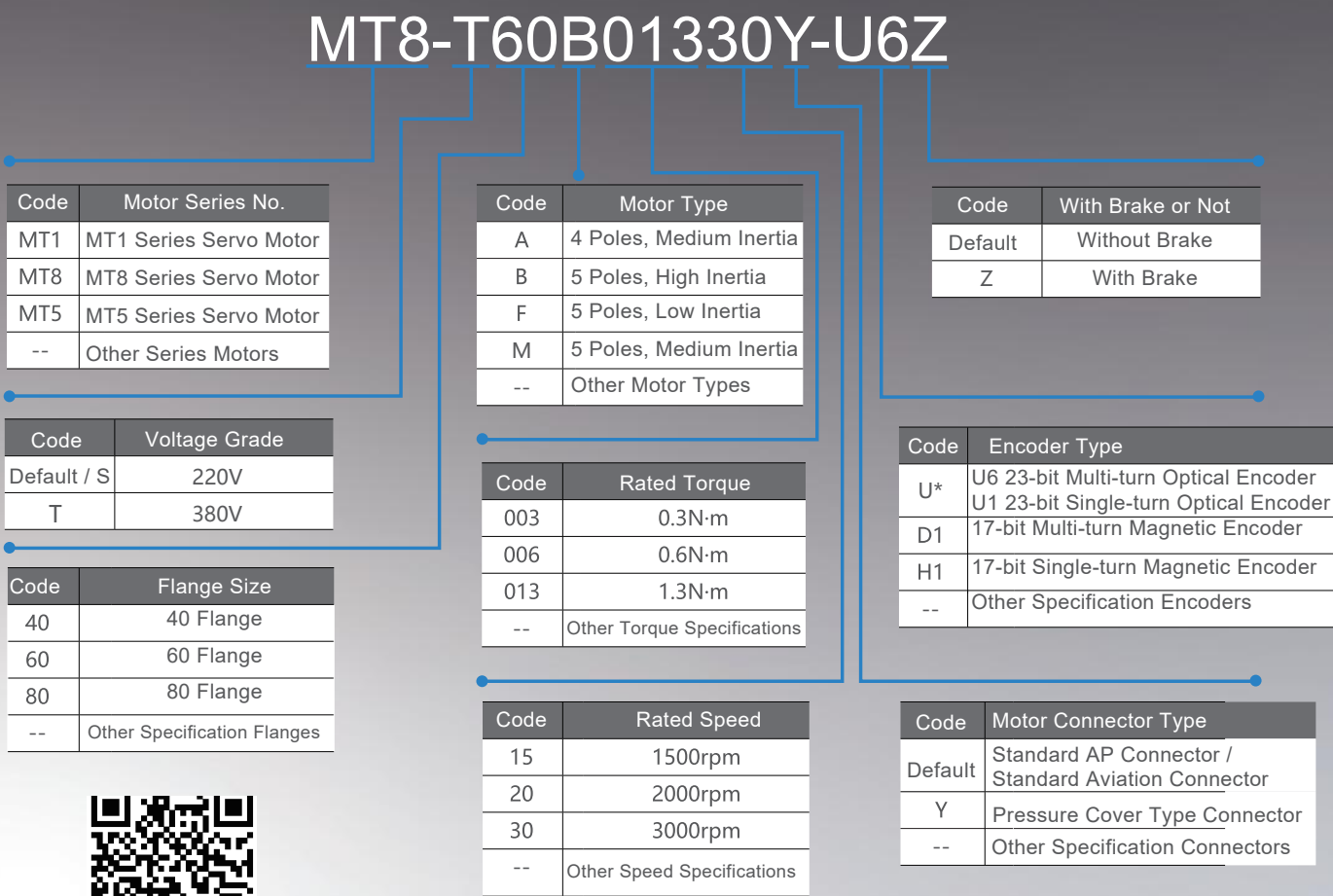


项目		规格
Basic Functions	Power Supply	Single-phase / Three-phase AC220V (Wide voltage range: AC 155V~250V), 50/60Hz Note: Three-phase AC220V power supply is recommended when the total rated output current of all axes exceeds 20A.
	Control Mode	Position mode, Speed mode, Torque mode, Mixed control mode
	Maximum Torque	Maximum Torque: Up to 300%
	Output Frequency	Output Frequency: 0~600 Hz
	Current Loop Period	Current Loop Cycle: 62.5 microseconds
	Overload Capacity	150% rated current output for 100s; 300% rated current output for 3s
Protection Functions	Overload Capacity	Dynamic braking, overload, overcurrent, short circuit, overvoltage, undervoltage, overheating, output phase loss, etc.
Field Bus	EtherCAT	EtherCAT protocol (DS402), synchronization cycle: 125μs ~ 32ms
	PROFINET	PROFINET protocol (RT), communication cycle: 1ms

MT Series
High-performance Servo Motor



Naming Rule



Bottom Text: Scan the QR code for more motor information.

MT5-A Series Motor Selection Table (110 Flange)

Model MT5-		110A04030	110A05030	110A06030
Flange Size	mm	110	110	110
Rated Voltage	V	220V	220V	220V
Rated Power	kW	1.2	1.5	1.8
Rated Torque	N•m	4	5	6
Peak Instantaneous Torque	N•m	12	15	18
Rated Current	Arms	5	6	7
Peak Instantaneous Current	Arms	15	18	21
Rated Speed	r/min	3000	3000	3000
Max Instantaneous Speed	r/min	3500	3500	3500
Rotor Inertia (Standard / With Brake)	Kg*cm²	7.3/8.8	9.2/10.7	10.8/12.3
Weight (Standard / With Brake)	Kg	5.2/6.7	6.05/7.55	6.65/8.15
Body Length (Standard / With Brake)	mm	189/263	204/263	219/293
Motor Code (17 / 23 Bit Encoder)		1473/1472	1607/1606	1653/1652
Matching Drive Module Power Grade		S5R0	S8R0	S8R0
Ingress Protection Rating		IP65		

Note: During process optimization, minor adjustments may be made to product dimensions. Actual dimensions shall prevail without prior separate notification, refer to the latest drawings. (No further separate statement will be made hereinafter.)

MT5-A Series Motor Selection Table (130 Flange)

Model MT5-		130A04025	130A05025	130A06025	130A07725	130A10025	130A15025
Flange Size	mm	130	130	130	130	130	130
Rated Voltage	V	220V	220V	220V	220V	220V	220V
Rated Power	kW	1	1.3	1.5	2	2.6	3.8
Rated Torque	N•m	4	5	6	7.7	10	15
Instantaneous Maximum Torque	N•m	10	12.5	15	19.2	18	23
Rated Current	Arms	4	5	6	7.5	10	13.5
Instantaneous Maximum Current	Arms	10	12.5	15	18.7	18	20.7
Rated Speed	r/min	2500	2500	2500	2500	2500	2500
Instantaneous Maximum Speed	r/min	3000	3000	3000	3000	3000	3000
Rotor Inertia (Standard / With Brake)	Kg*cm²	9.6/10.1	10.7/11.2	12.9/13.4	14.1/14.6	18.8/20.28	25.5/27
Weight (Standard / With Brake)	Kg	5.5/7.5	5.8/7.8	6.6/8.6	7.1/7.1	8.5/10.5	10.1/12.1
Body Length (Standard / With Brake)	mm	166/224	171/224	179/224	192/229	209/265	231/282
Motor Code (17/23 Bit Encoder)		1451/1450	1391/1390	1657/1656	1675/1674	1919/1918	1897/1896
Matching Drive Module Power Segment		S5R0	S5R0	S8R0	S8R0	S015	S015
Ingress Protection Class		IP65					

MT5-A Series Motor Selection Table (180 Flange)

Model MT5-		180A17215	180A19015	T180A27015	T180A35015	T180A48015
Flange Size	mm	180	180	180	180	180
Rated Voltage	V	220V	220V	380V	380V	380V
Rated Power	kW	2.7	3	4.3	5.5	7.5
Rated Torque	N•m	17.2	19	27	35	48
Instantaneous Maximum Torque	N•m	51.6	57	81	105	120
Rated Current	Arms	10.5	12	10	12	20
Instantaneous Maximum Current	Arms	31.5	36	30	36	50
Rated Speed	r/min	1500	1500	1500	1500	1500
Instantaneous Maximum Speed	r/min	1650	1800	1750	1750	1750
Rotor Inertia (Standard / With Brake)	Kg*cm²	56.1/62.1	63.5/69.5	88.5/94.5	114.4/120.4	137.3/143.3
Weight (Standard / With Brake)	Kg	15.4/19.9	16.7/21.1	21.1/25.6	25.6/30.1	30.8/35.3
Body Length (Standard / With Brake)	mm	197/244	205/252	232/279	260/307	305/352
Motor Code (17/23 Bit Encoder)		1943/1942	1867/1866	3331/3330	3333/3332	3365/3364
Matching Drive Module Power Grade		S015	S015	T015	T015	T020
Ingress Protection Rating		IP65				

Remark: For 380V motors, please match with our mid-to-high power single-axis M800-T series servo drives.

MT1-B Series Motor Selection Table (40/60/80 Flange)

Model MT5-		40B00330	60B00630	60B01330	80B02430	80B03230
Flange Size	mm	40	60	60	80	80
Rated Voltage	V	220	220	220	220	220
Rated Power	KW	0.1	0.2	0.4	0.75	1
Rated Torque	N•m	0.32	0.64	1.27	2.39	3.2
Peak Instantaneous Torque	N•m	0.96	1.92	3 .82	7.17	9.6
Rated Current	Arms	1	1.8	2.8	4.8	4.8
Peak Instantaneous Current	Arms	3	5.4	8.4	14.4	14.4
Rated Speed	r/min	3000	3000	3000	3000	3000
Peak Instantaneous Speed	r/min	6500	6500	5000	5000	4000
Rotor Inertia (Standard / With Brake)	Kg*cm²	0.06/0.08	0.32/0.37	0.68/0.73	1.72/1.77	2.4/2.45
Weight (Standard / With Brake)	Kg	0.5/0.65	0.9/1.2	1.22/1.65	2.2/3	2.71/3.36
Body Length (Standard / With Brake)	mm	81.5/101.5	77/104	96/123	106/140	120/154
Motor Code (17/23 Bit Encoder)		1137/1136	1139/1138	1345/1344	1499/1498	1481/1480
Matching Drive Power Grade		S5R0	S5R0	S5R0	S5R0	S5R0
Protection Class		IP65				

Remark: MT1 series motors are available in three encoder types: 17-bit single-turn magnetic encoder, 17-bit multi-turn magnetic encoder, and 23-bit multi-turn optical encoder U1. Model suffixes vary by type, please specify clearly when placing an order.

MT8-B Series Motor Selection Table (40/60/80 Flange)

Model MT8-		40B00330	60B00630	60B01330	80B02430	80B03230
Flange Size	mm	40	60	60	80	80
Rated Voltage	V	220	220	220	220	220
Rated Power	kW	0.1	0.2	0.4	0.75	1
Rated Torque	N•m	0.32	0.64	1.27	2.4	3.2
Instantaneous Maximum Torque	N•m	0.96	1.92	3.81	7.2	9.6
Rated Current	Arms	1	1.4	2.8	5	5.5
Instantaneous Maximum Current	Arms	3	4.2	8.4	15	16.5
Rated Speed	r/min	3000	3000	3000	3000	3000
Instantaneous Maximum Speed	r/min	6000	6000	6000	6000	4500
Rotor Inertia (Standard / With Brake)	Kg•cm²	0.05/0.053	0.29/0.32	0.53/0.56	1.62/1.72	2.1/2.2
Weight (Standard / With Brake)	Kg	0.55/0.85	1/1.4	1.3/1.7	2.5/3.5	3.2/4.2
Body Length (Standard / With Brake)	mm	79.5/112.5	77.2/109.2	93.7/125.7	105/142	119/156
Motor Code (17/23 Bit Encoder)		1277/1276	1271/1270	1359/1358	1477/1476	1485/1484
Matching Drive Module Power Grade		S5R0	S5R0	S5R0	S5R0	S5R0
Ingress Protection Rating		IP65				

MT5-B Series Motor Selection Table (130 Flange)

Model MT5-		130B05415	130B07220	130B08315	130B11515
Flange Size	mm	130	130	130	130
Rated Voltage	V	220	220	220	220
Rated Power	kW	1.5	1.5	1.8	2.5
Rated Torque	N•m	5.39	7.2	8.34	11.5
Instantaneous Maximum Torque	N•m	16.17	21.6	23.3	28.7
Rated Current	Arms	6.9	8.6	10.7	13.8
Instantaneous Maximum Current	Arms	20.7	25.8	32.1	41.4
Rated Speed	r/min	1500	2000	1500	1500
Instantaneous Maximum Speed	r/min	3000	3000	3000	3000
Rotor Inertia (Standard / With Brake)	Kg•cm²	14.6/16.8	16.9/19	16.9/19	21.4/23.5
Weight (Standard / With Brake)	Kg	6.2/7.5	7.6/9.6	7.6/9.6	9.3/11.3
Body Length (Standard / With Brake)	mm	149/182	159/192	159/192	177/210
Motor Code (17/23 Bit Encoder)		1577/1576	1593/1592	1849/1848	1851/1850
Matching Drive Module Power Grade		S8R0	S8R0	S015	S015
Ingress Protection Rating		IP65			

MT5-B Series Motor Selection Table (180 Flange)

Model MT5-		T180B18615	T180B28415	T180B35015	T180B48015
Flange Size	mm	180	180	180	180
Rated Voltage	V	380	380	380	380
Rated Power	kW	2.9	4.4	5.5	7.5
Rated Torque	N•m	18.6	28.4	35	48
Instantaneous Maximum Torque	N•m	55.8	85.2	105	120
Rated Current	Arms	11.9	16.5	20.8	26
Instantaneous Maximum Current	Arms	35.7	49.5	62.4	65
Rated Speed	r/min	1500	1500	1500	1500
Instantaneous Maximum Speed	r/min	3000	3000	3000	3000
Rotor Inertia (Standard / With Brake)	Kg•cm²	63.5/69.5	88.5/94.5	114.4/120.4	136.6/142.6
Weight (Standard / With Brake)	Kg	16.7/21.2	21.1/25.6	25.6/30.1	30.8/35.3
Body Length (Standard / With Brake)	mm	194/241	221/268	249/296	273/320
Motor Code (17/23 Bit Encoder)		3361/3360	3363/3362	3421/3420	3603/3602
Matching Drive Module Power Grade		T015	T020	T020	T025
Ingress Protection Rating		IP65			

Remarks: For 380V motors, please use our mid-to-high power standalone M800-T series servo drives.

MT5-F Series Motor Selection Table (100 Flange)

Model MT5-		100F03230	100F04830	100F06430	100F08030
Flange Size	mm	100	100	100	100
Rated Voltage	V	220	220	220	220
Rated Power	kW	1	1.5	2	2.5
Rated Torque	N•m	3.18	4.77	6.37	7.95
Instantaneous Maximum Torque	N•m	9.54	14.31	19.11	23.85
Rated Current	Arms	6.9	8.8	11.6	14.5
Instantaneous Maximum Current	Arms	21	27	35	44
Rated Speed	r/min	3000	3000	3000	3000
Instantaneous Maximum Speed	r/min	6000	6000	6000	5000
Rotor Inertia (Standard / With Brake)	Kg•cm²	2.26/3.0	3.1/3.83	3.93/4.66	4.76/5.5
Weight (Standard / With Brake)	Kg	4.0/5.0	5.0/6.0	6.0/7.0	6.0/7.0
Body Length (Standard / With Brake)	mm	134.2/164.2	153.2/183.2	172.2/202.2	191.2/221.2
Motor Code (17/23 Bit Encoder)		1719/1718	1127/1126	1953/1952	1967/1966
Matching Drive Module Power Grade		S8R0	S8R0	S015	S015
Ingress Protection Rating		IP65			

Note: The MT5-100F series are low inertia motors, with two optional shaft diameter / shaft extension specifications:
Shaft Ø24 mm / Shaft extension 45 mm
Shaft Ø19 mm / Shaft extension 55 mm

MT8-F Series Motor Selection Table (60/80 Flange)

Model MT8-		60F00630	60F01330	80F02430	80F03230
Flange Size	mm	60	60	80	80
Rated Voltage	V	220	220	220	220
Rated Power	kW	0.2	0.4	0.75	1
Rated Torque	N•m	0.64	1.27	2.38	3.18
Instantaneous Maximum Torque	N•m	2.24	4.45	8.33	11.13
Rated Current	Arms	1.5	2.5	4.5	6.3
Instantaneous Maximum Current	Arms	5.8	9.8	17.5	25
Rated Speed	r/min	3000	3000	3000	3000
Instantaneous Maximum Speed	r/min	6000	6000	6000	6000
Rotor Inertia (Standard / With Brake)	Kg•cm²	0.093/0.114	0.145/0.165	0.64/0.74	0.78/0.88
Weight (Standard / With Brake)	Kg	1.1/1.3	1.3/1.6	2.1/3.1	2.5/3.5
Shaft Diameter	mm	14	14	19	19
Shaft Extension / Shaft Protrusion	mm	30	30	35	35
Body Length (Standard / With Brake)	mm	79.2/111/2	97.2/129.2	107.5/144.5	119.4/156/4
Motor Code (17/23 Bit Encoder)		1271/1270	1359/1358	1477/1476	1485/1484
Matching Drive Power Rating		S2R0C	S5R0C	S5R0C	S5R0C

Note:MT8 motors have 3 encoder options:17-bit multi-turn RY mag encoder D1 (H1) 23-bit multi-turn RY optical encoder U1 (T1) 23-bit multi-turn optical encoder U6 (MT custom)Models vary. Specify type when ordering. H1 = 17-bit single-turn mag encoder; T1 = 23-bit single-turn optical encoder. Multi-turn can replace single-turn.

Cable Naming Specification

W-POW0503B-AP-MT8

Code	Description
W	Wire & Cable

Code	Description
02	0.2 mm²
03	0.3 mm²
05	0.5 mm²
07	0.75 mm²
--	Other custom wire gauges

Code	Description
/	Power cable: Without brake Encoder cable: Without battery box Brake cable: Default standard
N	Encoder cable: With battery lead wire, matched for M900 series dedicated battery compartment
B	Power cable: With brake Encoder cable: With battery box

Code	Description
/	AP connector, universal for all series
MT1	Dedicated cable for MT1 series
MT5A	Dedicated cable for MT5-A series
MT5B	Dedicated cable for MT5-B series
MT5M	Universal cable for MT5M / MT5F / MT5C series
MT8	Universal cable for MT8B / MT8F / MT8C series
--	Cables for other motor series

Code	Description
POW	Servo Power Cable
ECD	Servo Encoder Cable
BRK	Servo Brake Cable

Code	Description
03	3 m
035	3.5 m
05	5 m
--	Other custom lengths

Code	Description
AP	AP Connector (for motors ≤ 80 flange size)
YG	Pressure Cover Connector (for pressure cover type small motors ≤ 80 flange size)
HC	Aviation Connector (for 110-130 flange motors)
180HC	Aviation Connector (for 180 flange motors)
--	Other custom connector types

Cable Selection List

Motor model	Plug type	Cable model	Cable diameter	Wire type	Flange	Remarks	
MT1	Cover type plug	W-POW03xx-YG-MT1	4*0.3	Motor power line	40 flange	Equipped with standard motor	
		W-POW03xxB-YG-MT1	4*0.3+2*0.3			Equipped with brake motor	
		W-POW05xx-YG-MT1	4*0.5		60-80 flange	Equipped with standard motor	
		W-POW05xxB-YG-MT1	4*0.5+2*0.3			Equipped with brake motor	
		W-ECD02xx-YG-MT1	4*0.2	Encoder line	40-60-80 flange	Equipped with a single coil motor	
		W-ECD02xxN-YG-MT1	4*0.2+2*0.2			Equipped with multi turn motor (with battery lead)	
MT8	Cover type plug	W-POW05xx-YG-MT8	4*0.5	Motor power line	40-60-80 flange	Equipped with standard motor	
		W-POW05xxB-YG-MT8	4*0.5+2*0.3				Equipped with brake motor
		W-ECD02xx-YG-MT8	4*0.2	Encoder line			Equipped with standard motor
		W-ECD02xxN-YG-MT8	4*0.2+2*0.2				Equipped with multi turn motor (with battery lead)
MT1/MT8	Anpu type plug	W-POW05xxAP	4*0.5	Motor power line	40-60-80 flange	Equipped with standard motor	
		W-POW05xxB-AP	4*0.5+2*0.3				Equipped with brake motor
		W-ECD02xx-AP	4*0.2	Encoder line			Equipped with a single coil motor
		W-ECD02xxN-AP	4*0.2+2*0.2				Equipped with multi turn motor (with battery lead)
MT5-A	Aviation type plug	W-POW15xx-HC-MT5A	4*1.5	Motor power line	110-130-180 flange	Equipped with standard motors of 110A and 100A (below 10A)	
		W-POW25xx-HC-MT5A	4*2.5				Equipped with a standard motor of 100A (10A or above)
		W-POW25xx-180HC-MT5A	4*2.5				Equipped with 180A flange standard motor
		W-ECD03xx-HC-MT5A	4*0.3	Encoder line			Equipped with a single coil motor
		W-ECD03xxN-HC-MT5A	4*0.3+2*0.3				Equipped with multi turn motor (with battery lead)
		W-BRK05xx-HC-MT5A	2*0.5				Equipped with holding brake line, to be used in conjunction with W-POW15xx-HC-MT5A or W-POW25xx-HC-MT5A
		W-BRK05xx-180HC-MT5A	2*0.5	Motor brake wire			Equipped with holding brake line, to be used in conjunction with W-POW25xx-180HC-MT5A
MT5-B	Aviation type plug	W-POW15xx-HC-MT5B	4*1.5	Motor power wire	130-180 flange	Equipped with a standard motor of 130B(10A or below)	
		W-POW25xx-HC-MT5B	4*2.5				Equipped with a standard motor of 130B (10A or above)
		W-POW25xx-180HC-MT5B	4*2.5				Equipped with 180B flange standard motor
		W-ECD03xx-HC-MT5B	4*0.3	Encoder wire			Equipped with a single coil motor
		W-ECD03xxN-HC-MT5B	4*0.3+2*0.3				Equipped with multi turn motor (with battery lead)
		W-BRK05xx-HC-MT5B	2*0.5			Motor brake wire	
		W-BRK05xx-180HC-MT5B	2*0.5				Equipped with holding brake line, to be used in conjunction with W-POW25xx-180HC-MT5B
MT5-M / MT5-F	Aviation type plug	W-POW15xx-HC-MT5M	4*1.5	Motor power wire	100-130-180 flange	Equipped with a brake motor of 100Fand130M(10A or below)	
		W-POW15xxB-HC-MT5M	4*1.5+2*0.5				Equipped with a standard motor of 100Fand130M(10A or below)
		W-POW25xx-HC-MT5M	4*2.5				Equipped with a standard motor of 100F and130M (10A or above)
		W-POW25xxB-HC-MT5M	4*2.5+2*0.5				Equipped with a brake motor of 100Fand130M/130F(10A or above)
		W-POW25xx-180HC-MT5M	4*2.5				Equipped with 180M flange standard motor
		W-BRK05xx-180HC-MT5M	2*0.5	Brake wire			Equipped with holding brake line, to be used in conjunction with W-POW25xx-180HC-MT5M
		W-ECD03xx-HC-MT5M	4*0.3	Encoder wire			Equipped with a single coil motor
		W-ECD03xxN-HC-MT5M	4*0.3+2*0.3				Equipped with multi turn motor (with battery lead)
Note: xx represents different cable lengths							

Note: xx represents different cable lengths

Selection of braking resistors and battery accessories:
Battery module: MBT18505U; 2. External braking resistors: 200Ω (800W), 200Ω (2kW), 200Ω (3kW); external braking resistors for M900 series; the M930 series supports both built-in and external braking resistors.

About Us

MT-Drive & Control (Shenzhen) Co., Ltd.

A national high-tech enterprise dedicated to core components and complete solutions in the advanced manufacturing sector. Upholding the core values of "Focus, Innovation, Leadership", the company has built a three-layer industrial control product line architecture of "Control, Servo, and Sensors", and is committed to providing the industry with complete industry solutions that are more advanced, more reliable, more efficient, and more competitive!

Headquartered in Shenzhen, China's innovation hub, the company has established R&D Center, Quality Center, Production Center, Administration Center, Marketing Center, and Suzhou Sales Branch. As a pioneer and leader in the multi-axis motion field, Motong's product portfolio covers Motion PLC, Servo Systems, Drive-Control Integrated Systems, Remote I/O Modules and more.

As core components, they support bus protocols such as PROFINET, EtherCAT, and EtherNet/IP. With their proprietary technical architecture and superior performance, they are widely used in industries including photovoltaics (PV), lithium battery, robotics, CNC/CNC-like (metal, woodworking, glass), semiconductor, logistics and warehousing, 3C, automotive manufacturing, printing and packaging, tobacco, etc.

Upholding the philosophy of long-term value, Motong Drive & Control develops core components and complete industry solutions for the industrial sector in a synchronized manner. As its product line continues to expand, the company will provide comprehensive services to the industrial field and actively drive industry development.

Corporate Vision

A Leading Brand in the Multi-Axis Motion Field

Core Values

Focus · Innovation · Leadership

Patents & Certifications

The Company pursues independent innovation and owns multiple core key technologies in the motion drive field.

● We have obtained over 85+ intellectual property rights. ● We have passed product certifications such as CE, UL, RoHS, and FCC. ● We have obtained the ISO9001 quality management system certification.

MT-Drive Product Portfolio

Control Layer

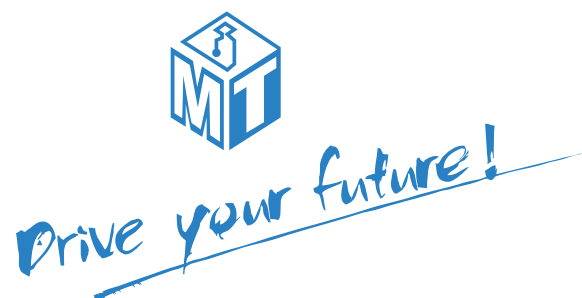


Drive Layer



Actuation/-Sensing Layer





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