

RMD-L Series Product Manual

Brushless DC Servo Motor designed to deliver exceptional performance with its high torque and fast rotation speed. With its advanced technology and seamless integration of motor and drive, this servo motor offers unparalleled precision and efficiency in various industrial applications.

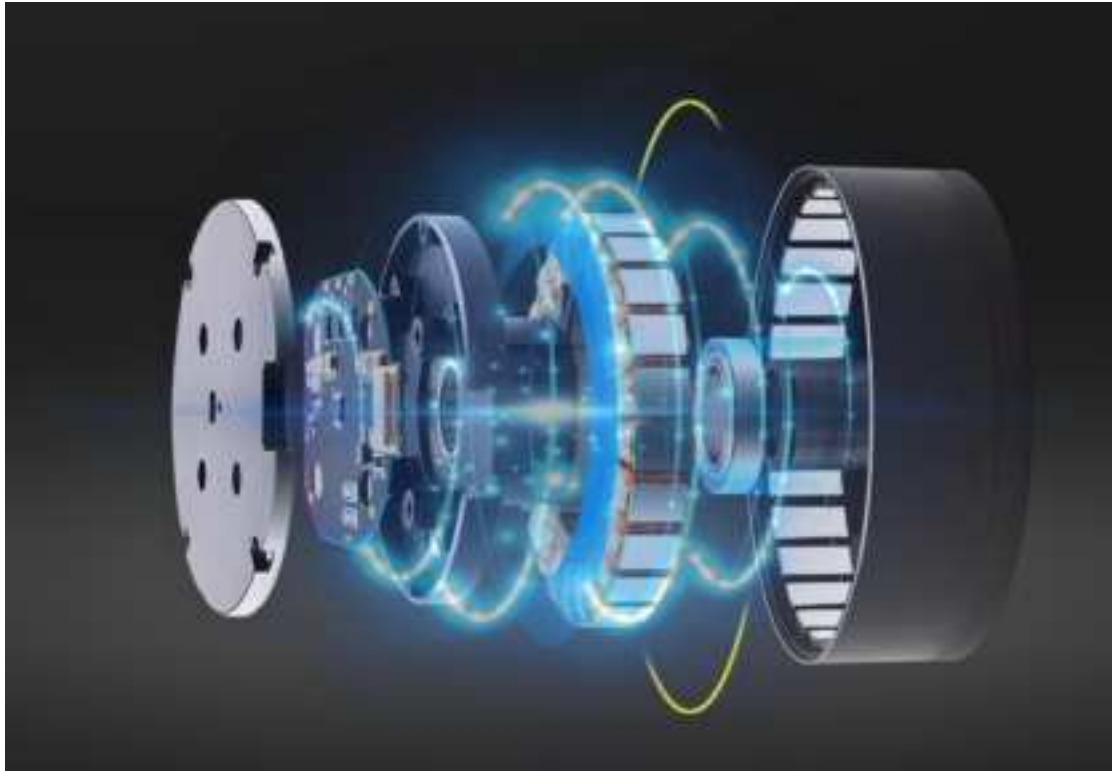


Our servo motor with high-performance bearings, to withstand pressure, wear, and shocks. With advanced manufacturing techniques, this motor reduces noise and friction during operation while maintaining high speed. It also exhibits excellent hardness and durability.



With Integrated Mechanical and Electrical Design

Equipped with built-in drive and position sensors, this motor offers powerful performance and enhanced stability. With its efficient heat dissipation system, it ensures a longer lifespan for uninterrupted usage.



The built-in drive allows for smooth operation while the position sensors provide accurate feedback for precise control. Whether you're in need of high power output or reliable stability, our motor delivers on both fronts.

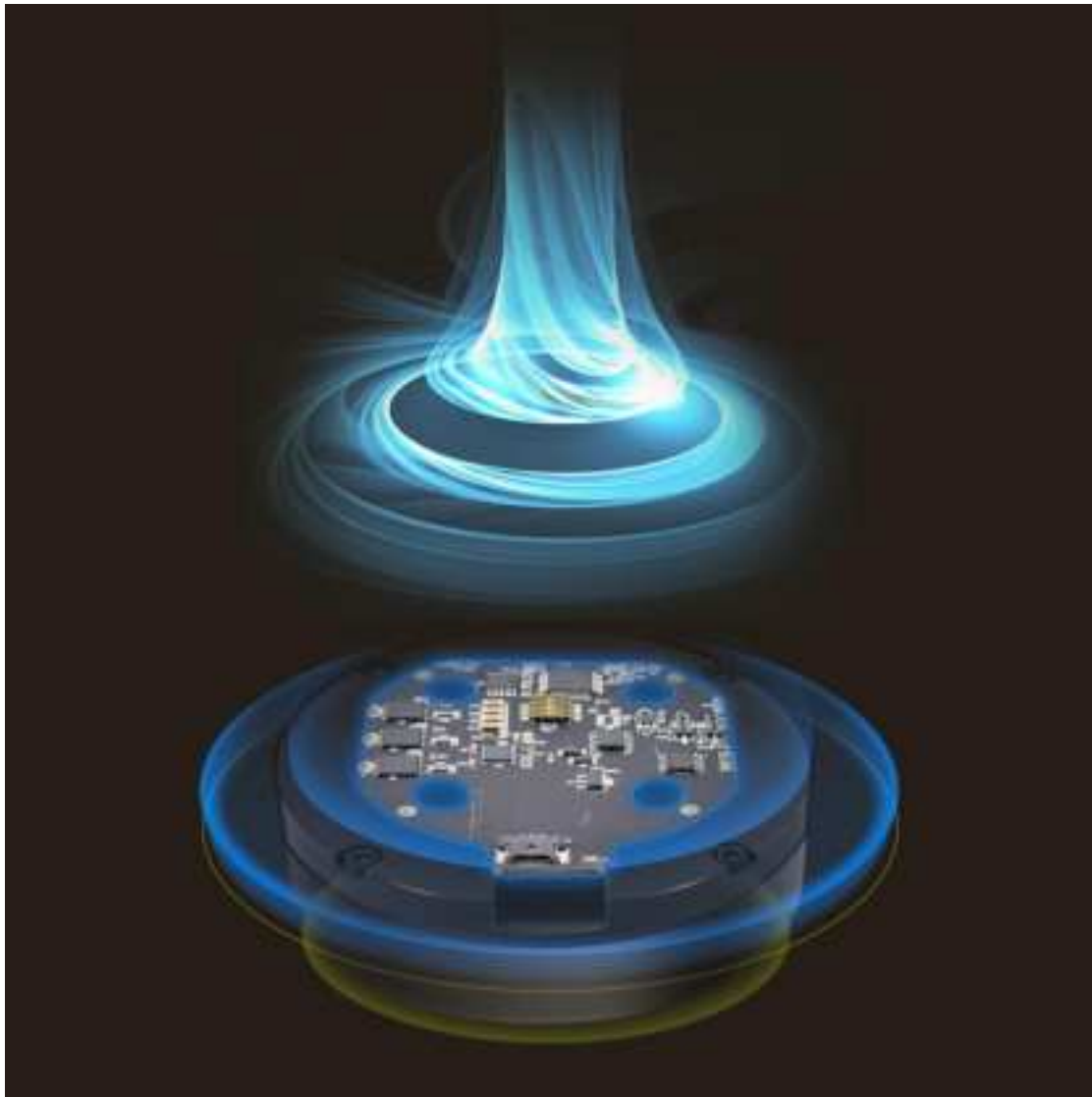
Its exceptional heat dissipation capability ensures that even during prolonged use, preventing any potential damage caused by overheating.

Our motor with multiple protection features and an intelligent chip for enhanced safety. It supports temperature sensor. This means that you can easily monitor the temperature in real-time, allowing you to make informed decisions regarding your operations or take necessary actions promptly if needed.

Furthermore, we prioritize safety by multiple protection mechanisms such as overload protection, overcurrent protection, external battery, overvoltage protection and short circuit protection. This guarantees optimal performance while safeguarding both equipment and personnel.

More Stable | More Durable | More Precise

Featuring high-precision alloy resistive sampling technology, our motor ensures accurate current control like never before. Experience safety and silence with precise control. With its advanced design and engineering, this motor guarantees stability, durability, and precision in use. The high-precision alloy resistive sampling enables precise current regulation, ensuring optimal efficiency and accuracy in all your operations.



High-performance Neodymium Iron Boron Permanent Magnets

Rotor designed in an arc shape, these magnets offer a smaller air gap and higher coercivity, resulting in greater torque output.

The use of neodymium iron boron permanent magnets ensures exceptional performance and efficiency. By reducing the air gap between the magnet and armature, our motor achieves improved power transmission and enhanced torque capabilities.

Its high coercivity allows for precise control over speed and acceleration while maintaining stability under heavy loads.



Supervisory Control and Data Acquisition System

Not only does our integrated servo motor excel in performance, but it also boasts easy installation and user-friendly programming options. With intuitive interfaces and comprehensive software support, configuring the motor to suit your requirements.

Plus, it supports direct command transmission from microprocessors. Experience seamless operation like never before.

With real-time data retrieval capabilities, you can monitor your operations effortlessly. Effortlessly navigate through commands by utilizing the user-friendly interface of our motor's supervisory control system. Send commands directly without any hassle or delay, ensuring efficient communication between devices.



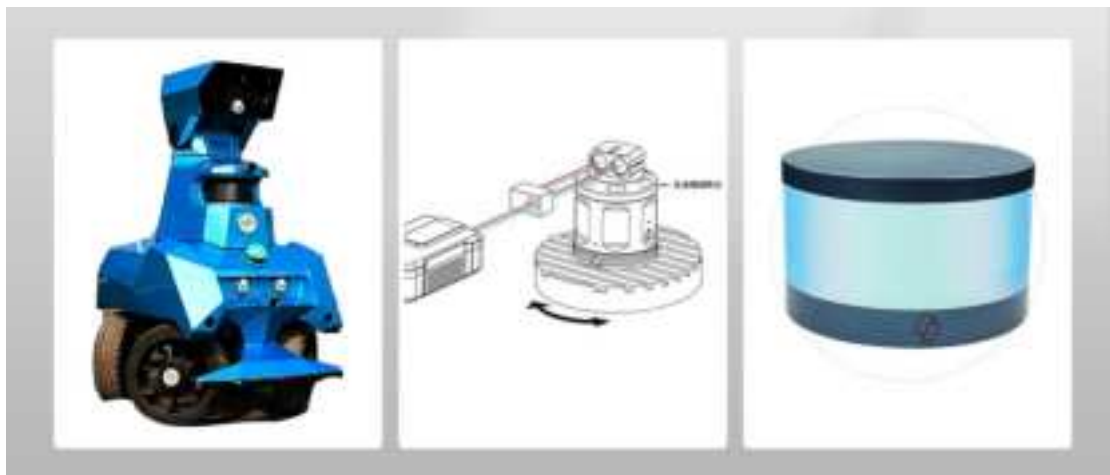
Various Applications

The superior hardness of our servo motor guarantees long-lasting durability under various working conditions. Additionally, the high-speed capabilities enable rapid response times for enhanced productivity. Its high torque capability allows for precise control over heavy loads while maintaining smooth motion.

Featuring a compact design and robust construction, this servo motor ensures reliable operation even in demanding environments, our servo motor is engineered to meet your specific needs.

With its advanced technology and superior performance, our electric motor is suitable for various applications such as industrial machinery, robotics, automotive systems, and more. Trust in its reliability to meet your specific needs.

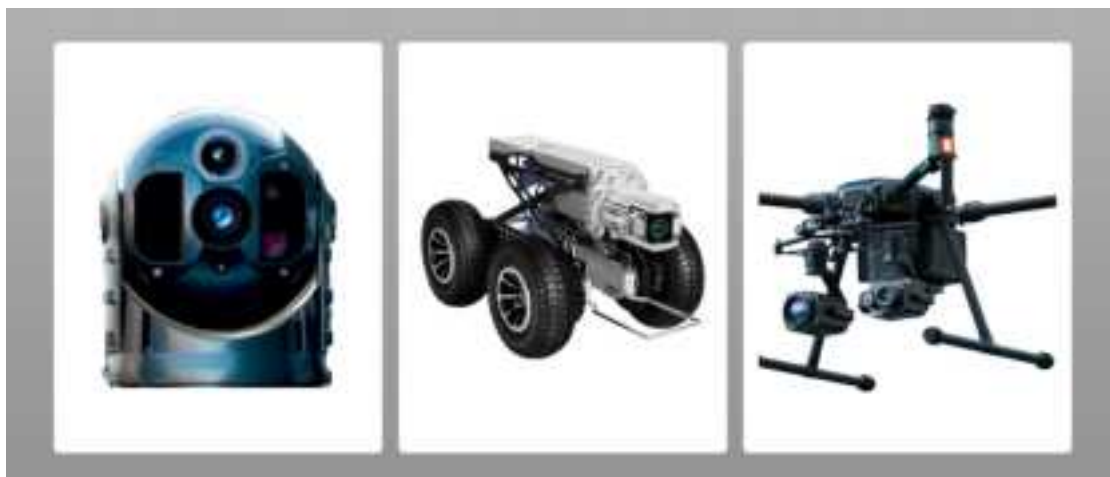
Whether you need precise control in robotics or automation systems or seek a reliable solution for industrial machinery, our servo motor offers the perfect combination of high performance and durability.



Power inspection robot

Industrial inspection

Laser radar



Industrial head and turntable

Pipeline robot

drone

RMD-L-5010-35T

INSTALLATION DRAWING

尺寸安装图



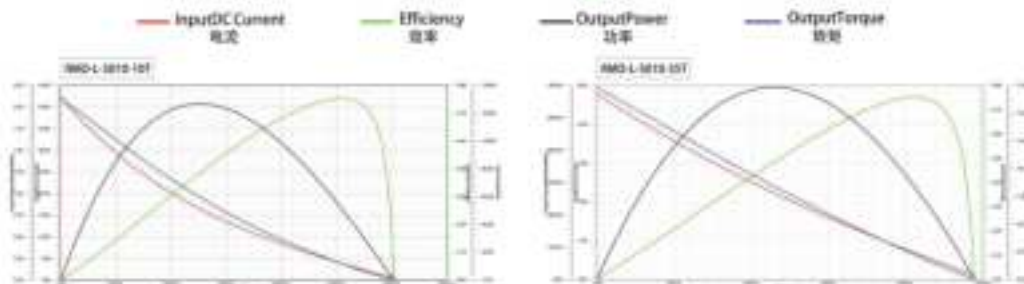
PRODUCT PARAMETERS

产品参数

产品名称	Item Name	RMD-L-5010-10T	RMD-L-5010-35T
额定电压	[Nominal Voltage] V	18	18
额定电流	[Nominal Current] A	3.26	1.63
额定扭矩	[Nominal Torque] N.M	0.26	0.26
额定转速	[Nominal Speed] rpm	2400	600
最大空载转速	[Max Speed] rpm	3050	1015
最大瞬时扭矩	[Max Instant Torque] N.M	0.4	0.03
最大瞬时电流	[Max Instant Current] A	8	4.8
阻抗	[Impedance] Ω	0.33	3.2
接线方式	[Wire Connect]	Y	Y
相间电感	[Phase to Phase Inductance] mH	0.33	3.2
转速常数	[Speed Constant] rpm/v	191	63
扭矩常数	[Torque Constant] N.M/A	0.05	0.76
转子惯量	[Rotor Inertia] g·cm ²	202	202
磁极数	[Number of Pole Pairs]	14	14
电机重量	[Motor Weight] g	115	131
工作温度范围	[Working Temperature] °C	[-20 ~ 80 °C]	
最高存储温度	[Max Storage Temperature] °C	120 °C	
匹配驱动器 Matched Driver		匹配驱动器 Matched Driver	
驱动器品牌	[Drive]	DRC06	
驱动器输入电压	[Input Voltage] V	8-24	
驱动器额定电流	[Current] A	Normal: 5A Instant: 8A	
驱动器功率	[Numerical Power] W	100	
通讯方式	[Communication]	RS-485 / CAN BUS	
编码器类型	[Encoder]	14 bit magnetic encoder	
分辨率	[Rust Rate]	9000, 10000, 57000, 111200 (default)	
通讯频率	[Communication Frequency]	CAN BUS @ 1Mbps, 20KHz ; RS485 @ 115200bps, 500KHz	
控制频率	[Control Frequency]	Torque loop 24KHz / Speed loop 8KHz / Position loop 4KHz	
控制模式	[Control Mode]	Torque (position loop) / speed (position loop)	
位置反馈	[S-Curve]	YES	
地址选择开关	[D switch]	YES	
接口件	[connector]	2X1.5 / 6PIN	
减震橡胶脚	[connector]	YES	

MOTOR CHARACTERISTIC CURVE

电机特性曲线



RMD-L-5015-10T

INSTALLATION DRAWING

尺寸安装图



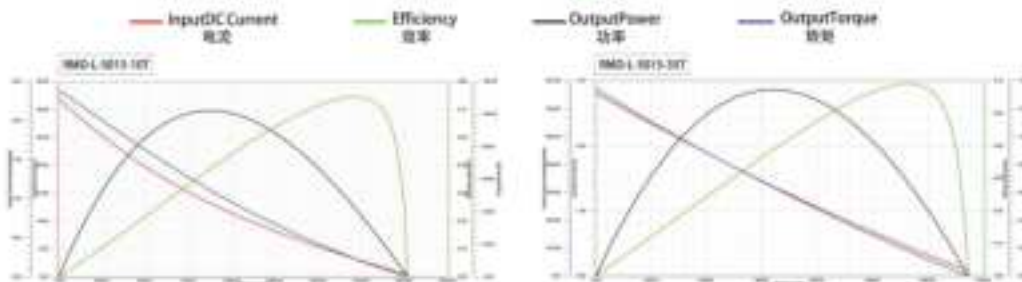
PRODUCT PARAMETERS

产品参数

产品型号	Item Name	RMD-L-5015-10T	RMD-L-5015-30T
额定电压	[Nominal Voltage] V	10	10
额定电流	[Nominal Current] A	4.3	1.37
额定扭矩	[Nominal Torque] N.M	0.38	0.36
额定转速	[Nominal Speed] rpm	7500	350
最大空载转速	[Max Speed] rpm	2040	660
最大瞬时扭矩	[Max Instant Torque] N.M	0.7	0.82
最大瞬时电流	[Max Instant Current] A	8	3.02
阻抗	[Impedance] Ω	0.48	4
接线方式	[Wire Connect]	Y	Y
相间电感	[Phase to Phase Inductance] mH	0.39	1.76
转速常数	[Speed Constant] rpm/v	120	43
扭矩常数	[Torque Constant] N.M/A	0.08	0.23
转子惯量	[Rotor Inertia] g·cm ²	268	268
磁极数	[Number of Pole Pairs]	14	14
电机重量	[Motor Weight] g	174	174
工作温度范围	[Working Temperature] °C	[-20 ~ 80 °C]	
最高存储温度	[Max Storage Temperature] °C	120 °C	
匹配驱动器 Matched Driver		匹配驱动器 Matched Driver	
驱动器品牌	[Drive]	DRC06	
驱动器输入电压	[Input Voltage] V	9-24	
驱动器额定电流	[Current] A	Normal: 5A Instant: 8A	
驱动器功率	[Numerical Power] W	100	
通信方式	[Communication]	RS-485 / CAN 0.5	
编码器类型	[Encoder]	14 bit magnetic encoder	
波特率	[Baud Rate]	9600, 19200, 37500, 115200(default)	
通信距离	[Communication Frequency]	CAN BUS @ 1Mbps 2000' ; RS485 @ 115200bps 5500ft	
控制频率	[Control Frequency]	Torque loop 20KHz / Speed loop 800Hz / Position loop 400Hz	
控制模式	[Control mode]	Torque (position) loop / speed loop/position loop	
位置反馈	[S-Curve]	YES	
限位反馈	[IO switch]	YES	
接口件	[connector]	2X1.5 / 6PIN	
减震降噪	[connector]	YES	

MOTOR CHARACTERISTIC CURVE

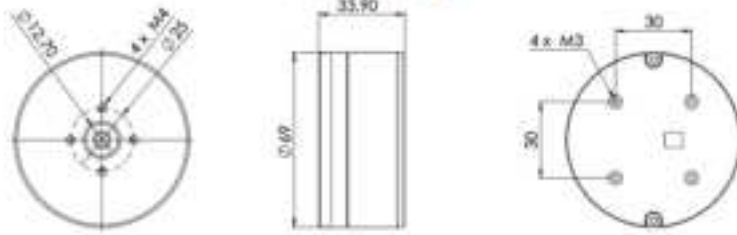
电机特性曲线



RMD-L-7015-23T

INSTALLATION DRAWING

尺寸安装图



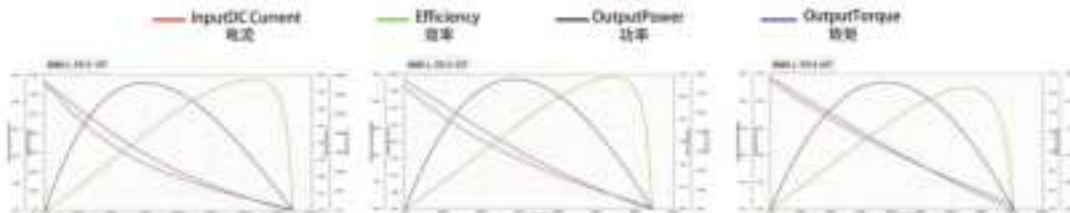
PRODUCT PARAMETERS

产品参数

产品型号	Item Name	RMD-L-7015-10T	RMD-L-7015-23T	RMD-L-7015-35T
额定电压	[Nominal Voltage] V	24	24	24
额定电流	[Nominal Current] A	8.35	3.62	1.83
额定扭矩	[Nominal Torque] N.M	1.00	1.00	0.99
额定转速	[Nominal Speed] rpm	1000	1000	200
最大空载转速	[Max Speed] rpm	1800	805	410
最大瞬时扭矩	[Max Instant Torque] N.M	2	3.8	2.42
最大瞬时电流	[Max Instant Current] A	13.00	15.00	4.75
阻抗	[Impedance] Ω	0.28	1.34	1.90
接线方式	[Wire Connect]	Y	Y	Y
绕组电感	[Phase to Phase Inductance] mH	0.24	1.23	4.83
转速常数	[Speed Constant] rpm/v	75	14	17
扭矩常数	[Torque Constant] N.M/A	0.12	0.28	0.81
转子惯量	[Rotor Inertia] g·cm ²	913	913	913
磁极数	[Number of Pole Pairs]	14	14	14
电机重量	[Motor Weight] g	360	350	360
工作温度范围	[Working Temperature] °C	-20~80°C		
最高存储温度	[Max Storage Temperature] °C	120°C		
匹配驱动器 Matched Driver		匹配驱动器 Matched Driver		
匹配驱动器	[Drive]	DRC10		
驱动器输入电压	[Input Voltage] V	9~36		
驱动器额定电流	[Current] A	Normal: 8A Instant: 15A		
额定功率	[Nominal Power] W	200		
通讯方式	[Communication]	RS-485 / CAN 0.5		
编码器类型	[Encoder]	14 bit magnetic encoder		
波特率	[Baud Rate]	9600, 19200, 57600, 115200(default)		
通讯频率	[Communication frequency]	CAN BUS @ 1Mbps 2KHz ; RS485 @ 115200bps 550Hz		
控制频率	[Control frequency]	Torque loop 20KHz / Speed loop 8KHz / Position loop 4KHz		
控制模式	[Control mode]	Torque (position) loop / speed loop(position loop)		
加速曲线	[S-Curve]	YES		
地址保持功能	[ID switch]	YES		
接口件	[connector]	2X13 / 8PIN		
减震处理	[vibration]	YES		

MOTOR CHARACTERISTIC CURVE

电机特性曲线



RMD-L-7025-28T

INSTALLATION DRAWING

尺寸安装图



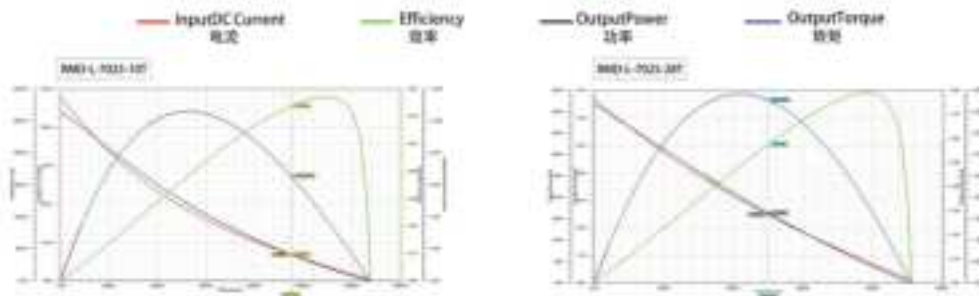
PRODUCT PARAMETERS

产品参数

产品型号	Item Name	RMD-L-7025-10T	RMD-L-7025-28T
额定电压	[Nominal Voltage] V	24	24
额定电流	[Nominal Current] A	8.30	3.00
额定扭矩	[Nominal Torque] N.M	1.60	1.60
额定转速	[Nominal Speed] rpm	1100	280
最大空载转速	[Max Speed] rpm	1200	310
最大瞬时扭矩	[Max Instant Torque] N.M	3.4	4.1
最大瞬时电流	[Max Instant Current] A	8.50	8.50
阻抗	[Impedance] Ω	0.28	2.20
接线方式	[Wire Connect]	Y	Y
绕组电感	[Phase to Phase Inductance] mH	0.24	2.08
转速常数	[Speed Constant] rpm/v	79	21
扭矩常数	[Torque Constant] N.M/A	0.19	0.51
转子惯量	[Rotor Inertia] g·cm ²	933	1040
磁极数	[Number of Pole Pairs]	14	14
电机重量	[Motor Weight] g	160	340
工作温度范围	[Working Temperature] °C		-20 ~ 80 °C
最高存储温度	[Max Storage Temperature] °C		120 °C
匹配驱动器 Matched Driver		匹配驱动器 Matched Driver	
驱动器系列	[Drive]	DRC10	
驱动器输入电压	[Input Voltage] V	9-36	
驱动器额定电流	[Current] A	Normal: 8A Instant: 15A	
额定功率	[Nominal Power] W	200	
通信方式	[Communication]	RS-485 / CAN 0.5	
编码器类型	[Encoder]	14 bit magnetic encoder	
波特率	[Baud Rate]	9600, 19200, 37500, 115200(default)	
通信频率	[Communication frequency]	CAN BUS @ 1Mbps 2KHz ; RS485 @ 115200bps 550Hz	
控制频率	[Control frequency]	Torque loop 24KHz / Speed loop 8KHz / Position loop 4KHz	
控制模式	[Control mode]	Torque (position) loop / speed loop(position loop)	
加速曲线	[S-Curve]	YES	
地址保持功能	[ID switch]	YES	
接口件	[connector]	2X1.5 / 8PIN	
减震降噪	[vibration]	YES	

MOTOR CHARACTERISTIC CURVE

电机特性曲线



RMD-L-9015-16T

INSTALLATION DRAWING

尺寸安装图



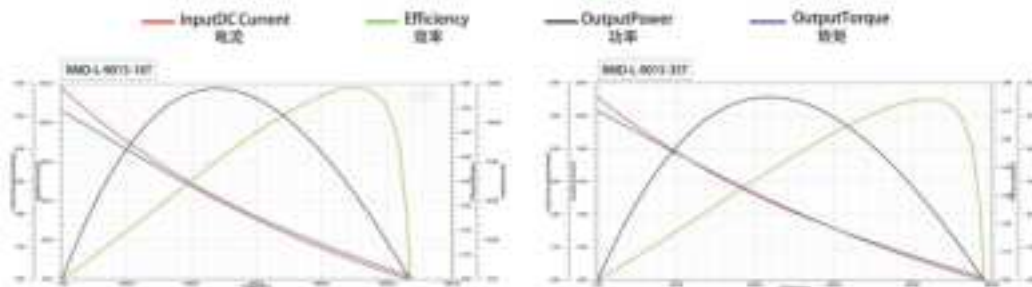
PRODUCT PARAMETERS

产品参数

产品型号	Item Name	RMD-L-9015-16T	RMD-L-9015-31T
额定电压	[Nominal Voltage] V	24	24
额定电流	[Nominal Current] A	7.01	3.34
额定扭矩	[Nominal Torque] N.M	1.54	1.67
额定转速	[Nominal Speed] rpm	700	290
最大空载转速	[Max Speed] rpm	1085	530
最大瞬时扭矩	[Max Instant Torque] N.M	5.4	5
最大瞬时电流	[Max Instant Current] A	11.00	11.00
阻转矩	[Dbr Resistance] Ω	0.35	3.31
连接方式	[Wire Connect]	Y	Y
相间电感	[Phase to Phase Inductance] mH	0.41	1.01
转速常数	[Speed Constant] rpm/v	45	21
扭矩常数	[Torque Constant] N.M/A	0.30	0.40
转子惯量	[Rotor Inertia] g·cm ²	5271	3271
磁极数	[Number of Pole Pairs]	24	14
电机重量	[Motor Weight] g	650	650
工作温度范围	[Working Temperature] °C	[-20 ~ 80 °C]	
最高存储温度	[Max Demagnetize Temperature] °C	120 °C	
匹配驱动器 Matched Driver		匹配驱动器 Matched Driver	
匹配驱动器	[Drive]	DRC10	
驱动器输入电压	[Input Voltage] V	9-36	
驱动器额定电流	[Current] A	Normal: 8A Instant: 15A	
额定功率	[Nominal Power] W	200	
通信方式	[Communication]	RS-485 / CAN 2.0B	
通信波特率	[Baudrate]	14 bit magnetic encoder	
分辨率	[Pulse Rate]	9000, 10000, 57000, 111200 (default)	
通信频率	[Communication frequency]	CAN BUS @ 1Mbps, 20KHz ; RS485 @ 115200bps, 500KHz	
控制频率	[Control frequency]	Torque loop 24KHz / Speed loop 8KHz / Position loop 4KHz	
控制模式	[Control mode]	Torque (position) loop / speed loop/position loop	
速度反馈	[S-Curve]	YES	
制动电阻	[Brake Resistor]	YES	
接口件	[connector]	2X1.5 / 8PIN	
减震措施	[vibration]	YES	

MOTOR CHARACTERISTIC CURVE

电机特性曲线



RMD-L-Series Servo Motor

A Highly Integrated Power Output Module

The L-Series Servo Motor is a cutting-edge product designed to meet your power output needs. This motor module offers three key components: a high-performance FOC driver, a high-power density brushless motor, and a high-precision absolute position encoder.

Suitable for medium to high-speed scenarios ranging from **20RPM to 250RPM**, the L-Series Servo Motor provides exceptional performance and reliability. Its advanced features ensure smooth operation and precise control in various applications.

Experience seamless motion control with our state-of-the-art FOC driver that optimizes torque efficiency while minimizing energy consumption. The integrated brushless motor delivers impressive power density, allowing for compact designs without compromising on performance.

Whether you're looking to optimize industrial automation processes or enhance robotics systems, the L-Series Servo Motor is your go-to solution for efficient power output. Trust in its superior integration capabilities and enjoy unparalleled performance in demanding environments.

The main application scenarios:

- Mechanical arm
- Manipulator
- Lead screw drive
- 3D printing
- PTZ/Pan-tilt head
- Turntable
- Inspection robot

Revolutionizing Traditional Distributed Design

Experience a breakthrough in product design with innovative L-Series Servo Motor. By breaking away from traditional distributed design, this cutting-edge motor enables a simpler and more streamlined structure for your end products. With enhanced internal wiring, you can enjoy effortless connectivity and improved overall performance.

The L-Series Servo Motor is designed to meet the demands of modern industries, offering unparalleled stability and reliability. Its advanced technology ensures smooth operation and precise control, allowing for seamless integration into various applications.

With its sleek and compact design, the L-Series Servo Motor not only optimizes space utilization but also simplifies installation processes. Say goodbye to complex wiring systems as this motor provides convenient internal wire routing options that save time and effort during assembly.