

项目	单位	规格												
电压	V	220V												
电机型号		MA020A	MH020A	MH020H	MQ020A	MA040A	MH040A	MH040H	MQ040A	MA060E	MA075A	MH075A	MH075H	MG075A
适配驱动		SV-M6系列/M7系列												
用途	-	保持用制动器												
电源	-	由于是SELV电源/危险电压请使用强化绝缘的电源												
额定电压	V	DC24V±10%												
额定电流	A	0.36	0.36	0.36	0.9	0.36	0.36	0.9	0.81	0.42	0.42	0.42	0.42	0.42
静摩擦转矩	N.m	1.6 以上	1.6 以上	1.6 以上	1.6 以上	1.6 以上	1.6 以上	1.6 以上	12 以上	0.38 以上	0.38 以上	0.38 以上	0.38 以上	0.38 以上
吸合时间	ms	50 以下	50 以下	50 以下	60 以下	50 以下	50 以下	60 以下	100 以下	70 以下	70 以下	70 以下	70 以下	70 以下
释放时间	ms	20 以下	20 以下	20 以下	40 以下	20 以下	20 以下	40 以下	60 以下	20 以下	20 以下	20 以下	20 以下	20 以下
释放电压	ms	DC1V 以上	DC1V 以上	DC1V 以上	DC1.5V 以上	DC1V 以上	DC1V 以上	DC1.5V 以上	DC1.5V 以上	DC1V 以上	DC1V 以上	DC1V 以上	DC1V 以上	DC1V 以上

项目	单位	规格												
电压	V	220V												
电机型号		MG085A	MG085S	MA090E	MA100A	MM100A	MM100S	MQ100E	MH100A	MG100A	MA120E	MG130A	MG130S	MA150A
安装法兰盘尺寸	mm	□130	□130	□110	□100	□130	□130	□80	□130	□130	□110	□130	□130	□100
质量	kg	5.53	5.7	3.7	3.5	4.67	5.87	2.68	6.4	6.91	4.3	6.89	7.3	4.4
额定输出功率	W	850	850	900	1000	1000	1000	1000	1000	1000	1200	1300	1300	1500
额定转矩	N.m	5.41	5.39	2.86	3.18	4.77	4.77	3.185	4.77	9.55	4	8.28	8.28	4.77
瞬时最大转矩	N.m	16.2	16.2	8.6	9.55	14.3	14.3	14.3	14.3	28.6	12	24.84	24.84	14.3
额定电流	Arms	5.9	6.7	4.5	6.6	5.2	8.25	5.7	5.2	6	9.3	9.6	8.2	8.2
最大瞬时电流	Arms	18	20.1	13.5	28	15.6	25	21.2	15.6	16	18	28	28.8	35
额定转速	r/min	1500	1500	3000	3000	2000	2000	3000	2000	1000	3000	1500	1500	3000
最高转速	r/min	3000	4000	5000	5000	3000	5000	4500/6000*	3000	1500	5000	3000	4000	5000
转矩常数	N.m/A	0.918	0.859	0.63	0.52	0.918	0.573	0.552	0.918	1.83	0.63	0.895	0.891	0.628
每相感应电压常数	mV/(r/min)	33.65	31.04	24.52	18.15	33.65	21.2	21.2	33.65	67.3	23.55	34.84	32.08	21.92
额定功率变化率	KW/S	63.29	20.9	17.1	49.82	36.8	24.84	50.7	7.39	75.4	23.1	33.9	35	80.12
机械时间常数	ms	3.43	2.74	1.98	0.619	1.51	1.24	0.85	7.54	1.12	1.5	2.57	2.23	0.507
电气时间常数	ms	11.1	10.2	6.78	7.22	11.1	13.3	7.6	11.1	9.65	8.86	14.63	10.7	8.08
转子惯量	x10-4kg.m ²	14	13.9	4.5	2.03	6.18	9.16	2	30.8	12.1	5.9	20.2	19.9	2.84
容许负载	N	490	490	392	392	490	490	392	490	490	392	490	490	392
编码器		17bit-23bit												

项目	单位	规格												
电压	V	220V												
电机型号		MA150E	MM150A	MM150S	MH150A	MA180E	MG180A	MG180S	MA200A	MM200A	MM200S			
安装法兰盘尺寸	mm	□110	□130	□130	□110	□110	□130	□130	□100	□130	□130			
质量	kg	4.95	5.87	6.98	7.8	5.4	8.14	8.8	5.3	12.1	6.91			
额定输出功率	W	1500	1500	1500	1500	1800	1800	1800	2000	2000	2000			
额定转矩	N.m	4.77	7.16	7.16	7.16	5.73	11.5	11.5	6.37	9.55	9.55			
瞬时最大转矩	N.m	14.3	21.5	21.5	21.5	17.2	34.5	34.5	19.1	28.6	28.6			
额定电流	Arms	7.6	8	9.5	8	9.5	11.8	15.6	11.3	9.9	15			
最大瞬时电流	Arms	24	24	29	24	29	35.5	46.8	48	30	50			
额定转速	r/min	3000	2000	2000	2000	3000	1500	1500	3000	2000	2000			
最高转速	r/min	5000	3000	5000	3000	5000	3000	4000	5000	3000	5000			
转矩常数	N.m/A	0.63	0.895	0.672	0.895	0.63	0.964	0.748	0.607	0.9645	0.627			
每相感应电压常数	mV/(r/min)	23.2	34.84	25.9	34.84	22.3	40.18	27	21.247	37.95	23			
额定功率变化率	KW/S	28	56	42.37	13.3	34.7	50.87	50.9	110.26	75.4	54.13			
机械时间常数	ms	1.47	1.16	1.08	4.9	1.38	2.06	1.95	0.425	1.05	0.93			
电气时间常数	ms	9.35	14.6	16.13	14.63	9.54	15.99	11.14	9.37	15.38	13.75			
转子惯量	x10-4kg.m ²	7.3	9.16	12.1	38.5	8.6	26	26	3.68	12.1	16.85			
容许负载	N	392	490	490	490	392	490	490	392	490	490			
编码器		17bit-23bit												

项目	单位	规格												
电压	V	220V												
电机型号		MA150E	MM150A	MM150S	MH150A	MA180E	MG180A	MG180S	MA200A	MM200A	MM200S			
安装法兰盘尺寸	mm	□110	□130	□130	□110	□110	□130	□130	□100	□130	□130			
质量	kg	4.95	5.87	6.98	7.8	5.4	8.14	8.8	5.3	12.1	6.91			
额定输出功率	W	1500	1500	1500	1500	1800	1800	1800	2000	2000	2000			
额定转矩	N.m	4.77	7.16	7.16	7.16	5.73	11.5	11.5	6.37	9.55	9.55			
瞬时最大转矩	N.m	14.3	21.5	21.5	21.5	17.2	34.5	34.5	19.1	28.6	28.6			
额定电流	Arms	7.6	8	9.5	8	9.5	11.8	15.6	11.3	9.9	15			
最大瞬时电流	Arms	24	24	29	24	29	35.5	46.8	48	30	50			
额定转速	r/min	3000	2000	2000	2000	3000	1500	1500	3000	2000	2000			
最高转速	r/min	5000	3000	5000	3000	5000	3000	4000	5000	3000	5000			
转矩常数	N.m/A	0.63	0.895	0.672	0.895	0.63	0.964	0.748	0.607	0.9645	0.627			
每相感应电压常数	mV/(r/min)	23.2	34.84	25.9	34.84	22.3	40.18	27	21.247	37.95	23			
额定功率变化率	KW/S	28	56	42.37	13.3	34.7	50.87	50.9	110.26	75.4	54.13			
机械时间常数	ms	1.47	1.16	1.08	4.9	1.38	2.06	1.95	0.425	1.05	0.93			
电气时间常数	ms	9.35	14.6	16.13	14.63	9.54	15.99	11.14	9.37	15.38	13.75			
转子惯量	x10-4kg.m ²	7.3	9.16	12.1	38.5	8.6	26	26	3.68	12.1	16.85			
容许负载	N	392	490	490	490	392	490	490	392	490	490			
编码器		17bit-23bit												
适配驱动		SV-M6系列/M7系列												
用途	-	保持用制动器												
电源	-	由于是SELV电源/危险电压请使用强化绝缘的电源												
额定电压	V	DC24V±10%												
额定电流	A	0.81	0.9	0.9	0.9	0.81	0.9	0.41	0.81	0.9	0.9			
静摩擦转矩	N.m	12 以上	14 以上	14 以上	14 以上	12 以上	14 以上	14 以上	8 以上	14 以上	14 以上			
吸合时间	ms	100 以下	100 以下	100 以下	100 以下	100 以下	100 以下	100 以下	50 以下	100 以下	100 以下			
释放时间	ms	60 以下	60 以下	60 以下	60 以下	60 以下	60 以下	80 以下	15 以下	60 以下	60 以下			
释放电压	ms	DC1.5V 以上	DC1V 以上	DC1V 以上	DC1V 以上	DC1.5V 以上	DC1V 以上	DC1V 以上	DC1V 以上	DC1V 以上	DC1V 以上			

伺服电机的使用环境条件及注意事项

使用环境条件	规格
额定时间	连续
使用环境温度	0° C-40° C (无结露)
使用环境湿度	20 ~ 85%RH (无结露)
保存环境温度	-20° C - 65° C (无结露)
保存环境湿度	20 ~ 85%RH (无结露)
使用保存环境	屋内 (不接触直射阳光)、无腐蚀性气体、无易燃性气体、无油性物、无灰尘
耐热等级	Class B
绝缘电阻	DC1000V-5MΩ 以上
绝缘耐压	AC1500V 一分钟
使用海拔	海拔 1000m 以下
振动等级	V15 (JEC2121)
耐振动	49m/s ² (5G)
耐冲击	98m/s ² (10G)
保护构造	IP67
Precautions	<ul style="list-style-type: none"> · 按照规定接地, 适用 Class I · 适用过电压范围II「Overvoltage category II」 · 适用污染度 2「Pollution degree 2」 · 额定转矩是指安装在按电机法兰盘尺寸的约 2 倍大小的 L 型钢上的条件下所显示的 · 制动器连接极性。红导线: 与 +24V 连接黑导线: 与 GND 连接。

* 为弱磁控制下最高转速

Installation and Wiring Instructions for SV-M6 Series Servo Motor (40-130 flange)

Number : M6MQ075B001A01
Version : V 1.0
Date : 2024.06

<http://www.hcfa.cn>

Thank you for using this product.
These instructions mainly provide information on the safe installation and wiring of the SV-M6 Series Servo Motor (40-130 flange).
For more detailed information, please refer to <SV-M6 Series Servo Motor (40-130 flange) User Instruction>.

Item List

Please confirm the following items and their quantities when unpacking:			
No.	Item	Quantity	
1	Servo motor	1	
2	Accessories	Flat key	1
		4 PIN terminal	1
		2 PIN terminal (for servo motor with brake)	1
4	Quality certification	1	

*Please confirm that there is no damage to those items during transportation. For any damages, please contact HCFA.

Safety Precautions

Please always pay attention to the following safety precautions during acceptance, inspection, installation, wiring, operation, and maintenance.

■ The safety instruction levels, which may be caused by the incorrect use of this product, are classified and described in the following table.

	Indicates that incorrect handling may result in death or severe injury.
	Indicates that incorrect handling may result in injury or property damage.

■ What must not be done and what must be done are indicated by the following diagrammatic symbols.

	Indicates what must not be done.
	Indicates what must be done.

⚠ DANGER

Installation and Wiring

Do not connect the motor directly to a commercial power. Otherwise, it may cause fire or malfunction.
Do not place any combustibles near the servo motor and drive. Otherwise, it may cause a fire.

Please place the drive within a protective case, and leave specified clearances between the drive and control enclosure walls or other equipments. Otherwise, it may cause an electric shock, fire, or malfunction.
Please install the drive in a place that frees from excessive dust, water, and oil. Otherwise, it may cause an electric shock, fire, malfunction, or damage.
 Please install a motor or a drive to incombustible, such as metal. Otherwise, it may cause a fire.
The wiring must be done by a professional electrician. Otherwise, it may cause an electric shock.
The FG terminal of the motor or the drive must be grounded. Otherwise, it may cause an electric shock.
Please cut off the upper circuit breaker before wiring. Otherwise, it may cause an electric shock, injury, malfunction, or damage.
Please ensure a good connection of the cable with its electrified part being well insulated. Otherwise, it may cause an electric shock, fire, or malfunction.

Operation and Running

Do not touch the internal parts of the drive. Otherwise, it may cause burns or an electric shock.
The cables must not be excessively damaged, stressed, loaded, or pinched. Otherwise, it may cause an electric shock, malfunction, or damage.
Do not touch the rotating parts of the servo motor during operation. Otherwise, it may cause injury.
Do not use the drive in any place near water, corrosive or flammable gases, and flammables. Otherwise, it may cause a fire.
 Do not subject the drive to any extreme vibration and impact. Otherwise, it may cause an electric shock, injury, or fire.
Do not immerse the cables in oil or water during operation. Otherwise, it may cause an electric shock, injury, or fire.
Do not conduct wiring or perform operations with wet hands. Otherwise, it may cause an electric shock, injury, or fire.
Do not touch the keyway with bare hands when using a motor with a keyway at the shaft end. Otherwise, it may cause injury.
Do not touch the motor, driver, or heat sink as their temperatures may rise. Otherwise, it may cause fire or damage.
Do not use external force to drive the motor. Otherwise, it may cause fire.

Other Safety Precautions

Please ensure equipment safety after earthquakes. Otherwise, it may cause an electric shock, injury, or fire.
 Ensure a correct installation and setting to prevent fire or personal injury during earthquakes. Otherwise, it may cause injury, electric shock, fire, malfunction, or damage.
Please provide an external emergency stop circuit to ensure that operation can be stopped and power switched off immediately. Otherwise, it may cause injury, electric shock, fire, malfunction, or damage.

Maintenance and Inspection

As there's dangerous and high-voltage inside the drive, before wiring or inspection, turn off the power and wait for 5 minutes or more until the charge lamp turns off. Do not disassemble the drive. Otherwise, it may cause an electric shock.

⚠ CAUTION

Installation and Wiring

Please install the servo motor and drive following the combinations specified in the instructions. Otherwise, it may cause fire or malfunction.
Do not touch the connector terminals directly. Otherwise, it may cause an electric shock or malfunction.

	Do not block the air intake or let any foreign materials enter into the equipment. The test operation must be done with the motor being fixed but separated from the mechanical system. Only after confirming the operation can the motor be installed to the mechanical system. The servo motor must be installed following the specified directions and methods. Ensure a proper installation in accordance with the weight and rated output of the equipment.	Otherwise, it may cause an electric shock or fire. Otherwise, it may cause injury. Otherwise, it may cause injury and malfunction. Otherwise, it may cause injury and malfunction.
Operation and Running		
	Do not stand or put any heavy objects on the equipment. Do not make extreme gain adjustments or changes, which will result in unstable running. When power is restored after an instantaneous power outage, keep away from the machine because it may be restarted suddenly. Set the machine so that it is secured against personal injury if restarted. Keep it away from the direct sunlight. Do not subject the motor and its axis to heavy impact.	Otherwise, it may cause an electric shock, injury, malfunction, or damage. Otherwise, it may cause malfunction or damage. Otherwise, it may cause injury. Otherwise, it may cause malfunction.
	The electromagnetic brake on the motor is designed to hold its shaft and should not be used for ordinary braking. Do not use any malfunctioning or damaged motor or drive. Please confirm that the power supply specification is normal. Holding brake is not a safety stopper used for ensuring machine safety. To ensure safety, install a stopper on the machine side. When any alarm has occurred, eliminate its cause, ensure safety, and deactivate the alarm before restarting operation. The brake relay and the emergency stop relay must be connected in series.	Otherwise, it may cause injury and malfunction. Otherwise, it may cause an electronic shock, fire, or injury. Otherwise, it may cause malfunction. Otherwise, it may cause injury. Otherwise, it may cause injury or malfunction.
Transportation and Storage		
	Do not subject the equipment to rain, droplets, toxic gas, or fluid. Do not carry the motor by the cables or shaft during transportation. Do not drop or overturn the product during transportation and installation.	Otherwise, it may cause malfunction. Otherwise, it may cause injury and malfunction. Otherwise, it may cause injury and malfunction.
	For long-term storage, please contact HCFA via the contact information listed in the instructions. Please store the product in the places following the environmental conditions specified in these instructions.	Otherwise, it may cause malfunction.
Other Safety Precautions		
	Please insulate the battery with adhesive tape and dispose of it following the law of each country (area). When disposing of the equipment, treat it as an industrial waste.	
Maintenance and Inspection		
	Please contact HCFA for further instructions on removal, installation, and repair. Do not turn on and off the main circuit power switch too frequently. Do not touch the heat sink and regenerative resistor of the motor and drive because their temperatures may be high while power is on or for some time after power-off.	Otherwise, it may cause malfunction. Otherwise, it may cause malfunction. Otherwise, it may cause burns or electric shock.
	When the drive becomes faulty, switch off the control circuit and main power. If the equipment is to be stored for a long time, please switch off the main circuit power.	Otherwise, it may cause a fire. Otherwise, it may lead to injury caused by the malfunction of the equipment.
Maintenance and Inspection		
< Warranty Period >		
• The term of warranty for the product is eighteen (18) months from the date of manufacture. However, for the motor with a brake, the warranty period does not exceed the maximum period that the shaft can accelerate or decelerate.		
< Warranty Coverage >		
• This warranty applies only when the condition, method, environment, etc. of use are in compliance with the terms and conditions and instructions that are stated in the instructions. However, even during the warranty period, the repair cost will be charged to customers in the following cases.		
• ① A failure caused by improper storing or handling, repair, and modification.		
• ② A failure caused by drops or damages during transportation.		
• ③ A failure caused by using without following the product specifications.		
• ④ A failure caused by external factors such as inevitable accidents, including without limitation fire, earthquake, thunder and lightning, flooding and wind hazard, salty damage, and abnormal fluctuation of voltage.		
• ⑤ A failure caused by the intrusion of water, oil, metals, and other foreign objects.		
• The warranty coverage is only for the product itself. HCFA bears no joint responsibility and makes no compensation for any further damages caused by product malfunction.		

Chapter One Product Description and Model Selection

Motor Nameplate Introduction

Model Name: MODEL:SV-M6MH040A-N2CD
Serial Number & Version number: S/P: 400W P/N: 1010219018800000000
S/N: 90121086001 nMAX: 6500rpm
Mn: 127Nm In: 2.1A nN : 3000rpm
Power Specifications: V: AC200~240V | IP67
Ambient: 40 | Ins.class: F

MADE IN CHINA

Model Number Notation

SV-M6 MH 040 A - N 2 C D - ****

Product Series: SV-MX6

Design Serial Number: A/B/C/E/F/H/K/S

Special Specifications: Encoder Specifications (Symbol: D 23BIT Absolute, A 17BIT Absolute)

Inertia Specifications: MA Low inertia, MM Medium inertia, MH High inertia, MHH Ultra-high inertia, MQ Special flange / Flat flange / Small flange, MG Low speed and high torque, MGS Low cogging cutting

Shaft Machining Specification: K Shaft key/without oil seal, L Shaft key/with oil seal (C:40/60/80 flange), C Connector/shaft key/with oil seal (C:40/60/80 flange), D Connector/shaft key/without oil seal

Power Specifications: Symbol Specifications (005 50W, 010 100W, 015 150W, 020 200W, 040 400W, 060 600W, 075 750W, 080 800W, 085 850W), Symbol Specifications (090 900W, 100 1KW, 120 1.2KW, 130 1.3KW, 150 1.5KW, 180 1.8KW, 200 2KW)

Voltage Specifications: Symbol Voltage Specification (2 AC220V)

Brake specifications: Symbol Brake (N Without brake, B With brake)

Part Names and Functions

4 Power cables (3 power cables + 1 FG cable)
Drive input UVW
Brake cable (BRK1+BRK2)

4 Encoder cables+ Shield cable
Encoder power supply and drive data communication
Battery connection is required when using absolute encoders

4 Power cables (3 power cables + 1 FG cable)
Drive input UVW
Brake cable (BRK1+BRK2)

4 Encoder cables+ Shield cable
Encoder power supply and drive data communication
Battery connection is required when using absolute encoders

Recommended Fixing Screws for Motor

Motor Model	Hole Size	Screw Type
005A, 010A	2-φ4.5	M4X10
020A, 040A, 060A	4-φ5.5	M5X12
075A, 100E	4-φ6.5	M5X16

Recommended Fixing Screws for Motor

Motor Model	Hole Size	Screw Type
MA100A, MH100A, MA060E, MA150A, MH150A, MA090E, MA200A, MG085A, MA120E, MM100A, MG100A, MA150E, MM150A, MG130A, MA180E, MM200A, MG150C, MG180A	4-φ9.0	M8X20

Chapter Two Product Specifications

Item	Unit	Specifications				
		220V				
Motor Model		MH005A	MH010A	MH010H	MQ010A	MH015A
Mounting Flange Dimension	mm	□40	□40	□40	□60	□40
Mass	Without Brake	0.33	0.45	0.44	0.68	0.83
	With Brake	0.55	0.66	0.65	0.92	0.69
Rated Output Power	W	50	100	100	100	150
Rated Torque	N.m	0.16	0.32	0.32	0.32	0.477
Max. Instantaneous Torque	N.m	0.56	1.11	1.11	0.96	1.43
Rated Current	Arms	1.1	1.1	0.92	0.95	1.5
Max. Instantaneous Current	Arms	3.89	3.89	3.6	2.8	4.5
Rated Rotation Velocity	r/min	3000	3000	3000	3000	3000
Max. Rotation Velocity	r/min	6500	6500	6500	6500	6000
Torque Constant	N.m/A	0.168	0.327	0.347	0.369	0.33
Phase Inductive Voltage Constant	mV/(r/min)	5	11.1	13.3	11.6	13.1
Rated Power Change Rate	Without Brake	6.7	14.4	11.13	6.4	17.5
	With Brake	6.1	13.8	10.78	5.69	17.1
Mechanical Time Constant	Without Brake	2.6	1.67	2.23	2.96	1.9
	With Brake	2.85	1.74	2.3	3.33	1.94
Electrical Time Constant	ms	0.89	1.1	0.986	1.76	1.22
Motor Rotor Inertia	Without Brake	0.038	0.071	0.092	0.16	0.13
	With Brake	0.042	0.074	0.095	0.18	0.133
Permissible Load	Radial Load	68	68	68	68	68
	Axial Load	58	58	58	58	58
Encoder		SV-M6 Series/M7 Series				
Adaptive Drive						
Usage						
Power						
Rated Voltage	V					
Rated Current	A	0.25	0.25	0.25	0.9	0.375
Static Friction Torque	N.m	0.38 or more	0.38 or more	0.38 or more	0.38-1.1	0.58 or more
Absorption time	ms	35 or less	35 or less	35 or less	60 or less	50 or less
Release Time	ms	20 or less	20 or less	20 or less	40 or less	20 or less
Release Voltage	ms	DC1V or more	DC1V or more	DC1V or more	DC1.5V or more	DC1V or more

Maximum Rotation velocity under weak magnetic control is marked with *.

Item	Unit	Specifications												
		220V												
Motor Model		MA020A	MH020A	MH020H	MQ020A	MA040A	MH040A	MH040H	MQ040A	MA060E	MA075A	MH075A	MH075H	MG075A
Mounting Flange Dimension	mm	□60	□60	□60	□80	□60	□60	□60	□80	□110	□80	□80	□80	□80
	Mass	Without Brake	0.9	0.87	0.95	1.24	1.28	1.22	1.45	1.6	3.1	2.25	2.25	2.65
With Brake		1.3	1.27	1.29	1.74	1.67	1.61	1.85	2.1	4.4	3.01	3.01	3.13	4.14
Rated Output Power	W	200	200	200	200	400	400	400	400	600	750	750	750	750
Rated Torque	N.m	0.64	0.64	0.64	0.637	1.27	1.27	1.27	1.27	1.91	2.39	2.39	2.39	4.77
Max. Instantaneous Torque	N.m	1.91	2.23	2.23	1.91	3.82	4.46	4.46	3.82	5.73	7.16	8.36	8.36	14.3
Rated Current	Arms	1.7	1.4	1.4	2	2.7	2.1	2.4	2.6	3	4.2	3.8	3.8	4.2
Max. Instantaneous Current	Arms	6.5	4.87	4.87	6.4	10.2	7.36	8.2	8.4	9	17.4	13.3	18.8	15
Rated Rotation Velocity	r/min	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	1500
Max. Rotation Velocity	r/min	5000/6000*	5000/6500*	5000/6500*	6500	5000/6000*	5000/6500*	5000/6500*	5000/6500*	5000	4500/6000*	4500/6000*	4500/6000*	2000
Torque Constant	N.m/A	0.427	0.5	0.5	0.318	0.488	0.67	0.531	0.488	0.63	0.583	0.648	0.648	1.135
Phase Inductive Voltage Constant	mV/(r/min)	14.5	14.61	14.61	12.2	17.9	20.85	20.4	19.6	24.48	21.33	22.65	22.65	43.3
Rated Power Change Rate	Without Brake	25.6	14.1	8.71	8.63	57.6	28.8	22.09	18.5	11.3	59.5	36.6	18.1	79
	With Brake	24.1	13.2	8.36	8.12	55.6	27.8	21.5	17.92	10.6	53.4	34.4	17.85	75.84
Mechanical Time Constant	Without Brake	0.775	1.57	2.54	2.51	0.561	1.24	1.15	1.51	1.77	0.463	0.97	1.95	1.01
	With Brake	0.824	1.68	2.65	2.67	0.581	1.29	1.18	1.57	1.87	0.516	1.03	1.98	1.05
Electrical Time Constant	ms	6.3	2.58	2.58	3.52	6.1	2.97	4.1	5.41	7.8	12.7	6.59	6.59	5.1
Motor Rotor Inertia	Without Brake	0.16	0.29	0.47	0.47	0.28	0.56	0.73	0.87	3.1	0.96	1.56	3.15	2.88
	With Brake	0.17	0.31	0.49	0.5	0.29	0.58	0.75	0.9	4.2	1.07	1.66	3.2	3
Permissible Load	Radial Load	245	245	245	245	245	245	245	245	392	392	392	392	392
	Axial Load	98	98	98	98	98	98	98	98	147	147	147	147	147
Encoder		17bit-23bit												

Item	Unit	Specifications												
Voltage	V	220V												
Motor Model		MA020A	MH020A	MH020H	MQ020A	MA040A	MH040A	MH040H	MQ040A	MA060E	MA075A	MH075A	MH075H	MG075A
Adaptive Drive		SV-M6 Series/M7 Series												
Usage	-	Holding brake												
Power	-	Use a reinforced insulated power supply due to SELV power supply/hazardous voltage												
Rated Voltage	V	DC24V±10%												
Rated Current	A	0.36	0.36	0.36	0.9	0.36	0.36	0.36	0.9	0.81	0.42	0.42	0.42	0.42
Static Friction Torque	N.m	1.6 or more	1.6 or more	1.6 or more	1.6 or more	1.6 or more	1.6 or more	1.6 or more	1.6 or more	12 or more	0.38 or more	0.38 or more	0.38 or more	0.38 or more
Absorption time	ms	50 or less	50 or less	50 or less	60 or less	50 or less	50 or less	50 or less	60 or less	100 or less	70 or less	70 or less	70 or less	70 or less
Release Time	ms	20 or less	20 or less	20 or less	40 or less	20 or less	20 or less	20 or less	40 or less	60 or less	20 or less	20 or less	20 or less	20 or less
Release Voltage	ms	DC1V or more	DC1V or more	DC1V or more	DC1.5V or more	DC1V or more	DC1V or more	DC1V or more	DC1.5V or more	DC1V or more	DC1V or more	DC1V or more	DC1V or more	DC1V or more

Item	Unit	Specifications												
Voltage	V	220V												
Motor Model		MG085A	MG085S	MA090E	MA100A	MM100A	MM100S	MQ100E	MH100A	MG100A	MA120E	MG130A	MG130S	MA150A
Mounting Flange Dimension	mm	□130	□130	□110	□100	□130	□130	□80	□130	□130	□110	□130	□130	□100
Mass	kg	5.53	5.7	3.7	3.5	4.67	5.87	2.68	6.4	6.91	4.3	6.89	7.3	4.4
Rated Output Power	W	850	850	900	1000	1000	1000	1000	1000	1000	1200	1300	1300	1500
Rated Torque	N.m	5.41	5.39	2.86	3.18	4.77	4.77	3.185	4.77	9.55	4	8.28	8.28	4.77
Max. Instantaneous Torque	N.m	16.2	16.2	8.6	9.55	14.3	14.31	11.13	14.3	28.6	12	24.84	24.84	14.3
Rated Current	Arms	5.9	6.7	4.5	6.6	5.2	8.25	5.7	5.2	5.2	6	9.3	9.6	8.2
Max. Instantaneous Current	Arms	18	20.1	13.5	28	15.6	25	21.2	15.6	16	18	28	28.8	35
Rated Rotation Velocity	r/min	1500	1500	3000	3000	2000	2000	3000	2000	1000	3000	1500	1500	3000
Max. Rotation Velocity	r/min	3000	4000	5000	5000	3000	5000	4500/6000*	3000	1500	5000	3000	4000	5000
Torque Constant	N.m/A	0.918	0.859	0.63	0.52	0.918	0.573	0.552	0.918	1.83	0.63	0.895	0.891	0.628
Phase Inductive Voltage Constant	mV/(r/min)	33.65	31.04	24.52	18.15	33.65	21.2	21.2	33.65	67.3	23.55	34.84	32.08	21.92
Rated Power Change Rate	KW/S	63.29	20.9	17.1	49.82	36.8	24.84	50.7	7.39	75.4	23.1	33.9	35	80.12
Mechanical Time Constant	ms	3.43	2.74	1.98	0.619	1.51	1.24	0.85	7.54	1.12	1.5	2.57	2.23	0.507
Electrical Time Constant	ms	11.1	10.2	6.78	7.22	11.1	13.3	7.6	11.1	9.65	8.86	14.63	10.7	8.08
Motor Rotor Inertia	x10 ⁻⁴ kg. m ²	14	13.9	4.5	2.03	6.18	9.16	2	30.8	12.1	5.9	20.2	19.9	2.84
Permissible Load	N	490	490	392	392	490	490	392	490	490	392	490	490	392
Encoder		17bit-23bit												

Item	Unit	Specifications												
Voltage	V	220V												
Motor Model		MA150E	MM150A	MM150S	MH150A	MA180E	MG180A	MG180S	MA200A	MM200A	MM200S			
Mounting Flange Dimension	mm	□110	□130	□130	□130	□110	□130	□130	□100	□130	□130			
Mass	kg	4.95	5.87	6.98	7.8	5.4	8.14	8.8	5.3	12.1	6.91			
Rated Output Power	W	1500	1500	1500	1500	1800	1800	1800	2000	2000	2000			
Rated Torque	N.m	4.77	7.16	7.16	7.16	5.73	11.5	11.5	6.37	9.55	9.55			
Max. Instantaneous Torque	N.m	14.3	21.5	21.5	21.5	17.2	34.5	34.5	19.1	28.6	28.6			
Rated Current	Arms	7.6	8	9.5	8	9.5	11.8	15.6	11.3	9.9	15			
Max. Instantaneous Current	Arms	24	24	29	24	29	35.5	46.8	48	30	50			
Rated Rotation Velocity	r/min	3000	2000	2000	2000	3000	1500	1500	3000	2000	2000			
Max. Rotation Velocity	r/min	5000	3000	5000	3000	5000	3000	4000	5000	3000	5000			
Torque Constant	N.m/A	0.63	0.895	0.672	0.895	0.63	0.964	0.748	0.607	0.9645	0.627			
Phase Inductive Voltage Constant	mV/(r/min)	23.2	34.84	25.9	34.84	22.3	40.18	27	21.247	37.95	23			
Rated Power Change Rate	KW/S	28	56	42.37	13.3	34.7	50.87	50.9	110.26	75.4	54.13			
Mechanical Time Constant	ms	1.47	1.16	1.08	4.9	1.38	2.06	1.95	0.425	1.05	0.93			
Electrical Time Constant	ms	9.35	14.6	16.13	14.63	9.54	15.99	11.14	9.37	15.38	13.75			
Motor Rotor Inertia	x10 ⁻⁴ kg. m ²	7.3	9.16	12.1	38.5	8.6	26	26	3.68	12.1	16.85			
Permissible Load	N	392	490	490	490	392	490	490	392	490	490			
Encoder		17bit-23bit												

Maximum rotation velocity under weak magnetic control is marked with *.

Item	Unit	Specifications												
Voltage	V	220V												
Motor Model		MA150E	MM150A	MM150S	MH150A	MA180E	MG180A	MG180S	MA200A	MM200A	MM200S			
Mounting Flange Dimension	mm	□110	□130	□130	□130	□110	□130	□130	□100	□130	□130			
Mass	kg	4.95	5.87	6.98	7.8	5.4	8.14	8.8	5.3	12.1	6.91			
Rated Output Power	W	1500	1500	1500	1500	1800	1800	1800	2000	2000	2000			
Rated Torque	N.m	4.77	7.16	7.16	7.16	5.73	11.5	11.5	6.37	9.55	9.55			
Max. Instantaneous Torque	N.m	14.3	21.5	21.5	21.5	17.2	34.5	34.5	19.1	28.6	28.6			
Rated Current	Arms	7.6	8	9.5	8	9.5	11.8	15.6	11.3	9.9	15			
Max. Instantaneous Current	Arms	24	24	29	24	29	35.5	46.8	48	30	50			
Rated Rotation Velocity	r/min	3000	2000	2000	2000	3000	1500	1500	3000	2000	2000			
Max. Rotation Velocity	r/min	5000	3000	5000	3000	5000	3000	4000	5000	3000	5000			
Torque Constant	N.m/A	0.63	0.895	0.672	0.895	0.63	0.964	0.748	0.607	0.9645	0.627			
Phase Inductive Voltage Constant	mV/(r/min)	23.2	34.84	25.9	34.84	22.3	40.18	27	21.247	37.95	23			
Rated Power Change Rate	KW/S	28	56	42.37	13.3	34.7	50.87	50.9	110.26	75.4	54.13			
Mechanical Time Constant	ms	1.47	1.16	1.08	4.9	1.38	2.06	1.95	0.425	1.05	0.93			
Electrical Time Constant	ms	9.35	14.6	16.13	14.63	9.54	15.99	11.14	9.37	15.38	13.75			
Motor Rotor Inertia	x10 ⁻⁴ kg. m ²	7.3	9.16	12.1	38.5	8.6	26	26	3.68	12.1	16.85			
Permissible Load	N	392	490	490	490	392	490	490	392	490	490			
Encoder		17bit-23bit												

Maximum Rotation velocity under weak magnetic control is marked with *.

Environmental Specifications and Precautions

Environmental Specifications	Rated Time	Continuous
	Ambient Operating Temperature	0°C - 40°C (with no condensation)
	Ambient Operating Humidity	20 ~ 85%RH (with no condensation)
	Ambient Storage Temperature	-20°C - 65°C (with no condensation)
	Ambient Storage Humidity	20 ~ 85%RH (with no condensation)
	Operating & Storage Atmosphere	Indoors (no direct sunlight), free from corrosive gas, flammable gas, oil mist, dust and dirt
	Heat Resistance	Class B
	Insulation Resistance	DC1000V-5MΩ or more
	Insulation Withstand Voltage	AC1500V for one minute
	Altitude	Below 1000m above the sea level
Precautions	Vibration Class	V15 (JEC2121)
	Vibration Resistance	49m/s ² (5G)
	Impact Resistance	98m/s ² (10G)
	Protection	IP67
		<ul style="list-style-type: none"> Grounding should follow the instructions. Class I is available. Overvoltage category II is available/allowable. Pollution degree 2 is available. Torque ratings are shown when mounted on an L-beam approximately two times the size of the motor flange. The brake connection wire has different polarities. Red wire: Connects to +24V Black wire: Connects to GND