

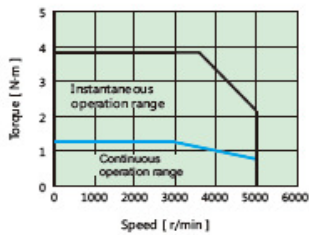


MA40A
400W Low Inertia
MH40A
400W High inertia



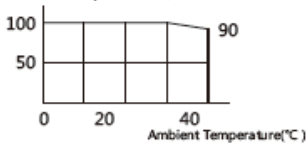
NT characteristics

■ NT characteristics

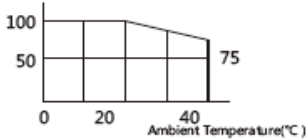


■ Continuous torque-Ambient temperature

- Without oil seal
Rated torque ratio(%)



- With oil seal
Rated torque ratio(%)



Specifications

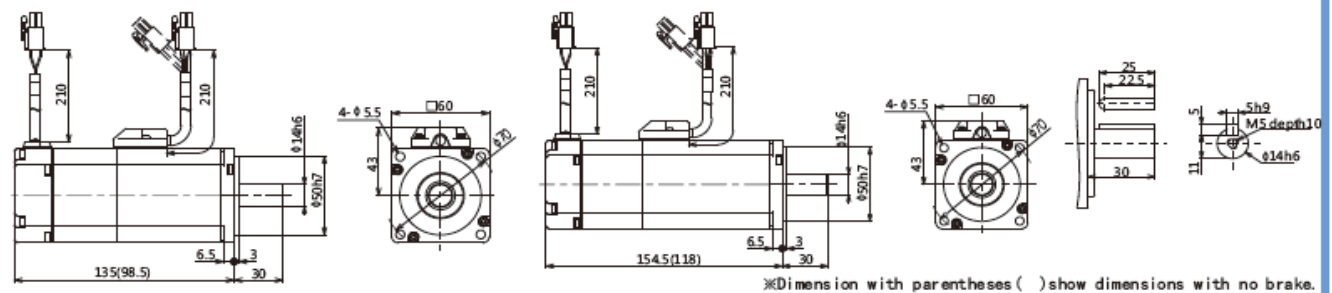
Items		Units	Specification	
Model Name	M□□□□□2□□**		400W Low inertia MA040A	400W High inertia MH040A
Fitting flange size		mm	□60	
Approximate mass	Without brake	Kg	1.3	1.5
	With brake		1.8	2.0
Rated voltage		V	AC200	
Rated output		W	400	
Rated torque		N·m	1.27	
Instantaneous max. torque		N·m	3.82	
Rated current		Arms	2.7	
Instantaneous max. current		Arms	7.8	
Rated speed		r/min	3000	
Max. speed		r/min	5000	
Torque constant		N·m/A	0.498	
Induced voltage constant per phase		MV(r/min)	17.4	
Rated power rate	Without brake	KW/S	58.7	23.5
	With brake		51.9	22.4
Mechanical time constant	Without brake	ms	0.67	1.66
	With brake		0.75	1.75
Electrical time constant		ms	2.47	
Moment of inertia	Without brake	×10 ⁻⁴ Kg·m ²	0.28	0.69
	With brake		0.31	0.72
Brake specification	Usage	—	Holding	
	Rated voltage	V	DC24V±10%	
	Rated current	—	0.3	
	Static friction torque		1.27 or more	
	Suction time	ms	50 at 100% voltage	
	Release time	ms	15 at 100% voltage	
	Release voltage	V	DC 1V or more	

External Dimensions

■ MA40A

■ MH40A

■ Shaft-end dimension



Supplement to Motor Specification

Ambient conditions for use

Items	Units	Specification
Ambient temperature for use	°C	0~40(Without condensation) Note 1)
Ambient humidity for use	%RH	20~85(Without condensation)
Ambient temperature for storage	°C	-20~65(Highest temperature guaranteed: 80 degrees, 72hours) Note 2)
Ambient humidity for storage	%RH	20~85(Without condensation)
Atmosphere for use/storage	—	Indoors(Not subject to rainwater or direct sunlight); free from corrosive gas, flammable gas, flammables, grinding fluid, oil mist, or dust
Insulation class	—	Class B
Insulation resistance	—	1000 VDC megger 5MΩ or more
Dielectric strength	—	At 1500 V AC 50/60 Hz for 1 minute 10mA or less
Vibration class	—	V15
Vibration resistance	m/s ²	49 (5G)
Impact resistance	m/s ²	98 (10G)
Protective construction	—	IP65(Excluding shaft penetrating section and connectors)
Time rating	—	Continuous
Operating position	—	All directions
Direction of rotation	—	Normal: CW, Reverse: CCW



*Note 1) The temperature for use is the temperature measured at a point 5cm apart from the motor.
 *Note 2) This is a temperature that can be tolerated only for a short period such as during transportation.

Encoder specification

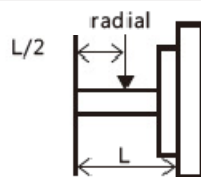
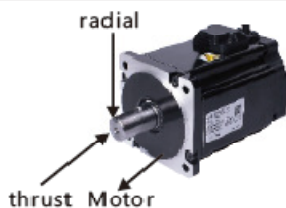
Items	Units	Specification
Motor Model Name	—	M□□□□□□□□N** M□□□□□□□□A**
Encoder specification	—	17 bit (incremental) 17 bit (absolute)
Encoder room temperature	°C	0~85
Resistance to external magnetic field	mT	±2 (20G) or less
Rated voltage	V	DC 4.5V~5.5V
External battery voltage	V	— DC 2.4V~5.5V
Current consumption	mA	160 typ
State of low power consumption	μA	— Typ 10μA
Single revolution resolution	—	131,072(17 bit)
Multi-revolution count	count/turn	— 65,536 Count
Maximum speed	r/min	6,000
Input/ Output form	—	EIA - 422B(half-duplex)
Count-up direction	—	CCW
Communication specification	Transmission method	— Half-duplex asynchronous serial communication
	Communication speed	Mbps



Count-up direction CCW

Output shaft permissible load

Items	Units	Specification							
Motor model name M□□□□□□□□□□**		50W MM500□□2	100W MM101□□2	200W MA201□□2 MH201□□2	400W MA401□□2 MH401□□2	750W MA751□□2 MH751□□2	1KW MM102□□2 MH102□□2	1.5KW MM152□□2 MH152□□2	2KW MM202□□2
Permissible radial load	N	68	68	245	245	392	490	490	490
Permissible thrust load	N	58	58	98	98	147	196	196	196



※At the midpoint of the thrust protrusion