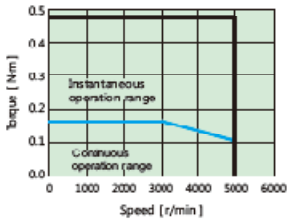
HCFA

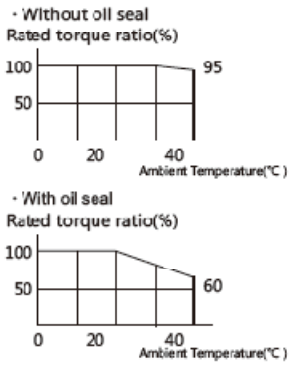
MM05A
50W Middle Inertia

NT characteristics

■ NT characteristics



■ Continuous torque-Ambient temperature

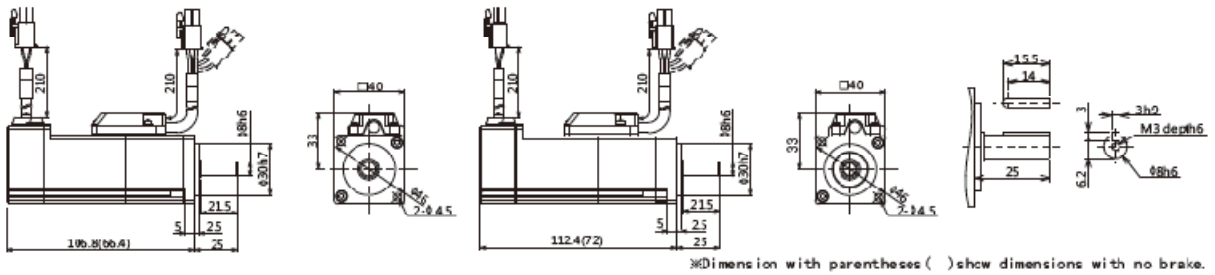


Specifications

Items		Units	Specification
Model Name M□□□□□2□□**			50W Middle inertia MM005A
Fitting flange size		mm	□40
Approximate mass	Without brake	Kg	0.4
	With brake		0.6
Rated voltage		V	200
Rated output		W	50
Rated torque		N·m	0.16
Instantaneous max. torque		N·m	0.56
Rated current		Arms	0.6
Instantaneous max. current		Arms	1.8
Rated speed		r/min	3000
Max. speed		r/min	6000
Torque constant		N·m/A	0.30
Induced voltage constant per phase		MV(r/min)	10.6
Rated power rate	Without brake	KW/S	5.4
	With brake		4.7
Mechanical time constant	Without brake	ms	2.67
	With brake		3.04
Electrical time constant		ms	0.6
Moment of inertia	Without brake	$\times 10^{-4}$Kg·m^2	0.047
	With brake		0.054
Brake specification	Usage	—	Holding
	Rated voltage	V	DC24V±10%
	Rated current	—	0.25
	Static friction torque		0.16 or more
	Suction time	ms	35 at 100% voltage
	Release time	ms	20 at 100% voltage
	Release voltage	V	DC 1V or more

External Dimensions

■ MM50A without oil seal ■ MM50A with oil seal ■ Shaft-end dimension



※Dimension with parentheses ( ) show dimensions with no brake.

Supplement to Motor Specification

Ambient conditions for use

Items	Units	Specification	
Ambient temperature for use	℃	0~40(Without condensation) Note 1)	
Ambient humidity for use	%RH	20~85(Without condensation)	
Ambient temperature for storage	℃	-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	—	V 15	
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	CCW 
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		℃	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(17bit)		
Multi-revolution count		count/turn	—	65,536 Count	 Count-up direction CCW
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	2.5		

Output shaft permissible load

Items	Units	Specification							
Motor model name M□□□□□2□□**		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