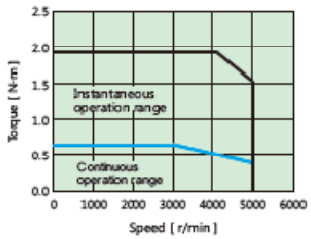
HCFA

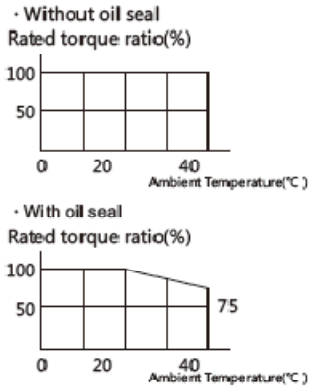
MA20A
200W Low Inertia
MH20A
200W High inertia

NT characteristics

■ NT characteristics



■ Continuous torque-Ambient temperature

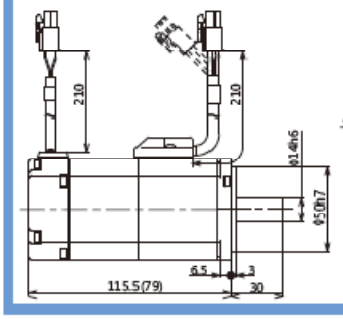


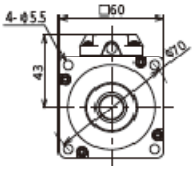
Specifications

Items		Units	Specification	
Model Name M□□□□□2□□**			200W Low inertia MA020A	200W High inertia MH020A
Fitting flange size		mm	□60	
Approximate mass	Without brake	Kg	0.9	1.0
	With brake		1.4	1.5
Rated voltage		V	AC200	
Rated output		W	200	
Rated torque		N·m	0.64	
Instantaneous max. torque		N·m	1.91	
Rated current		Arms	1.7	
Instantaneous max. current		Arms	4.9	
Rated speed		r/min	3000	
Max. speed		r/min	5000	
Torque constant		N·m/A	0.417	
Induced voltage constant per phase		MV(r/min)	14.5	
Rated power rate	Without brake	KW/S	23.9	9.3
	With brake		19.5	8.6
Mechanical time constant	Without brake	ms	1.12	2.87
	With brake		1.37	3.12
Electrical time constant		ms	1.99	
Moment of inertia	Without brake	$\times 10^{-4}$Kg·m^2	0.17	0.43
	With brake		0.21	0.47
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	DC1V or more	

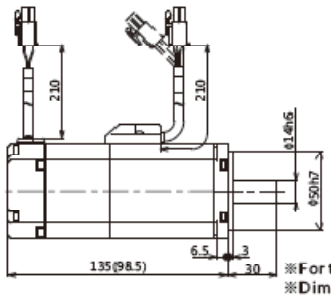
External Dimensions

■ MA20A

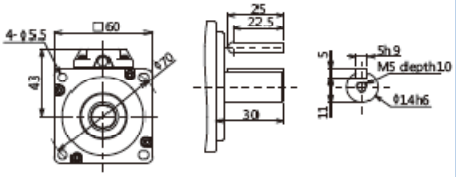




■ MH20A



■ Shaft-end dimension



※For the specification of φ11, please refer to HCFA engineer
※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	—	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	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