

New Product Release

SV0601-2E

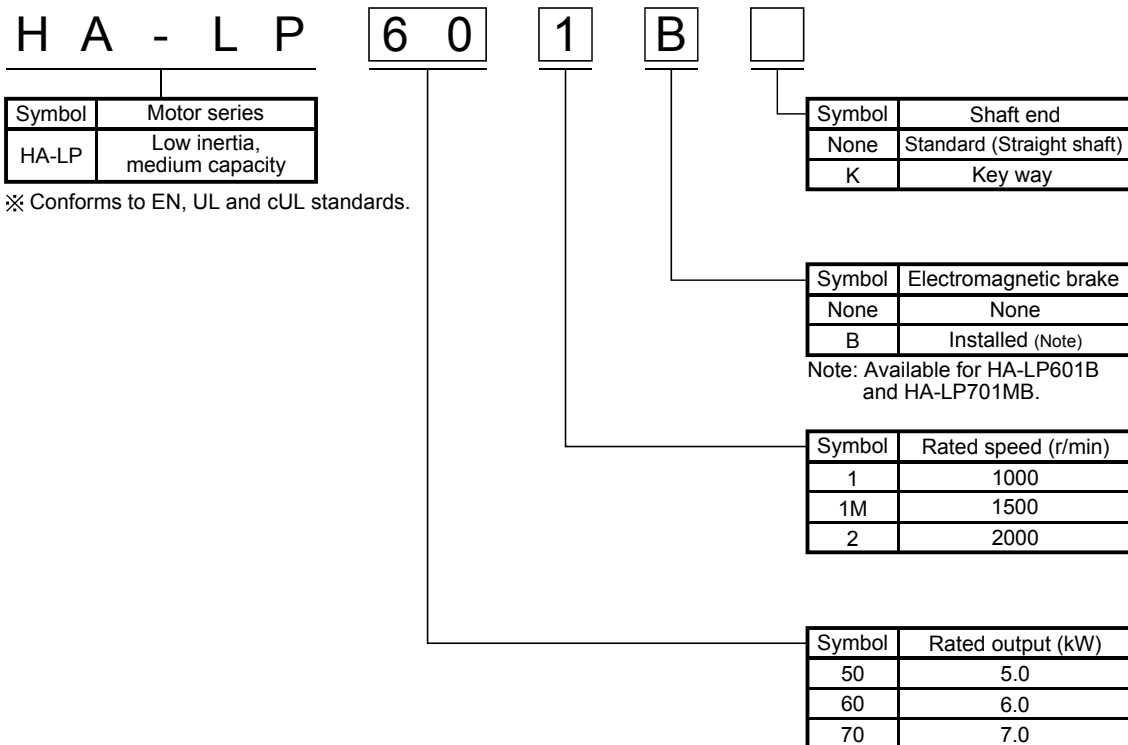
General-Purpose AC Servo MELSERVO-J3

Servo Motor <HA-LP Series (5 to 7kW)>

New capacity 5 to 7kW have been added to HA-LP series low-inertia servo motor lineup.
 The HA-LP series is equipped with a high-resolution absolute encoder, 262144p/rev as standard specifications.
 Typically suitable for following applications: material handling systems and molding machines.
 The HA-LP series servo motors, 5 to 7kW, also conform to the global standards (EN, UL and, cUL standards).



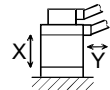
■ Model configurations



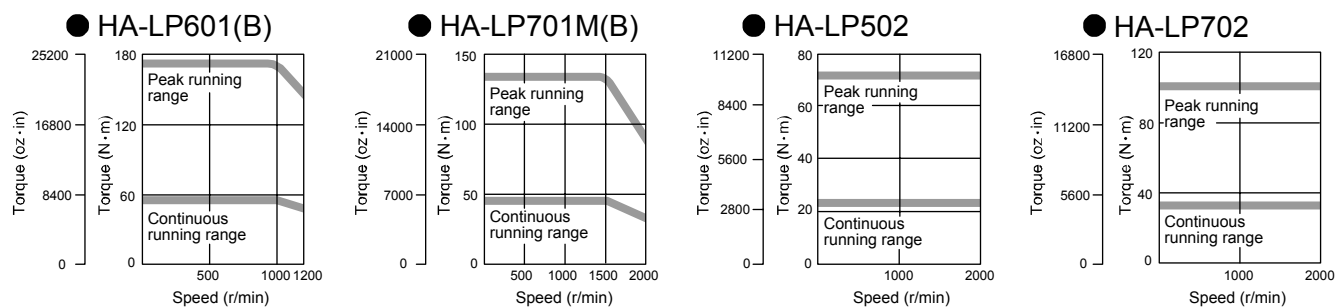
Servo motor specifications

Servo motor model (Note 7)		HA-LP601(B)	HA-LP701M(B)	HA-LP502	HA-LP702	
Servo amplifier model (Note 6)		MR-J3-700A/B		MR-J3-500A/B	MR-J3-700A/B	
Servo motor	Power facility capacity (Note 1) (kVA)	8.6	10	7.5	10.0	
	Continuous running duty	Rated output (kW)	6.0	7.0	5.0	7.0
		Rated torque (N·m [oz·in])	57.3 (8110)	44.6 (6320)	23.9 (3380)	33.4 (4730)
	Maximum torque (N·m [oz·in])	172 (24400)	134 (19000)	71.6 (10100)	100 (14200)	
	Rated speed (r/min)	1000	1500	2000		
	Maximum speed (r/min)	1200	2000	2000		
	Permissible instantaneous speed (r/min)	1380	2300	2300		
	Power rate at continuous rated torque (kW/s)	313	189	77.2	118	
	Rated current (A)	34	37	25	34	
	Maximum current (A)	102	111	75	102	
	Regenerative braking frequency (times/min) (Note 2)	158	70	50	50	
	Moment of inertia J ($\times 10^{-4}$ kg·m ²) [J (oz·in ²)]	Standard	105 (574)		74.0 (405)	94.2 (515)
		With electromagnetic brake	113 (618)		–	–
	Recommended load/motor inertia moment ratio	10 times the servo motor's inertia moment maximum (Note 3)				
	Speed/position detector	18-bit encoder (Resolution per encoder/servo motor rotation: 262144p/rev)				
	Attachments	Oil seal				
	Insulation class	Class F				
Structure	Totally enclosed ventilated (protection level: IP44) (Note 4)		Totally enclosed non ventilated (protection level: IP65) (Note 4)			
Environment	Ambient temperature	0 to 40°C (32 to 104°F) (non freezing), storage: -15 to 70°C (5 to 158°F) (non freezing)				
	Ambient humidity	80%RH maximum (non condensing), storage: 90%RH maximum (non condensing)				
	Atmosphere	Indoors (no direct sunlight); no corrosive gas, inflammable gas, oil mist or dust				
	Elevation	1000m or less above sea level				
Vibration (Note 5)	X: 11.7m/s ² Y: 29.4m/s ²					
Mass (kg [lb])	Standard	55 (125)		28 (62)	35 (78)	
	With electromagnetic brake	70 (155)		–	–	
Cooling fan	Power supply	Voltage, frequency	1- phase 200 to 220VAC/50Hz 1- phase 200 to 230VAC/60Hz		–	
		Input (W)	42 (50Hz) / 54 (60Hz)		–	
	Rated current (A)	0.21 (50Hz) / 0.25 (60Hz)		–		

- Notes: 1. The power facility capacity varies depending on the power supply's impedance.
2. The regenerative braking frequency shows the permissible frequency for decelerating the motor without a load and the optional regeneration unit from the rated speed to a stop.
3. Contact Mitsubishi if the load/motor of inertia moment ratio exceeds the value in the table.
4. The shaft-through portion is excluded.
5. The vibration direction is shown in the right-side diagram. The numeric value indicates the maximum value of the component (commonly the bracket in the opposite direction of the motor shaft). Fretting of the bearing occurs easily when the motor stops, so maintain vibration to approximately one-half of the allowable value.
6. The amplifier software version compatible with the HA-LP series 5 to 7kW is as follows:
A type: Version B0 or above B type: Version A0 or above
7. MRZJW3-SETUP221E software version B1 or above is planned to be compatible with HA-LP series 5 to 7kW.



Servo motor torque characteristics (Note)

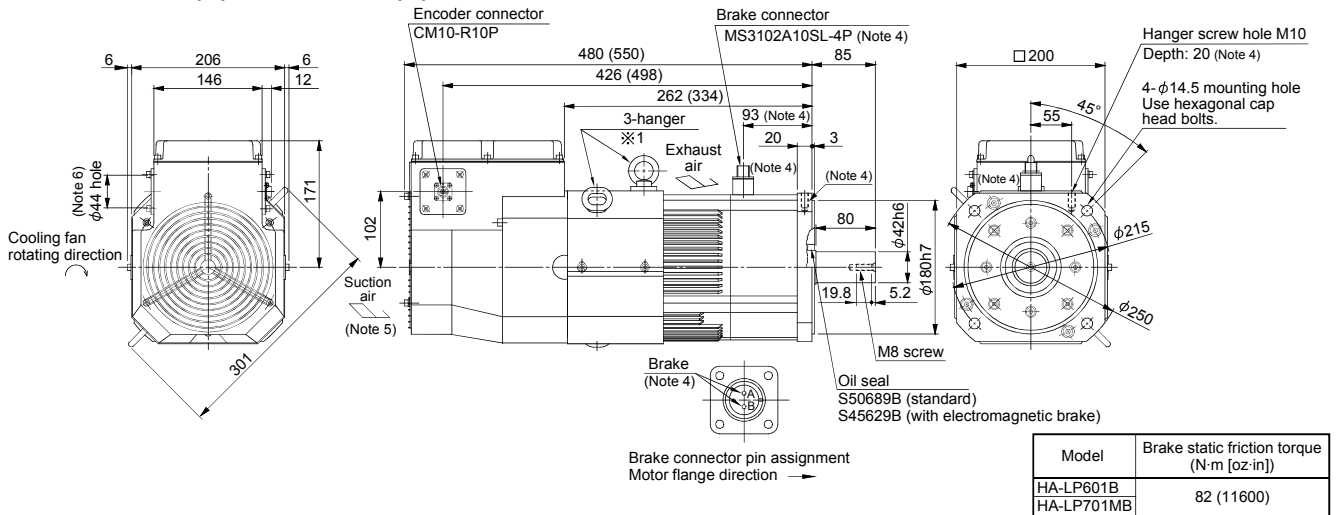


Note : : For 3-phase 200VAC.

■ Servo motor dimensions

● HA-LP601(B), HA-LP701M(B)

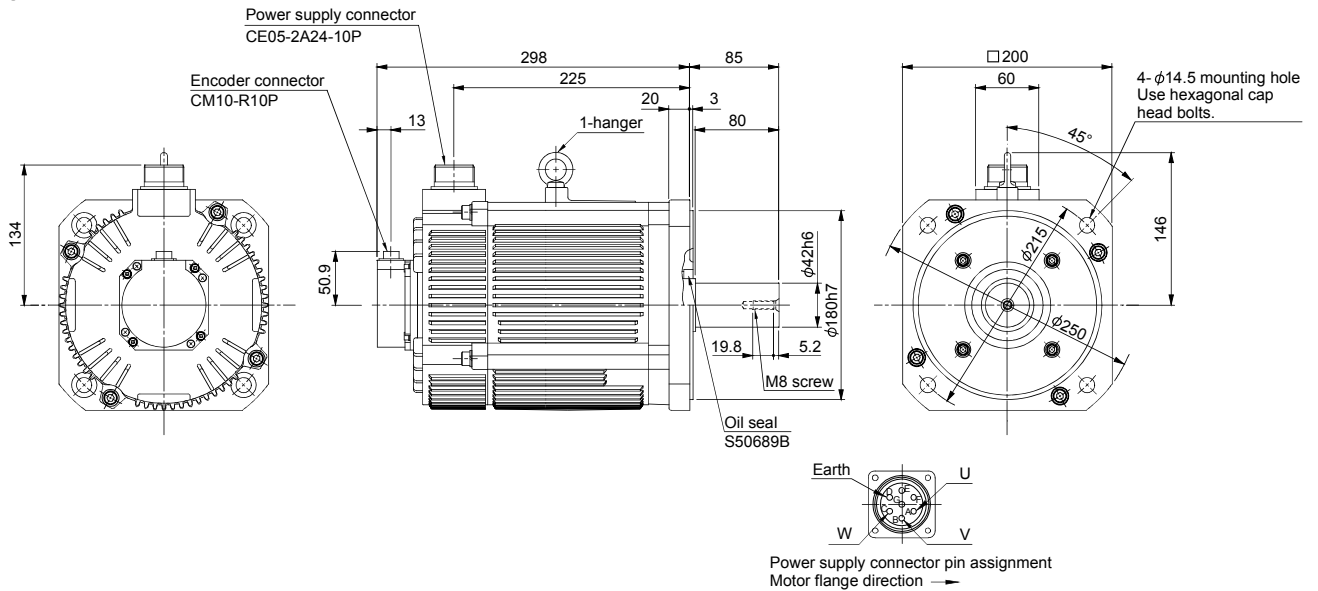
(Unit: mm)



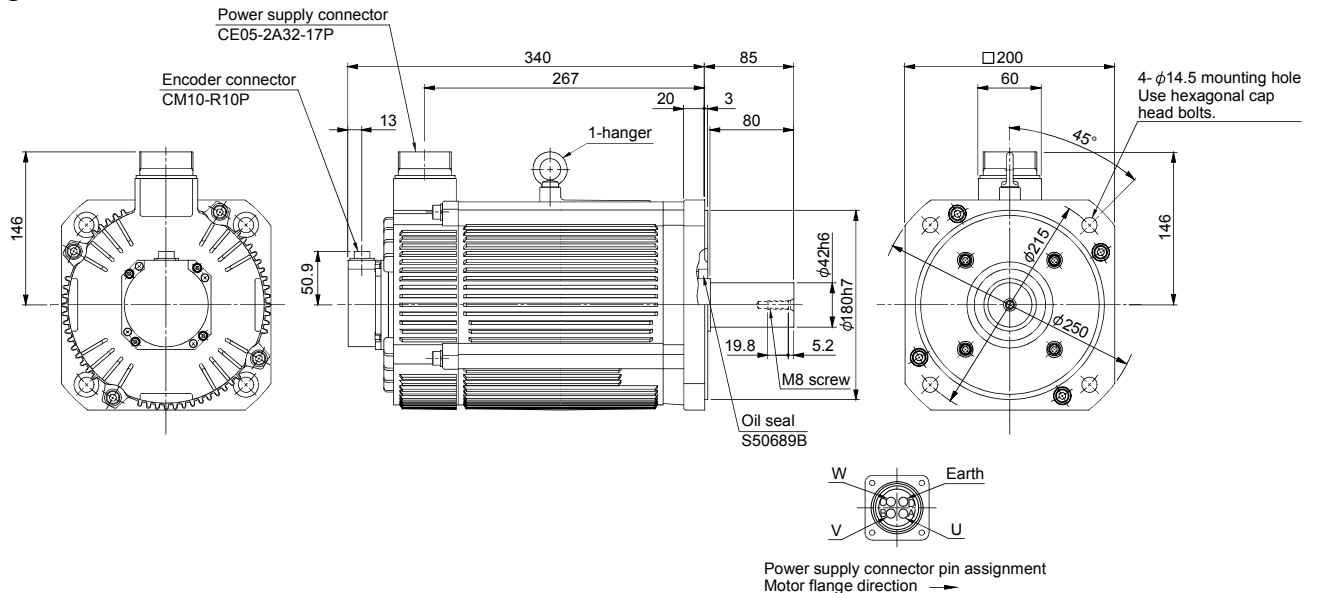
※1. When the motor is used without a hanger, plug the thread hole with a bolt of M10×20 or shorter.

※2. The terminal block on the terminal box housing consists of M6 screws for the motor power supply (U, V, W), M4 screws for the cooling fan (BU, BV) and for the thermal protector (OHS1, OHS2).

● HA-LP502



● HA-LP702



Notes: 1. Use a friction coupling to fasten a load.

2. For dimensions where there is no tolerance listed, use general tolerance.

3. Dimensions inside () are for the models with an electromagnetic brake.

4. Only for the models with an electromagnetic brake. The electromagnetic brake terminals do not have the polarity.

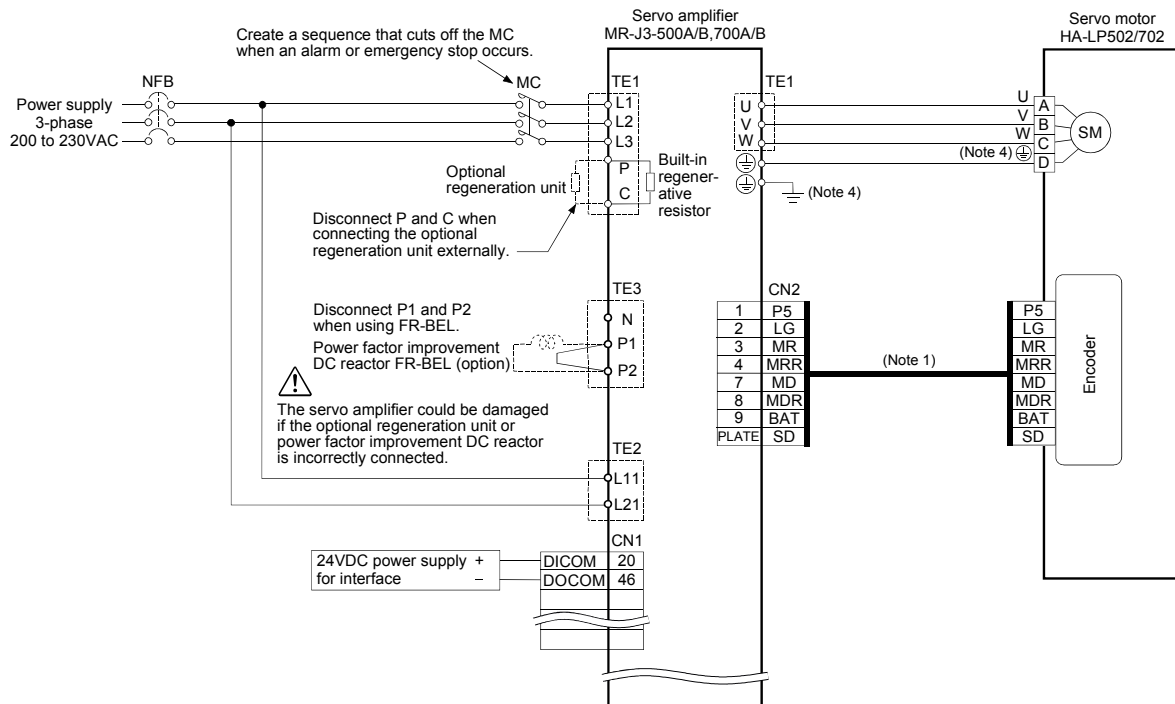
5. Leave a clearance of at least 100mm between the motor's suction side and wall.

6. Make sure that oil, water and dust, etc., will not enter the motor from the lead-in hole.

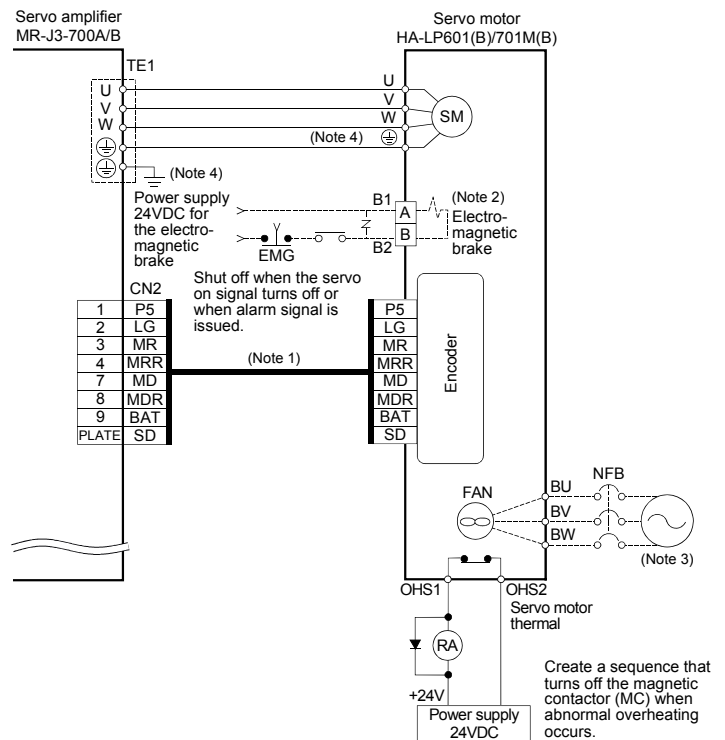
Standard wiring diagram

● Connection of main circuit and control circuit power supplies and CN2 connector (Note 5)

<For HA-LP502/HA-LP702>



<For HA-LP601(B)/HA-LP701M(B)>



- Notes:
1. Refer to "MR-J3 SERVO AMPLIFIER INSTRUCTION MANUAL" for details on the connection.
 2. For the motor with an electromagnetic brake. The electromagnetic brake terminals (B1, B2) do not have the polarity.
 3. Always supply power to the fan terminal. The power supply differs according to the motor. Refer to the "Cooling fan power supply" in the Servo motor specifications on page 2 in this brochure.
 4. For grounding, connect the ground wire to the control box's protection ground terminal via the servo amplifier's protection ground (PE) terminal.
 5. Connections other than shown in the diagram are same as for MR-J3-700A/B or smaller servo amplifier. Refer to "MELSERVO-J3 catalog".