

SJME-□-OY

# Junma servo motors

## A new concept in drive simplicity Medium inertia compact motor

- Peak torque up to three times continuous torque for 3 seconds
- Easy to install with prebuilt cables
- Motors with brakes are available
- No motor settings required, just plug and run

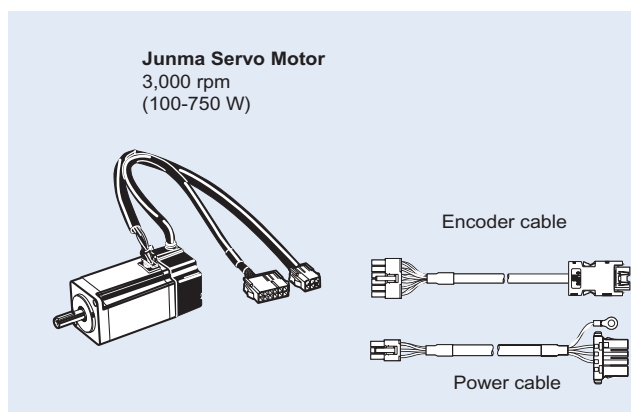
### Ratings

- 230 VAC Single-phase 100 W to 750 W (0.318 Nm to 2.39 Nm)

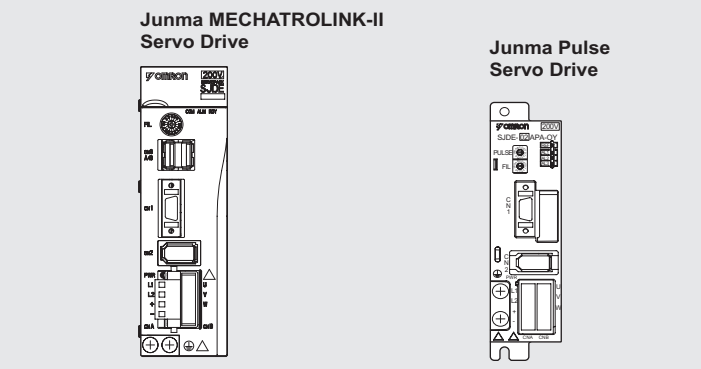


AC Servo systems

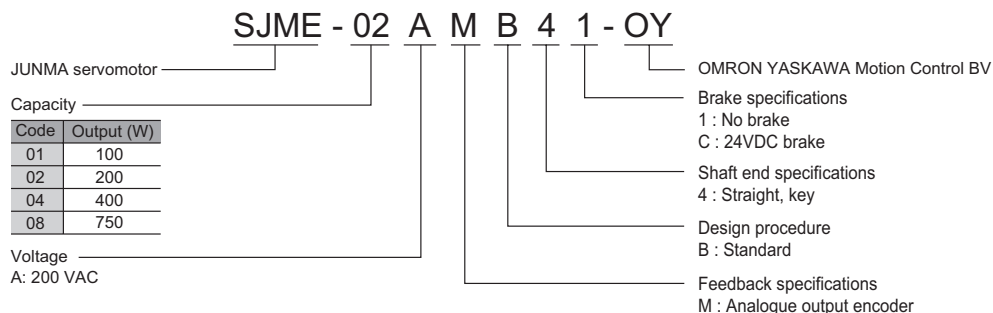
## System Configuration



(Refer to servo drive chapter)



## Motor Type Designation



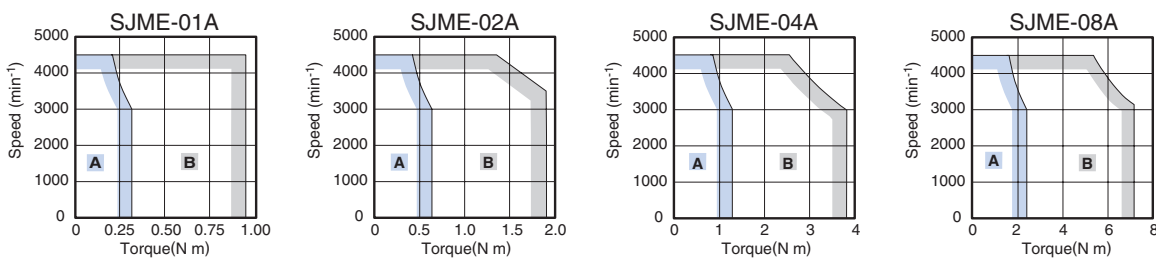
Servomotor Specifications

Voltage		230 V			
Servomotor Model SJME- □		01A□	02A□	04A□	08A□
Rated Output <sup>1</sup>	W	100	200	400	750
Rated Torque <sup>1, 2</sup>	N·m	0.318	0.637	1.27	2.39
Instantaneous Peak Torque <sup>1</sup>	N·m	0.955	1.91	3.82	7.16
Rated Current <sup>1</sup>	Arms	0.84	1.1	2.0	3.7
Instantaneous Max. Current <sup>1</sup>	Arms	2.5	3.3	6.0	11.1
Rated Speed <sup>1</sup>	min <sup>-1</sup>	3000			
Max. Speed <sup>1</sup>	min <sup>-1</sup>	4500			
Torque Constant	N·m/Arms	0.413	0.645	0.682	0.699
Rotor Moment of Inertia (JM)	kg·m <sup>2</sup> ×10 <sup>-4</sup>	0.0634	0.330	0.603	1.50
Allowable load inertia <sup>3</sup>	kg·m <sup>2</sup> ×10 <sup>-4</sup>	0.6	3.0	5.0	10.0
Rated Power Rate	kW/s	16.0	12.3	26.7	38.1
Rated Angular Acceleration	rad/s <sup>2</sup>	50200	19300	21100	15900
Encoder	Standard	Analogue output encoder			
Allowable radial load		78	245	245	392
Allowable thrust load		54	74	74	147
Approx. mass	kg (without brake)	0.5	0.9	1.3	2.6
	kg (with brake)	0.8	1.5	1.9	3.5
Brake specifications	Rated voltage	24 VDC ±10%			
	Holding Brake Moment of Inertia	kg·m <sup>2</sup> ×10 <sup>-4</sup>	0.0075	0.064	0.171
	Power consumption (at 20°C)	W	6	6.9	7.7
	Current consumption (at 20°C)	A	0.25	0.29	0.32
	Static friction torque	N·m (minimum)	0.318	1.27	2.39
	Rise time for holding torque	ms (max)	100		
	Release time	ms (max)	80		
Basic Specifications	Time Rating	Continuous			
	Thermal Class	Class B			
	Vibration Class	15 µm or below			
	Withstand Voltage	1500 VAC for one minute			
	Insulation resistance	500 VDC, 10 MΩ min.			
	Enclosure	Totally-enclosed, self-cooled, IP55 (excluding shaft opening and connectors)			
	Vibration Resistance	Vibration acceleration 49 m/s <sup>2</sup>			
	Usage / storage temperature	0 to +40° C / -20 to 60° C without freezing			
	Usage / storage humidity	20 to 80% RH (non-condensing)			
	Altitude	1000 m or less above sea level			
Mounting	Flange-mounted				

**Note:** \*1. These items and speed/torque characteristics quoted in combination with an SJDE servo drive are at an armature winding temperature of 100°C. Other values quoted at 20°C.  
 \*2: The rated torques listed here are the values for the continuous allowable torque at 40°C with an aluminium heatsink (250 mm x 250 mm x 6 mm) attached.  
 \*3. Value use the appropriate SJDE drive without of external regeneration unit

Torque-Speed Charecteristics

( A : Continuous Duty Zone B : Intermittent Duty Zone)

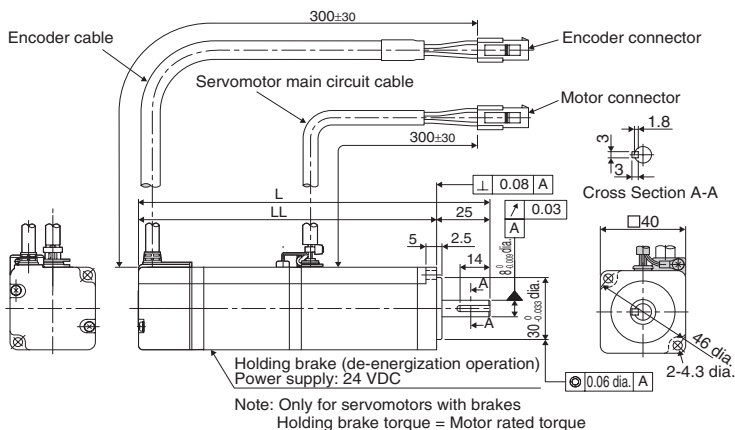


Dimensions

Junma servomotors

SJME-01 (200V, 100W)

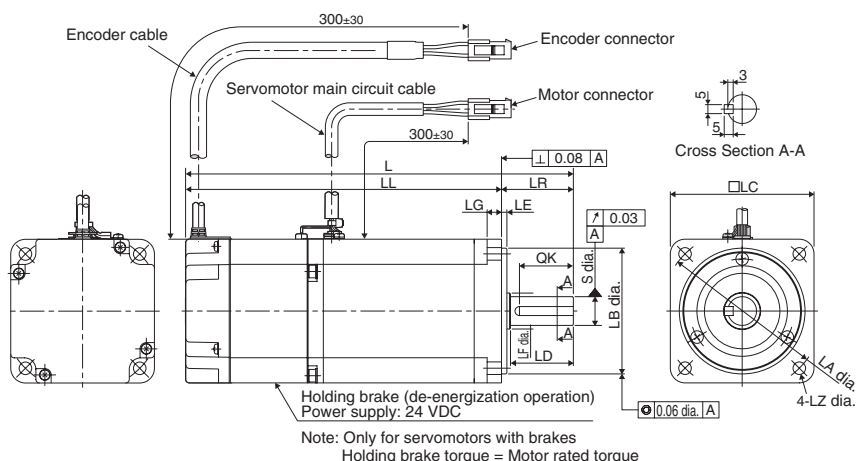
Model	L	LL	Approx. Mass (kg)
SJME-01AMB41-OY	119	94	0.5
SJME-01AMB4C-OY	164	139	0.8



Units: mm

SJME-02, 04, 08 (200V, 200 to 750W)

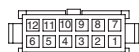
Model	L	LL	LR	LG	LE	S	LB	LC	LD	LF	LA	LZ	QK	Approx. Mass (kg)
SJME-02AMB41-OY	125.5	95.5	30	6	3	14 <sup>0</sup> <sub>-0.011</sub>	50 <sup>0</sup> <sub>-0.039</sub>	60	-	-	70	5.5	20	0.9
SJME-02AMB4C-OY	165.5	135.5												1.5
SJME-04AMB41-OY	148.5	118.5												1.3
SJME-04AMB4C-OY	188.5	158.5												1.9
SJME-08AMB41-OY	173	133	40	8	3	16 <sup>0</sup> <sub>-0.011</sub>	70 <sup>0</sup> <sub>-0.046</sub>	80	35	20	90	7	30	2.6
SJME-08AMB4C-OY	216	176												3.5



Units: mm

Servomotor connectors

Encoder Connector Specifications



Plug: 5559-12P-210  
Terminal: 5558T2(chained) or 5558T2L(detached)  
(Manufacture: Molex Japan Co., Ltd)

1	PG5V	Red
2	PG0V(GND)	Black
3	Phase A+	Blue
4	Phase A-	Blue/White
5	Phase B+	Yellow
6	Phase B-	Yellow/White
7	Phase Z	Purple
8	Phase U	Gray
9	Phase V	Green
10	Phase W	Orange
11	-	-
12	FG	Shield

Motor Connector Specifications

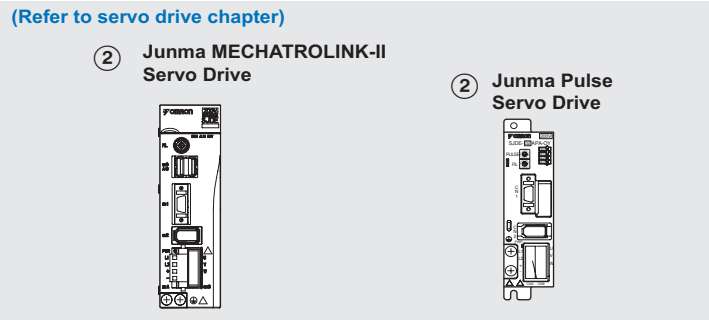
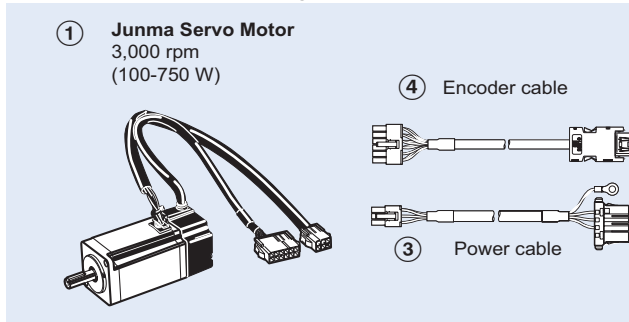


Plug: 5559-06P-210  
Terminal (No.1 to 3, 5, 6): 5558T(chained) or 5558TL(detached)  
Grounding Pin (No.4): 30490-2002(chained) or 30490-2012 (detached)  
(Manufacture: Molex Japan Co., Ltd)

	No brake		With brake	
1	Phase U	Red	Phase U	Red
2	Phase V	White	Phase V	White
3	Phase W	Blue	Phase W	Blue
4	F G	Green/Yellow	F G	Green/Yellow
5	-	-	Brake	Red
6	-	-	Brake	Black

Ordering Information

Junma Servo motor configuration



Servomotors and Servo drives

Symbol	Specifications				① Servomotor model	② Servo drive model		
	Voltage	Encoder and Design		Rated Torque		Capacity	MECHATROLINK-II	Pulse Control
①②	1 Phase 200 VAC	Analogue Incremental Encoder	Without brake	0.318 Nm	100 W	SJME-01AMB41-OY	SJDE-01ANA-OY	SJDE-01APA-OY
				0.637 Nm	200 W	SJME-02AMB41-OY	SJDE-02ANA-OY	SJDE-02APA-OY
				1.27 Nm	400 W	SJME-04AMB41-OY	SJDE-04ANA-OY	SJDE-04APA-OY
				2.39 Nm	750 W	SJME-08AMB41-OY	SJDE-08ANA-OY	SJDE-08APA-OY
		Straight shaft with key	With brake	0.318 Nm	100 W	SJME-01AMB4C-OY	SJDE-01ANA-OY	SJDE-01APA-OY
				0.637 Nm	200 W	SJME-02AMB4C-OY	SJDE-02ANA-OY	SJDE-02APA-OY
				1.27 Nm	400 W	SJME-04AMB4C-OY	SJDE-04ANA-OY	SJDE-04APA-OY
				2.39 Nm	750 W	SJME-08AMB4C-OY	SJDE-08ANA-OY	SJDE-08APA-OY

Power cables

Symbol	Specifications	Model	Appearance	
③	Power cable for Junma servomotors without brake SJME-0□AMB41-OY	Flexible cables (Standard)		
		Shielded Cable		
		Bending radius (Dynamic) > 10xDiameter		
		Bending cycles > 5 Million		
		1.5 m		JZSP-CHM000-01-5E
		3 m		JZSP-CHM000-03-E
		5 m		JZSP-CHM000-05-E
		10 m		JZSP-CHM000-10-E
		15 m		JZSP-CHM000-15-E
		20 m		JZSP-CHM000-20-E
	Non flexible cables		3 m	R7A-CAZ003S
			5 m	R7A-CAZ005S
			10 m	R7A-CAZ010S
	Power cable for Junma servomotors with brake SJME-0□AMB4C-OY	Flexible cables (Standard)		
Shielded Cable				
Bending radius (Dynamic) > 10xDiameter				
Bending cycles > 5 Million				
1.5 m		JZSP-CHM030-01-5E		
3 m		JZSP-CHM030-03-E		
5 m		JZSP-CHM030-05-E		
10 m		JZSP-CHM030-10-E		
15 m		JZSP-CHM030-15-E		
20 m		JZSP-CHM030-20-E		
Non flexible cables		3 m	R7A-CAZ003B	
		5 m	R7A-CAZ005B	
		10 m	R7A-CAZ010B	

Encoder cables

Symbol	Specifications	Model (Flexible)	Appearance	
④	Encoder cable for Junma servomotors SJME-0□AMB4□-OY	Flexible cables (Standard)		
		Shielded Cable		
		Bending radius (Dynamic) > 10xDiameter		
		Bending cycles > 5 Million		
		1.5 m		JZSP-CHP800-01-5E
		3 m		JZSP-CHP800-03-E
		5 m		JZSP-CHP800-05-E
		10 m		JZSP-CHP800-10-E
		15 m		JZSP-CHP800-15-E
		20 m		JZSP-CHP800-20-E
Non flexible cables		3 m	R7A-CRZ003C	
		5 m	R7A-CRZ005C	
		10 m	R7A-CRZ010C	

Connectors for power and encoder cables

Specifications			Model (Omron)	Model (Yaskawa)
Connectors for making power cables	Drive side (CNB)	Manufacturer: JST (04JFAT-SAYGF-N)	R7A-CNZ01A	JZSP-CHM9-2
	Motor side	Manufacturer: Molex (5557-06R-210)	R7A-CNZ02A	JZSP-CHM9-1
Connectors for making encoder cables	Drive side (CN2)	Manufacturers 3M and Molex	R7A-CNZ01R	JZSP-CHP9-2
	Motor side	Manufacturer: Molex (57026-5000)	R7A-CNZ02R	JZSP-CHP9-1

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.  
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.