OMRON

SIGMA-5

The 5-star servo drive

» Increases machine efficiency, performance & availability

» Save time & cost

» Meets demanding machine requirements

realizing

Sigma-5: the 5-star servo drive...

It is a primary goal of OMRON YASKAWA to offer customers products and solutions that meet their needs. And the Sigma-5 servo drive offers exactly that. Precise positioning at the highest speed. Smooth and vibration-free operation. And the easiest possible start up. For machine builders this translates into better machine performance to meet exacting machine requirements. It also has a significant impact on increasing machine availability while reducing costs.

As Sigma-5 belongs to the product portfolio of a global leader in automation, you will have total world-wide service and support throughout the product life cycle. Moreover, ongoing technical developments by Omron will keep your machines in front, giving you an edge, both now and in the future.

...value delivered

- Meets the most demanding machine requirements
- Helps to maximize machine performance
- Minimizes total cost of ownership
- Increases machine availability

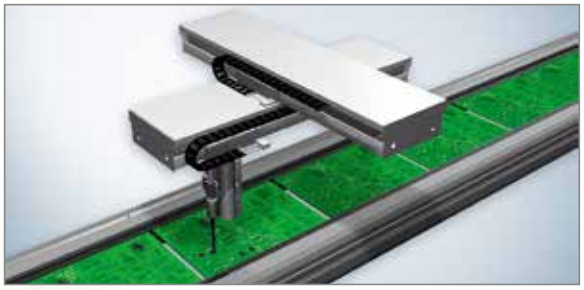
...enhance machine efficiency while saving time and costs

The Sigma-5 servo drive excels in even the most demanding axis-control operations and applications, including those in the following industries and applications:

- Electronics
- Semiconductors
- Packaging
- Printing
- Machine tools
- Injection moulding
- Metal forming

Flow wrap machine require various servo axes working in absolute synchronisation. Sigma-5 in combination with Trajexia allows synchronisation over the field proven Mechatrolink bus., greatly simplifying system wiring and reducing the chance on wiring errors.

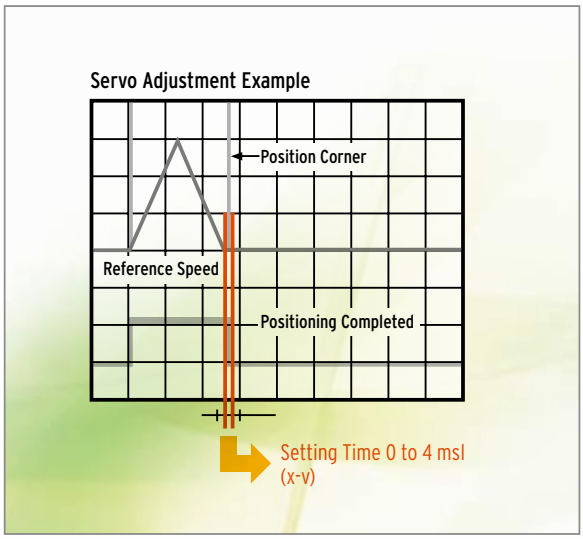
This glass cutting machine has high demands on continues and smooth movement as each misalignment is directly visible. The Sigma-5 servo in combination with the Trajexia motin control give full control of each movement.



The machine uses picking techniques to place components on PCB's. The procedure must be very accurate, as the component pins must be placed at um accuracy. This is solved using the Sigma-5 series servo system because its dynamic perfomance.

The chip molding process is another candidate application. In this case the actual chip must be placed in high speed, but also very accurate.

Five reasons to choose Sigma-5



Outstanding performance

Sigma-5 delivers the highest performance in the industry, enabling your machinery to operate faster and with higher precision. The frequency response of 1.6 kHz combined with Sigma-5's innovative algorithm results in quicker positioning, smaller following error, very low ripple at low speed, higher accuracy and a settling time close to zero.

Moreover, the drive features mechanical vibration cancellation, which enables it to automatically cancel the vibration on the mechanics and control a huge inertia mismatch ratio range.

Space saving

The new and compact Sigma-5 design features 30 % fewer parts, which helps to save panel space and machine costs.

Proven quality

An installed base of well over six million units underlines the quality of Sigma-series servos. High reliability increases machine throughput and efficiency by reducing down-time and maintenance costs.

Motion network

In addition to support for the Analog/Pulse train reference series, the Mechatrolink-II embedded open field bus option offers flexible communication with motion controllers whilst reducing cabling and installation time.

Motor portfolio

A wide choice of motors from 0.1 to 15 kW – rotary, linear and direct drive, is available to match any machine requirements. Furthermore, Sigma-5 can also drive the complete rotary Sigma II motor portfolio.

Sigma-5
Key features and benefits:

- Quicker positioning and smooth control
- Safety embedded
- No manual adjustment required
- Optimized auto tuning function
- Automatic filter function to suppress vibrations
- Embedded open field-bus system MECHATROLINK-II

Trajexia
Key features and benefits:

- Standalone and CJ1 series PLC option (30 axes)
- Each axis can run complex interpolation moves, e-cams and e-gearboxes
- Advanced debugging tools including trace and oscilloscope functions
- Multi-tasking controller capable of running up to 14 tasks simultaneously
- Open-Ethernet built-in, PROFIBUS-DP and DeviceNet as options

Sigma-5 + Trajexia motion controllers The perfect choice

Offering a series of optimized servomotors, high-resolution serial encoders and new, intelligent algorithms, Sigma-5 is just the right servo drive to achieve precise and fast positioning with smooth and vibration-free motion at even the slowest speeds.

In combination with Trajexia motion controllers, Sigma-5 becomes the perfect choice for virtually any industrial application demanding precise control with positional accuracies up to 10nm. The Trajexia platform offers 4, 16 and 30-axes motion coordination over a robust and fast motion link and with a multi-tasking controller that is capable of running 14 tasks simultaneously.

The complete servo/motion control package

The intuitive and user-friendly software tool accompanying Sigma-5 minimizes commissioning time obtaining the best from the servo for your machine. Furthermore, Trajexia's advanced debugging tools ensure efficient operation and minimum downtime.

Sigma-5: the star in...

- Performance
- Space saving
- Quality
- Motor portfolio
- Motion network

OMRON

SGMJV-□, SGMAV-□, SGMEV-□, SGMGV-□, SGMSV-□

Sigma-5 rotary servo motors

The ideal servo family for motion control. Fast response, high speed, and high accuracy.

- Contributing to machine performance in conjunction with a medium-inertia motor
- Peak torque 350% of nominal during 3 seconds
- Automatic motor recognition by servo drive
- IP67 and shaft oil seal available
- High resolution encoders
- Absolute multiturn encoder solution
- Compact design and robust construction

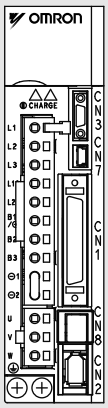
Ratings

- 230 VAC from 50 W to 1.5 kW (rated torque from 0.159 to 4.77 Nm)
- 400 VAC from 200 W to 15 kW (rated torque from 0.637 Nm to 95.4 Nm)

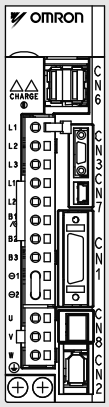
System configuration

(Refer to servo drive chapter)

Drive options



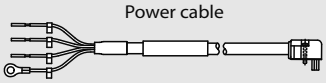
Analog Pulse Models



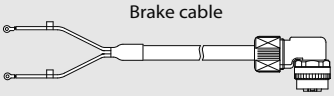
MECHATROLINK-II Models

Power, encoder and brake cables

Encoder cable



Power cable



Brake cable

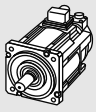
(a separate brake cable to use only for SGMGV and SGMSV servo motors from 850 W)

Servo motors

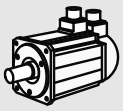
SGMJV Servo Motor
3000 rpm (50-750 W)

SGMAV Servo Motor
3000 rpm (50 W-1 kW)

SGMEV Servo Motor
3000 rpm (100 W-1.5 kW)



SGMGV Servo Motor
1500 rpm (300 W-15 kW)



SGMSV Servo Motor
3000 rpm (1-5 kW)

Servo motor / servo drive combination

Sigma-5 rotary servo motor					Sigma-5 servo drive			
	Voltage	Rated torque	Capacity	Model	230 V (1-phase) Analog Pulse	200 V (1-phase) MECHATROLINK-II	400 V (3-phase) Analog Pulse	400 V (3-phase) MECHATROLINK-II
SGMJV ($3000\ min^{-1}$) 	230 V	0.159 Nm	50 W	SGMJV-A5A□	SGDV-R70A01A	SGDV-R70A11A	-	-
		0.318 Nm	100 W	SGMJV-01A□	SGDV-R90A01A	SGDV-R90A11A	-	-
		0.637 Nm	200 W	SGMJV-02A□	SGDV-1R6A01A	SGDV-1R6A11A	-	-
		1.27 Nm	400 W	SGMJV-04A□	SGDV-2R8A01A	SGDV-2R8A11A	-	-
		2.39 Nm	750 W	SGMJV-08A□	SGDV-5R5A01A	SGDV-5R5A11A	-	-
SGMAV ($3000\ min^{-1}$) 	230 V	0.159 Nm	50 W	SGMAV-A5A□	SGDV-R70A01A	SGDV-R70A11A	-	-
		0.318 Nm	100 W	SGMAV-01A□	SGDV-R90A01A	SGDV-R90A11A	-	-
		0.477 Nm	150 W	SGMAV-C2A□	SGDV-1R6A01A	SGDV-1R6A11A	-	-
		0.637 Nm	200 W	SGMAV-02A□	SGDV-1R6A01A	SGDV-1R6A11A	-	-
		1.27 Nm	400 W	SGMAV-04A□	SGDV-2R8A01A	SGDV-2R8A11A	-	-
		1.75 Nm	550 W	SGMAV-06A□	SGDV-5R5A01A	SGDV-5R5A11A	-	-
		2.39 Nm	750 W	SGMAV-08A□	SGDV-5R5A01A	SGDV-5R5A11A	-	-
		3.18 Nm	1 kW	SGMAV-10A□	SGDV-120A01A008000	SGDV-120A11A008000	-	-
SGMEV ($3000\ min^{-1}$) 	230 V	0.318 Nm	100 W	SGMEV-01A□	SGDV-R90A01A	SGDV-R90A11A	-	-
		0.637 Nm	200 W	SGMEV-02A□	SGDV-1R6A01A	SGDV-1R6A11A	-	-
		1.27 Nm	400 W	SGMEV-04A□	SGDV-2R8A01A	SGDV-2R8A11A	-	-
		2.39 Nm	750 W	SGMEV-08A□	SGDV-5R5A01A	SGDV-5R5A11A	-	-
		4.77 Nm	1.5 kW	SGMEV-15A□	SGDV-120A01A008000	SGDV-120A11A008000	-	-
	400 V	0.637 Nm	200 W	SGMEV-02D□	-	-	SGDV-1R9D01A	SGDV-1R9D11A
		0.955 Nm	300 W	SGMEV-03D□	-	-	SGDV-1R9D01A	SGDV-1R9D11A
		1.27 Nm	400 W	SGMEV-04D□	-	-	SGDV-1R9D01A	SGDV-1R9D11A
		2.07 Nm	650 W	SGMEV-07D□	-	-	SGDV-3R5D01A	SGDV-3R5D11A
		2.39 Nm	750 W	SGMEV-08D□	-	-	SGDV-3R5D01A	SGDV-3R5D11A
		4.77 Nm	1.5 kW	SGMEV-15D□	-	-	SGDV-5R4D01A	SGDV-5R4D11A
SGMGV ($1500\ min^{-1}$) 	400 V	1.96 Nm	300 W	SGMGV-03D□	-	-	SGDV-1R9D01A	SGDV-1R9D11A
		2.86 Nm	450 W	SGMGV-05D□	-	-	SGDV-1R9D01A	SGDV-1R9D11A
		5.39 Nm	850 W	SGMGV-09D□	-	-	SGDV-3R5D01A	SGDV-3R5D11A
		8.34 Nm	1.3 kW	SGMGV-13D□	-	-	SGDV-5R4D01A	SGDV-5R4D11A
		11.5 Nm	1.8 kW	SGMGV-20D□	-	-	SGDV-8R4D01A	SGDV-8R4D11A
		18.6 Nm	2.9 kW	SGMGV-30D□	-	-	SGDV-120D01A	SGDV-120D11A
		28.4 Nm	4.4 kW	SGMGV-44D□	-	-	SGDV-170D01A	SGDV-170D11A
		35.0 Nm	5.5 kW	SGMGV-55D□	-	-	SGDV-210D01A	SGDV-210D11A
		48.0 Nm	7.5 kW	SGMGV-75D□	-	-	SGDV-260D01A	SGDV-260D11A
		70.0 Nm	11 kW	SGMGV-1AD□	-	-	SGDV-280D01A	SGDV-280D11A
		95.4 Nm	15 kW	SGMGV-1ED□	-	-	SGDV-370D01A	SGDV-370D11A
SGMSV ($3000\ min^{-1}$) 	400 V	3.18 Nm	1 kW	SGMSV-10D□	-	-	SGDV-3R5D01A	SGDV-3R5D11A
		4.9 Nm	1.5 kW	SGMSV-15D□	-	-	SGDV-5R4D01A	SGDV-5R4D11A
		6.36 Nm	2 kW	SGMSV-20D□	-	-	SGDV-8R4D01A	SGDV-8R4D11A
		7.96 Nm	2.5 kW	SGMSV-25D□	-	-	SGDV-120D01A	SGDV-120D11A
		9.8 Nm	3 kW	SGMSV-30D□	-	-	SGDV-120D01A	SGDV-120D11A
		12.6 Nm	4 kW	SGMSV-40D□	-	-	SGDV-170D01A	SGDV-170D11A
		15.8 Nm	5 kW	SGMSV-50D□	-	-	SGDV-170D01A	SGDV-170D11A

Note: 1. For servo motor and cables part numbers refer to ordering information at the end of this chapter
2. Refer to the servo drive chapter for drive options selection and detailed specifications

Type designation

Servo motor

SGMJV - 01 A 1 A 6 S

Sigma-5 servo motor type
- SGMJV: Middle-inertia
- SGMAV: Low-inertia and high dynamics
- SGMEV: Flat type
- SGMGV: High-torque type
- SGMSV: Low-inertia and high dynamics

Capacity (kW)

Code	SGMJV 3000 min^{-1}	SGMAV 3000 min^{-1}	SGMEV 3000 min^{-1}	SGMGV 1500 min^{-1}	SGMSV 3000 min^{-1}
A5	0.05	0.05			
01	0.1	0.1	0.1		
C2		0.15			
02	0.2	0.2	0.2		
03			0.3	0.3	
04	0.4	0.4	0.4		
05				0.45	
06		0.55			
07			0.65		
08	0.75	0.75	0.75		
09				0.85	
10		1.0			1.0
13				1.3	
15			1.5		1.5
20				1.8	2.0
25					2.5
30				2.9	3.0
40					4.0
44				4.4	
50					5.0
55				5.5	
70					
75				7.5	
1A				11	
1E				15	

Voltage

Code	Voltage	Type				
		SGMJV	SGMAV	SGMEV	SGMGV	SGMSV
A	230 V	◎	◎	◎		
D	400 V			◎	◎	◎

Brake, oil seal specifications

Code	Options	Type				
		SGMJV	SGMAV	SGMEV	SGMGV	SGMSV
1	No brake, no oil/dust seal	◎	◎	◎	○	○
B	90 VDC brake			○	○	
C	24 VDC brake	○	○	○	○	
D	Oil seal + 90 VDC brake			○	○	
E	Oil seal + 24 VDC brake	○	○	○	○	
F	Dust seal			○	◎	◎
G	Dust seal + 90 VDC brake			○		
H	Dust seal + 24 VDC brake			○		
S	Oil seal	○	○	○	○	

◎: Standard ○: Option

Shaft end specifications

Code	Shaft end	Type				
		SGMJV	SGMAV	SGMEV	SGMGV	SGMSV
2	Straight, no key	○	○	○	○	○
6	Straight, key, tapped	◎	◎	◎	◎	◎
8	Straight, no key, tapped	○	○	○		
B	With two flat seats	○	○	○		

◎: Standard ○: Option

Design Revision Order:
- A: Standard
- E: IP67 (SGMEV-01, 02, 04, 08, 15)
- F: Prepared for oil seal mounting (SGMEV-03, 07)

Serial encoder specifications

Code	Encoder	Type				
		SGMJV	SGMAV	SGMEV	SGMGV	SGMSV
A	13-bit incremental	○				
D	20-bit incremental	◎	◎	◎	◎	◎
3	20-bit absolute	○	○	○	○	○

◎: Standard ○: Option

Servo motor specifications

Type SGMJV, 230 V

Ratings and specifications

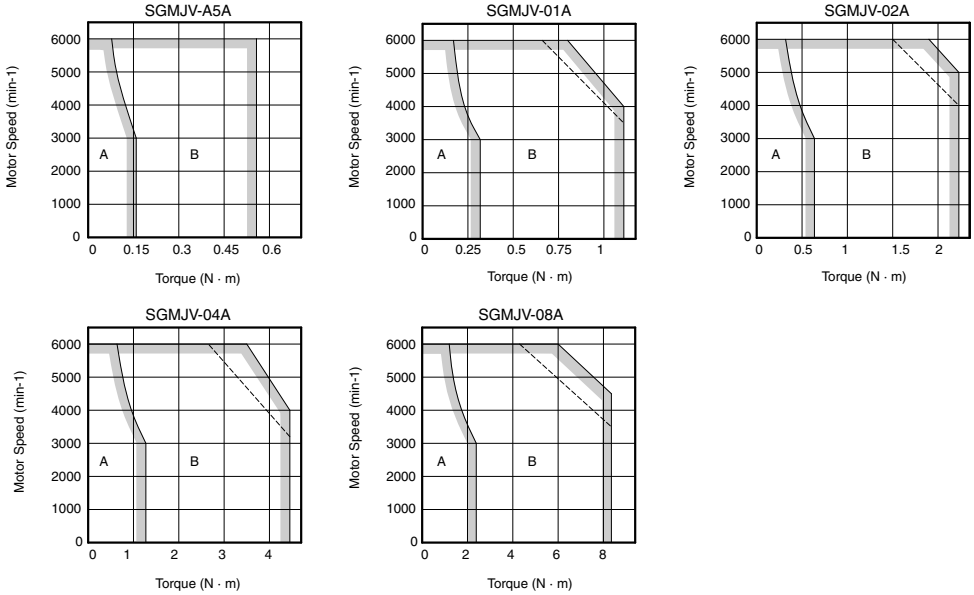
Applied voltage			230 V				
Servo motor model SGMJV- □			A5A□	01A□	02A□	04A□	08A□
Rated output *1		W	50	100	200	400	750
Rated torque *1,*2		N·m	0.159	0.318	0.637	1.27	2.39
Instantaneous peak torque *1		N·m	0.557	1.11	2.23	4.46	8.36
Rated current *1		A (rms)	0.61	0.84	1.6	2.7	4.7
Instantaneous max. current *1		A (rms)	2.1	2.9	5.8	9.3	16.9
Rated speed *1		min^{-1}	3000				
Max. speed *1		min^{-1}	6000				
Torque constant		N·m/A (rms)	0.285	0.413	0.435	0.512	0.544
Rotor moment of inertia (JM)		$kg·m^2x10^{-4}$ (without brake)	0.0414	0.0665	0.259	0.442	1.57
		$kg·m^2x10^{-4}$ (with brake)	0.0489	0.0740	0.323	0.506	1.74
Allowable load moment of inertia (JL)		Multiple of (JM)	15			10	
Rated power rate *1		kW/s	6.11	15.2	15.7	36.5	36.3
Rated angular acceleration *1		rad/s^2	38400	47800	24600	28800	15200
Encoder		Standard	Incremental encoder (20 bits)				
		Option	Incremental encoder (13 bits)/ Absolute encoder (20 bits)				
Allowable radial load		N	78		245		392
Allowable thrust load		N	54		74		147
Approx. mass		Kg (without brake)	0.3	0.4	0.9	1.3	2.7
		Kg (with brake)	0.6	0.7	1.5	1.9	3.6
Brake specifications	Rated voltage		24 VDC				
	Power consumption (at 20°C)	W	6		6.9		7.7
	Current consumption (at 20°C)	A	0.25		0.29		0.32
	Holding torque	N·m	0.159	0.318	0.637	1.27	2.39
	Rise time for holding torque	ms (max)	100				
	Release time	ms (max)	60				80
Basic specifications	Time rating		Continuous				
	Thermal class		Class B				
	Usage/ storage temperature		0 to +40 °C/ -20 to 60 °C without freezing				
	Usage/ storage humidity		20 to 80% RH (non-condensing)				
	Vibration class		15 µm or below				
	Insulation resistance		500 VDC, 10 MOhm min.				
	Withstand voltage		1500 VAC for one minute				
	Enclosure		Totally-enclosed, self-cooled, IP65 (excluding shaft opening)				
	Vibration resistance		Vibration acceleration 49 m/s2				
	Altitude		1000 m or less above sea level				
	Mounting		Flange-mounted				

Note: 1. These items and torque/speed characteristics quoted in combination with an SGDV servo drive are at an armature winding temperature of 100°C. Other values quoted are at 20°C.

2. The rated torques listed here are the values for the continuous allowable torque at 40°C with an aluminium heatsink of the following dimensions attached: SGMJV-A5/01: 200 mm x 200 mm x 6 mm, SGMJV-02/04/08: 250 mm x 250 mm x 6 mm

Torque-speed characteristics

(A : Continuous duty zone B : Intermittent duty zone)



Type SGMAV, 230 V

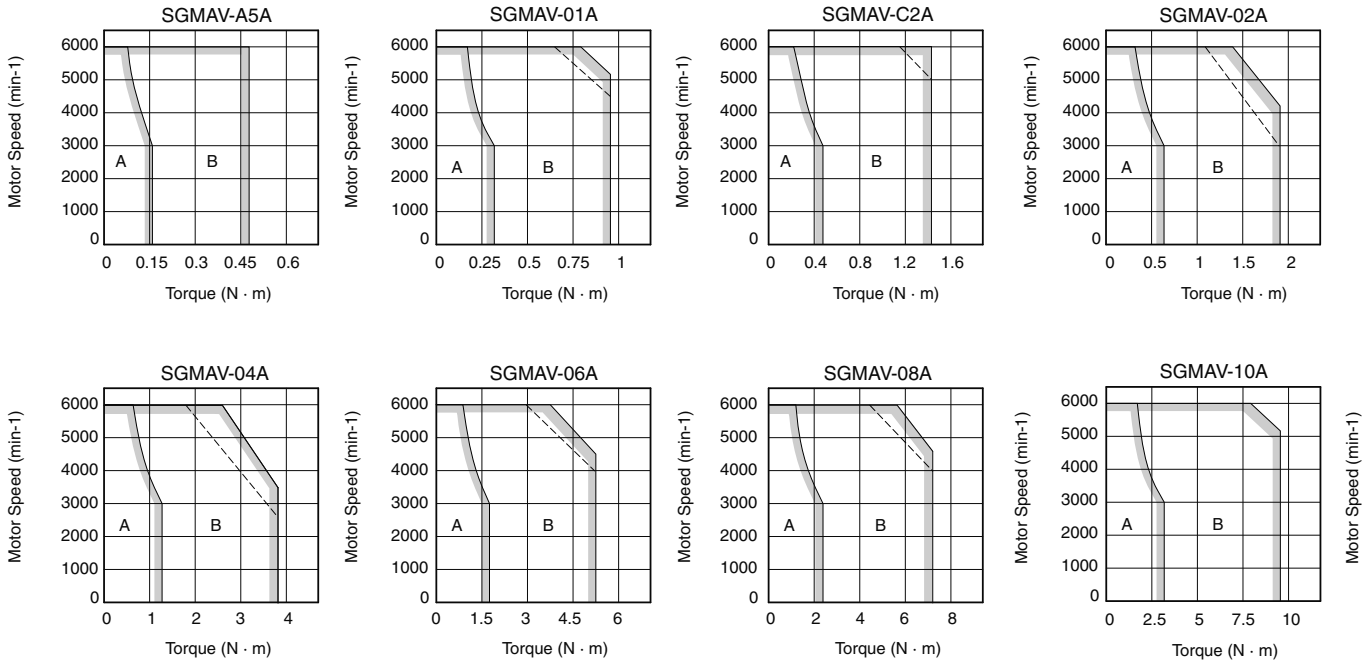
Ratings and specifications

Applied voltage			230 V							
Servo motor model SGMAV- □			A5A□	01A□	C2A□	02A□	04A□	06A□	08A□	10A□
Rated output[*1]		W	50	100	150	200	400	550	750	1000
Rated torque[*1,2]		N·m	0.159	0.318	0.477	0.637	1.27	1.75	2.39	3.18
Instantaneous peak torque[*1]		N·m	0.477	0.955	1.43	1.91	3.82	5.25	7.16	9.55
Rated current[*1]		A (rms)	0.66	0.91	1.3	1.5	2.6	3.8	5.3	7.4
Instantaneous max. current[*1]		A (rms)	2.1	2.8	4.2	5.3	8.5	12.2	16.6	23.9
Rated speed[*1]		min^{-1}	3000							
Max. speed[*1]		min^{-1}	6000							
Torque constant		N·m/A (rms)	0.265	0.375	0.381	0.450	0.539	0.496	0.487	0.467
Rotor moment of inertia (JM)		$kg·m^2x10^{-4}$ (without brake)	0.0242	0.0380	0.0531	0.116	0.190	0.326	0.769	1.2
		$kg·m^2x10^{-4}$ (with brake)	0.0312	0.0450	0.0601	0.180	0.254	0.390	0.940	1.41
Allowable load moment of inertia (JL)		Multiple of (JM)	30				20			10
Rated power rate[*1]		kW/s	10.4	26.6	42.8	35.0	84.9	93.9	74.1	84.3
Rated angular acceleration[*1]		rad/s^2	65800	83800	89900	54900	67000	53700	31000	26500
Encoder		Standard	Incremental encoder (20 bits)							
		Option	Absolute encoder (20 bits)							
Allowable radial load		N	68	78		245			392	
Allowable thrust load		N	54			74			147	
Approx. mass		Kg (without brake)	0.3	0.4	0.5	0.9	1.2	1.7	2.3	3.6
		Kg (with brake)	0.6	0.7	0.8	1.5	1.8	2.4	3.2	4.6
Brake specifications	Rated voltage		24 VDC							
	Power consumption (at 20°C)	W	6			6.9		8.7	7.7	7
	Current consumption (at 20°C)	A	0.25			0.29		0.36	0.32	0.29
	Holding torque	N·m	0.159	0.318	0.477	0.637	1.27	1.75	2.39	3.18
	Rise time for holding torque	ms (max)	100							
	Release time	ms (max)	60							80
Basic specifications	Time rating		Continuous							
	Thermal class		Class B							
	Usage/ storage temperature		0 to +40 °C/ -20 to 60 °C without freezing							
	Usage/ storage humidity		20 to 80% RH (non-condensing)							
	Vibration class		15 µm or below							
	Insulation resistance		500 VDC, 10 MOhm min.							
	Withstand voltage		1500 VAC for one minute							
	Enclosure		Totally-enclosed, self-cooled, IP65 (excluding shaft opening)							
	Vibration resistance		Vibration acceleration 49 m/s2							
	Altitude		1000 m or less above sea level							
	Mounting		Flange-mounted							

Note: 1. These items and torque/speed characteristics quoted in combination with an SGDV servo drive are at an armature winding temperature of 100°C. Other values quoted are at 20°C.

2. The rated torques listed here are the values for the continuous allowable torque at 40ºC with an aluminium heatsink of the following dimensions attached (SGMJV-A5/01:200 mm x 200 mm x 6 mm, SGMJV-02/04/08:250 mm x 250 mm x 6 mm).

Torque-speed characteristics



Type SGMEV, 230 V/400 V

Ratings and specifications

Applied voltage		230 V					400 V					
Servo motor model SGMEV- □		01A□	02A□	04A□	08A□	15A□	02D□	03D□	04D□	07D□	08D□	15D□
Rated output[*1]	W	100	200	400	750	1500	200	300	400	650	750	1500
Rated torque[*1,2]	N·m	0.318	0.637	1.27	2.39	4.77	0.637	0.955	1.27	2.07	2.39	4.77
Instantaneous peak torque[*1]	N·m	0.955	1.91	3.82	7.16	14.3	0.191	3.82	3.82	7.16	7.16	14.3
Rated current[*1]	A (rms)	0.89	2.0	2.6	4.1	7.5	1.4	1.3	1.4	2.2	2.6	4.5
Instantaneous max. current[*1]	A (rms)	2.8	6.5	8.5	13.9	23.0	4.5	5.1	4.4	8.4	7.8	13.7
Rated speed[*1]	min^{-1}	3000										
Max. speed[*1]	min^{-1}	5000										
Torque constant	N·m/A (rms)	0.392	0.349	0.535	0.641	0.687	0.481	0.837	0.963	1.02	0.994	1.135
Rotor moment of inertia (JM)	$kg·m^2x10^{-4}$ (without brake)	0.049	0.193	0.331	2.1	4.02	0.193	0.173	0.331	0.672	2.1	4.02
	$kg·m^2x10^{-4}$ (with brake)	0.078	0.302	0.440	2.975	4.895	0.302	0.231	0.440	0.812	2.975	4.895
Allowable load moment of inertia (JL)	Multiple of (JM)	25	15	7	5		15	20	7	20	5	
Rated power rate[*1]	kW/s	20.6	21.0	49.0	27.1	56.7	21	52.9	49.0	63.8	27.1	56.7
Rated angular acceleration[*1]	rad/s^2	64800	33000	38500	11400	11900	33000	55300	38500	30800	11400	11900
Encoder	Standard	Incremental encoder (20 bits)										
	Option	Absolute encoder (20 bits)										
Allowable radial load	N	78	245		392	490	245	345	245	392		490
Allowable thrust load	N	49	68		147		68	74	68	147		
Approx. mass	Kg (without brake)	0.7	1.4	2.1	4.2	6.6	1.4	1.7	2.1	3.4	4.2	6.6
	Kg (with brake)	0.9	1.9	2.6	5.7	8.1	1.9	2.2	2.6	4.3	5.7	8.1
Holding brake moment of inertia J	$kg·m^2x10^{-4}$	0.029	0.109		0.875		0.109	0.058	0.109	0.140	0.875	
Basic specifications	Time rating	Continuous										
	Thermal class	Class B										
	Usage/ storage temperature	0 to +40 °C/ -20 to 60 °C without freezing										
	Usage/ storage humidity	20 to 80% RH (non-condensing)										
	Vibration class	15 µm or below										
	Insulation resistance	500 VDC, 10 MOhm min.										
	Withstand voltage	1500 VAC for one minute										
	Enclosure	Totally-enclosed, self-cooled, IP55[*3]										
	Vibration resistance	Vibration acceleration xx m/s2										
	Altitude	1000 m or less above sea level										
	Mounting	Flange-mounted										

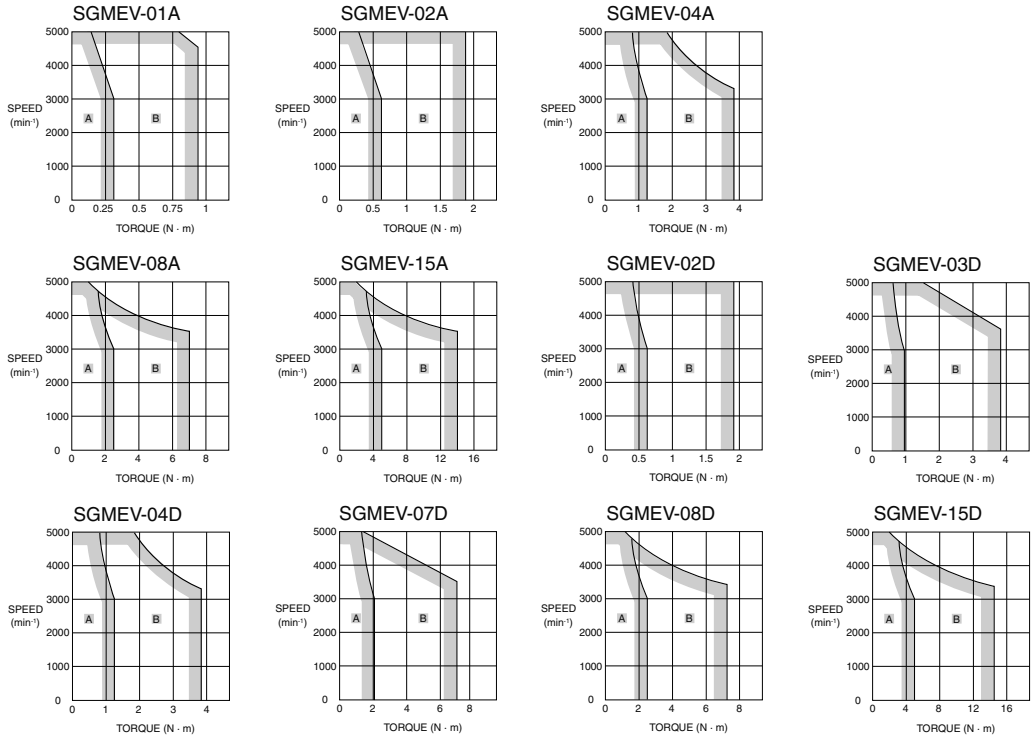
Note: 1. These items and torque/speed characteristics quoted in combination with an SGDV servo drive are at an armature winding temperature of 100°C. Other values quoted are at 20°C.

2. The rated torques listed here are the values for the continuous allowable torque at 40°C with an aluminium heatsink of the following dimensions attached (SGMEV-01A/02A/04A/02D/03D/04D/07D: 250 mm x 250 mm x 6 mm, SGMEV-08A/15A/08D/15D: 300 mm x 300 mm x 12 mm)

3. IP55 in case of standard cable attaching. IP67 is possible unless SGMEV-03D/07D servomotors.

Torque-speed characteristics

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



Type SGMGV, 400 V

Ratings and specifications

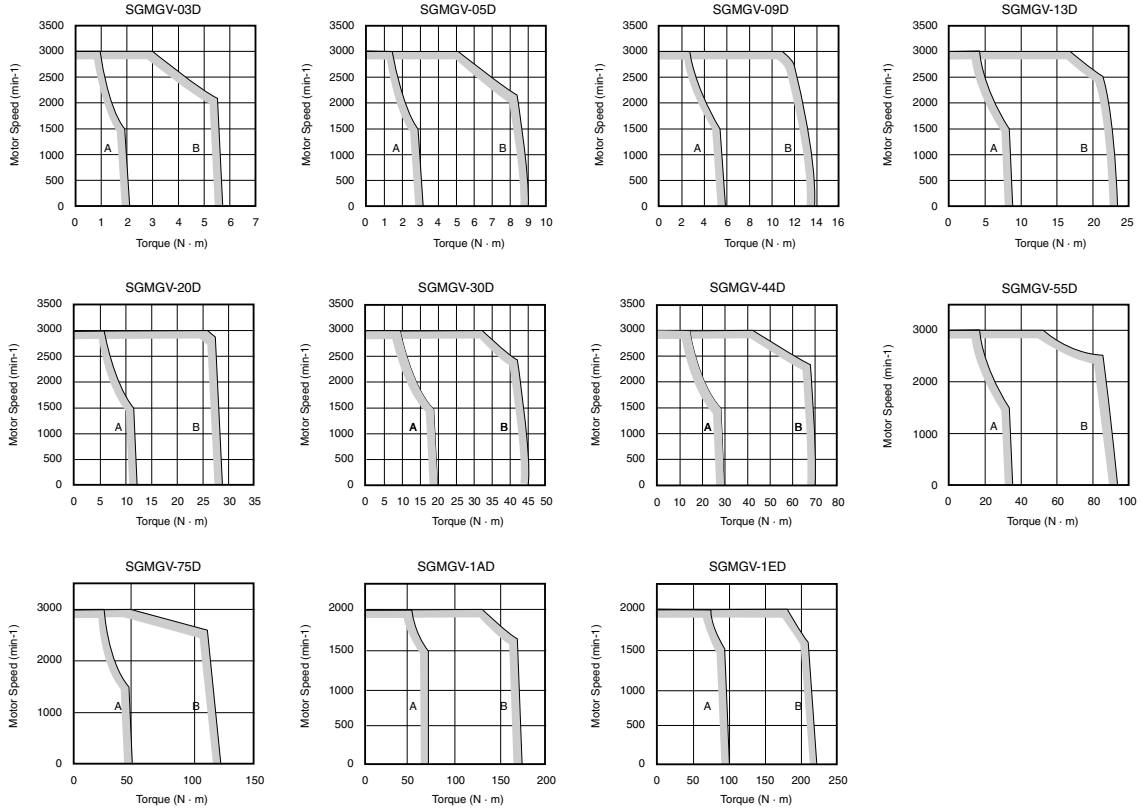
Applied voltage		400 V										
Servo motor model SGMGV- □		03D□	05D□	09D□	13D□	20D□	30D□	44D□	55D□	75D□	1AD□	1ED□
Rated output*1	kW	0.3	0.45	0.85	1.3	1.8	2.9	4.4	5.5	7.5	11	15
Rated torque*1	N·m	1.96	2.86	5.39	8.34	11.5	18.6	28.4	35.0	48.0	70.0	95.4
Instantaneous peak torque*1	N·m	5.88	8.92	13.8	23.3	28.7	45.1	71.1	87.6	119	175	224
Rated current*1	A (rms)	1.4	1.9	3.5	5.4	8.4	11.9	16.5	20.8	25.7	28.1	37.2
Instantaneous max. current*1	A (rms)	4	5.5	8.5	14	20	28	40.5	52	65	70	85
Rated speed*1	min^{-1}	1500										
Max. speed*1	min^{-1}	3000									2000	
Torque constant	N·m/A (rms)	1.55	1.71	1.72	1.78	1.50	1.70	1.93	1.80	1.92	2.64	2.74
Rotor moment of inertia (JM)	$kg·m^2x10^{-4}$ (without brake)	2.48	3.33	13.9	19.9	26	46	67.5	89.0	125	242	303
	$kg·m^2x10^{-4}$ (with brake)	2.69	3.54	16	22	28.1	54.5	76	97.5	134	261	322
Allowable load moment of inertia (JL)	Multiple of (JM)	5										
Rated power rate*1	kW/s (without brake)	15.5	24.6	20.9	35.0	50.9	75.2	119	138	184	202	300
	kW/s (with brake)	14.3	23.1	18.2	31.6	47.1	63.5	106	126	172	188	283
Rated angular acceleration*1	rad/s^2 (without brake)	7900	8590	3880	4190	4420	4040	4210	3930	3840	2890	3150
	rad/s^2 (with brake)	7290	8080	3370	3790	4090	3410	3740	3590	3580	2680	2960
Encoder	Standard	Incremental encoder (20 bits)										
	Option	Absolute encoder (20 bits)										
Allowable radial load	N	490			686	980	1470		1764			4998
Allowable thrust load	N	98			343	392	490		588			2156
Approx. mass	Kg (without brake)	2.6	3.2	5.5	7.1	8.6	13.4	17.5	21.5	29.5	57	67
	Kg (with brake)	4.5	5.0	7.5	9.0	11.0	19.5	23.5	27.5	35	65	85
Brake specifications: Rated voltage		24 /90 VDC										
Power consumption (at 20°C)	W (24 VDC)	10		9.8			18.5		25		32	35
	W (90 VDC)	10		10.1			18.5		25		32	35
Current consumption (at 20°C)	A (24 VDC)	0.42		0.41			0.77		1.05		1.33	1.46
	A (90 VDC)	0.11					0.21		0.28		0.36	0.39
Holding torque	N·m	4.5		12.7	19.6		43.1		72.6		84.3	114.6
Rise time for holding torque	ms (max)	80					100 (24 V), 80 (90 V)		80			
Release time	ms (max)	100					170					

Applied voltage		400 V										
Servo motor model SGMGV- □		03D□	05D□	09D□	13D□	20D□	30D□	44D□	55D□	75D□	1AD□	1ED□
Basic specifications	Time rating	Continuous										
	Thermal class	Class F										
	Usage/ storage temperature	0 to +40 °C/ -20 to 60 °C without freezing										
	Usage/ storage humidity	20 to 80% RH (non-condensing)										
	Insulation resistance	500 VDC, 10 MOhm min.										
	Withstand voltage	1800 VAC for one minute										
	Vibration class	15 μm or below										
	Enclosure	Totally-enclosed, self-cooled, IP67 (excluding shaft opening)										
	Vibration resistance	Vibration acceleration 24.5 m/s2										
	Altitude	1000 m or less above sea level										
	Mounting	Flange-mounted										

Note: 1. These items and torque/speed characteristics quoted in combination with an SGDV servo drive are at an armature winding temperature of 20°C.

Torque-speed characteristics

(A : Continuous duty zone B : Intermittent duty zone)



Type SGMSV, 400 V

Ratings and specifications

Applied voltage		400 V						
Servo motor model SGMSV-□		**10D□**	**15D□**	**20D□**	**25D□**	**30D□**	**40D□**	**50D□**
Rated output[*1]	kW	1.0	1.5	2.0	2.5	3.0	4.0	5.0
Rated torque[*1,2]	N·m	3.18	4.9	6.36	7.96	9.8	12.6	15.8
Instantaneous peak torque[*1]	N·m	9.54	14.7	19.1	23.9	29.4	37.8	47.6
Rated current[*1]	A (rms)	2.8	4.7	6.1	7.4	8.9	12.5	13.8
Instantaneous max. current[*1]	A (rms)	8.5	14	19.5	22.3	28	38	42
Rated speed[*1]	min^{-1}	3000						
Max. speed[*1]	min^{-1}	6000	5000					
Torque constant	N·m/A (rms)	1.27	1.15	1.12	1.15	1.16	1.06	1.21
Rotor moment of inertia (JM)	$kg·m^2x10^{-4}$ (without brake)	1.74	2.0	2.47	3.19	7.0	9.60	12.3
	$kg·m^2x10^{-4}$ (with brake)	1.99	2.25	2.72	3.44	9.2	11.8	14.5
Allowable load moment of inertia (JL)	Multiple of (JM)	5						
Rated power rate[*1]	kW/s	57.9	97.2	127	199	137	165	203
Rated angular acceleration[*1]	rad/s^2	18300	24500	25700	25000	14000	13100	12800
Encoder	Standard	Incremental encoder (20 bits)						
	Option	Absolute encoder (20 bits)						
Allowable radial load	N	686				980	1176	
Allowable thrust load	N	196				392		
Approx. mass	Kg (without brake)	4.6	5.1	5.8	7.0	11	14	17
	Kg (with brake)	5.5	6	6.8	8.7	13	16	19

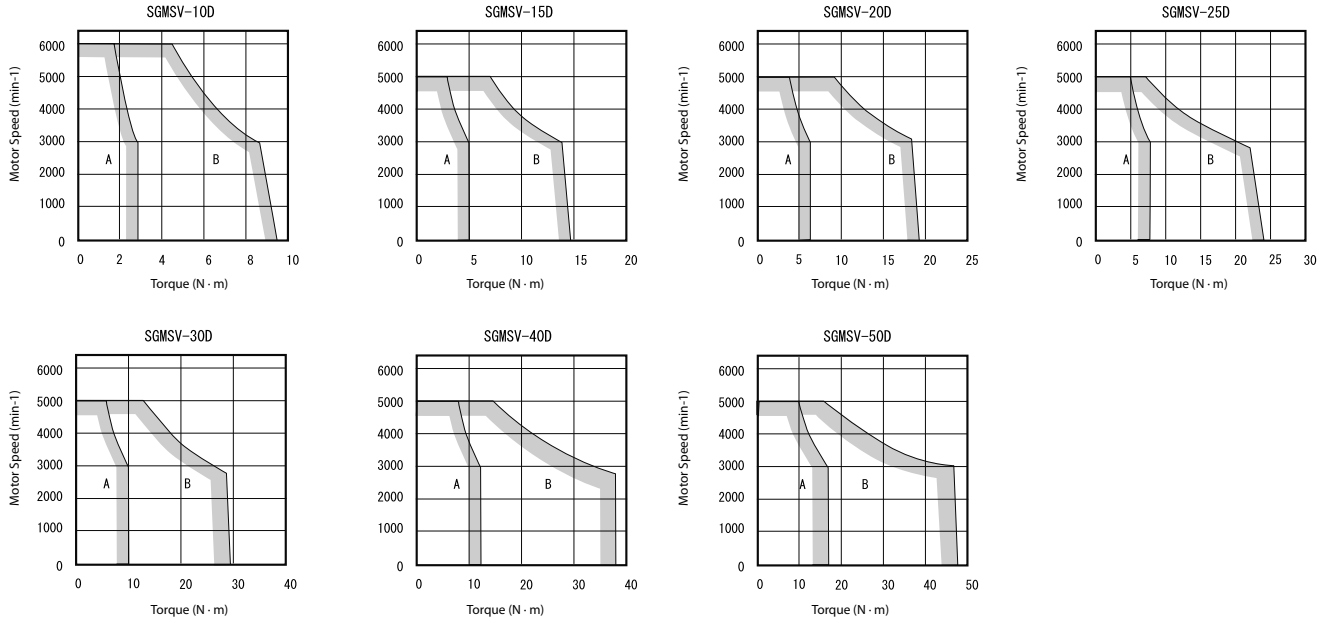
Basic specifications		
	Time rating	Continuous
	Thermal class	Class F
	Usage/ storage temperature	0 to +40 °C/ -20 to 60°C without freezing
	Usage/ storage humidity	20 to 80% RH (non-condensing)
	Vibration class	15 µm or below
	Insulation resistance	500 VDC, 10 MOhm min.
	Withstand voltage	1500 VAC for one minute
	Enclosure	Totally-enclosed, self-cooled, IP67 (excluding shaft opening)
	Vibration resistance	Vibration acceleration xx.x m/s2
	Altitude	1000 m or less above sea level
	Mounting	Flange-mounted

Note: 1. These items and torque/speed characteristics quoted in combination with an SGDV servo drive are at an armature winding temperature of 20°C.

2. The rated torques listed here are the values for the continuous allowable torque value with an aluminium heatsink of the following dimensions attached (SGMSV-10/15/20/25: 300 mm x 300 mm x 12 mm, SGMSV-30/40/50: 400 mm x 400 mm x 20 mm).

Torque-speed characteristics

A : Continuous Duty Zone B : Intermittent Duty Zone

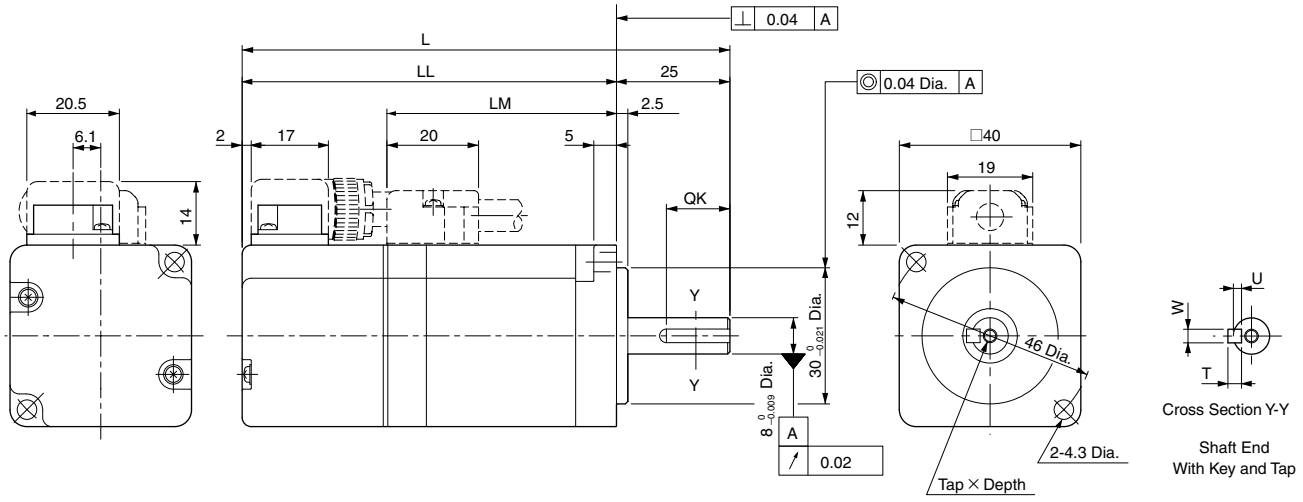


Dimensions

Servomotors

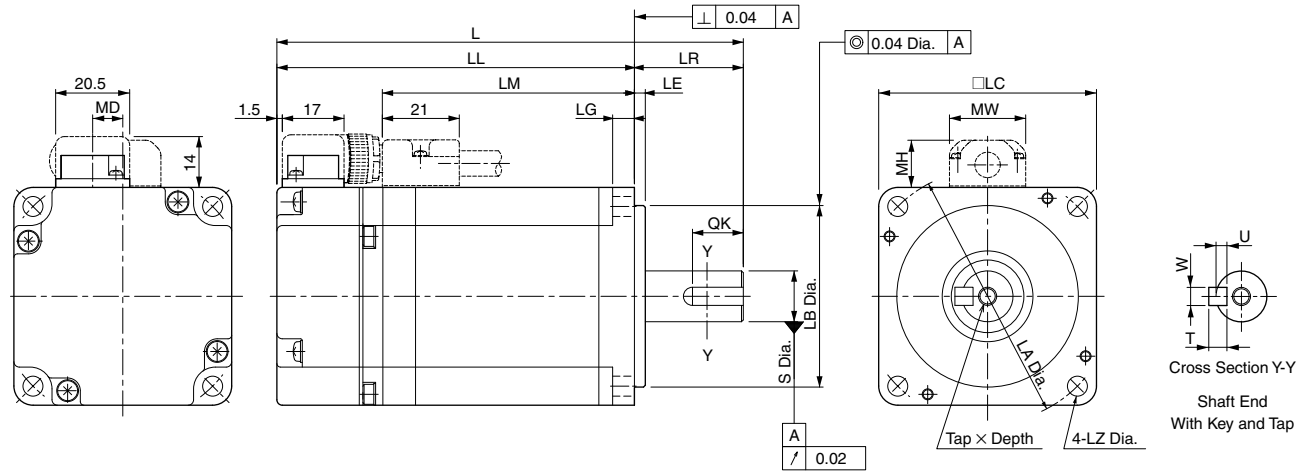
Type SGMJV (230 V, 50 - 100 W)

Dimensions (mm)	Without brake		With brake		LM	Shaft End Dimensions					Approx. Mass (Kg)	
Model	L	LL	L	LL		Tap × Depth	QK	U	W	T	Without brake	With brake
SGMJV-A5A□A6□	94	69	139	114	37	M3 x 6L	14	1.8	3	3	0.3	0.6
SGMJV-01A□A6□	107.5	82.5	152.5	127.5	50.5						0.4	0.7



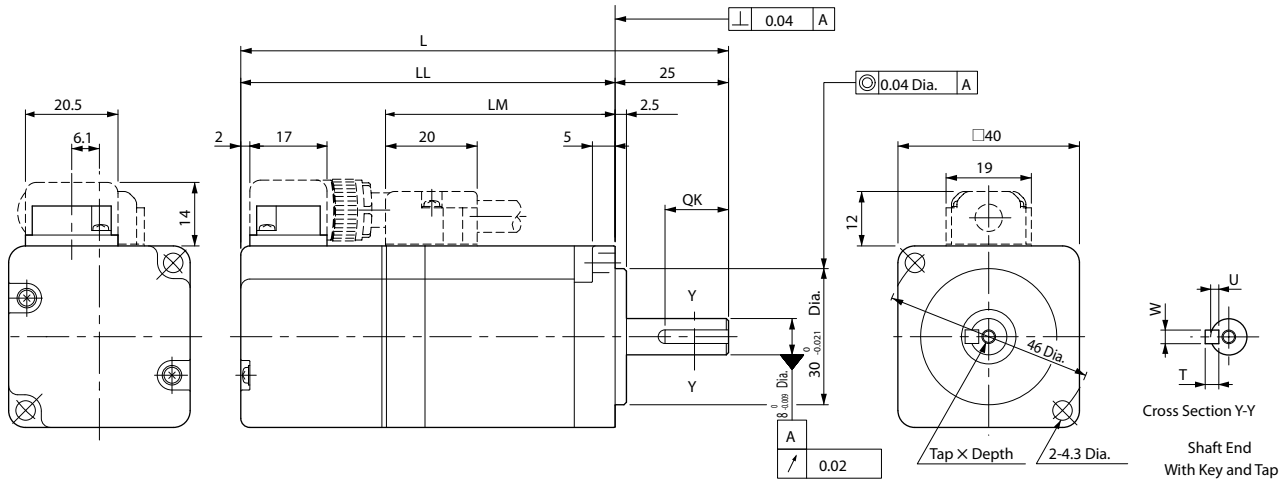
Type SGMJV (230 V, 200 - 750 W)

Dimensions (mm)	Without brake		With brake		LM	Flange Face Dimensions							Shaft End Dimensions						MD	MW	MH	Approx. Mass Kg	
Model	L	LL	L	LL		LR	LE	LG	LC	LA	LB	LZ	S	Tap × Depth	QK	U	W	T				Without brake	With brake
SGMJV-02A□A6□	110	80	150	120	51	30	3	6	60	70	$50^{0}_{-0..025}$	5.5	$14^{0}_{-0..011}$	M5x8L	14	3	5	5	8.3	21	13	0.9	1.5
SGMJV-04A□A6□	128.5	98.5	168.5	138.5	69.5																	1.3	1.9
SGMJV-08A□A6□	155	115	200	160	85	40		8	80	90	$70^{0}_{-0..030}$	7	$19^{0}_{-0..013}$	M6x10L	22	3.5	6	6	13.8	27	15	2.3	3.2



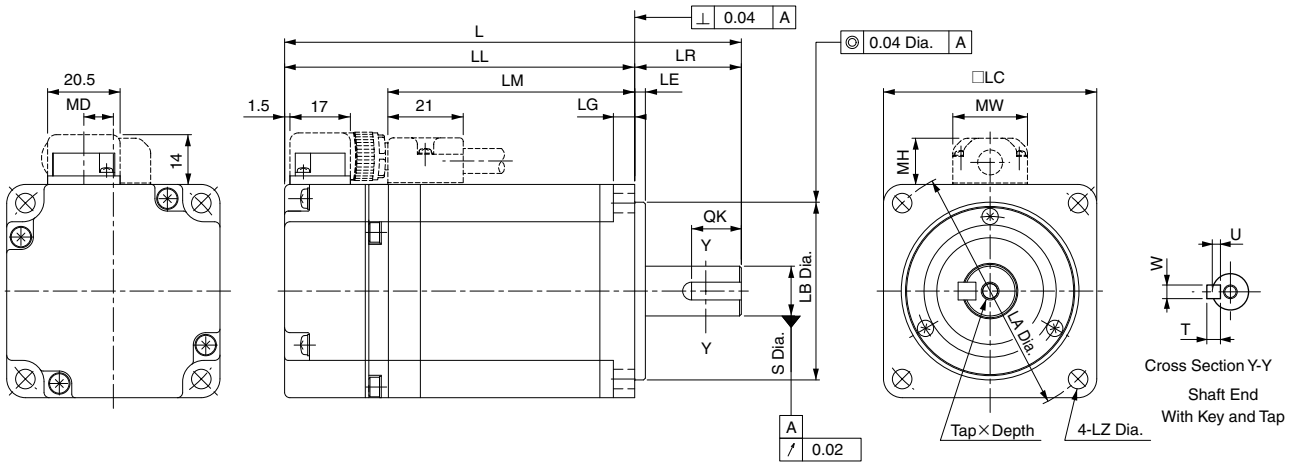
Type SGMAV (230 V, 50 - 150 W)

Dimensions (mm)	Without brake		With brake		LM	Shaft End Dimensions					Approx. Mass (Kg)	
Model	L	LL	L	LL		Tap x Depth	QK	U	W	T	Without brake	With brake
SGMAV-A5A□A6□	95.5	70.5	140.5	115.5	38.5	M3x6L	14	1.8	3	3	0.3	0.6
SGMAV-01A□A6□	107.5	82.5	152.5	127.5	50.5						0.4	0.7
SGMAV-C2A□A6□	119.5	94.5	164.5	139.5	62.5						0.5	0.8



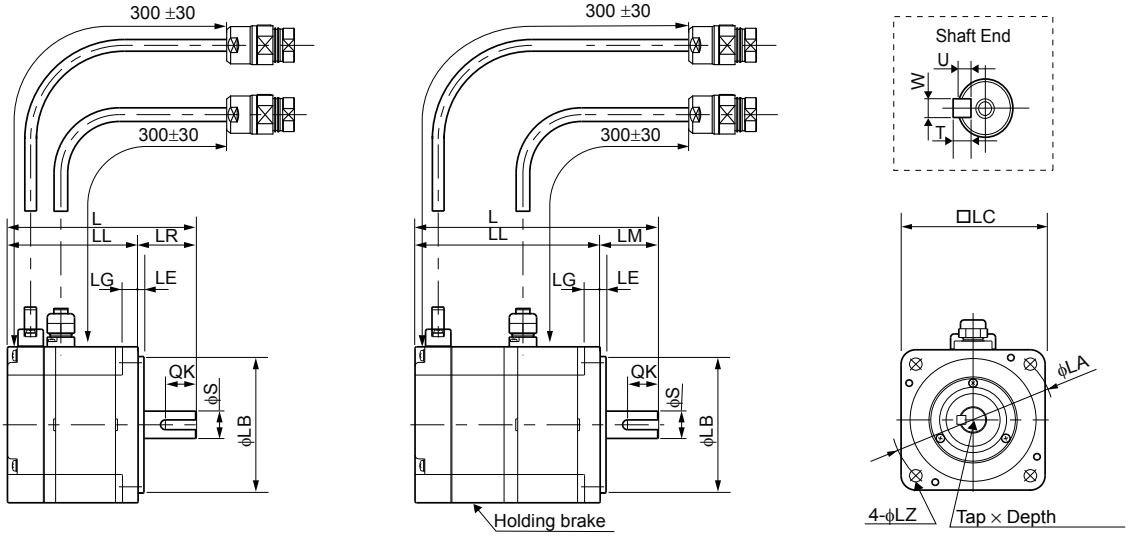
Type SGMAV (230 V, 200 - 750 W)

Dimensions (mm)	Without brake		With brake		LM	Flange Face Dimensions							Shaft End Dimensions						MD	MW	MH	Approx. Mass (Kg)	
Model	L	LL	L	LL		LR	LE	LG	LC	LA	LB	LZ	S	Tap x Depth	QK	U	W	T				Without brake	With brake
SGMAV-02A□A6□	110	80	150	120	51	30	3	6	60	70	$50^{0}_{-0..025}$	5.5	$14^{0}_{-0..011}$	M5x8L	20	3	5	5	8.5	21	13	0.9	1.5
SGMAV-04A□A6□	128.5	98.5	168.5	138.5	69.5										14							1.2	1.9
SGMAV-06A□A6□	154.5	124.5	200.5	170.5	95.5																	1.7	2.4
SGMAV-08A□A6□	155	115	200	160	85	40		8	80	90	$70^{0}_{-0..030}$	7	$19^{0}_{-0..013}$	M6x10L	22	3.5	6	6	13.8	27	15	2.3	3.2
SGMAV-10A□A6□	185	145	235	195	115																	3.6	4.6



Type SGMEV (230/400 V, 100 - 1500 W)

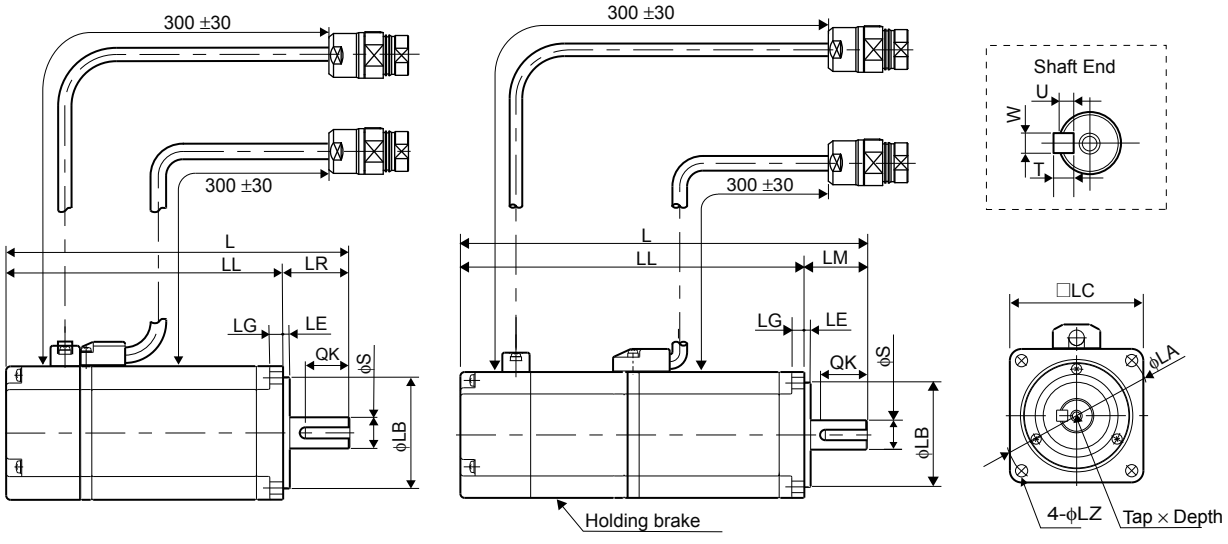
Dimensions (mm)	Without brake		With brake		LM	Flange Face Dimensions						Shaft End Dimensions						Approx. Mass (Kg)	
Model	L	LL	L	LL		LA	LB	LC	LE	LG	LZ	S	QK	W	T	U	Tap x Depth	Without brake	With brake
SGMEV-01A□A6□	87	62	116	91	25	70	$50^{0}_{-0..030}$	60	3	6	5.5	$8^{0}_{-0..011}$	14	3	3	1.8	M3 x 6L	0.7	0.9
SGMEV-02A□A6□	97	67	128.5	98.5	30	90	$70^{0}_{-0..030}$	80		8	7	$14^{0}_{-0..011}$	16	5	5	3	M5 x 8L	1.4	1.9
SGMEV-02D□A6□																			
SGMEV-04A□A6□	117	87	148.5	118.5														2.1	2.6
SGMEV-04D□A6□																			
SGMEV-08A□A6□	126.5	86.5	160	120	40	145	$110^{0}_{-0..035}$	120	3.5	10	10	$16^{0}_{-0..011}$	22					4.2	4.7
SGMEV-08D□A6□																			
SGMEV-15A□A6□	154.5	114.5	188	148								$19^{0}_{-0..013}$		6	6	3.5	M6 x 10L	6.6	8.1
SGMEV-15D□A6□																			



Models without Brake Models with Brake

Type SGMEV (400 V, 300 - 650 W)

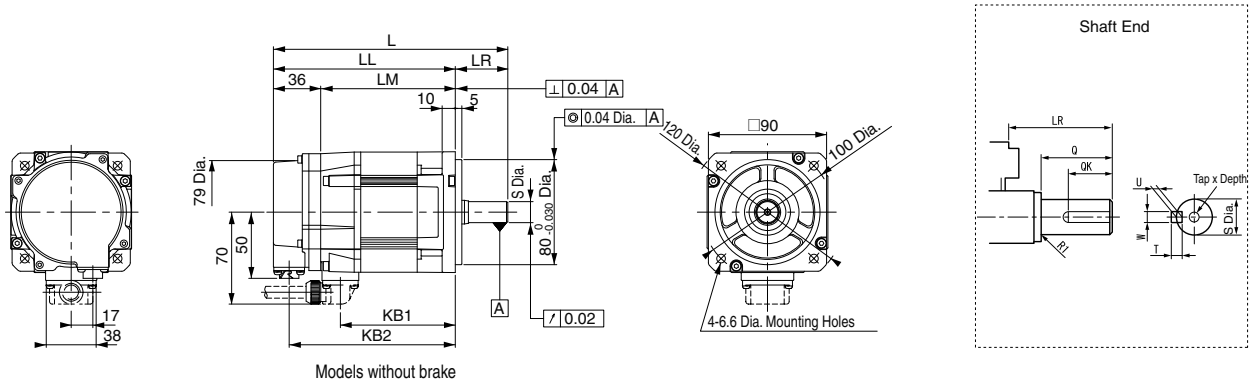
Dimensions (mm)	Without brake		With brake		LM	Flange Face Dimensions						Shaft End Dimensions						Approx. Mass (Kg)	
Model	L	LL	L	LL		LA	LB	LC	LE	LG	LZ	S	QK	W	T	U	Tap x Depth	Without brake	With brake
SGMEV-03D□A6□	154.5	124.5	194	164	30	70	$50^{0}_{-0..025}$	60	3	6	5.5	$14^{0}_{-0..011}$	20	5	5	3	M5 x 8L	1.7	2.2
SGMEV-07D□A6□	185	145	229.5	189.5	40	90	$70^{0}_{-0..030}$	80	3	8	70	$16^{0}_{-0..011}$	30					3.4	4.3



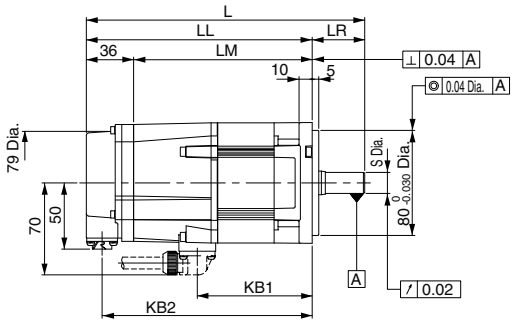
Models without Brake Models with Brake

Type SGMGV (400 V, 300 - 450 W)

Dimensions (mm)	Without brake				With brake				LR	KB1	Shaft End Dimensions							Approx. Mass (Kg)	
Model	L	LL	LM	KB2	L	LL	LM	KB2			S	Q	QK	W	T	U	Tap x Depth	Without brake	With brake
SGMGV-03D□A6□	163	126	90	114	196	159	123	147	37	75	$14^{0}_{-0.011}$	25	15	5	5	3	M4 x 10L	2.6	3.6
SGMGV-05D□A6□	179	139	103	127	212	172	136	160	40	88	$16^{0}_{-0.011}$	30	20				M4 x 12L	3.2	4.2



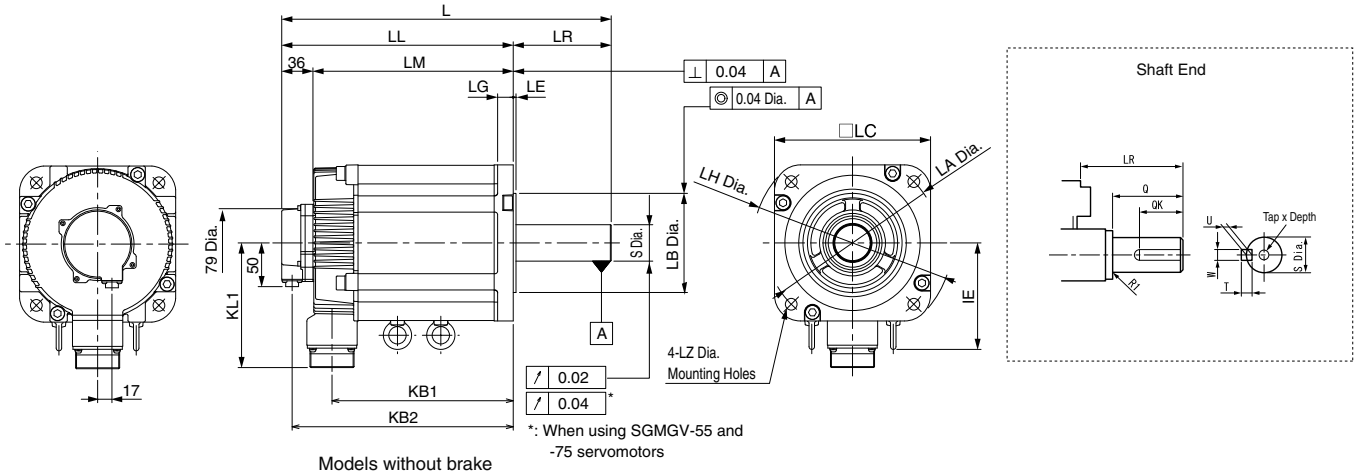
Models without brake



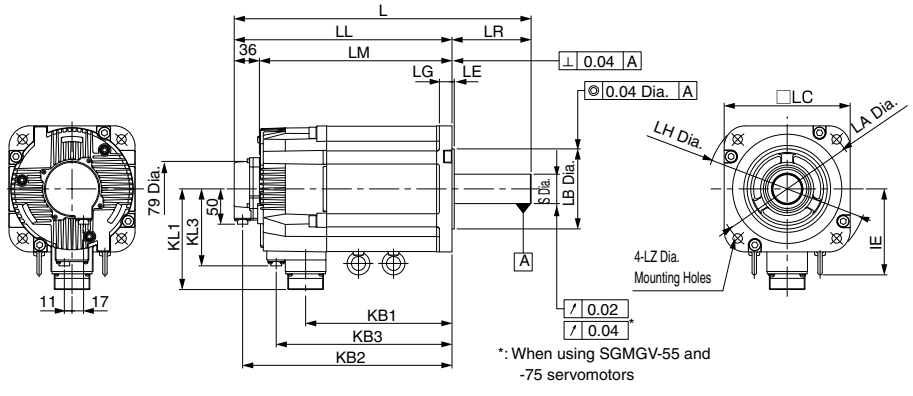
Models with brake

Type SGMGV (400 V, 850 W- 7.5 kW)

Dimensions (mm)	Without brake				With brake						LR	KB1	IE	KL1	Flange Face Dimensions							Shaft End Dimensions							Approx. Mass (Kg)	
Model	L	LL	LM	KB2	L	LL	LM	KB2	KB3	KL3					LA	LB	LC	LE	LG	LH	LZ	S	Q	QK	W	T	U	Tap x Depth	Without brake	With brake
SGMGV-09D□A6□	195	137	101	125	231	173	137	161	115	80	58	83	-	104	145	$110^{0}_{-0..035}$	130	6	12	165	9	$19^{0}_{-0..013}$	40	25	5	5	3	M5 x 12L	5.5	7.5
SGMGV-13D□A6□	211	153	117	141	247	189	153	177	131			99	-									$22^{0}_{-0..013}$			6	6	3.5		7.1	9.0
SGMGV-20D□A6□	229	171	135	159	265	207	171	195	149			117	-									$24^{0}_{-0..013}$			8	7	4		8.6	11.0
SGMGV-30D□A6□	239	160	124	148	287	208	172	196	148	110	79	108	-	134	200	$114.3^{0}_{-0.025}$	180	3.2	18	230	13.5	$35^{+0.01}_{0}$	76	60	10	8	5	M12 x 25L	13.4	19.5
SGMGV-44D□A6□	263	184	148	172	311	232	196	220	172			132	-																17.5	23.5
SGMGV-55D□A6□	334	221	185	209	378	265	229	253	205		113	163	123	144								$42^{0}_{-0.016}$	110	90	12			M16 x 32L	21.5	27.5
SGMGV-75D□A6□	380	267	231	255	424	311	275	299	251			209																	29.5	35



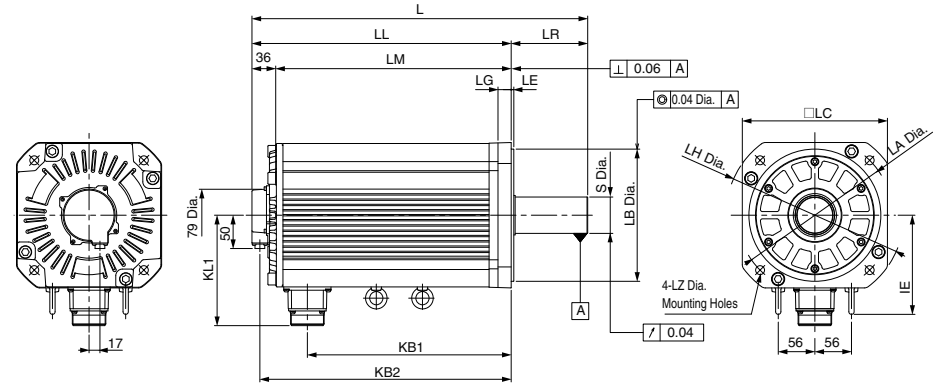
Models without brake



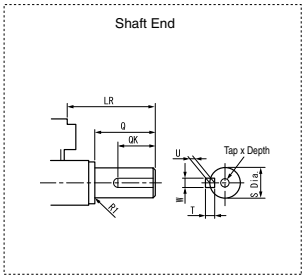
Models with brake

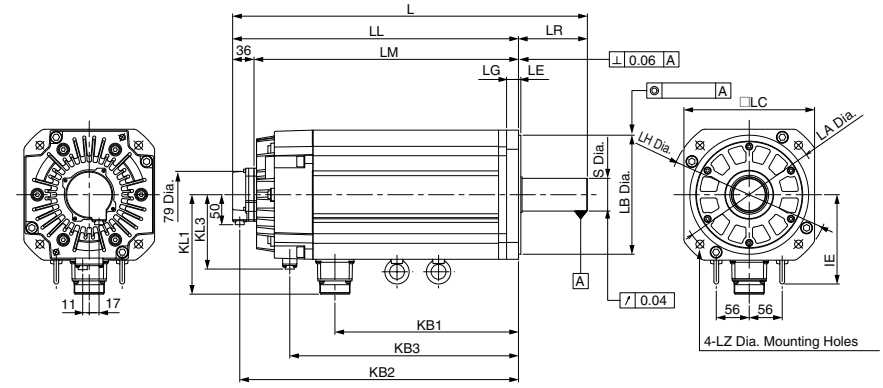
Type SGMGV (400 V, 11 - 15 kW)

Dimensions (mm)	Without brake				With brake						LR	KB1	IE	KL1	Flange Face Dimensions							Shaft End Dimensions							Approx. Mass (Kg)	
Model	L	LL	LM	KB2	L	LL	LM	KB2	KB3	KL3					LA	LB	LC	LE	LG	LH	LZ	S	Q	QK	W	T	U	Tap x Depth	Without brake	With brake
SGMGV-1AD□A6□	447	331	295	319	498	382	346	370	315	125	116	247	150	168	235	$200^{0}_{-0.046}$	220	4	20	270	13.5	$42^{0}_{-0.016}$	110	90	12	8	5	M16 x 32L	57	65
SGMGV-1ED□A6□	509	393	357	381	598	482	446	470	385			309										$55^{0.030}_{-0..011}$			16	10	6	M20 x 40L	67	85



Models without brake

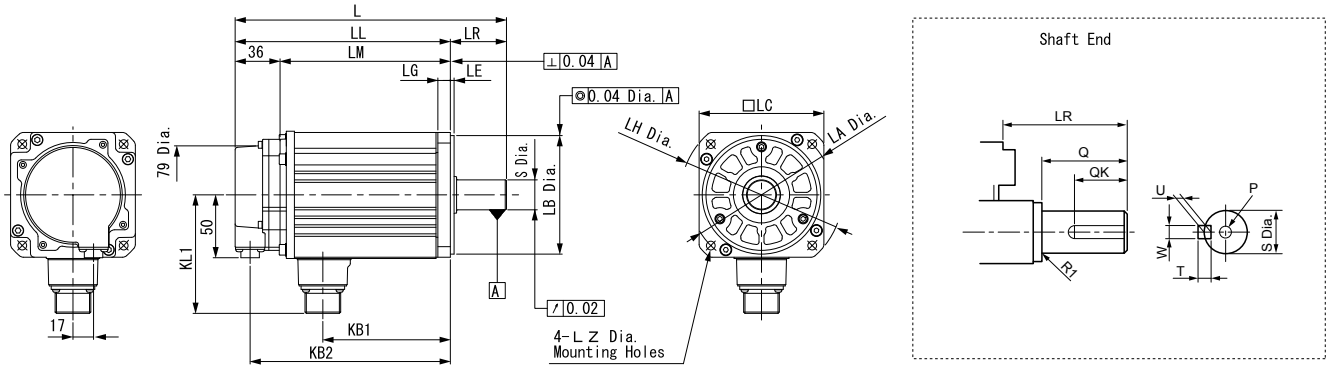




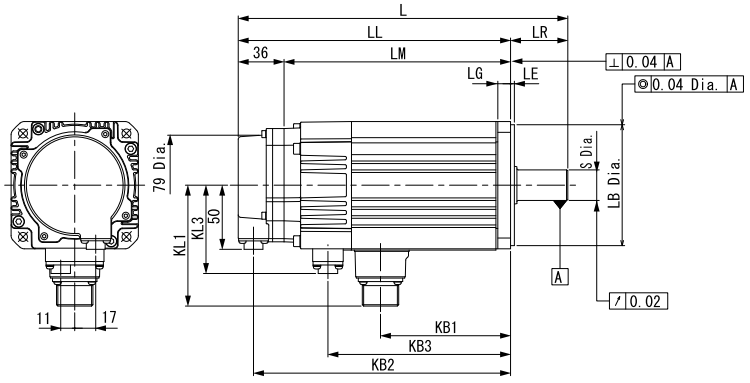
Models with brake

Type SGMSV (400 V, 1 - 5 kW)

Dimensions (mm)	Without brake					With brake							KB1	KL1	Flange Face Dimensions								Shaft End Dimensions							Approx. Mass (Kg)	
Model	L	LL	LM	LR	KB2	L	LL	LM	LR	KB2	KB3	KL2			LA	LB	LC	LE	LF	LG	LH	LZ	S	Q	QK	W	T	U	Tap x Depth	Without brake	With brake
SGMSV-10D□A2□	192	147	111	45	135	233	188	152	45	118	176	69	76	96	115	$95^{0}_{-0.035}$	100	3	3	10	130	7	$24^{0}_{-0.013}$	40	32	8	7	4	M8 x 16L	4.1	5.5
SGMSV-15D□A2□	211	153	117	58	141	243	198	162	45	128	186		99																	4.6	6
SGMSV-20D□A2□	229	171	135	58	159	259	214	178	45	144	202		117																	5.4	6.8
SGMSV-25D□A2□	239	160	124	79	148	292	247	211	45	177	225		108																	6.8	8.7
SGMSV-30D□A2□	259	196	160	63	184	295	232	196	63	176	220	81	124	114	145	$110^{0}_{-0.035}$	130	6	6	12	165	9	$28^{0}_{-0.013}$	55	50					10.5	13
SGMSV-40D□A2□	296	233	197	63	221	332	269	233	63	213	257		161																	13.5	16
SGMSV-50D□A2□	336	273	237	63	261	372	309	273	63	253	297		201																	16.5	19



Models without brake

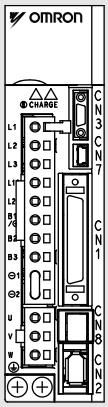


Models with brake

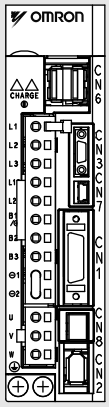
Ordering information

(Refer to servo drive chapter)

Drive options



② Analog Pulse Models

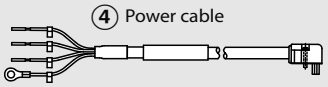


② MECHATROLINK-II Models

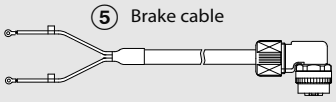
Power, encoder and brake cables

③ Encoder cable

④ Power cable



⑤ Brake cable



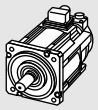
(a separate brake cable to use only for SGMGV and SGMSV servo motors from 850 W)

Servo motors

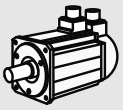
① SGMJV Servo Motor
3000 rpm (50-750 W)

① SGMAV Servo Motor
3000 rpm (50 W-1 kW)

① SGMEV Servo Motor
3000 rpm (100 W-1.5 kW)



① SGMGV Servo Motor
1500 rpm (300 W-15 kW)



① SGMSV Servo Motor
3000 rpm (1-5 kW)

Note: The symbols ①②③... show the recommended sequence to select the servo motor and cables

Servo motor

① Select motor from families SGMJV, SGMAV, SGMEV, SGMGV, SGMSV using motor tables in next pages.

Servo drive

② Refer to Sigma-5 servo drive chapter for detailed drive specifications and selection of drive accessories.

SGMJV - servo motors 3000 r/min (50 - 750 W)

Symbol	Specifications					Servo motor model	Compatible servo drives ②
	Voltage	Encoder and design		Rated torque	Capacity		Sigma-5
① 	230 V	Incremental encoder (13 bit) Straight shaft with key and tap	Without brake	0.159 Nm	50 W	SGMJV-A5AAA61	SGDV-R70A□1A
				0.318 Nm	100 W	SGMJV-01AAA61	SGDV-R90A□1A
				0.637 Nm	200 W	SGMJV-02AAA61	SGDV-1R6A□1A
				1.27 Nm	400 W	SGMJV-04AAA61	SGDV-2R8A□1A
				2.39 Nm	750 W	SGMJV-08AAA61	SGDV-5R5A□1A
			With brake	0.159 Nm	50 W	SGMJV-A5AAA6C	SGDV-R70A□1A
				0.318 Nm	100 W	SGMJV-01AAA6C	SGDV-R90A□1A
				0.637 Nm	200 W	SGMJV-02AAA6C	SGDV-1R6A□1A
				1.27 Nm	400 W	SGMJV-04AAA6C	SGDV-2R8A□1A
				2.39 Nm	750 W	SGMJV-08AAA6C	SGDV-5R5A□1A
		Incremental encoder (20 bit) Straight shaft with key and tap	Without brake	0.159 Nm	50 W	SGMJV-A5ADA61	SGDV-R70A□1A
				0.318 Nm	100 W	SGMJV-01ADA61	SGDV-R90A□1A
				0.637 Nm	200 W	SGMJV-02ADA61	SGDV-1R6A□1A
				1.27 Nm	400 W	SGMJV-04ADA61	SGDV-2R8A□1A
				2.39 Nm	750 W	SGMJV-08ADA61	SGDV-5R5A□1A
			With brake	0.159 Nm	50 W	SGMJV-A5ADA6C	SGDV-R70A□1A
				0.318 Nm	100 W	SGMJV-01ADA6C	SGDV-R90A□1A
				0.637 Nm	200 W	SGMJV-02ADA6C	SGDV-1R6A□1A
				1.27 Nm	400 W	SGMJV-04ADA6C	SGDV-2R8A□1A
				2.39 Nm	750 W	SGMJV-08ADA6C	SGDV-5R5A□1A
		Absolute encoder (20 bit) Straight shaft with key and tap	Without brake	0.159 Nm	50 W	SGMJV-A5A3A61	SGDV-R70A□1A
				0.318 Nm	100 W	SGMJV-01A3A61	SGDV-R90A□1A
				0.637 Nm	200 W	SGMJV-02A3A61	SGDV-1R6A□1A
				1.27 Nm	400 W	SGMJV-04A3A61	SGDV-2R8A□1A
				2.39 Nm	750 W	SGMJV-08A3A61	SGDV-5R5A□1A
			With brake	0.159 Nm	50 W	SGMJV-A5A3A6C	SGDV-R70A□1A
				0.318 Nm	100 W	SGMJV-01A3A6C	SGDV-R90A□1A
				0.637 Nm	200 W	SGMJV-02A3A6C	SGDV-1R6A□1A
				1.27 Nm	400 W	SGMJV-04A3A6C	SGDV-2R8A□1A
				2.39 Nm	750 W	SGMJV-08A3A6C	SGDV-5R5A□1A

SGMAV - servo motors 3000 r/min (50 W - 1 kW)

Symbol	Specifications					Servo motor model	Compatible servo drives ②
	Voltage	Encoder and design		Rated torque	Capacity		Sigma-5
① 	230 V	Incremental encoder (20 bit) Straight shaft with key and tap	Without brake	0.159 Nm	50 W	SGMAV-A5ADA61	SGDV-R70A□1A
				0.318 Nm	100 W	SGMAV-01ADA61	SGDV-R90A□1A
				0.477 Nm	150 W	SGMAV-C2ADA61	SGDV-1R6A□1A
				0.637 Nm	200 W	SGMAV-02ADA61	SGDV-1R6A□1A
				1.27 Nm	400 W	SGMAV-04ADA61	SGDV-2R8A□1A
				1.75 Nm	550 W	SGMAV-06ADA61	SGDV-5R5A□1A
				2.39 Nm	750 W	SGMAV-08ADA61	SGDV-5R5A□1A
				3.18 Nm	1 kW	SGMAV-10ADA61	SGDV-120A□1A008000
			With brake	0.159 Nm	50 W	SGMAV-A5ADA6C	SGDV-R70A□1A
				0.318 Nm	100 W	SGMAV-01ADA6C	SGDV-R90A□1A
				0.477 Nm	150 W	SGMAV-C2ADA6C	SGDV-1R6A□1A
				0.637 Nm	200 W	SGMAV-02ADA6C	SGDV-1R6A□1A
				1.27 Nm	400 W	SGMAV-04ADA6C	SGDV-2R8A□1A
				1.75 Nm	550 W	SGMAV-06ADA6C	SGDV-5R5A□1A
				2.39 Nm	750 W	SGMAV-08ADA6C	SGDV-5R5A□1A
				3.18 Nm	1 kW	SGMAV-10ADA6C	SGDV-120A□1A008000
		Absolute encoder (20 bit) Straight shaft with key and tap	Without brake	0.159 Nm	50 W	SGMAV-A5A3A61	SGDV-R70A□1A
				0.318 Nm	100 W	SGMAV-01A3A61	SGDV-R90A□1A
				0.477 Nm	150 W	SGMAV-C2A3A61	SGDV-1R6A□1A
				0.637 Nm	200 W	SGMAV-02A3A61	SGDV-1R6A□1A
				1.27 Nm	400 W	SGMAV-04A3A61	SGDV-2R8A□1A
				1.75 Nm	550 W	SGMAV-06A3A61	SGDV-5R5A□1A
				2.39 Nm	750 W	SGMAV-08A3A61	SGDV-5R5A□1A
				3.18 Nm	1 kW	SGMAV-10A3A61	SGDV-120A□1A008000
			With brake	0.159 Nm	50 W	SGMAV-A5A3A6C	SGDV-R70A□1A
				0.318 Nm	100 W	SGMAV-01A3A6C	SGDV-R90A□1A
				0.477 Nm	150 W	SGMAV-C2A3A6C	SGDV-1R6A□1A
				0.637 Nm	200 W	SGMAV-02A3A6C	SGDV-1R6A□1A
				1.27 Nm	400 W	SGMAV-04A3A6C	SGDV-2R8A□1A
				1.75 Nm	550 W	SGMAV-06A3A6C	SGDV-5R5A□1A
				2.39 Nm	750 W	SGMAV-08A3A6C	SGDV-5R5A□1A
				3.18 Nm	1 kW	SGMAV-10A3A6C	SGDV-120A□1A008000

SGMEV - servo motors 3000 r/min (100 W - 1.5 kW)

Symbol	Specifications					Servo motor model	Compatible servo drives ②
	Voltage	Encoder and design		Rated torque	Capacity		Sigma-5
① 	230 V	**Incremental encoder (20 bit)** Straight shaft with key and tap	Without brake	0.318 Nm	100 W	SGMEV-01ADA61	SGDV-R90A□1A
				0.637 Nm	200 W	SGMEV-02ADA61	SGDV-1R6A□1A
				1.27 Nm	400 W	SGMEV-04ADA61	SGDV-2R8A□1A
				2.39 Nm	750 W	SGMEV-08ADA61	SGDV-5R5A□1A
				4.77 Nm	1.5 kW	SGMEV-15ADA61	SGDV-120A□1A008000
			With brake	0.318 Nm	100 W	SGMEV-01ADA6C	SGDV-R90A□1A
				0.637 Nm	200 W	SGMEV-02ADA6C	SGDV-1R6A□1A
				1.27 Nm	400 W	SGMEV-04ADA6C	SGDV-2R8A□1A
				2.39 Nm	750 W	SGMEV-08ADA6C	SGDV-5R5A□1A
				4.77 Nm	1.5 kW	SGMEV-15ADA6C	SGDV-120A□1A008000
		Absolute encoder (20 bit) Straight shaft with key and tap	Without brake	0.318 Nm	100 W	SGMEV-01A3A61	SGDV-R90A□1A
				0.637 Nm	200 W	SGMEV-02A3A61	SGDV-1R6A□1A
				1.27 Nm	400 W	SGMEV-04A3A61	SGDV-2R8A□1A
				2.39 Nm	750 W	SGMEV-08A3A61	SGDV-5R5A□1A
				4.77 Nm	1.5 kW	SGMEV-15A3A61	SGDV-120A□1A008000
			With brake	0.318 Nm	100 W	SGMEV-01A3A6C	SGDV-R90A□1A
				0.637 Nm	200 W	SGMEV-02A3A6C	SGDV-1R6A□1A
				1.27 Nm	400 W	SGMEV-04A3A6C	SGDV-2R8A□1A
				2.39 Nm	750 W	SGMEV-08A3A6C	SGDV-5R5A□1A
				4.77 Nm	1.5 kW	SGMEV-15A3A6C	SGDV-120A□1A008000
	400 V	**Incremental encoder (20 bit)** Straight shaft with key and tap	Without brake	0.637 Nm	200 W	SGMEV-02DDA61	SGDV-1R9D□1A
				0.955 Nm	300 W	SGMEV-03DDA61	SGDV-1R9D□1A
				1.27 Nm	400 W	SGMEV-04DDA61	SGDV-1R9D□1A
				2.07 Nm	650 W	SGMEV-07DDA61	SGDV-3R5D□1A
				2.39 Nm	750 W	SGMEV-08DDA61	SGDV-3R5D□1A
				4.77 Nm	1.5 kW	SGMEV-15DDA61	SGDV-5R4D□1A
			With brake	0.637 Nm	200 W	SGMEV-02DDA6C	SGDV-1R9D□1A
				0.955 Nm	300 W	SGMEV-03DDA6C	SGDV-1R9D□1A
				1.27 Nm	400 W	SGMEV-04DDA6C	SGDV-1R9D□1A
				2.07 Nm	650 W	SGMEV-07DDA2C	SGDV-3R5D□1A
				2.39 Nm	750 W	SGMEV-08DDA2C	SGDV-3R5D□1A
				4.77 Nm	1.5 kW	SGMEV-15DDA2C	SGDV-5R4D□1A
		Absolute encoder (20 bit) Straight shaft with key and tap	Without brake	0.637 Nm	200 W	SGMEV-02D3A61	SGDV-1R9D□1A
				0.955 Nm	300 W	SGMEV-03D3A61	SGDV-1R9D□1A
				1.27 Nm	400 W	SGMEV-04D3A61	SGDV-1R9D□1A
				2.07 Nm	650 W	SGMEV-07D3A61	SGDV-3R5D□1A
				2.39 Nm	750 W	SGMEV-08D3A61	SGDV-3R5D□1A
				4.77 Nm	1.5 kW	SGMEV-15D3A61	SGDV-5R4D□1A
			With brake	0.637 Nm	200 W	SGMEV-02D3A6C	SGDV-1R9D□1A
				0.955 Nm	300 W	SGMEV-03D3A6C	SGDV-1R9D□1A
				1.27 Nm	400 W	SGMEV-04D3A6C	SGDV-1R9D□1A
				2.07 Nm	650 W	SGMEV-07D3A6C	SGDV-3R5D□1A
				2.39 Nm	750 W	SGMEV-08D3A6C	SGDV-3R5D□1A
				4.77 Nm	1.5 kW	SGMEV-15D3A6C	SGDV-5R4D□1A

SGMGV - servo motors 1500 r/min (300 W - 15 kW)

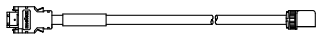
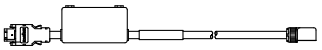
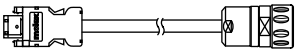
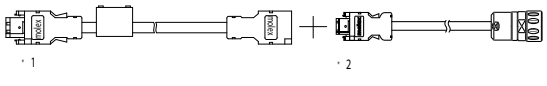
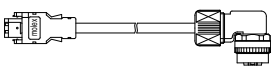
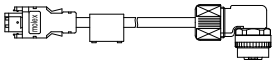
Symbol	Specifications					Servo motor model	Compatible servo drives ②
	Voltage	Encoder and design		Rated torque	Capacity		Sigma-5
① 	400 V	**Incremental encoder (20 bit)** Straight shaft with key and tap	Without brake	1.96 Nm	300 W	SGMGV-03DDA6F	SGDV-1R9D□1A
				2.86 Nm	450 W	SGMGV-05DDA6F	SGDV-1R9D□1A
				5.39 Nm	850 W	SGMGV-09DDA6F	SGDV-3R5D□1A
				8.34 Nm	1.3 kW	SGMGV-13DDA6F	SGDV-5R4D□1A
				11.5 Nm	1.8 kW	SGMGV-20DDA6F	SGDV-8R4D□1A
				18.6 Nm	2.9 kW	SGMGV-30DDA6F	SGDV-120D□1A
				28.4 Nm	4.4 kW	SGMGV-44DDA6F	SGDV-170D□1A
				35.0 Nm	5.5 kW	SGMGV-55DDA6F	SGDV-210D□1A
				48.0 Nm	7.5 kW	SGMGV-75DDA6F	SGDV-260D□1A
				70.0 Nm	11 kW	SGMGV-11DDA6F	SGDV-280D□1A
				95.4 Nm	15 kW	SGMGV-15DDA6F	SGDV-370D□1A
			With brake	1.96 Nm	300 W	SGMGV-03DDA6H	SGDV-1R9D□1A
				2.86 Nm	450 W	SGMGV-05DDA6H	SGDV-1R9D□1A
				5.39 Nm	850 W	SGMGV-09DDA6H	SGDV-3R5D□1A
				8.34 Nm	1.3 kW	SGMGV-13DDA6H	SGDV-5R4D□1A
				11.5 Nm	1.8 kW	SGMGV-20DDA6H	SGDV-8R4D□1A
				18.6 Nm	2.9 kW	SGMGV-30DDA6H	SGDV-120D□1A
				28.4 Nm	4.4 kW	SGMGV-44DDA6H	SGDV-170D□1A
				35.0 Nm	5.5 kW	SGMGV-55DDA6H	SGDV-210D□1A
				48.0 Nm	7.5 kW	SGMGV-75DDA6H	SGDV-260D□1A
				70.0 Nm	11 kW	SGMGV-11DDA6H	SGDV-280D□1A
				95.4 Nm	15 kW	SGMGV-15DDA6H	SGDV-370D□1A
		Absolute encoder (20 bit) Straight shaft with key and tap	Without brake	1.96 Nm	300 W	SGMGV-03D3A6F	SGDV-1R9D□1A
				2.86 Nm	450 W	SGMGV-05D3A6F	SGDV-1R9D□1A
				5.39 Nm	850 W	SGMGV-09D3A6F	SGDV-3R5D□1A
				8.34 Nm	1.3 kW	SGMGV-13D3A6F	SGDV-5R4D□1A
				11.5 Nm	1.8 kW	SGMGV-20D3A6F	SGDV-8R4D□1A
				18.6 Nm	2.9 kW	SGMGV-30D3A6F	SGDV-120D□1A
				28.4 Nm	4.4 kW	SGMGV-44D3A6F	SGDV-170D□1A
				35.0 Nm	5.5 kW	SGMGV-55D3A6F	SGDV-210D□1A
				48.0 Nm	7.5 kW	SGMGV-75D3A6F	SGDV-260D□1A
				70.0 Nm	11 kW	SGMGV-11D3A6F	SGDV-280D□1A
				95.4 Nm	15 kW	SGMGV-15D3A6F	SGDV-370D□1A
			With brake	1.96 Nm	300 W	SGMGV-03D3A6H	SGDV-1R9D□1A
				2.86 Nm	450 W	SGMGV-05D3A6H	SGDV-1R9D□1A
				5.39 Nm	850 W	SGMGV-09D3A6H	SGDV-3R5D□1A
				8.34 Nm	1.3 kW	SGMGV-13D3A6H	SGDV-5R4D□1A
				11.5 Nm	1.8 kW	SGMGV-20D3A6H	SGDV-8R4D□1A
				18.6 Nm	2.9 kW	SGMGV-30D3A6H	SGDV-120D□1A
				28.4 Nm	4.4 kW	SGMGV-44D3A6H	SGDV-170D□1A
				35.0 Nm	5.5 kW	SGMGV-55D3A6H	SGDV-210D□1A
				48.0 Nm	7.5 kW	SGMGV-75D3A6H	SGDV-260D□1A
				70.0 Nm	11 kW	SGMGV-11D3A6H	SGDV-280D□1A
				95.4 Nm	15 kW	SGMGV-15D3A6H	SGDV-370D□1A

SGMSV - servo motors 3000 r/min (1 - 5 kW)

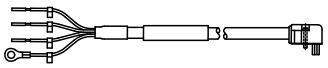
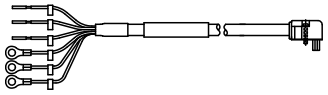
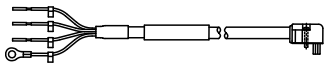
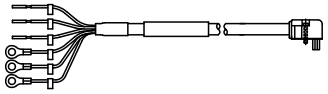
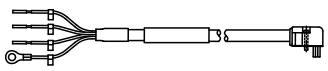
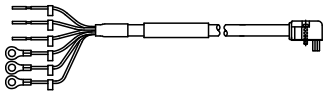
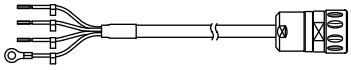
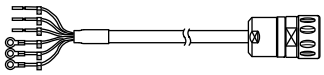
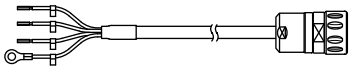
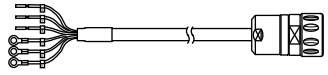
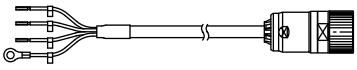
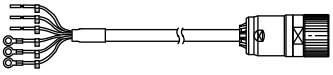
Symbol	Specifications					Servo motor model	Compatible servo drives ②
	Voltage	Encoder and design		Rated torque	Capacity		Sigma-5
① 	400 V	**Incremental encoder (20 bit)** Straight shaft with key and tap	Without brake	3.18 Nm	1 kW	SGMSV-10DDA6F	SGDV-3R5D□1A
				4.9 Nm	1.5 kW	SGMSV-15DDA6F	SGDV-5R4D□1A
				6.36 Nm	2 kW	SGMSV-20DDA6F	SGDV-8R4D□1A
				7.96 Nm	2.5 kW	SGMSV-25DDA6F	SGDV-120D□1A
				9.8 Nm	3 kW	SGMSV-30DDA6F	SGDV-120D□1A
				12.6 Nm	4 kW	SGMSV-40DDA6F	SGDV-170D□1A
				15.8 Nm	5 kW	SGMSV-50DDA6F	SGDV-170D□1A
			With brake	3.18 Nm	1 kW	SGMSV-10DDA6H	SGDV-3R5D□1A
				4.9 Nm	1.5 kW	SGMSV-15DDA6H	SGDV-5R4D□1A
				6.36 Nm	2 kW	SGMSV-20DDA6H	SGDV-8R4D□1A
				7.96 Nm	2.5 kW	SGMSV-25DDA6H	SGDV-120D□1A
				9.8 Nm	3 kW	SGMSV-30DDA6H	SGDV-120D□1A
				12.6 Nm	4 kW	SGMSV-40DDA6H	SGDV-170D□1A
				15.8 Nm	5 kW	SGMSV-50DDA6H	SGDV-170D□1A
		Absolute encoder (20 bit) Straight shaft with key and tap	Without brake	3.18 Nm	1 kW	SGMSV-10D3A6F	SGDV-3R5D□1A
				4.9 Nm	1.5 kW	SGMSV-15D3A6F	SGDV-5R4D□1A
				6.36 Nm	2 kW	SGMSV-20D3A6F	SGDV-8R4D□1A
				7.96 Nm	2.5 kW	SGMSV-25D3A6F	SGDV-120D□1A
				9.8 Nm	3 kW	SGMSV-30D3A6F	SGDV-120D□1A
				12.6 Nm	4 kW	SGMSV-40D3A6F	SGDV-170D□1A
				15.8 Nm	5 kW	SGMSV-50D3A6F	SGDV-170D□1A
			With brake	3.18 Nm	1 kW	SGMSV-10D3A6H	SGDV-3R5D□1A
				4.9 Nm	1.5 kW	SGMSV-15D3A6H	SGDV-5R4D□1A
				6.36 Nm	2 kW	SGMSV-20D3A6H	SGDV-8R4D□1A
				7.96 Nm	2.5 kW	SGMSV-25D3A6H	SGDV-120D□1A
				9.8 Nm	3 kW	SGMSV-30D3A6H	SGDV-120D□1A
				12.6 Nm	4 kW	SGMSV-40D3A6H	SGDV-170D□1A
				15.8 Nm	5 kW	SGMSV-50D3A6H	SGDV-170D□1A

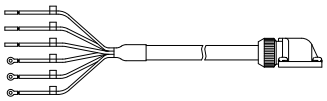
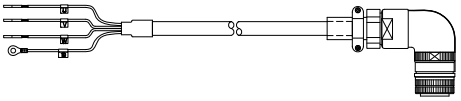
Encoder Cables

for Sigma-5 servo drive

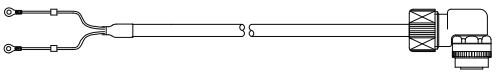
Symbol	Specifications		Model	Appearance
③	Sigma-5 incremental encoder cable for SGMJV/AV Servo motors SGMJV-□□ADA□□ SGMJV-□□AAA□□ SGMAV-□□ADA□□	1.5 m	JZSP-CSP21-01-5E-E	
		3 m	JZSP-CSP21-03-E-E	
		5 m	JZSP-CSP21-05-E-E	
		10 m	JZSP-CSP21-10-E-E	
		15 m	JZSP-CSP21-15-E-E	
		20 m	JZSP-CSP21-20-E-E	
	Sigma-5 absolute encoder cable (with a battery case) for SGMJV/AV Servo motors SGMJV-□□A3A□□ SGMAV-□□A3A□□	3 m	JZSP-CSP25-03-G□	
		5 m	JZSP-CSP25-05-G□	
		10 m	JZSP-CSP25-10-G□	
		15 m	JZSP-CSP25-15-G□	
		20 m	JZSP-CSP25-20-G□	
	Sigma-5 incremental encoder cable for SGMEV Servo motors	1.5 m	R88A-CRWA001-5C-DE	
		3 m	R88A-CRWA003C-DE	
		5 m	R88A-CRWA005C-DE	
		10 m	R88A-CRWA010C-DE	
		15 m	R88A-CRWA015C-DE	
		20 m	R88A-CRWA020C-DE	
	Sigma-5 absolute encoder cable extension with a battery case for SGMEV Servo motors **Note:** *1This cable is only an extension and must be used in conjunction with incremental encoder cable *2R88A-CRWA0□□C-DE	0.3 m	JZSP-CSP12-E	
	Sigma-5 incremental encoder cable for SGMGV/SV Servo motors SGMGV-□□DD□ SGMSV-□□DD□	1.5 m	JZSP-CVP12-01-5E-E	
		3 m	JZSP-CVP12-03-E-E	
		5 m	JZSP-CVP12-05-E-E	
		10 m	JZSP-CVP12-10-E-E	
		15 m	JZSP-CVP12-15-E-E	
		20 m	JZSP-CVP12-20-E-E	
	Sigma-5 absolute encoder cable (with a battery case) for SGMGV/SV Servo motors SGMGV-□□D3□ SGMSV-□□D3□	3 m	JZSP-CVP27-03-G□	
		5 m	JZSP-CVP27-05-G□	
		10 m	JZSP-CVP27-10-G□	
		15 m	JZSP-CVP27-15-G□	
		20 m	JZSP-CVP27-20-G□	

Power cables

Symbol	Specifications		Model	Appearance
④	For 200 V servo motors without brake SGMJV-(A5/01)A□A□1 SGMAV-(A5/01/C2)ADA□1	1.5 m	JZSP-CSM21-01-5E-E	
		3 m	JZSP-CSM21-03-E-E	
		5 m	JZSP-CSM21-05-E-E	
		10 m	JZSP-CSM21-10-E-E	
		15 m	JZSP-CSM21-15-E-E	
		20 m	JZSP-CSM21-20-E-E	
	For 200 V servo motors with brake SGMJV-(A5/01)A□A□C SGMAV-(A5/01/C2)A□A□C	1.5 m	JZSP-CSM31-01-5E-E	
		3 m	JZSP-CSM31-03-E-E	
		5 m	JZSP-CSM31-05-E-E	
		10 m	JZSP-CSM31-10-E-E	
		15 m	JZSP-CSM31-15-E-E	
		20 m	JZSP-CSM31-20-E-E	
	For 200 V servo motors without brake SGMJV-(02/04)A□A□1 SGMAV-(02/04/06)A□A□1	1.5 m	JZSP-CSM22-01-5E-E	
		3 m	JZSP-CSM22-03-E-E	
		5 m	JZSP-CSM22-05-E-E	
		10 m	JZSP-CSM22-10-E-E	
		15 m	JZSP-CSM22-15-E-E	
		20 m	JZSP-CSM22-20-E-E	
	For 200 V servo motors with brake SGMJV-(02/04)A□A□C SGMAV-(02/04/06)A□A□C	1.5 m	JZSP-CSM32-01-5E-E	
		3 m	JZSP-CSM32-03-E-E	
		5 m	JZSP-CSM32-05-E-E	
		10 m	JZSP-CSM32-10-E-E	
		15 m	JZSP-CSM32-15-E-E	
		20 m	JZSP-CSM32-20-E-E	
	For 200 V servo motors without brake SGMJV-08A□A□1 SGMAV-08A□A□1 SGMAV-10A□A□1	1.5 m	JZSP-CSM23-01-5E-E	
		3 m	JZSP-CSM23-03-E-E	
		5 m	JZSP-CSM23-05-E-E	
		10 m	JZSP-CSM23-10-E-E	
		15 m	JZSP-CSM23-15-E-E	
		20 m	JZSP-CSM23-20-E-E	
	For 200 V servo motors with brake SGMJV-08A□A□C SGMAV-08A□A□C SGMAV-10A□A□C	1.5 m	JZSP-CSM33-01-5E-E	
		3 m	JZSP-CSM33-03-E-E	
		5 m	JZSP-CSM33-05-E-E	
		10 m	JZSP-CSM33-10-E-E	
		15 m	JZSP-CSM33-15-E-E	
		20 m	JZSP-CSM33-20-E-E	
	For 200 V servo motors without brake SGMEV-(01/02/04/08)A□A□1	3 m	R88A-CAWA003S-DE	
		5 m	R88A-CAWA005S-DE	
		10 m	R88A-CAWA010S-DE	
		15 m	R88A-CAWA015S-DE	
		20 m	R88A-CAWA020S-DE	
	For 200 V servo motors with brake SGMEV-(01/02/04/08)A□A□C	3 m	R88A-CAWA003B-DE	
		5 m	R88A-CAWA005B-DE	
		10 m	R88A-CAWA010B-DE	
		15 m	R88A-CAWA015B-DE	
		20 m	R88A-CAWA020B-DE	
	For 200 V servo motors without brake SGMEV-15A□A□1	3 m	R88A-CAWB003S-DE	
		5 m	R88A-CAWB005S-DE	
		10 m	R88A-CAWB010S-DE	
		15 m	R88A-CAWB015S-DE	
		20 m	R88A-CAWB020S-DE	
	For 200 V servo motors with brake SGMEV-15A□A□C	3 m	R88A-CAWB003B-DE	
		5 m	R88A-CAWB005B-DE	
		10 m	R88A-CAWB010B-DE	
		15 m	R88A-CAWB015B-DE	
		20 m	R88A-CAWB020B-DE	
	For 400 V servo motors without brake SGMEV-(02/03/04/07/08/15)D□A□1	3 m	R88A-CAWK003S-DE	
		5 m	R88A-CAWK005S-DE	
		10 m	R88A-CAWK010S-DE	
		15 m	R88A-CAWK015S-DE	
		20 m	R88A-CAWK020S-DE	
	For 400 V servo motors with brake SGMEV-(02/03/04/07/08/15)D□A□C	3 m	R88A-CAWK003B-DE	
		5 m	R88A-CAWK005B-DE	
		10 m	R88A-CAWK010B-DE	
		15 m	R88A-CAWK015B-DE	
		20 m	R88A-CAWK020B-DE	

Symbol	Specifications		Model	Appearance
④	For 400 V servo motors without brake SGMGV-(03/05)D□A□1	1.5 m	JZSP-VVM21-01-5E-E	
		3 m	JZSP-VVM21-03-E-E	
		5 m	JZSP-VVM21-05-E-E	
		10 m	JZSP-VVM21-10-E-E	
		15 m	JZSP-VVM21-15-E-E	
		20 m	JZSP-VVM21-20-E-E	
	For 400 V servo motors with brake SGMGV-(03/05)D□A□C	1.5 m	JZSP-VVM41-01-5E-E	
		3 m	JZSP-VVM41-03-E-E	
		5 m	JZSP-VVM41-05-E-E	
		10 m	JZSP-VVM41-10-E-E	
		15 m	JZSP-VVM41-15-E-E	
		20 m	JZSP-VVM41-20-E-E	
	For 400 V servo motors SGMGV-(09/13/20)D□ SGMSV-(10/15/20/25)D□ For servomortors with brake, a separate cable (JZSP-CVB12-□□-E-E) is needed	3 m	R88A-CAWC003S-E	
		5 m	R88A-CAWC005S-E	
		10 m	R88A-CAWC010S-E	
		15 m	R88A-CAWC015S-E	
		20 m	R88A-CAWC020S-E	
	For 400 V servo motors SGMGV-(30/44)D□ SGMSV-(30/40/50)D□ For servomortors with brake, a separate cable (JZSP-CVB12-□□-E-E) is needed	3 m	R88A-CAWG003S-E	
		5 m	R88A-CAWG005S-E	
		10 m	R88A-CAWG010S-E	
		15 m	R88A-CAWG015S-E	
		20 m	R88A-CAWG020S-E	
	For 400 V servo motors SGMGV-55D□ For servomortors with brake, a separate cable (JZSP-CVB12-□□-E-E) is needed	3 m	R88A-CAWF003S-E	
		5 m	R88A-CAWF005S-E	
		10 m	R88A-CAWF010S-E	
		15 m	R88A-CAWF015S-E	
		20 m	R88A-CAWF020S-E	
	For 400 V servo motors SGMGV-(75/1A)D□ For servomortors with brake, a separate cable (JZSP-CVB12-□□-E-E) is needed	3 m	R88A-CAWH003S-E	
		5 m	R88A-CAWH005S-E	
		10 m	R88A-CAWH010S-E	
		15 m	R88A-CAWH015S-E	
		20 m	R88A-CAWH020S-E	
	For 400 V servo motors SGMGV-1ED□ For servomortors with brake, a separate cable (JZSP-CVB12-□□-E-E) is needed	3 m	R88A-CAWJ003S-E	
		5 m	R88A-CAWJ005S-E	
		10 m	R88A-CAWJ010S-E	
		15 m	R88A-CAWJ015S-E	
		20 m	R88A-CAWJ020S-E	

Brake cable (for SGMGV-09/13/20/30/44/55/75/1A/1E and SGMSV-10/15/20/25/30/40/50 Motors)

Symbol	Specifications		Model	Appearance
⑤	Brake cable only. For 400 V servo motors with brake SGMGV-(09/13/20/30/44/55/75/1A/1E)D□A□C SGMSV-(10/15/20/25/30/40/50)D□A□C	1.5 m	JZSP-CVB12-01-5E-E	
		3 m	JZSP-CVB12-03-E-E	
		5 m	JZSP-CVB12-05-E-E	
		10 m	JZSP-CVB12-10-E-E	
		15 m	JZSP-CVB12-15-E-E	
		20 m	JZSP-CVB12-20-E-E	

Connectors for power and encoder cables

Description		Applicable Servo motor	Manufacturer	Model	Appearance
Power connector kit	Servomotor side	SGMJV-(A5/01)□, SGMAV-(A5/01)□, SGMAV-C2□	J.S.T.	JZSP-CSM9-1-E-G□	
		SGMJV-(02/04)□, SGMAV-(02/04/06)□	J.S.T.	JZSP-CSM9-2-E-G□	
		SGMJV-08□, SGMAV-(08/10)□	J.S.T.	JZSP-CSM9-3-E-G□	
		SGMGV-(03/05)□	Japan Aviation Electronics Industry, Ltd	JZSP-CVM9-1-E	
		SGMGV-(09/13/20)□, SGMSV-(10/15/20/25)□	DDK Ltd	MS3108E18-10S	
		SGMGV-(30/44)□, SGMSV-(30/40/50)□	DDK Ltd	MS3108E22-22S	
		SGMGV-(55/75/1A/1E)□	DDK Ltd	MS3108E32-17S	
		SGMEV-□□A□	Hypertac	SPOC-06K-FSDN169	
		SGMEV-□□D□	Hypertac	LPRA-06B-FRBN170	
Brake connector kit	Servomotor side	SGMGV-(09/13/20/30/44/55/75/1A/1E)□, SGMSV-(10/15/20/25/30/40/50)□	DDK Ltd[*1]	CM10Y-AP2S-M-D-G□	
Encoder connector kit	Servo drive side	SGMJV-□, SGMAV-□, SGMGV-□, SGMEV-□	Molex	JZSP-CMP9-1-E-G□	
	Servomotor side	SGMJV-□, SGMAV-□	Molex	JZSP-CSP9-2-E-G□	
		SGMGV-□, SGMSV-□	DDK Ltd[*1]	CM10-AP-10S-M-D-G1	
		SGMEV-□	Hypertac	SPOC-17H-FRON169	
Power connector kit -spare part connector male -	Servomotor side (connector included with 200 V models SGMEV motors)	SGMEV-□□A□	Hypertac	SRUC-06J-MSCN236	
Power connector kit -spare part connector male -	Servomotor side (connector included with 400 V models SGMEV motors)	SGMEV-□□D□	Hypertac	LRRA06AMRPN182	
Encoder connector kit -spare part connector male -	Servomotor side (connector included with SGMEV motors)	SGMEV-□	Hypertac	SRUC-17G-MRWN087	

Note: All connectors and cables listed have IP67 protection.

[*1]The DDK connectors are not supplied. Use the model reference to request the connector to the manufacturer.

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

Cat. No. I74E-EN-03

In the interest of product improvement, specifications are subject to change without notice.

OMRON EUROPE B.V. Wegalaan 67-69, NL-2132 JD, Hoofddorp, The Netherlands. Tel: +31 (0) 23 568 13 00 Fax: +31 (0) 23 568 13 88 www.industrial.omron.eu

UNITED KINGDOM
Omron Electronics Ltd
Opal Drive, Fox Milne, Milton Keynes, MK15 0DG, UK
Tel: +44 (0) 870 752 08 61
Fax: +44 (0) 870 752 08 62
www.industrial.omron.co.uk

Austria
Tel: +43 (0) 2236 377 800
www.industrial.omron.at

Belgium
Tel: +32 (0) 2 466 24 80
www.industrial.omron.be

Czech Republic
Tel: +420 234 602 602
www.industrial.omron.cz

Denmark
Tel: +45 43 44 00 11
www.industrial.omron.dk

Finland
Tel: +358 (0) 207 464 200
www.industrial.omron.fi

France
Tel: +33 (0) 1 56 63 70 00
www.industrial.omron.fr

Germany
Tel: +49 (0) 2173 680 00
www.industrial.omron.de

Hungary
Tel: +36 1 399 30 50
www.industrial.omron.hu

Italy
Tel: +39 02 326 81
www.industrial.omron.it

Netherlands
Tel: +31 (0) 23 568 11 00
www.industrial.omron.nl

Norway
Tel: +47 (0) 22 65 75 00
www.industrial.omron.no

Poland
Tel: +48 (0) 22 645 78 60
www.industrial.omron.pl

Portugal
Tel: +351 21 942 94 00
www.industrial.omron.pt

Russia
Tel: +7 495 648 94 50
www.industrial.omron.ru

South-Africa
Tel: +27 (0)11 579 2600
www.industrial.omron.co.za

Spain
Tel: +34 913 777 900
www.industrial.omron.es

Sweden
Tel: +46 (0) 8 632 35 00
www.industrial.omron.se

Switzerland
Tel: +41 (0) 41 748 13 13
www.industrial.omron.ch

Turkey
Tel: +90 216 474 00 40
www.industrial.omron.com.tr

More Omron representatives
www.industrial.omron.eu

Authorised Distributor:

Control Systems
• Programmable logic controllers • Human-machine interfaces • Remote I/O

Motion & Drives
• Motion controllers • Servo systems • Inverters

Control Components
• Temperature controllers • Power supplies • Timers • Counters • Programmable relays
• Digital panel indicators • Electromechanical relays • Monitoring products • Solid-state relays
• Limit switches • Pushbutton switches • Low voltage switch gear

Sensing & Safety
• Photoelectric sensors • Inductive sensors • Capacitive & pressure sensors
• Cable connectors • Displacement & width-measuring sensors • Vision systems
• Safety networks • Safety sensors • Safety units/relay units • Safety door/guard lock switches

BRO_Sigma5_EN_INT03