SGMAH-□, SGMPH-□, SGMGH-□,SGMSH-□,SGMUH-□,SGMBH-□

Sigma-II rotary servo motors

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

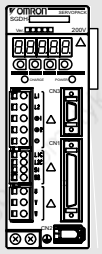
- 6 different designs provide a complete range of servo motors to meet the power, speed and performance required per each application.
- Peak torque 300% of nominal during 3 seconds
- Automatic motor recognition by servo drive
- IP67 and shaft oil seal available
- High resolution encoders
- Absolute multiturn encoder solution
- Compact design and robust construction

Ratings

- 230 VAC from 30 W to 1.5k W (rated torque from 0.09 to 4.77 Nm)
- 400 VAC from 300 W to 55 kW (rated torque from 0.95 Nm to 350 Nm)

System configuration

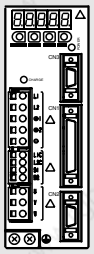
(Refer to servo drive chapter)



Servo drive with option boards for flexible system configuration

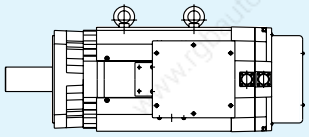
Sigma-II Servo Drive

Drive options

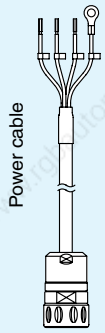


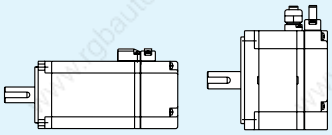
Intelligent Servo Drive

XtraDrive



SGMBH Servo Motor 1500 rpm (22 kW-55 kW)

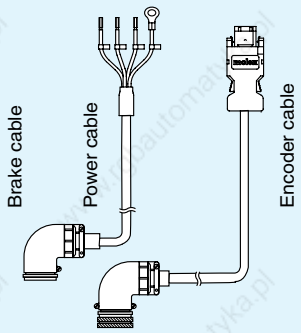


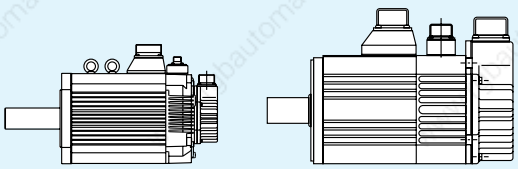


SGMAH Servo Motor 3000 rpm (30-750 W)

SGMPH Servo Motor 3000 rpm (100-1500 W)

Power and encoder cables





SGMGH Servo Motor 1500 rpm (450W-15 kW)

SGMUH Servo Motor 3000 rpm (1-5 kW)

SGMSH Servo Motor 6000 rpm (1-4 kW)

Servo motor / servo drive combination

Sigma-II rotary servo motor					Sigma-II servo drive		XtraDrive servo drive	
	Voltage	Rated torque	Capacity	Model	230 V (1-phase)	400 V (3-phase)	230 V (1-phase)	400 V (3-phase)
SGMAH (3000 min^{-1})	230 V	0.0955 N.m	30 W	SGMAH-A3A□	SGDH-A3AE-OY	-	XD-P3-MN01	-
		0.159 N.m	50 W	SGMAH-A5A□	SGDH-A5AE-OY	-	XD-P5-MN01	-
		0.318 N.m	100 W	SGMAH-01A□	SGDH-01AE-OY	-	XD-01-MN01	-
		0.637 N.m	200 W	SGMAH-02A□	SGDH-02AE-OY	-	XD-02-MN01	-
		1.27 N.m	400 W	SGMAH-04A□	SGDH-04AE-OY	-	XD-04-MN01	-
		2.39 N.m	750 W	SGMAH-08A□	SGDH-08AE-S-OY	-	XD-08-MN	-
	400 V	0.955 N.m	300 W	SGMAH-03D□	-	SGDH-05DE-OY	-	XD-05-TN
		2.07 N.m	650 W	SGMAH-07D□	-	SGDH-10DE-OY	-	XD-10-TN
SGMPH (3000 min^{-1})	230 V	0.318 N.m	100 W	SGMPH-01A□	SGDH-01AE-OY	-	XD-01-MN01	-
		0.637 N.m	200 W	SGMPH-02A□	SGDH-02AE-OY	-	XD-02-MN01	-
		1.27 N.m	400 W	SGMPH-04A□	SGDH-04AE-OY	-	XD-04-MN01	-
		2.39 N.m	750 W	SGMPH-08A□	SGDH-08AE-S-OY	-	XD-08-MN	-
		4.77 N.m	1500 W	SGMPH-15A□	SGDH-15AE-S-OY	-	XD-15-MN	-
	400 V	0.637 N.m	200 W	SGMPH-02D□	-	SGDH-05DE-OY	-	XD-05-TN
		1.27 N.m	400 W	SGMPH-04D□	-	SGDH-05DE-OY	-	XD-05-TN
		2.39 N.m	750 W	SGMPH-08D□	-	SGDH-10DE-OY	-	XD-10-TN
		4.77 N.m	1500 W	SGMPH-15D□	-	SGDH-15DE-OY	-	XD-15-TN
SGMGH (1500 min^{-1})	400 V	2.84 N.m	0.45 kW	SGMGH-05D□	-	SGDH-05DE-OY	-	XD-05-TN
		5.39 N.m	0.85 kW	SGMGH-09D□	-	SGDH-1ODE-OY	-	XD-10-TN
		8.34 N.m	1.3 kW	SGMGH-13D□	-	SGDH-15DE-OY	-	XD-15-TN
		11.5 N.m	1.8 kW	SGMGH-20D□	-	SGDH-20DE-OY	-	XD-20-TN
		18.6 N.m	2.9 kW	SGMGH-30D□	-	SGDH-30DE-OY	-	XD-30-TN
		28.4 N.m	4.4 kW	SGMGH-44D□	-	SGDH-50DE-OY	-	XD-50-TN
		35.0 N.m	5.5 kW	SGMGH-55D□	-	SGDH-60DE-OY	-	-
		48.0 N.m	7.5 kW	SGMGH-75D□	-	SGDH-75DE-OY	-	-
		70.0 N.m	11 kW	SGMGH-1AD□	-	SGDH-1ADE-OY	-	-
		95.4 N.m	15 kW	SGMGH-1ED□	-	SGDH-1EDE-OY	-	-
SGMSH (3000 min^{-1})	400 V	3.18 N.m	1.0 kW	SGMSH-10D□	-	SGDH-10DE-OY	-	XD-10-TN
		4.90 N.m	1.5 kW	SGMSH-15D□	-	SGDH-15DE-OY	-	XD-15-TN
		6.36 N.m	2.0 kW	SGMSH-20D□	-	SGDH-20DE-OY	-	XD-20-TN
		9.80 N.m	3.0 kW	SGMSH-30D□	-	SGDH-30DE-OY	-	XD-30-TN
		12.6 N.m	4.0 kW	SGMSH-40D□	-	SGDH-50DE-OY	-	XD-50-TN
		15.8 N.m	5.0 kW	SGMSH-50D□	-	SGDH-50DE-OY	-	XD-50-TN
SGMUH (6000 min^{-1})	400 V	1.59 N.m	1.0 kW	SGMUH-10D□	-	SGDH-10DE-OY	-	XD-10-TN
		2.45 N.m	1.5 kW	SGMUH-15D□	-	SGDH-15DE-OY	-	XD-15-TN
		4.9 N.m	3.0 kW	SGMUH-30D□	-	SGDH-30DE-OY	-	XD-30-TN
		6.3 N.m	4.0 kW	SGMUH-40D□	-	SGDH-50DE-OY	-	XD-50-TN
SGMBH (1500 min^{-1})	400 V	140 Nm	22 kW	SGMBH-2BD□	-	SGDH-2BDE	-	-
		191 Nm	30 kW	SGMBH-3ZD□	-	SGDH-3ZDE	-	-
		236 Nm	37 kW	SGMBH-3GD□	-	SGDH-3GDE	-	-
		286 Nm	45 kW	SGMBH-4ED□	-	SGDH-4EDE	-	-
		350 Nm	55 kW	SGMBH-5ED□	-	SGDH-5EDE	-	-

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

SGMAH - 01 A 1 A 6 S D - OY

Sigma-II servo motor type
- SGMAH: Super high power rate type
- SGMPH: Cube type
- SGMGH: High-speed feed type
- SGMSH: Super high power rate type
- SGMUH: High speed type

Capacity (kW)

Code	SGMAH 3000 min⁻¹	SGMPH 3000 min⁻¹	SGMGH 1500 min⁻¹	SGMSH 3000 min⁻¹	SGMUH 6000 min⁻¹
A3	0.03				
A5	0.05				
01	0.1	0.1			
02	0.2	0.2			
03	0.3				
04	0.4	0.4			
05			0.45		
06					
07	0.65				
08	0.75	0.75			
09			0.85		
10				1.0	1.0
12					
13			1.3		
15		1.5		1.5	1.5
20			1.8	2.0	
22					
30			2.9	3.0	3.0
32					
40				4.0	4.0
44			4.4		
50				5.0	
55			5.5		
60					
75			7.5		
1A			11		
1E			15		

Voltage
- A: 230 V
- D: 400 V

Connector specifications

Blank	No option
D	Hypertac connector (SGMAH,SGMPH)

Brake, oil seal specifications

1	No brake, no oil/dust seal
S	Oil seal
B	90 V brake
C	24 V brake
D	Oil seal + 90 DC brake
E	Oil seal + 24 VDC brake
F	Dust seal
G	Dust seal + 90 VDC brake
H	Dust seal + 24 VDC brake

Shaft end specifications

Code	Shaft end	Type				
		SGMAH	SGMPH	SGMGH	SGMSH	SGMUH
2	Straight, no key	○	○	○	○	
4	Straight, key	○	○			
6	Straight, key, tapped	◎	◎	◎	◎	◎
8	Straight, tapped	○	○			

◎: Standard ○: Option

Design procedure:
- A: Standard
- E: SGMPH (IP67)
- F: SGMAH (prepared for oil seal mounting)

Serial encoder specifications

Code	Encoder	Type				
		SGMAH	SGMPH	SGMGH	SGMSH	SGMUH
1	16-bit absolute	○	○			
2	17-bit absolute			○	○	
A	13-bit incremental	◎	◎			
B	16-bit incremental	○	○			
C	17-bit incremental			◎	◎	◎

◎: Standard ○: Option

SGMBH - 2 B D 2 A □ □

Sigma-II series large
Type : SGMBH

Motor output
2B: 22 kW 4E: 45 kW
3Z: 30 kW 5E: 55 kW
3G: 37 kW

Voltage
D:400 V

Encoder specifications
2:17-bit absolute (standard)
C:17-bit incremental (standard)
3: 20-bit absolute (option)

Design revision
A: Max. torque 200%

Motor specifications
- 2 : Flange, straight shaft
- 6 : Flange, straight shaft (with key and tap)

} For 45 kW or less

- K : Foot mount, straight shaft
- L : Foot mount, straight shaft (with key and tap)

} For 37 kW or more

Option
1: Oil seal (V type)
B: Oil seal (V type) and holding brake (90 VDC)
C: Oil seal (V type) and holding brake (24 VDC)
S: Oil seal (S type)
D: Oil seal (S type) and holding brake (90 VDC)
E: Oil seal (S type) and holding brake (24 VDC)
Note : Options are not available for 55 kW motors.

Servo motor specifications

Type SGMAH, 230 V/400 V

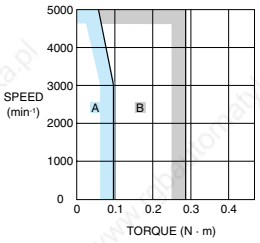
Ratings and specifications

Applied voltage		230 V						400 V	
Servo motor model SGMAH- □		A3A□	A5A□	01A□	02A□	04A□	08A□	03D□	07D□
Rated output	W	30	50	100	200	400	750	300	650
Rated torque	N·m	0.096	0.159	0.318	0.637	1.27	2.39	0.955	2.07
Instantaneous peak torque	N·m	0.286	0.477	0.955	1.91	3.82	7.16	3.82	7.16
Rated current	A (rms)	0.44	0.64	0.91	2.1	2.8	4.4	1.3	2.2
Instantaneous max. current	A (rms)	1.3	2.0	2.8	6.5	8.5	13.4	5.1	7.7
Rated speed	min^{-1}	3000							
Max. speed	min^{-1}	5000							
Torque constant	N·m/A (rms)	0.238	0.268	0.378	0.327	0.498	0.590	0.837	1.02
Rotor moment of inertia (JM)	$kg·m^2x10^{-4}$	0.017	0.022	0.036	0.106	0.173	0.672	0.173	0.672
Allowable load moment of inertia (JL)	Multiple of (JM)	30				20			
Rated power rate	kW/s	5.49	11.5	27.8	38.2	93.7	84.8	52.9	63.8
Rated angular acceleration	rad/s^2	57500	72300	87400	60100	73600	35500	55300	30800
Applicable encoder	Standard	Incremental encoder (13 bits)							
	Option	Incremental/absolute encoder (16 bits)							
Holding brake moment of inertia J	$kg·m^2x10^{-4}$	0.0085			0.058		0.14	0.058	0.14
Basic specifications	Time rating	Continuous							
	Insulation class	Class B							
	Ambient temperature	0 to +40 °C							
	Ambient humidity	20 to 80% (non-condensing)							
	Vibration class	15 µm or below							
	Enclosure	Totally-enclosed, self-cooled, IP55 (excluding shaft opening)							
	Vibration resistance	Vibration acceleration 49 m/s2							
	Mounting	Flange-mounted							

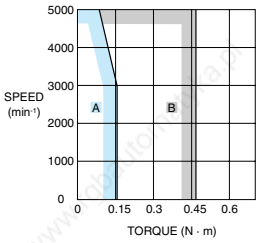
Torque-speed charecteristics

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

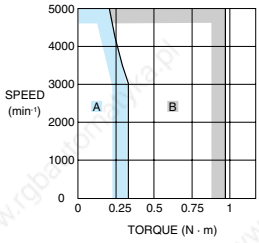
SGMAH-A3A



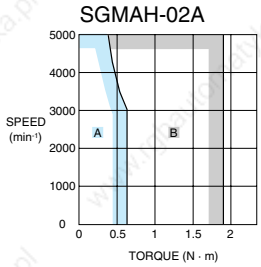
SGMAH-A5A



SGMAH-01A



SGMAH-02A



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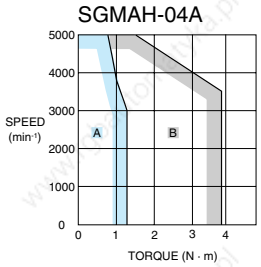

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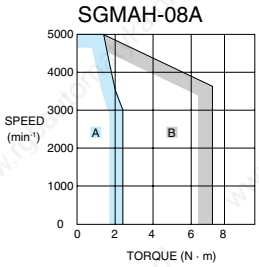
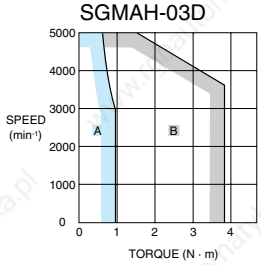
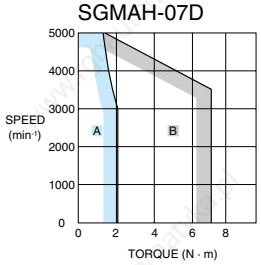


SGMAH-03D



SGMAH-07D



Type SGMPH, 230 V/400 V

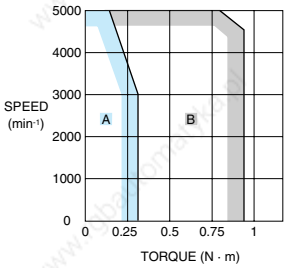
Ratings and specifications

Applied voltage		230 V					400 V			
Servo motor model SGMPH-□		01A□	02A□	04A□	08A□	15A□	02D□	04D□	08D□	15D□
Rated output	W	100	200	400	750	1500	200	400	750	1500
Rated torque	N·m	0.318	0.637	1.27	2.39	4.77	0.637	1.27	2.39	4.77
Instantaneous peak torque	N·m	0.955	1.91	3.82	7.16	14.3	1.91	3.82	7.16	14.3
Rated current	A (rms)	0.89	2.0	2.6	4.1	7.5	1.4	1.4	2.6	4.5
Instantaneous max. current	A (rms)	2.8	6.0	8.0	13.9	23.0	4.6	4.4	7.8	13.7
Rated speed	min^{-1}	3000								
Max. speed	min^{-1}	5000								
Torque constant	N·m/A (rms)	0.392	0.349	0.535	0.641	0.687	0.481	0.963	0.994	1.14
Rotor moment of inertia (JM)	$kg·m^2x10^{-4}$	0.0491	0.193	0.331	2.10	4.02	0.193	0.331	2.10	4.02
Allowable load moment of inertia (JL)	Multiple of (JM)	25	15	7	5		15	7	5	
Rated power rate	kW/s	20.6	21.0	49.0	27.1	56.7	21.0	49.0	27.1	56.7
Rated angular acceleration	rad/s^2	64800	33000	38500	11400	11900	33000	38500	11400	11900
Applicable encoder	Standard	Incremental encoder (13 bits)								
	Option	Incremental/absolute encoder (16 bits)								
Holding brake moment of inertia J	$kg·m^2x10^{-4}$	0.029	0.109		0.875		0.109		0.875	
Basic specifications: Time rating		Continuous								
Basic specifications: Insulation class		Class B								
Basic specifications: Ambient temperature		0 to +40 °C								
Basic specifications: Ambient humidity		20 to 80% (non-condensing)								
Basic specifications: Vibration class		15 µm or below								
Basic specifications: Enclosure		Totally-enclosed, self-cooled, IP55 (excluding shaft opening)								
Basic specifications: Vibration resistance		Vibration acceleration 49 m/s2								
Basic specifications: Mounting		Flange-mounted								

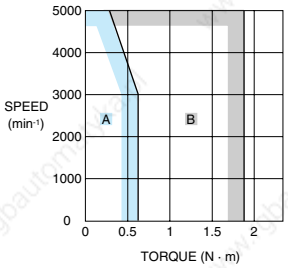
Torque-speed charecteristics

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

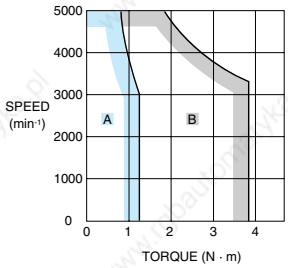
SGMPH-01A



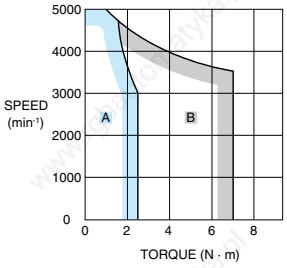
SGMPH-02A



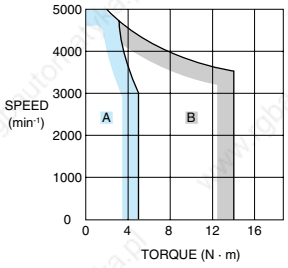
SGMPH-04A



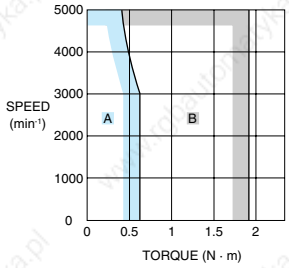
SGMPH-08A



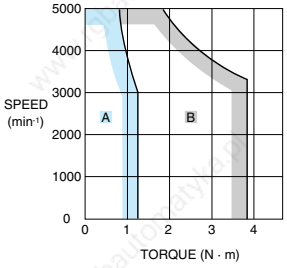
SGMPH-15A



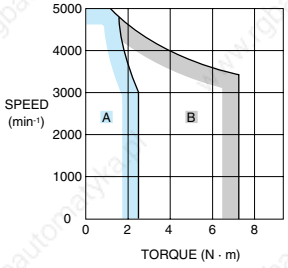
SGMPH-02D



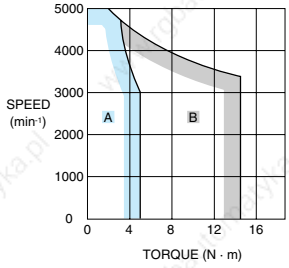
SGMPH-04D



SGMPH-08D



SGMPH-15D



Type SGMGH, 400 V

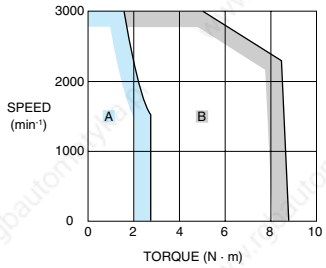
Ratings and specifications

Applied voltage		400 V									
Servo motor model SGMGH- □		05D□	09D□	13D□	20D□	30D□	44D□	55D□	75D□	1AD□	1ED□
Rated output	kW	0.45	0.85	1.3	1.8	2.9	4.4	5.5	7.5	11	15
Rated torque	N·m	2.84	5.39	8.34	11.5	18.6	28.4	35.0	48.0	70.0	95.4
Instantaneous peak torque	N·m	8.92	13.8	23.3	28.7	45.1	71.1	90.7	123	175	221
Rated current	A (rms)	1.9	3.5	5.4	8.4	11.9	16.5	20.8	25.4	28.1	37.2
Instantaneous max. current	A (rms)	5.5	8.5	14	20	28	40.5	55	65	70	85
Rated speed	min^{-1}	1500									
Max. speed	min^{-1}	3000								2000	
Torque constant	N·m/A (rms)	1.64	1.65	1.68	1.46	1.66	1.82	1.74	2.0	2.56	2.64
Rotor moment of inertia (JM)	$kg·m^2x10^{-4}$	7.24	13.9	20.5	31.7	46.0	67.5	89.0	125	281	315
Allowable load moment of inertia (JL)	Multiple of (JM)	5									
Rated power rate	kW/s	11.2	20.9	33.8	41.5	75.3	120	137	184	174	289
Rated angular acceleration	rad/s^2	3930	3880	4060	3620	4050	4210	3930	3850	2490	3030
Applicable encoder	Standard	Incremental encoder (17 bits)									
	Option	Absolute encoder (17 bits)									
Holding brake moment of inertia J	$kg·m^2x10^{-4}$	2.10			8.50					18.8	37.5
Basic specifications	Time rating	Continuous									
	Insulation class	Class F									
	Ambient temperature	0 to +40 °C									
	Ambient humidity	20 to 80% (non-condensing)									
	Vibration class	15 µm or below									
	Enclosure	Totally-enclosed, self-cooled, IP67 (excluding shaft opening)									
	Vibration resistance	Vibration acceleration 24.5 m/s2									
	Mounting	Flange-mounted									

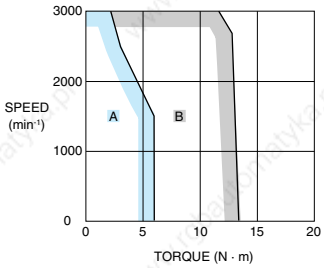
Torque-speed charecteristics

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

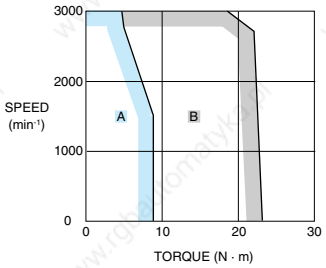
SGMGH-05D



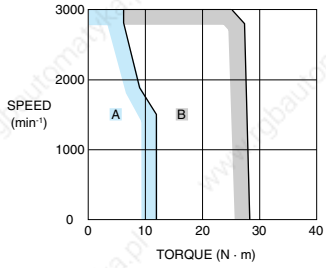
SGMGH-09D



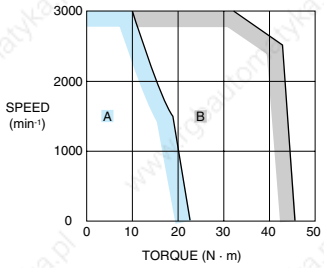
SGMGH-13D



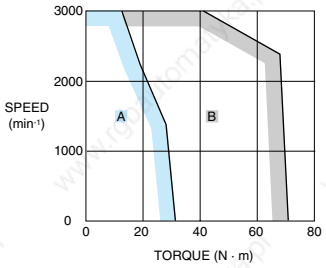
SGMGH-20D



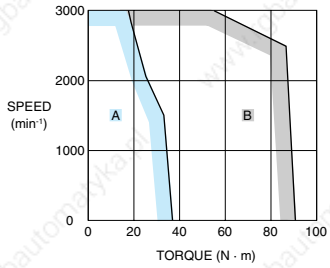
SGMGH-30D



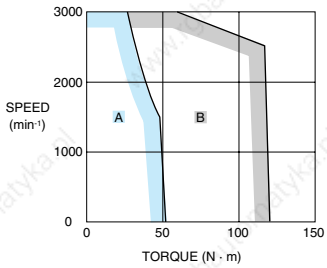
SGMGH-44D



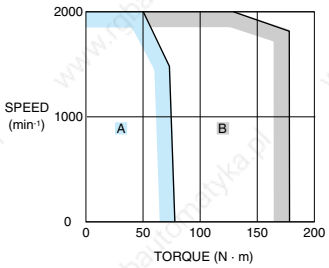
SGMGH-55D



SGMGH-75D



SGMGH-1AD



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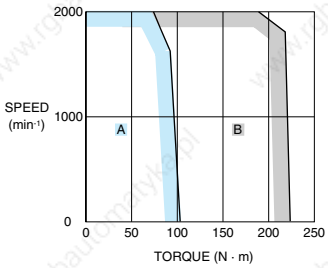


Type SGMSH, 400 V

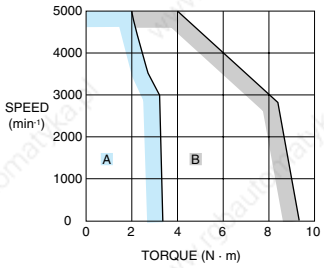
Ratings and specifications

Applied voltage		400 V					
Servo motor model SGMSH-□		**10D□**	**15D□**	**20D□**	**30D□**	**40D□**	**50D□**
Rated output	kW	1.0	1.5	2.0	3.0	4.0	5.0
Rated torque	N·m	3.18	4.9	6.36	9.8	12.6	15.8
Instantaneous peak torque	N·m	9.54	14.7	19.1	29.4	37.8	47.6
Rated current	A (rms)	2.8	4.7	6.2	8.9	12.5	13.8
Instantaneous max. current	A (rms)	8.5	14	19.5	28	38	42
Rated speed	min^{-1}	3000					
Max. speed	min^{-1}	5000					
Torque constant	N·m/A (rms)	1.27	1.15	1.12	1.19	1.07	1.24
Rotor moment of inertia (JM)	$kg·m^2x10^{-4}$	1.74	2.47	3.19	7.0	9.60	12.3
Allowable load moment of inertia (JL)	Multiple of (JM)	5					
Rated power rate	kW/s	57.9	97.2	127	137	166	202
Rated angular acceleration	rad/s^2	18250	19840	19970	14000	13160	12780
Applicable encoder	Standard	Incremental encoder (17 bits)					
	Option	Absolute encoder (17 bits)					
Holding brake moment of inertia J	$kg·m^2x10^{-4}$	0.325			2.10		
Basic specifications: Time rating		Continuous					
Basic specifications: Insulation class		Class F					
Basic specifications: Ambient temperature		0 to +40 °C					
Basic specifications: Ambient humidity		20 to 80% (non-condensing)					
Basic specifications: Vibration class		15 µm or below					
Basic specifications: Enclosure		Totally-enclosed, self-cooled, IP67 (excluding shaft opening)					
Basic specifications: Vibration resistance		Vibration acceleration 24.5 m/s2					
Basic specifications: Mounting		Flange-mounted					

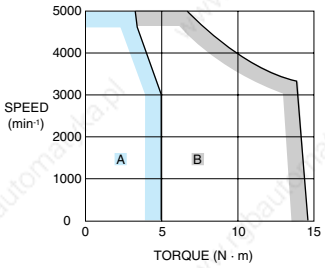
Torque-speed charecteristics

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

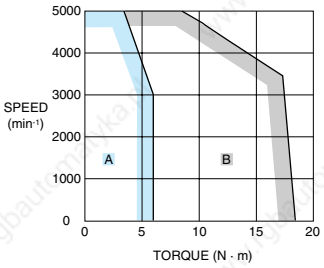
SGMSH-10D



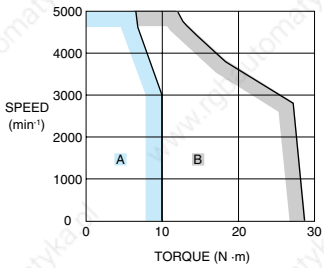
SGMSH-15D



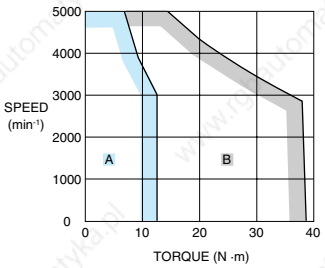
SGMSH-20D



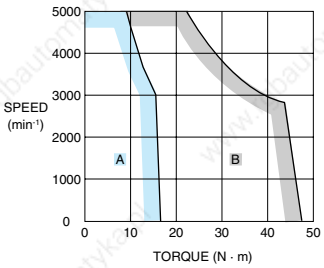
SGMSH-30D



SGMSH-40D



SGMSH-50D



Type SGMUH, 400V

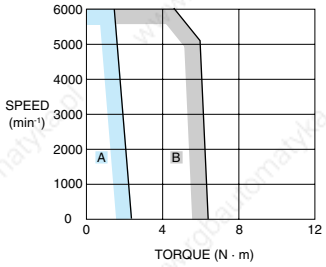
Ratings and specifications

Applied voltage		400 V			
Servo motor model SGMUH- □		10D□	15D□	30D□	40D□
Rated output	kW	1.0	1.5	3.0	4.0
Rated torque	N·m	1.59	2.45	4.9	6.3
Instantaneous peak torque	N·m	6.5	11	21.5	29
Rated current	A (rms)	2.7	4.1	8.1	9.6
Instantaneous max. current	A (rms)	8.5	14	28	38.5
Rated speed	min^{-1}	6000			
Max. speed	min^{-1}	6000			
Torque constant	N·m/A (rms)	0.81	0.83	0.81	0.80
Rotor moment of inertia (JM)	$kg·m^2x10^{-4}$	1.74	2.47	7.0	9.6
Allowable load moment of inertia (JL)	Multiple of (JM)	5			
Rated power rate	kW/s	14.5	24.3	34.3	41.3
Rated angular acceleration	rad/s^2	9130	9910	7000	6550
Applicable encoder	Standard	Incremental encoder (17 bits)			
	Option	-			
Holding brake moment of inertia J	$kg·m^2x10^{-4}$	0.25		2.10	
Basic specifications: Time rating		Continuous			
Basic specifications: Insulation class		Class F			
Basic specifications: Ambient temperature		0 to +40 °C			
Basic specifications: Ambient humidity		20 to 80% (non-condensing)			
Basic specifications: Vibration class		15 µm or below			
Basic specifications: Enclosure		Totally-enclosed, self-cooled, IP67 (excluding shaft opening)			
Basic specifications: Vibration resistance		Vibration acceleration 24.5 m/s2			
Basic specifications: Mounting		Flange-mounted			

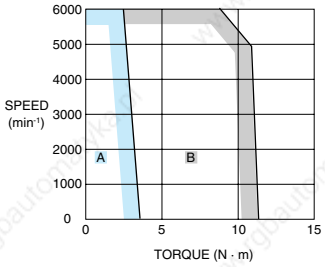
Torque-speed charecteristics

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

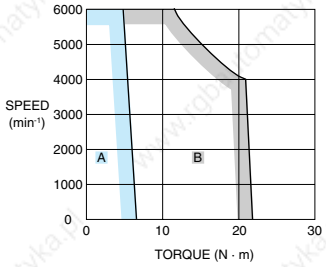
SGMUH-10D



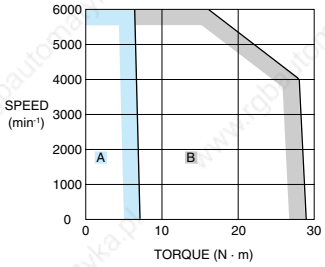
SGMUH-15D



SGMUH-30D



SGMUH-40D



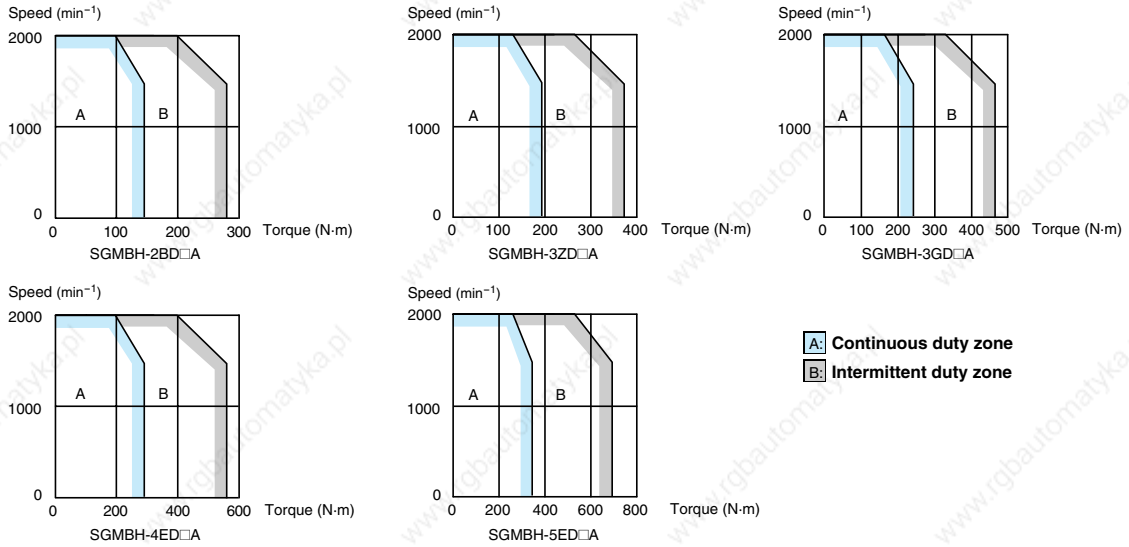
Type SGMBH, 400 V

Ratings and specifications

Type	SGMBH-□		2BD□A	3ZD□A	3GD□A	4ED□A	5ED□A
Performance	Rated output	kW	22	30	37	45	55
	Rated torque	N·m	140	191	236	286	350
	Stalling torque	N·m	140	191	236	286	350
	Instantaneous peak torque	N·m	280	382	471	572	700
	Rated current	A(rms)	58	80	100	127	150
	Innstantaneous max. current	A(rms)	120	170	210	260	310
	Rated/max. speed	min^{-1}	1500/2000				
	Rotor inertia	$kg·m^2$	0.0592	0.0773	0.139	0.151	0.197
Structure	Protective enclosure		IP44				
	Mounting method		Flange		Flange foot mount [1]		Foot mount
Encoder		Standard	Incremental, absolute: 17 bits				
		Option	Absolute: 20 bits				
Usage temperature			0 to 40 °C				
Usage humidity			20 to 80% (non-condensing)				

Note: 1. 37 kW and 45 kW motors with brakes are foot mount type.

Torque-speed charecteristics

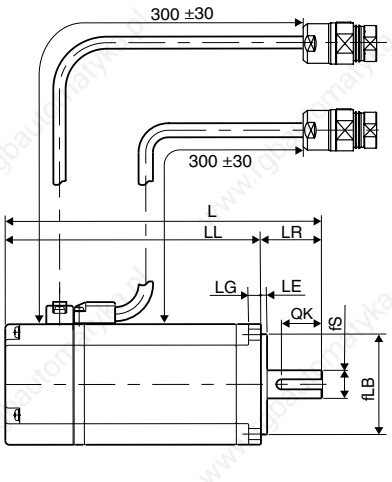


Dimensions

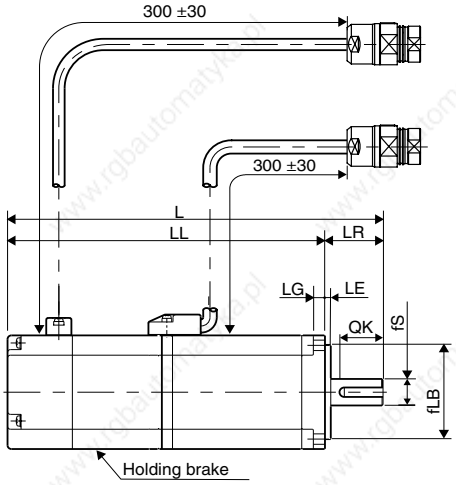
Servo motors

Type SGMAH (230/400 V)

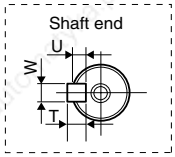
Dimensions (mm)	Without brake		With brake		LR	Flange surface						Shaft end						Aprox. Mass (Kg)	
Model	L	LL	L	LL		LA	LB	LC	LE	LG	LZ	S	QK	W	T	U	Tap × depth	Without brake	With brake
SGMAH-A3A□A6□D-OY	94.5	69.5	126	101	25	46	30^{h7}	40	2.5	5	4.3	6^{h6}	14	2	2	1.2	M2.5 x 5L	0.3	0.6
SGMAH-A5A□A6□D-OY	102.0	77	133.5	108.5														0.4	0.7
SGMAH-01A□A6□D-OY	119.5	94.5	160	135								8^{h6}		3	3	1.8	M3 x 6L	0.5	0.8
SGMAH-02A□A6□D-OY	126.5	96.5	166	136	30	70	50^{h7}	60	3	6	5.5	14^{h6}	20	5	5	3	M5 x8L	1.1	1.6
SGMAH-03D□A6□D-OY	154.5	124.5	194	164														1.7	2.2
SGMAH-04A□A6□D-OY																		1.7	2.2
SGMAH-07D□A6□D-OY	185	145	229.5	189.5	40	90	70^{h7}	80	3	8	7	16^{h6}	30					3.4	4.3
SGMAH-08A□A6□D-OY																		3.4	4.3

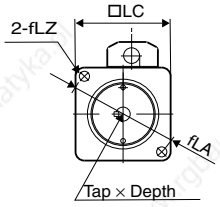


Models without brake

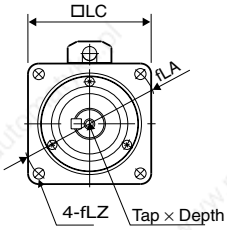


Models with brake





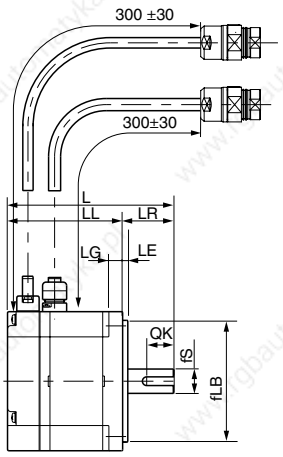
SGMAH-A3,-A5,-01



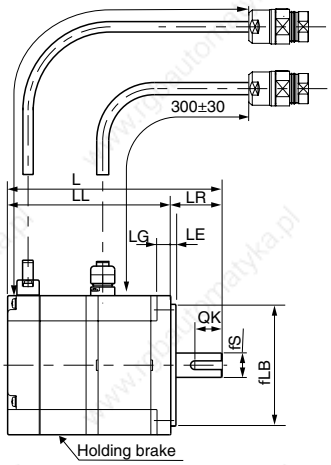
SGMAH-02 to -08

Type SGMPH (230/400 V)

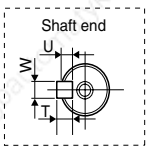
Dimensions (mm)	Without brake		With brake		LR	Flange surface						Shaft end						Aprox. Mass (Kg)	
Model	L	LL	L	LL		LA	LB	LC	LE	LG	LZ	S	QK	W	T	U	Tap × depth	Without brake	With brake
SGMPH-01□□□6□D-OY	87	62	116	91	25	70	50^{h7}	60	3	6	5.5	8^{h6}	14	3	3	1.8	M3x6L	0.7	0.9
SGMPH-02□□□6□D-OY	97	67	128.5	98.5	30	90	70^{h7}	80	3	8	7	14^{h6}	16	5	5	3	M5x8L	1.4	1.9
SGMPH-04□□□6□D-OY	117	87	148.5	118.5														2.1	2.6
SGMPH-08□□□6□D-OY	126.5	86.5	160	120	40	145	110^{h}_{7}	120	3.5	10	10	16^{h6}	22					4.2	5.7
SGMPH-15□□□6□D-OY	154.5	114.5	188	148								19^{h6}		6	6	3.5	M6x10L	6.6	8.1

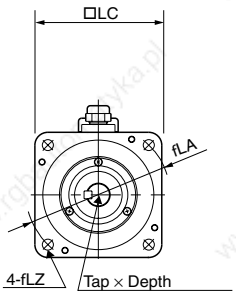


Models without brake



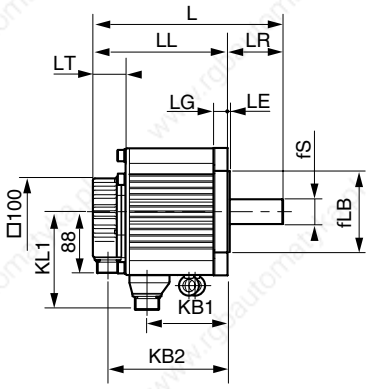
Models with brake



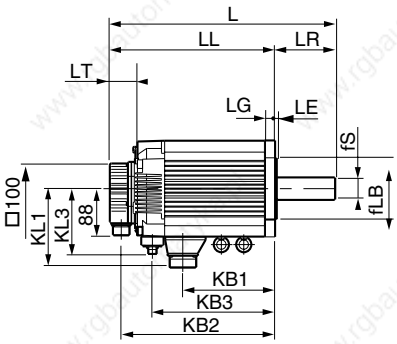


Type SGMGH (400 V)

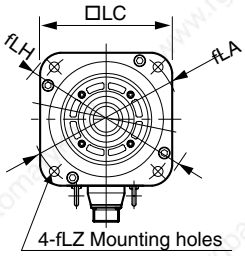
Dimensions (mm)	Without brake			With brake					LR	LT	KB1	KL1	Flange surface							Shaft end							Aprox. Mass (Kg)	
Model	L	LL	KB2	L	LL	KB2	KB3	KL3					LA	LB	LC	LE	LG	LH	LZ	S	Q	QK	W	T	U	P	Without brake	With brake
SGMGH-05D□A6□-OY	196	138	117	234	176	154	109	98	58	46	65	109	145	110	130	6	12	165	9	19	40	25	5	5	3	M5 x 12L	5.5	7.5
SGMGH-09D□A6□-OY	219	161	140	257	199	177	132				88																7.6	9.6
SGMGH-13D□A6□-OY	243	185	164	281	223	201	156				112									22			6	6	3.5		9.6	12
SGMGH-20D□A6□-OY	245	166	144	296	217	195	137	123	79	47	89	140	200	114.3	180	3.2	18	230	13.5	35	76	60	10	8	5	M12 x 25L	14	19
SGMGH-30D□A6□-OY	271	192	170	322	243	221	163				115																18	23.5
SGMGH-44D□A6□-OY	305	226	204	356	277	255	197				149																23	28.5
SGMGH-55D□A6□-OY	373	260	238	424	311	289	231		113		174	150								42	110	90	12			M16 x 32L	30	35
SGMGH-75D□A6□-OY	447	334	312	498	385	363	305				248																40	45.5
SGMGH-1AD□A6□-OY	454	338	316	499	383	362	315	142	116	47	251	168	235	200	220	4	18	270	13.5	42	110	90	12	8	5	M16 x 32L	57.5	65
SGMGH-1ED□A6□-OY	573	457	435	635	519	497	415			48	343						20			55			16	10	6	M20 x 40L	86	100

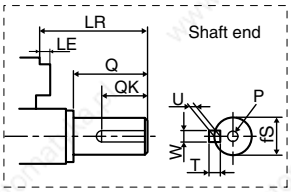


Models without brake



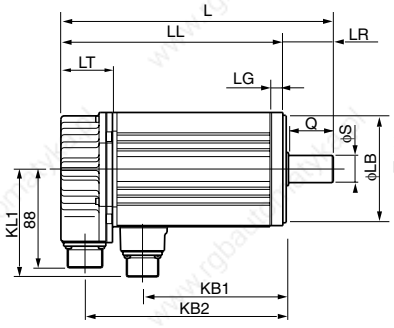
Models with brake



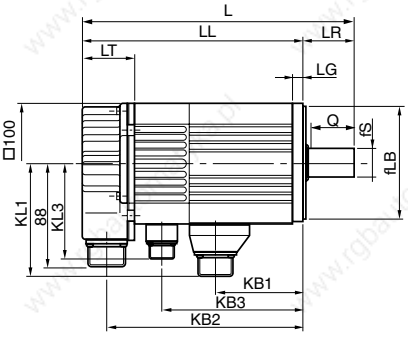


Type SGMSH (400 V)

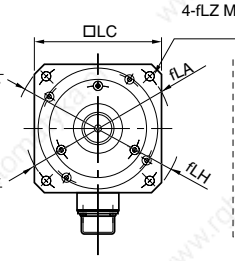
Dimensions (mm)	Without brake			With brake					LR	LT	KB 1	KL 1	Flange surface							Shaft end							Aprox. Mass (Kg)	
Model	L	LL	KB2	L	LL	KB2	KB3	KL3					LA	LB	LC	LE	LG	LH	LZ	S	Q	QK	W	T	U	P	Without brake	With brake
SGMSH-10D□A6□-OY	194	149	128	238	193	171	120	85	45	46	76	96	115	95^{h}_{7}	100	3	10	130	7	24^{h6}	40	32	8	7	4	M8 x 16L	4.6	6.0
SGMSH-15D□A6□-OY	220	175	154	264	219	197	146				102																5.8	7.5
SGMSH-20D□A6□-OY	243	198	177	287	242	220	169				125																7.0	8.5
SGMSH-30D□A6□-OY	262	199	178	300	237	216	170	98	63		124	114	145	$110^{}_{h7}$	130	6	12	165	9	28^{h6}	55	50					11	14
SGMSH-40D□A6□-OY	299	236	215	337	274	253	207				161																14	17
SGMSH-50D□A6□-OY	339	276	255	377	314	293	247				201																17	20

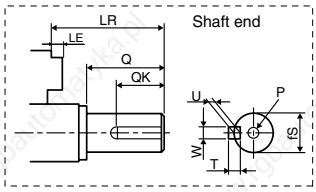


Models without brake



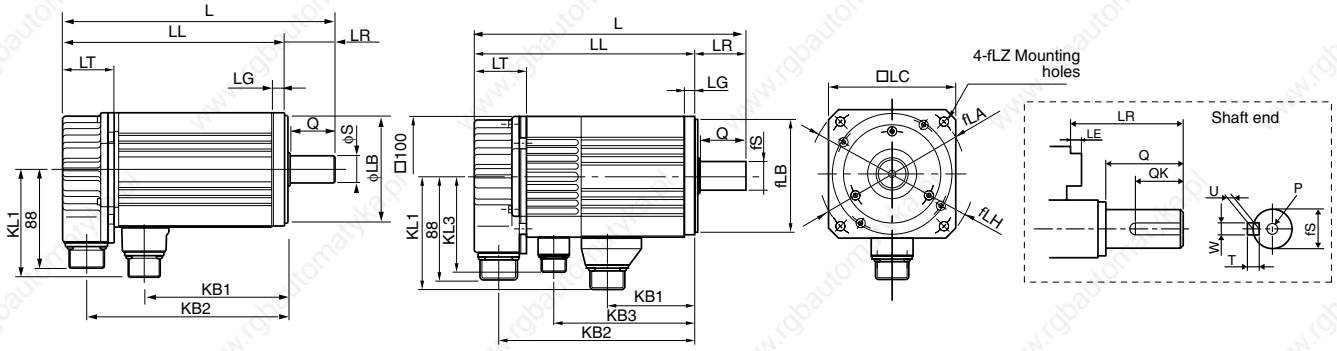
Models with brake





Type SGMUH (400 V)

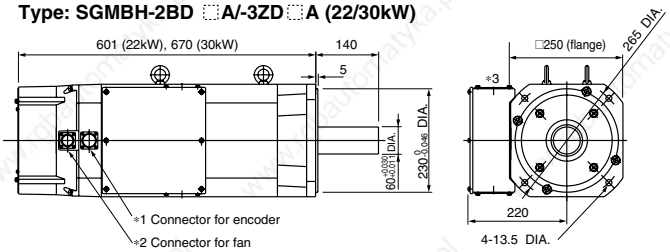
Dimensions (mm)	Without brake			With brake					LR	LT	KB1	KL1	Flange surface							Shaft end							Aprox. Mass (Kg)	
Model	L	LL	KB2	L	LL	KB2	KB3	KL3					LA	LB	LC	LE	LG	LH	LZ	S	Q	QK	W	T	U	P	With-out brake	With brake
SGMUH-10D□A6□-OY	194	149	128	238	193	171	120	85	45	46	76	96	130	110	116	3.5	10	150	9	24^{h6}	40	32	8	7	4	M8 x 16L	4.8	6.2
SGMUH-15D□A6□-OY	220	175	154	264	219	197	146				102																6.0	7.7
SGMUH-30D□A6□-OY	262	202	181	300	237	219	173	98	60		127	114	165	130	155		12	190	11	28^{h6}	55	50					11.5	14.5
SGMUH-40D□A6□-OY	327	269	245	362	302	281	210			71	164																15	18



Models without brake Models with brake

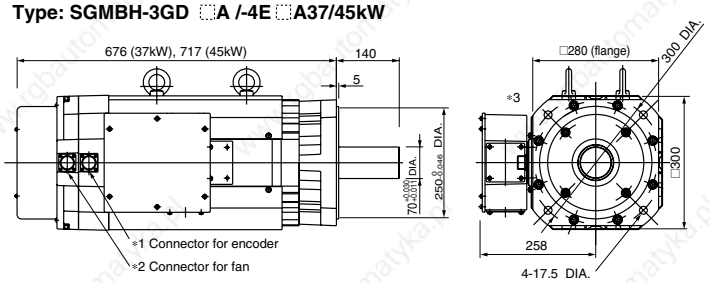
Type SGMBH (400 V)

Type: SGMBH-2BD □A/-3ZD□A (22/30kW)



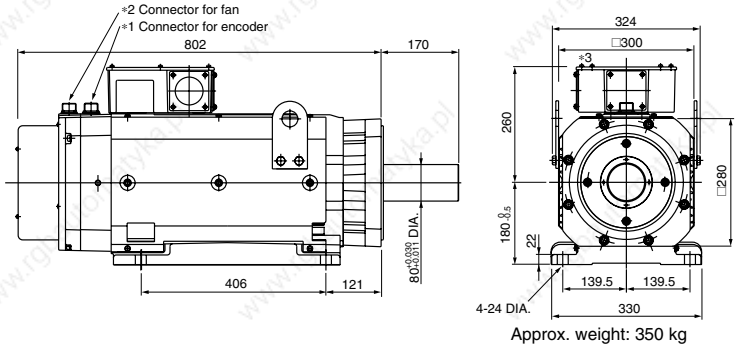
Approx. weight: 120 kg (22 kW)
140 kg (30 kW)

Type: SGMBH-3GD □A /-4E□A37/45kW



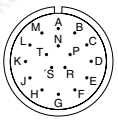
Approx. weight: 230 kg (37 kW)
250 kg (45 kW)

Type: SGMBH-5ED □A (55kW)



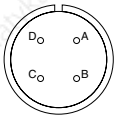
Approx. weight: 350 kg

∗1 Connector for encoder



Receptacle:	97F-3102E20-29P
Plug IP67 (L-shape):	MS3108E20-29S

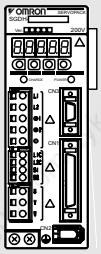
∗2 Connector for fan



Receptacle:	CE05-2A18-10PD-B
Plug IP67 (L-shape):	MS3108E18-10S

Ordering information

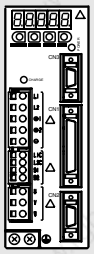
(Refer to servo drive chapter)



Servo drive with option boards for flexible system configuration

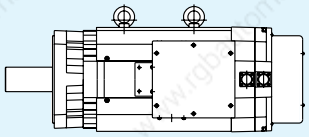
② **Sigma-II Servo Drive**

Drive options

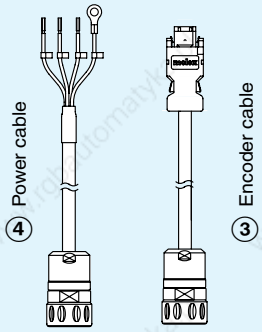


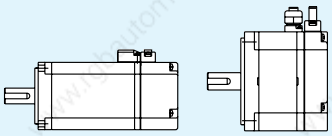
Intelligent servo drive

② **XtraDrive**



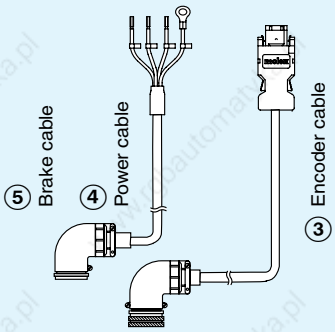
① **SGMBH Servo Motor 1500 rpm (22 kW-55 kW)**



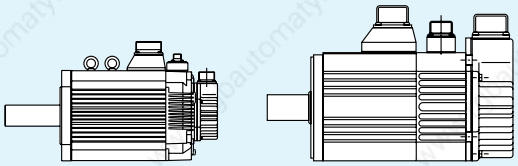


① **SGMAH Servo Motor 3000 rpm (30-750 W)**

① **SGMPH Servo Motor 3000 rpm (100-1500 W)**



Power and encoder cables



① **SGMGH Servo Motor 1500 rpm (450W-15 kW)**

① **SGMUH Servo Motor 3000 rpm (1-5 kW)**

① **SGMSH Servo Motor 6000 rpm (1-4 kW)**

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

Servo motor

① Select motor from families SGMAH, SGMPH, SGMGH, SGMUH, SGMSH, SGMBH using motor tables in next pages.

Servo drive

Note: Choosing Sigma-II drive or XtraDrive affects to the encoder cable needed.

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

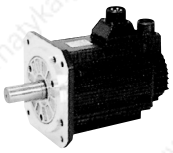
SGMAH - cylindrical servo motors 3000 r/min (30 - 750 W)

Symbol	Specifications					Servo motor model	Compatible servo drives ②	
	Voltage	Encoder and design		Rated torque	Capacity		Sigma-II	XtraDrive
①	230 V	**Incremental encoder (13 bit)** Straight shaft with key & tap	Without brake	0.096 Nm	30 W	SGMAH-A3AAA61D-OY	SGDH-A3AE-OY	XD-P3-MN01
				0.159 Nm	50 W	SGMAH-A5AAA61D-OY	SGDH-A5AE-OY	XD-P5-MN01
				0.318 Nm	100 W	SGMAH-01AAA61D-OY	SGDH-01AE-OY	XD-01-MN01
				0.637 Nm	200 W	SGMAH-02AAA61D-OY	SGDH-02AE-OY	XD-02-MN01
				1.27 Nm	400 W	SGMAH-04AAA61D-OY	SGDH-04AE-OY	XD-04-MN01
				2.39 Nm	750 W	SGMAH-08AAA61D-OY	SGDH-08AE-S-OY	XD-08-MN
			With brake	0.096 Nm	30 W	SGMAH-A3AAA6CD-OY	SGDH-A3AE-OY	XD-P3-MN01
				0.159 Nm	50 W	SGMAH-A5AAA6CD-OY	SGDH-A5AE-OY	XD-P5-MN01
				0.318 Nm	100 W	SGMAH-01AAA6CD-OY	SGDH-01AE-OY	XD-01-MN01
				0.637 Nm	200 W	SGMAH-02AAA6CD-OY	SGDH-02AE-OY	XD-02-MN01
				1.27 Nm	400 W	SGMAH-04AAA6CD-OY	SGDH-04AE-OY	XD-04-MN01
				2.39 Nm	750 W	SGMAH-08AAA6CD-OY	SGDH-08AE-S-OY	XD-08-MN
		Absolute encoder (16 bit) Straight shaft with key & tap	Without brake	0.096 Nm	30 W	SGMAH-A3A1A61D-OY	SGDH-A3AE-OY	XD-P3-MN01
				0.159 Nm	50 W	SGMAH-A5A1A61D-OY	SGDH-A5AE-OY	XD-P5-MN01
				0.318 Nm	100 W	SGMAH-01A1A61D-OY	SGDH-01AE-OY	XD-01-MN01
				0.637 Nm	200 W	SGMAH-02A1A61D-OY	SGDH-02AE-OY	XD-02-MN01
				1.27 Nm	400 W	SGMAH-04A1A61D-OY	SGDH-04AE-OY	XD-04-MN01
				2.39 Nm	750 W	SGMAH-08A1A61D-OY	SGDH-08AE-S-OY	XD-08-MN
			With brake	0.096 Nm	30 W	SGMAH-A3A1A6CD-OY	SGDH-A3AE-OY	XD-P3-MN01
				0.159 Nm	50 W	SGMAH-A5A1A6CD-OY	SGDH-A5AE-OY	XD-P5-MN01
				0.318 Nm	100 W	SGMAH-01A1A6CD-OY	SGDH-01AE-OY	XD-01-MN01
				0.637 Nm	200 W	SGMAH-02A1A6CD-OY	SGDH-02AE-OY	XD-02-MN01
				1.27 Nm	400 W	SGMAH-04A1A6CD-OY	SGDH-04AE-OY	XD-04-MN01
				2.39 Nm	750 W	SGMAH-08A1A6CD-OY	SGDH-08AE-S-OY	XD-08-MN
	400 V	**Incremental encoder (13 bit)** Straight shaft with key	Without brake	0.955 Nm	300 W	SGMAH-03DAA61D-OY	SGDH-05DE-OY	XD-05-TN
				2.07 Nm	650 W	SGMAH-07DAA61D-OY	SGDH-10DE-OY	XD-10-TN
			With brake	0.955 Nm	300 W	SGMAH-03DAA6CD-OY	SGDH-05DE-OY	XD-05-TN
				2.07 Nm	650 W	SGMAH-07DAA6CD-OY	SGDH-10DE-OY	XD-10-TN
		Absolute encoder (16 bit) Straight shaft with key	Without brake	0.955 Nm	300 W	SGMAH-03D1A61D-OY	SGDH-05DE-OY	XD-05-TN
				2.07 Nm	650 W	SGMAH-07D1A61D-OY	SGDH-10DE-OY	XD-10-TN
			With brake	0.955 Nm	300 W	SGMAH-03D1A6CD-OY	SGDH-05DE-OY	XD-05-TN
				2.07 Nm	650 W	SGMAH-07D1A6CD-OY	SGDH-10DE-OY	XD-10-TN

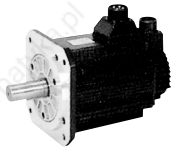
SGMPH - flat type servo motors 3000 r/min (100 - 1500 W)

Symbol	Specifications					Servo motor model	Compatible servo drives ②	
	Voltage	Encoder and design		Rated torque	Capacity		Sigma-II	XtraDrive
①	230 V	**Incremental encoder (13 bit)** Straight shaft with key & tap	Without brake	0.318 Nm	100 W	SGMPH-01AAA61D-OY	SGDH-01AE-OY	XD-01-MN01
				0.637 Nm	200 W	SGMPH-02AAA61D-OY	SGDH-02AE-OY	XD-02-MN01
				1.27 Nm	400 W	SGMPH-04AAA61D-OY	SGDH-04AE-OY	XD-04-MN01
				2.39 Nm	750 W	SGMPH-08AAA61D-OY	SGDH-08AE-S-OY	XD-08-MN
				4.77 Nm	1500 W	SGMPH-15AAA61D-OY	SGDH-15AE-S-OY	XD-15-MN
			With brake	0.318 Nm	100 W	SGMPH-01AAA6CD-OY	SGDH-01AE-OY	XD-01-MN01
				0.637 Nm	200 W	SGMPH-02AAA6CD-OY	SGDH-02AE-OY	XD-02-MN01
				1.27 Nm	400 W	SGMPH-04AAA6CD-OY	SGDH-04AE-OY	XD-04-MN01
				2.39 Nm	750 W	SGMPH-08AAA6CD-OY	SGDH-08AE-S-OY	XD-08-MN
				4.77 Nm	1500 W	SGMPH-15AAA6CD-OY	SGDH-15AE-S-OY	XD-15-MN
		Absolute encoder (16 bit) Straight shaft with key & tap	Without brake	0.318 Nm	100 W	SGMPH-01A1A61D-OY	SGDH-01AE-OY	XD-01-MN01
				0.637 Nm	200 W	SGMPH-02A1A61D-OY	SGDH-02AE-OY	XD-02-MN01
				1.27 Nm	400 W	SGMPH-04A1A61D-OY	SGDH-04AE-OY	XD-04-MN01
				2.39 Nm	750 W	SGMPH-08A1A61D-OY	SGDH-08AE-S-OY	XD-08-MN
				4.77 Nm	1500 W	SGMPH-15A1A61D-OY	SGDH-15AE-S-OY	XD-15-MN
			With brake	0.318 Nm	100 W	SGMPH-01A1A6CD-OY	SGDH-01AE-OY	XD-01-MN01
				0.637 Nm	200 W	SGMPH-02A1A6CD-OY	SGDH-02AE-OY	XD-02-MN01
				1.27 Nm	400 W	SGMPH-04A1A6CD-OY	SGDH-04AE-OY	XD-04-MN01
				2.39 Nm	750 W	SGMPH-08A1A6CD-OY	SGDH-08AE-S-OY	XD-08-MN
				4.77 Nm	1500 W	SGMPH-15A1A6CD-OY	SGDH-15AE-S-OY	XD-15-MN
	400 V	**Incremental encoder (13 bit)** Straight shaft with key	Without brake	0.637 Nm	200 W	SGMPH-02DAA61D-OY	SGDH-05DE-OY	XD-05-TN
				1.27 Nm	400 W	SGMPH-04DAA61D-OY	SGDH-05DE-OY	XD-05-TN
				2.39 Nm	750 W	SGMPH-08DAA61D-OY	SGDH-10DE-OY	XD-10-TN
				4.77 Nm	1500 W	SGMPH-15DAA61D-OY	SGDH-15DE-OY	XD-15-TN
			With brake	0.637 Nm	200 W	SGMPH-02DAA6CD-OY	SGDH-05DE-OY	XD-05-TN
				1.27 Nm	400 W	SGMPH-04DAA6CD-OY	SGDH-05DE-OY	XD-05-TN
				2.39 Nm	750 W	SGMPH-08DAA6CD-OY	SGDH-10DE-OY	XD-10-TN
				4.77 Nm	1500 W	SGMPH-15DAA6CD-OY	SGDH-15DE-OY	XD-15-TN
		Absolute encoder (16 bit) Straight shaft with key	Without brake	0.637 Nm	200 W	SGMPH-02D1A61D-OY	SGDH-05DE-OY	XD-05-TN
				1.27 Nm	400 W	SGMPH-04D1A61D-OY	SGDH-05DE-OY	XD-05-TN
				2.39 Nm	750 W	SGMPH-08D1A61D-OY	SGDH-10DE-OY	XD-10-TN
				4.77 Nm	1500 W	SGMPH-15D1A61D-OY	SGDH-15DE-OY	XD-15-TN
			With brake	0.637 Nm	200 W	SGMPH-02D1A6CD-OY	SGDH-05DE-OY	XD-05-TN
				1.27 Nm	400 W	SGMPH-04D1A6CD-OY	SGDH-05DE-OY	XD-05-TN
				2.39 Nm	750 W	SGMPH-08D1A6CD-OY	SGDH-10DE-OY	XD-10-TN
				4.77 Nm	1500 W	SGMPH-15D1A6CD-OY	SGDH-15DE-OY	XD-15-TN

SGMGH - servo motors 1500 r/min (0.45 - 15 kW)

Symbol	Specifications					Servo motor model	Compatible servo drives ②	
	Voltage	Encoder and design		Rated torque	Capacity		Sigma-II	XtraDrive
① 	400 V	**Incremental encoder (17 bit)** Straight shaft with key & tap	Without brake	2.84 Nm	0.45 kW	SGMGH-05DCA6F-OY	SGDH-05DE-OY	XD-05-TN
				5.39 Nm	0.85 kW	SGMGH-09DCA6F-OY	SGDH-10DE-OY	XD-10-TN
				8.34 Nm	1.3 kW	SGMGH-13DCA6F-OY	SGDH-15DE-OY	XD-15-TN
				11.5 Nm	1.8 kW	SGMGH-20DCA6F-OY	SGDH-20DE-OY	XD-20-TN
				18.6 Nm	2.9 kW	SGMGH-30DCA6F-OY	SGDH-30DE-OY	XD-30-TN
				28.4 Nm	4.4 kW	SGMGH-44DCA6F-OY	SGDH-50DE-OY	XD-50-TN
				35.0 Nm	5.5 kW	SGMGH-55DCA6F-OY	SGDH-60DE-OY	-
				48.0 Nm	7.5 kW	SGMGH-75DCA6F-OY	SGDH-75DE-OY	-
				70.0 Nm	11.5 kW	SGMGH-1ADCA6F-OY	SGDH-1ADE-OY	-
				95.4 Nm	15.0 kW	SGMGH-1EDCA6F-OY	SGDH-1EDE-OY	-
			With brake	2.84 Nm	0.45 kW	SGMGH-05DCA6H-OY	SGDH-05DE-OY	XD-05-TN
				5.39 Nm	0.85 kW	SGMGH-09DCA6H-OY	SGDH-10DE-OY	XD-10-TN
				8.34 Nm	1.3 kW	SGMGH-13DCA6H-OY	SGDH-15DE-OY	XD-15-TN
				11.5 Nm	1.8 kW	SGMGH-20DCA6H-OY	SGDH-20DE-OY	XD-20-TN
				18.6 Nm	2.9 kW	SGMGH-30DCA6H-OY	SGDH-30DE-OY	XD-30-TN
				28.4 Nm	4.4 kW	SGMGH-44DCA6H-OY	SGDH-50DE-OY	XD-50-TN
				35.0 Nm	5.5 kW	SGMGH-55DCA6H-OY	SGDH-60DE-OY	-
				48.0 Nm	7.5 kW	SGMGH-75DCA6H-OY	SGDH-75DE-OY	-
				70.0 Nm	11.5 kW	SGMGH-1ADCA6H-OY	SGDH-1ADE-OY	-
				95.4 Nm	15.0 kW	SGMGH-1EDCA6H-OY	SGDH-1EDE-OY	-
		Absolute encoder (17 bit) Straight shaft with key & tap	Without brake	2.84 Nm	0.45 kW	SGMGH-05D2A6F-OY	SGDH-05DE-OY	XD-05-TN
				5.39 Nm	0.85 kW	SGMGH-09D2A6F-OY	SGDH-10DE-OY	XD-10-TN
				8.34 Nm	1.3 kW	SGMGH-13D2A6F-OY	SGDH-15DE-OY	XD-15-TN
				11.5 Nm	1.8 kW	SGMGH-20D2A6F-OY	SGDH-20DE-OY	XD-20-TN
				18.6 Nm	2.9 kW	SGMGH-30D2A6F-OY	SGDH-30DE-OY	XD-30-TN
				28.4 Nm	4.4 kW	SGMGH-44D2A6F-OY	SGDH-50DE-OY	XD-50-TN
				35.0 Nm	5.5 kW	SGMGH-55D2A6F-OY	SGDH-60DE-OY	-
				48.0 Nm	7.5 kW	SGMGH-75D2A6F-OY	SGDH-75DE-OY	-
				70.0 Nm	11.5 kW	SGMGH-1AD2A6F-OY	SGDH-1ADE-OY	-
				95.4 Nm	15.0 kW	SGMGH-1ED2A6F-OY	SGDH-1EDE-OY	-
			With brake	2.84 Nm	0.45 kW	SGMGH-05D2A6H-OY	SGDH-05DE-OY	XD-05-TN
				5.39 Nm	0.85 kW	SGMGH-09D2A6H-OY	SGDH-10DE-OY	XD-10-TN
				8.34 Nm	1.3 kW	SGMGH-13D2A6H-OY	SGDH-15DE-OY	XD-15-TN
				11.5 Nm	1.8 kW	SGMGH-20D2A6H-OY	SGDH-20DE-OY	XD-20-TN
				18.6 Nm	2.9 kW	SGMGH-30D2A6H-OY	SGDH-30DE-OY	XD-30-TN
				28.4 Nm	4.4 kW	SGMGH-44D2A6H-OY	SGDH-50DE-OY	XD-50-TN
				35.0 Nm	5.5 kW	SGMGH-55D2A6H-OY	SGDH-60DE-OY	-
				48.0 Nm	7.5 kW	SGMGH-75D2A6H-OY	SGDH-75DE-OY	-
				70.0 Nm	11.5 kW	SGMGH-1AD2A6H-OY	SGDH-1ADE-OY	-
				95.4 Nm	15.0 kW	SGMGH-1ED2A6H-OY	SGDH-1EDE-OY	-

SGMSH - 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-II	XtraDrive
① 	400 V	**Incremental encoder (17 bit)** Straight shaft with key & tap	Without brake	3.18 Nm	1.0 kW	SGMSH-10DCA6F-OY	SGDH-10DE-OY	XD-10-TN
				4.9 Nm	1.5 kW	SGMSH-15DCA6F-OY	SGDH-15DE-OY	XD-15-TN
				6.36 Nm	2.0 kW	SGMSH-20DCA6F-OY	SGDH-20DE-OY	XD-20-TN
				9.8 Nm	3.0 kW	SGMSH-30DCA6F-OY	SGDH-30DE-OY	XD-30-TN
				12.6 Nm	4.0 kW	SGMSH-40DCA6F-OY	SGDH-50DE-OY	XD-50-TN
				15.8 Nm	5.0 kW	SGMSH-50DCA6F-OY	SGDH-50DE-OY	XD-50-TN
			With brake	3.18 Nm	1.0 kW	SGMSH-10DCA6H-OY	SGDH-10DE-OY	XD-10-TN
				4.9 Nm	1.5 kW	SGMSH-15DCA6H-OY	SGDH-15DE-OY	XD-15-TN
				6.36 Nm	2.0 kW	SGMSH-20DCA6H-OY	SGDH-20DE-OY	XD-20-TN
				9.8 Nm	3.0 kW	SGMSH-30DCA6H-OY	SGDH-30DE-OY	XD-30-TN
				12.6 Nm	4.0 kW	SGMSH-40DCA6H-OY	SGDH-50DE-OY	XD-50-TN
				15.8 Nm	5.0 kW	SGMSH-50DCA6H-OY	SGDH-50DE-OY	XD-50-TN
		Absolute encoder (17 bit) Straight shaft with key & tap	Without brake	3.18 Nm	1.0 kW	SGMSH-10D2A6F-OY	SGDH-10DE-OY	XD-10-TN
				4.9 Nm	1.5 kW	SGMSH-15D2A6F-OY	SGDH-15DE-OY	XD-15-TN
				6.36 Nm	2.0 kW	SGMSH-20D2A6F-OY	SGDH-20DE-OY	XD-20-TN
				9.8 Nm	3.0 kW	SGMSH-30D2A6F-OY	SGDH-30DE-OY	XD-30-TN
				12.6 Nm	4.0 kW	SGMSH-40D2A6F-OY	SGDH-50DE-OY	XD-50-TN
				15.8 Nm	5.0 kW	SGMSH-50D2A6F-OY	SGDH-50DE-OY	XD-50-TN
			With brake	3.18 Nm	1.0 kW	SGMSH-10D2A6H-OY	SGDH-10DE-OY	XD-10-TN
				4.9 Nm	1.5 kW	SGMSH-15D2A6H-OY	SGDH-15DE-OY	XD-15-TN
				6.36 Nm	2.0 kW	SGMSH-20D2A6H-OY	SGDH-20DE-OY	XD-20-TN
				9.8 Nm	3.0 kW	SGMSH-30D2A6H-OY	SGDH-30DE-OY	XD-30-TN
				12.6 Nm	4.0 kW	SGMSH-40D2A6H-OY	SGDH-50DE-OY	XD-50-TN
				15.8 Nm	5.0 kW	SGMSH-50D2A6H-OY	SGDH-50DE-OY	XD-50-TN

SGMUH - servo motors 6000 r/min (1 - 4 kW)

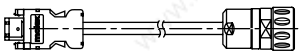
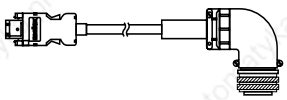
Symbol	Specifications					Servo motor model	Compatible servo drives ②	
	Voltage	Encoder and design		Rated torque	Capacity		Sigma-II	XtraDrive
①	400 V	**Incremental encoder (17 bit)** Straight shaft with key	Without brake	1.59 Nm	1.0 kW	SGMUH-10DCA61-OY	SGDH-10DE-OY	XD-10-TN
				2.45 Nm	1.5 kW	SGMUH-15DCA61-OY	SGDH-15DE-OY	XD-15-TN
				4.9 Nm	3.0 kW	SGMUH-30DCA61OY	SGDH-30DE-OY	XD-30-TN
				6.3 Nm	4.0 kW	SGMUH-40DCA61-OY	SGDH-50DE-OY	XD-50-TN
			With brake	1.59 Nm	1.0 kW	SGMUH-10DCA6C-OY	SGDH-10DE-OY	XD-10-TN
				2.45 Nm	1.5 kW	SGMUH-15DCA6C-OY	SGDH-15DE-OY	XD-15-TN
				4.9 Nm	3.0 kW	SGMUH-30DCA6C-OY	SGDH-30DE-OY	XD-30-TN
				6.3 Nm	4.0 kW	SGMUH-40DCA6C-OY	SGDH-50DE-OY	XD-50-TN

SGMBH - servo motors 1500 r/min (22 - 55 kW)

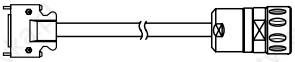
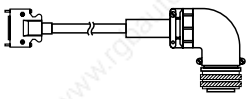
Symbol	Specifications					Servo motor model	Compatible drives ②
	Voltage	Encoder and design		Rated torque	Capacity		Sigma-II
①	400 V	**Incremental encoder (17 bit)** Straight shaft with key & tap	Without brake Flange mount	140 Nm	22 kW	SGMBH-2BDCA61	SGDH-2BDE
				191 Nm	30 kW	SGMBH-3ZDCA61	SGDH-3ZDE
				236 Nm	37 kW	SGMBH-3GDCA61	SGDH-3GDE
				286 Nm	45 kW	SGMBH-4EDCA61	SGDH-4EDE
			Without brake Foot mount	236 Nm	37 kW	SGMBH-3GDCAL1	SGDH-3GDE
				286 Nm	45 kW	SGMBH-4EDCAL1	SGDH-4EDE
				350 Nm	55 kW	SGMBH-5EDCAL1	SGDH-5EDE
			With brake Flange mount	140 Nm	22 kW	SGMBH-2BDCA6C	SGDH-2BDE
				191 Nm	30 kW	SGMBH-3ZDCA6C	SGDH-3ZDE
			With brake Foot mount	236 Nm	37 kW	SGMBH-3GDCALC	SGDH-3GDE
				286 Nm	45 kW	SGMBH-4EDCALC	SGDH-4EDE
		Absolute encoder (17 bit) Straight shaft with key & tap	Without brake Flange mount	140 Nm	22 kW	SGMBH-2BD2A61	SGDH-2BDE
				191 Nm	30 kW	SGMBH-3ZD2A61	SGDH-3ZDE
				236 Nm	37 kW	SGMBH-3GD2A61	SGDH-3GDE
				286 Nm	45 kW	SGMBH-4ED2A61	SGDH-4EDE
			Without brake Foot mount	236 Nm	37 kW	SGMBH-3GD2AL1	SGDH-3GDE
				286 Nm	45 kW	SGMBH-4ED2AL1	SGDH-4EDE
				350 Nm	55 kW	SGMBH-5ED2AL1	SGDH-5EDE
			With brake Flange mount	140 Nm	22 kW	SGMBH-2BD2A6C	SGDH-2BDE
				191 Nm	30 kW	SGMBH-3ZD2A6C	SGDH-3ZDE
			With brake Foot mount	236 Nm	37 kW	SGMBH-3GD2ALC	SGDH-3GDE
				286 Nm	45 kW	SGMBH-4ED2ALC	SGDH-4EDE

Encoder Cables

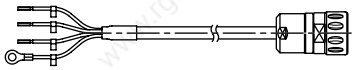
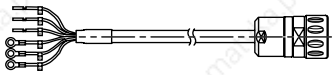
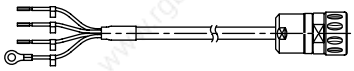
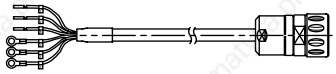
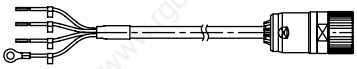
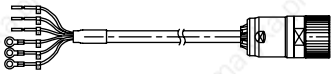
for sigma-II servo drive

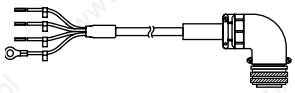
Symbol	Specifications		Model	Appearance
③	Sigma-II encoder cable for SGMAH/PH Servo motors SGMAH-□□□□□□□D-OY SGMPH-□□□□□□□D-OY	3 m	R88A-CRWA003C-DE	
		5 m	R88A-CRWA005C-DE	
		10 m	R88A-CRWA010C-DE	
		15 m	R88A-CRWA015C-DE	
		20 m	R88A-CRWA020C-DE	
	Sigma-II encoder cable for SGMGH/SH/UH Servo motors SGMGH-□ SGMSH-□ SGMUH-□, SGMBH-□	3 m	R88A-CRWB003N-E	
		5 m	R88A-CRWB005N-E	
		10 m	R88A-CRWB010N-E	
		15 m	R88A-CRWB015N-E	
		20 m	R88A-CRWB020N-E	

for XtraDrive servo drive

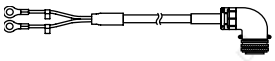
Symbol	Specifications		Model	Appearance
③	XtraDrive encoder cable for Sigma-II (SGMAH/PH) Servo motors SGMAH-□□□□□□□D-OY SGMPH-□□□□□□□D-OY	3 m	XD-CRWA003-DE	
		5 m	XD-CRWA005-DE	
		10 m	XD-CRWA010-DE	
		15 m	XD-CRWA015-DE	
		20 m	XD-CRWA020-DE	
	XtraDrive encoder cable for Sigma-II (SGMGH/SH/UH/BH) Servo motors SGMGH-□ SGMSH-□ SGMUH-□	3 m	XD-CRWB003N-E	
		5 m	XD-CRWB005N-E	
		10 m	XD-CRWB010N-E	
		15 m	XD-CRWB015N-E	
		20 m	XD-CRWB020N-E	

Power cables

Symbol	Specifications		Model	Appearance
④	For 200 V servo motors without brake SGMAH-□□A□□□1D-OY SGMPH-(01/02/04/08)A□□41D-OY	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 SGMAH-□□A□□□CD-OY SGMPH-(01/02/04/08)A□□4CD-OY	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 SGMPH-15A□□□1D-OY	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 SGMPH-15A□□□CD-OY	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 SGMAH-□□D□□□1D-OY SGMPH-□□D□□□1D-OY	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 SGMAH-□□D□□□CD-OY SGMPH-□□D□□□CD-OY	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	
	For 400 V servo motors SGMGH-(05/09/13)D□ SGMSH-(10/15/20)D□ SGMUH-(10/15)D□ For servomortors with brake, a separate cable (R88A-CAWC0□□B-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 SGMGH-(20/30)D□ SGMSH-(30/40/50)D□ SGMUH-(30/40)D□ For servomortors with brake, a separate cable (R88A-CAWC0□□B-E) is needed	3 m	R88A-CAWD003S-E	
		5 m	R88A-CAWD005S-E	
		10 m	R88A-CAWD010S-E	
		15 m	R88A-CAWD015S-E	
		20 m	R88A-CAWD020S-E	
	For 400 V servo motors SGMGH-44D□ For servomortors with brake, a separate cable (R88A-CAWC0□□B-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 SGMGH-55D□ For servomortors with brake, a separate cable (R88A-CAWC0□□B-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 SGMGH-(75/1A)D□ For servomortors with brake, a separate cable (R88A-CAWC0□□B-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 SGMGH-1ED□ For servomortors with brake, a separate cable (R88A-CAWC0□□B-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 SGMGH/SH/UH Motors)

Symbol	Specifications		Model	Appearance
⑤	Brake cable only. For 400 V servo motors with brake SGMGH-□□D□ SGMSH-□□D□ SGMUH-□□D□	3 m	R88A-CAWC003B-E	
		5 m	R88A-CAWC005B-E	
		10 m	R88A-CAWC010B-E	
		15 m	R88A-CAWC015B-E	
		20 m	R88A-CAWC020B-E	

Connectors

Specification	Model
Hypertac power connector IP67 (for 200 V motors SGMAH/PH-□□A□□□□D-OY)	SPOC-06K-FSDN169
Hypertac power connector IP67 (for 400 V motors SGMAH/PH-□□D□□□□D-OY)	LPRA-06B-FRBN170
Hypertac encoder connector IP67 (for motors SGMAH/PH-□□□□□□□D-OY)	SPOC-17H-FRON169
Military power connector IP67 (for 400 V motors SGMGH-(05/10/13)D□, SGMSH-(10/15/20)D□ , SGMUH-(10/15)D□)) (for SGMBH-□ fan)	MS3108E18-10S
Military power connector IP67 (for 400 V motors SGMGH-(20/30/44)D□, SGMSH-(30/40/50)D□, SGMUH-(30/40)D□)	MS3108E22-22S
Military power connector IP67 (for 400 V motors SGMGH-(55/75/1A/1E)D□)	MS3108E32-17S
Military brake connector IP67 (for 400 V servo motors SGMGH-□, SGMSH-□, SGMUH-□)	MS3108E10SL-3S
Military encoder connector IP67 (for motors SGMGH-□, SGMSH-□, SGMUH-□, SGMBH-□)	MS3108E20-29S
Spare part, hypertac power connector male (connector included with the motor for 200 V models SGMAH/PH-□□A□□□□D-OY)	SRUC-06J-MSCN236
Spare part, hypertac power connector male (connector included with the motor for 400 V motors SGMAH/PH-□□D□□□□D-OY)	LRRA-06A-MRPN182
Spare part, hypertac encoder connector male (connector included with the motor for motors SGMAH/PH-□□□□□□□D-OY)	SRUC-17G-MRWN087

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. I47E-EN-01

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