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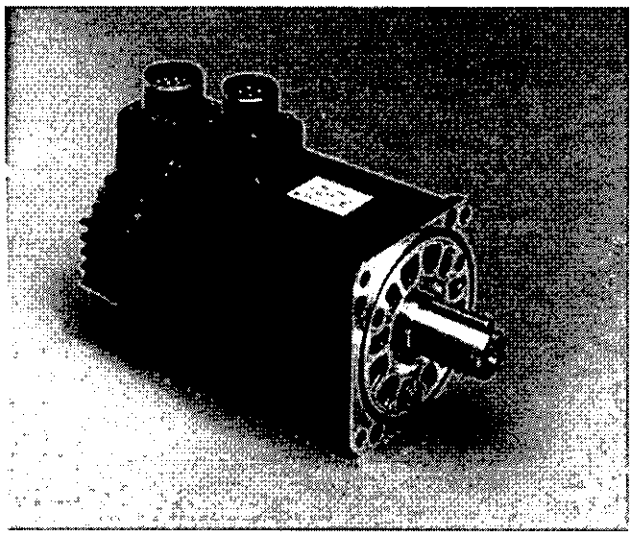
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Find the *Yaskawa SGMS-30A6AB* at our website: *Click HERE*

Super High Power Rate Series

SGMS Servomotors (3000rpm) - With Incremental / Absolute Encoder

Rated Output: 1.0kW, 1.5kW, 2.0kW, 3.0kW, 4.0kW, 5.0kW



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Design Features

1. **Compact**
   - Small sized motor
     Six frame sizes: up to 140 in. lb. RMS - torque.
2. **High Speed**
   - Rated Speed: 3000 RPM
   - Maximum Speed: 4500 RPM
3. **Encoders**
   - 4095 PPR incremental encoder standard
   - 8192 PPR absolute encoder (option)
4. **Enclosure**
   - Totally enclosed, self-cooled IP67 (excluding shaft)
   - IP67 with shaft seal (option)
5. **Application Emphasis**
   - High torque-to inertia ratio
   - Chip mounters
   - PCB drilling machines
   - Robots
   - Conveyors
   - Packaging
6. **Certified International Standards**
   - UL Recognized and c-UL pending (File # E165827), CE compliance (option)

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Servomotor Ratings and Specifications

Time Rating: Continuous
Insulation: Class F
Vibration: 15μm or less
Withstand Voltage: 1500VAC
Insulation Resistance: 500VDC 10MΩ min.

Enclosure: Totally-enclosed, self-cooled IP67 (except for shaft opening)
Ambient Temperature: 0 to 40°C
Ambient Humidity: 20 to 80% (non-condensing)
Rated Speed: 3000 rpm
Instantaneous Max Speed: 4500 rpm

Excitation: Permanent magnet
Drive Method: Direct drive
Mounting: Flange-mounted
Painting Color: Muncell notation N1.5

MOTORS: SGMS-	Rated Output*	Rated Torque*		Instantaneous Peak Torque*		Rated Current*	Instantaneous Max. Current*
	kW (HP)	N • m	kgf • cm (lb • in)	N • m	kgf • cm (lb • in)	A (rms)	A (rms)
10A□A	1.0 (1.3)	3.18	32.4 (28.2)	9.54	97.2 (84.4)	5.7	17
15A□A	1.5 (2.0)	4.9	50 (43)	14.7	150 (130)	9.5	28
20A□A	2.0 (2.7)	6.36	65 (56.4)	19.1	195 (169)	12.4	42
30A□A	3.0 (4.0)	9.8	100 (87)	29.4	300 (260)	18.8	56
40A□A	4.0 (5.4)	12.6	129 (112)	37.8	387 (336)	24.3	77
50A□A	5.0 (6.7)	15.8	161 (140)	47.6	486 (422)	28.2	84

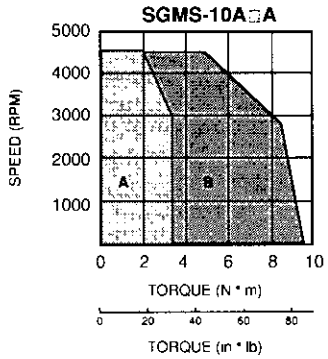
MOTORS: SGMS-	Torque Constant		Moment of Inertia		Holding Brake Torque	Holding Brake Inertia		Allowable Load Inertia	Rated Power Rate*	Rated Angular Acceleration*	Inertia Time Constant	Inductive Time Constant
	N • m/A (rms)	kgf • cm/A (lb • in/A) (rms)	$kg \cdot m^2 \times 10^{-4}$	$gf \cdot cm \cdot s^2$ ($lb \cdot in \cdot s^2 \times 10^{-3}$)	N • m	$kg \cdot m^2 \times 10^{-4}$	$gf \cdot cm \cdot s^2$ ($lb \cdot in \cdot s^2 \times 10^{-3}$)	$kg \cdot m^2 \times 10^{-4}$	kW/s	rad/s^2	ms	ms
10A□A	0.64	6.5 (5.6)	1.74	1.78 (1.54)	7.84	0.215	0.219 (0.190)	1.74	57.9	18250	0.87	7.1
15A□A	0.57	5.8 (5.1)	2.47	2.52 (2.19)				2.47	97.2	19840	0.71	7.7
20A□A	0.56	5.7 (5.0)	3.19	3.26 (2.82)				3.19	127	19970	0.58	8.3
30A□A	0.57	5.8 (5.1)	7.00	7.14 (6.20)	2.0	1.85	1.89 (1.64)	7.0	137	14000	0.74	13.0
40A□A	0.55	5.6 (4.9)	9.60	9.80 (8.50)				9.6	166	13160	0.60	14.1
50A□A	0.61	6.2 (5.4)	12.3	12.6 (10.9)				12.3	202	12780	0.57	14.7

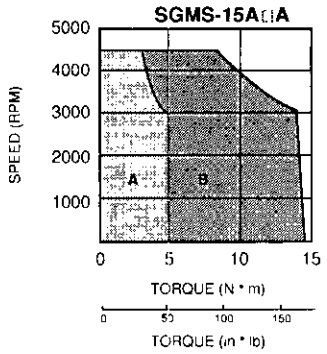
* These items and torque-speed characteristics quoted in combination with an SGDB Servo Amplifier at an armature winding temperature of 20°C.

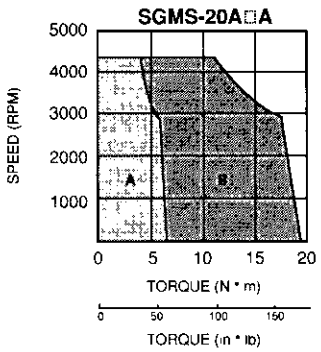
Note: These characteristics can be obtained when the following heat sinks (steel plates) are used for cooling purposes:
Type 10A□A to 20A□A: 300 × 300 × 12 (mm) (11.81 × 11.81 × 0.47 (in))
Type 30A□A to 50A□A: 400 × 400 × 20 (mm) (15.75 × 15.75 × 0.79 (in))

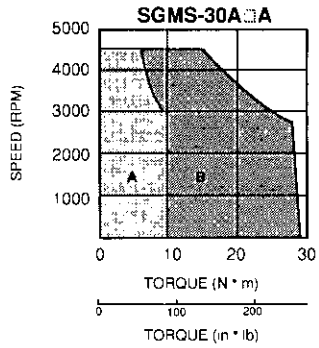
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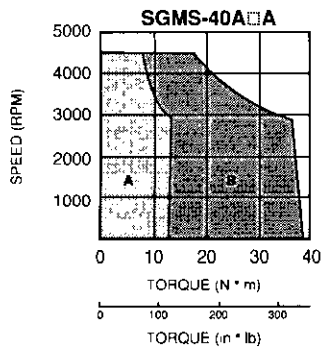
Speed / Torque Curves

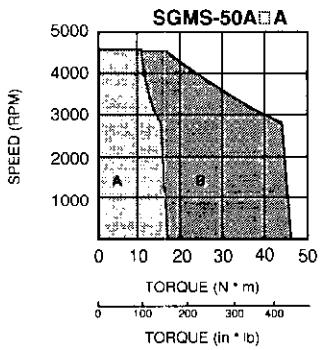












A : CONTINUOUS DUTY ZONE

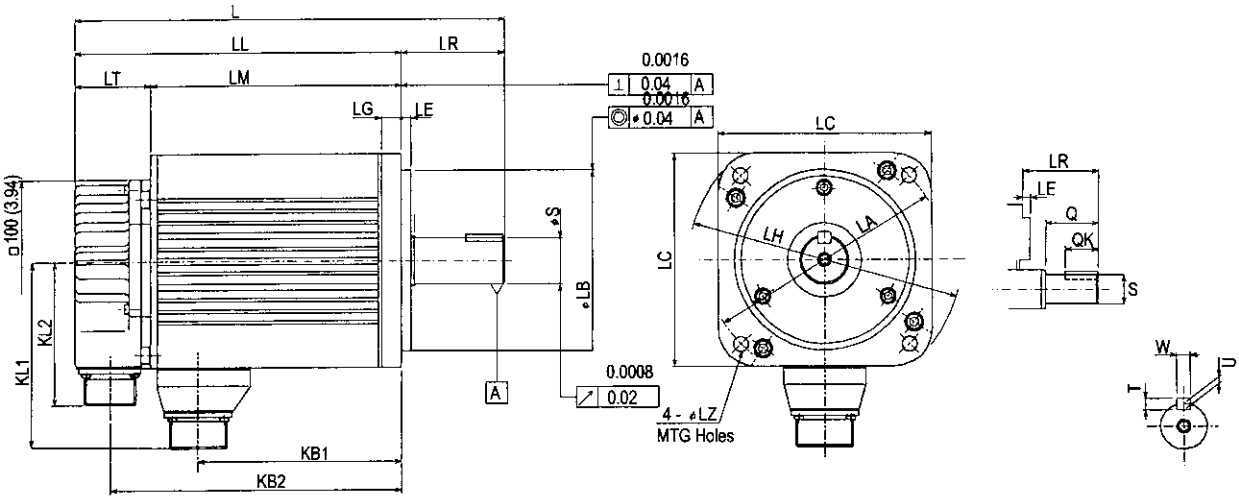
B : INTERMITTENT DUTY ZONE

SGMS

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Dimensions in inches (mm)

(1) 4096 PPR Incremental Encoder



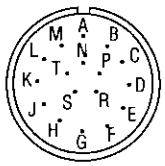
Type SGMS-	L	LL	LM	LR	LT	KB1	KB2	KL1	KL2	Flange Dimensions								Shaft End Dimension		Approx. Mass lb (kg)
										LA	LB	LC	LE	LG	LH	LJ	LZ	S	Q	
10A6AB	7.64 (194)	5.87 (149)	4.06 (103)	1.77 (45)	1.81 (46)	2.99 (76)	5.04 (128)	3.78 (96)	3.43 (87)	4.53 (115)	3.74 (95) $^{0}_{-.035}$	3.94 (100)	0.12 (3)	0.39 (10)	5.12 (130)	1.77 (45)	0.28 (7)	0.94 (24) $^{0}_{-.013}$	1.57 (40)	10.1 (4.6)
15A6AB	8.66 (220)	6.89 (175)	5.08 (129)	1.77 (45)	1.81 (46)	4.02 (102)	6.06 (154)	3.78 (96)	3.43 (87)	4.53 (115)	3.74 (95) $^{0}_{-.035}$	3.94 (100)	0.12 (3)	0.39 (10)	5.12 (130)	1.77 (45)	0.28 (7)	0.94 (24) $^{0}_{-.013}$	1.57 (40)	12.8 (5.8)
20A6AB	9.57 (243)	7.8 (198)	5.98 (152)	1.77 (45)	1.81 (46)	4.92 (125)	6.97 (177)	3.78 (96)	3.43 (87)	4.53 (115)	3.74 (95) $^{0}_{-.035}$	3.94 (100)	0.12 (3)	0.39 (10)	5.12 (130)	1.77 (45)	0.28 (7)	0.94 (24) $^{0}_{-.013}$	1.57 (40)	15.4 (7.0)
30A6AB	10.31 (262)	7.83 (199)	6.02 (153)	2.48 (63)	1.81 (46)	4.8 (122)	7.01 (178)	4.49 (114)	3.43 (87)	5.71 (145)	4.33 (110) $^{0}_{-.035}$	5.12 (130)	0.24 (6)	0.47 (12)	6.5 (165)	1.77 (45)	0.35 (9)	1.1 (28) $^{0}_{-.013}$	2.17 (55)	24.3 (11)
40A6AB	11.77 (299)	9.29 (236)	7.48 (190)	2.48 (63)	1.81 (46)	6.26 (159)	8.46 (215)	4.49 (114)	3.43 (87)	5.71 (145)	110 (4.33) $^{0}_{-.0014}$	5.12 (130)	0.24 (6)	0.47 (12)	6.5 (165)	1.77 (45)	0.35 (9)	1.1 (28) $^{0}_{-.013}$	2.17 (55)	30.9 (14)
50A6AB	13.35 (339)	10.87 (276)	9.06 (230)	2.48 (63)	1.81 (46)	7.83 (199)	10.04 (255)	4.49 (114)	3.43 (87)	5.71 (145)	110 (4.33) $^{0}_{-.0014}$	5.12 (130)	0.24 (6)	0.47 (12)	6.5 (165)	1.77 (45)	0.35 (9)	1.1 (28) $^{0}_{-.013}$	2.17 (55)	37.5 (17)

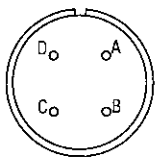
Note:
1. Incremental Encoder (4096 PPR) is used as a detector.
2. Dimensions are the same when using other incremental encoders.
3. Tolerances on the dimensions LB of flange type and S of shaft extensions are based on JIS (Japanese Industrial Standard) B0401 "Limits and Fits for Engineering."
4. There are no dimensional changes on the CE products.

SGMS

Connector Specifications

Receptacle: MS3102A20-29P
Applicable Plug: (To be prepared by customer)
Plug: MS3108B20-29S (L Type)
MS3106B20-29S (Straight Type)
Cable Clamp: MS3057-12A





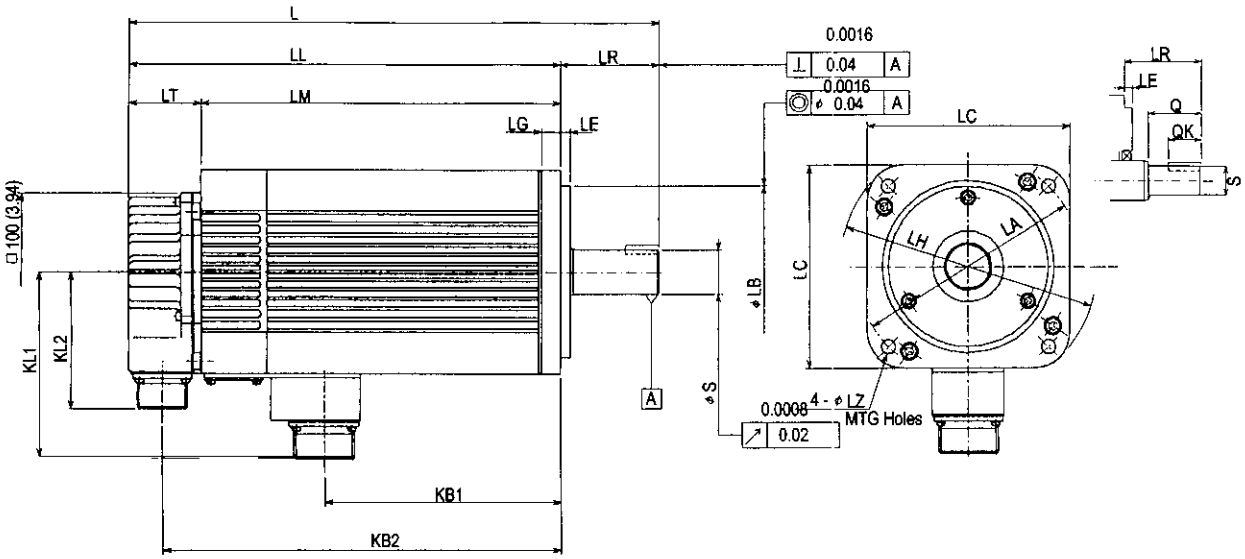
Connector Wiring on the Incremental Encoder			
A	Channel A Output	K	
B	Channel $\bar{A}$ Output	L	
C	Channel B Output	M	-
D	Channel $\bar{B}$ Output	N	-
E	Channel C Output	P	-
F	Channel $\bar{C}$ Output	R	-
G	0V	S	-
H	+5 VDC	T	-
J	FG (Frame Ground)		

Note: The above-mentioned detector side specifications are common to all the motors with incremental encoders.

Connector Wiring on the Motor Side	
A	U Phase
B	V Phase
C	W Phase
D	Ground Terminal

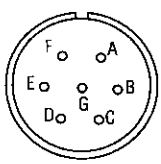
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(2) 4096 PPR Incremental Encoder, with Brake



Type SGMS-	L	LL	LM	LR	LT	KB1	KB2	KL1	KL2	Flange Dimensions								Shaft End Dimension		Approx. Mass lb (kg)
										LA	LB	LC	LE	LG	LH	LJ	LZ	S	Q	
10A6ABC	9.37 (238)	7.6 (193)	5.79 (147)	1.77 (45)	1.81 (46)	2.64 (67)	6.77 (172)	3.94 (100)	3.43 (87)	4.53 (115)	3.74 (95) $^{0}_{-0.035}$	3.94 (100)	0.12 (3)	0.39 (10)	5.12 (130)	1.77 (45)	0.28 (7)	0.94 (24) $^{0}_{-0.013}$	1.57 (40)	13.2 (6.0)
15A6ABC	10.39 (264)	8.62 (219)	6.81 (173)	1.77 (45)	1.81 (46)	3.66 (93)	7.8 (198)	3.94 (100)	3.43 (87)	4.53 (115)	3.74 (95) $^{0}_{-0.035}$	3.94 (100)	0.12 (3)	0.39 (10)	5.12 (130)	1.77 (45)	0.28 (7)	0.94 (24) $^{0}_{-0.013}$	1.57 (40)	16.5 (7.5)
20A6ABC	11.3 (287)	9.53 (242)	7.72 (196)	1.77 (45)	1.81 (46)	4.57 (116)	8.7 (221)	3.94 (100)	3.43 (87)	4.53 (115)	3.74 (95) $^{0}_{-0.035}$	3.94 (100)	0.12 (3)	0.39 (10)	5.12 (130)	1.77 (45)	0.28 (7)	0.94 (24) $^{0}_{-0.013}$	1.57 (40)	18.7 (8.5)
30A6ABC	11.81 (300)	9.33 (237)	7.52 (191)	2.48 (63)	1.81 (46)	4.45 (113)	8.5 (216)	4.69 (119)	3.43 (87)	5.71 (145)	4.33 (110) $^{0}_{-0.035}$	5.12 (130)	0.24 (6)	0.47 (12)	6.5 (165)	1.77 (45)	0.35 (9)	1.1 (28) $^{0}_{-0.013}$	2.17 (55)	30.9 (14)
40A6ABC	13.27 (337)	10.79 (274)	8.98 (228)	2.48 (63)	1.81 (46)	5.91 (150)	9.96 (253)	4.69 (119)	3.43 (87)	5.71 (145)	4.33 (110) $^{0}_{-0.035}$	5.12 (130)	0.24 (6)	0.47 (12)	6.5 (165)	1.77 (45)	0.35 (9)	1.1 (28) $^{0}_{-0.013}$	2.17 (55)	37.5 (17)
50A6ABC	13.27 (377)	12.36 (314)	10.55 (268)	2.48 (63)	1.81 (46)	7.48 (190)	11.54 (293)	4.69 (119)	3.43 (87)	5.71 (145)	4.33 (110) $^{0}_{-0.035}$	5.12 (130)	0.24 (6)	0.47 (12)	6.5 (165)	1.77 (45)	0.35 (9)	1.1 (28) $^{0}_{-0.013}$	2.17 (55)	44.1 (20)

Note:
1. Incremental Encoder (4096 PPR) is used as a detector.
2. Dimensions are the same when using other incremental encoders.
3. Tolerances on the dimensions LB of flange type and S of shaft extensions are based on JIS (Japanese Industrial Standard) B0401 "Limits and Fits for Engineering."
4. There are no dimensional changes on the CE products.

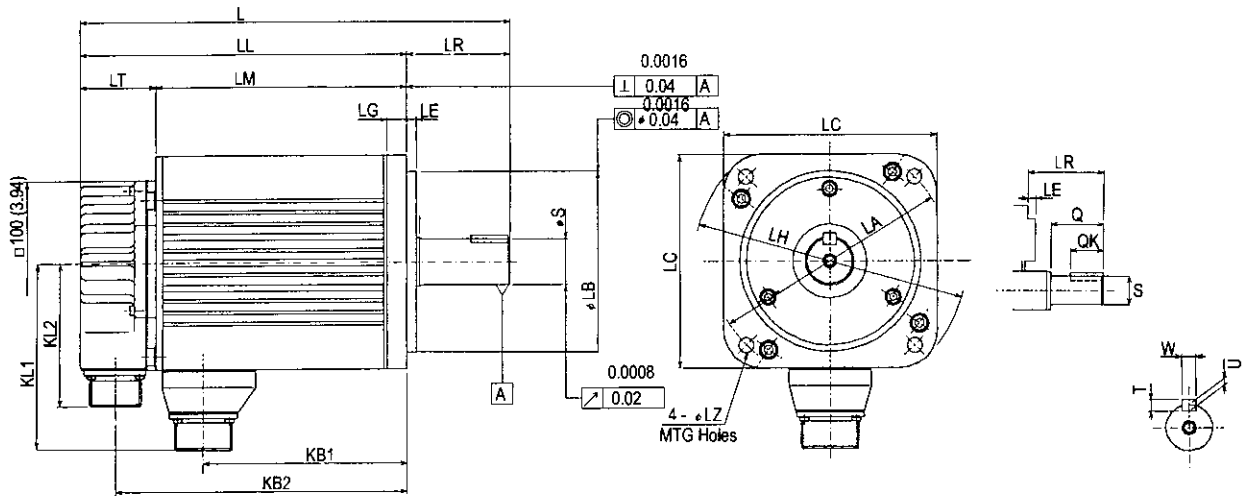


Connector Wiring on the Motor Side			
A	U Phase	E	Brake Terminal
B	V Phase	F	Brake Terminal
C	W Phase	G	-
D	FG Frame Ground		

SGMS

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(3) 8192 PPR Absolute Encoder (15 bit)



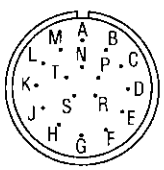
Type SGMS-	L	LL	LM	LR	LT	KB1	KB2	KL1	KL2	Flange Dimensions								Shaft End Dimension		Approx. Mass lb (kg)
										LA	LB	LC	LE	LG	LH	LJ	LZ	S	Q	
10ASAB	8.19 (208)	6.42 (163)	4.06 (103)	1.77 (45)	2.36 (60)	2.99 (76)	5.59 (142)	3.78 (96)	3.43 (87)	4.53 (115)	3.74 (95) $^{0}_{-0.035}$	3.94 (100)	0.12 (3)	0.39 (10)	5.12 (130)	1.77 (45)	0.28 (7)	0.94 (24) $^{0}_{-0.013}$	1.57 (40)	11 (5.0)
15ASAB	9.21 (234)	7.44 (189)	5.08 (129)	1.77 (45)	2.36 (60)	4.02 (102)	6.61 (168)	3.78 (96)	3.43 (87)	4.53 (115)	3.74 (95) $^{0}_{-0.035}$	3.94 (100)	0.12 (3)	0.39 (10)	5.12 (130)	1.77 (45)	0.28 (7)	0.94 (24) $^{0}_{-0.013}$	1.57 (40)	13.7 (6.2)
20ASAB	10.12 (257)	8.35 (212)	5.98 (152)	1.77 (45)	2.36 (60)	4.92 (125)	7.52 (191)	3.78 (96)	3.43 (87)	4.53 (115)	3.74 (95) $^{0}_{-0.035}$	3.94 (100)	0.12 (3)	0.39 (10)	5.12 (130)	1.77 (45)	0.28 (7)	0.94 (24) $^{0}_{-0.013}$	1.57 (40)	16.3 (7.4)
30ASAB	10.87 (276)	8.39 (213)	6.02 (153)	2.48 (63)	2.36 (60)	4.8 (122)	7.56 (192)	4.49 (114)	3.43 (87)	5.71 (145)	4.33 (110) $^{0}_{-0.035}$	5.12 (130)	0.24 (6)	0.47 (12)	6.5 (165)	1.77 (45)	0.35 (9)	1.1 (28) $^{0}_{-0.013}$	2.17 (55)	25.4 (11.5)
40ASAB	12.32 (313)	9.84 (250)	7.48 (190)	2.48 (63)	2.36 (60)	6.26 (159)	9.02 (229)	4.49 (114)	3.43 (87)	5.71 (145)	4.33 (110) $^{0}_{-0.035}$	5.12 (130)	0.24 (6)	0.47 (12)	6.5 (165)	1.77 (45)	0.35 (9)	1.1 (28) $^{0}_{-0.013}$	2.17 (55)	32 (14.5)
50ASAB	13.9 (353)	11.42 (290)	9.06 (230)	2.48 (63)	2.36 (60)	7.83 (199)	10.59 (269)	4.49 (114)	3.43 (87)	5.71 (145)	4.33 (110) $^{0}_{-0.035}$	5.12 (130)	0.24 (6)	0.47 (12)	6.5 (165)	1.77 (45)	0.35 (9)	1.1 (28) $^{0}_{-0.013}$	2.17 (55)	38.6 (17.5)

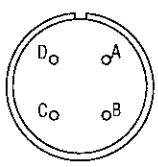
Note:
1. Incremental Encoder (81926 PPR) is used as a detector.
2. Dimensions are the same when using other incremental encoders.
3. Tolerances on the dimensions LB of flange type and S of shaft extensions are based on JIS (Japanese Industrial Standard) B0401 "Limits and Fits for Engineering."
4. There are no dimensional changes on the CE products.

SGMS

Connector Specifications

Receptacle: MS3102A20-29P
Applicable Plug: (To be prepared by customer)
Plug: MS3108B20-29S (L Type)
MS3106B20-29S (Straight Type)
Cable Clamp: MS3057-12A





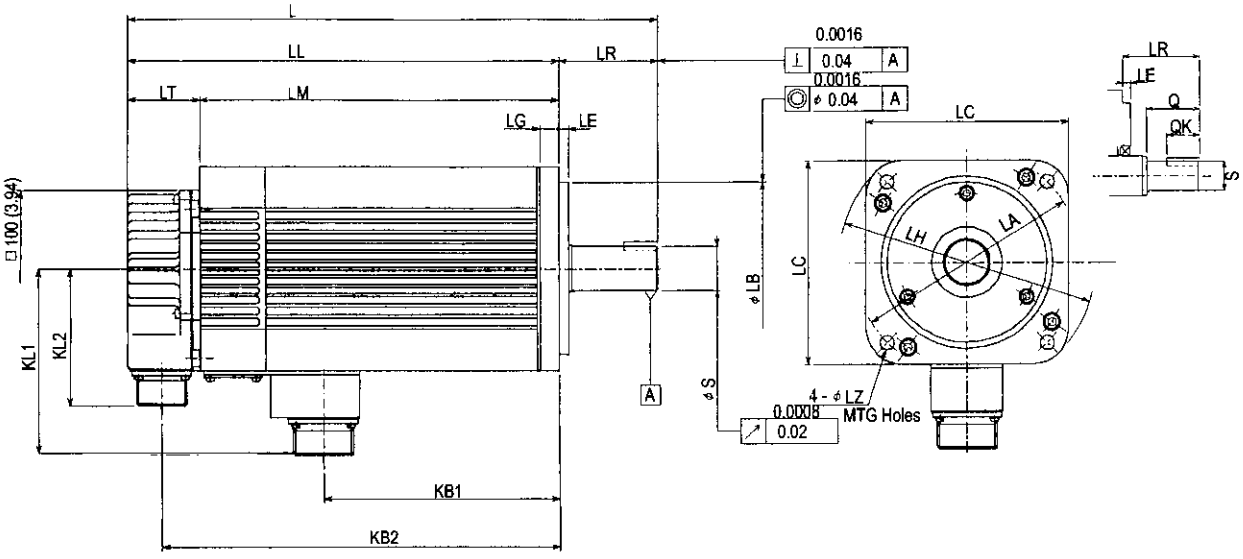
Connector Wiring on the Incremental Encoder (When using 8192 PPR (15 bits))			
A	Channel A Output	K	-
B	Channel $\bar{A}$ Output	L	-
C	Channel B Output	M	-
D	Channel $\bar{B}$ Output	N	-
E	Channel Z (C) Output	P	-
F	Channel $\bar{Z}$ ($\bar{C}$) Output	R	Reset
G	0V	S	0V (battery)
H	+5 VDC	T	3.6V (battery)
J	FG (Frame Ground)		

Note: The above-mentioned detector side specifications are common to all the motors with incremental encoders.

Connector Wiring on the Motor Side	
A	U Phase
B	V Phase
C	W Phase
D	FG (Frame Ground)

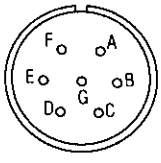
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(4) 8192 PPR Absolute Encoder (15 bit), With Brake



Type SGMS-	L	LL	LM	LR	LT	KB1	KB2	KL1	KL2	Flange Dimensions								Shaft End Dimension		Approx. Mass lb (kg)
										LA	LB	LC	LE	LG	LH	LJ	LZ	S	Q	
10ASABC	9.92 (252)	8.15 (207)	5.79 (147)	1.77 (45)	2.36 (60)	2.64 (67)	7.32 (186)	3.94 (100)	3.43 (87)	4.53 (115)	3.74 (95) $^{0}_{-0.035}$	3.94 (100)	0.12 (3)	0.39 (10)	5.12 (130)	1.77 (45)	0.28 (7)	0.94 (24) $^{0}_{-0.013}$	1.57 (40)	14.3 (65)
15ASABC	10.94 (278)	9.17 (233)	6.81 (173)	1.77 (45)	2.36 (60)	3.66 (93)	8.35 (212)	3.94 (100)	3.43 (87)	4.53 (115)	3.74 (95) $^{0}_{-0.035}$	3.94 (100)	0.12 (3)	0.39 (10)	5.12 (130)	1.77 (45)	0.28 (7)	0.94 (24) $^{0}_{-0.013}$	1.57 (40)	17.6 (8.0)
20ASABC	11.85 (301)	10.08 (256)	7.72 (196)	1.77 (45)	2.36 (60)	4.57 (116)	9.25 (235)	3.94 (100)	3.43 (87)	4.53 (115)	3.74 (95) $^{0}_{-0.035}$	3.94 (100)	0.12 (3)	0.39 (10)	5.12 (130)	1.77 (45)	0.28 (7)	0.94 (24) $^{0}_{-0.013}$	1.57 (40)	19.8 (9.0)
30ASABC	12.36 (314)	9.88 (251)	7.52 (191)	2.48 (63)	2.36 (60)	4.45 (113)	9.06 (230)	4.69 (119)	3.43 (87)	5.71 (145)	4.33 (110) $^{0}_{-0.035}$	5.12 (130)	0.24 (6)	0.47 (2)	6.5 (165)	1.77 (45)	0.35 (9)	1.1 (28) $^{0}_{-0.013}$	2.17 (55)	32 (14.5)
40ASABC	13.82 (351)	11.34 (288)	8.98 (228)	2.48 (63)	2.36 (60)	5.91 (150)	10.51 (267)	4.69 (119)	3.43 (87)	5.71 (145)	4.33 (110) $^{0}_{-0.035}$	5.12 (130)	0.24 (6)	0.47 (2)	6.5 (165)	1.77 (45)	0.35 (9)	1.1 (28) $^{0}_{-0.013}$	2.17 (55)	38.6 (17.5)
50ASABC	15.39 (391)	12.91 (328)	10.55 (268)	2.48 (63)	2.36 (60)	7.48 (190)	12.09 (307)	4.69 (119)	3.43 (87)	5.71 (145)	4.33 (110) $^{0}_{-0.035}$	5.12 (130)	0.24 (6)	0.47 (2)	6.5 (165)	1.77 (45)	0.35 (9)	1.1 (28) $^{0}_{-0.013}$	2.17 (55)	45.2 (20.5)

Note:
1. Incremental Encoder (8192 PPR) is used as a detector.
2. Dimensions are the same when using other incremental encoders.
3. Tolerances on the dimensions LB of flange type and S of shaft extensions are based on JIS (Japanese Industrial Standard) B0401 "Limits and Fits for Engineering."
4. There are no dimensional changes on the CE products.



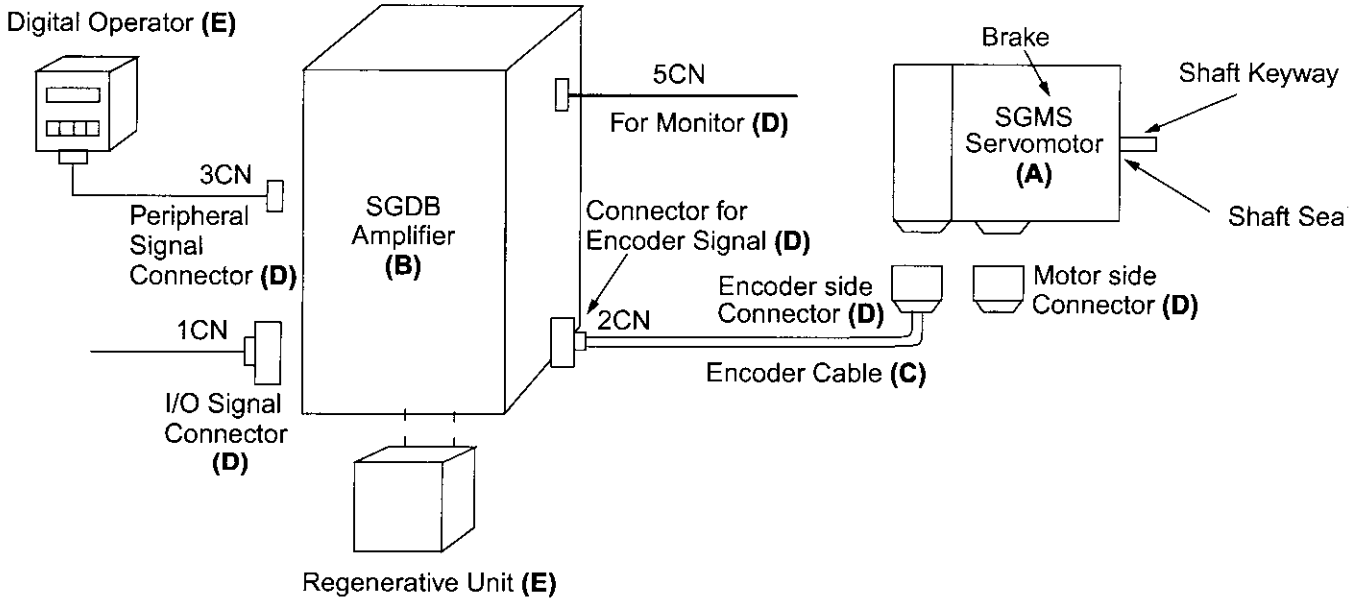
Connector Wiring on the Motor Side			
A	U Phase	E	Brake Terminal
B	V Phase	F	Brake Terminal
C	W Phase	G	-
D	FG (Frame Ground)		

SGMS

Selecting Your SGMS Sigma Servo System

Use the diagram below to locate and identify the components of your system. Each item is letter-coded and cross-referenced in the option tables on the following pages.

System Configuration



SGMS

Model Number Designation

SGMS - 10 A 6 A B C

Sigma Servomotor Type

Rated Output
- 10: 1.0kW (1.3HP)
- 15: 1.5kW (2.0HP)
- 20: 2.0kW (2.7HP)
- 30: 3.0kW (4.0HP)
- 40: 4.0kW (5.4HP)
- 50: 5.0kW (6.7 HP)

Power Supply
- A: 200V

Encoder Specifications
- 6: 4096PPR Incremental Encoder
- S: 8192PPR Absolute Encoder

Rated Speed
- A: 3000RPM

Shaft Specifications
- B: Straight Shaft with Keyway

Accessories
- C: 24VDC Brake
- S: Shaft Seal
- G: Shaft Seal and Brake

Note: **Bold** items are Stock Products usually available from inventory. Contact your Yaskawa representative for delivery on all other items.

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Servomotor & Amplifier Selection

Use the table below to select the appropriate SGMS Sigma Servomotor and Amplifier.

Description	Peak Torque (in. lb.)	Rated Torque (in. lb.)	Motor Inertia (in. lb. sec^2 x 10^{-3})	Motor MODEL # **(A)**	Amplifier MODEL # **(B)*** Analog/Digital Input SGDB-	Motor & Amplifier Item Class
200V 3-Phase 4096 PPR Incremental Encoder Straight Shaft with Keyway MS Connectors	84.4	28.2	1.54	SGMS-10A6AB	10ADG	Stock
				SGMS-10A6ABC		
	130	43	2.19	SGMS-15A6AB	15ADG	
				SGMS-15A6ABC		
	169	56.4	2.82	SGMS-20A6AB	20ADG	
				SGMS-20A6ABC		
	260	87	6.2	SGMS-30A6AB	30ADG	
				SGMS-30A6ABC		
	336	112	8.5	SGMS-40A6AB	44ADG	
				SGMS-40A6ABC		
	422	140	11	SGMS-50A6AB		
				SGMS-50A6ABC		

Note: 24VDC brakes for SGMS Sigma servomotors are standard. Contact a local source for 24VDC power supplies. For technical information, request manual number TSE-S800-16 from your Yaskawa representative.

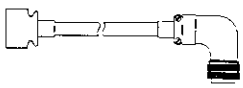
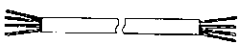
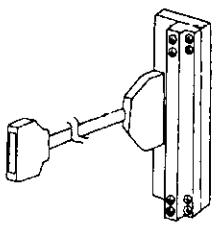
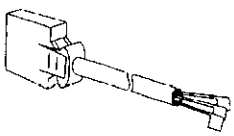
* For more detailed SGDB amplifier specifications and dimensions, refer to page 127.

SGMS

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Pre-wired Cable Selection

Use the table below to select Pre-wired Cables for your SGMS Sigma Servomotor.

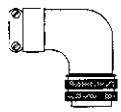
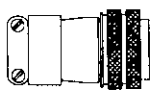
Cable Description (C)		Motor Size (kW)	Part Number without Brake	Part Number with Brake	Comments	Item Class
Power Cable with L-type Connectors		1.0, 1.5, 2.0	B1E-□	B1BE-□	Use the following key to specify required cable length (last digit of part #): 1: 3 meters 2: 5 meters 3: 10 meters (standard) 4: 15 meters 5: 20 meters	Stock *
		3.0	B2E-□	B2BE-□		
		4.0, 5.0	B3E-□	B3BE-□		
Encoder Cable (incremental or absolute)		All	DE9407237-□E			
Encoder Cable Only for Solder Connections			DP8409123		Up to 70 feet; for use with mating connector.	
Encoder Cable Only for Solder Connections			DP8409179		Over 70 feet; splice cable to accommodate connector.	
Input/Output 1CN Cable & Transition Terminal Block			JUSP-TA50P		35 mm din rail mountable; the cable length is 0.5 meters.	
Input/Output 1CN Cable with Pigtail Leads			DE9406969-□		Use the following key to specify required cable length (last digit of part #): 1: 1 meter (standard) 2: 2 meters 3: 3 meters	

* Standard cable lengths are Stock items; non-standard cable lengths are Limited Stock items.

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Mating Connector Selection

Use the table below to select Mating Connectors for your SGMS Sigma Servomotor.

Connector Description (D)		Motor Size (kW)	Part Number		Comments	Item Class
			without Brake	with Brake		
MS Connector for Motor Power Cable *		1.0, 1.5, 2.0	MS3106B18-10S MS3108B18-10S MS3057-10A	MS3106B20-15S MS3108B20-15S MS3057-12A	Straight-type connector L-type connector Cable clamp	Stock
		3.0, 4.0, 5.0	MS3106B22-22S MS3108B22-22S MS3057-12A	MS3106B24-10S MS3108B24-10S MS3057-16A	Straight-type connector L-type connector Cable clamp	
MS Connector for Encoder Cable (incremental or absolute encoder)		All	MS3106B20-29S MS3108B20-29S MS3057-12A		Straight-type connector L-type connector Cable clamp	
1CN Mating Connector			DE9406970		Can use 1CN for analog speed and torque monitor service checks.	
2CN Encoder Mating Connector			DE9406973		–	
3CN Peripheral Mating Connector			Stock 9-pin male D-shell connector		Source locally.	–
5CN Connector and 1m Cable with Pigtails			DE9404559		–	Stock

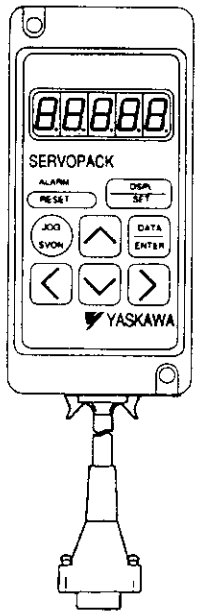
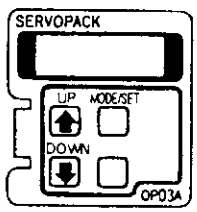
* Choose either a straight or L-type connector and the associated cable clamp for a complete assembly. For example, L-type connector MS3108B18-10S is compatible with cable clamp MS3057-10A.

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Peripheral Device Selection

Use the table below to select Peripheral Devices for your SGMS Sigma Servomotor.

Component (E)		Part Number	Description	Item Class
Hand-held Digital Operator Panel		JUSP-OP02A-1	Portable unit with built-in cable	Stock
Digital Operator Panel		JUSP-OP03A	Plugs into front of amplifier	Non-Stock
SVMON Software		SVMON	Programming software for DOS 3.3 on a 3.5" floppy disk	Stock
Software Interface Cable		YS-11	Pre-wired 1.5 meter cable with 9-pin connector	

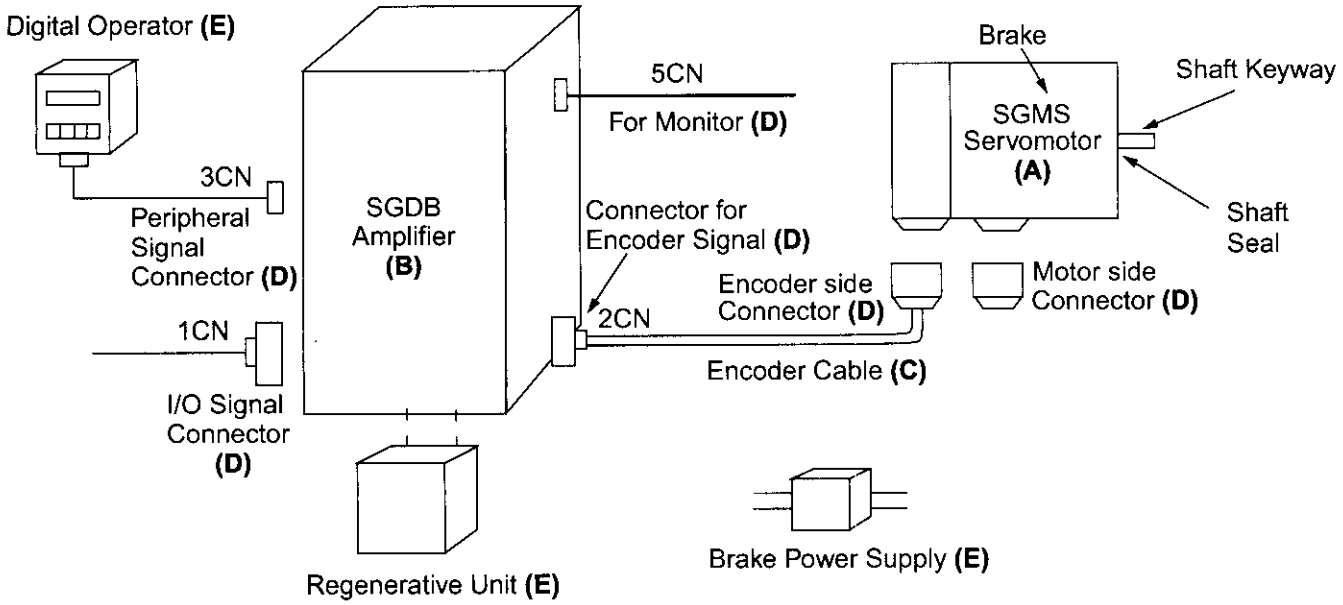
SGMS

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Selecting Your SGMS Sigma Servo System

Use the diagram below to locate and identify the components of your system. Each item is letter-coded and cross-referenced in the option tables on the following pages.

System Configuration



Model Number Designation

SGMS - 10 V 6 A B B

Sigma Servomotor Type

Rated Output
- 10: 1.0kW (1.3HP)
- 15: 1.5kW (2.0HP)
- 20: 2.0kW (2.7HP)
- 30: 3.0kW (4.0HP)
- 40: 4.0kW (5.4HP)
- 50: 5.0kW (6.7 HP)

Power Supply
- V: 200V CE Specification

Accessories
- B: 90VDC Brake
- S: Shaft Seal
- F: Shaft Seal and Brake

Shaft Specifications
- B: Straight Shaft with Keyway

Rated Speed
- A: 3000RPM

Encoder Specifications
- 6: 4096PPR Incremental Encoder
- S: 8192PPR Absolute Encoder

SGMS

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Servomotor & Amplifier Selection

Use the table below to select the appropriate SGMS Sigma Servomotor and Amplifier.

Description	Peak Torque (in. lb.)	Rated Torque (in. lb.)	Motor Inertia (in. lb. $sec^2 \times 10^{-3}$)	Motor MODEL # **(A)**	Amplifier MODEL # **(B)*** Analog/Digital Input SGDB-	Motor Item Class
200V 3-Phase 4096 PPR Incremental Encoder Straight Shaft with Keyway MS Connectors	84.4	28.2	1.54	SGMS-10V6AB	10VD (Limited Stock)	Limited Stock
				SGMS-10V6ABB		Non-Stock
	130	43	2.19	SGMS-15V6AB	15VD (Limited Stock)	Limited Stock
				SGMS-15V6ABB		Non-Stock
	169	56.4	2.82	SGMS-20V6AB	20VD (Limited Stock)	Limited Stock
				SGMS-20V6ABB		Non-Stock
	260	87	6.2	SGMS-30V6AB	30VD (Limited Stock)	Limited Stock
				SGMS-30V6ABB		Non-Stock
	336	112	8.5	SGMS-40V6AB	60VDY6 (Limited Stock)	Limited Stock
				SGMS-40V6ABB		Non-Stock
	422	140	11	SGMS-50V6AB	60VDY7 (Limited Stock)	Limited Stock
				SGMS-50V6ABB		Non-Stock

Note: 90VDC brakes for SGMS Sigma servomotors (CE) are standard. See Peripheral Device Selection in this section to order a power supply.
For technical information, request technical document numbers PI-6021 and DE9409784 from your Yaskawa representative.

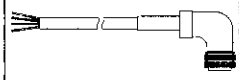
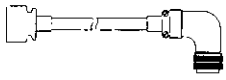
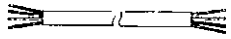
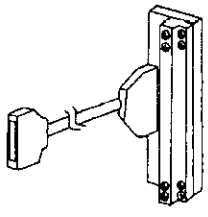
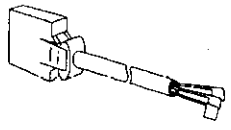
* For more detailed SGDB amplifier specifications and dimensions, refer to page 127.

SGMS

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Pre-wired Cable Selection

Use the table below to select Pre-wired Cables for your SGMS Sigma Servomotor.

Cable Description (C)		Motor Size (kW)	Part Number without Brake	Part Number with Brake	Comments	Item Class
Power Cable with Connectors		1.0, 1.5, 2.0	B1CE-□	B1BCE-□	Use the following key to specify required cable length (last digit of part #): 1. 3 meters 2: 5 meters 3: 10 meters (standard) 4: 15 meters 5: 20 meters	Limited Stock
		3.0	B2CE-□	B2BCE-□		
		4.0, 5.0	B3CE-□	B3BCE-□		
Encoder Cable (incremental or absolute)		All	A1CE-□			Limited Stock
Encoder Cable Only for Solder Connections			DP8409123		Up to 70 feet; for use with mating connector.	Stock *
Encoder Cable Only for Solder Connections			DP8409179		Over 70 feet; splice cable to accommodate connector.	
Input/Output 1CN Cable & Transition Terminal Block			JUSP-TA50P		35 mm din rail mountable; the cable length is 0.5 meters.	
Input/Output 1CN Cable with Pigtail Leads			DE9406969-□		Use the following key to specify required cable length (last digit of part #): 1: 1 meter (standard) 2: 2 meters 3: 3 meters	

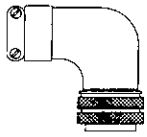
* Standard cable lengths are Stock items; non-standard cable lengths are Limited Stock items.

SGMS

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Mating Connector Selection

Use the table below to select Mating Connectors for your SGMS Sigma Servomotor.

Connector Description (D)		Motor Size (kW)	Part Number		Comments	Item Class
			without Brake	with Brake		
Connector for Motor Power Cable *		1.0, 1.5, 2.0	JL04V-8A18-10SE-EB JL04-18CK(13)	JL04V-8A20-15SE-EB JL04-2022CK(14)	L-type connector Cable clamp	
		3.0, 4.0, 5.0	JL04V-8A22-22SE-EB JL04-2022CK(14)	JL04V-8A24-10SE-EB JL04-2428CK(17)	L-type connector Cable clamp	
Connector for Encoder Cable (incremental or absolute encoder)		All	JA08A-20-29S-J1-EB JL04-2022CKE(12)		L-type connector Cable clamp	Limited Stock
1CN Mating Connector			DE9406970		Can use 1CN for analog speed and torque monitor service checks.	
2CN Encoder Mating Connector			DE9406973		–	
3CN Peripheral Mating Connector			Stock 9-pin male D-shell connector		Source locally.	–
5CN Connector and 1m Cable with Pigtails			DE9404559		–	Limited Stock

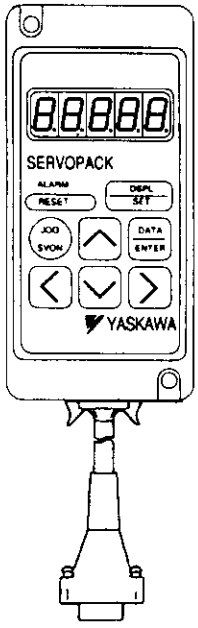
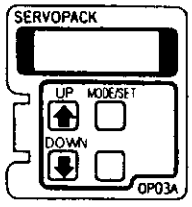
* Choose the connector and the associated cable clamp for a complete assembly.

SGMS

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Peripheral Device Selection

Use the table below to select Peripheral Devices for your SGMS Sigma Servomotor.

Component (E)		Part Number	Description	Item Class
Hand-held Digital Operator Panel		JUSP-OP02A-1	Portable unit with built-in cable	Stock
Digital Operator Panel		JUSP-OP03A	Plugs into front of amplifier	Non-Stock
SVMON Software		SVMON	Programming software for DOS 3.3 on a 3.5" floppy disk	Stock
Software Interface Cable		YS-11	Pre-wired 1.5 meter cable with 9-pin connector	

SGMS

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