

# 200V Three-phase Sigma II Servo Systems

## Servomotor & Amplifier Selection

Use the table below to select the appropriate SGMGH Sigma II servomotor and amplifier.  
(Refer to the motor model # designation on the previous page specifying the available modification to motor construction/features.)

Description	Peak Torque (in • lb)	Rated Torque (in • lb)	Motor Inertia (in • lb • s <sup>2</sup> x 10 <sup>-3</sup> )	Motor MODEL # (A)	Amplifier MODEL # (B)* Analog/Digital Input SGDH-	Motor & Amplifier Item Class	
200V Three-Phase  17-bit Incremental Encoder  Straight Shaft with Keyway  3000rpm maximum**  MS Connectors	79	25	6.41	SGMGH-05ACA61	05AE	Stock	
			8.26	SGMGH-05ACA6C			
	122	48	12.30	SGMGH-09ACA61	10AE		
			14.15	SGMGH-09ACA6C			
	207	74	18.2	SGMGH-13ACA61	15AE		
			20.1	SGMGH-13ACA6C			
	254	102	28.1	SGMGH-20ACA61	20AE		
			35.9	SGMGH-20ACA6C			
	404	165	40.7	SGMGH-30ACA61	30AE		
			48.5	SGMGH-30ACA6C			
	630	252	59.8	SGMGH-44ACA61	50AE		
			67.6	SGMGH-44ACA6C			
	776	310	78.8	SGMGH-55ACA61	60AE Requires Regenerative Unit (E)		
			86.6	SGMGH-55ACA6C			
	1050	425	111	SGMGH-75ACA61	75AE Requires Regenerative Unit (E)		
			119	SGMGH-75ACA6C			
	1550	620	249	SGMGH-1AACA61	1AAE Requires Regenerative Unit (E)		Limited Stock
			267	SGMGH-1AACA6C			Non-stock
1988	845	279	SGMGH-1EACA61	1EAE Requires Regenerative Unit (E)	Limited Stock		
		309	SGMGH-1EACA6C		Non-stock		

Note: 24V<sub>DC</sub> brakes for SGMGH Sigma II servomotors are standard. Contact a local source for 24V<sub>DC</sub> power supplies.  
For technical information, request request Yaskawa manual number YEA-SIA-S800-32.2.

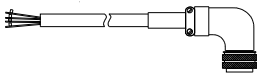
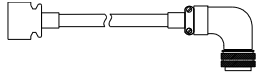
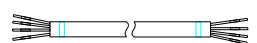
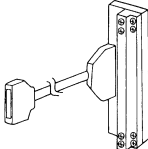
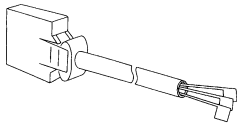
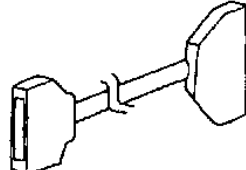
\* For more detailed SGD amplifier specifications and dimensions, refer to pages 99 to 112.

\*\*2000rpm maximum for 11 and 15kW systems only.

# 200V Three-phase Sigma II Servo Systems

## Pre-wired Cable Selection

Use the table below to select pre-wired cables for your SGMGH Sigma II servomotor.

Cable Description (C)		Motor Size (kW)	Part Number*		Comments	Item Class
			without Brake	with Brake		
Power Cable with Connectors  (IP67)		0.5, 0.9, 1.3	B1E-□□(A)	B1BE-□□(A)	Use the following key to specify needed cable length (last two digits of the part number): 03: 3m 05: 5m 10: 10m (standard) 15: 15m 20: 20m	
		2.0, 3.0	B2E-□□(A)	B2BE-□□(A)		
		4.4	B3E-□□(A)	B3BE-□□(A)		
		5.5, 7.5**	B5E-□□(A)	B5BE-□□(A) B7BCE-□□(A)		
		11, 15**	B6E-□□(A)	B6BE-□□(A) B7BCE-□□(A)		
Encoder Cable (incremental or absolute)  (IP67)		All	JZSP-CMP02-□□(B)		These cables are available in five lengths. Use two digits in the part number's last place: 03: 3m 05: 5m 10: 10m (standard) 15: 15m 20: 20m	Stock***
Encoder Cable (for applications up to 20m) for solder connections			FR-RMCT-SB		These cables are available in any length.  For example, to order one FR-RMCT-SB cable, 16m long, specify: quantity: 16 part no.: FR-RMCT-SB	
Encoder Cable (for applications from >20 to <50m) for solder connections			UL20276-SB			
Input/Output 1CN Cable & Transition Terminal Block			JUSP-TA50P		35 mm DIN rail mountable; the cable length is 0.5m.	
Input/Output 1CN Cable with Pigtail Leads			JZSP-CKI01-□(A)		Use the following key to specify needed cable length (last digit of part number): 1: 1m (standard) 2: 2m 3: 3m	
Input/Output 1CN Cable Cable with Female D-Sub output Connector****			JZSP-CKI0D-□□		Use the following key to specify required cable length (last two digits of the part number): D50: 0.5m 01: 1m (standard) 02: 2m 03: 3m	

\* "(A)" at the end of the cable number is the revision level. The revision level may be changed prior to this catalog's reprinting.

\*\* When ordering these cables for motors with brakes, order the standard power cable and the additional cable for the brake.

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

\*\*\*\* 50 Pin Female D-Sub output connector mates to customer supplied third party terminal block. (e.g., Wago #289-449, Weidmuller #919658, Phoenix #2283647, Amphenol/Sine #20-51039, and many others).

## Connector Selection

Use the table below to select mating connectors for each SGMGH Sigma II servomotor.

Connector Description (D)	Motor Size (kW)	Part Number		Comments	Item Class
		without Brake	with Brake		
MS Connector for Motor Power Cable*	0.5, 0.9, 1.3	MS3106B18-10S	MS3106B20-15S	Straight-type connector	Stock
		MS3108B18-10S	MS3108B20-15S	L-type connector	
		MS3057-10A	MS3057-12A	Cable clamp	
	2.0, 3.0, 4.4	MS3106B22-22S	MS3106B24-10S	Straight-type connector	
		MS3108B22-22S	MS3108B24-10S	L-type connector	
		MS3057-12A	MS3057-16A	Cable clamp	
	5.5, 7.5, 1A, 1E	MS3106B32-17S	MS3106B32-17S and MS3106A10SL-3S	Straight-type connector	
		MS3108B32-17S	MS3108B32-17S and MS3108A10SL-3S	L-type connector	
		MS3057-20A	MS3057-20A MS3057-4A	Cable clamp	
MS Connector for Encoder Cable (incremental or absolute encoder)	All	MS3106B20-29S		Straight-type connector	
		MS3108B20-29S		L-type connector	
		MS3057-12A		Cable clamp	
1CN Mating Connector	All	JZSP-CKI9		—	
2CN Encoder Mating Connector	All	JZSP-CMP9-1		—	
3CN Peripheral Mating Connector	All	YSC-1		—	
5CN Connector and 1m Cable with Pig-tails	All	DE9404559		Can use 5CN for analog speed and torque monitor service checks.	

\* 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. MS connectors listed in the table are non-environmental.

## Peripheral Device Selection

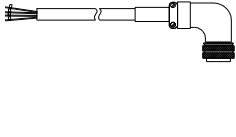
Use the table below to select peripheral devices for each SGMGH Sigma II servomotor.

Component (E)	Part Number	Description	Item Class
Hand-held Digital Operator Panel	JUSP-OP02A-1 and JZSP-CMS00-1	Portable unit with 1m adapter cable for Sigma II	Stock
Software Interface Cable	YS-12	Pre-wired 2.0m cable with 9-pin connector	
Absolute Encoder Battery	JZSP-BA01 JZSP-BA01-1	3.6V, 1000mAh (Lithium Battery) For SGDH-60 and above (same as JZSP-BA01 with longer lead)	
SigmaWin+ Software	JZSP-WP0001	Minimum Recommended System Requirements Pentium 200 MHz, 64MB RAM, 200MB hard drive, CDROM Drive, RS-232 or RS-422 port, Screen resolution 800x600 w/ 256 colors, and Windows 95,98,NT4.0,2000,ME. (Windows XP planned)	
Regenerative Unit for 6.0kW amplifier (880W)	JUSP-RA04	These are general purpose regenerative units.*	
Regenerative Unit for 7.5, 11, and 15kW amplifiers (1760W)	JUSP-RA05	Order the Motion document: PI#99004 for setup instructions for this unit. <b>Caution:</b> Proper set-up is necessary to avoid equipment damage.	
DC Reactor (for suppressing harmonics in the power supply)	For 200V: SGDH-05AE SGDH-08AE SGDH-10AE	X5061	Limited Stock
	SGDH-15AE SGDH-20AE	X5060	
	SGDH-30AE SGDH-50AE	X5059 X5068	

\* For an alternate solution, specify the individual resistor part number RH500N25\_OHMK in necessary series or parallel connection. Refer to the SGDH servo amplifier section of this catalog for additional specifications, and the *Sigma II Series Servo System User's Manual* (YEA-SIA-S800-32.2) for proper resistor sizing guidelines.

## CE Pre-wired Cable Selection



Use the table below to select shielded pre-wired power cables for your SGMGH Sigma II servomotor.

Cable Description (C)		Motor Size (kW)	Part Number*		Comments	Item Class
			without Brake	with Brake		
Power Cable with Connectors  IP67		0.5, 0.9, 1.3	B1CE-□□(A)	B1BCE-□□(A)	Use the following key to specify needed cable length (last two digits of the part number): 03: 3m 05: 5m 10: 10m (standard) 15: 15m 20: 20m	Limited Stock
		2.0, 3.0	B2CE-□□(A)	B3BCE-□□(A)		
		4.4	B3CE-□□(A)			
		5.5, 7.5	B5CE-□□(A)	B5CE-□□(A) B7BCE-□□(A)		
		11, 15	B6CE-□□(A)	B6CE-□□(A) B7BCE-□□(A)		

\* "(A)" at the end of the cable number is the revision level, which may be changed prior to this catalog's reprinting.

## CE Connector Selection

Use the table below to select mating connectors for your SGMGH Sigma II servomotor.

Connector Description (D)		Motor Size (kW)	Part Number		Comments**	Item Class
			without Brake	with Brake		
Connector for Motor Power Cable*		0.5, 0.9, 1.3	CE05-8A18-10SD-B-BAS CE3057-10A-1(D265)	CE05-8A20-15SD-B-BAS CE3057-12A-1(D265)	L-type connector Cable clamp	Limited Stock
		2.0, 3.0, 4.4	CE05-8A22-22SD-B-BAS CE3057-12A-1(D265)	CE05-8A24-10SD-B-BAS CE3057-16A-1(D265)	L-type connector Cable clamp	
		5.5, 7.5, 11, 15	CE05-8A32-17SD-B-BAS or CE05-6A32-17SD-B-BSS and CE3057-20A-1		L-type connector or Straight-type connector and Cable clamp (diameters 0.866 to 0.937in)	
Connector for Holding Brake		All	CE05-8A10SL-3SC-B-BAS and CE3057-4A-1 (D265)		L-type connector for holding brake and Cable clamp (diameters 0.142 to 0.220in)	
Connector for Encoder Cable (incremental or absolute encoder)			CE02-6A20-29NSW and CE20BA-S and CE3057-12A-3(D265)		L-type connector (plug and back shell) and Cable clamp (diameters 0.265 to 0.394in)	

\* Choose the connector and the associated cable clamp for a complete assembly. Connectors listed in this table are environmentally sealed.  
\*\* Connectors are manufactured by DDK and listed here with the largest standard cable clamp available.