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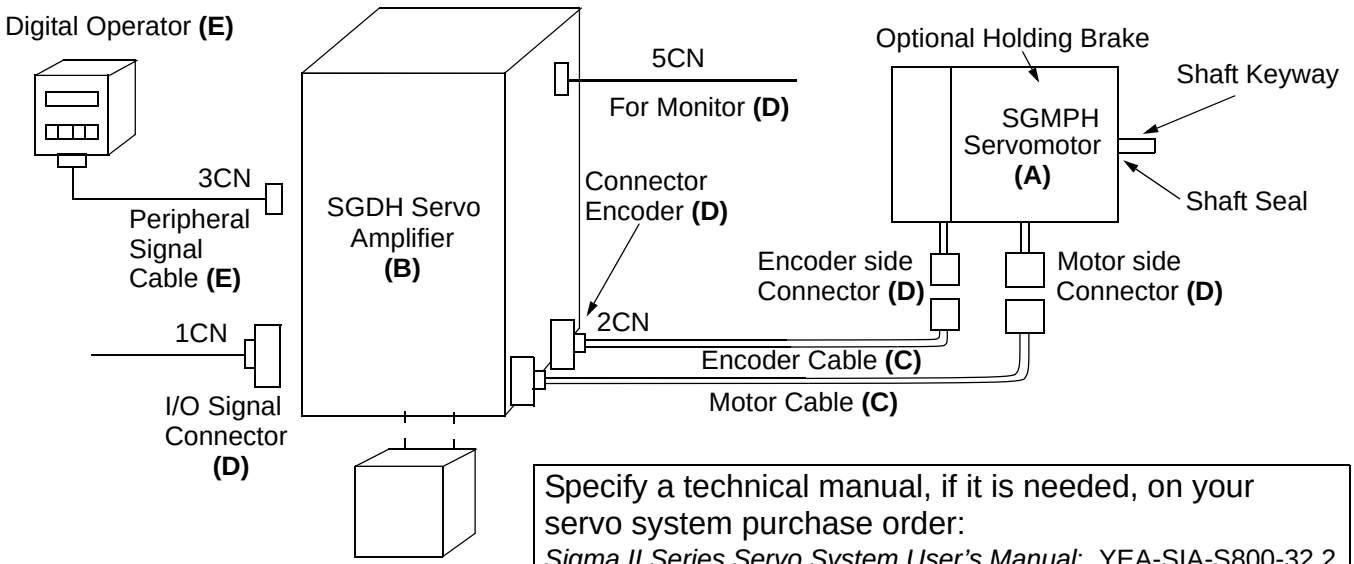
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Selecting Your SGMPH Sigma II Servo System

First, select the Sigma II servomotor suited for your application using SigmaSize: the Yaskawa servomotor sizing software, available at no charge. (Request SigmaSize software via e-mail, at: literature@yaskawa.com).
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



Specify a technical manual, if it is needed, on your servo system purchase order:
Sigma II Series Servo System User's Manual: YEA-SIA-S800-32.2
(Manual is provided at no charge with a purchase order, but it must be requested).

Model Number Designation

SGMPH - 01 A A E 4 1D

Sigma Servomotor Type
Rated Output
- 01: 100W (0.13hp)
- 02: 200W (0.25hp)
- 04: 400W (0.5hp)
- 08: 750W (1hp)
- 15: 1.5kW (2hp)

Power Supply
- A: 200V UL Recognized
- B: 100V UL Recognized

Encoder Specifications
- A: 13-Bit (2048 x 4) Incremental Encoder
- 1: 16-Bit (16,384 x 4) Absolute Encoder

Revision Level

Shaft Specifications
- 4: Straight Shaft with Keyway

Accessories
- 1D: Standard
- CD: Standard with $24V_{DC}$ Holding Brake
- SD: Standard with Shaft Seal
- ED: Standard with Brake & Shaft Seal

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Servomotor & Amplifier Selection

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

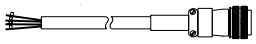
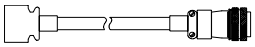
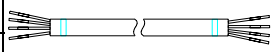
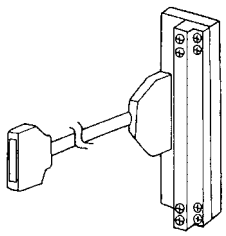
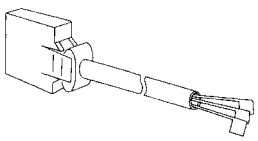
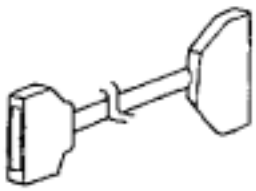
Description	Peak Torque (oz • in)	Rated Torque (oz • in)	Motor Inertia (oz • in • s^2x10^{-3})	Motor MODEL # **(A)**	Amplifier MODEL # **(B)***		Motor & Amplifier Item Class
					1-Phase SGDH-	3-Phase SGDH-	
200V 13-Bit Incremental Encoder Straight Shaft with Keyway 5000rpm Pre-wired with Heavy Duty Connectors	135	45.1	0.917	SGMPH-01AAE41D	01AE	—	Stock
			1.46	SGMPH-01AAE4CD			
	270	90.1	2.96	SGMPH-02AAE41D	02AE	—	
			4.35	SGMPH-02AAE4CD			
	542	181	4.92	SGMPH-04AAE41D	04AE	—	
			6.31	SGMPH-04AAE4CD			
	1010	338	29.9	SGMPH-08AAE41D	08AE-S	08AE	
			35.7	SGMPH-08AAE4CD			
	2027	676	57.1	SGMPH-15AAE41D	15AE-S	15AE	
			67.8	SGMPH-15AAE4CD			
100V, 1-Phase 13-Bit Incremental Encoder Straight Shaft with Keyway 5000rpm Pre-wired with Heavy Duty Connectors	135	45.1	0.917	SGMPH-01BAE41D	01BE	—	
			1.46	SGMPH-01BAE4CD			
	270	90.1	2.96	SGMPH-02BAE41D	02BE	—	
			4.35	SGMPH-02BAE4CD			
	542	181	4.92	SGMPH-04AAE41D	04FE	—	
			6.31	SGMPH-04AAE4CD			

Notes: $24V_{DC}$ brakes for SGMPH Sigma II servomotors are standard. Contact a local source for $24V_{DC}$ power supplies. Motor power and encoder cables are factory pre-wired with approximately 13" lead length with heavy duty mating connectors.
Use the tables on the following page to specify mating connectors and/or various cable lengths.
For technical information, request Yaskawa manual number YEA-SIA-S800-32.2.

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Pre-wired Cable Selection

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

Cable Description **(C)**		Motor Size (kW)	Part Number*	Comments	Item Class
Power Cable with Interconnectron Connectors (without Brake)		0.1, 0.2, 0.4, 0.8	B4ICE-☐☐(A)	These UL and CE compliant 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**
		1.5	B5ICE-☐☐(A)		
Power Cable with Interconnectron Connectors (with Brake) (IP67)		0.1, 0.2, 0.4, 0.8	B4IBCE-☐☐(A)		
		1.5	B5IBCE-☐☐(A)		
Encoder Cable with Interconnectron Connector (incremental or absolute) (IP67)		All	A1ICE-☐☐(A)		
Encoder Cable (for applications up to 20m) Only 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) Only for Solder Connections			UL20276-SB		
Input/Output 1CN Cable & Transition Terminal Block			JUSP-TA50P	35mm DIN rail mountable; the cable length is 0.5 meters.	
Input/Output 1CN Cable with Pigtail Leads			JZSP-CKI01-☐(A)	Use the following key to specify required 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	

* The "(A)" at the end of the cable part number is the revision level. Revision level may be changed prior to catalog reprinting.

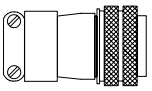
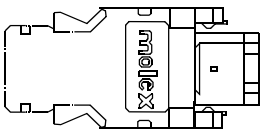
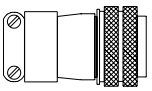
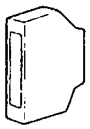
** Standard cable lengths are Stock items; non-standard cable lengths are Limited Stock items.

*** 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)

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Connector Selection

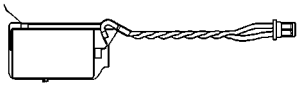
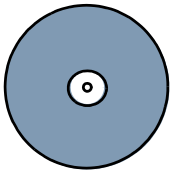
Use the table below to select mating connectors or kits for your SGMPH Sigma II servomotor.

Connector Description **(D)**		Motor Size (kW)	Part Number	Comments	Item Class
Interconnectron Connector for Motor Power Cable (with or without Brake) (IP67)		0.1, 0.2, 0.4, 0.8, 1.5	FIN07S-B2	Solder Cup	Stock
2CN Amplifier Mating Connector			JZSP-CMP9-1	—	
Interconnectron Connector for Encoder Cable (incremental or absolute encoder) (IP67)			FIN17C-A2	Gauge: 24 - 18AWG Requires Crimp Tool B150 and positioner.	
1CN Mating Connector		All	JZSP-CKI9	–	
Interconnectron Crimp Tool	—		B150	—	Limited Stock
Positioner	—		B055/A	—	

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Peripheral Device Selection

Use the table below to select peripheral devices for your SGMPH Sigma II servomotor.

Component Description **(E)**		Part Number	Comments	Item Class
Hand-held Digital Operator Panel		JUSP-OP02A-1 and JZSP-CMS00-1	Portable unit with 1m adapter cable for Sigma II	Stock
Absolute Encoder Battery		JZSP-BA01	3.6V, 1000mAh (lithium battery)	
Software Interface Cable	—	YS-12	Pre-wired 2.0m cable with 9-pin connector	
SigmaWin+ Software		JZSP-WP0001	Minimum Recommended System Requirements Pentuim 200 MHz, 64MB RAM, 200MB hard drive, CDROM Drive, RS-232 or RS-422 port, Screen rsolution 800x600 w/ 256 colors, and Windows 95,98,NT4.0,2000,ME. (Windows XP planned)	
Individual External Regenerative Unit	For: SGDH-01AE SGDH-02AE SGDH-04AE SGDH-08AE SGDF-08AE-S amps	RH12050ohmJ	These are general purpose regenerative units.* **Caution:** Proper set-up is necessary to avoid equipment damage.	
	For: SGDH-15AE SGDH-15AE-S	RH500N25_ohmK		
DC Reactor (for suppressing harmonics in the power supply)	For 200V: SGDH-01AE SGDH-02AE SGDH-04AE SGDH-08AE SGDF-08AE-S SGDH-15AE SGDH-15AE-S	X5071 X5070 X5069 X5061 X5079 X5060 X5078	—	Limited Stock
	For 100V: SGDH-01BE SGDH-02BE	X5063 X5062		

* For an alternate solution, specify the individual resistor part number RH500N25_OHMK in necessary series or parallel connection. Refer to the *Sigma II Series Servo System User's Manual (YEA-SIA-S800-32.2) for proper resistor sizing guidelines.*

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