

100/200V Single-phase Sigma II Servo Systems

Servomotor & Amplifier Selection

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

Motors Used with 13-bit Incremental Encoders (5000rpm Maximum)					Amplifier			
Description	Peak Torque (oz • in)	Rated Torque (oz • in)	Motor Inertia (oz • in • s ² × 10 ⁻³)	Motor MODEL NUMBER (A)	Amplifier MODEL NUMBER (B)*		Motor & Amplifier Item Class	
					Single-Phase SGD H	3-Phase SGD H-		
200V, Single-Phase Straight Shaft without Keyway	40.5	13.5	0.235	SGMAH-A3AAF21	A3AE	-	Stock	
			0.355	SGMAH-A3AAF2C				
	67.7	22.6	0.312	SGMAH-A5AAF21	A5AE	-		
			0.432	SGMAH-A5AAF2C				
	135	45.1	0.515	SGMAH-01AAF21	01AE	-		
			0.635	SGMAH-01AAF2C				
0.515			SGMAH-01AAF41	01AE				
0.635			SGMAH-01AAF4C					
270	90.1	1.50	SGMAH-02AAF41	02AE	-			
		2.321	SGMAH-02AAF4C					
		2.45	SGMAH-04AAF41	04AE				
		3.271	SGMAH-04AAF4C					
1010	338	9.52	SGMAH-08AAF41	08AE-S	08AE			
		11.5	SGMAH-08AAF4C					
		200V, Single-Phase, Straight Shaft with Keyway	181	2.45		SGMAH-04AAF41	04AE	-
				3.271		SGMAH-04AAF4C		
1010	338			9.52	SGMAH-08AAF41	08AE-S		
				11.5	SGMAH-08AAF4C			
200V, Single-Phase, Straight Shaft without Keyway NEMA flange	135	45.1	0.515	SGMAH-01AAF21**	01AE	-		
			0.635	SGMAH-01AAF2C**				
	270	90.1	1.50	SGMAH-02AAN21***	02AE			
	542	181	2.45	SGMAH-04AAN21***	04AE			
100V, Single-Phase, Straight Shaft without Keyway	40.5	13.5	0.235	SGMAH-A3BAF21	A3BE	-		
			0.355	SGMAH-A3BAF2C				
	67.7	22.6	0.312	SGMAH-A5BAF21	A5BE	-		
			0.432	SGMAH-A5BAF2C				
135	45.1	0.515	SGMAH-01BAF21	01BE	-			
		0.635	SGMAH-01BAF2C					
		0.515	SGMAH-01BAF41	01BE				
		0.635	SGMAH-01BAF4C					
100V, Single-Phase, Straight Shaft with Keyway	270	90.1	1.50	SGMAH-02BAF41	02BE	-		
			2.321	SGMAH-02BAF4C				
	542	181	2.45	SGMAH-04AAF41	04FE			
			3.271	SGMAH-04AAF4C				
100V, Single-Phase, Straight Shaft without Keyway NEMA flange	135	45.1	0.515	SGMAH-01BAF21**	01BE	-		
			0.635	SGMAH-01BAF2C**				
	270	90.1	1.50	SGMAH-02BAN21***	02BE			
	542	181	2.45	SGMAH-04AAN21***	04FE			

Notes: 24V_{DC} brakes for SGMAH 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 amplifier mating connectors.

Use the tables on the following pages to specify mating connectors or pre-wired cables available in various lengths.

For technical information, request Yaskawa manual number YEA-SIA-S800-32.2.

* For more detailed SGD H amplifier specifications and dimensions, refer to pages 95 to 110.

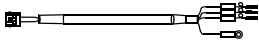
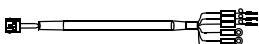
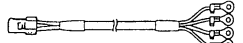
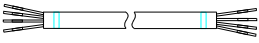
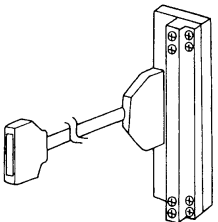
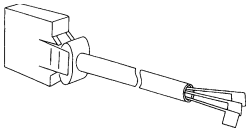
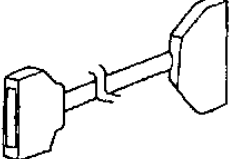
** NEMA 23 adapter flange (see "Peripheral Device Selection")

*** NEMA 23 flange and pilot (see "Dimensions in inches (mm)")

**** NEMA 34 flange and pilot (see "Dimensions in inches (mm)")

Pre-wired Cable Selection

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

Cable Description (C)		Motor Size (kW)	Part Number*	Comments	Item Class
Power Cable without Brake		All	JZSP-CMM00-□□(A)	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**
Power Cable with Brake			JZSP-CMM10-□□(A)		
Shielded Power Cable without Brake***			BAHCE-□□(A)		
Shielded Power Cable with Brake***			BAHBCE-□□(A)		
Encoder Cable (incremental and absolute)	—		JZSP-CMP00-□□(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 maximum) 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.	Stock
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 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 part number is the revision level. Revision level may be changed prior to this catalog reprinting.
 ** Standard cable lengths are Stock items; non-standard cable lengths are Limited Stock items.
 *** Use these power cables where it is important to meet CE (EMC) requirements.
 **** 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).


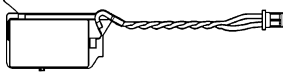
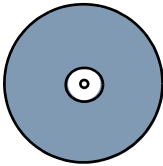
Connector Selection

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

Connector Description (D)	Motor Size (kW)	Part Number	Comments	Item Class
Motor Power Mating Connector (without Brake)	All	JZSP-CMM9-1	These connector kits include pin and socket. Requires use of Amp Crimp Tool (90548-1). (See below).	Stock
Motor Power Mating Connector (with Brake)		JZSP-CMM9-2		
Amp Crimp Tool		90548-1	Crimp tool for Motor Power Connector (JZSP-CMM9-□)	Limited Stock
2CN Amplifier Mating Connector		JZSP-CMP9-1	—	Stock
Motor Encoder Mating Connector		JZSP-CMP9-2	—	
1CN Mating Connector		JZSP-CK19	for SGDH I/O 50-pin	
3CN Peripheral Mating Connector		YSC-1	—	
5CN Analog Monitor Connector		DE9404559	—	

Peripheral Device Selection

Use the table below to select peripheral devices for your SGMAH 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 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)	
DC Reactor (for suppressing harmonics in the power supply)	For 200V: SGDH-A3AE SGDH-A5AE SGDH-01AE SGDH-02AE SGDH-04AE SGDH-08AE SGDH-08AE-S	— — X5071 X5070 X5069 X5061 X5079	—	Limited Stock
	For 100V: SGDH-A3BE SGDH-A5BE SGDH-01BE SGDH-02BE	— — X5063 X5062	—	
Individual External Regenerative Unit	50 Ω, 70W for A3, A5, 01, 02, 04, AND 08 AMPS	RH120-50ohmJ	This is a general purpose regenerative unit.* Caution: Proper set-up is necessary to avoid equipment damage.	Stock
NEMA Flange Adapter	—	SGM-N23	For 30, 50, and 100W SGMAH motors only. Complies to NEMA 23 mounting standard.	

* 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.