

1326AB Servomotor Description and Options

Basic Servomotor Description

The 1326 Servomotors are a family of high performance, three-phase, brushless AC synchronous motors designed by Allen-Bradley to meet the stringent requirements of servo system applications. This series of standard AC servomotors can be used with 1389 or 1391 AC Servo Controllers. The performance parameters of these motors with selected amplifiers are listed on page NO TAG. The typical speed-torque curves (see page NO TAG) depict the operational envelope of these motor and controller combinations. Each motor has the following standard features:

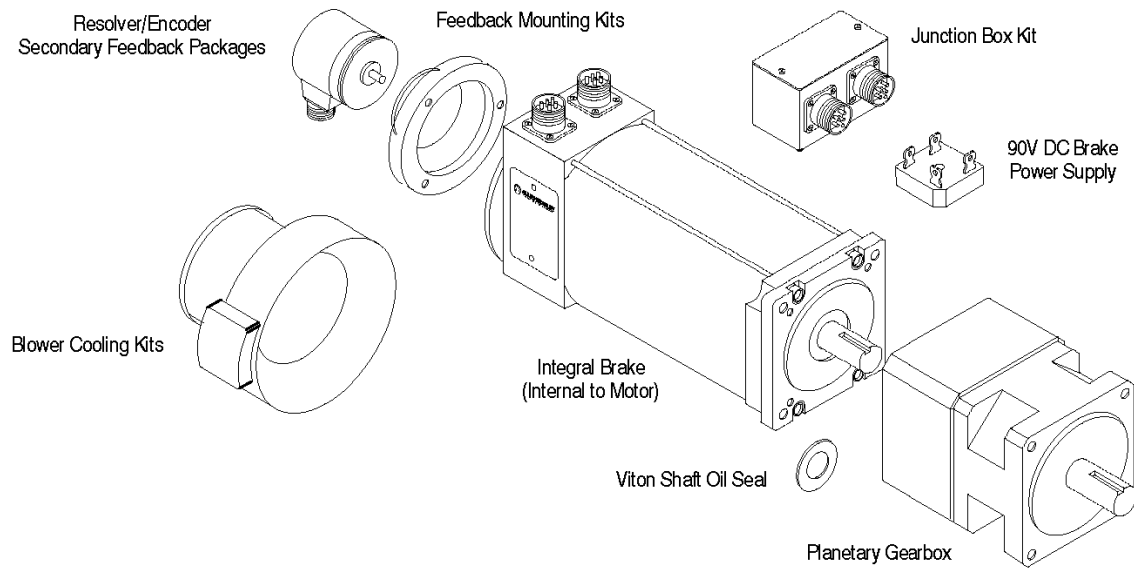
- Permanent magnet rotor for increased servo response.
- Three-phase sinusoidal wound stator field for direct transfer of heat to ambient, and smooth operation at low speeds.
- Brushless resolver supplies position, commutation & velocity feedback information. This also provides durability in harsh environments by not having on-board electronics in the motor. 1391 A Quad B (optional) encoder output (up to 2048 ppr) is generated via resolver feedback.
- 100% continuous rated output torque at stall (zero rpm).
- Precision balance of 0.0005" (0.0127 mm) total peakpeak displacement.
- Vertical shaft up or down mounting.
- TENV construction.
- IP65 rated (when used with the Shaft Seal option) to withstand harsh environments. Motor is dust-tight and able to withstand pulsating water jets without liquid entering the motor.
- Important:** 1326AB motors lose the IP 65 rating when externally mounted encoder/resolver feedback or blower packages are used.
- Normally closed thermal switch in the motor winding (rated 115V AC at 1A, 24V DC at 1A) provides thermal over-load indication.
- Environmentally sealed power and feedback cable packages. Power and resolver feedback cables can be ordered as standard (flex), track (multi-flex) or extended length (ES).
- MIL spec connectors are standard.
- Provisions for field mounting of feedback packages.
- Ferrite magnets for cost effective performance.
- UL recognized insulation system (file # E57948).

Servomotor Options

Options available for the 1326AB include (option code designation or catalog number in parenthesis):

- Integral spring-set holding brakes with 90V DC coils (-A4, -A5, -A7) or 24V DC coils (-K4, -K5, -K7).
- Brake Power Supply (1326-MOD-BPS) converts 115V AC to the voltage needed for 90V DC brakes (-A4, -A5 and -A7).
- Shaft Oil Seal kits (1326AB-MOD-SSV-xx) for field installation of Viton shaft seals. Motor disassembly is not required.
- NEMA Inch (-11) or IEC metric flange mount (-21) with metric shafts.

Figure 1 AC Servomotor Configuration and Options



- Resolver Feedback Packages (1326AB-MOD-Vxxxx) provide 4.25" (108 mm) transducers which offer absolute/vernier or single brushless resolver feedback for use with Allen-Bradley 8600GP, IMC rack and S Class motion controllers.
- Junction Box Kit (1326AB-MOD-RJxx) available with either axially mounted connectors or integral terminal blocks. Connector version allows the motor connectors to be brought out axially to the motor (rather than radially) without further wiring. Terminal block version provides two terminal blocks for user wiring.
- Secondary Feedback Mounting Kits (1326AB-MOD-Mx-xx) for field installation of an Allen-Bradley Encoder (845H or T) or resolver. Using a 1326AB motor with a 1391B-ES (or 1391-DES) with A Quad B feedback (up to 2048 ppr) eliminates the need for encoder mounting.
- Blower Cooling Kit (1326AB-MOD-G3, G4) provides air over cooling for up to 35% more torque output on most 1326AB C frame motors. The kit can be field mounted on the rear of 1326AB-Cxx motors (including motors with brakes). For motors using secondary motor mounted feedback (1326AB-MOD-M6-C1), use option G4.
- Cables for power (1326-CPxx..) and feedback (1326-CFx.. commutation, 1326-CEx.. encoders) are available in lengths up to 100 ft. (30 m) for standard and high flex applications. Power (1326ES-CPxx..) and commutation (1326ES-CFx..) cables over 100 ft. (30 m), up to 300 ft. (90 m) are available when using 1391B-ES or 1391-DES drives only.
- Planetary Gearbox option with straight or right angle configuration for gear ratios up to 100:1. Low backlash option is also available.

All kits are supplied as motor accessories and must be specified as a separate item.

1326AB Servomotor

1326 A B - A 3 E - 11 - A4

First Position	Second Position	Third Position	Fourth Position	Fifth Position	Sixth Position	Seventh Position	Eighth Position
Bulletin Number	Type	Design	Series	Motor Length	Max. Op. Speed	Mounting & Shaft Description	Standard Options
	Letter Description	Description	Description	Description	RPM Code Std ES/DES	Code Description	
	A AC Servomotor PM Type	Factory use only	Sequentially lettered to designate frame diameters.	Sequentially numbered to indicate stack length within a given frame size.	B 1600 2000 C 2000 3000 E 3000 4000 G 5000 6000	11 Inch Combination Face/Flange with Keyway 21 NEMA/IEC Metric Flange with Keyway	
			Code Description			Code Description	
			A 4.25" (108 mm)			A4 72 lb.-in. (8.1 N-m) Holding Brake w/90V DC Coil.	
			B 5.88" (149 mm)			A5 120 lb.-in. (13.6 N-m) Holding Brake w/90V DC Coil.	
			C 7.63" (194 mm)			A7 400 lb.-in. (45.2 N-m) Holding Brake w/90V DC Coil.	
						K4 72 lb.-in. (8.1 N-m) Holding Brake w/24V DC Coil.	
						K5 120 lb.-in. (13.6 N-m) Holding Brake w/24V DC Coil.	
						K7 400 lb.-in. (45.2 N-m) Holding Brake w/24V DC Coil.	

Shaft Oil Seal Kit

1326AB - MOD - SS V - A 1

First Position	Second Position	Third Position	Fourth Position	Fifth Position	Sixth Position
Bulletin Number	Type	Shaft Seal	Material	Motor Series	Motor Mounting ¹
	Code Description		Letter Description	Letter for ...	Number Description
	MOD Modification Kit		V Viton	A -A Series B -B Series C -C Series	1 Std. Inch 2 Metric

¹ "A" Series motors with brake must use 1326AB-MOD-SSV-A2.

Brake Power Supply Rectifier

1326 - MOD - BPS

Bulletin Number	Type	Description
	Code Description	Code Description
	MOD Modification Kit	BPS Single-phase, full-wave, screw mount rectifier with surge suppressor network. 115V AC input, for use with 90V DC brakes. ²

² Up to 4 brakes per rectifier can be used.

Motor Junction Box Kit ³

1326AB - MOD - RJAB

First Position	Second Position	Third Position
Bulletin Number	Type	Description
	Code	Description
	MOD	Modification Kit
		RJAB For all AB-A and AB-B Series Motors
		RJBC For all AB-B4 and AB-Cx Series Motors

³ The motor comes standard with IP65 plug style connectors mounted radially to the motor. This kit allows the connectors to be brought out axially from the motor without further wiring. Kit includes Motor Junction Box and Mounting Hardware.

Feedback Mounting Adapter Kit ⁴

1326AB - MOD - M4 - C1

First Position	Second Position	Third Position	Fourth Position	
Bulletin Number	Type	Mounting Adapter Kit for ...	Coupling Size for ...	
	Code	Description	Code	Motor Series
	MOD	Modification Kit ¹	C1	A, B, C
			Blank	For M22, M23, M24, M25, M26

Code	Description
M4	A-B 845H/T Encoder for AB-A series motor
M5	A-B 845H/T Encoder for AB-B series motor
M6	A-B 845H/T Encoder for AB-C series motor
M22	Type VC/VD 4.25" (108 mm) Resolver for AB-B series motor
M23	Type VC/VD 4.25" (108 mm) Resolver for AB-C series motor
M24	0.375" (9.5 mm) diameter heavy duty shaft extension adapter
M25	0.625" (15.9 mm) diameter heavy duty shaft extension for Type VC/VD 4.25" (108 mm) resolver
M26	Foot mounting kit for M25

⁴ All kits contain a feedback device mounting adapter and mounting hardware. M4, M5 and M6 include a motor to encoder coupling. M22 and M23 do not include a coupling since it is included with the resolver feedback device.

1326 - MOD - C1

First Position		Second Position		Third Position	
Bulletin Number	Type			Coupling Size	
		Code	Description	Code	Size □ Motor Shaft to Encoder Shaft
		MOD	Modification Kit	C1	3/8" to 3/8" (9.5 mm to 9.5 mm)

⁵ The feedback coupling is included as standard with all Feedback Mounting Adapter Kits.

Resolver Feedback Package

1326AB - MOD - VC 1:1

First Position	Second Position	Third Position	Fourth Position
Bulletin Number	Type	Resolver Package	Gear Ratio Input:Resolver
		Code	Description
		MOD	Modification Kit ⁶

Code	Description	Code	Description
VC	4.25" (108 mm) feedback package with cast housing and single or vernier (dual) format with receiver (Harowe 11BRW-300-F-58A or equivalent) type resolver(s) for use with 8200, IMC 120, 121, 123.	1:1	Single device format - 1 turn of the motor shaft to 1 turn of the resolver.
		1:2	Single device format - 1 turn of the motor shaft to 2 turns of the resolver.
		1:2.5	Single device format - 1 turn of the motor shaft to 2.5 turns of the resolver.
		1:5	Single device format -1 turn of the motor shaft to 5 turns of the resolver.
VD	4.25" (108 mm) feedback package with cast housing and single or vernier (dual) format with transmitter (Harowe 11BRCX-300-C10/6 or equivalent) type resolver(s) for use with A-B series 8600, MAX and S Class controllers with a REC 4096 Board.	255	Absolute master/vernier format - 1:1 input/master, 255:256 master/vernier for IMC 120, 121, 123 only.
		256	Absolute master/vernier format - 1:1 input/master, 256:255 master/vernier for 8600 series and MAX, IMC S class controls with a REC 4096 Board.
		424	Absolute master/vernier format - 1:1 input/master, 424:425 master/vernier for IMC 120, 121, 123 only.
		425	Absolute master/vernier format - 1:1 input/master, 425:424 master/vernier for 8600 series and MAX, IMC S class controls with a REC 4096 Board.
		800	Absolute master/vernier format - 1:1 input/master, 800:801 master/vernier for IMC 120, 121, 123 only.
		801	Absolute master/vernier format - 1:1 input/master, 801:800 master/vernier for 8600 series controllers (is not applicable for use with MAX/S Class controls)

⁶ Kit includes Resolver Feedback Package, mounting hardware and 3/8" to 3/8" (9.5 mm to 9.5 mm) resolver to motor mounting coupling.

Blower Mod Kit

1326AB - MOD - G3

Bulletin Number	Type		Description	
	Code	Description	Code	Motor Series
MOD	MOD	Modification Kit	G3	Rear mounted blower for C series motors
			G4	"Saddle" type blower for C series motors with rear mounted encoders

Power and Feedback Cables

1326 - C P AB T 15

First Position		Second Position		Third Position		Fourth Position		Fifth Position		Sixth Position	
Bulletin Number		Type		Function		Motor Size Used On		Power Track Cable		Cable Length	
Letter	Description	Letter	Description	Letter	Description	Code	Type	Letter	Description	Code	Description
Blank	Standard Cable	C	Connector & Cable Assembly	P	Power Connection	AB	Series A & B (except 1326AB-B4)	T	All Series, used for high flex applications	K	Connector Kit (No Cable)
ES 7	Extended length cable - used with 1391B-ES and 1391-DES Only					C	Series C & 1326AB-B4	Blank	Standard Cable	15	15' (4.6 m)
				F	Commutation & Feedback Connection	U	All Series			30	30' (9.1 m)
				E	845H/T Encoder					50	50' (15.2 m)
				V	All 4.25" (108 mm) Resolver Packages					100	100' (30.4 m)
										150	150' (45.7 m) ⁷
										200	200' (61 m) ⁷
										250	250' (76.2 m) ⁷
										300	300' (91.4 m) ⁷

⁷ The Extended Length option is only available for 1326-CFUxx, CPABxx and CPCxx cables and can only be used with 1391B-ES and 1391-DES drives.

Planetary Gearbox

1326AB - PG A 05 - LB - 21

First Position		Second Position		Third Position		Fourth Position		Fifth Position		Sixth Position	
Bulletin Number		Type		Used on 1326AB Motor Series		Gear Ratio (Motor Shaft:Output Shaft)		Options		Motor Mounting Configuration	
Code	Description	Code	Description	Code	Description	Code	Description	Code	Description	Code	Description
PG	Straight Planetary Gearbox	A	Series A	03	3:1	Blank	No Options	21	Metric		
RP	Right Angle Planetary Gearbox	B	Series B	05	5:1	LB	Low Backlash Option	11	Inch		
		C	Series C	10	10:1						
				15	15:1						
				20	20:1						
				30	30:1						
				50	50:1						
				100	100:1						