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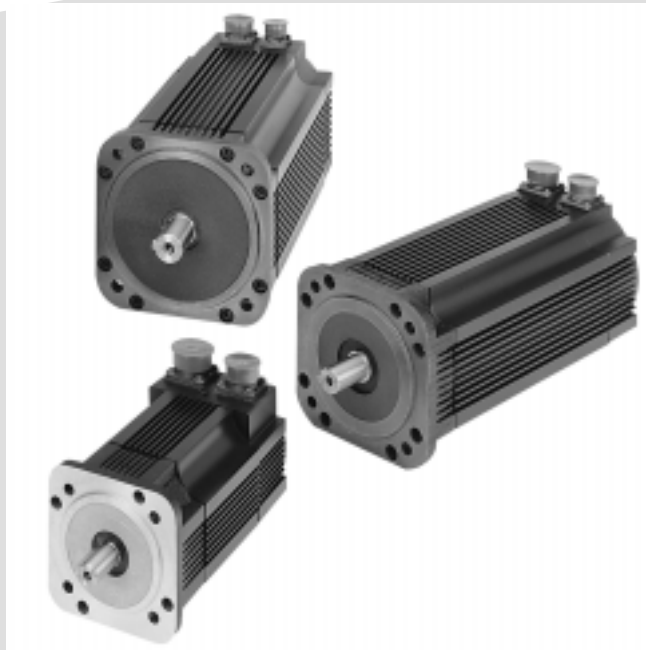
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1326AB 460V, Torque Plus Series, AC Servo Motors



Product Data



This publication provides product information about the 2.3 to 53.0 N-m (20.7 to 469.0 lb-in.) 1326AB 460V Torque Plus Series, AC Servo Motors. This publication includes:

- Detailed lists of the features and options available for 1326AB 460V, Torque Plus Series, AC Servo Motors
- Tables that show how to determine the catalog numbers for the motors and options you need
- Performance data and speed-torque curves for all 1326AB 460V Torque Plus Series, AC Servo Motors
- Servo motor dimensions
- Details on holding brakes, shaft oil seal kits, encoder mounting adapters and junction boxes
- High-resolution feedback motors

Servo Motor Description

Torque Plus motors feature a specially engineered housing that reduces motor length and increases continuous torque ratings. These high performance, three-phase, brushless, AC, synchronous servo motors are designed by Allen-Bradley to meet the stringent requirements of high performance motion systems. This series of 460V, AC servo motors is intended to be used with the Allen-Bradley 1394 Motion Control System. Each servo motor features:

- Special flux profile permanent magnets engineered by Allen-Bradley to increase servo response.
- A three-phase, sinusoidal-wound stator field for smooth operation at low speeds.
- TENV construction. IP65 is standard. IP67 (-L) option is available with optional shaft seal (1326AB-MOD-SSV-xxx) installed.
- An extruded aluminum housing for improved heat transfer.
- 100% continuous-rated output torque at stall (zero rpm).
- A UL Listed insulation system (file #E57948).
- The ability to be vertically mounted at any angle with the shaft up or down.
- A normally closed thermal switch in the motor winding (rated 115V AC/ 24V DC at 1A) that provides thermal overload indication.
- A precision balance of 0.0127 mm (0.0005 in.) total peak-to-peak displacement.
- A CEI/IEC 72-1 metric flange mount with metric shafts.
- A threaded hole on the face of the shaft for securing couplings.

Feedback Options

1326AB servo motors are available with either resolver (standard) or high-resolution encoder feedback devices. Resolver-based servo motors feature:

- A rugged, brushless resolver that provides accurate position feedback, eliminates the need for on-board electronics and can withstand harsh shock, high operating temperatures, and vibration.
- Resolver feedback generates (2048ppr) A quad B encoder output.

High-resolution servo motors are available in single or multi-turn configurations that provide high-resolution encoder feedback for applications requiring precise tolerance:

- Single-turn (-S) configuration provides precise machine positions of two million counts per revolution.

- Multi-turn (-M) configuration provides accurate absolute machine positions over multiple revolutions (no batteries needed) to eliminate machine re-homing on power-up. It provides one million counts of feedback per revolution and absolute positioning within 4,096 revolutions.
- Both configurations feature on-board EEPROM memory for storing motor configuration information.

Important: High-resolution feedback can only be used with the 9/440 high-resolution feedback CNC.

Servo Motor Options

Options available for the 1326AB 460V AC Torque Plus Series include (the option code or catalog number is in parenthesis):

- Integral Spring-Set Holding Brakes with 24V DC coils (-K4, -K5, -K7).
- A Shaft Oil Seal kit, (1326AB-MOD-SSV-xx) for installing a Viton shaft oil seal on a motor in the field. Motor disassembly is not required. When the shaft oil seal is installed, the motor is dust tight, able to withstand pulsating water jets, and meet the IP65 requirements of the IEC 529 standard.

Important: IP67 (-L) servo motors have a factory-installed shaft oil seal and do not require the Shaft Oil Kit option.

- Secondary Feedback Mounting Kits (1326AB-MOD-Mxx) for installing an Allen-Bradley Encoder (845H) in the field.

Note: Not available for high-resolution motors.

If you are using a 1326AB-Bxxx Servo Motor with a 1394 Servo System you do not need to mount a secondary encoder because the 1394 derives A Quad B feedback output (2048 ppr) from the motor feedback.

Important: 1326AB servo motors lose the IP65 or IP67 rating when an externally mounted encoder package is used.

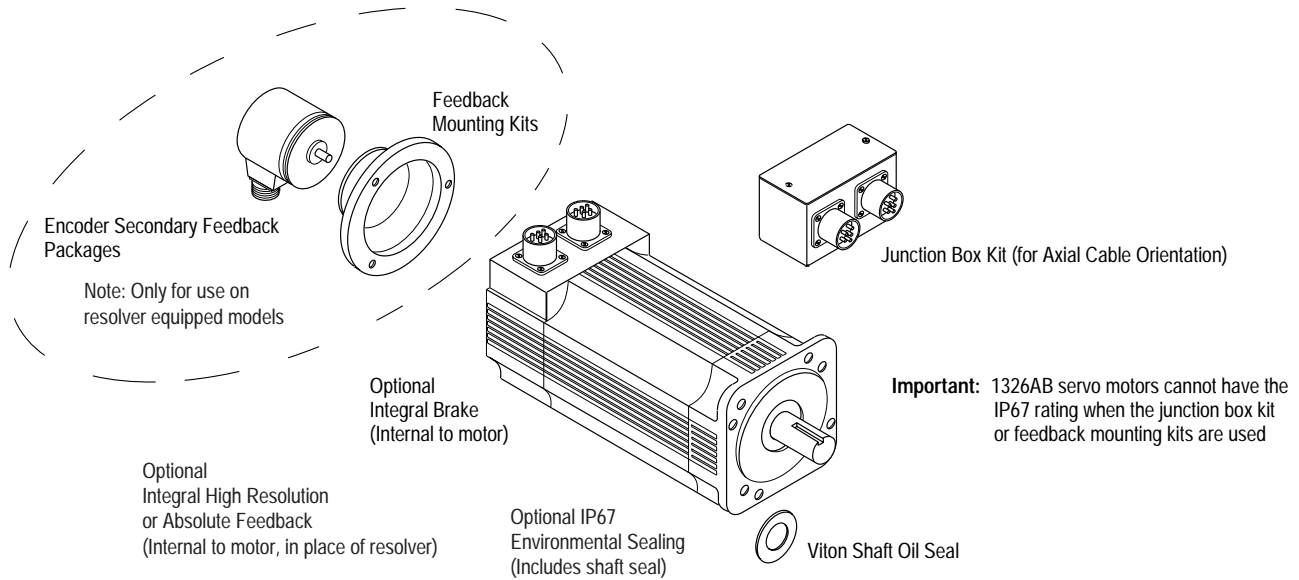
- IP67 (-L) servo motors. The IP67 rating (IEC 529) provides environmental protection from the effects of temporary immersion in water.

Important: 1326AB servo motors lose the IP67 rating when the externally-mounted encoder or the junction box kit options are used.

- A Junction Box Kit (1326AB-MOD-RJxxx) with axially-mounted connectors is available with either front or rear exit connections. Right-angle connector cables are also available (refer to *1326 Cables for 460V AC Servo Motors*, publication 1326A-2.11). The junction box allows the motor connectors to be brought out axially (rather than radially) to the motor without further wiring.

Important: 1326AB servo motors lose the IP67 rating when the junction box kit option is used.

Figure 1
1326AB Torque Plus Series Servo Motor Configuration and Options



Servo Motor Cables

Servo motor cable information can be found in the *1326 Cables for 460V AC Servo Motors Product Data* (publication 1326A-2.11).

Motor Mounting Bolt Specifications

Refer to the following table to determine the correct bolt type to use with your motor.

Motor	Bolt Size	Pitch	Flange Thickness	Screw Length	Torque ¹
B4xxx	M8	1.25 mm (0.049 in.)	11.2 mm (0.440 in.)	25 mm (0.984 in.)	37.94-47.42 N-m (28-35 ft-lb)
B5xxx	M10	1.50 mm (0.059 in.)	15.0 mm (0.591 in.)	30 mm (1.18 in.)	54.20-74.53 N-m (40-55 ft-lb)
B7xxx	M12	1.75 mm (0.069 in.)	20.60 mm (0.811 in.)	40 mm (1.57 in.)	108.4-135.5 N-m (80-100 ft-lb)

¹ Torque values are typical. Actual values depend on fastener materials used.

Selecting High Resolution Motors for the 9/440 CNC System

Use the following criteria for selection:

- For applications that require axis position to be known on start-up and without homing, use 1326AB-Bxxxx-21ML multi-turn motors.
- For applications that require a brake, use 1326AB-Bxxxx-21MKxL multi-turn IP67 motors.
- For all other applications, use 1326AB-Bxxxx-21SL single-turn motors.

Note: Non-IP67 (-L) motors are not available with high-resolution feedback.

Determining Catalog Numbers

1326AB 460V Torque Plus Series catalog numbers are made of various components. Each character of the catalog number identifies a specific version or option for that component. Use the following selection tables to determine the catalog numbers for the motors, options and cables you need.

1326AB Servo Motor

Bulletin Number	Type	Voltage	Frame Series	Motor Length	Motor Winding Designator	Flange and Shaft Series	Feedbacks ²	Standard Options	
1326AB									
AB = Ferrite AC Servo Motor		B = 460/380V AC		4 = 108 mm frame diameter (115 mm bolt center) 5 = 149 mm frame diameter (165 mm bolt center) 7 = 194 mm frame diameter (215 mm bolt center)		Sequentially numbered to indicate the magnet stack length within a given frame size		Letter designation for rated motor speed ¹	
21 = IEC metric flange with keyway		S = Single-turn high-resolution feedback M = Multi-turn high-resolution feedback Blank = resolver-based feedback		L = IP67 environmental rating only for all frame series K4 = 8.1 N-m (72 lb-in.) Holding brake with 24V DC coil for 1326AB-B4 frame series K5 = 13.6 N-m (120 lb-in.) Holding brake with 24V DC coil for 1326AB-B5 frame series K7 = 41 N-m (140 lb-in.) Holding brake with 24V DC coil for 1326AB-B7 frame series K4L = 8.1 N-m (72 lb-in.) Holding brake with 24V DC coil for 1326AB-B4 frame series with IP67 environmental rating K5L = 13.6 N-m (120 lb-in.) Holding brake with 24V DC coil for 1326AB-B5 frame series with IP67 environmental rating K7L = 41 N-m (140 lb-in.) Holding brake with 24V DC coil for 1326AB-B7 frame series with IP67 environmental rating					

¹ See the table in the Servo Motor Performance Data section for the rated speeds of all 1326AB 460/380V Torque Plus Series Motors.

² High resolution encoder option is only available with IP67 environmental rating.

Motor Junction Box Kit^{1, 2}

Bulletin Number	Type	Description
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1326AB	-	-
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MOD = Modification Kit

RJAB1 = Kit for all B4 and B5 series motors RJC1 = Kit for all B7 series motors
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¹ The motor comes standard with IP65 plug style connectors mounted radially to the motor. This kit allows the connectors to be brought out axially to the motor without further wiring. Kit includes a motor junction box and mounting hardware.

² Do not use this kit with the high resolution encoder option. Instead, use the right angle connector cable option.

Shaft Oil Seal Kit¹

Bulletin Number	Type	Shaft Seal	Material	Motor Series and Mounting
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1326AB	-	-	-	-
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MOD = Modification Kit

SS = Shaft Seal

V = Viton

AB4 = For a B4 series motor (IEC metric) B2 = For a B5 series motor (IEC metric) C2 = For a B7 series motor (IEC metric)
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¹ This kit is not required for IP67 motors. The shaft seal is factory installed.

Feedback Mounting Adapter Kit^{1, 2}

Bulletin Number	Type	Mounting Adapter Kit
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1326AB	-	-
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MOD = Modification Kit

M40 = Allen-Bradley 845H Encoder for the B4 series motor M50 = Allen-Bradley 845H Encoder for the B5 series motor M60 = Allen-Bradley 845H Encoder for the B7 series motor
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¹ All kits contain a feedback mounting adapter, mounting hardware, and a coupling.

² Do not use this kit with the high resolution encoder feedback option.

Servo Motor Performance Data

This section contains performance data of 1326AB 460V Torque Plus Series Motors and 1394 Axis Module Combinations.

Motor Catalog Number ¹	Rated Speed rpm		Motor Rated Torque N-m (lb-in.)	Motor Rated Output kW	Rotor Inertia kg-m ² (lb-in.-s ²)	System Continuous Torque N-m (lb-in.)	System Peak Stall Torque N-m (lb-in.)	System Continuous Stall Current Amperes	System Peak Stall Current Amperes	1394 Axis Module	
	460V	380V									
1326AB-B410G	5000	4000	2.7 (24)	1.0	0.0005 (0.004)	2.7 (24)	6.6 (58) ³	2.45	6.0	AM03	
							8.1 (72)		7.32	AM04	
										AM07	
1326AB-B410J	7250	6000	2.7 (24)	1.4	0.0005 (0.004)	2.3 (21) ²	4.7 (42) ³	3.0	6.0	AM03	
						2.7 (24)	7.0 (62) ³		3.48	9.0	AM04
							8.1 (72)			10.4	AM07
1326AB-B420E	3000	2500	5.0 (44)	1.1	0.0008 (0.007)	5.0 (44)	10.6 (94) ³	2.84	6.0	AM03	
							14.9 (132)		8.0	AM04	
										AM07	
1326AB-B420H	6000	5000	5.1 (45)	2.2	0.0008 (0.007)	2.8 (25) ²	5.6 (50) ³	3.0	6.0	AM03	
						4.2 (37) ²	8.4 (74) ³		4.5	9.0	AM04
						5.1 (45)	14.0 (124) ³		5.46	15.0	AM07
1326AB-B430E	3000	2500	6.6 (58)	1.4	0.001 (0.01)	5.1 (45) ²	10.1 (89) ³	3.0	6.0	AM03	
						6.6 (58)	15.2 (135) ³		3.9	9.0	AM04
							19.7 (174)			11.6	AM07
1326AB-B430G	5000	4000	6.4 (57)	2.3	0.001 (0.01)	5.2 (46) ²	10.3 (92) ³	4.5	9.0	AM04	
						6.4 (57)	17.2 (153) ³		5.6	15.0	AM07
1326AB-B515E	3000	2500	10.4 (92)	2.3	0.0043 (0.038)	7.7 (68) ²	15.4 (136) ³	4.5	9.0	AM04	
						10.4 (92)	25.6 (226) ³		6.1	15.0	AM07
							31.2 (276)			18.3	AM50
1326AB-B515G	5000	4000	10.4 (92)	2.9	0.0043 (0.038)	7.9 (70) ²	15.8 (140) ³	7.5	15	AM07	
						10.4 (92)	31.2 (276)		9.5	28.5	AM50
											AM75
1326AB-B520E	3000	2500	13.0 (115)	2.9	0.006 (0.05)	8.8 (78) ²	17.7 (157) ³	4.5	9.0	AM04	
						13.0 (115)	29.4 (260) ³		6.7	15.0	AM07
							39.0 (345)			20.1	AM50
1326AB-B520F	3500	3000	13.1 (116)	2.9	0.006 (0.05)	11.2 (99) ²	22.4 (198) ³	7.5	15.0	AM07	
						13.1 (116)	39.3 (348)		8.8	26.4	AM50
											AM75
1326AB-B530E	3000	2500	18.0 (160)	4.2	0.009 (0.08)	14.2 (126) ²	28.4 (251) ³	7.5	15.0	AM07	
						18.0 (160)	54.2 (480)		9.5	28.5	AM50
											AM75
1326AB-B720E	3500	3000	30.9 (273)	6.8	0.015 (0.140)	30.9 (273)	58.5 (518) ³	17.5	33.2	AM50	
							88.1 (780) ³		50.0	AM75	
1326AB-B720F	5000	4100	31.8 (281.7)	11.7	.015 (.140)	31.8 (281.7)	38 (336) ³	27.5	33.2	AM50	
							56 (495) ³		50	AM75	
1326AB-B730E	3350	2800	39.0 (345)	9.6	0.024 (0.22)	39.0 (345)	56.8 (502) ³	22.8	33.2	AM50	
							85.4 (756) ³		50.0	AM75	
1326AB-B740C	2200	1800	53.0 (469)	8.7	0.032 (0.29)	53.0 (469)	84.2 (745) ³	20.9	33.2	AM50	
							126.8 (1122) ³		50.0	AM75	
1326AB-B740E	3400	2800	50.0 (450)	12.7	0.032 (0.29)	50.0 (450)	52.7 (466) ³	32.0	33.2	AM50	
							79.4 (702) ³		50.0	AM75	

¹ All ratings are for 40° C (104° F) motor ambient, 110° C (212° F) case and 50° C (122° F) amplifier ambient. For extended ratings at lower ambients contact Allen-Bradley.

² Limited by axis module continuous current.

³ Limited by axis module peak current.

General Speed-Torque Curve Definitions

The typical speed-torque curves show the operational envelope of different 1326AB Torque Plus/1394 combinations. General definitions for the 1326AB 460V Torque Plus Series servo motors are given below.

Rated Speed - The operating speed of the drive and motor combination at which approximately 70% of continuous rated torque (T_c) can be developed. This point is defined with the motor at 25° C (77° F).

Rated Operation Area - The boundary of the speed-torque curve where the motor and controller combination may operate on a servo basis without exceeding the RMS rating of either.

Intermittent Operation Area - The boundary of the speed-torque curve where the motor and controller combination may operate in acceleration- deceleration mode without exceeding peak rating of either, provided that the duty cycle RMS continuous torque limit is not exceeded.

$$\text{RMS Torque} = \sqrt{\frac{(\text{Tpa}^2)(t_1) + (\text{Tss}^2)(t_2) + (\text{Tpd}^2)(t_3) + (\text{Tr}^2)(t_4)}{t_1 + t_2 + t_3 + t_4}}$$

Continuous Current - The rated current of a motor with windings at a rated temperature and an ambient temperature of 40° C (104° F).

Peak Current - The amount of current that can be applied to the motor without causing damage to the motor.

Mechanical Time Constant - The time required for the motor to reach 63% of its final speed when a step voltage is applied.

Electrical Time Constant - The time required for the motor to reach 63% of its rated current.

Max. Ambient Temperature - The maximum environmental temperature in which the motor can be operated at rated loads without exceeding its insulation-type temperature rise limits.

Insulation Class - The designation of the operating temperature limits for motor insulation materials.

Thermal Time Constant - The time required for the motor windings to reach 63% of continuous temperature rise with constant watts loss.

Torque Constant - The amount of torque developed for one ampere of motor current at the stated motor temperature.

Voltage Constant - The value of the generated voltage at a specified speed when the rotor is moved mechanically in the magnetic field.

Terminal Resistance - The winding resistance.

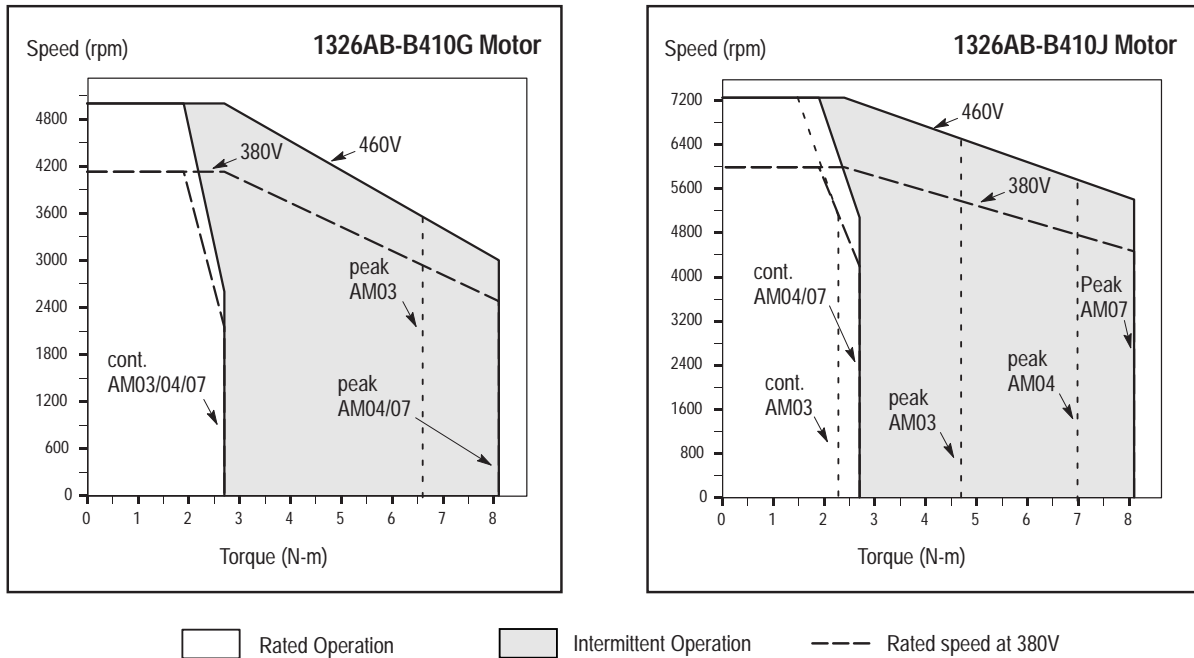
Inductance - The winding inductance measured by a step input of zero impedance voltage applied to the locked rotor.

Rotor Polar Moment of Inertia - The moment of inertia about the axis of rotation.

Motor Weight - The weight of the complete motor (including brake, if supplied) less the weight of options.

Balance - The compensation of rotor weight distribution to reduce vibrational resonance. Motors are factory balanced under running speeds.

Figure 2
1326AB-B410G and 1326AB-B410J Motor Speed-Torque Curves
for Resolver and High-Resolution Motors



Important: Curves and performance data shown are for motor and 1394 combinations where the amplifier rating is greater than or equal to the continuous stall current of the motor.

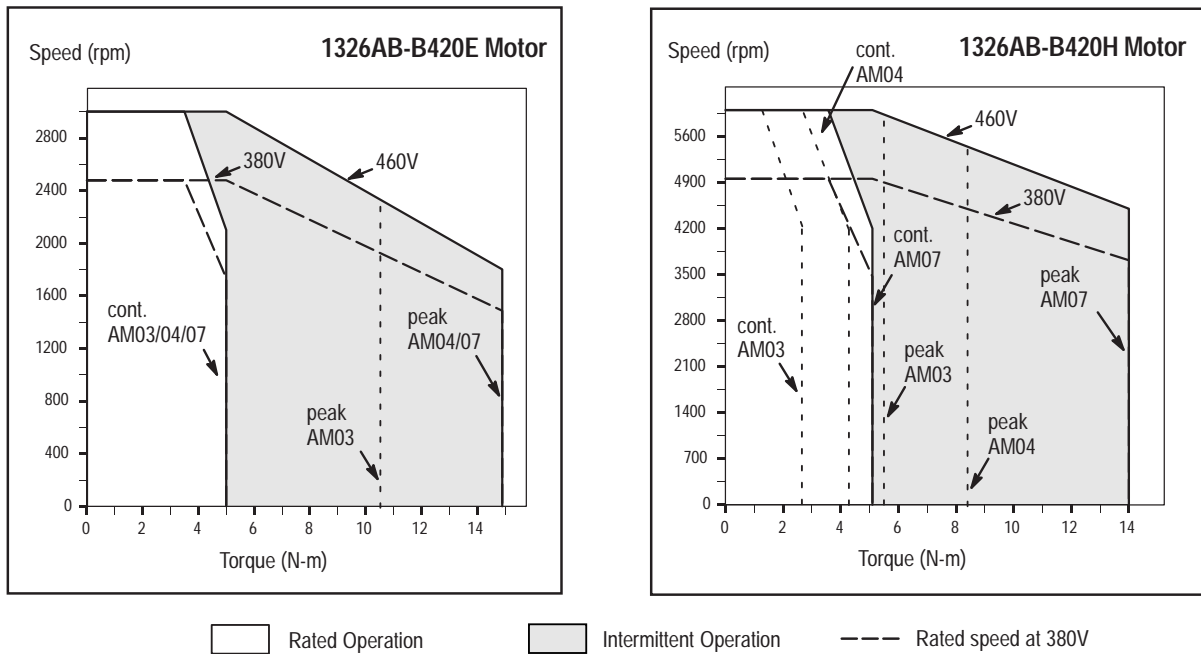
The motor was tested at a line voltage of 460V AC, in a 40° C (104° F) ambient environment. The case temperature was approximately 100° C (212° F) with the motor windings at an 80° C (176° F) rise over ambient. Torque ratings were determined when the motor was mounted to a 304.8 mm x 304.8 mm x 25.4 mm (12 in. x 12 in. x 1 in.) steel mounting bracket. The motor contains two thermal switches wired in series that open during an overtemperature condition. They are set at 155° C (311° F) ±10%. Contacts are rated for 1A at 115V AC, 1A at 24V DC. All values shown below have a tolerance of ±10%.

Category	Parameter	Ambient Temp.	Units	1326AB-B410G	1326AB-B410J
General	Continuous Stall Torque - AM03/04/07	at 40° C (104° F)	N-m (lb-in.)	2.7 (24)/2.7 (24)/2.7 (24)	2.3 (21)/2.7 (24)/2.7 (24)
	Rated Output		kW	1.0	1.4
	Peak Stall Torque - AM03/04/07	at 40° C (104° F)	N-m (lb-in.)	6.6 (58)/8.1 (72)/8.1 (72)	4.7 (42)/7.0 (62)/8.1 (72)
	Continuous Stall Current - AM03/04/07	at 40° C (104° F)	amperes	2.45/2.45/2.45	3.0/3.48/3.48
	Peak Stall Current - AM03/04/07	at 40° C (104° F)	amperes	6/7.32/7.32	6/9/10.4
	Mechanical Time Constant	at 40° C (104° F)	milliseconds	9.8	11.2
	Electrical Time Constant	at 40° C (104° F)	milliseconds	3.8	4.3
	Rated Speed - 460V/380V	at 40° C (104° F)	rpm	5000/4000	7250/6000
Thermal	Maximum Ambient Temperature (without derating)		degrees C	40.0	40.0
	Insulation Class			H	H
	Thermal Time Constant		minutes	23	23
Winding	Torque Constant	at 25° C (77° F)	N-m (lb-in.)/A	1.1 (9.97)	0.7 (6.2)
	Voltage Constant	RMS (L-L) at 25° C (77° F)	volts/1000 rpm	80.5	52.8
	Terminal Resistance	ohms (L-L) at 25° C (77° F)	ohms	12.6	5.8
	Inductance	mH (L-L) at 25° C (77° F)	millihenry	73.0	28.6
Mechanical	Rotor Polar Moment of Inertia		kg-m ² (lb-in.-s ²)	0.0005 (0.004)	0.0005 (0.004)
	Motor Weight		kg (lb)	10.0 (22)	10.0 (22)
	Balance ¹		mm (in.)	0.0127 (0.0005)	0.0127 (0.0005)

¹ To obtain vibration velocity in mm (in.)/second, use the following formula: $V_v = D_{p-p} \times \text{rpm} / 27.01$

where: V_v = Vibration velocity in mm (in.)/second
 D_{p-p} = Peak-to-peak displacement in mm (in.)
rpm = Motor speed

Figure 3
1326AB-B420E and 1326AB-B420H Motor Speed-Torque Curves
for Resolver and High-resolution Motors



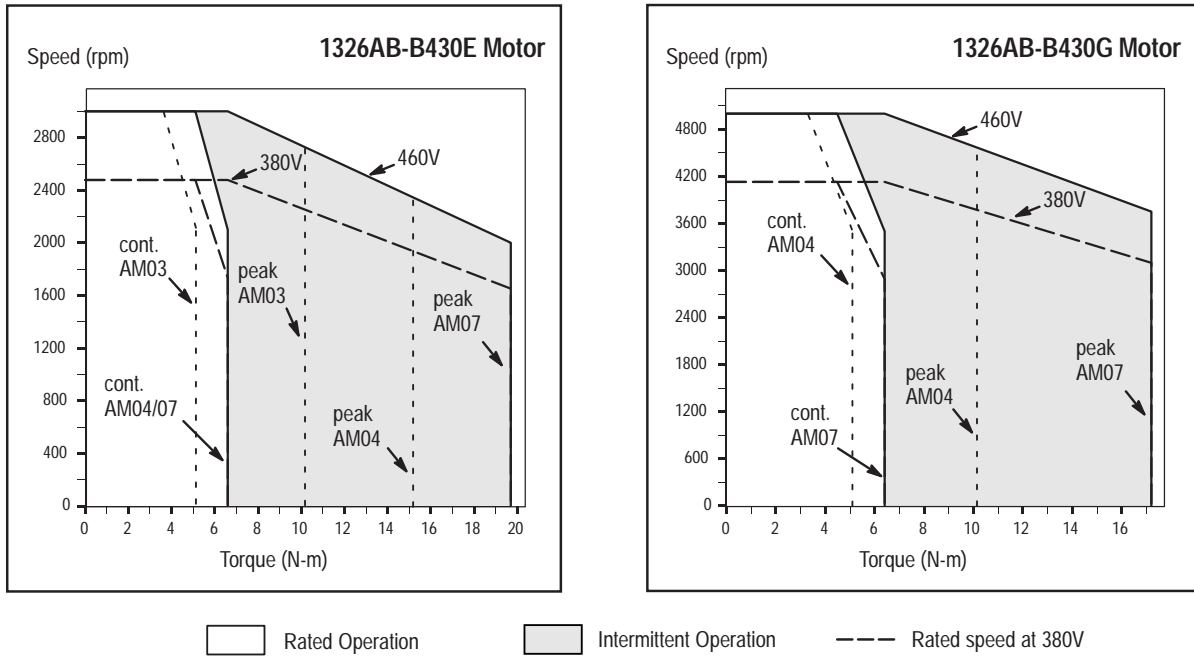
Important: Curves and performance data shown are for motor and 1394 combinations where the amplifier rating is greater than or equal to the continuous stall current of the motor.

The motor was tested at a line voltage of 460V AC, in a 40° C (104° F) ambient environment. The case temperature was approximately 100° C (212° F) with the motor windings at an 80° C (176° F) rise over ambient. Torque ratings were determined when the motor was mounted to a 304.8 mm x 304.8 mm x 25.4 mm (12 in. x 12 in. x 1 in.) steel mounting bracket. The motor contains two thermal switches wired in series that open during an overtemperature condition. They are set at 155° C (311° F) ±10%. Contacts are rated for 1A at 115V AC, 1A at 24V DC. All values shown below have a tolerance of ±10%.

Category	Parameter	Ambient Temp.	Units	1326AB-B420E	1326AB-B420H
General	Continuous Stall Torque - AM03/04/07	at 40° C (104° F)	N-m (lb-in.)	5.0 (44)/5.0 (44)/5.0 (44)	2.8 (25)/4.2 (37)/5.1 (45)
	Rated Output		kW	1.1	2.2
	Peak Stall Torque - AM03/04/07	at 40° C (104° F)	N-m (lb-in.)	10.6(94)/14.9(132)/14.9 (132)	5.6 (50)/8.4 (74)/14 (124)
	Continuous Stall Current - AM03/04/07	at 40° C (104° F)	amperes	2.84/2.84/2.84	3.0/4.5/5.46
	Peak Stall Current - AM03/04/07	at 40° C (104° F)	amperes	6/8/8	6/9/15
	Mechanical Time Constant	at 40° C (104° F)	milliseconds	6.9	6.0
	Electrical Time Constant	at 40° C (104° F)	milliseconds	3.8	4.6
	Rated Speed - 460V/380V	at 40° C (104° F)	rpm	3000/2500	6000/5000
Thermal	Maximum Ambient Temperature (without derating)		degrees C	40.0	40.0
	Insulation Class			H	H
	Thermal Time Constant		minutes	33	33
Winding	Torque Constant	at 25° C (77° F)	N-m (lb-in.)/A	2.15 (19.01)	1.01 (8.88)
	Voltage Constant	RMS (L-L) at 25° C (77° F)	volts/1000 rpm	122.2	60.5
	Terminal Resistance	ohms (L-L) at 25° C (77° F)	ohms	12.64	3.12
	Inductance	mH (L-L) at 25° C (77° F)	millihenry	69.76	17.2
Mechanical	Rotor Polar Moment of Inertia		kg-m ² (lb-in.-s ²)	0.0008 (0.007)	0.0008 (0.007)
	Motor Weight		kg (lb)	12.7 (28)	12.7 (28)
	Balance ¹		mm (in.)	0.0127 (0.0005)	0.0127 (0.0005)

¹ To obtain vibration velocity in mm (in.)/second, use the following formula: $V_v = D_{p-p} \times \text{rpm} / 27.01$
 where: V_v = Vibration velocity in mm (in.)/second
 D_{p-p} = Peak-to-peak displacement in mm (in.)
 rpm = Motor speed

Figure 4
1326AB-B430E and 1326AB-B430G Motor Speed-Torque Curves
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Important: Curves and performance data shown are for motor and 1394 combinations where the amplifier rating is greater than or equal to the continuous stall current of the motor.

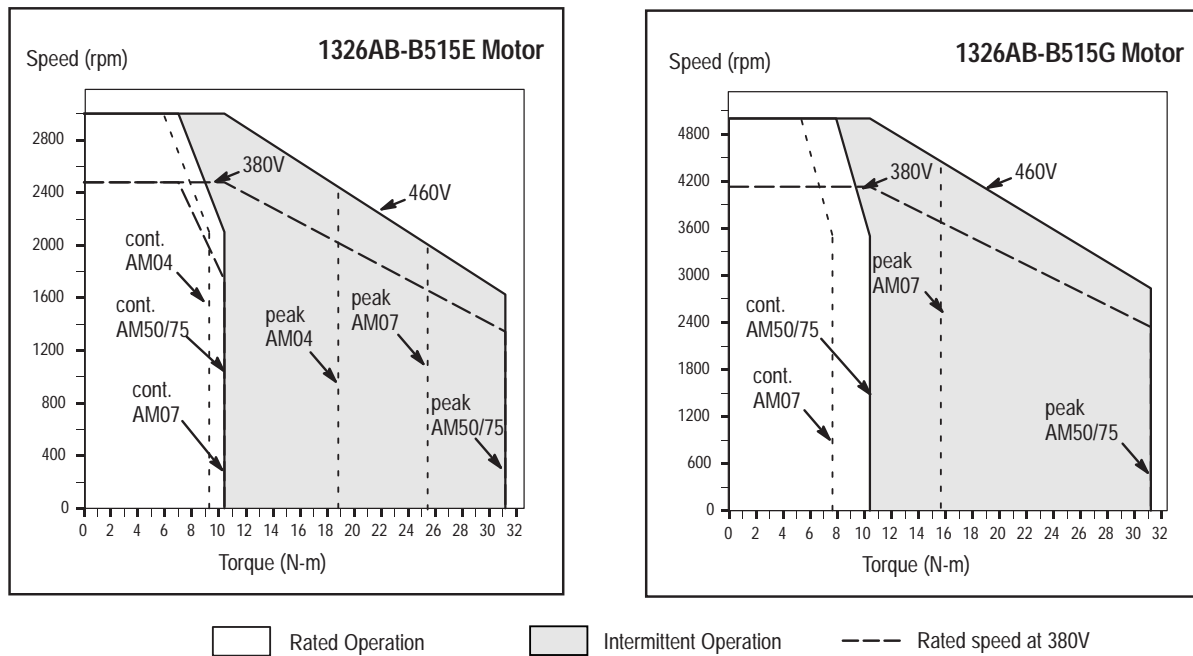
The motor was tested at a line voltage of 460V AC, in a 40° C (104° F) ambient environment. The case temperature was approximately 100° C (212° F) with the motor windings at an 80° C (176° F) rise over ambient. Torque ratings were determined when the motor was mounted to a 304.8 mm x 304.8 mm x 25.4 mm (12 in. x 12 in. x 1 in.) steel mounting bracket. The motor contains two thermal switches wired in series that open during an overtemperature condition. They are set at 155° C (311° F) ±10%. Contacts are rated for 1A at 115V AC, 1A at 24V DC. All values shown below have a tolerance of ±10%.

Category	Parameter	Ambient Temp.	Units	1326AB-B430E	1326AB-B430G
General	Continuous Stall Torque - AM03/04/07	at 40° C (104° F)	N-m (lb-in.)	5.1 (45)/6.6 (58)/6.6 (58)	NA/5.2 (46)/6.4 (57)
	Rated Output		kW	1.4	2.3
	Peak Stall Torque - AM03/04/07	at 40° C (104° F)	N-m (lb-in.)	10.1 (89)/15.2 (135)/19.7 (174)	NA/10.3 (92)/17.2 (153)
	Continuous Stall Current - AM03/04/07	at 40° C (104° F)	amperes	3.0/3.9/3.9	NA/4.5/5.6
	Peak Stall Current - AM03/04/07	at 40° C (104° F)	amperes	6/9/11.6	NA/9/15
	Mechanical Time Constant	at 40° C (104° F)	milliseconds	5.9	6.2
	Electrical Time Constant	at 40° C (104° F)	milliseconds	4.3	3.7
	Rated Speed - 460V/380V	at 40° C (104° F)	rpm	3000/2500	5000/4000
Thermal	Maximum Ambient Temperature (without derating)		degrees C	40.0	40.0
	Insulation Class			H	H
	Thermal Time Constant		minutes	38	38
Winding	Torque Constant	at 25° C (77° F)	N-m (lb-in.)/A	1.80 (15.92)	1.23 (10.89)
	Voltage Constant	RMS (L-L) at 25° C (77° F)	volts/1000 rpm	121	81.5
	Terminal Resistance	ohms (L-L) at 25° C (77° F)	ohms	7.05	3.44
	Inductance	mH (L-L) at 25° C (77° F)	millihenry	40.20	18.22
Mechanical	Rotor Polar Moment of Inertia		kg-m ² (lb-in.-s ²)	0.001 (0.010)	0.001 (0.0101)
	Motor Weight		kg (lb)	16.8 (37)	16.8 (37)
	Balance ¹		mm (in.)	0.0127 (0.0005)	0.0127 (0.0005)

¹ To obtain vibration velocity in mm (in.)/second, use the following formula: $V_v = D_{p-p} \times \text{rpm} / 27.01$

where: V_v = Vibration velocity in mm (in.)/second
 D_{p-p} = Peak-to-peak displacement in mm (in.)
 rpm = Motor speed

Figure 5
1326AB-B515E and 1326AB-B515G Motor Speed-Torque Curves
for Resolver and High-Resolution Motors



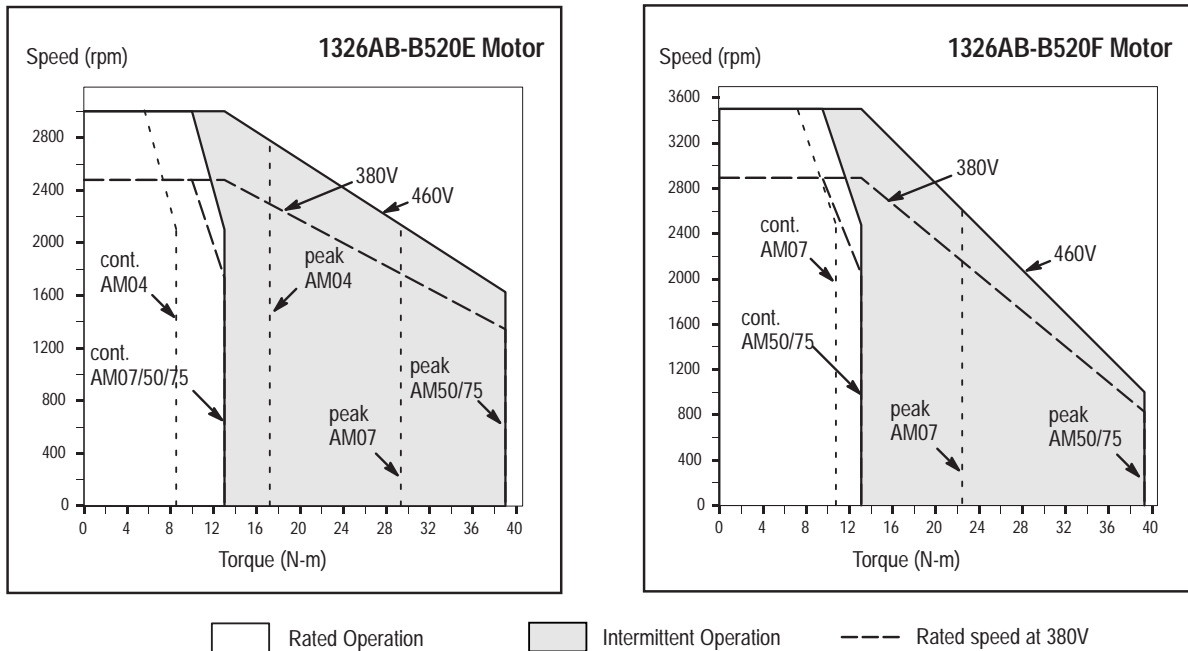
Important: Curves and performance data shown are for motor and 1394 combinations where the amplifier rating is greater than or equal to the continuous stall current of the motor.

The motor was tested at a line voltage of 460V AC, in a 40° C (104° F) ambient environment. The case temperature was approximately 100° C (212° F) with the motor windings at an 80° C (176° F) rise over ambient. Torque ratings were determined when the motor was mounted to a 304.8 mm x 304.8 mm x 25.4 mm (12 in. x 12 in. x 1 in.) steel mounting bracket. The motor contains two thermal switches wired in series that open during an overtemperature condition. They are set at 155° C (311° F) ±10%. Contacts are rated for 1A at 115V AC, 1A at 24V DC. All values shown below have a tolerance of ±10%.

Category	Parameter	Ambient Temp.	Units	1326AB-B515E	1326AB-B515G
General	Continuous Stall Torque - AM04/07/50/75	at 40° C (104° F)	N-m (lb-in.)	7.7 (68)/10.4 (92)/ 10.4 (92)/10.4 (92)	NA/7.9 (70)/10.4 (92)/ 10.4 (92)
	Rated Output		kW	2.3	2.9
	Peak Stall Torque - AM04/07/50/75	at 40° C (104° F)	N-m (lb-in.)	15.4 (136)/25.6 (226)/ 31.2 (276)/31.2 (276)	NA/15.8 (140)/31.2 (276)/31.2 (276)
	Continuous Stall Current - AM04/07/50/75	at 40° C (104° F)	amperes	4.5/6.1/6.1/6.1	NA/7.5/9.5/9.5
	Peak Stall Current - AM04/07/50/75	at 40° C (104° F)	amperes	9/15/18.3/18.3	NA/15/28.5/28.5
	Mechanical Time Constant	at 40° C (104° F)	milliseconds	10.2	16.1
	Electrical Time Constant	at 40° C (104° F)	milliseconds	5.6	3.8
	Rated Speed - 460V/380V	at 40° C (104° F)	rpm	3000/2500	5000/4000
Thermal	Maximum Ambient Temperature (without derating)		degrees C	40.0	40.0
	Insulation Class			H	H
	Thermal Time Constant		minutes	45	45
Winding	Torque Constant	at 25° C (77° F)	N-m (lb-in.)/A	2.54 (22.52)	0.96 (8.46)
	Voltage Constant	RMS (L-L) at 25° C (77° F)	volts/1000 rpm	123.5	75.9
	Terminal Resistance	ohms (L-L) at 25° C (77° F)	ohms	3.29	2.0
	Inductance	mH (L-L) at 25° C (77° F)	millihenry	28.57	10.75
Mechanical	Rotor Polar Moment of Inertia		kg-m ² (lb-in.-s ²)	0.0043 (0.038)	0.0043 (0.038)
	Motor Weight		kg (lb)	21.3 (47)	21.3 (47)
	Balance ¹		mm (in.)	0.0127 (0.0005)	0.0127 (0.0005)

¹ To obtain vibration velocity in mm (in.)/second, use the following formula: $V_v = D_{p-p} \times \text{rpm} / 27.01$
 where: V_v = Vibration velocity in mm (in.)/second
 D_{p-p} = Peak-to-peak displacement in mm (in.)
 rpm = Motor speed

Figure 6
1326AB-B520E and 1326AB-B520F Motor Speed-Torque Curves
for Resolver and High-Resolution Motors



Important: Curves and performance data shown are for motor and 1394 combinations where the amplifier rating is greater than or equal to the continuous stall current of the motor.

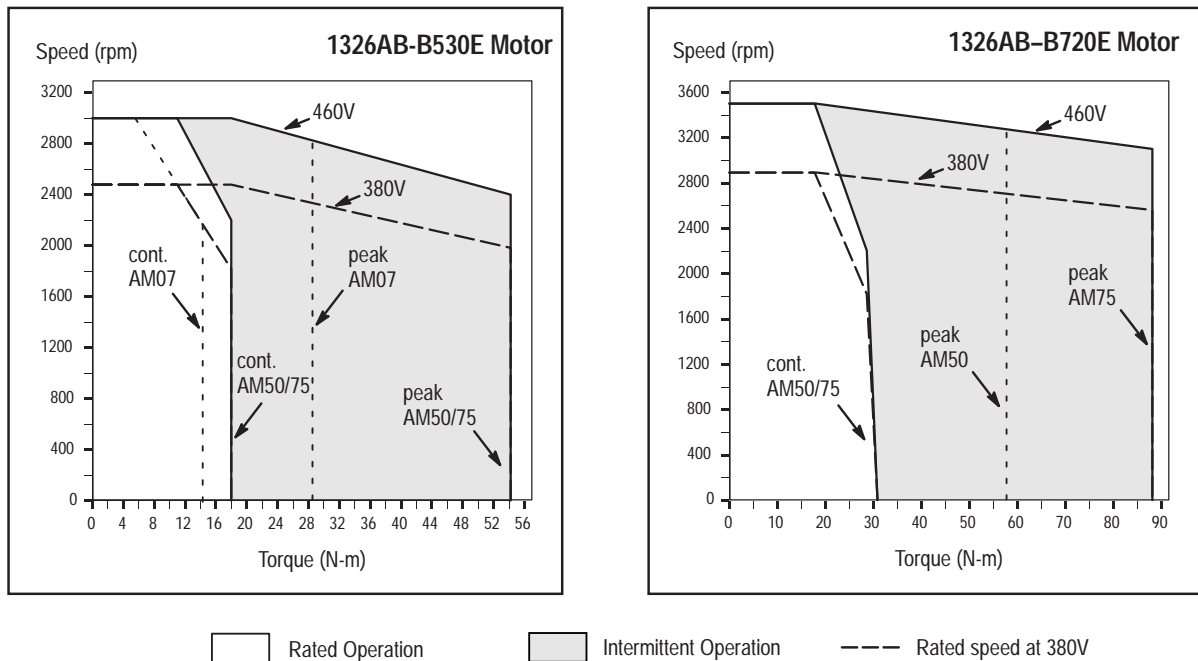
The motor was tested at a line voltage of 460V AC, in a 40° C (104° F) ambient environment. The case temperature was approximately 100° C (212° F) with the motor windings at an 80° C (176° F) rise over ambient. Torque ratings were determined when the motor was mounted to a 304.8 mm x 304.8 mm x 25.4 mm (12 in. x 12 in. x 1 in.) steel mounting bracket. The motor contains two thermal switches wired in series that open during an overtemperature condition. They are set at 155° C (311° F) ±10%. Contacts are rated for 1A at 115V AC, 1A at 24V DC. All values shown below have a tolerance of ±10%.

Category	Parameter	Ambient Temp.	Units	1326AB-B520E	1326AB-B520F
General	Continuous Stall Torque - AM04/07/50/75	at 40° C (104° F)	N-m (lb-in.)	8.8 (78)/13 (115)/ 13 (115)/13 (115)	NA/11.2 (99)/13.1 (116)/13.1 (116)
	Rated Output		kW	2.9	2.9
	Peak Stall Torque - AM04/07/50/75	at 40° C (104° F)	N-m (lb-in.)	17.7 (157)/29.4 (260)/ 39 (345)/39 (345)	NA/22.4 (198)/39.3 (348)/39.3 (348)
	Continuous Stall Current - AM04/07/50/75	at 40° C (104° F)	amperes	4.5/6.7/6.7/6.7	NA/7.5/8.8/8.8
	Peak Stall Current - AM04/07/50/75	at 40° C (104° F)	amperes	9.0/15.0/20.1/20.1	NA/15.0/26.4/26.4
	Mechanical Time Constant	at 40° C (104° F)	milliseconds	9.3	9.3
	Electrical Time Constant	at 40° C (104° F)	milliseconds	6.2	6.6
	Rated Speed - 460V/380V	at 40° C (104° F)	rpm	3000/2500	3500/3000
Thermal	Maximum Ambient Temperature (without derating)		degrees C	40.0	40.0
	Insulation Class			H	H
	Thermal Time Constant		minutes	56	56
Winding	Torque Constant	at 25° C (77° F)	N-m (lb-in.)/A	2.33 (20.66)	1.46 (12.95)
	Voltage Constant	RMS (L-L) at 25° C (77° F)	volts/1000 rpm	141	105.6
	Terminal Resistance	ohms (L-L) at 25° C (77° F)	ohms	2.95	1.71
	Inductance	mH (L-L) at 25° C (77° F)	millihenry	27.58	15.2
Mechanical	Rotor Polar Moment of Inertia		kg-m ² (lb-in.-s ²)	0.006 (0.050)	0.006 (0.050)
	Motor Weight		kg (lb)	27.7 (61)	27.7 (61)
	Balance ¹		mm (in.)	0.0127 (0.0005)	0.0127 (0.0005)

¹ To obtain vibration velocity in mm (in.)/second, use the following formula: $V_v = D_{p-p} \times \text{rpm} / 27.01$

where: V_v = Vibration velocity in mm (in.)/second
 D_{p-p} = Peak-to-peak displacement in mm (in.)
rpm = Motor speed

Figure 7
1326AB-B530E and 1326AB-B720E Motor Speed-Torque Curves
for Resolver and High-Resolution Motors



Important: Curves and performance data shown are for motor and 1394 combinations where the amplifier rating is greater than or equal to the continuous stall current of the motor.

The motor was tested at a line voltage of 460V AC, in a 40° C (104° F) ambient environment. The case temperature was approximately 100° C (212° F) with the motor windings at an 80° C (176° F) rise over ambient. Torque ratings were determined when the motor was mounted to a 304.8 mm x 304.8 mm x 25.4 mm (12 in. x 12 in. x 1 in.) steel mounting bracket. The motor contains two thermal switches wired in series that open during an overtemperature condition. They are set at 155° C (311° F) ±10%. Contacts are rated for 1A at 115V AC, 1A at 24V DC. All values shown below have a tolerance of ±10%.

Category	Parameter	Ambient Temp.	Units	1326AB-B530E	1326AB-B720E
General	Continuous Stall Torque - AM07/50/75	at 40° C (104° F)	N-m (lb-in.)	14.2 (126)/18 (160)/18 (160)	NA/30.9 (273)/30.9 (273)
	Rated Output		kW	4.2	6.8
	Peak Stall Torque - AM07/50/75	at 40° C (104° F)	N-m (lb-in.)	28.4 (251)/54.2 (480)/54.2 (480)	NA/58.5 (518)/88.1 (780)
	Continuous Stall Current - AM07/50/75	at 40° C (104° F)	amperes	7.5/9.5/9.5	NA/17.5/17.5
	Peak Stall Current - AM07/50/75	at 40° C (104° F)	amperes	15.0/28.5/28.5	NA/33.2/50
	Mechanical Time Constant	at 40° C (104° F)	milliseconds	8.2	6.6
	Electrical Time Constant	at 40° C (104° F)	milliseconds	7.2	9.5
	Rated Speed - 460V/380V	at 40° C (104° F)	rpm	3000/2500	3500/3000
Thermal	Maximum Ambient Temperature (without derating)		degrees C	40.0	40
	Insulation Class			H	H
	Thermal Time Constant		minutes	66	55
Winding	Torque Constant	at 25° C (77° F)	N-m (lb-in.)/A	2.2 (19.5)	2.07 (18.4)
	Voltage Constant	RMS (L-L) at 25° C (77° F)	volts/1000 rpm	137.1	125.2
	Terminal Resistance	ohms (L-L) at 25° C (77° F)	ohms	1.56	0.665
	Inductance	mH (L-L) at 25° C (77° F)	millihenry	16.42	8.73
Mechanical	Rotor Polar Moment of Inertia		kg-m ² (lb-in.-s ²)	0.009 (0.080)	0.015 (0.140)
	Motor Weight		kg (lb)	34.5 (76)	46.3 (102)
	Balance ¹		mm (in.)	0.0127 (0.0005)	0.0127 (0.0005)

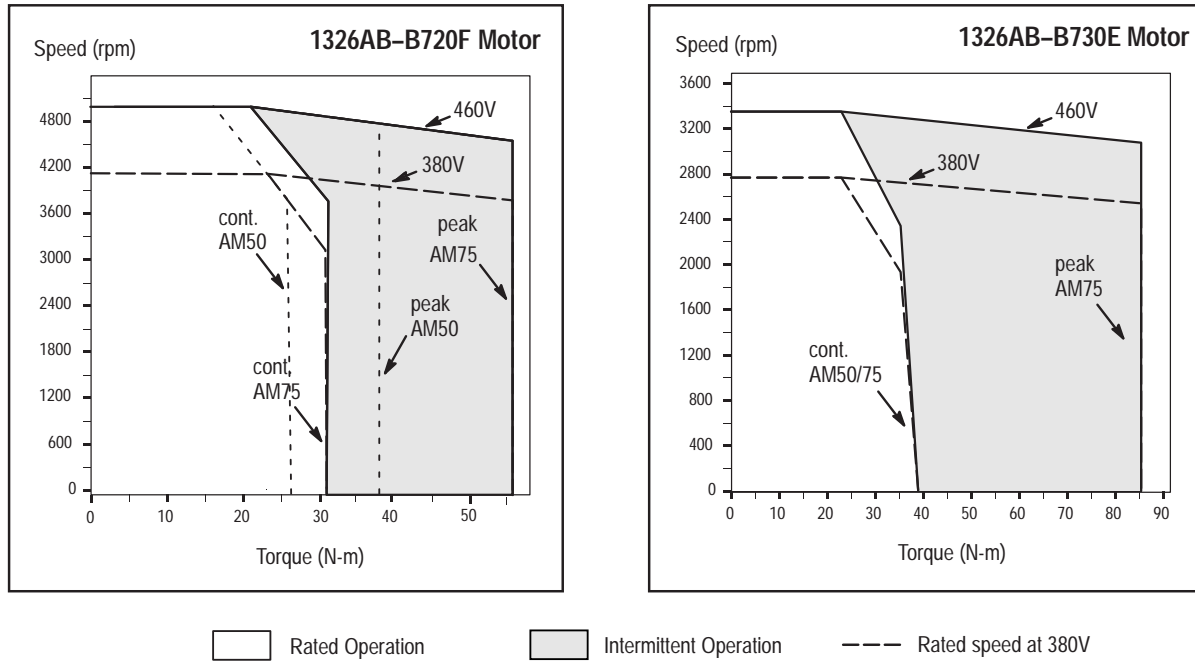
¹ To obtain vibration velocity in mm (in.)/second, use the following formula: $V_v = D_{p-p} \times \text{rpm} / 27.01$

where: V_v = Vibration velocity in mm (in.)/second

D_{p-p} = Peak-to-peak displacement in mm (in.)

rpm = Motor speed

Figure 8
1326AB-B720F and 1326AB-B730E Motor Speed-Torque Curves
for Resolver and High-Resolution Motors



Important: Curves and performance data shown are for motor and 1394 combinations where the amplifier rating is greater than or equal to the continuous stall current of the motor.

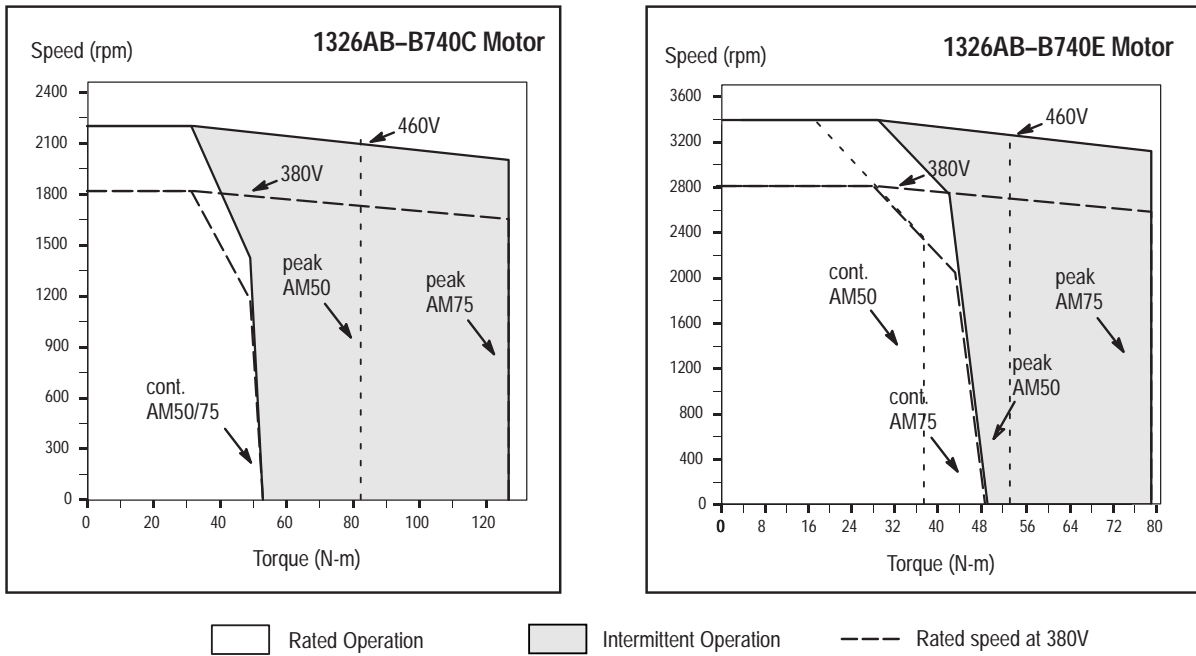
The motor was tested at a line voltage of 460V AC, in a 40° C (104° F) ambient environment. The case temperature was approximately 100° C (212° F) with the motor windings at an 80° C (176° F) rise over ambient. Torque ratings were determined when the motor was mounted to a 304.8 mm x 304.8 mm x 25.4 mm (12 in. x 12 in. x 1 in.) steel mounting bracket. The motor contains two thermal switches wired in series that open during an overtemperature condition. They are set at 155° C (311° F) ±10%. Contacts are rated for 1A at 115V AC, 1A at 24V DC. All values shown below have a tolerance of ±10%.

Category	Parameter	Ambient Temp.	Units	1326AB-B720F	1326AB-B730E
General	Continuous Stall Torque - AM50/75	at 40° C (104° F)	N-m (lb-in.)	31.8 (281.7)/31.8 (281.7)	39 (345)/39 (345)
	Rated Output		kW	11.7/9.7	9.6/8.0
	Peak Stall Torque - AM50/75	at 40° C (104° F)	N-m (lb-in.)	38 (336)/56 (495)	56.8 (502)/85.4 (756)
	Continuous Stall Current - AM50/75	at 40° C (104° F)	amperes	27.5/27.5	22.8/22.8
	Peak Stall Current - AM50/75	at 40° C (104° F)	amperes	33.2/50	33.2/50
	Mechanical Time Constant	at 40° C (104° F)	milliseconds	6.6	6.9
	Electrical Time Constant	at 40° C (104° F)	milliseconds	9.5	11.92
	Rated Speed - 460V/380V	at 40° C (104° F)	rpm	5000/4100	3350/2800
Thermal	Maximum Ambient Temperature (without derating)		degrees C	40	40
	Insulation Class			H	H
	Thermal Time Constant		minutes	60	60
Winding	Torque Constant	at 25° C (77° F)	N-m (lb-in.)/A	1.37 (12.12)	2.01 (17.8)
	Voltage Constant	RMS (L-L) at 25° C (77° F)	volts/1000 rpm	82.8	126.2
	Terminal Resistance	ohms (L-L) at 25° C (77° F)	ohms	0.291	0.426
	Inductance	mH (L-L) at 25° C (77° F)	millihenry	4.15	6.60
Mechanical	Rotor Polar Moment of Inertia		kg-m ² (lb-in.-s ²)	0.015 (0.140)	0.024 (0.22)
	Motor Weight		kg (lb)	62.6 (138)	62.6 (138)
	Balance ¹		mm (in.)	0.0127 (0.0005)	0.0127 (0.0005)

¹ To obtain vibration velocity in mm (in.)/second, use the following formula: $V_v = Dp-p \times rpm/27.01$

where: V_v = Vibration velocity in mm (in.)/second
 D_{p-p} = Peak-to-peak displacement in mm (in.)
 rpm = Motor speed

Figure 9
1326AB-B740C and 1326AB-B740E Motor Speed-Torque Curves
for Resolver and High-Resolution Motors



Important: Curves and performance data shown are for motor and 1394 combinations where the amplifier rating is greater than or equal to the continuous stall current of the motor.

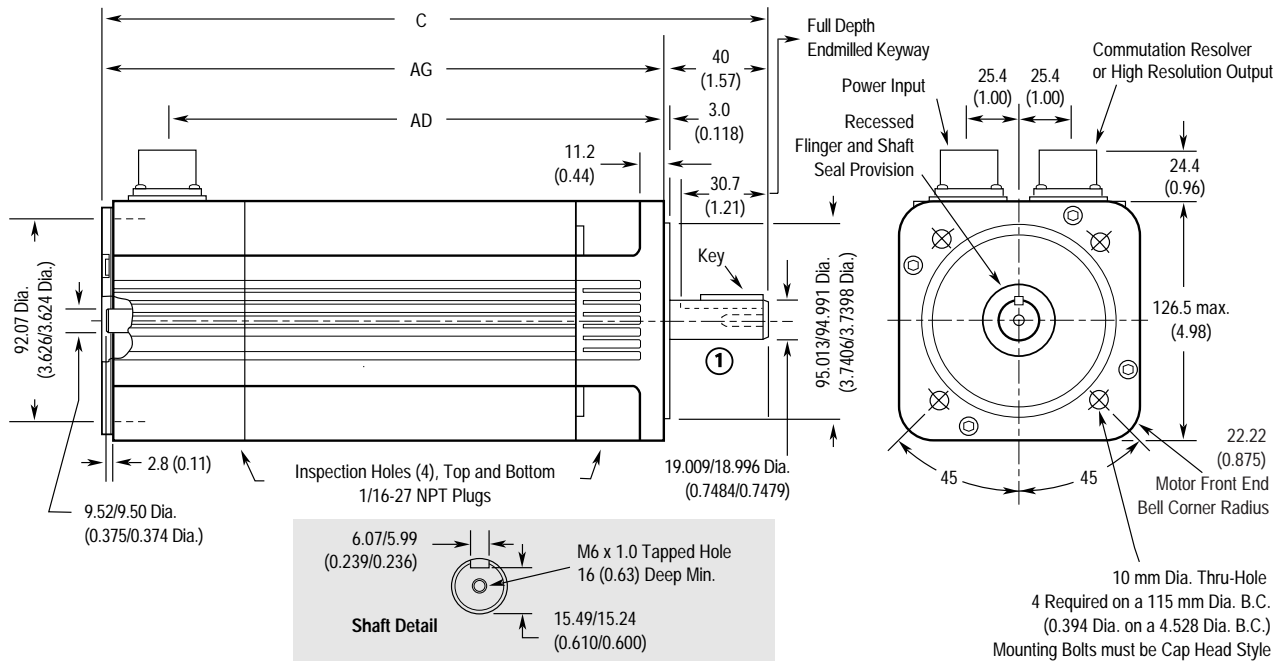
The motor was tested at a line voltage of 460V AC, in a 40° C (104° F) ambient environment. The case temperature was approximately 100° C (212° F) with the motor windings at an 80° C (176° F) rise over ambient. Torque ratings were determined when the motor was mounted to a 304.8 mm x 304.8 mm x 25.4 mm (12 in. x 12 in. x 1 in.) steel mounting bracket. The motor contains two thermal switches wired in series that open during an overtemperature condition. They are set at 155° C (311° F) ±10%. Contacts are rated for 1A at 115V AC, 1A at 24V DC. All values shown below have a tolerance of ±10%.

Category	Parameter	Ambient Temp.	Units	1326AB-B740C	1326AB-B740E
General	Continuous Stall Torque - AM50/75	at 40° C (104° F)	N-m (lb-in.)	53 (469)/53 (469)	50.8 (450)/50.8 (450)
	Rated Output		kW	8.7/7.0	12.7/10.6
	Peak Stall Torque - AM50/75	at 40° C (104° F)	N-m (lb-in.)	84.2 (745)/126.8 (1122)	/52.7 (466)/79.4 (702)
	Continuous Stall Current - AM50/75	at 40° C (104° F)	amperes	20.9/20.9	32.0/32.0
	Peak Stall Current - AM50/75	at 40° C (104° F)	amperes	33.2/50	33.2/50
	Mechanical Time Constant	at 40° C (104° F)	milliseconds	6.1	6.1
	Electrical Time Constant	at 40° C (104° F)	milliseconds	14.3	14.3
	Rated Speed - 460V/380V	at 40° C (104° F)	rpm	2200/1800	3400/2800
Thermal	Maximum Ambient Temperature (without derating)		degrees C	40	40
	Insulation Class			H	H
	Thermal Time Constant		minutes	60	60
Winding	Torque Constant	at 25° C (77° F)	N-m (lb-in.)/A	2.98 (26.4)	2.11 (18.7)
	Voltage Constant	RMS (L-L) at 25° C (77° F)	volts/1000 rpm	193.1	127.5
	Terminal Resistance	ohms (L-L) at 25° C (77° F)	ohms	0.610	0.26
	Inductance	mH (L-L) at 25° C (77° F)	millihenry	11.35	4.6
Mechanical	Rotor Polar Moment of Inertia		kg-m ² (lb-in.-s ²)	0.032 (0.29)	0.032 (0.29)
	Motor Weight		kg (lb)	77.1 (170)	77.1 (170)
	Balance ¹		mm (in.)	0.0127 (0.0005)	0.0127 (0.0005)

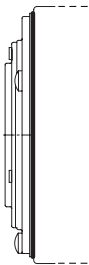
¹ To obtain vibration velocity in mm (in.)/second, use the following formula: $V_v = D_p \cdot p \cdot \text{rpm} / 27.01$
 where: V_v = Vibration velocity in mm (in.)/second
 D_p = Peak-to-peak displacement in mm (in.)
 rpm = Motor speed

Servo Motor Dimensions

Figure 10
1326AB-B4 Torque Plus Series (Resolver and High Resolution Feedback)



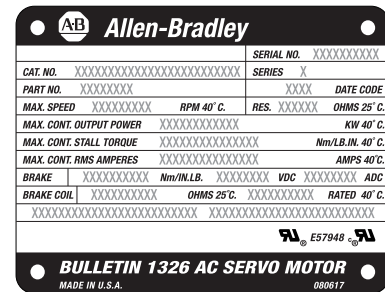
High-Resolution Motor End



① Shaft and Pilot Tolerances

- Maximum Shaft Runout 0.04 (0.0016) T.I.R
- Shaft Endplay 0.127 (0.005)
- Maximum Pilot Eccentricity 0.08 (0.0032) T.I.R
- Maximum Face Runout 0.08 (0.0032) T.I.R

Name Plate Detail



Flange Mount in millimeters and (inches)

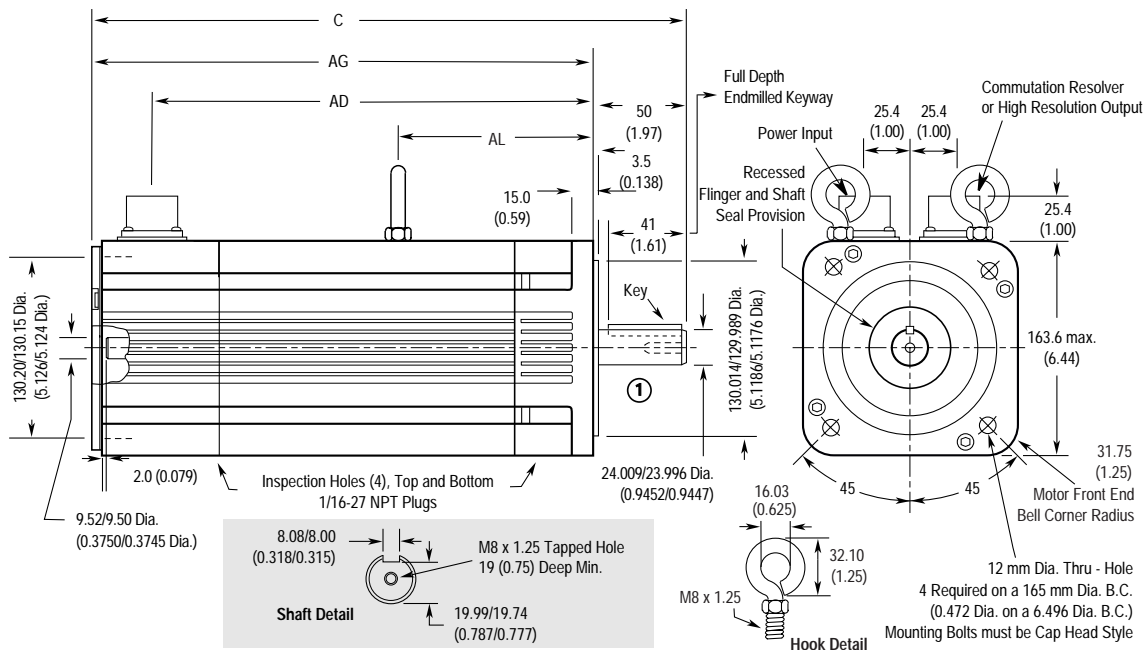
Feedback	Catalog number	Description	AD	AG	C	Key	End Milled keyway (full depth)
Revolver	1326AB-B410x-21	without brake ^{1,2}	201.7 (7.94)	235.7 (9.28)	275.6 (10.85)	6 x 6 x 30 (0.236 x 0.236 x 1.18)	30.7 (1.21)
	1326AB-B420x-21	without brake ^{1,2}	258.8 (10.19)	292.9 (11.53)	333.0 (13.11)	6 x 6 x 30 (0.236 x 0.236 x 1.18)	30.7 (1.21)
	1326AB-B430x-21	without brake ^{1,2}	328.7 (12.94)	362.7 (14.28)	402.8 (15.86)	6 x 6 x 30 (0.236 x 0.236 x 1.18)	30.7 (1.21)
High-Resolution	1326AB-B410x-21M/S	without brake ^{1,2}	201.7 (7.94)	241.8 (9.52)	281.7 (11.09)	6 x 6 x 30 (0.236 x 0.236 x 1.18)	30.7 (1.21)
	1326AB-B420x-21M/S	without brake ^{1,2}	258.8 (10.19)	299.0 (11.77)	338.8 (13.34)	6 x 6 x 30 (0.236 x 0.236 x 1.18)	30.7 (1.21)
	1326AB-B430x-21M/S	without brake ^{1,2}	328.7 (12.94)	368.8 (14.52)	408.7 (16.09)	6 x 6 x 30 (0.236 x 0.236 x 1.18)	30.7 (1.21)

¹ If ordering a 1326AB-B4xxx-21-K4 with optional 24V DC, 8.1 N-m (72 lb-in.) brake, add 45 mm (1.75 in.) to AD, AG and C.

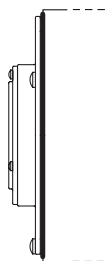
² If ordering a 1326AB-B4xxx-21-xK4L with optional 24V DC, 8.1 N-m (72 lb-in.) brake (IP67 rated), add 45 mm (1.75 in.) to AD, AG and C.

Dimensions are per NEMA Standards MG 7-2.4.1.3 and IEC 72-1. Shaft tolerance per DIN 42955, "N" tolerance.

Figure 11
1326AB-B5 Torque Plus Series (Resolver and High Resolution Feedback)



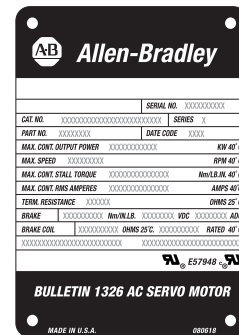
High-Resolution Motor End



① Shaft and Pilot Tolerances

- Maximum Shaft Runout 0.05 (0.002) T.I.R
- Shaft Endplay 0.127 (0.005)
- Maximum Pilot Eccentricity 0.10 (0.004) T.I.R
- Maximum Face Runout 0.10 (0.004) T.I.R

Name Plate Detail



Flange Mount in millimeters and (inches)

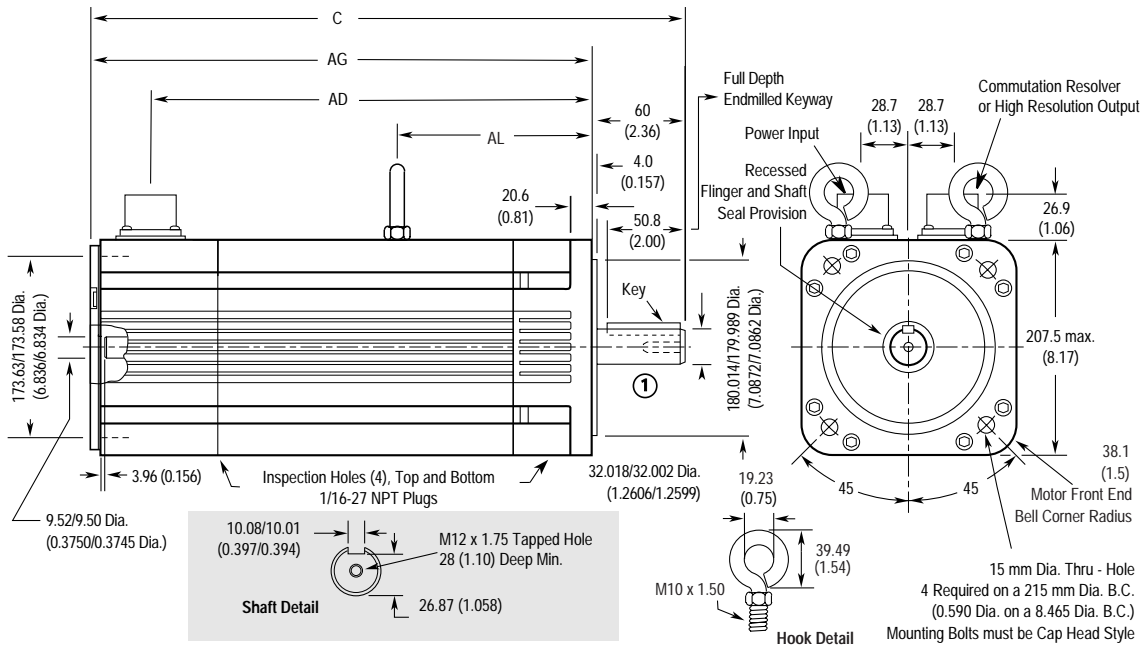
Feedback	Catalog number	Description	AL	AD	AG	C	Key	End Milled keyway (full depth)
Resolver	1326AB-B515x-21	without brake ^{1,2}	N/A	244.1 (9.61)	276.6 (10.89)	326.6 (12.86)	8 x 7 x 40 (0.315 x 0.276 x 1.57)	41.0 (1.61)
	1326AB-B520x-21	without brake ^{1,2}	N/A	282.2 (11.11)	314.7 (12.39)	364.7 (14.36)	8 x 7 x 40 (0.315 x 0.276 x 1.57)	41.0 (1.61)
	1326AB-B530x-21	without brake ^{1,2}	187 (7.362) ^{1,2}	364.7 (14.36)	397.3 (15.64)	447.3 (17.61)	8 x 7 x 40 (0.315 x 0.276 x 1.57)	41.0 (1.61)
High-Resolution	1326AB-B515x-21M/S	without brake ^{1,2}	N/A	244.1 (9.61)	291.1 (11.46)	341.1 (13.43)	8 x 7 x 40 (0.315 x 0.276 x 1.57)	41.0 (1.61)
	1326AB-B520x-21M/S	without brake ^{1,2}	N/A	282.2 (11.11)	329.2 (12.96)	379.2 (14.93)	8 x 7 x 40 (0.315 x 0.276 x 1.57)	41.0 (1.61)
	1326AB-B530x-21M/S	without brake ^{1,2}	187 (7.362) ^{1,2}	364.7 (14.36)	411.7 (16.21)	461.8 (18.18)	8 x 7 x 40 (0.315 x 0.276 x 1.57)	41.0 (1.61)

¹ If ordering a 1326AB-B5xxx-21-K5 with optional 24V DC, 13.6 N-m (120 lb-in.) brake, add 76.2 mm (3.0 in.) to AD, AG and C (38.1 mm (1.5 in.) to AL).

² If ordering a 1326AB-B5xxx-21-xK5L with optional 24V DC, 13.6 N-m (120 lb-in.) brake (IP67 rated), add 76.2 mm (3.0 in.) to AD, AG and C (38.1 mm (1.5 in.) to AL).

Dimensions are per NEMA Standards MG 7-2.4.1.3 and IEC 72-1. Shaft tolerance per DIN 42955, "N" tolerance.

Figure 12
1326AB-B7 Torque Plus Series (Resolver and High Resolution Feedback)



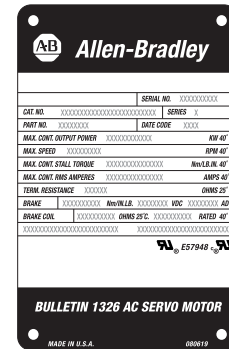
High-Resolution Motor End



① **Shaft and Pilot Tolerances**

- Maximum Shaft Runout 0.05 (0.002) T.I.R
- Shaft Endplay 0.127 (0.005)
- Maximum Pilot Eccentricity 0.10 (0.004) T.I.R
- Maximum Face Runout 0.10 (0.004) T.I.R

Name Plate Detail



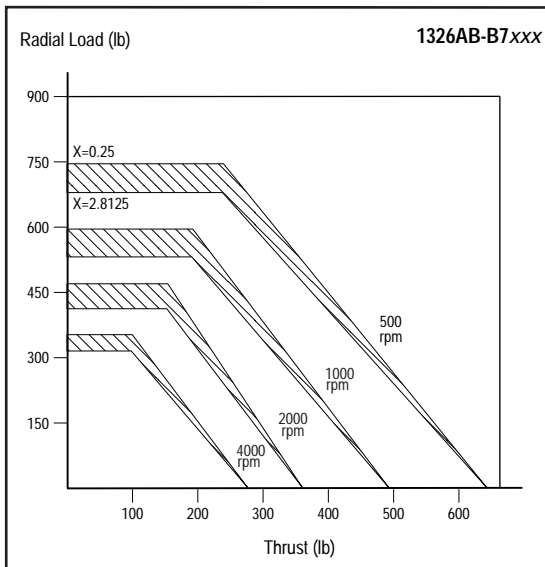
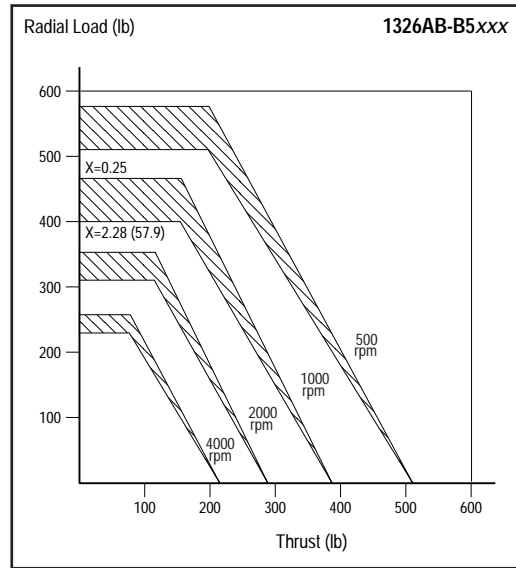
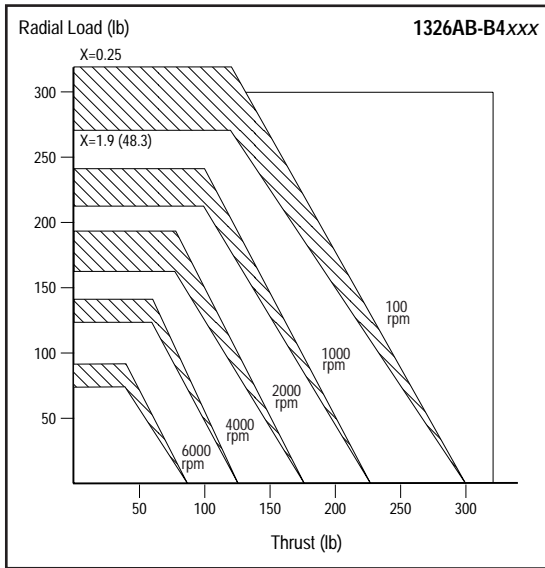
Flange Mount in millimeters and (inches)

Feedback	Catalog number	Description	AL	AD	AG	C	Key	End Milled keyway (full depth)
Revolver	1326AB-B720x-21	without brake ^{1,2}	164.3 (6.468) ^{1,2}	324.6 (12.78)	366.0 (14.41)	426.0 (16.77)	10 x 8 x 50 (0.39 x 0.31 x 1.97)	50.8 (2.00)
	1326AB-B730x-21	without brake ^{1,2}	208.7 (8.218) ^{1,2}	413.5 (16.28)	454.9 (17.91)	514.9 (20.27)	10 x 8 x 50 (0.39 x 0.31 x 1.97)	50.8 (2.00)
	1326AB-B740x-21	without brake ^{1,2}	253.2 (9.968) ^{1,2}	502.4 (19.78)	543.8 (21.41)	603.8 (23.77)	10 x 8 x 50 (0.39 x 0.31 x 1.97)	50.8 (2.00)
High-Resolution	1326AB-B720x-21M/S	without brake ^{1,2}	164.3 (6.468) ^{1,2}	324.6 (12.78)	371.9 (14.64)	431.8 (17.00)	10 x 8 x 50 (0.39 x 0.31 x 1.97)	50.8 (2.00)
	1326AB-B730x-21M/S	without brake ^{1,2}	208.7 (8.218) ^{1,2}	413.5 (16.28)	460.8 (18.14)	520.7 (20.50)	10 x 8 x 50 (0.39 x 0.31 x 1.97)	50.8 (2.00)
	1326AB-B740x-21M/S	without brake ^{1,2}	253.2 (9.968) ^{1,2}	502.4 (19.78)	549.7 (21.64)	609.6 (24.00)	10 x 8 x 50 (0.39 x 0.31 x 1.97)	50.8 (2.00)

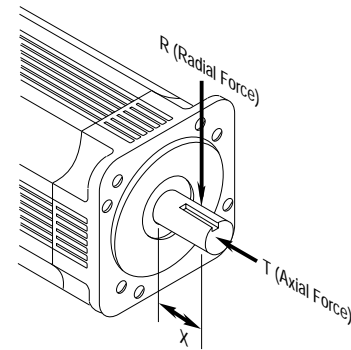
¹ If ordering a 1326AB-B7xxx-21-K7 with an optional 24V DC, 45.1 N-m (400 lb-in.) brake, add 76.2 mm (3.0 in.) to AD, AG and C (38.1 mm (1.5) to AL).

² If ordering a 1326AB-B7xxx-21-xK7L with an optional 24V DC, 45.1 N-m (400 lb-in.) brake (IP67 rated), add 76.2 mm (3.0 in.) to AD, AG and C (38.1 mm (1.5) to AL). Dimensions are per NEMA Standards MG 7-2.4.1.3 and IEC 72-1. Shaft tolerance per DIN 42955, "N" tolerance.

Figure 13
Motor Output Shaft Radial Load vs. Thrust Load



1326AB AC Servo Motor 15,000 hour B10 bearing life – vertical or horizontal mounting



Servo Motor Options

This section provides detailed information on the various options available for the 1326AB 460V, Torque Plus Servo Motors.

Integral Holding Brake (Option -Kxx)

The disc-type brake is spring-set when power is removed. It is designed to hold a load at rest and provide limited braking torque for emergency stopping. The brake is not intended to be used as a positioning brake (brake backlash is 0.8 arc-minutes maximum) or meant to be continuously cycled to assist in stopping a load.



ATTENTION: To avoid personal injury or property damage, ensure the brake is not energized/de-energized more than 90 times an hour when used as a parking brake. The parking brake is only meant to hold a stationary load and not intended to stop motor movement unless a power interruption occurs. For more information, refer to the table below.

Option Designator	Holding Torque N-m (lb-in.)	Current Draw when Energized (24V DC input)	Brake Response Time (ms) Pickup/Dropout	Weight Added to Motor Weight kg (lb)	Inertia Added to Motor Inertia kg-cm-s ² (lb-in.-s ²)	Cold Resistance (ohms)
-K4	8.1 (72)	0.88A	120/20	1.36 (3.0)	0.001 (0.001)	28
-K5	13.6 (120)	1.20A	150/25	4.08 (9.0)	0.0031 (0.0027)	21
-K7	45.1 (400)	1.20A	120/30	5.90 (13.0)	0.0053 (0.0046)	21

Shaft Oil Seal (1326AB-MOD-SSV-xxx)

Allen-Bradley offers a Viton shaft oil seal kit that you can install on a motor in the field. Use the seal in applications where the motor shaft may be subjected to occasional oil splashes or low pressure water jetting. An example would be when a motor is exposed to splashing from coolant nozzles.

Important: A shaft seal kit must be installed on the motor to meet IP65 requirements. The kit is not intended to be used in applications where the motor shaft is partially or fully submerged in oil.

Important: The IP67 motor option (-L) has a factory-installed shaft seal and does not require this kit option.

Encoder Mounting Adapters (1326AB-MOD-Mxx)

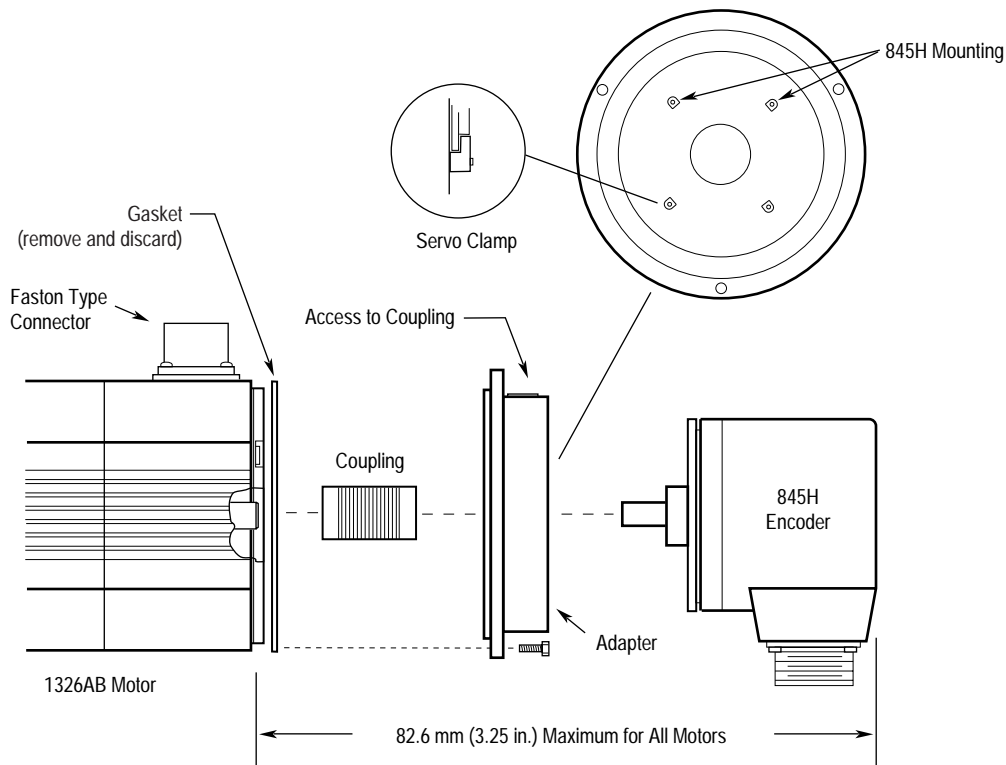
Several adapters are available for mounting Allen-Bradley 845H encoders to 1326AB Torque Plus Series Servo Motors.

Important: These adapters are not available for high-resolution feedback (-21M and -21S) motors.

Refer to the figure below for more information.

Important: Motors with IP65 or IP67 protection lose their rating when this option is used.

Figure 14
Encoder Mounting Adapter



Note: Use servo clamps to mount an 845H servo mount encoder to the adapter plate.

Note: Coupling accommodates 9.53 mm (0.375 in.) encoder shaft.

Note: Servo clamps accommodate both English and metric servo encoder mounting configurations.



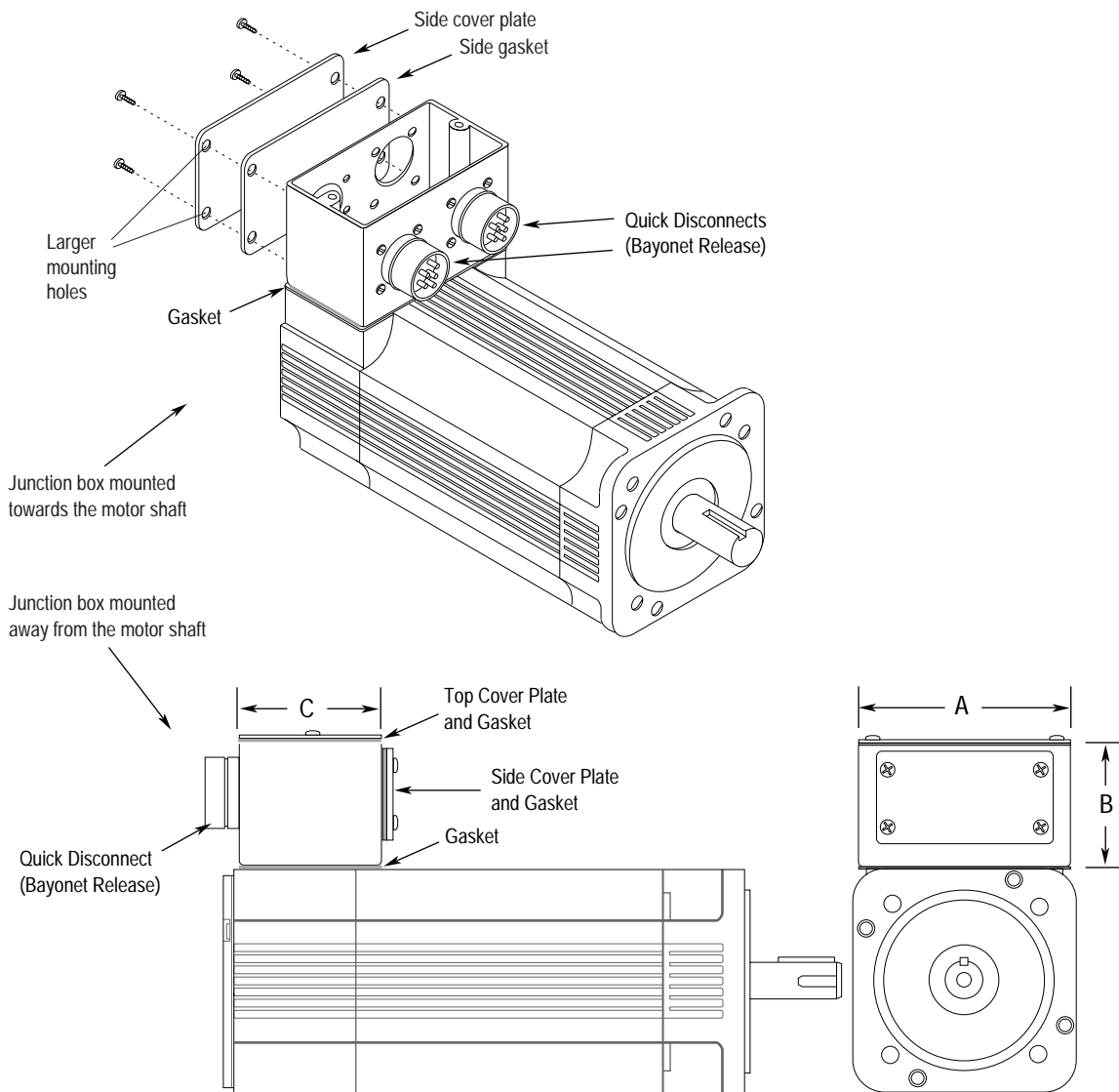
ATTENTION: To avoid equipment damage caused by the gasket after adapter installation, remove and discard gasket during disassembly.

Motor Junction Box Kit (1326AB-MOD-RJAB1 and -RJC1)

The Motor Junction Box Kit provides axially-mounted connectors with either front or rear exit connections. The junction box allows the motor connectors to be brought out axially to the motor without further wiring. Motors with IP65 protection maintain their rating when using this option. Refer to the figure below for junction box dimensions.

Important: Motors with IP67 protection lose their rating when using this option.

Figure 15
Motor Junction Box Mounting Options and Dimensions



Dimension	1326AB-MOD-RJAB1	1326AB-MOD-RJC1
A	105.0 mm (4.13 in.)	120.65 mm (4.75 in.)
B	62.0 mm (2.44 in.)	66.675 mm (2.625 in.)
C	63.5 mm (2.50 in.)	66.675 mm (2.625 in.)

1326-CCUx-xxx Commutation Connection for Motor Resolver

Wire Color	Gauge mm ² (AWG)	Connector Pin	System Module Terminal #
Black (Axis_0_R1)	0.519 (20)	A	1
White (Axis_0_R2)	0.519 (20)	B	6
Shield - Drain	0.519 (20)	no connection	2
Black (Axis_0_S1)	0.519 (20)	D	3
Red (Axis_0_S3)	0.519 (20)	E	8
Shield - Drain	0.519 (20)	no connection	7
Black (Axis_0_S4)	0.519 (20)	H	9
Green (Axis_0_S2)	0.519 (20)	G	4
Shield - Drain	0.519 (20)	no connection	5
Overall Shield	N/A	no connection	10

1326-CCUT-xxx Flex Rated Commutation Feedback Cable for Motor Resolver

Wire Color	Gauge mm ² (AWG)	Connector Pin	System Module Terminal #
White/Black (Axis_0_R1)	0.519 (20)	A	1
White (Axis_0_R2)	0.519 (20)	B	6
Shield	0.519 (20)	no connection	2
White/Black (Axis_0_S1)	0.519 (20)	D	3
White/Red (Axis_0_S3)	0.519 (20)	E	8
Shield	0.519 (20)	no connection	7
White/Black (Axis_0_S4)	0.519 (20)	H	9
White/Green (Axis_0_S2)	0.519 (20)	G	4
Shield	N/A	no connection	5
Green/Yellow	N/A	no connection	10

1326-CECUx-xxx L-xxx High-Resolution Feedback Cable Wiring Information for High-Resolution Servo Motors Only

Wire Number	Wire Color	Gauge mm ² (AWG)	Connector Pin	1394 Terminal
Black (power)	0.519 (20)	A	3	Black (power)
White (ground)	0.519 (20)	B	2	White (ground)
Shield	0.519 (20)	no connection	no connection	Shield
Black (ChA_LO)	0.519 (20)	C	11	Black (ChA_LO)
Red (ChA_HI)	0.519 (20)	D	12	Red (ChA_HI)
Shield	0.519 (20)	I	10	Shield
Black (ChB_LO)	0.519 (20)	E	8	Black (ChB_LO)
Blue (ChB_HI)	0.519 (20)	F	9	Blue (ChB_HI)
Shield	0.519 (20)	I	7	Shield
Black (Comm_HI)	0.519 (20)	G	6	Black (Comm_HI)
Green (Comm_LO)	0.519 (20)	H	5	Green (Comm_LO)
Shield	0.519 (20)	I	4	Shield
Overall Shield	N/A	J	1	Overall Shield

1326-CPB1-xxx Standard Motor Power Cable for 1326AS-B3xxx, 1326AB/AS-B4xxx, and 1326AB-B5xxx Servo Motors

Wire Number	Wire Color	Gauge mm ² (AWG)	Connector Pin	1394 Terminal
1 (Power)	Black	1.3 (16)	1	U1
2 (Power)	Black	1.3 (16)	2	V1
3 (Power)	Black	1.3 (16)	3	W1
4 (Brake)	Black	1.3 (16)	4	TB1-3
5 (Thermostat)	Black	1.3 (16)	5	TB1-2
6 (Brake)	Black	1.3 (16)	6	TB1-4
Braided Shield	Braided Shield	N/A	7	PE3
8 (GND)	Green/Yellow	1.3 (16)	8	PE2
9 (Thermostat)	Black	1.3 (16)	9	TB1-1

1326-CPB1T-xxx Flex Rated Power Cable for 1326AS-B3xxx, 1326AB/AS-B4xxx, and 1326AB-B5xxx Servo Motors

Wire Number	Wire Color	Gauge mm ² (AWG)	Connector Pin	1394 Terminal
1 (Power)	White	1.3 (16)	1	U1
2 (Power)	White	1.3 (16)	2	V1
3 (Power)	White	1.3 (16)	3	W1
4 (Brake)	White	1.3 (16)	4	TB1-3
5 (Thermostat)	White	1.3 (16)	5	TB1-2
6 (Brake)	White	1.3 (16)	6	TB1-4
Braided Shield	Braided Shield	N/A	7	PE3
8 (GND)	Green/Yellow	1.3 (16)	8	PE2
9 (Thermostat)	White	1.3 (16)	9	TB1-1

1326-CPC1-xxx Standard Power Cable for the 1326AB-B7xxx, 1326AS-B6xxx, and 1326AS-B8xxx Servo Motors

Wire Number	Wire Color	Gauge mm ² (AWG)	Connector Pin	1394 Terminal
1 (Power)	Black	5.3 (10)	1	U1
2 (Power)	Black	5.3 (10)	2	V1
3 (Power)	Black	5.3 (10)	3	W1
4 (Brake)	Black	1.3 (16)	4	TB1-3
5 (Thermostat)	Black	1.3 (16)	5	TB1-2
6 (Brake)	Black	1.3 (16)	6	TB1-4
Braided Shield	Braided Shield	N/A	7	PE3
8 (GND)	Green/Yellow	3.3 (12)	8	PE2
9 (Thermostat)	Black	1.3 (16)	9	TB1-1

1326-CPC1T-xxx Flex Rated Power Cable for the 1326AB-B7xxx, 1326AS-B6xxx, and 1326AS-B8xxx Servo Motors

Wire Number	Wire Color	Gauge mm ² (AWG)	Connector Pin	1394 Terminal
1 (Power)	White	5.3 (10)	1	U1
2 (Power)	White	5.3 (10)	2	V1
3 (Power)	White	5.3 (10)	3	W1
4 (Brake)	White	1.3 (16)	4	TB1-3
5 (Thermostat)	White	1.3 (16)	5	TB1-2
6 (Brake)	White	1.3 (16)	6	TB1-4
Braided Shield	Braided Shield	N/A	7	PE3
8 (GND)	Green/Yellow	3.3 (12)	8	PE2
9 (Thermostat)	White	1.3 (16)	9	TB1-1

1326-CEU-xxx Encoder Feedback Cable

Pair #	Wire Color	Gauge mm ² (AWG)	Connector Pin	Description	1394 Terminal
1	Black	0.324 (22)	H	A (NOT)	2
	White	0.324 (22)	A	A	1
2	Black	0.324 (22)	F	Common	9
	Red	0.324 (22)	D	+5V	8
3	Black	0.324 (22)	J	Z (NOT)	6
	Orange	0.324 (22)	C	Z	5
4	Black	0.324 (22)	I	B (NOT)	4
	Blue	0.324 (22)	B	B	3
5	Black	0.324 (22)	F	Common	9
	Green	0.324 (22)	E	no connection	
	Braided Shield	N/A	G	Shield	

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European Headquarters SA/NV, avenue Herrmann Debroux, 46, 1160 Brussels, Belgium, Tel: (32) 2 663 06 00, Fax: (32) 2 663 06 40
Asia Pacific Headquarters, 27/F Citicorp Centre, 18 Whitfield Road, Causeway Bay, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846

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