


Digitized Automation for a Changing World

Delta AC Servo Drive & Motor
ASDA-A2 Series

www.deltaww.com

More Rapid, More Stable, More Precise

Delta Electronics, Inc., a leading manufacturer of industrial automation products, is pleased to announce the launch of its new high-performance ASDA-A2 series servo motors and servo drives with motion control.

The current trend for motion control has the control command source close to the drive. In response, Delta has developed the new ASDA-A2 series that offers excellent motion control so that the external controller is almost eliminated. The ASDA-A2 series features a built-in electronic cam (E-CAM) function which provides an excellent solution for flying shear, rotary cut and synchronized motion applications. The all new position register control PR mode is a unique and significant function that provides a variety of control modes to enhance system performance.

The ASDA-A2 series also supports various industrial communications protocols, such as CANopen, DMCNET, and EtherCAT which offers higher performance and high speed communications and enables the drive to integrate with other parts of the automation more efficiently and effectively. The full-closed loop control, auto notch filter, vibration suppression and gantry control functions help to perform complex motions that require high precision and smooth operation. The 20-bit superior resolution encoder which is essential for accurate positioning applications is equipped as standard. In addition, the outstanding Capture and Compare functions for high-speed pulses offer the best support for stepless positioning. Other additional functionality, such as up to 1kHz frequency response, innovative editing software, high-speed PC monitoring (similar to a digital oscilloscope), and more, all drastically maximize the performance of the ASDA-A2 series.

Delta's new ASDA-A2 series is the ultimate servo system providing a total solution for a wide range of machine tools and industrial applications

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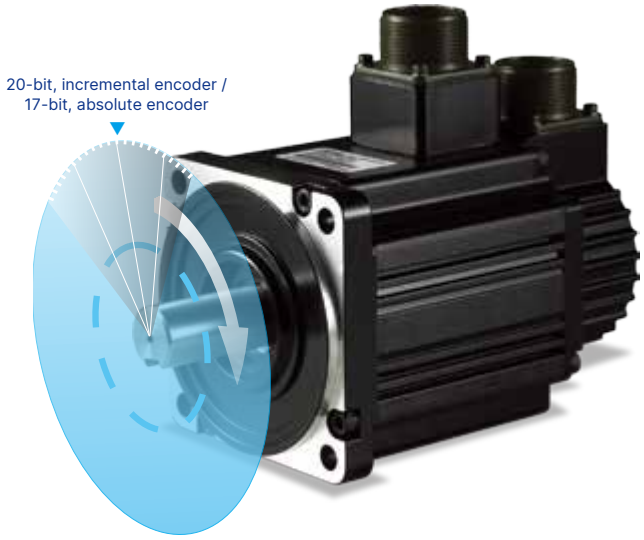
ASDA-A2 Series Features

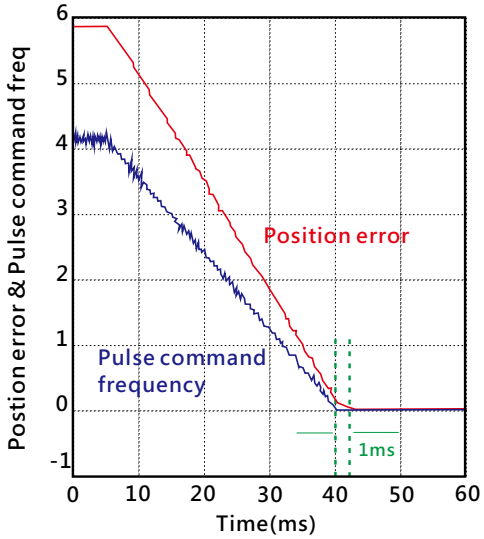
High Positioning Accuracy

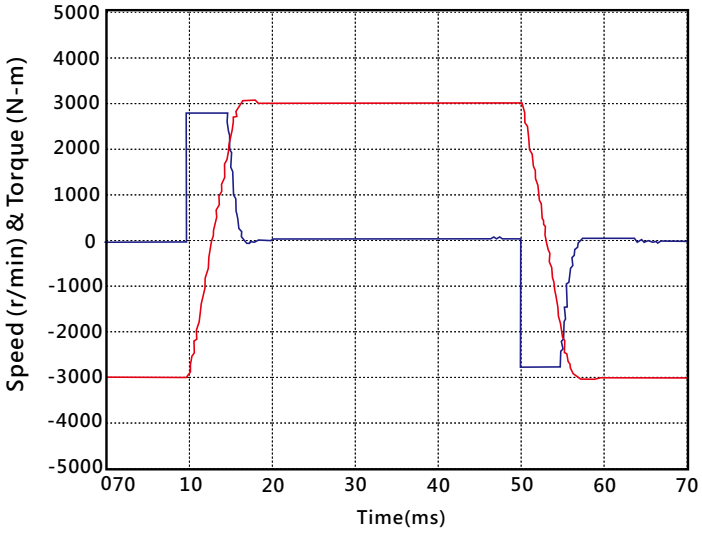
- ECMA series servo motors feature incremental encoders with 20-bit resolution which can eliminate unstable commands at low speed, smooth motor operation and enhance the accuracy of positioning.
- Absolute encoder supported. 17-bit motor position will not get lost when power is cut off.



High Responsiveness

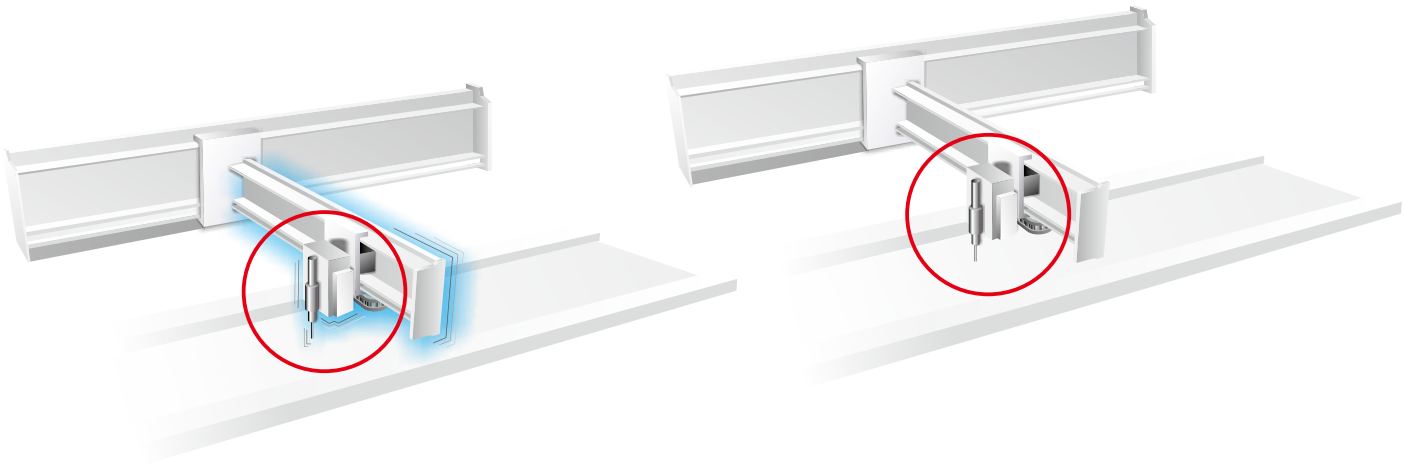
- Up to 1kHz frequency response.
- Settling time below 1ms.
- 7ms acceleration time for speeds from -3,000 r/min to 3,000 r/min with an empty load!
  (Note: The test record of a 400W motor with 60mm frame size)





Excellent Suppression Functions

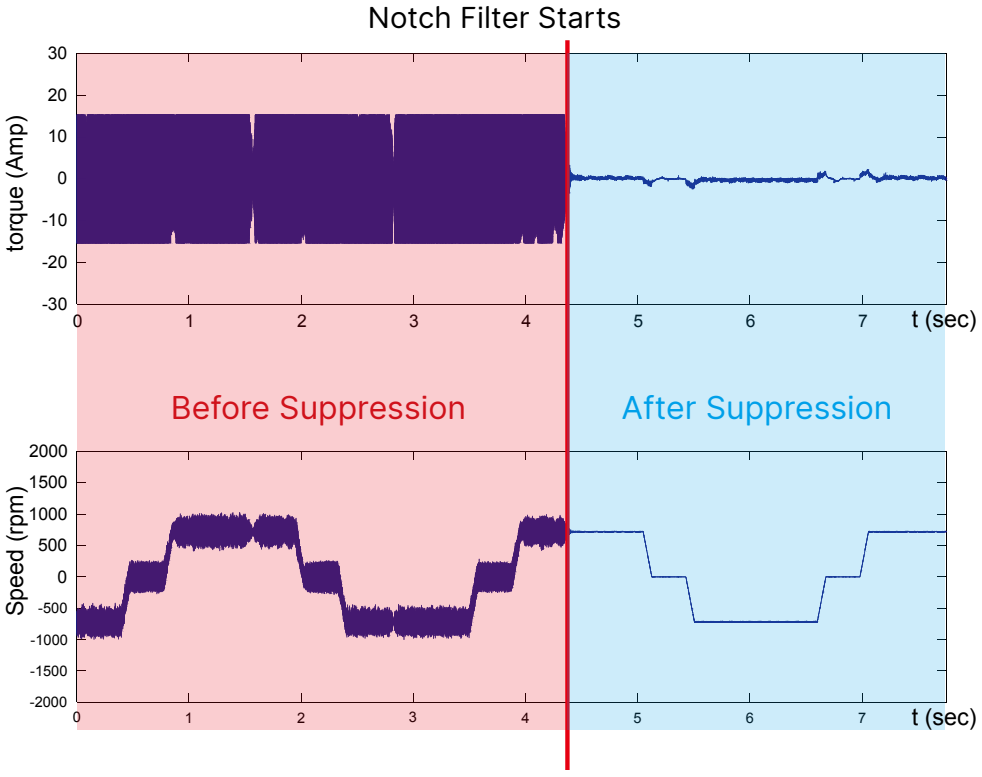
- Vibration Suppression (Low Frequency)
  Two vibration suppression filters are provided for long arm system to minimize the vibration at machine edges effectively.



Without Suppression Function When Settling

With Suppression Function When Settling

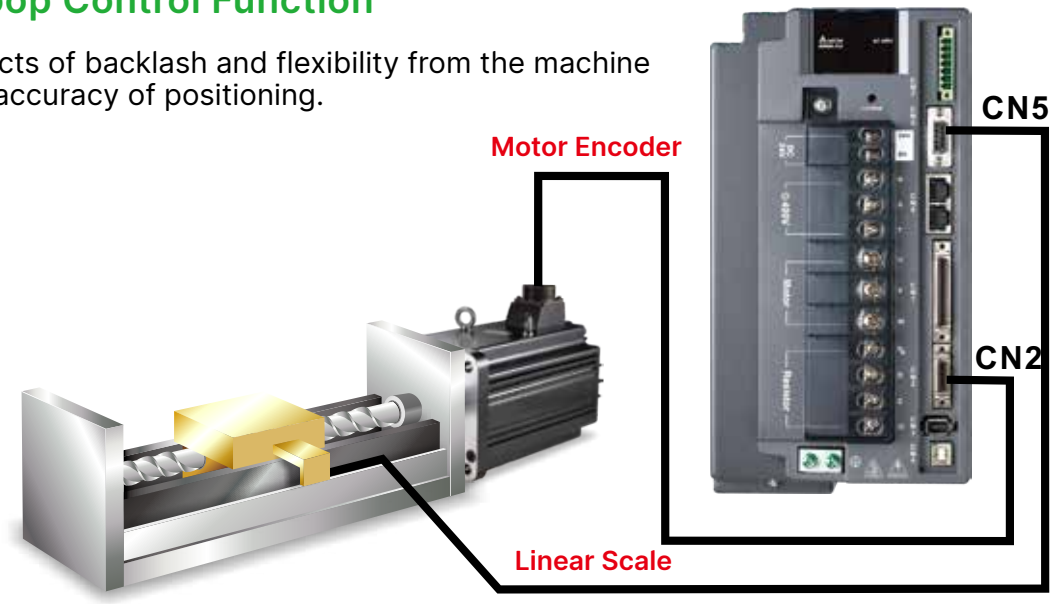
- Resonance Suppression (High Frequency)
  Two auto notch filters and one manual notch filter are provided to suppress mechanical resonance efficiently.



ASDA-A2 Series Features

Full-Closed Loop Control Function[*1]

- Reduces the effects of backlash and flexibility from the machine and ensures the accuracy of positioning.



Note:
*1. PT and DMCNET mode only.

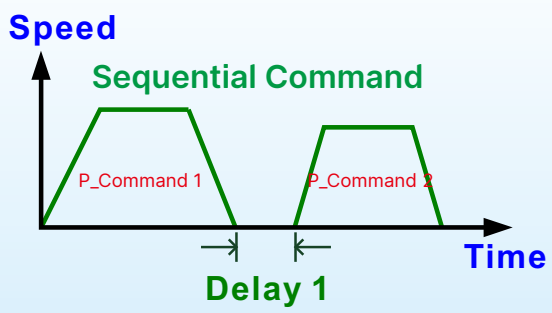
Electronic CAM (E-CAM) Function

- 720 points max. for E-CAM outline.
- Smooth interpolation between points can be completed automatically to yield flexible programming.
- ASDA-Soft configuration software supported.
- Easy to use for flying shear, rotary cut, and other cam applications.

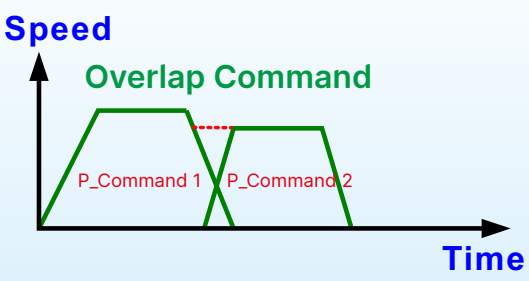
E-CAM function of ASDA-A2 series for packaging machines and packaging lines

Versatile PR Mode

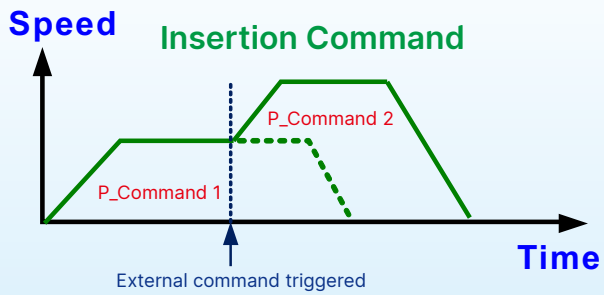
- ASDA-Soft configuration software supported.
- New sub-modes supported, not traditional point-to-point control.
- 64 procedures can be applied.
- Motion profile can be changed instantaneously.
- 35 Homing modes / Jump mode / Write parameter mode / Constant speed mode / Position control mode supported.



A command is executed only when the previous command is completed.



The second command is executed after the delay time or during the deceleration period.



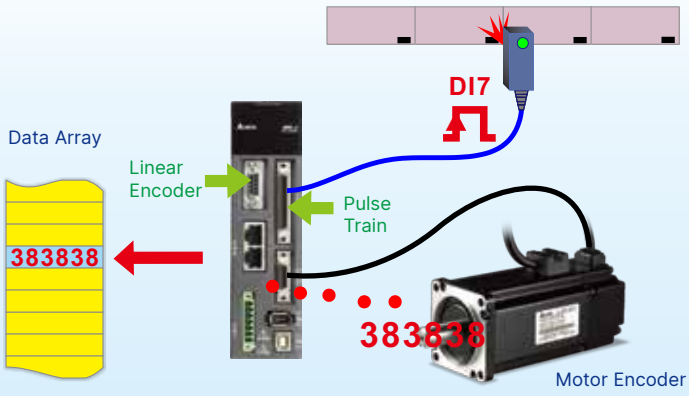
Insertion changes the command executed at the moment it is inserted.

ASDA-A2 Series Features

Capture and Compare Functions

Capture - Position Latch Function

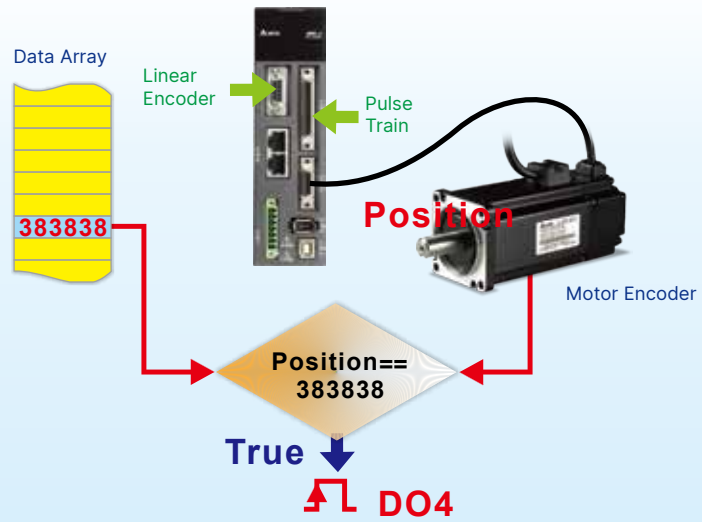
- Latches the coordinate value on the reference axis.
- Response time is less than 5us.
- Use for mark tracing.
- Maximum 800 records.



When DI7 is triggered, the latched position is recorded in Data Array.

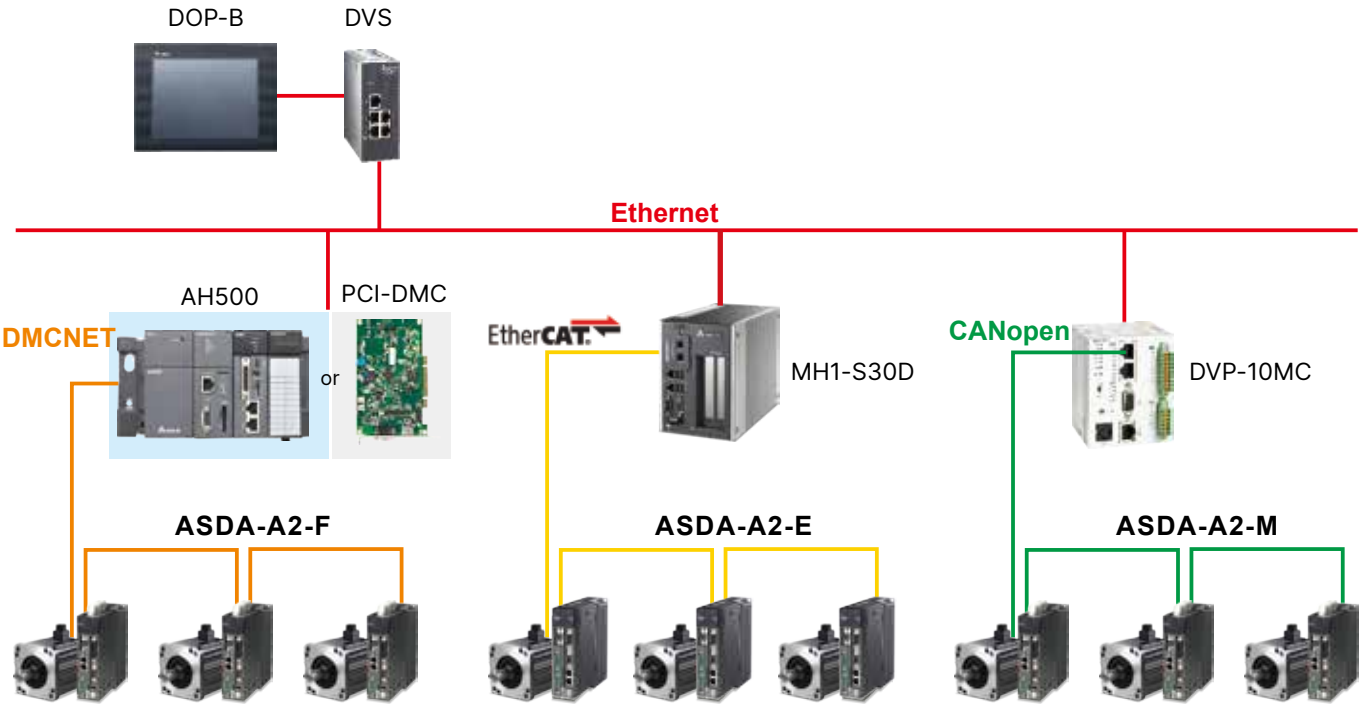
Compare - Position Detection Function

- Detects the location on the reference axis.
- Response time is less than 5us.
- Use for CCD camera applications.
- Maximum 800 records.

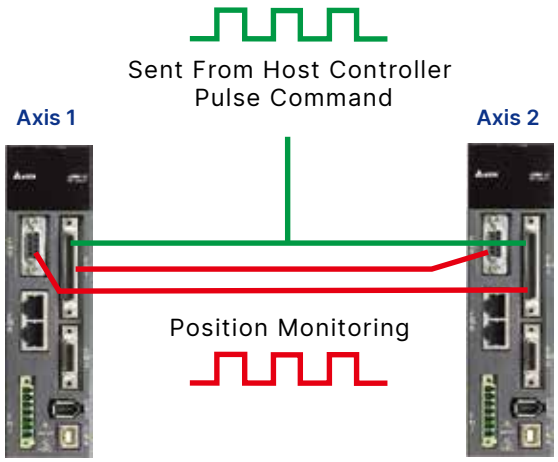


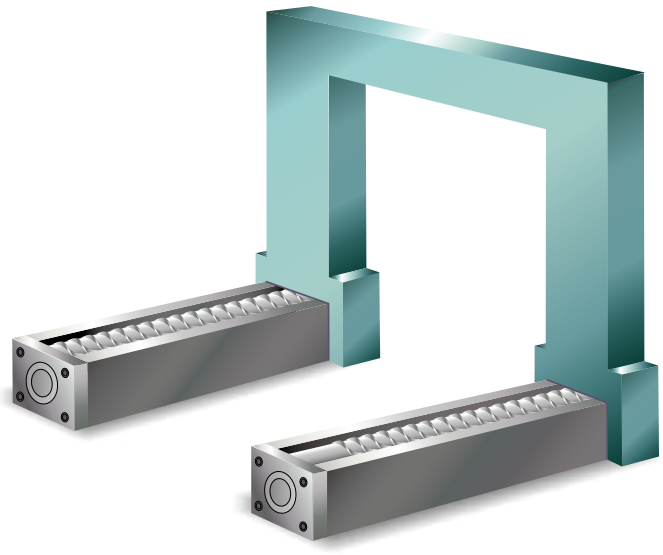
When the record in Data Array is the same as the detected position, DO4 will output.

Supports High-Speed DMCNET, EtherCAT, CANopen Protocols for Multi-Axis Synchronous Control



Integrated Gantry Control





Product Line-up

220 V Series

Servo Motors				
Motor Series		Phase	Rated Output Power (W)	Model Name
Low Inertia	ECMA-C 3,000 r/min	1-phase / 3-phase	50	ECMA-C1040F □ S
			100	ECMA-C △ 0401 □ S
			200	ECMA-C △ 0602 □ S
			400	ECMA-C △ 0604 □ S
			400	ECMA-C △ 0804 □ 7
			750	ECMA-C △ 0807 □ S
			750	ECMA-C △ 0907 □ S
			1,000	ECMA-C △ 0910 □ S
			1,000	ECMA-C △ 1010 □ S
			2,000	ECMA-C △ 1020 □ S
			3,000	ECMA-C △ 1330 □ 4
Medium Inertia	ECMA-E 2,000 r/min	1-phase / 3-phase	500	ECMA-E △ 1305 □ S
			1,000	ECMA-E △ 1310 □ S
			1,500	ECMA-E △ 1315 □ S
			2,000	ECMA-E △ 1320 □ S
			2,000	ECMA-E △ 1820 □ S
			3,000	ECMA-E △ 1830 □ S
			3,500	ECMA-E △ 1835 □ S
Medium-High Inertia	ECMA-F 1,500 r/min	1-phase / 3-phase	500	ECMA-F △ 1305 □ S
			850	ECMA-F △ 1308 □ S
			1,300	ECMA-F △ 1313 □ S
			1,800	ECMA-F △ 1318 □ S
			3,000	ECMA-F △ 1830 □ S
			4,500	ECMA-F △ 1845 □ S
			5,500	ECMA-F △ 1855 □ 3
			7,500	ECMA-F △ 1875 □ 3
			11,000	ECMA-F1221B □ 3
			15,000	ECMA-F1221F □ S
High Inertia	ECMA-C/G 3,000 r/min	1-phase / 3-phase	400	ECMA-C △ 0604 □ H
			750	ECMA-C △ 0807 □ H
			300	ECMA-G △ 1303 □ S
			600	ECMA-G △ 1306 □ S
			900	ECMA-G △ 1309 □ S

1) The boxes (□) at the ends of the servo drive model names are for optional configurations. For the actual model name, please refer to the model expla
2) The boxes (△) in the model names represent encoder type. △ =1: Incremental encoder, 20-bit; △ =2: Incremental encoder, 17-bit; △ =A: Absolute ty
3) The boxes (□) in the model names represent shaft end/brake or the number of oil seal.

		Servo Drives		
Rated Current（Arms）	Maximum Current（A）	Model Name	Continuous Output Current (Arms)	Max. Instantaneous Current (A)
0.69	2.05	ASD-A2-0121-□	0.90	2.70
0.90	2.70			
1.55	4.65	ASD-A2-0221-□	1.55	4.65
2.60	7.80	ASD-A2-0421-□	2.60	7.80
2.60	7.80			
5.10	15.30	ASD-A2-0721-□	5.10	15.30
3.66	11.00			
4.25	12.37	ASD-A2-1021-□	7.30	21.90
7.30	21.90			
12.05	36.15	ASD-A2-2023-□	13.40	40.20
17.2	47.5	ASD-A2-3023-□	19.40	58.20
2.90	8.70	ASD-A2-0421-□	2.60	7.80
		ASD-A2-0721-□	5.10	15.30
5.60	16.80	ASD-A2-1021-□	7.30	21.90
8.30	24.90	ASD-A2-1521-□	8.66	24.90
11.01	33.03	ASD-A2-2023-□	13.40	40.20
11.22	33.66			
16.10	48.30	ASD-A2-3023-□	19.40	58.20
19.20	57.60			
3.90	12.10	ASD-A2-0721-□	5.10	15.30
7.10	19.40	ASD-A2-1021-□	7.30	21.90
12.60	38.60	ASD-A2-2023-□	13.40	40.20
13.00	36.00			
19.40	58.20	ASD-A2-3023-□	19.40	58.20
32.50	81.30	ASD-A2-4523-□	32.50	70.7
		ASD-A2-5523-□	40.00	106
40.00	100.00	ASD-A2-5523-□	40.00	106
47.50	118.80	ASD-A2-7523-□	47.50	141.1
51.80	129.50	ASD-A2-1B23-□	54.40	141.1
67	162	ASD-A2-1F23-□	70.00	212.2
2.60	7.80	ASD-A2-0421□	2.60	7.80
5.10	15.30	ASD-A2-0721-□	5.10	15.30
2.50	7.50	ASD-A2-0421-□	2.60	7.80
4.80	14.40	ASD-A2-0721-□	5.10	15.30
7.50	22.50	ASD-A2-1021-□	7.30	21.90

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Product Line-up

400 V Series

Servo Motors				
Motor Series		Phase	Rated Output Power (W)	Model Name
Low Inertia	ECMA-J 3,000 r/min	3-phase	400	ECMA-J △ 0604 □ S
			750	ECMA-J △ 0807 □ S
			750	ECMA-J △ 0907 □ S
			1,000	ECMA-J △ 0910 □ S
			1,000	ECMA-J △ 1010 □ S
			2,000	ECMA-J △ 1020 □ S
			3,000	ECMA-J △ 1330 □ 4
Medium Inertia	ECMA-K 2,000 r/min	3-phase	750	ECMA-K △ 1305 □ S
			1,000	ECMA-K △ 1310 □ S
			1,500	ECMA-K △ 1315 □ S
			2,000	ECMA-K △ 1320 □ S
			2,000	ECMA-K △ 1820 □ S
Medium-High Inertia	ECMA-L 1,500 r/min	3-phase	750	ECMA-L △ 1305 □ S
			850	ECMA-L △ 1308 □ S
			1,300	ECMA-L △ 1313 □ S
			3,000	ECMA-L △ 1830 □ S
			4,500	ECMA-L △ 1845 □ S
			5,500	ECMA-L △ 1855 □ 3
			7,500	ECMA-L △ 1875 □ 3
			11,000	ECMA-L1221B □ 3
			15,000	ECMA-L1221F □ 3
High Inertia	ECMA-M 3,000 r/min	3-phase	900	ECMA-M △ 1309 □ S

NOTE

1) The boxes (□) at the ends of the servo drive model names are for optional configurations. For the actual model name, please refer to the model e
2) The boxes (△) in the model names represent encoder type. △ =1: Incremental encoder, 20-bit ; △ =2: Incremental encoder, 17-bit; △ =A: Absolu
3) The boxes (□) in the model names represent shaft end/brake or the number of oil seal.

		Servo Drives		
Rated Current (Arms)	Maximum Current (A)	Model Name	Continuous Output Current (Arms)	Max. Instantaneous Current (A)
1.62	4.85	ASD-A2-0743-□	3.07	9.21
3.07	9.5	ASD-A2-0743-□	3.07	9.21
		ASD-A2-1043-□	3.52	9.86
2.16	6.37	ASD-A2-0743-□	3.07	9.21
2.4	7.17	ASD-A2-1043-□	3.52	9.86
4.15	12.46	ASD-A2-1543-□	5.02	10.04
		ASD-A2-2043-□	6.66	18.65
7.09	21.28	ASD-A2-2043-□	6.66	18.65
		ASD-A2-3043-□	11.9	33.2
9.8	29.99	ASD-A2-3043-□	11.9	33.32
1.7	5.2	ASD-A2-0743-□	3.07	9.21
3.52	10.56	ASD-A2-1043-□	3.52	9.86
		ASD-A2-1543-□	5.02	10.04
		ASD-A2-2043-□	6.66	18.65
5.02	15.06	ASD-A2-1543-□	5.02	10.04
		ASD-A2-2043-□	6.66	18.65
6.66	19.98	ASD-A2-2043-□	6.66	18.65
		ASD-A2-3043-□	11.9	33.32
6.6	19.88	ASD-A2-2043-□	6.66	18.65
		ASD-A2-3043-□	11.9	33.32
2.1	6.1	ASD-A2-0743-□	3.07	9.21
3.4	8.85	ASD-A2-1043-□	3.52	9.86
5.02	15	ASD-A2-1543-□	5.02	10.04
		ASD-A2-2043-□	6.66	18.65
11.53	34.6	ASD-A2-3043-□	11.9	33.32
		ASD-A2-4543-□	20	44
20.8	52	ASD-A2-4543-□	20	44
		ASD-A2-5543-□	22.04	48.49
		ASD-A2-7543-□	28.39	62.46
22.37	56	ASD-A2-5543-□	22.04	48.49
		ASD-A2-7543-□	28.39	62.46
27.3	68.3	ASD-A2-7543-□	28.39	62.46
		ASD-A2-1B43-□	28.1	61.82
		ASD-A2-1F43-□	38.65	85.03
27.2	68	ASD-A2-1B43-□	28.1	61.82
		ASD-A2-1F43-□	38.65	85.03
41.6	100	ASD-A2-1F43-□	38.65	85.03
4.4	13.1	ASD-A2-1543-□	5.02	10.04

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Model Explanation

ASDA-A2 Series Servo Drives

ASD - A2[*5] - 04 21 - M

Product Name:
AC Servo Drive

Series:
A2

Rated Output Power

01: 100 W	10: 1 kW	45: 4.5 kW
02: 200 W	15: 1.5 kW	55: 5.5 kW
04: 400 W	20: 2 kW	75: 7.5 kW
07: 750 W	30: 3 kW	1B: 11 kW
		1F: 15 kW

Input Voltage and Phase
21: 220V 1-phase / 3-phase[*6]
23: 220V 3-phase
43: 400V 3-phase

Model Type
(see the table below)

	Type	RS-485 (CN3)	Full-Closed Control (CN5) [*1]	Extension Port for Digital Input (CN7)	EtherCAT [*4]	CANopen	DMCNET	Analog Voltage Control	Pulse Input Port	PR Parameters	E-CAM [*3]
Standard Model	L	○	○	X	X	X	X	○	○	○	X
	U	○	○	○	X	X	X	○	○	○	○
Network Model	E	X	X	○	○	X	X	X	X	○	X
	F	○	○	X	X	X	○	X	X	○ [*2]	X
	M	○	○	X	X	○	X	○	○	○	○

NOTE

1. In PR mode, only A2-F supports full-closed control function.
2. When applying communication mode (A2-E, -F, -M models), PR parameters can be read and written through DMCNET only.
3. E-CAM function can only be used in PR mode.
4. For information about ASDA A2-E EtherCAT interface servo drive, please refer to the ASDA A2-E brochure.
5. For communication mode -F/-M models with 400V/11kW, 15kW is categorized as ASDA-A2R.
6. Rated power of 100W to 1.5kW are marked number 21 with 220V, single-phase and three-phase connections.

ECMA Series Servo Motors

ECM A - C1 06 02 E S

Product Name
ECM: Electrical Commutation Motor

Driving Type
A: AC Servo Motor

S: Standard Shaft Diameter
H: High Inertia Model

Shaft Type and Oil Seal	W/O Brake W/O Oil Seal	With Brake W/O Oil Seal	W/O Brake With Oil Seal	With Brake With Oil Seal
Round Shaft (with screw hole)	-	-	C	D
Keyway	E	F	-	-
Keyway (with screw hole)	P	Q	R	S

Series
Rated Voltage / Rated Speed

C: 220V / 3,000 r/min	J: 400V / 3,000 r/min
E: 220V / 2,000 r/min	K: 400V / 2,000 r/min
F: 220V / 1,500 r/min	L: 400V / 1,500 r/min
G: 220V / 1,000 r/min	M: 400V / 1,000 r/min

Encoder Type

1: Incremental encoder, 20-bit	A: Absolute encoder, Single-turn: 17-bit Multi-turn: 16-bit
2: Incremental encoder, 17-bit	
3: 2500 ppr	

Motor Frame Size

04: 40 mm	10: 100 mm
06: 60 mm	13: 130 mm
08: 80 mm	18: 180 mm
09: 86 mm	22: 220 mm

Rated Output Power

0F: 50 W	08: 850 W	35: 3.5 kW
01: 100 W	09: 900 W	45: 4.5 kW
02: 200 W	10: 1 kW	50: 5.0 kW
03: 300 W	13: 1.3 kW	55: 5.5 kW
04: 400 W	15: 1.5 kW	75: 7.5 kW
05: 500 W	18: 1.8 kW	1B: 11 kW
06: 600 W	20: 2 kW	1F: 15 kW
07: 750 W	30: 3 kW	

Servo Motor Features

ECMA series servo motors are permanent AC servo motors, capable of combining with 200 to 230 V ASDA-A2 220 V series AC servo drives from 50 W to 15 kW and 380 V to 480 V ASDA-A2 400 V series AC servo drives from 750 W to 7.5 kW.

For the 220 V series, there are 40 mm, 60 mm, 80 mm, 86 mm, 100 mm, 130 mm, 180 mm, and 200 mm eight kinds of frame sizes available. The motor speed is from 1,000 r/min to 5,000 r/min and the torque output is from 0.477 N-m to 224 N-m.

For the 400 V series, there are 60 mm, 80 mm, 86 mm, 100 mm, 130 mm, 180 mm, six kinds of frame sizes available. The motor speed is from 1,500 r/min to 5,000 r/min and the torque output is from 3.82 N-m to 119.36 N-m In terms of optional configurations, ECMA series provides brake and oil seal to fully support our customers' needs. It also offers two different shaft selections, round shaft and keyway, for various applications.

Servo Motor Specifications

Low Inertia Series- 220 V Series

ECMA Series	C104	C △ 04	C △ 06		C △ 08		C △ 09		C △ 10		C △ 13
	0F	01	02	04 □ S	04	07	07	10	10	20	30
Rated output power (kW)	0.05	0.1	0.2	0.4	0.4	0.75	0.75	1.0	1.0	2.0	3.0
Rated torque (N-m)*1	0.159	0.32	0.64	1.27	1.27	2.39	2.39	3.18	3.18	6.37	9.55
Maximum torque (N-m)	0.477	0.96	1.92	3.82	3.82	7.16	7.14	8.78	9.54	19.11	28.65
Rated speed (r/min)	3,000						3,000		3,000		3,000
Maximum speed (r/min)	5,000						3,000		5,000		4,500
Rated current (A)	0.69	0.90	1.55	2.6	2.6	5.1	3.66	4.25	7.3	12.05	17.2
Maximum current (A)	2.05	2.70	4.65	7.8	7.8	15.3	11	12.37	21.9	36.15	47.5
Power rating (kW/s)	12.27	27.7	22.4	57.6	24.0	50.4	29.6	38.6	38.1	90.6	71.8
Rotor moment of inertia ($x10^{-4}$kg-m^2)	0.0206	0.037	0.177	0.277	0.68	1.13	1.93	2.62	2.65	4.45	12.7
Mechanical time constant (ms)	1.2	0.75	0.80	0.53	0.74	0.63	1.72	1.20	0.74	0.61	1.11
Torque constant-KT (N-m/A)	0.23	0.36	0.41	0.49	0.49	0.47	0.65	0.75	0.44	0.53	0.557
Voltage constant-KE (mV/(r/min)	9.8	13.6	16	17.4	18.5	17.2	24.2	27.5	16.8	19.2	20.98
Armature resistance (Ohm)	12.7	9.30	2.79	1.55	0.93	0.42	1.34	0.897	0.20	0.13	0.0976
Armature inductance (mH)	26	24.0	12.07	6.71	7.39	3.53	7.55	5.7	1.81	1.50	1.21
Electrical time constant (ms)	2.05	2.58	4.3	4.3	7.96	8.36	5.66	6.35	9.3	11.4	12.4
Insulation class	Class A (UL), Class B (CE)										
Insulation resistance	100M Ω , DC 500 V above										
Insulation strength	1.8k Vac,1 sec										
Weight (kg)(without brake)	0.42	0.5	1.2	1.6	2.1	3.0	2.9	3.8	4.3	6.2	7.8
Weight (kg)(with brake)	--	0.8	1.5	2.0	2.9	3.8	3.69	5.5	4.7	7.2	9.2
Max. radial shaft load (N)	78.4	78.4	196	196	245	245	245	245	490	490	490
Max. thrust shaft load (N)	39.2	39.2	68	68	98	98	98	98	98	98	98
Power rating (kW/s)(with brake)	--	25.6	21.3	53.8	22.1	48.4	29.3	37.9	30.4	82	65.1
Rotor moment of inertia ($x10^{-4}$kg-m^2)(with brake)	--	0.04	0.19	0.30	0.73	1.18	1.95	2.67	3.33	4.95	14.0
Mechanical time constant (ms)(with brake)	--	0.81	0.85	0.57	0.78	0.65	1.74	1.22	0.93	0.66	1.22
Brake holding torque [Nt-m (min)]*2	--	0.3	1.3	1.3	2.5	2.5	2.5	2.5	8	8	10.0
Brake power consumption (at 20˚C)[W]	--	7.3	6.5	6.5	8.2	8.2	8.2	8.2	18.7	18.7	19.0
Brake release time [ms (Max)]	--	5	10	10	10	10	10	10	10	10	10
Brake pull-in time [ms (Max)]	--	25	70	70	70	70	70	70	70	70	70
Vibration grade (μm)	15										
Operating temperature (˚C)	0ºC to 40ºC										
Storage temperature (˚C)	-10ºC to 80ºC										
Operating humidity	20 to 90%RH (non-condensing)										
Storage humidity	20 to 90%RH (non-condensing)										
Vibration capacity	2.5G										
IP Rating	IP65 (when waterproof connectors are used, or when an oil seal is used to be fitted to the rotating shaft (an oil seal model is used))										
Approvals	CE cULus										

*1. Rate torque values are continuous permissible values at 0 ~ 40˚C ambient temperature when attaching with the sizes of heatsinks listed below:
ECMA-_ _ 04 / 06 / 08: 250 mm x 250 mm x 6 mm
ECMA-_ _ 10: 300 mm x 300 mm x 12 mm
ECMA-_ _ 13: 400 mm x 400 mm x 20 mm
ECMA-_ _ 18: 550 mm x 550 mm x 30 mm
ECMA-_ _ 22: 650 mm x 650 mm x 35 mm
Material type : Aluminum – F40, F60, F80, F100, F130, F180, F220
*2. The holding brake is used to hold the motor shaft, not for braking the rotation. Never use it for decelerating or stopping the machine.

Medium Series- 220 V Series

ECMA Series	E △ 13				E △ 18		
	05	10	15	20	20	30	35
Rated output power (kW)	0.5	1.0	1.5	2.0	2.0	3.0	3.5
Rated torque (N-m)*1	2.39	4.77	7.16	9.55	9.55	14.32	16.71
Maximum torque (N-m)	7.16	14.3	21.48	28.65	28.65	42.97	50.13
Rated speed (r/min)	2,000						
Maximum speed (r/min)	3,000						
Rated current (A)	2.9	5.6	8.3	11.01	11.22	16.1	19.2
Maximum current (A)	8.7	16.8	24.9	33.03	33.66	48.3	57.6
Power rating (kW/s)	7.0	27.1	45.9	62.5	26.3	37.3	50.8
Rotor moment of inertia ($x10^{-4}$kg-m^2)(without brake)	8.17	8.41	11.18	14.59	34.68	54.95	54.95
Mechanical time constant (ms)	1.91	1.51	1.10	0.96	1.62	1.06	1.08
Torque constant-KT (N-m/A)	0.83	0.85	0.87	0.87	0.85	0.89	0.87
Voltage constant-KE (mV/(r/min)	30.9	31.9	31.8	31.8	31.4	32.0	32
Armature resistance (Ohm)	0.57	0.47	0.26	0.174	0.119	0.052	0.052
Armature inductance (mH)	7.39	5.99	4.01	2.76	2.84	1.38	1.38
Electrical time constant (ms)	12.96	12.88	15.31	15.86	23.87	26.39	26.39
Insulation class	Class A (UL), Class B (CE)						
Insulation resistance	100M Ω , DC 500 V above						
Insulation strength	1.8k Vac,1 sec						
Weight (kg)(without brake)	6.8	7.0	7.5	7.8	13.5	18.5	18.5
Weight (kg)(with brake)	8.2	8.4	8.9	9.2	17.5	22.5	22.5
Max. radial shaft load (N)	490	490	490	490	1,176	1,470	1,470
Max. thrust shaft load (N)	98	98	98	98	490	490	490
Power rating (kW/s)(with brake)	6.4	24.9	43.1	57.4	24.1	35.9	48.9
Rotor moment of inertia ($x10^{-4}$kg-m^2)(with brake)	8.94	9.14	11.90	15.88	37.86	57.06	57.06
Mechanical time constant (ms)(with brake)	2.07	1.64	1.19	1.05	1.77	1.10	1.12
Brake holding torque [Nt-m (min)]*2	10.0	10.0	10.0	10.0	25.0	25.0	25.0
Brake power consumption (at 20°C)[W]	19.0	19.0	19.0	19.0	20.4	20.4	20.4
Brake release time [ms (Max)]	10	10	10	10	10	10	10
Brake pull-in time [ms (Max)]	70	70	70	70	70	70	70
Vibration grade (μm)	15						
Operating temperature (°C)	0°C to 40°C						
Storage temperature (°C)	-10°C to 80°C						
Operating humidity	20 to 90%RH (non-condensing)						
Storage humidity	20 to 90%RH (non-condensing)						
Vibration capacity	2.5G						
IP Rating	IP65 (when waterproof connectors are used, or when an oil seal is used to be fitted to the rotating shaft (an oil seal model is used))						
Approvals	CE c UL us						

*1. Rate torque values are continuous permissible values at 0 ~ 40°C ambient temperature when attaching with the sizes of heatsinks listed below:
ECMA-_ _ 04 / 06 / 08: 250 mm x 250 mm x 6 mm
ECMA-_ _ 10: 300 mm x 300 mm x 12 mm
ECMA-_ _ 13: 400 mm x 400 mm x 20 mm
ECMA-_ _ 18: 550 mm x 550 mm x 30 mm
ECMA-_ _ 22: 650 mm x 650 mm x 35 mm
Material type : Aluminum – F40, F60, F80, F100, F130, F180, F220
*2. The holding brake is used to hold the motor shaft, not for braking the rotation. Never use it for decelerating or stopping the machine.

Servo Motor Specifications

Medium-High Inertia Series- 220 V Series

ECMA Series	F △ 13				F △ 18				F122	
	05	08	13	18	30	45	55	75	1B	1F
Rated output power (kW)	0.5	0.85	1.3	1.8	3.0	4.5	5.5	7.5	11	15
Rated torque (N-m)*1	3.18	5.41	8.34	11.48	19.10	28.65	35.01	47.74	70	95.4
Maximum torque (N-m)	8.92	13.8	23.3	28.7	57.29	71.62	87.53	119.36	175	224.0
Rated speed (r/min)	1,500									
Maximum speed (r/min)	3,000								2,000	
Rated current (A)	3.9	7.1	12.6	13	19.4	32.5	40.0	47.5	51.8	67
Maximum current (A)	12.1	19.4	38.6	36	58.2	81.3	100.0	118.8	129.5	162
Power rating (kW/s)	9.8	21.52	34.78	52.93	66.4	105.5	122.9	159.7	144.9	201.8
Rotor moment of inertia ($x10^{-4}$kg-m^2)(without brake)	10.3	13.6	20	24.9	54.95	77.75	99.78	142.7	338	451
Mechanical time constant (ms)	2.8	2.43	1.62	1.7	1.28	0.92	0.96	0.63	1.38	1.23
Torque constant-KT (N-m/A)	0.82	0.76	0.66	0.88	0.98	0.88	0.88	1.01	1.37	1.42
Voltage constant-KE (mV/(r/min)	29.5	29.2	24.2	32.2	35.0	32.0	31.0	35.5	49	50
Armature resistance (Ohm)	0.624	0.38	0.124	0.185	0.077	0.032	0.025	0.015	0.026	0.0184
Armature inductance (mH)	7	4.77	1.7	2.6	1.27	0.89	0.60	0.40	0.65	0.48
Electrical time constant (ms)	11.22	12.55	13.71	14.05	16.5	27.8	24.0	26.7	24.79	26.09
Insulation class	Class A (UL), Class B (CE)									
Insulation resistance	100M Ω , DC 500 V above									
Insulation strength	1.8k Vac,1 sec									
Weight (kg)(without brake)	6.3	8.6	9.4	10.5	18.5	23.5	30.5	40.5	56.4	75
Weight (kg)(with brake)	7.7	10.0	10.8	11.9	22.5	29	36	46	68.4	87
Max. radial shaft load (N)	490	490	490	490	1,470	1,470	1,764	1,764	3,300	3,300
Max. thrust shaft load (N)	98	98	98	98	490	490	588	588	1,100	1,100
Power rating (kW/s)(with brake)	8.8	19.78	32.66	50.3	63.9	101.8	119.4	156.6	141.4	197.1
Rotor moment of inertia ($x10^{-4}$kg-m^2)(with brake)	11.5	14.8	21.3	26.2	57.06	80.65	102.70	145.55	346.5	461.8
Mechanical time constant (ms)(with brake)	3.12	2.65	1.73	1.79	1.33	0.96	0.99	0.64	1.41	1.25
Brake holding torque[Nt-m(min)]*2	10	10.0	10.0	10.0	25.0	55.0	55.0	55.0	115	115
Brake power consumption (at 20˚C)[W]	19	19.0	19.0	19.0	20.4	19.9	19.9	19.9	28.8	28.8
Brake release time [ms (Max)]	10	10	10	10	10	10	10	10	10	10
Brake pull-in time [ms (Max)]	70	70	70	70	70	70	70	70	70	70
Vibration grade (μm)	15									
Operating temperature (˚C)	0ºC to 40ºC									
Storage temperature (˚C)	-10ºC to 80ºC									
Operating humidity	20 to 90%RH (non-condensing)									
Storage humidity	20 to 90%RH (non-condensing)									
Vibration capacity	2.5G									
IP Rating	IP65 (when waterproof connectors are used, or when an oil seal is used to be fitted to the rotating shaft (an oil seal model is used))									
Approvals	CE c UL us									

*1. Rate torque values are continuous permissible values at 0 ~ 40˚C ambient temperature when attaching with the sizes of heatsinks listed below:
ECMA-_ _ 04 / 06 / 08: 250 mm x 250 mm x 6 mm
ECMA-_ _ 10: 300 mm x 300 mm x 12 mm
ECMA-_ _ 13: 400 mm x 400 mm x 20 mm
ECMA-_ _ 18: 550 mm x 550 mm x 30 mm
ECMA-_ _ 22: 650 mm x 650 mm x 35 mm
Material type : Aluminum – F40, F60, F80, F100, F130, F180, F220
*2. The holding brake is used to hold the motor shaft, not for braking the rotation. Never use it for decelerating or stopping the machine.

High Inertia Series- 220 V Series

ECMA Series	C △ 06	C △ 08	G △ 13		
	04 □H	07 □H	03	06	09
Rated output power (kW)	0.4	0.75	0.3	0.6	0.9
Rated torque (N-m)*1	1.27	2.39	2.86	5.73	8.59
Maximum torque (N-m)	3.82	7.16	8.59	17.19	21.48
Rated speed (r/min)	3,000		1,000		
Maximum speed (r/min)	5,000		2,000		
Rated current (A)	2.6	5.1	2.5	4.8	7.5
Maximum current (A)	7.8	15.3	7.5	14.4	22.5
Power rating (kW/s)	21.7	19.63	10.0	39.0	66.0
Rotor moment of inertia ($x10^{-4}$kg-m^2)(without brake)	0.743	2.91	8.17	8.41	11.18
Mechanical time constant (ms)	1.42	1.6	1.84	1.40	1.06
Torque constant-KT (N-m/A)	0.49	0.47	1.15	1.19	1.15
Voltage constant-KE (mV/(r/min)	17.4	17.2	42.5	43.8	41.6
Armature resistance (Ohm)	1.55	0.42	1.06	0.82	0.43
Armature inductance (mH)	6.71	3.53	14.29	11.12	6.97
Electrical time constant (ms)	4.3	8.36	13.5	13.50	16.06
Insulation class	Class A (UL), Class B (CE)				
Insulation resistance	100M Ω , DC 500 V above				
Insulation strength	1.8k Vac,1 sec				
Weight (kg)(without brake)	1.8	3.4	6.8	7.0	7.5
Weight (kg)(with brake)	2.2	3.9	8.2	8.4	8.9
Max. radial shaft load (N)	196	245	490	490	490
Max. thrust shaft load (N)	68	98	98	98	98
Power rating (kW/s)(with brake)	21.48	19.3	9.2	35.9	62.1
Rotor moment of inertia ($x10^{-4}$kg-m^2)(with brake)	0.751	2.96	8.94	9.14	11.9
Mechanical time constant (ms)(with brake)	1.43	1.62	2.0	1.51	1.13
Brake holding torque [Nt-m (min)]*2	1.3	2.5	10.0	10.0	10.0
Brake power consumption (at 20°C)[W]	6.5	8.2	19.0	19.0	19.0
Brake release time [ms (Max)]	10	10	10	10	10
Brake pull-in time [ms (Max)]	70	70	70	70	70
Vibration grade (μm)	15				
Operating temperature (°C)	0°C to 40°C				
Storage temperature (°C)	-10°C to 80°C				
Operating humidity	20 to 90%RH (non-condensing)				
Storage humidity	20 to 90%RH (non-condensing)				
Vibration capacity	2.5G				
IP Rating	IP65 (when waterproof connectors are used, or when an oil seal is used to be fitted to the rotating shaft (an oil seal model is used))				
Approvals	CE c UL us				

*1. Rate torque values are continuous permissible values at 0 ~ 40°C ambient temperature when attaching with the sizes of heatsinks listed below:
ECMA-_ _ 04 / 06 / 08: 250 mm x 250 mm x 6 mm
ECMA-_ _ 10: 300 mm x 300 mm x 12 mm
ECMA-_ _ 13: 400 mm x 400 mm x 20 mm
ECMA-_ _ 18: 550 mm x 550 mm x 30 mm
ECMA-_ _ 22: 650 mm x 650 mm x 35 mm
Material type : Aluminum – F40, F60, F80, F100, F130, F180, F220
*2. The holding brake is used to hold the motor shaft, not for braking the rotation. Never use it for decelerating or stopping the machine.

Servo Motor Specifications

Low / Medium Series- 400 V Series

ECMA Series	J △ 06	J △ 08	J △ 09		J △ 10		J △ 13	K △ 13				K △ 18
	04	07	07	10	10	20	30	05	10	15	20	20
Rated output power (kW)	0.4	0.75	0.75	1	1.0	2.0	3.0	0.5	1.0	1.5	2.0	2.0
Rated torque (N-m)*1	1.27	2.39	2.39	3.18	3.18	6.37	9.55	2.39	4.77	7.16	9.55	9.55
Maximum torque (N-m)	3.82	7.16	7.14	8.78	9.54	19.1	28.65	7.16	14.32	21.48	28.65	28.65
Rated speed (r/min)	3,000		3,000		3,000		3,000	2,000				
Maximum speed (r/min)	5,000		3,000		5,000		4,500	3,000				
Rated current (A)	1.62	3.07	2.16	2.4	4.15	7.09	9.8	1.7	3.52	5.02	6.66	6.6
Maximum current (A)	4.85	9.5	6.37	7.17	12.46	21.28	29.99	5.2	10.56	15.06	19.98	19.88
Power rating (kW/s)	58.2	50.4	29.6	38.6	38.2	91.2	71.8	6.99	27.1	45.9	62.5	26.3
Rotor moment of inertia ($x10^{-4}$kg-m^2)(without brake)	0.277	1.13	1.93	2.62	2.65	4.45	12.7	8.17	8.41	11.18	14.59	34.68
Mechanical time constant (ms)	0.47	0.66	1.56	1.06	0.77	0.58	0.99	2.08	1.80	1.24	1.04	1.74
Torque constant-KT (N-m/A)	0.79	0.78	1.12	1.29	0.77	0.9	0.97	1.41	1.35	1.43	1.43	1.45
Voltage constant-KE (mV/(r/min)	30.6	28.24	42	50.9	29.0	34.4	37.3	51.5	53.2	55	55	54.0
Armature resistance (Ohm)	3.95	1.22	3.62	2.58	0.617	0.388	0.269	1.76	1.47	0.83	0.57	0.376
Armature inductance (mH)	21.3	10.68	21.2	15.28	6.03	4.62	3.55	22.4	17.79	11.67	8.29	7.87
Electrical time constant (ms)	5.39	8.75	5.85	5.93	9.77	11.9	13.2	12.73	12.04	14.04	14.39	20.9
Insulation class	Class A (UL), Class B (CE)											
Insulation resistance	100M Ω , DC 500 V above											
Insulation strength	2.3k Vac, 1 sec											
Weight (kg)(without brake)	1.6	3.0	2.9	3.8	4.3	6.2	7.8	6.8	7.0	7.5	7.8	13.5
Weight (kg)(with brake)	2	3.8	-	-	4.7	7.2	9.2	8.2	8.4	8.9	9.2	17.5
Max. radial shaft load (N)	19.6	245	245	245	490	490	490	490	490	490	490	1176
Max. thrust shaft load (N)	68	98	98	98	98	98	98	98	98	98	98	490
Power rating (kW/s)(with brake)	53.8	48.4	29.3	37.9	30.4	82	65.1	6.39	24.9	43.1	59.7	24.1
Rotor moment of inertia ($x10^{-4}$kg-m^2)(with brake)	0.3	1.18	1.95	2.67	3.33	4.95	14.0	8.94	9.14	11.90	15.88	37.86
Mechanical time constant (ms)(with brake)	0.52	0.65	1.57	1.08	0.96	0.65	1.09	2.28	1.96	1.32	1.13	1.9
Brake holding torque [Nt-m (min)]*2	1.3	2.5	2.5	2.5	8.0	8.0	10.0	10.0	10.0	10.0	10.0	25.0
Brake power consumption (at 20°C)[W]	6.5	8.5	8.2	8.2	18.5	18.5	19.0	19.0	19.0	19.0	19.0	20.4
Brake release time [ms (Max)]	10	10	10	10	10	10	10	10	10	10	10	10
Brake pull-in time [ms (Max)]	70	70	70	70	70	70	70	70	70	70	70	70
Vibration grade (μm)	15											
Operating temperature (°C)	0°C to 40°C											
Storage temperature (°C)	-10°C to 80°C											
Operating humidity	20 to 90%RH (non-condensing)											
Storage humidity	20 to 90%RH (non-condensing)											
Vibration capacity	2.5G											
IP Rating	IP65 (when waterproof connectors are used, or when an oil seal is used to be fitted to the rotating shaft (an oil seal model is used))											
Approvals	CE cULus											

*1. Rate torque values are continuous permissible values at 0 ~ 40°C ambient temperature when attaching with the sizes of heatsinks listed below:
ECMA-_ _ 08: 250 mm x 250 mm x 6 mm
ECMA-_ _ 13: 400 mm x 400 mm x 20 mm
ECMA-_ _ 18: 550 mm x 550 mm x 30 mm
Material type : Aluminum – F80, F130, F180, F220
*2. The holding brake is used to hold the motor shaft, not for braking the rotation. Never use it for decelerating or stopping the machine.

Medium-High / High Inertia Series- 400 V Series

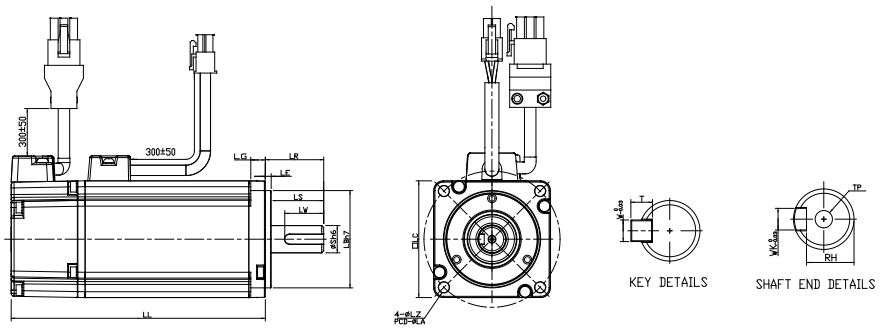
ECMA Series	L △ 13			L △ 18				L122		M △ 13
	05	08	13	30	45	55	75	1B	1F	09
Rated output power (kW)	0.5	0.85	1.3	3.0	4.5	5.5	7.5	11	15	0.9
Rated torque (N-m)*1	3.18	5.39	8.34	19.10	28.65	35.0	47.74	70	95.4	8.59
Maximum torque (N-m)	8.92	13.8	23.3	57.29	71.62	87.53	119.36	175	224	21.48
Rated speed (r/min)	1,500							1,500		1,000
Maximum speed (r/min)	3,000							2,000		2,000
Rated current (A)	2.1	3.4	5.02	11.53	20.8	22.37	27.3	27.2	41.6	4.4
Maximum current (A)	6.1	8.85	15	34.6	52	56	68.3	68	100	13.1
Power rating (kW/s)	7.72	17.0	29.47	66.4	105.5	122.9	159.7	145	201.8	66
Rotor moment of inertia ($x10^{-4}$kg-m^2)(without brake)	13.1	17.1	23.6	54.95	77.75	99.78	142.7	338	451	11.18
Mechanical time constant (ms)	2.3	1.76	1.44	1.11	0.94	0.88	0.77	1.42	1.34	1.21
Torque constant-KT (N-m/A)	1.5	1.59	1.66	1.66	1.38	1.56	1.75	2.57	2.29	1.95
Voltage constant-KE (mV/(r/min)	55.5	58.9	61.1	64.4	53	58.9	66.4	96	83.9	71.7
Armature resistance (Ohm)	1.41	0.92	0.59	0.21	0.09	0.07	0.06	0.0994	0.0545	1.45
Armature inductance (mH)	20	14.1	9.54	4.94	2.36	2.2	1.7	2.51	1.43	23.3
Electrical time constant (ms)	14.1	15.33	16.17	23.97	28.07	27.6	28.29	25.25	26.26	16.07
Insulation class	Class A (UL), Class B (CE)									
Insulation resistance	100M Ω , DC 500 V above									
Insulation strength	2.3k Vac,1 sec									
Weight (kg)(without brake)	6.8	8.6	10.7	18.5	23.5	30.5	40.5	56.4	75	7.5
Weight (kg)(with brake)	-	10	--	22.5	29	36	46	68.4	87	8.9
Max. radial shaft load (N)	490	490	490	1,470	1,470	1,764	1,764	3,300	3,300	490
Max. thrust shaft load (N)	98	98	98	490	490	588	588	1,100	1,100	98
Power rating (kW/s)(with brake)	7.02	14.82	27.82	63.9	101.8	119.4	156.6	141.4	197.1	62
Rotor moment of inertia ($x10^{-4}$kg-m^2)(with brake)	14.4	19.6	25	57.06	80.65	102.70	145.5	346.5	461.8	11.9
Mechanical time constant (ms)(with brake)	2.54	2.02	1.52	1.16	0.95	0.91	0.79	1.46	1.37	1.29
Brake holding torque [Nt-m (min)]*2	10.0	10.0	10.0	25.0	55.0	55.0	55.0	115	115	10.0
Brake power consumption (at 20°C)[W]	19.0	19.0	19.0	20.4	19.9	19.9	19.9	28.8	28.8	19.0
Brake release time [ms (Max)]	10	10	10	10	10	10	10	10	10	10
Brake pull-in time [ms (Max)]	70	70	70	70	70	70	70	70	70	70
Vibration grade (μm)	15									
Operating temperature (°C)	0°C to 40°C									
Storage temperature (°C)	-10°C to 80°C									
Operating humidity	20 to 90%RH (non-condensing)									
Storage humidity	20 to 90%RH (non-condensing)									
Vibration capacity	2.5G									
IP Rating	IP65 (when waterproof connectors are used, or when an oil seal is used to be fitted to the rotating shaft (an oil seal model is used))									
Approvals	CE cULus									

*1. Rate torque values are continuous permissible values at 0 ~ 40°C ambient temperature when attaching with the sizes of heatsinks listed below:
ECMA-_ _ 08: 250 mm x 250 mm x 6 mm
ECMA-_ _ 13: 400 mm x 400 mm x 20 mm
ECMA-_ _ 18: 550 mm x 550 mm x 30 mm
ECMA-_ _ 22: 650 mm x 650 mm x 35 mm
Material type : Aluminum – F80, F130, F180, F220
*2. The holding brake is used to hold the motor shaft, not for braking the rotation. Never use it for decelerating or stopping the machine.

Servo Motor Dimensions

220 V Series

Frame Size 86 mm and below



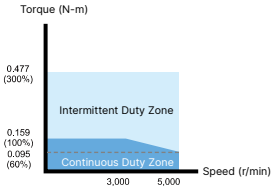
Units: mm

Model	C1040F☐S	C△0401☐S	C△0602☐S	C△0604☐S	C△0604☐H	C△0804☐7	C△0807☐S	C△0807☐H	C△0907☐S	C△0910☐S
LC	40	40	60	60	60	80	80	80	86	86
LZ	4.5	4.5	5.5	5.5	5.5	6.6	6.6	6.6	6.6	6.6
LA	46	46	70	70	70	90	90	90	100	100
S	8 ($^{+0}_{-0.009}$)	8 ($^{+0}_{-0.009}$)	14 ($^{+0}_{-0.011}$)	14 ($^{+0}_{-0.011}$)	14 ($^{+0}_{-0.011}$)	14 ($^{+0}_{-0.011}$)	19 ($^{+0}_{-0.013}$)	19 ($^{+0}_{-0.013}$)	16 ($^{+0}_{-0.011}$)	16 ($^{+0}_{-0.011}$)
LB	30 ($^{+0}_{-0.021}$)	30 ($^{+0}_{-0.021}$)	50 ($^{+0}_{-0.025}$)	50 ($^{+0}_{-0.025}$)	50 ($^{+0}_{-0.025}$)	70 ($^{+0}_{-0.030}$)	70 ($^{+0}_{-0.030}$)	70 ($^{+0}_{-0.030}$)	80 ($^{+0}_{-0.030}$)	80 ($^{+0}_{-0.030}$)
LL (without brake)	79.1	100.6	105.5	130.7	145.8	112.3	138.3	154.8	130.2	153.2
LL (with brake)	--	136.8	141.6	166.8	176.37	152.8	178	187.8	161.3	184.3
LS	20	20	27	27	27	27	32	32	30	30
LR	25	25	30	30	30	30	35	35	35	35
LE	2.5	2.5	3	3	3	3	3	3	3	3
LG	5	5	7.5	7.5	7.5	8	8	8	8	8
LW	16	16	20	20	20	20	25	25	20	20
RH	6.2	6.2	11	11	11	11	15.5	15.5	13	13
WK	3	3	5	5	5	5	6	6	5	5
W	3	3	5	5	5	5	6	6	5	5
T	3	3	5	5	5	5	6	6	5	5
TP	M3 Depth 8	M3 Depth 8	M4 Depth 15	M4 Depth 15	M4 Depth 15	M4 Depth 15	M6 Depth 20	M6 Depth 20	M5 Depth 15	M5 Depth 15

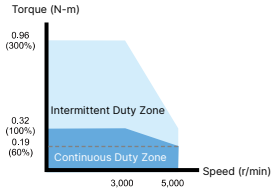
NOTE

1) Dimensions are in millimeters.
2) Dimensions of the servo motors may be revised without prior notice.
3) The boxes (☐) in the model names are for optional configurations(keyway, brake and oil seal).
4) The boxes (△) in the model names are for encoder resolution types. (△ =1: Incremental encoder, 20-bit; △ =2: Incremental encoder, 17-bit; △ =A: Absolute type)

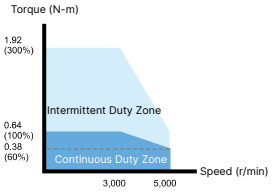
Speed-Torque Curves (T-N Curves)



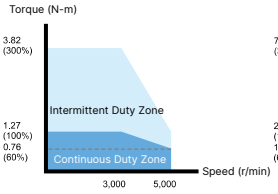
ECMA-C1040F ☐ S



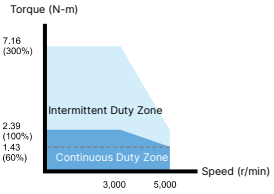
ECMA-C△0401 ☐ S



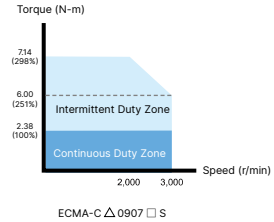
ECMA-C△0602 ☐ S



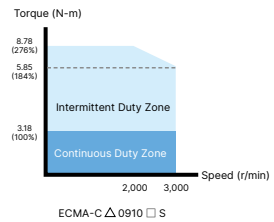
ECMA-C△0604 ☐ S
ECMA-C△0604 ☐ H
ECMA-C△0804 ☐ 7



ECMA-C△0807 ☐ S
ECMA-C△0807 ☐ H



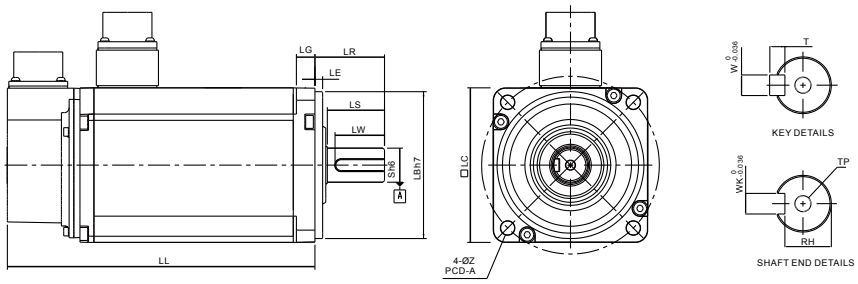
ECMA-C△0907 ☐ S



ECMA-C△0910 ☐ S

220 V Series

Frame Size 100 mm and 130 mm



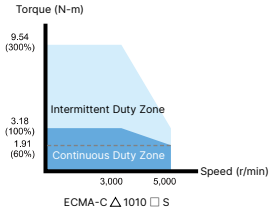
Units: mm

Model	C △ 1010 □ S	C △ 1020 □ S	C △ 1330 □ 4	E △ 1305 □ S	E △ 1310 □ S	E △ 1315 □ S	E △ 1320 □ S
LC	100	100	130	130	130	130	130
LZ	9	9	9	9	9	9	9
LA	115	115	145	145	145	145	145
S	22 ($^{+0}_{-0.013}$)	22 ($^{+0}_{-0.013}$)	24 ($^{+0}_{-0.013}$)	22 ($^{+0}_{-0.013}$)	22 ($^{+0}_{-0.013}$)	22 ($^{+0}_{-0.013}$)	22 ($^{+0}_{-0.013}$)
LB	95 ($^{+0}_{-0.035}$)	95 ($^{+0}_{-0.035}$)	110 ($^{+0}_{-0.035}$)	110 ($^{+0}_{-0.035}$)	110 ($^{+0}_{-0.035}$)	110 ($^{+0}_{-0.035}$)	110 ($^{+0}_{-0.035}$)
LL (without brake)	153.3	199	187.5	147.5	147.5	167.5	187.5
LL (with brake)	192.5	226	216	183.5	183.5	202	216
LS	37	37	47	47	47	47	47
LR	45	45	55	55	55	55	55
LE	5	5	6	6	6	6	6
LG	12	12	11.5	11.5	11.5	11.5	11.5
LW	32	32	36	36	36	36	36
RH	18	18	20	18	18	18	18
WK	8	8	8	8	8	8	8
W	8	8	8	8	8	8	8
T	7	7	7	7	7	7	7
TP	M6 Depth 20	M6 Depth 20	M6 Depth 20	M6 Depth 20	M6 Depth 20	M6 Depth 20	M6 Depth 20

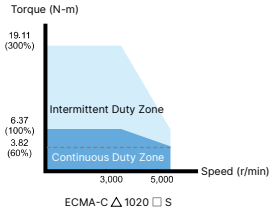
NOTE

1) Dimensions are in millimeters.
2) Dimensions of the servo motors may be revised without prior notice.
3) The boxes (□) in the model names are for optional configurations(keyway, brake and oil seal).
4) The boxes (△) in the model names are for encoder resolution types. (△ =1: Incremental encoder, 20-bit; △ =2: Incremental encoder, 17-bit; △ =A: Absolute type)

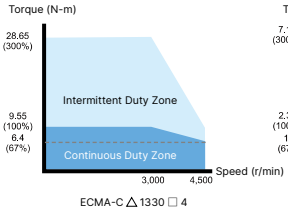
Speed-Torque Curves (T-N Curves)



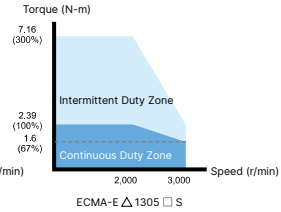
ECMA-C △ 1010 □ S



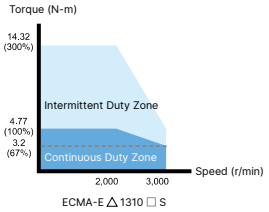
ECMA-C △ 1020 □ S



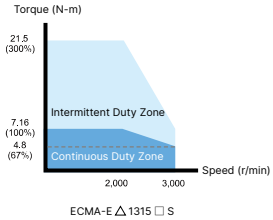
ECMA-C △ 1330 □ 4



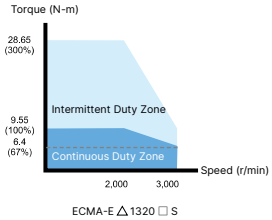
ECMA-E △ 1305 □ S



ECMA-E △ 1310 □ S



ECMA-E △ 1315 □ S

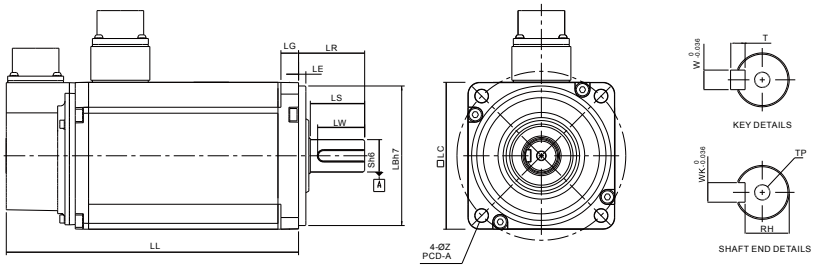


ECMA-E △ 1320 □ S

Servo Motor Dimensions

220 V Series

Frame Size 100 mm and 130 mm



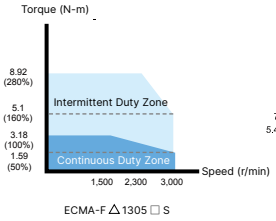
Units: mm

Model	F △ 1305 □ S	F △ 1308 □ S	F △ 1313 □ S	F △ 1318 □ S	G △ 1303 □ S	G △ 1306 □ S	G △ 1309 □ S
LC	130	130	130	130	130	130	130
LZ	9	9	9	9	9	9	9
LA	145	145	145	145	145	145	145
S	22 ($^{+0}_{-0.013}$)	22 ($^{+0}_{-0.013}$)	22 ($^{+0}_{-0.013}$)	22 ($^{+0}_{-0.013}$)	22 ($^{+0}_{-0.013}$)	22 ($^{+0}_{-0.013}$)	22 ($^{+0}_{-0.013}$)
LB	110 ($^{+0}_{-0.035}$)	110 ($^{+0}_{-0.035}$)	110 ($^{+0}_{-0.035}$)	110 ($^{+0}_{-0.035}$)	110 ($^{+0}_{-0.035}$)	110 ($^{+0}_{-0.035}$)	110 ($^{+0}_{-0.035}$)
LL (without brake)	139.5	152.5	187.5	202	147.5	147.5	163.5
LL (with brake)	168	181	216	230.7	183.5	183.5	198
LS	47	47	47	47	47	47	47
LR	55	55	55	55	55	55	55
LE	6	6	6	6	6	6	6
LG	11.5	11.5	11.5	11.5	11.5	11.5	11.5
LW	36	36	36	36	36	36	36
RH	18	18	18	18	18	18	18
WK	8	8	8	8	8	8	8
W	8	8	8	8	8	8	8
T	7	7	7	7	7	7	7
TP	M6 Depth 20	M6 Depth 20	M6 Depth 20	M6 Depth 20	M6 Depth 20	M6 Depth 20	M6 Depth 20

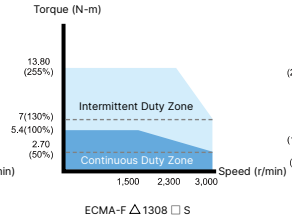
NOTE

1) Dimensions are in millimeters.
2) Dimensions of the servo motors may be revised without prior notice.
3) The boxes (□) in the model names are for optional configurations (keyway, brake and oil seal).
4) The boxes (△) in the model names are for encoder resolution types. (△ =1: Incremental encoder, 20-bit; △ =2: Incremental encoder, 17-bit; △ =A: Absolute type)

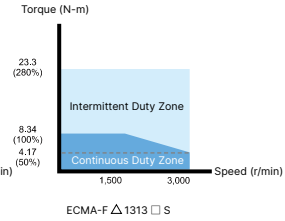
Speed-Torque Curves (T-N Curves)



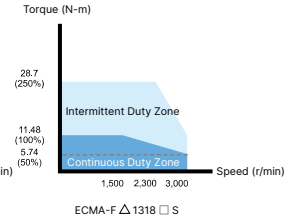
ECMA-F △ 1305 □ S



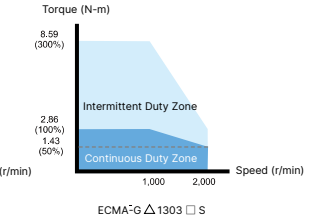
ECMA-F △ 1308 □ S



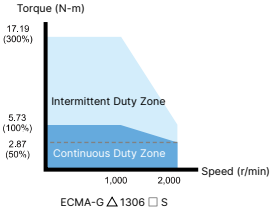
ECMA-F △ 1313 □ S



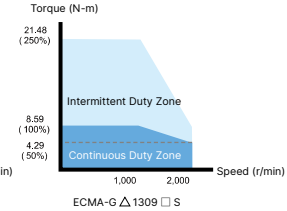
ECMA-F △ 1318 □ S



ECMA-G △ 1303 □ S



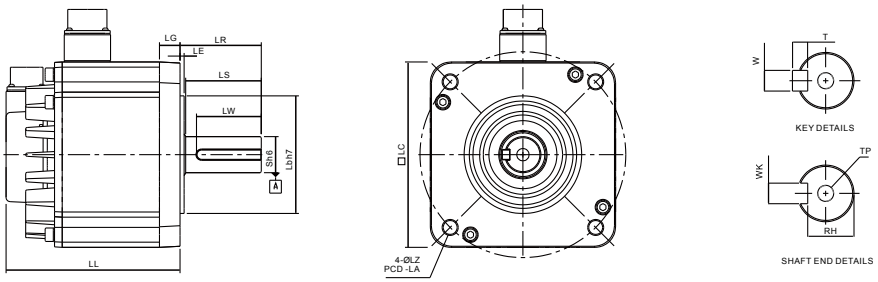
ECMA-G △ 1306 □ S



ECMA-G △ 1309 □ S

220 V Series

Frame Size 180 mm



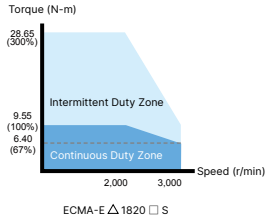
Units: mm

Model	E △ 1820 □ S	E △ 1830 □ S	E △ 1835 □ S	F △ 1845 □ S	F △ 1855 □ 3	F △ 1875 □ 3
LC	180	180	180	180	180	180
LZ	13.5	13.5	13.5	13.5	13.5	13.5
LA	200	200	200	200	200	200
S	35 ($^{+0}_{-0.016}$)	35 ($^{+0}_{-0.016}$)	35 ($^{+0}_{-0.016}$)	35 ($^{+0}_{-0.016}$)	42 ($^{+0}_{-0.016}$)	42 ($^{+0}_{-0.016}$)
LB	114.3 ($^{+0}_{-0.035}$)	114.3 ($^{+0}_{-0.035}$)	114.3 ($^{+0}_{-0.035}$)	114.3 ($^{+0}_{-0.035}$)	114.3 ($^{+0}_{-0.035}$)	114.3 ($^{+0}_{-0.035}$)
LL (without brake)	169	202.1	202.1	235.3	279.7	342.0
LL (with brake)	203.1	235.3	235.3	279.3	311.7	376.1
LS	73	73	73	73	108.5	108.5
LR	79	79	79	79	113	113
LE	4	4	4	4	4	4
LG	20	20	20	20	20	20
LW	63	63	63	63	90	90
RH	30	30	30	30	37	37
WK	10	10	10	10	12	12
W	10	10	10	10	12	12
T	8	8	8	8	8	8
TP	M12 Depth 25	M12 Depth 25	M12 Depth 25	M12 Depth 25	M16 Depth 32	M12 Depth 32

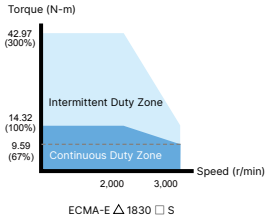
NOTE

1) Dimensions are in millimeters.
2) Dimensions of the servo motors may be revised without prior notice.
3) The boxes (□) in the model names are for optional configurations(keyway, brake and oil seal).
4) The boxes (△) in the model names are for encoder resolution types. (△ =1: Incremental encoder, 20-bit; △ =2: Incremental encoder, 17-bit; △ =A: Absolute type)

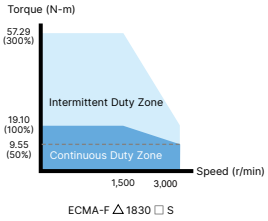
Speed-Torque Curves (T-N Curves)



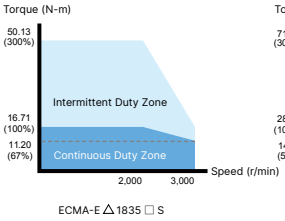
ECMA-E △ 1820 □ S



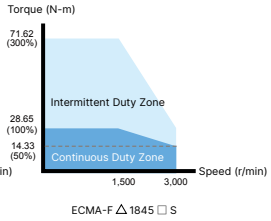
ECMA-E △ 1830 □ S



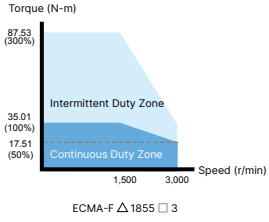
ECMA-F △ 1830 □ S



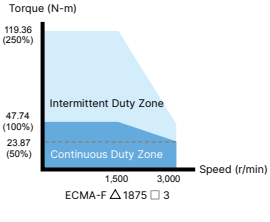
ECMA-E △ 1835 □ S



ECMA-F △ 1845 □ S



ECMA-F △ 1855 □ 3

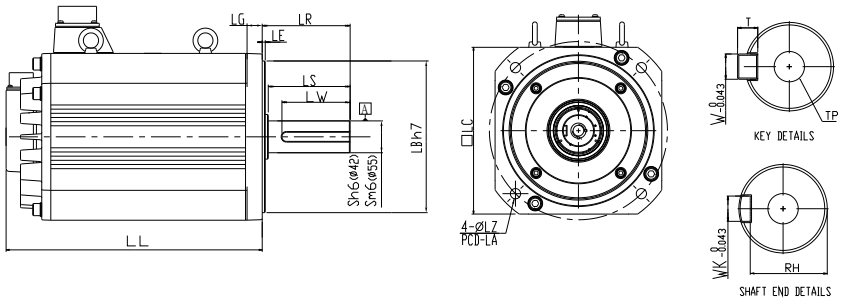


ECMA-F △ 1875 □ 3

Servo Motor Dimensions

220 V / 400 V Series

Frame Size 220 mm and above



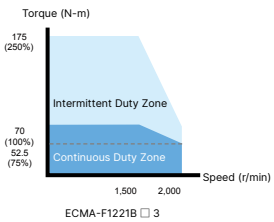
Units: mm

Model	F1221B □ 3	F1221F □ S	L1221B □ 3	L1221F □ S
LC	220	220	220	220
LZ	13.5	13.5	13.5	13.5
LA	235	235	235	235
S	42 ($^{+0}_{-0.016}$)	55 ($^{+0.03}_{-0.011}$)	42 ($^{+0}_{-0.016}$)	55 ($^{+0.03}_{-0.011}$)
LB	200 ($^{+0}_{-0.046}$)	200 ($^{+0}_{-0.046}$)	200 ($^{+0}_{-0.046}$)	200 ($^{+0}_{-0.046}$)
LL (without brake)	371.4	453.4	371.4	450.4
LL (with brake)	434.4	513.4	434.4	513.4
LS	108	108	110	110
LR	116	116	116	116
LE	4	4	4	4
LG	20	20	20	20
LW	90	90	90	90
RH	37	49	37	49
WK	12	16	12	16
W	12	16	12	16
T	8	10	8	10
TP	M16 Depth 32	M20 Depth 40	M16 Depth 32	M20 Depth 40

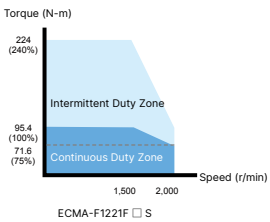
NOTE

1) Dimensions are in millimeters.
2) Dimensions of the servo motors may be revised without prior notice.
3) The boxes (□) in the model names are for optional configurations (keyway, brake and oil seal).

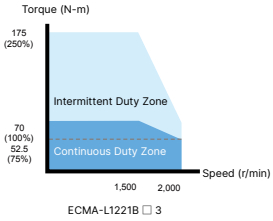
Speed-Torque Curves (T-N Curves)



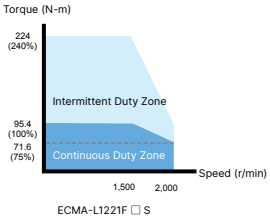
ECMA-F1221B □ 3



ECMA-F1221F □ S



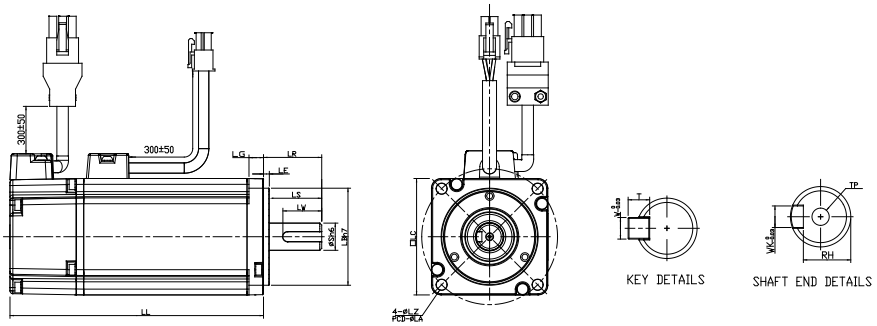
ECMA-L1221B □ 3



ECMA-L1221F □ S

400 V Series

Frame Size 80 mm and below



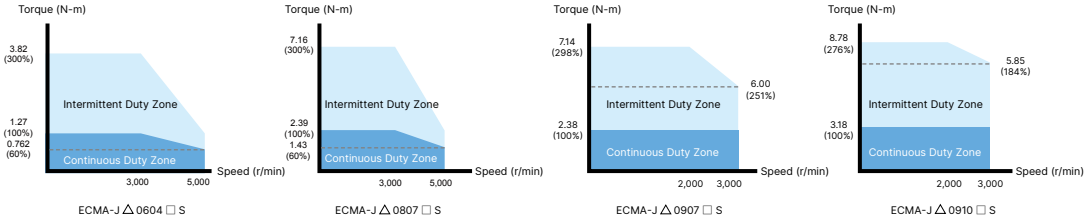
Units: mm

Model	J △ 0604 □ S	J △ 0807 □ S	J △ 0907 □ S	J △ 0910 □ S
LC	60	80	86	86
LZ	5.5	6.6	6.6	6.6
LA	70	90	100	100
S	14($^{+0}_{-0.011}$)	19($^{+0}_{-0.013}$)	16($^{+0}_{-0.011}$)	16($^{+0}_{-0.011}$)
LB	50($^{+0}_{-0.025}$)	70($^{+0}_{-0.030}$)	80($^{+0}_{-0.030}$)	80($^{+0}_{-0.030}$)
LL (without brake)	130.7	138.3	130.2	153.2
LL (with brake)	166.8	178	161.3	184.3
LS (without oil seal)	27	32	30	30
LS (with oil seal)	--	29.5	30	30
LR	30	35	35	35
LE	3	3	3	3
LG	7.5	8	8	8
LW	20	25	20	20
RH	11	15.5	13	13
WK	5	6	5	5
W	5	6	5	5
T	5	6	5	5
TP	M4 Depth 15	M6 Depth 20	M5 Depth 15	M5 Depth 15

NOTE

1) Dimensions are in millimeters.
2) Dimensions of the servo motors may be revised without prior notice.
3) The boxes (□) in the model names are for optional configurations (keyway, brake and oil seal).
4) The boxes (△) in the model names are for encoder resolution types (△ =1: Incremental encoder, 20-bit; △ =2: Incremental encoder, 17-bit); △ =A: Absolute type

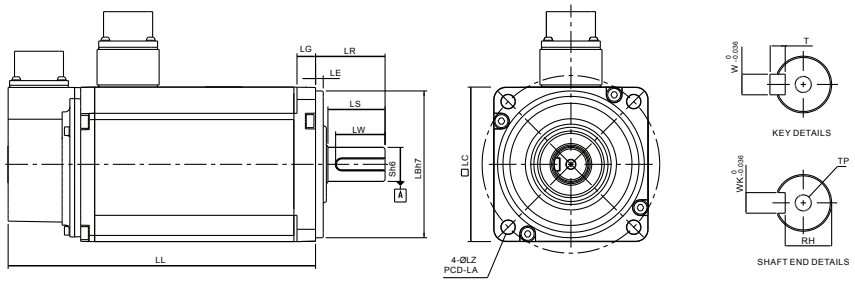
Speed-Torque Curves (T-N Curves)



Servo Motor Dimensions

400 V Series

Frame Size 100 mm and 130 mm



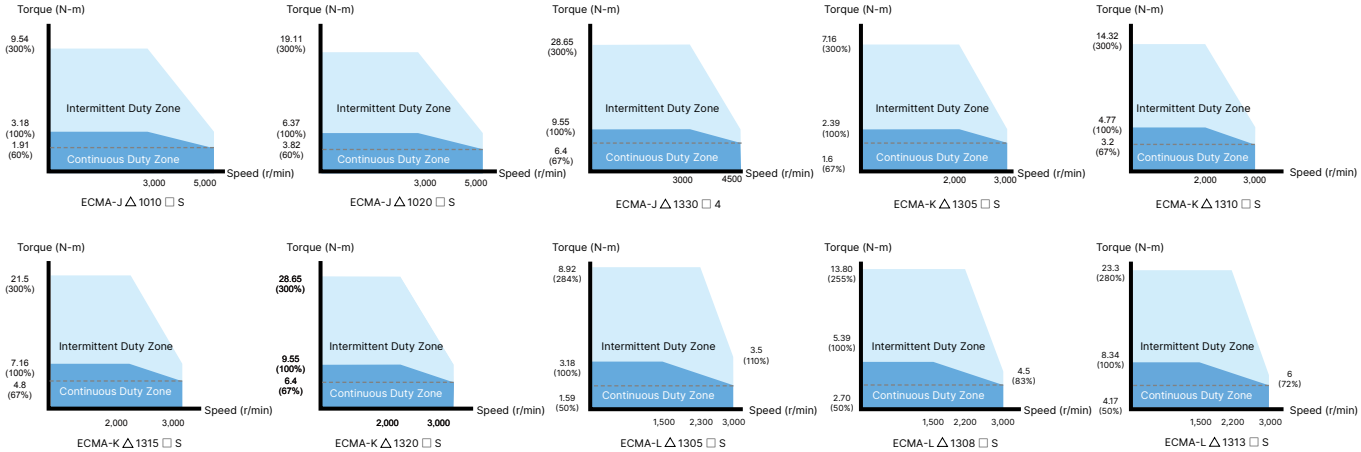
Units: mm

Model	J △ 1010 □ S	J △ 1020 □ S	J △ 1330 □ 4	K △ 1305 □ S	K △ 1310 □ S	K △ 1315 □ S	K △ 1320 □ S	L △ 1305 □ S	L △ 1308 □ S	L △ 1313 □ S
LC	100	100	130	130	130	130	130	130	130	130
LZ	9	9	9	9	9	9	9	9	9	9
LA	115	115	145	145	145	145	145	145	145	145
S	22 ($^{+0}_{-0.013}$)	22 ($^{+0}_{-0.013}$)	24 ($^{+0}_{-0.013}$)	22 ($^{+0}_{-0.013}$)	22 ($^{+0}_{-0.013}$)	22 ($^{+0}_{-0.013}$)	22 ($^{+0}_{-0.013}$)	22 ($^{+0}_{-0.013}$)	22 ($^{+0}_{-0.013}$)	22 ($^{+0}_{-0.013}$)
LB	95 ($^{+0}_{-0.035}$)	95 ($^{+0}_{-0.035}$)	110 ($^{+0}_{-0.035}$)	110 ($^{+0}_{-0.035}$)	110 ($^{+0}_{-0.035}$)	110 ($^{+0}_{-0.035}$)	110 ($^{+0}_{-0.035}$)	110 ($^{+0}_{-0.035}$)	110 ($^{+0}_{-0.035}$)	110 ($^{+0}_{-0.035}$)
LL (without brake)	153.3	199	187.5	139.5	147.5	167.5	187.5	147.5	163.5	194.5
LL (with brake)	192.5	226	216.0	168	183.5	202	216	183.2	198	223
LS	37	37	47	47	47	47	47	47	47	47
LR	45	45	55	55	55	55	55	55	55	55
LE	5	5	6	6	6	6	6	6	6	6
LG	12	12	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
LW	32	32	36	36	36	36	36	36	36	36
RH	18	18	20	18	18	18	18	18	18	18
WK	8	8	8	8	8	8	8	8	8	8
W	8	8	8	8	8	8	8	8	8	8
T	7	7	7	7	7	7	7	7	7	7
TP	MP6 Depth 20	MP6 Depth 20	MP6 Depth 20	MP6 Depth 20	MP6 Depth 20	MP6 Depth 20	MP6 Depth 20	M8 Depth 25	MP6 Depth 20	MP6 Depth 20

NOTE

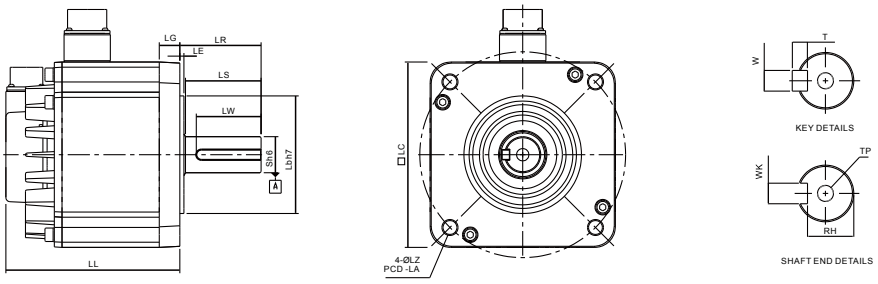
1) Dimensions are in millimeters.
2) Dimensions of the servo motors may be revised without prior notice.
3) The boxes (□) in the model names are for optional configurations (keyway, brake and oil seal).
4) The boxes (△) in the model names are for encoder resolution types (△ =1: Incremental encoder, 20-bit; △ =2: Incremental encoder, 17-bit); △ =A: Absolute type

Speed-Torque Curves (T-N Curves)



400 V Series

Frame Size 180 mm and above



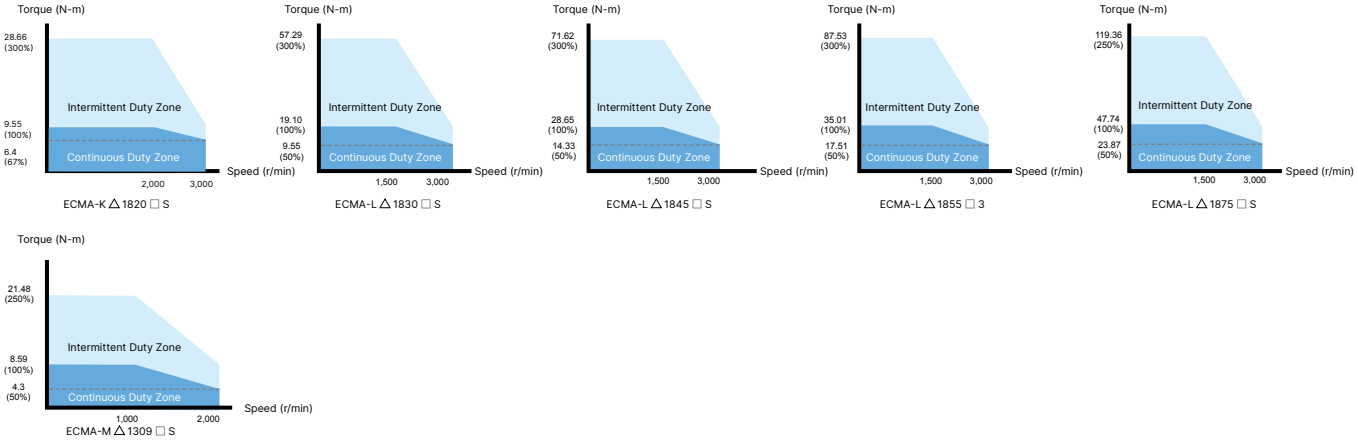
Units: mm

Model	K △ 1820 □ S	L △ 1830 □ S	L △ 1845 □ S	L △ 1855 □ 3	L △ 1875 □ S	M △ 1309 □ S
LC	180	180	180	180	180	130
LZ	13.5	13.5	13.5	13.5	13.5	9
LA	200	200	200	200	200	145
S	35 ($^{+0}_{-0.016}$)	35 ($^{+0}_{-0.016}$)	35 ($^{+0}_{-0.016}$)	42 ($^{+0}_{-0.016}$)	42 ($^{+0}_{-0.016}$)	22 ($^{+0}_{-0.013}$)
LB	114.3($^{+0}_{-0.035}$)	114.3($^{+0}_{-0.035}$)	114.3($^{+0}_{-0.035}$)	114.3($^{+0}_{-0.035}$)	114.3($^{+0}_{-0.035}$)	110($^{+0}_{-0.035}$)
LL (without brake)	169	202.1	235.3	279.7	342.0	163.5
LL (with brake)	203.1	235.3	279.3	311.7	376.1	198
LS	73	73	73	108.5	108.5	47
LR	79	79	79	113	113	55
LE	4	4	4	4	4	6
LG	20	20	20	20	20	11.5
LW	63	63	63	90	90	36
RH	30	30	30	37	37	18
WK	10	10	10	12	12	8
W	10	10	10	12	12	8
T	8	8	8	8	8	7
TP	M12 Depth 25	M12 Depth 25	M12 Depth 25	M16 Depth 32	M16 Depth 32	M6 Depth 20

NOTE

1) Dimensions are in millimeters.
2) Dimensions of the servo motors may be revised without prior notice.
3) The boxes (□) in the model names are for optional configurations (keyway, brake and oil seal).
4) The boxes (△) in the model names are for encoder resolution types (△ =1: Incremental encoder, 20-bit; △ =2: Incremental encoder, 17-bit); △ =A: Absolute type

Speed-Torque Curves (T-N Curves)



Part Names and Functions

LED Display / Operation Panel / Charge LED

- **LED Display**

  The 5 digit, 7 segment LED displays the servo status or fault codes.

- **Operation Panel**

  Function keys used to perform status display, monitor and diagnostic, function and parameter setting.

  Function Keys:
  MODE : Press this key to select/change mode
  SHIFT : Press this key to shift cursor to the left
  UP : Press this key to increase values on the display
  DOWN : Press this key to decrease values on the display
  SET : Press this key to store data

- **Charge LED**

  A lit LED indicates that either power is connected to the servo drive or a residual charge is present in the drive's internal power components.

Full-Closed Loop Control Interface

- **Used to connect linear scale and encoder for controlling A, B, Z phase signals.**

I/O Interface

- **Used to connect Delta's DVP series PLC or other external controllers for controlling I/O signals.**

High-speed Communication Port

- **1-in/1-out communication ports offer easy serial connection.**

Motor Encoder Interface

- **Used to connect the encoder of the servo motor**

Extension Digital Input Connection Port

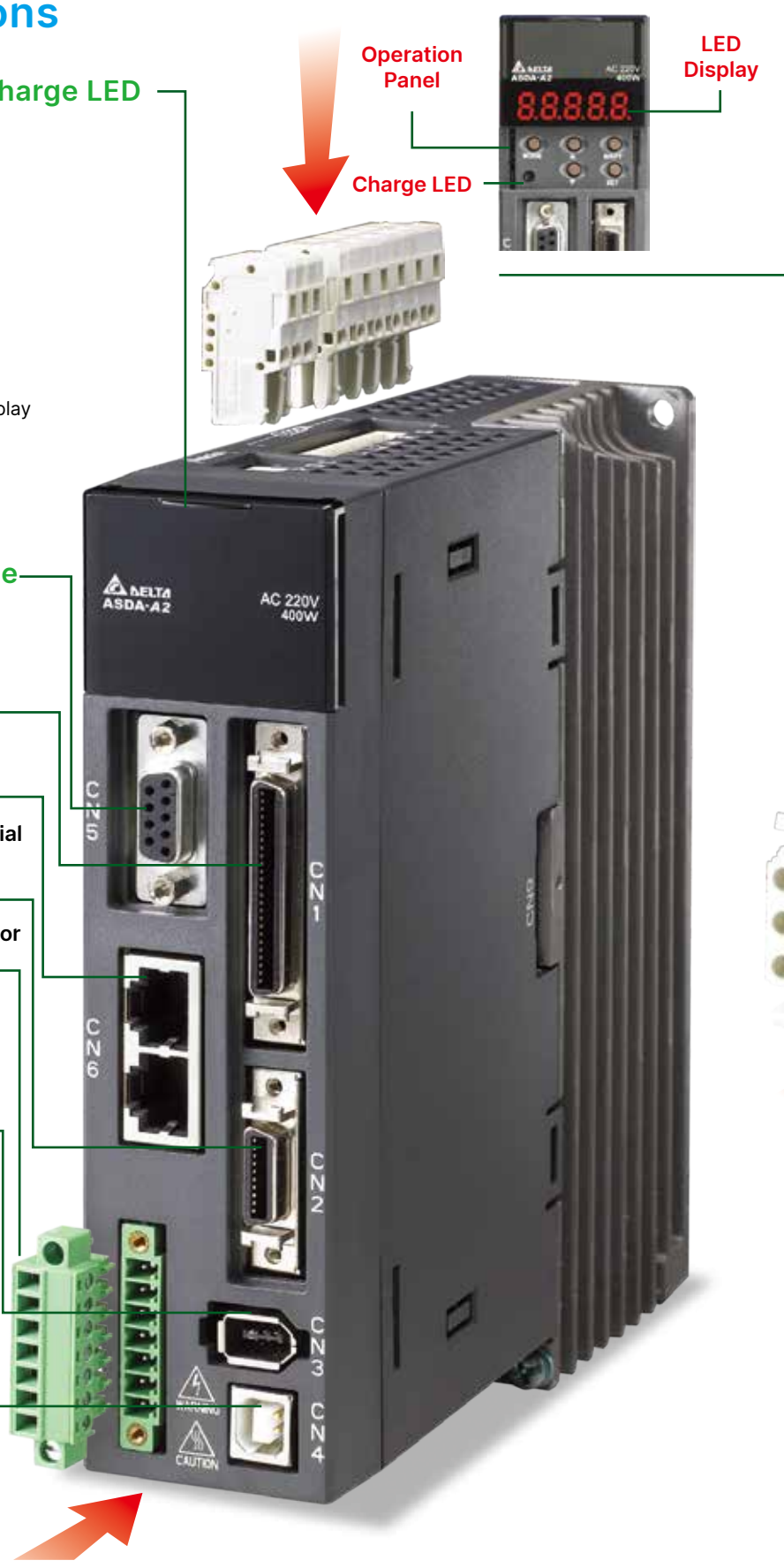
- **Used to connect a removable digital input terminal block. Max. 6 digital inputs can be added.**

Serial Communication Port

- **Used to connect PLC, HMI, and other controllers for RS-485 / RS-232 serial communication.**

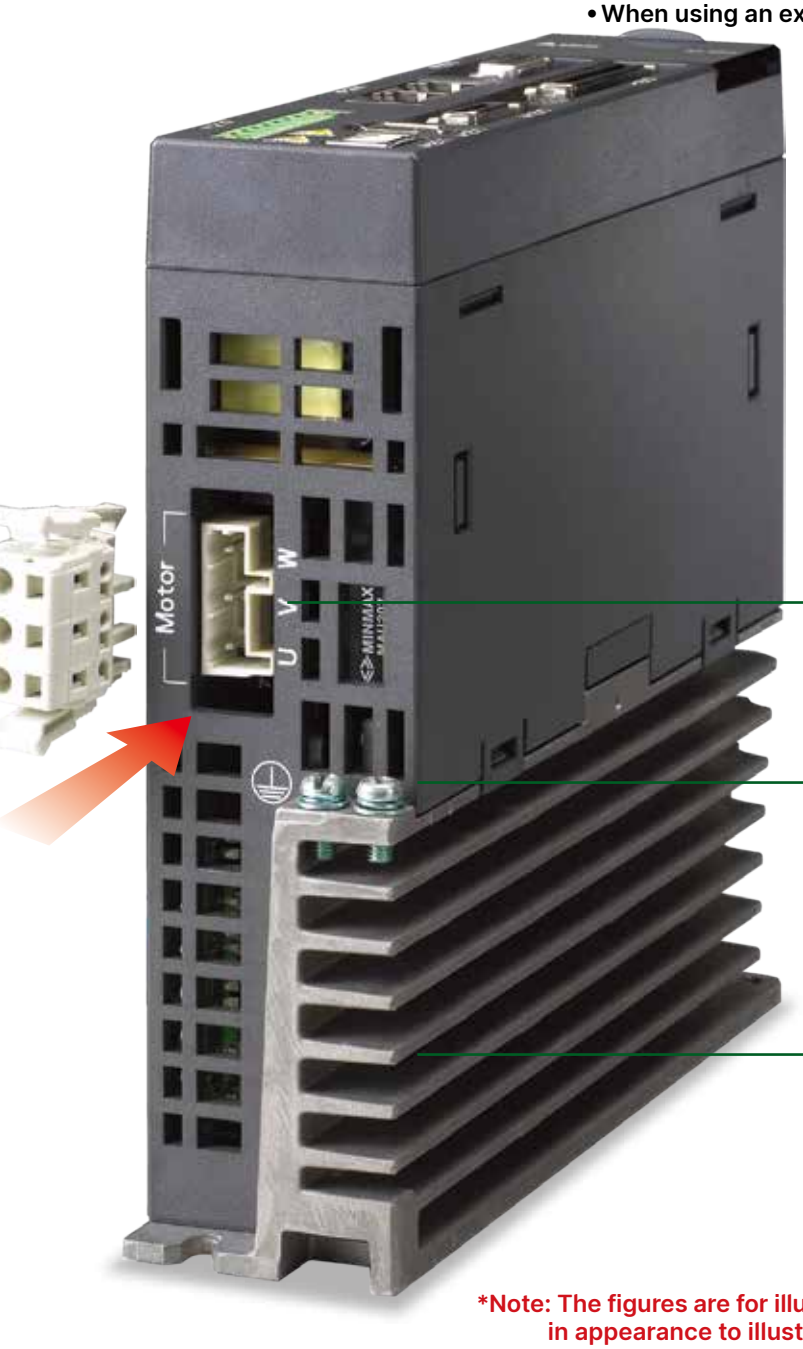
USB Connection Port

- **Used to connect personal computers or notebooks.**
- **Ver 1.1 USB is equipped as standard.**
- **Direct connectivity to personal computers or notebooks, capable of accessing data through ASDA-Soft configuration software.**
- **Monitor speed upon software is up to 1Mbps.**



Internal & External Regenerative Resistor Terminal / Control Circuit Terminal / Main Circuit Terminal

- **Internal & External Regenerative Resistor Terminal**
  1. When using an external resistor, connect it to P ⊕ and C , and ensure an open circuit between P ⊕ and D.
  2. When using an internal resistor, ensure the circuit is closed between P ⊕ and D, and the circuit is open between P ⊕ and C. (Note: Please refer to the table of regenerative resistor specifications for the models with a built-in regenerative resistor.)
  3. When using an external braking unit, connect it to P ⊕ and, and ensure an open circuit between P ⊕ and D, and P ⊕ and C.
- **When using an external braking unit, connect it to P ⊕ and ⊖**



- **Control Circuit Terminal (L1C, L2C or DC24V, DC0V)**
  - 220 V Series: L1C, L2C are used to connect 200 ~ 230 Vac, 50/60Hz single-phase or three-phase power supply.
  - 400 V Series: DC24V, DC0V are used to connect 24Vdc ±10% power supply.
- **Main Circuit Terminal (R, S, T)**
  - 220 V Series: Used to connect 200 ~ 230 Vac, 50/60Hz commercial power supply.
  - 400 V Series: Used to connect 380 ~ 480 Vac, 50/60Hz commercial power supply.

Servo Motor Output (U, V, W)

- **Used to connect servo motor. Never connect the output terminal to main circuit power as the AC drive may be damaged beyond repair if incorrect cables are connected to the output terminals.**

Ground Terminal

- **Used to connect grounding wire of power supply and servo motor.**

Heatsink

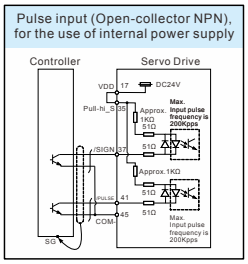
- **Used to secure servo drive and for heat dissipation.**

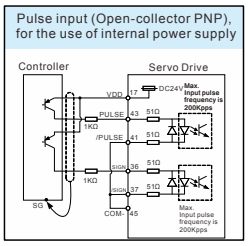
***Note: The figures are for illustration purposes only. Actual models may differ slightly in appearance to illustrations provided.**

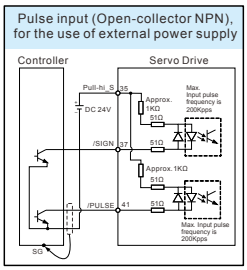
Wiring

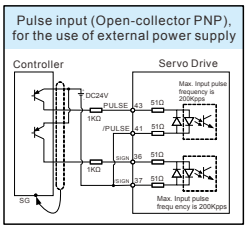
200 V Series

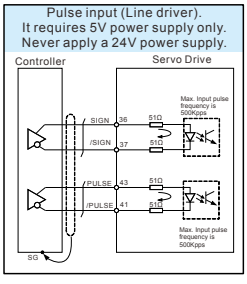
Position (PT) Control Mode (for Pulse Command Input)

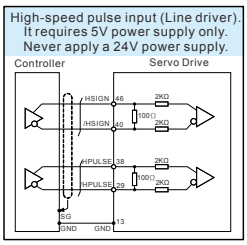


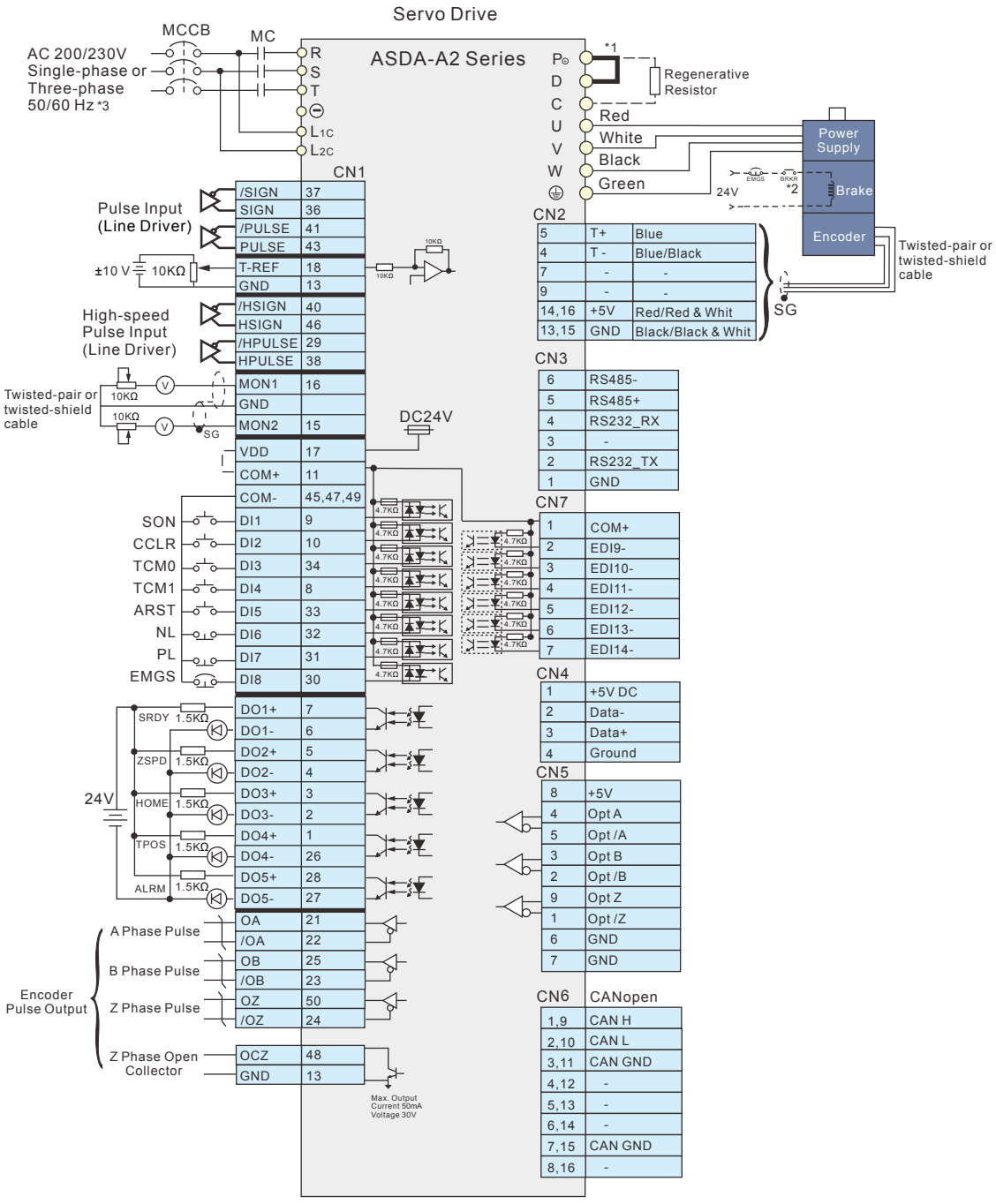










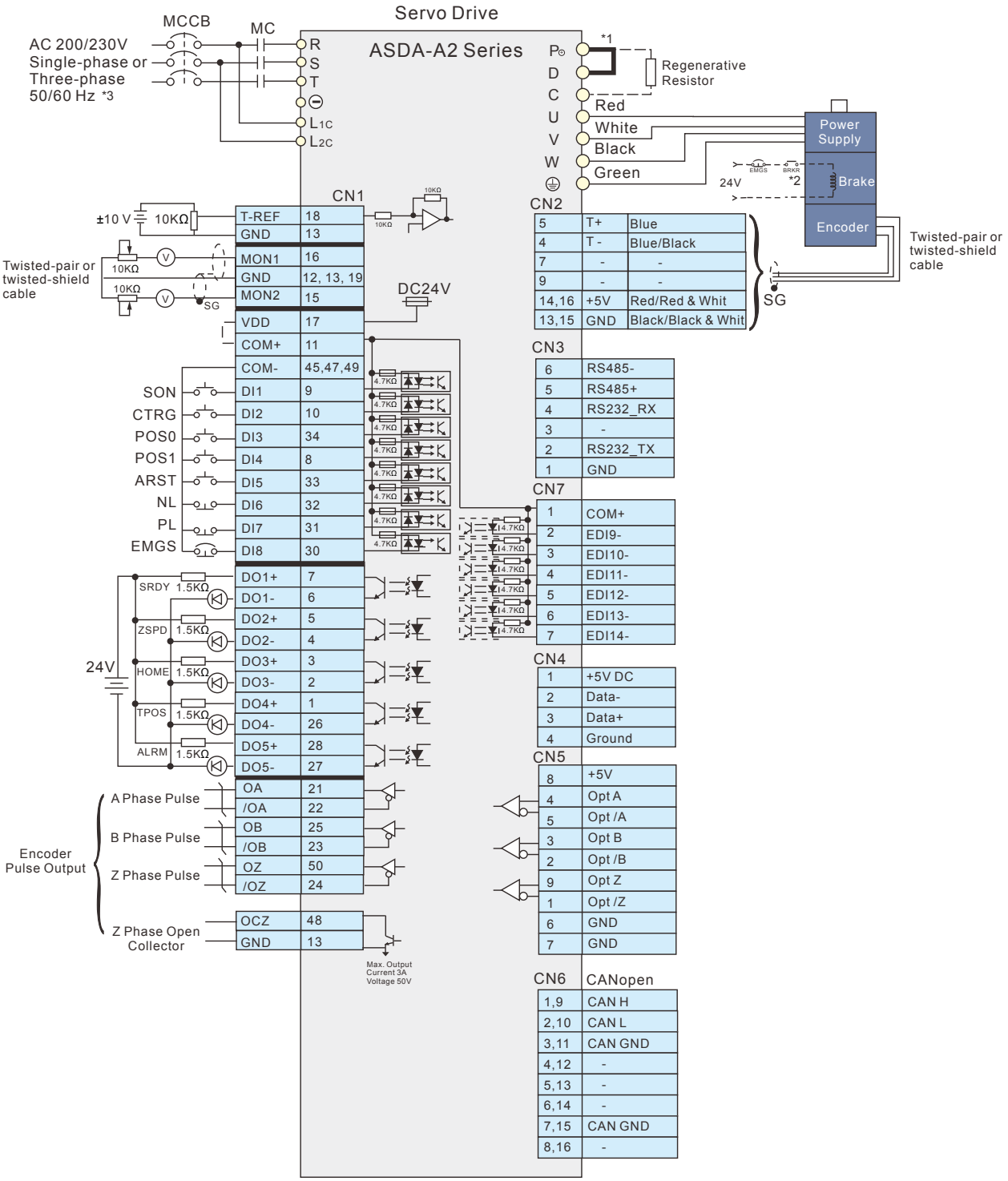


Please note:

*1. 400 W ~ 4.5 kW servo drives provide a built-in regenerative resistor.
*2. The brake oil has no polarity.
*3. Single-phase connections are for servo drives 1.5 kW and below only.

200 V Series

Position (PR) Control Mode (for Internal Procedure Control)



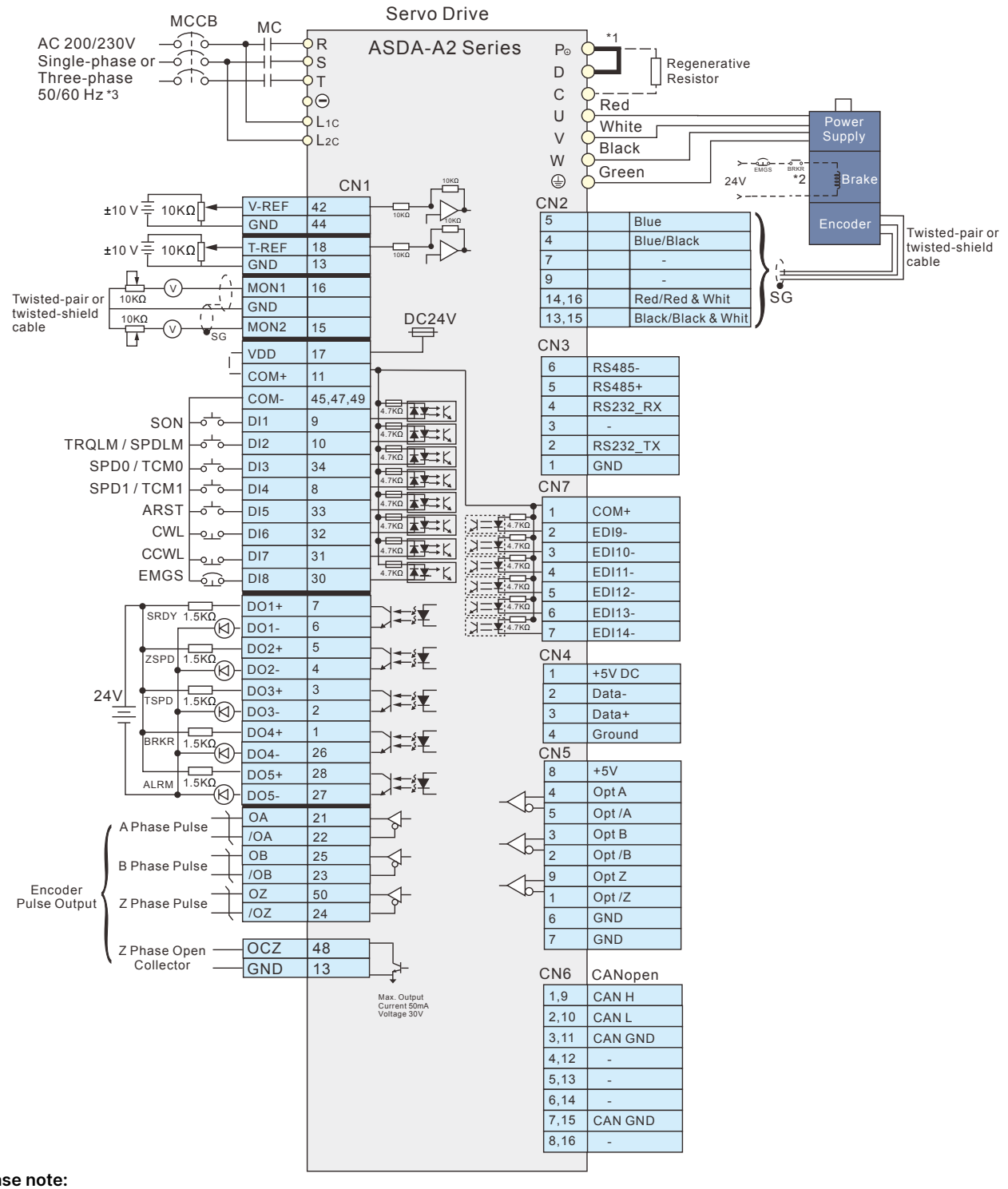
Please note:

*1. 400 W ~ 4.5 kW servo drives provide a built-in regenerative resistor.
*2. The brake oil has no polarity.
*3. Single-phase connections are for servo drives 1.5 kW and below only.

Wiring

200 V Series

Speed (S), Torque (T) Control Mode (for Analog Voltage Input and Internal Parameter Setting)

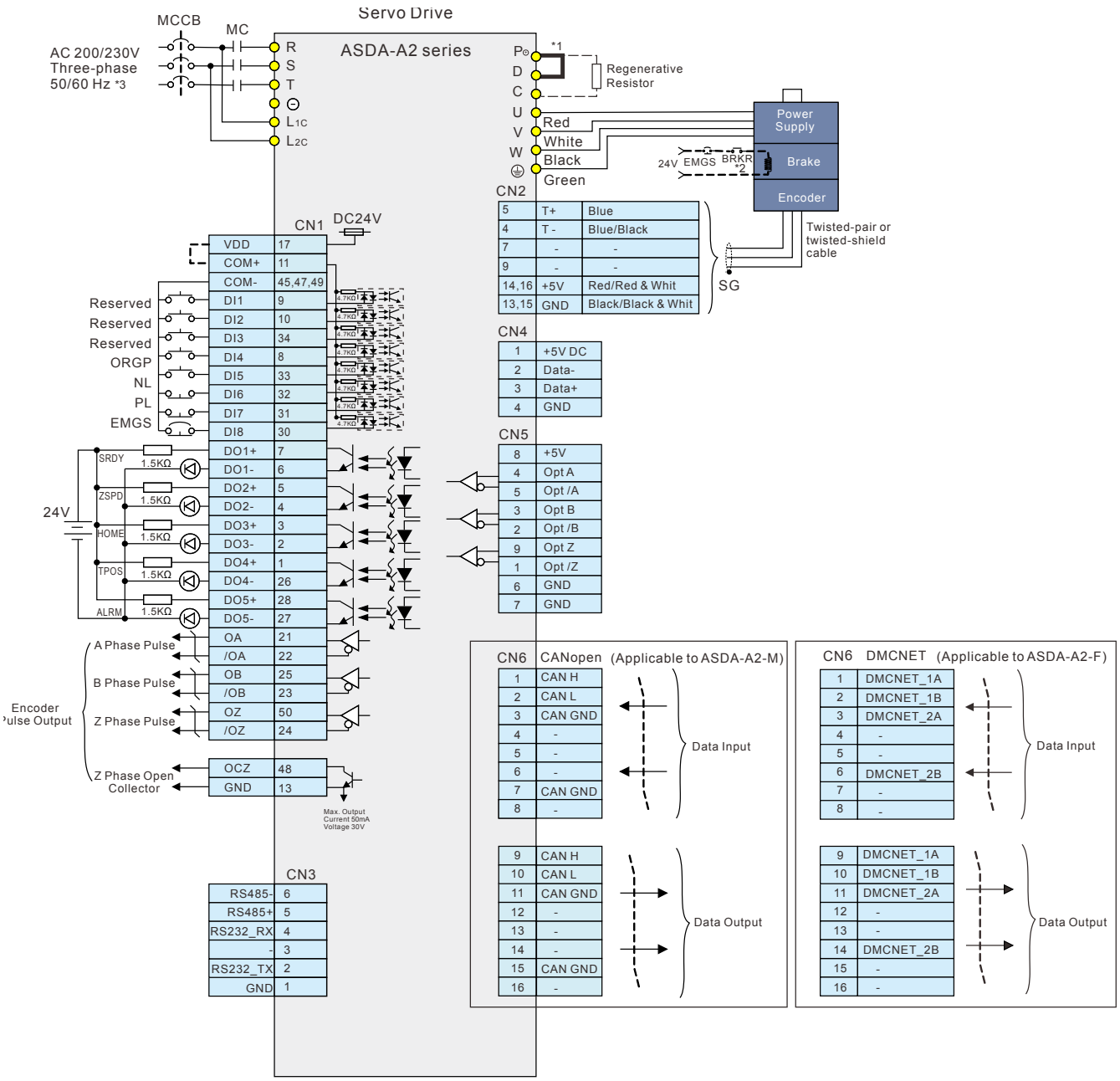


Please note:

*1. 400 W ~ 4.5 kW servo drives provide a built-in regenerative resistor.
*2. The brake oil has no polarity.
*3. Single-phase connections are for servo drives 1.5 kW and below only.

200 V Series

CANopen Communication Mode



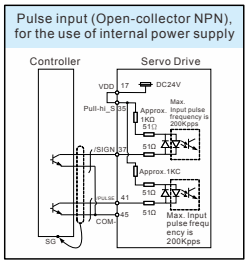
Please note:

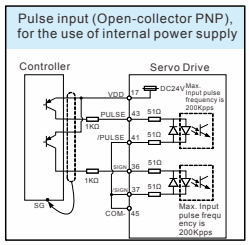
*1. 400 W ~ 4.5 kW servo drives provide a built-in regenerative resistor.
*2. The brake oil has no polarity.
*3. Single-phase connections are for servo drives 1.5 kW and below only.

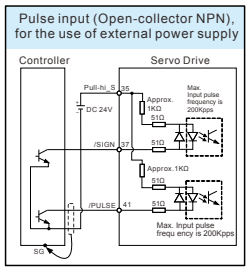
Wiring

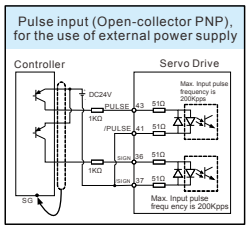
400 V Series

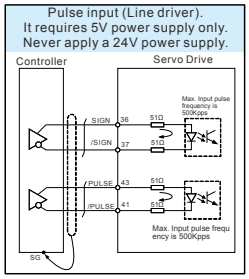
Position (PT) Control Mode (for Pulse Command Input)

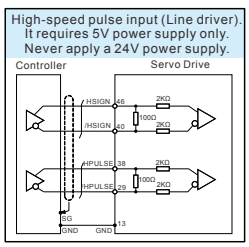


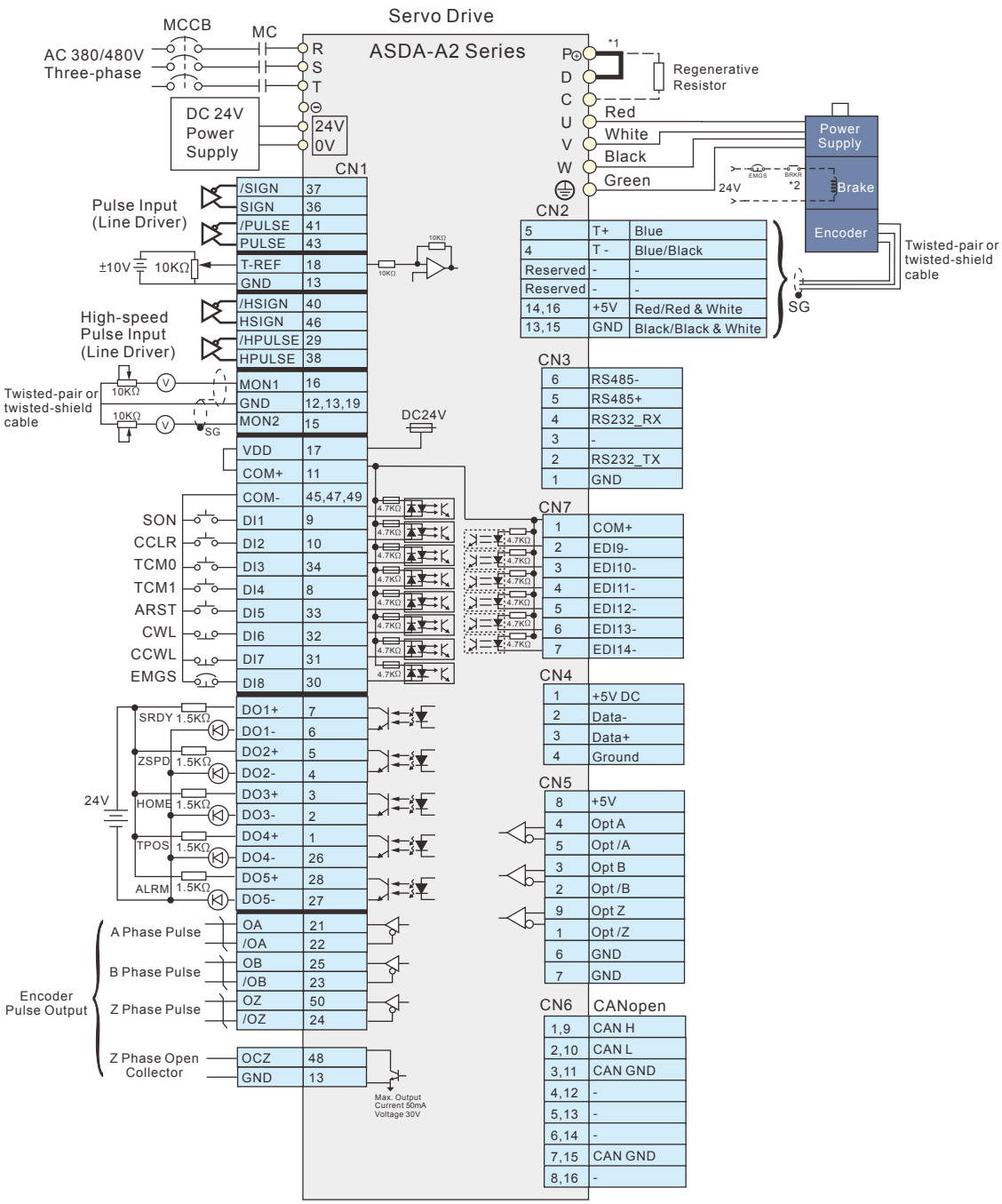












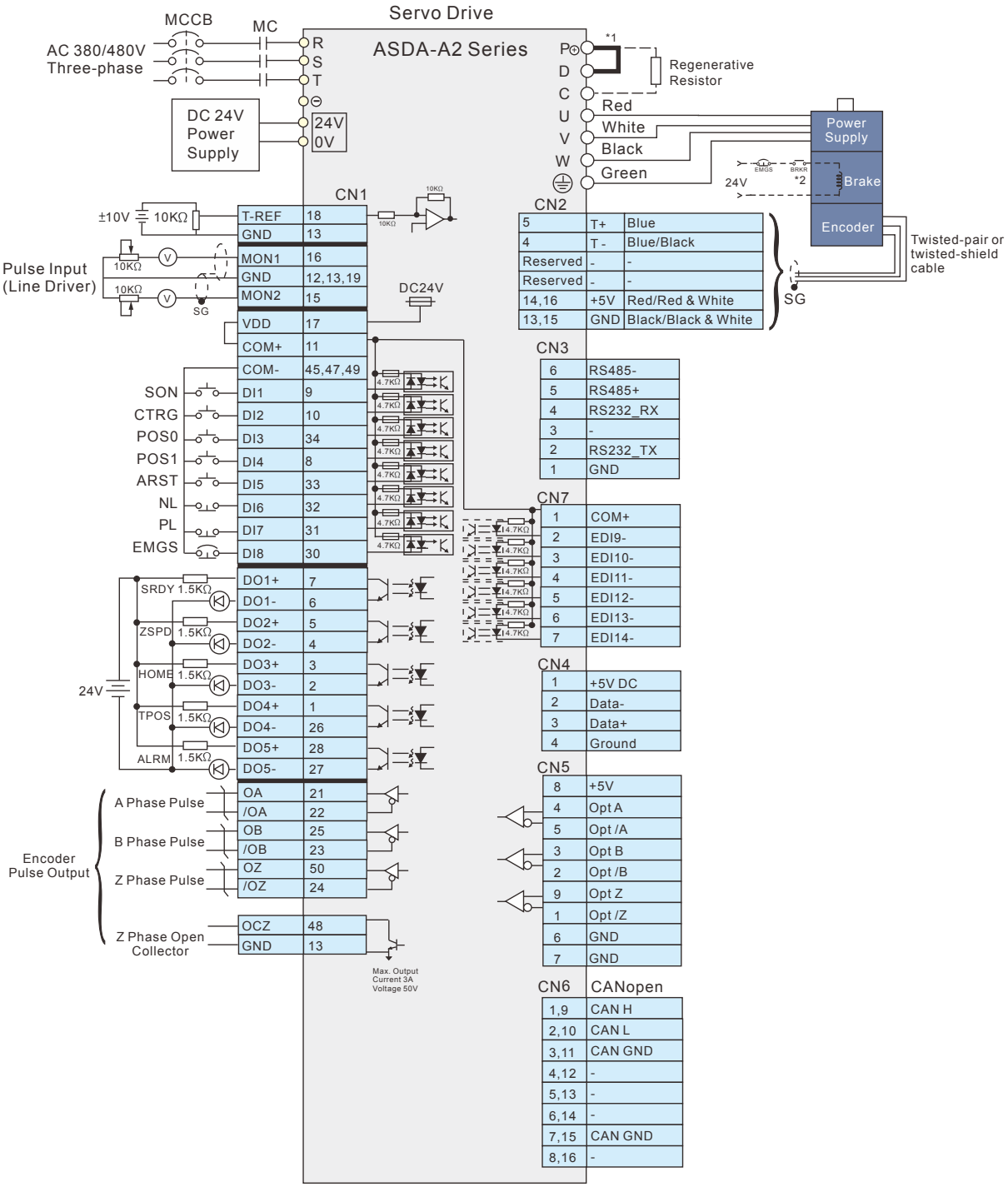
Please note:

*1 Servo drives under 1.5 kW provide a built-in regenerative resistor.

*2 The brake oil has no polarity.

400 V Series

Position (PR) Control Mode (for Internal Procedure Control)



Please note:

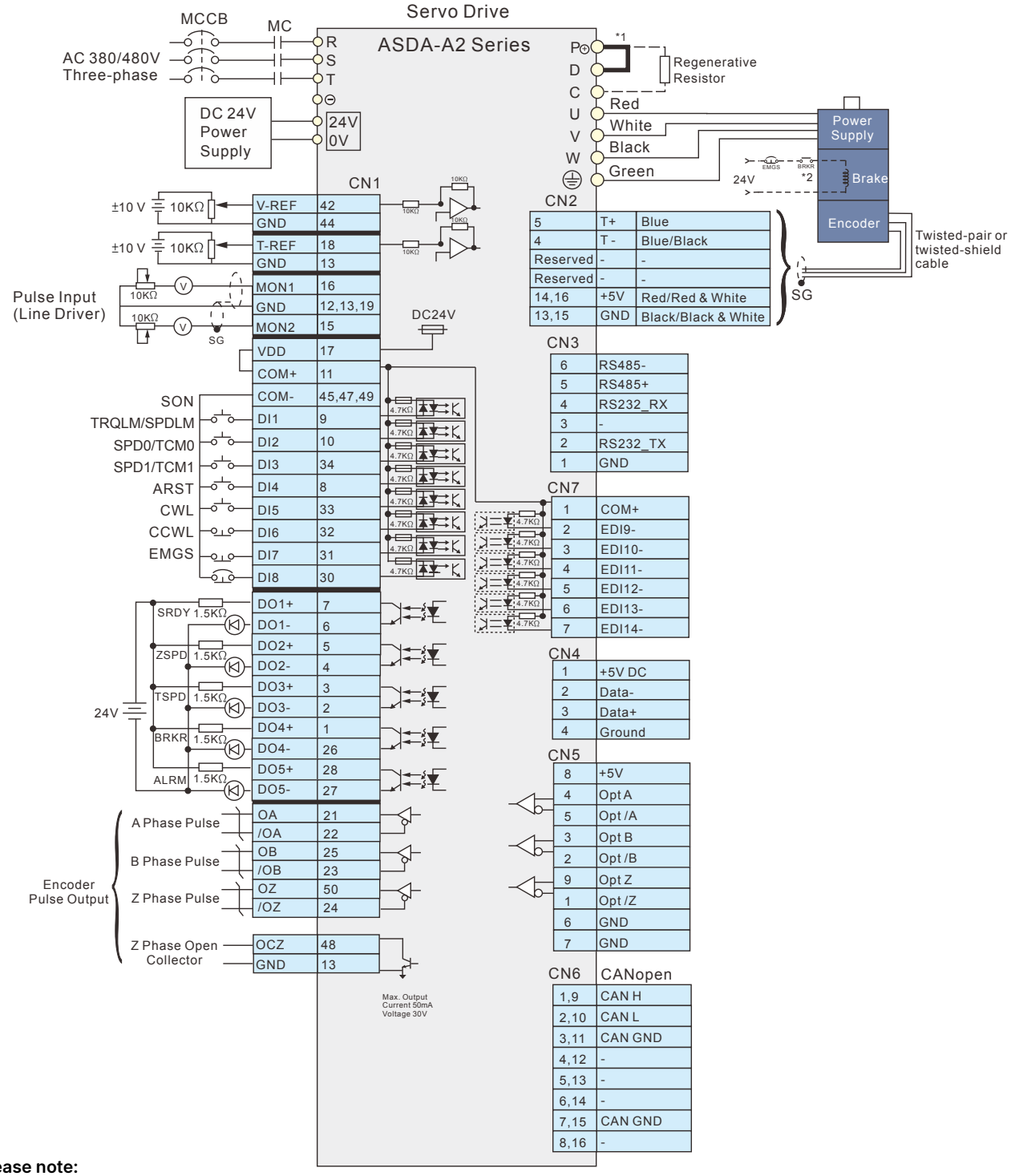
*1 Servo drives under 1.5 kW provide a built-in regenerative resistor.

*2 The brake oil has no polarity.

Wiring

400 V Series

Speed (S), Torque (T) Control Mode (for Analog Voltage Input and Internal Parameter Setting)



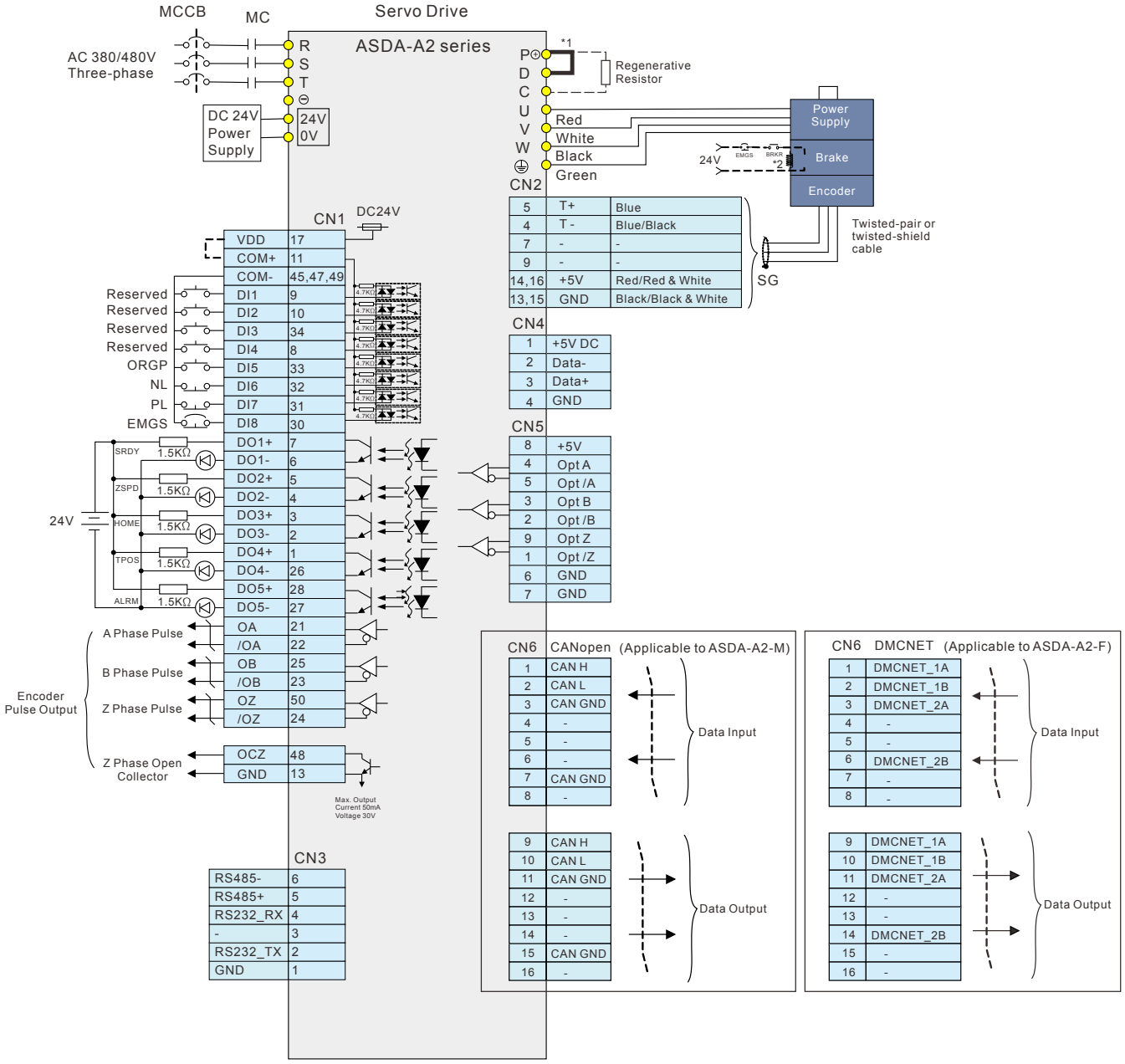
Please note:

*1 Servo drives under 1.5 kW provide a built-in regenerative resistor.

*2 The brake oil has no polarity.

400 V Series

CANopen Communication Mode (for ASDA-A2-M Series)

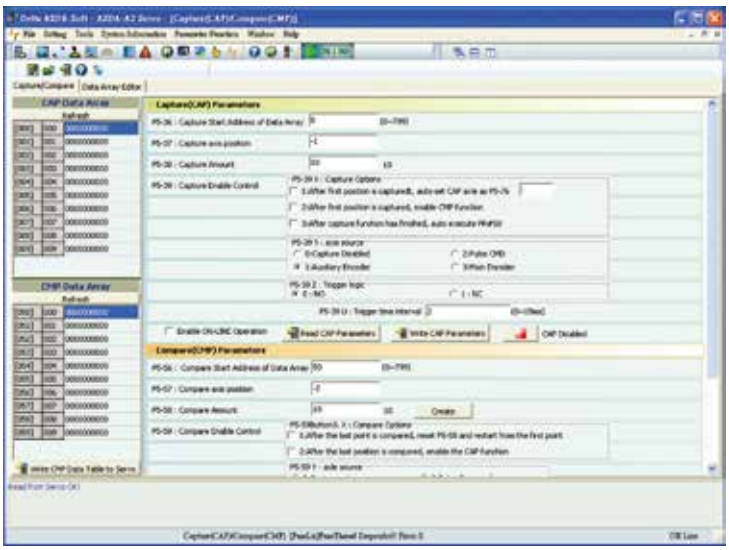


Please note:

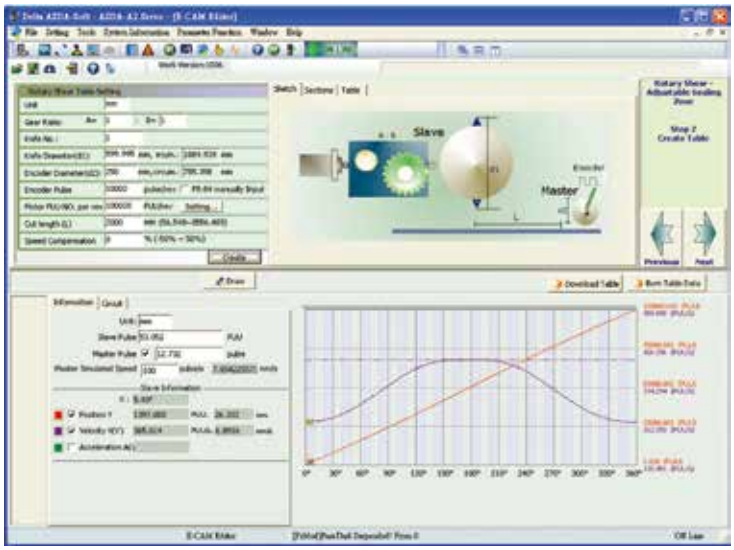
*1 Servo drives under 1.5 kW provide a built-in regenerative resistor.

*2 The brake oil has no polarity.

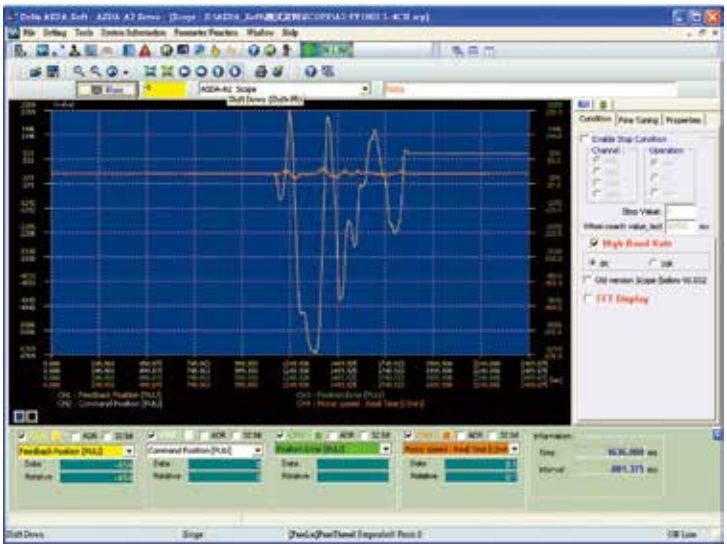
ASDA-Soft Configuration Software



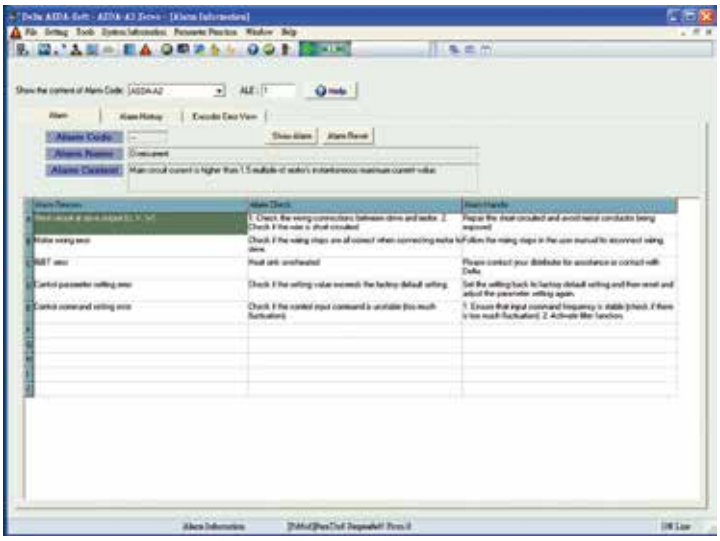
- Strong CAPTURE and COMPARE functions for position latch and detection help you complete system configuration quickly.



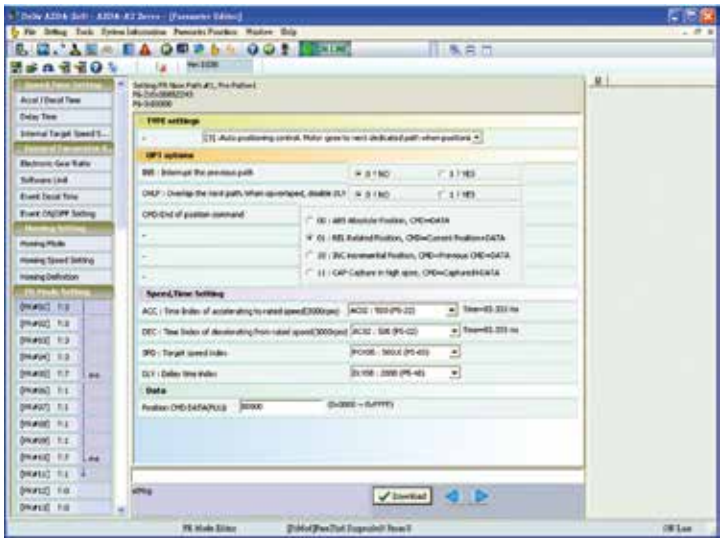
- User-friendly E-CAM editing interface is provided for designing E-CAM outlines and curves freely. In addition, quick settings for flying shear and rotary cut applications are offered.



- Versatile on-line monitoring function, similar to a digital oscilloscope is able to quickly record the status and data of each axis. Real-time monitoring is easy.



- Convenient alarm display function is capable of troubleshooting the system easily and recommending timely corrective actions.



- Easy-to-use editing interface is designed for new and enhanced PR control mode. Homing, point-to-point and other motion control functions for multi-axis positioning control are easily achieved.

Optional Accessories

Quick Connectors

- Used for 100 W to 300 W servo drives.
- One operating lever is provided for wire to terminal block insertion.

Power Cables

- 3m and 5m standard cables are available.
- Customized service is offered to meet the needs of customers.
- Two types are selectable: with brake and without brake.

Encoder Cables

- 3m and 5m standard cables are available.
- Customized service is offered to meet the needs of customers.

RS-232 Communication Cables

- Connects ASDA-A2 to PLC, HMI and other controllers via RS-232 communication.
- Standard cable length is 3m

CN1 I/O connector

- Delta Part Number: ASD-IF-SC5020

Terminal Block Modules

- Easy installation and wiring.
- 0.5m connection cable is provided. Easy to reduce the space required.
- Easy to expand system's I/O configuration.

Regenerative Resistors

- For selecting a regenerative resistor, please refer to the table of regenerative resistor specifications on page 70.

USB Communication Cables (for PC)

- USB Communication Cables (for PC)
- USB1.1 is equipped as standard.

CANopen Accessories

- Delta's TAP-CN03 distribution box connects ASDA-A2 to Delta's PLC CAN Master
- CANopen communication cable is provided

RS-485 Connectors

- Used to connect multiple ASDA-A2 series products by RS-485 interface through Modbus serial communication.

Note: The figures are for illustration purposes only. Actual models may differ slightly in appearance to illustrations provided.

Servo Drive Specifications

220 V Series

ASDA-A2 Series			100 W	200 W	400 W	750 W	1 kW	1.5 kW	2 kW	3 kW	4.5 kW	5.5 kW	7.5 kW	11 kW	15kW
			01	02	04	07	10	15	20	30	45	55	75	1B	1F
Power	Phase / Voltage		Three-phase / Single-phase 220 V_{AC}						3-phase 220 V_{AC}						
	Permissible Voltage Range		1-phase / 3-phase 200 ~ 230 V_{AC}, -15% ~ 10%						3-phase 200 ~ 230 V_{AC}, -15% ~ 10%						
	Input Current (3PH) (Units: Arms)		0.8	1.11	1.86	3.66	4.68	6.33	8.76	9.83	17.5	19.4	26.3	48	63
	Input Current (1PH) (Units: Arms)		1	1.92	3.22	6.78	8.88	10.96	-	-	-	-	-	-	-
	Continuous Output Current (Units: Arms)		0.9	1.55	2.6	5.1	7.3	8.86	13.4	19.4	32.5	40	47.5	54.4	70
Cooling System			Natural Air Circulation			Fan Cooling									
Encoder Resolution / Feedback Resolution			Incremental encoder: 20-bit ；Absolute encoder: 17-bit												
Control of Main Circuit			SVPWM (Space Vector Pulse Width Modulation) Control												
Tuning Modes			Auto / Manual												
Regenerative Resistor			None	Built-in								External			
Position Control Mode	Max. Input Pulse Frequency (Only for Non-DMCNET mode)		Max. 500Kpps / 4Mpps (Line driver), Max. 200Kpps (Open collector)												
	Pulse Type (Only for Non-DMCNET mode)		Pulse + Direction, A phase + B phase, CCW pulse + CW pulse												
	Command Source		External pulse train (PT mode) (Only for Non-DMCNET mode) / Internal parameters (PR mode)												
	Smoothing Strategy		Low-pass and P-curve filter												
	Electronic Gear		Electronic gear N/M multiple N: 1 ~ 32767, M: 1 : 32767 (1/50 < N/M < 25,600)												
	Torque Limit Operation		Set by parameters												
	Feed Forward Compensation		Set by parameters												
Speed Control Mode	Analog Input Command (Only for Non-DMCNET mode)	Voltage Range	0 ~ ±10 V_{DC}												
		Input Resistance	10KΩ												
		Time Constant	354.6 μs												
	Speed Control Range *1		1 : 5,000									1 : 3,000		1 : 2,000	
	Command Source		External analog signal (Only for Non-DMCNET mode) / Internal parameters												
	Smoothing Strategy		Low-pass and S-curve filter												
	Torque Limit Operation		Set by parametersor via analog input (Only for Non-DMCNET mode)												
	Frequency Response Characteristic		Maximum 1kHz												
	Speed Accuracy*2 (At rated rotation speed)		0.01% or less at 0 to 100% load fluctuation												
			0.01% or less at ±10% power fluctuation												
			0.01% or less at 0°C to 50°C ambient temperature fluctuation												
Torque Control Mode	Analog Input Command (Only for Non-DMCNET mode)	Voltage Range	0 ~ ±10 V_{DC}												
		Input Resistance	10KΩ												
		Time Constant	2.2 μs												
	Command Source		External analog signal (Only for Non-DMCNET mode) / Internal parameters												
	Smoothing Strategy		Low-pass filter												
	Speed Limit Operation		Set by parametersor via analog input (Only for Non-DMCNET mode)												
Analog Monitor Output			Monitor signal can set by parameters (Output voltage range: ±8V)												
Digital Inputs / Outputs	Inputs		Servo on, Reset, Gain switching, Pulse clear, Zero speed CLAMP, Command input reverse control, Command triggered, Speed / Torque limit enabled, Position command selection, Motor stop, Speed position selection, Position / Speed mode switching, Speed / Torque mode switching, Torque / Position mode switching, PT / PR command switching, Emergency stop, Forward / Reverse inhibit limit, Reference "Home" sensor, Forward / Reverse operation torque limit, Move to "Home", Electronic Cam (E-CAM), Forward / Reverse JOG input, Event trigger PR command, Electronic gear ratio (Numerator) selection and Pulse inhibit input * Please note that the above digital signals and inputs are available only for Non-DMCNET mode. In DMCNET mode, it is recommended to write digital inputs into the servo drives through DMCNET communication, and the digital inputs should be used for Emergency Stop, Forward / Reverse Inhibit limit and Reference "Home" sensor only.												
	Outputs		Encoder signal output (A, B, Z Line Driver and Z Open Collector)												
			Servo ready, Servo on, At Zero speed, At Speed reached, At Positioning completed, At Torques limit, Servo alarm (Servo fault) activated, Electromagnetic brake control, Homing completed, Output overload warning, Servo warning activated, Position command overflow, Forward / Reverse software limit, Internal position command completed, Capture operation completed output., Motion control completed output., Master position of E-CAM (Electronic CAM)												
Protective Functions			Overcurrent, Overvoltage, Undervoltage, Motor overheated, Regeneration error, Overload, Overspeed, Abnormal pulse control command, Excessive deviation, Encoder error, Adjustment error, Emergency stop activated, Reverse/ Forward limit switch error, Position excessive deviation of full-close control loop, Serial communication error, Input power phase loss, Serial communication time out, short circuit protection of U, V, W, and CN1, CN2, CN3 terminals												
Communication Interface			RS-232 / RS-485 / CANopen / USB / DMCNET												
Environment	Installation Site		Indoor location (free from direct sunlight), no corrosive liquid and gas (far away from oil mist, flammable gas, dust)												
	Altitude		Altitude 2000m or lower above sea level												
	Atmospheric Pressure		86kPa ~ 106kPa												
	Operating Temperature		0°C ~ 55°C (If operating temperature is above 45°C, forced cooling will be required)												
	Storage Temperature		-20°C ~ 65°C												
	Humidity		0 ~ 90% RH (non-condensing)												
	Vibration		9.80665 m/s^2 (1G) less than 20Hz, 5.88 m/s^2 (0.6G) 20 to 50Hz												
	IP Rating		IP20												
	Power System		TN System*3												
	Approvals		IEC/EN 61800-5-1, UL 508C, C-tick												

Footnote:

*1. Rated rotation speed: When full load, speed ratio is defined as the minimum speed (the motor will not pause).
*2. When command is rated rotation speed, the speed fluctuation rate is defined as: (Empty load rotation speed Full load rotation speed) / Rated rotation speed
*3. TN system: A power distribution system having one point directly earthed, the exposed conductive parts of the installation being connected to that points by protective earth conductor.

400 V Series

ASDA-A2 Series			750 W	1kW	1.5kW	2kW	3kW	4.5kW	5.5kW	7.5kW	11 kW	15 kW
			07	10	15	20	30	45	55	75	1B	1F
Control Power	Input Voltage		24 V_{DC}, ±10%									
	Input Current		0.89A			1.18A				1.66A	2A	
	Input Power		21.4 W			28.2 W				39.85 W	48 W	
Main Power	Permissible Voltage Range		3-phase 380 ~ 480 V_{AC}, ±10%									
	Input Current (Units: Arms)		2.22	3.02	4.24	5.65	8.01	11.9	14.1	17.27	28.95	39.47
	Continuous Output Current (Units: Arms)		3.07	3.52	5.02	6.66	11.9	20	22.37	30	28.1	38.65
Cooling System			Fan Cooling									
Encoder Resolution / Feedback Resolution			Incremental encoder: 20-bit ；Absolute encoder: 17-bit									
Control of Main Circuit			SVPWM(Space Vector Pulse Width Modulation) Control									
Tuning Modes			Auto / Manual									
Regenerative Resistor			Built-in			External						
Position Control Mode	Max. Input Pulse Frequency (Only for Non-DMCNET mode)		Max. 500Kpps / 4Mpps (Line driver), Max. 200Kpps (Open collector)									
	Pulse Type (Only for Non-DMCNET mode)		Pulse + Direction, A phase + B phase, CCW pulse + CW pulse									
	Command Source		External pulse train (Only for Non-DMCNET mode) / Internal parameters									
	Smoothing Strategy		Low-pass and P-curve filter									
	Electronic Gear		Electronic gear N/M multiple N: 1 ~ 32767, M: 1 : 32767 (1/50 < N/M < 25,600)									
	Torque Limit Operation		Set by parameters									
	Feed Forward Compensation		Set by parameters									
Speed Control Mode	Analog Input Command (Only for Non-DMCNET mode)	Voltage Range	0 ~ ±10 V_{DC}									
		Input Resistance	10KΩ									
		Time Constant	2.2 μs									
	Speed Control Range *1		1 : 5,000					1 : 3,000				
	Command Source		External analog signal (Only for Non-DMCNET mode) / Internal parameters									
	Smoothing Strategy		Low-pass and S-curve filter									
	Torque Limit Operation		Set by parametersor via analog input (Only for Non-DMCNET mode)									
	Frequency Response Characteristic		Maximum 1kHz									
	Speed Accuracy *2		0.01% or less at 0 to 100% load fluctuation									
			0.01% or less at ±10% power fluctuation									
			0.01% or less at 0ºC to 50ºC ambient temperature fluctuation									
Torque Control Mode	Analog Input Command (Only for Non-DMCNET mode)	Voltage Range	0 ~ ±10 V_{DC}									
		Input Resistance	10KΩ									
		Time Constant	2.2 μs									
	Command Source		External analog signal (Only for Non-DMCNET mode) / Internal parameters									
	Smoothing Strategy		Low-pass filter									
	Speed Limit Operation		Set by parametersor via analog input (Only for Non-DMCNET mode)									
Analog Monitor Output			Monitor signal can set by parameters (Output voltage range: ±8V)									
Digital Inputs / Outputs	Inputs		Servo on, Reset, Gain switching, Pulse clear, Zero speed CLAMP, Command input reverse control, Command triggered, Speed / Torque limit enabled, Position command selection, Motor stop, Speed position selection, Position / Speed mode switching, Speed / Torque mode switching, Torque / Position mode switching, PT / PR command switching, Emergency stop, Forward / Reverse inhibit limit, Reference "Home" sensor, Forward / Reverse operation torque limit, Move to "Home", Electronic cam, Forward / Reverse JOG input, Event trigger PR command, Electronic gear ratio (Numerator) selection and Pulse inhibit input * Please note that the above digital signals and inputs are available only for Non-DMCNET mode. In DMCNET mode, it is recommended to write digital inputs into the servo drives through DMCNET communication, and the digital inputs should be used for Emergency Stop, Forward / Reverse Inhibit limit and Reference "Home" sensor only.									
	Outputs		Encoder signal output (A, B, Z Line Driver and Z Open Collector)									
			Servo ready, Servo on, At Zero speed, At Speed reached, At Positioning completed, At Torques limit, Servo alarm (Servo fault) activated, Electromagnetic brake control, Homing completed, Output overload warning, Servo warning activated, Position command overflow, Forward / Reverse software limit, Internal position command completed, Capture operation completed output., Motion control completed output., Master position of E-CAM (Electronic CAM)									
Protective Functions			Overcurrent, Overvoltage, Undervoltage, Motor overheated, Regeneration error, Overload, Overspeed, Abnormal pulse control command, Excessive deviation, Encoder error, Adjustment error, Emergency stop activated, Reverse/ Forward limit switch error, Position excessive deviation of full-close control loop, Serial communication error, Input power phase loss, Serial communication time out, short circuit protection of U, V, W, and CN1, CN2, CN3 terminals									
Communication Interface			RS-232 / RS-485 / CANopen / USB / DMCNET									
Environment	Installation Site		Indoor location (free from direct sunlight), no corrosive liquid and gas (far away from oil mist, flammable gas, dust)									
	Altitude		Altitude 2000m or lower above sea level									
	Atmospheric Pressure		86kPa ~ 106kPa									
	Operating Temperature		0ºC ~ 55ºC (If operating temperature is above 45ºC, forced cooling will be required)									
	Storage Temperature		-20ºC ~ 65ºC									
	Humidity		0 ~ 90% RH (non-condensing)									
	Vibration		9.80665 m/s^2 (1G) less than 20Hz, 5.88 m/s^2 (0.6G) 20 to 50Hz									
	IP Rating		IP20									
	Power System		TN System*3									
	Approvals		IEC/EN 61800-5-1, UL 508C, C-tick									

Footnote:

*1. Rated rotation speed: When full load, speed ratio is defined as the minimum speed (the motor will not pause).
*2. When command is rated rotation speed, the speed fluctuation rate is defined as: (Empty load rotation speed Full load rotation speed) / Rated rotation speed
*3. TN system: A power distribution system having one point directly earthed, the exposed conductive parts of the installation being connected to that points by protective earth conductor.

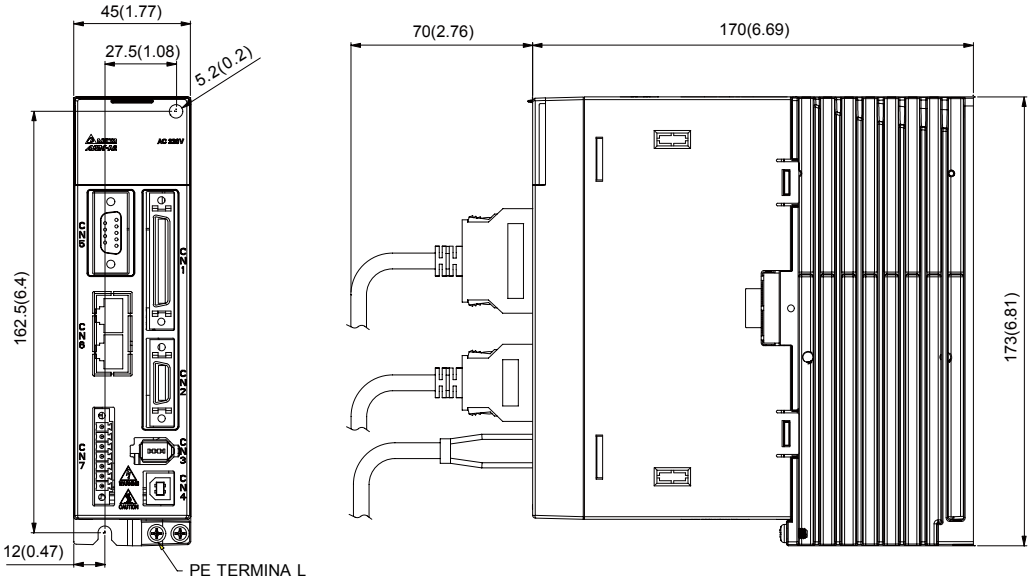
Servo Drive Dimensions

Units: mm (inches)

220 V Series

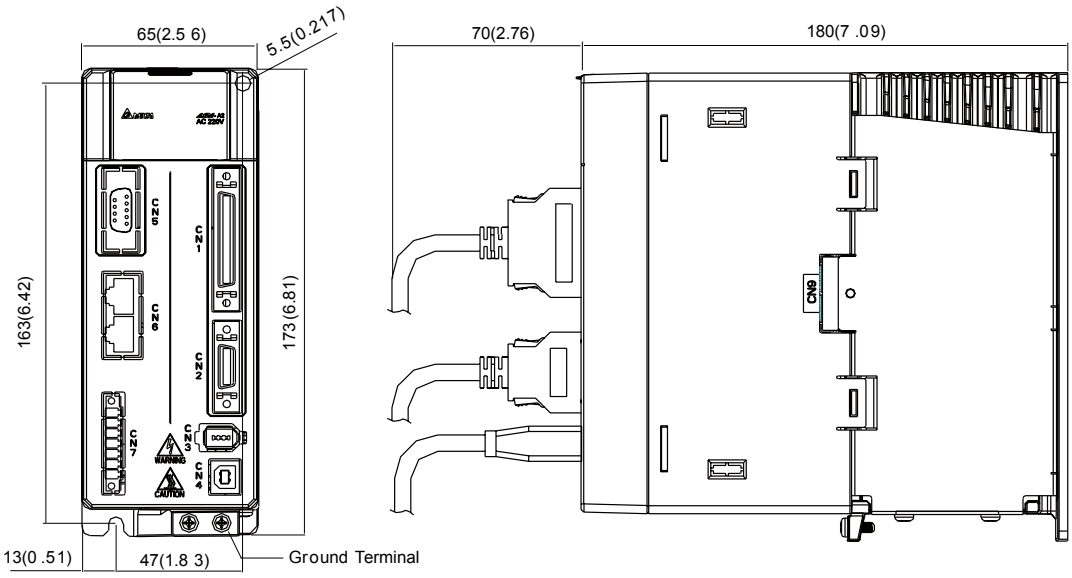
100W / 200W / 400W

Weight
1.5 (3.3)



750W / 1.0kW / 1.5kW

Weight
2.0 (4.4)

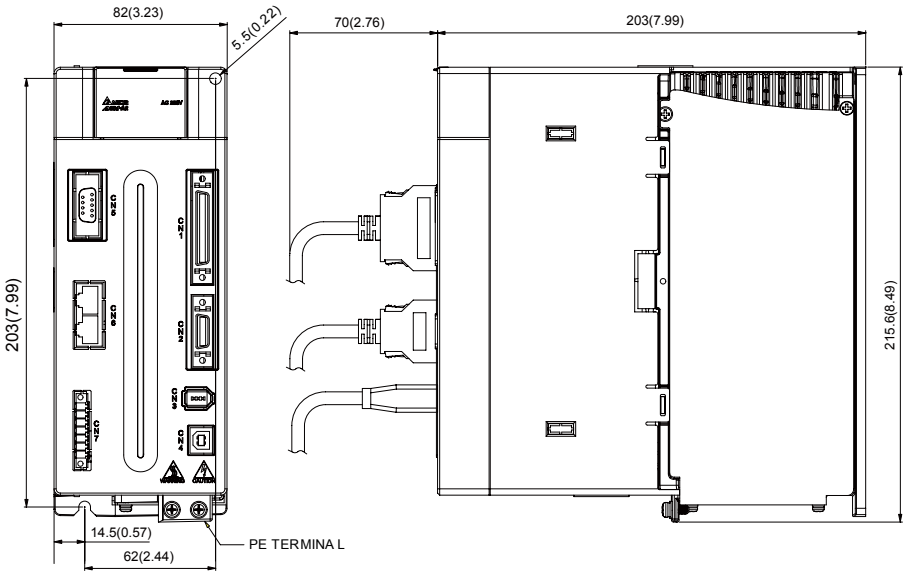


NOTE

1) Dimensions are in millimeters (inches); Weights are in kilograms (kg) and (pounds (lbs)).
2) Dimensions and weights of the servo drive may be revised without prior notice.

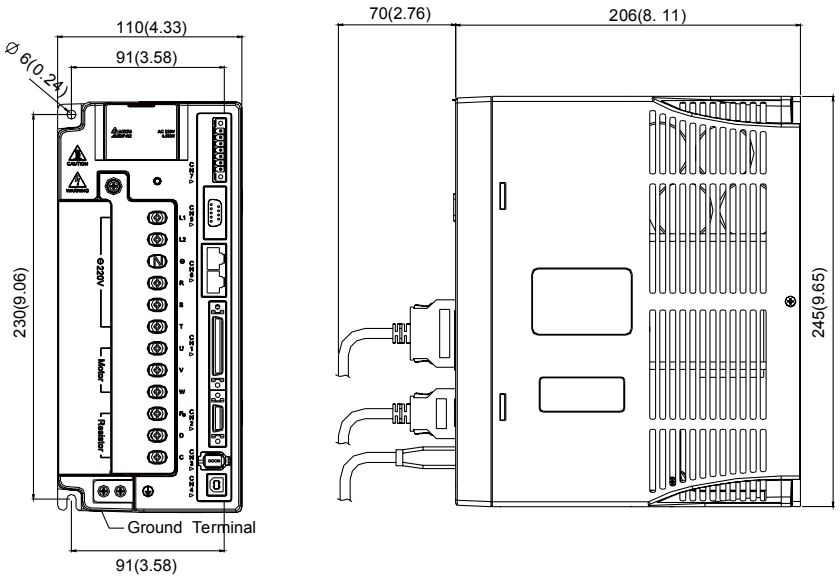
2.0kW / 3.0kW

Weight
2.89 (6.36)



4.5kW

Weight
4.4 (10.0)



NOTE

1) Dimensions are in millimeters (inches); Weights are in kilograms (kg) and (pounds (lbs)).
2) Dimensions and weights of the servo drive may be revised without prior notice.

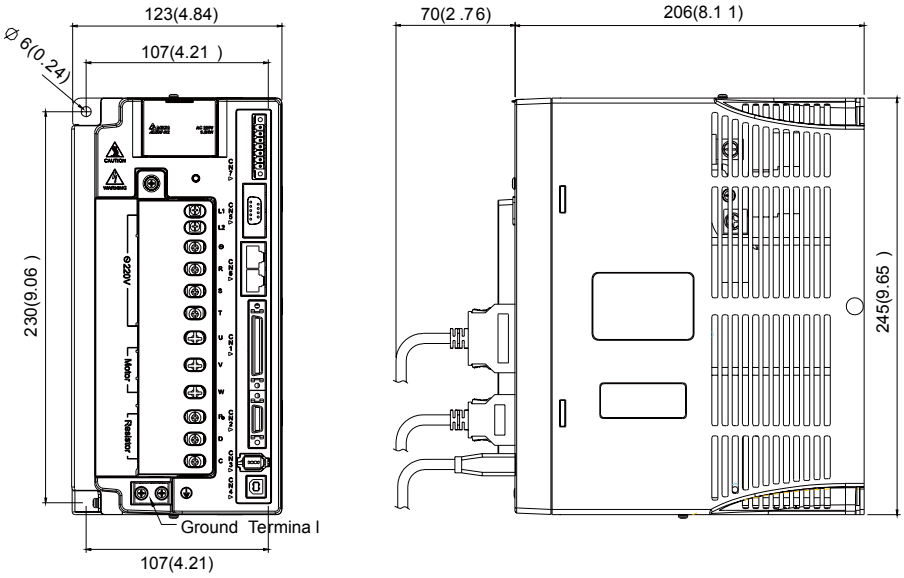
Servo Drive Dimensions

Units: mm (inches)

220 V Series

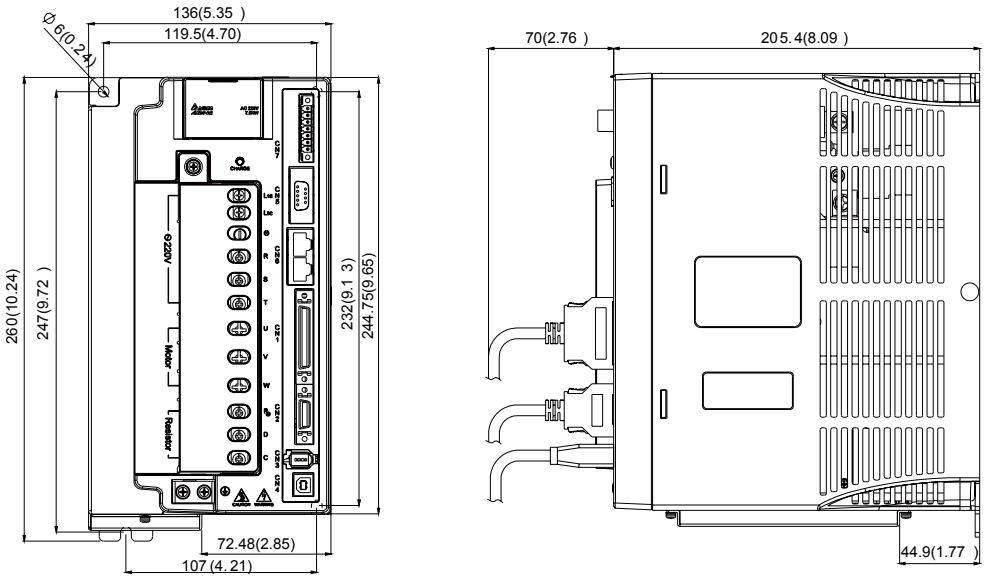
5.5kW

Weight
5.5 (12.1)



7.5kW

Weight
5.9 (13)

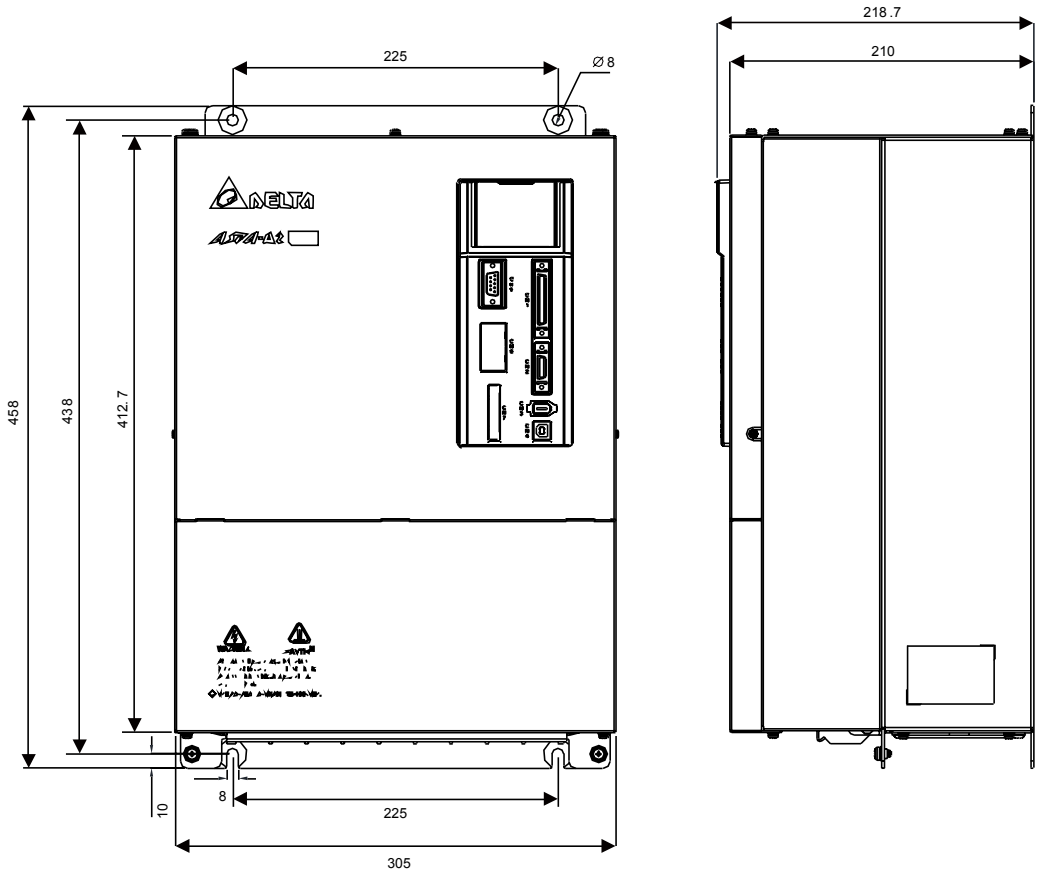


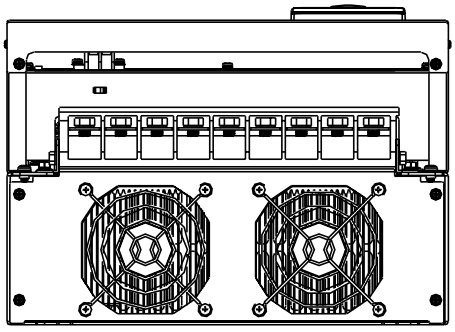
NOTE

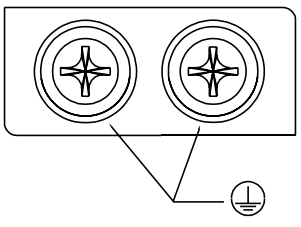
1) Dimensions are in millimeters (inches); Weights are in kilograms (kg) and (pounds (lbs)).
2) Dimensions and weights of the servo drive may be revised without prior notice.

11kW / 15kW

Weight
20 (44)







Screw: M4x0.7
Screw Torque: 14 (kgf-cm)

NOTE

1) Dimensions are in millimeters (inches); Weights are in kilograms (kg) and (pounds (lbs)).
2) Dimensions and weights of the servo drive may be revised without prior notice.

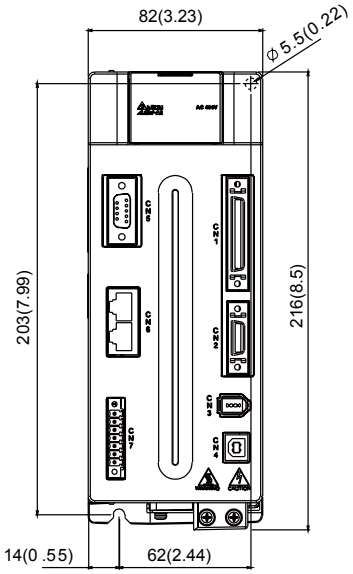
Servo Drive Dimensions

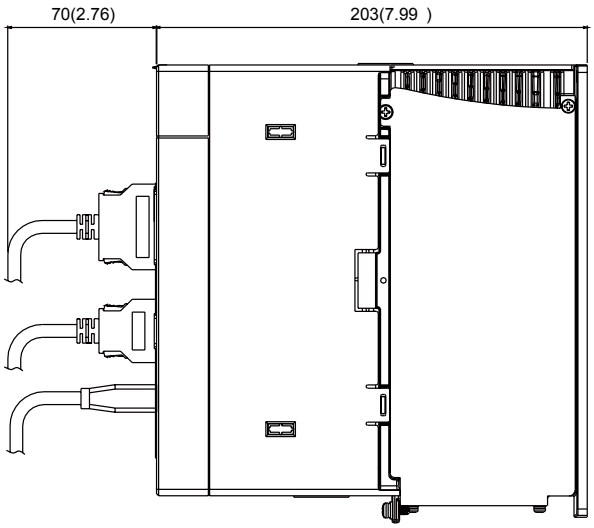
Units: mm (inches)

400 V Series

750W / 1.0kW / 1.5kW

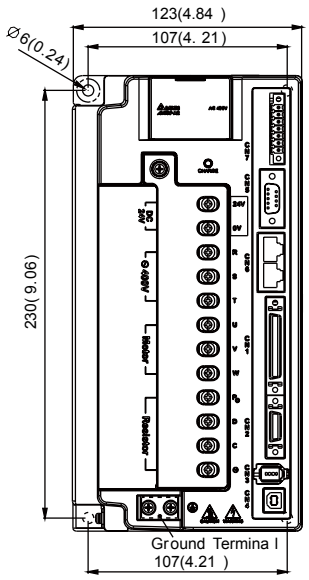
Weight
2.89 (6.36)

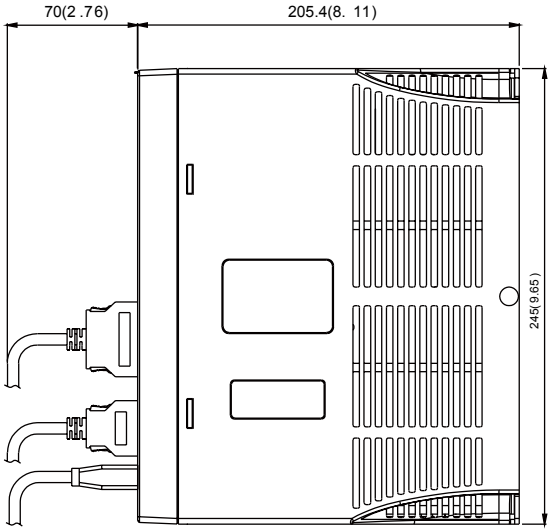




2.0kW / 3.0kW / 4.5kW / 5.5kW

Weight
5.5 (12.1)



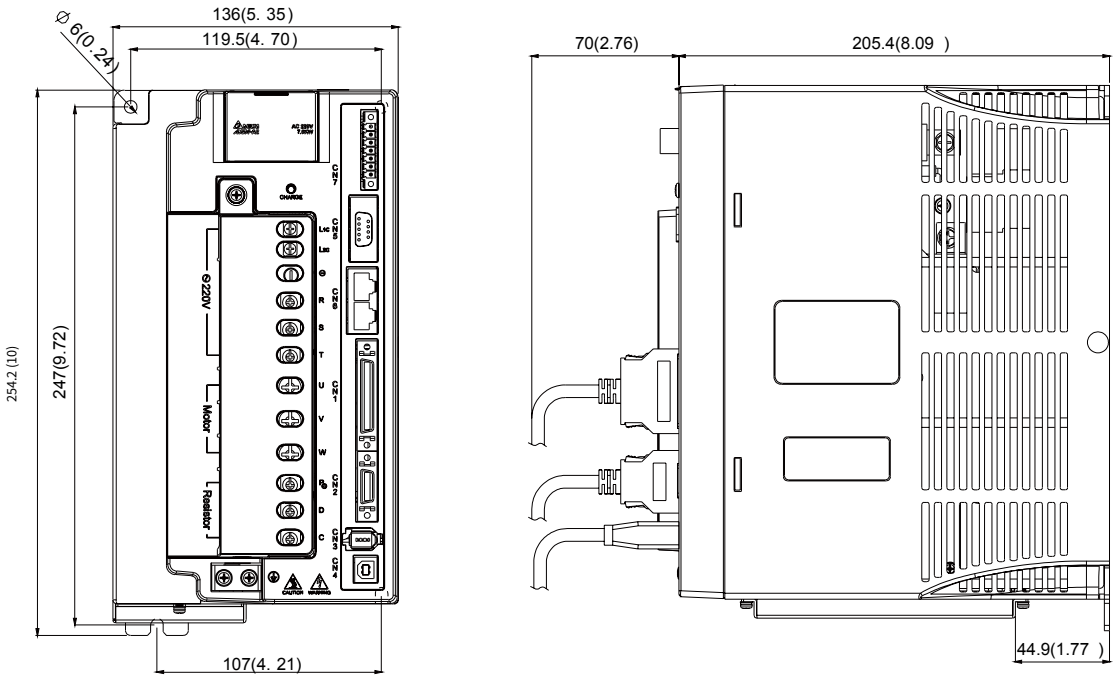


NOTE

1) Dimensions are in millimeters (inches); Weights are in kilograms (kg) and (pounds (lbs)).
2) Dimensions and weights of the servo drive may be revised without prior notice.

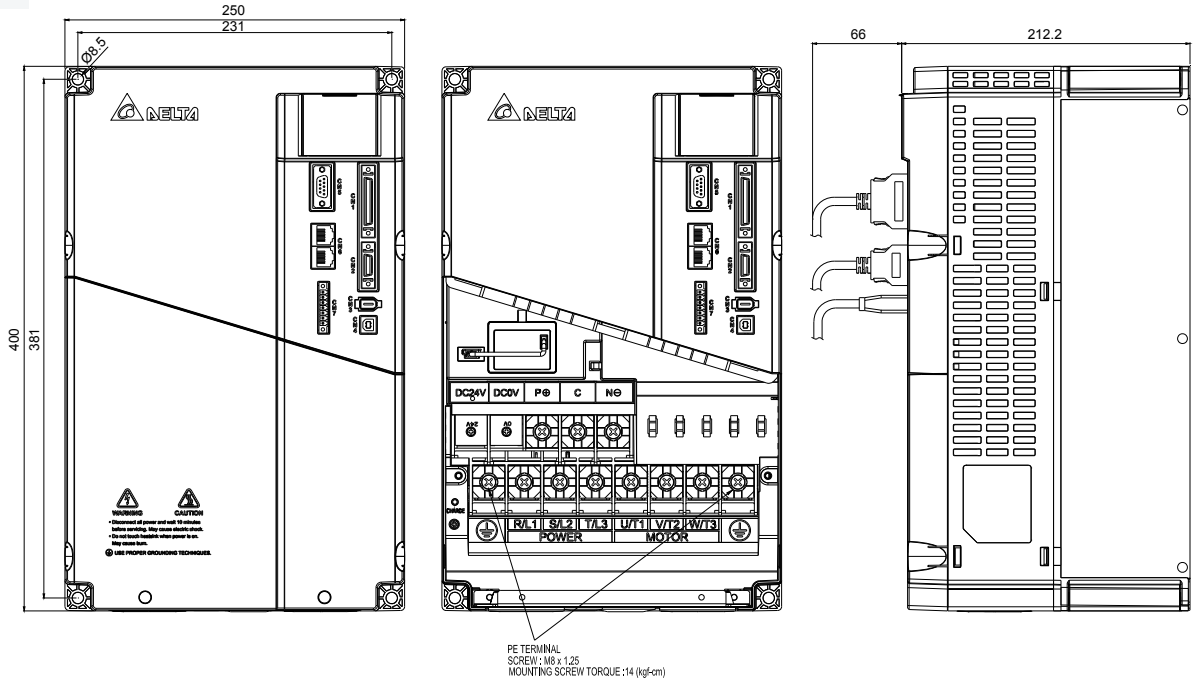
7.5kW

Weight
5.5 (12.1)



11kW / 15kW

Weight
10.3(22.66)



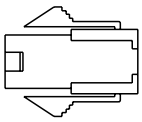
NOTE

1) Dimensions are in millimeters (inches); Weights are in kilograms (kg) and (pounds (lbs)).
2) Dimensions and weights of the servo drive may be revised without prior notice.

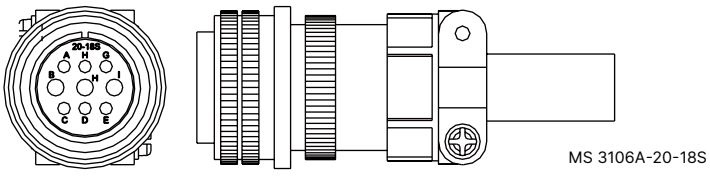
Optional Cables and Connectors

● Power Connectors

ASDBCAPW0000 (for 200 V drives)

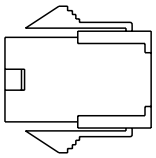


ASD-CAPW1000

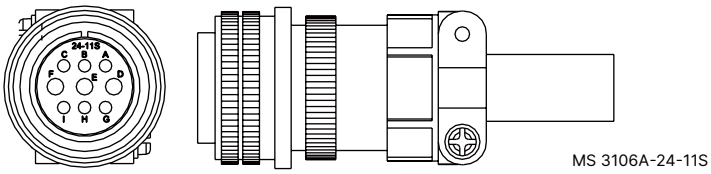


MS 3106A-20-18S

ASDBCAPW0100 (for 200 V drives, with brake cable)

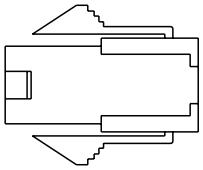


ASD-CAPW2000

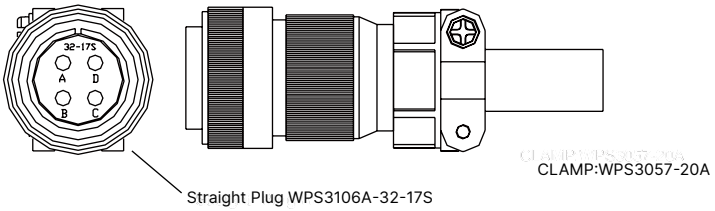


MS 3106A-24-11S

ASD-CAPW5400 (for 400 V drives)



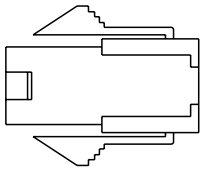
ASD-CAPW4000



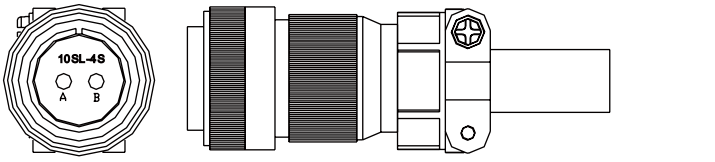
CLAMP:WPS3057-20A

Straight Plug WPS3106A-32-17S

ASD-CAPW5100 (for 400 V drives, with brake cable)



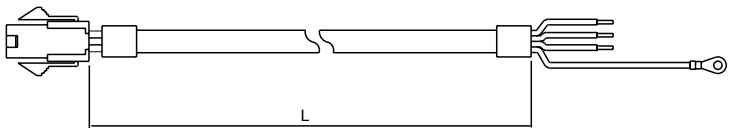
ASD-CNBR1000



CLAMP: WPS3106A 10SL-4S-R

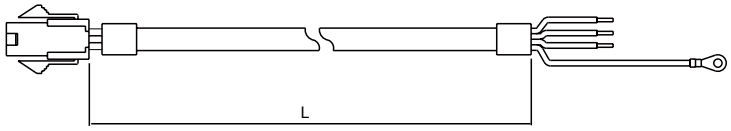
● Power Cables

ASD-ABPW0003, ASD-ABPW0005 (for 200 V drives)



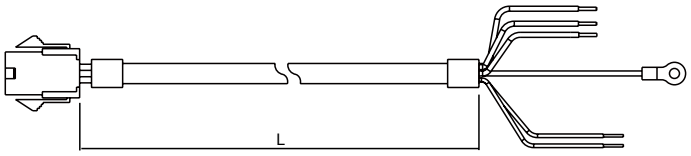
Item	Part No.	L	
		mm	inch
1	ASD-ABPW0003	3,000 ± 100	118 ± 4
2	ASD-ABPW0005	5,000 ± 100	197 ± 4

ASD-CAPW5403, ASD-CAPW5405 (for 400 V drives)



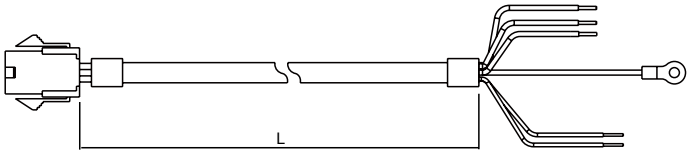
Item	Part No.	L	
		mm	inch
1	ASD-CAPW5403	3,000 ± 100	118 ± 4
2	ASD-CAPW5405	5,000 ± 100	197 ± 4

AASD-ABPW0103, ASD-ABPW0105 (for 200 V drives, with brake cable)



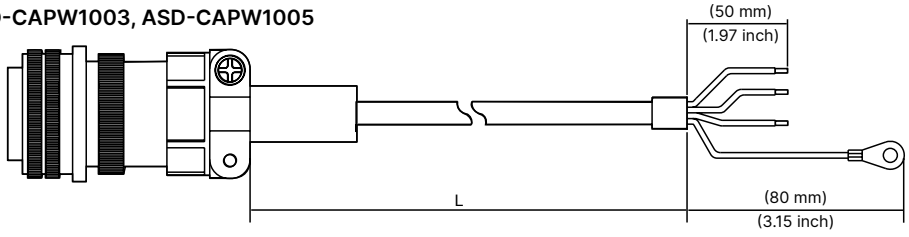
Item	Part No.	L	
		mm	inch
1	ASD-ABPW0103	3,000 ± 100	118 ± 4
2	ASD-ABPW0105	5,000 ± 100	197 ± 4

ASD-CAPW5103, ASD-CAPW5105 (for 400 V drives, with brake cable)



Item	Part No.	L	
		mm	inch
1	ASD-CAPW5103	3,000 ± 100	118 ± 4
2	ASD-CAPW5105	5,000 ± 100	197 ± 4

ASD-CAPW1003, ASD-CAPW1005

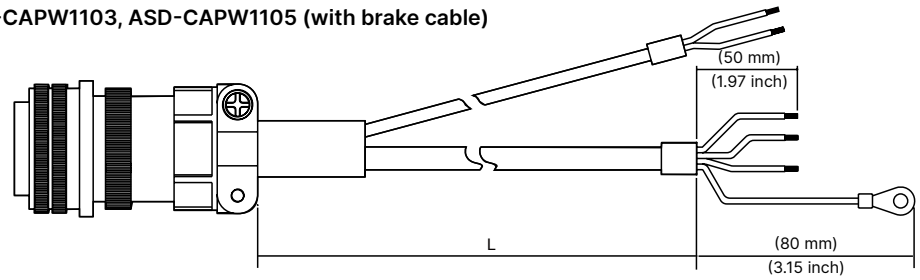


Item	Part No.	Straight	L	
			mm	inch
1	ASD-CAPW1003	3106A-20-18S	3,000 ± 100	118 ± 4
2	ASD-CAPW1005	3106A-20-18S	5,000 ± 100	197 ± 4

Optional Cables and Connectors

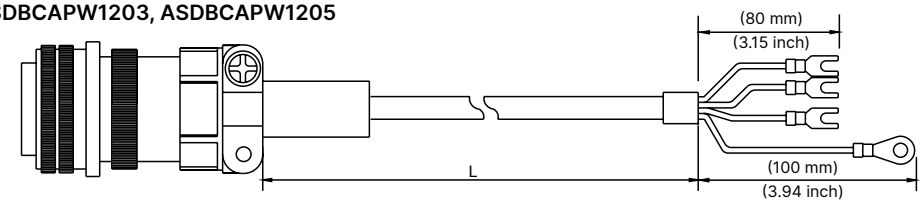
● Power Cables

ASD-CAPW1103, ASD-CAPW1105 (with brake cable)



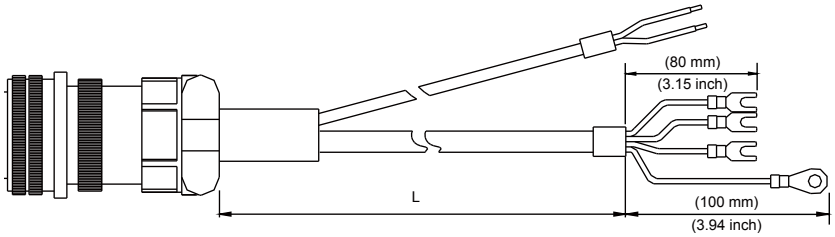
Item	Part No.	Straight	L	
			mm	inch
1	ASD-CAPW1103	3106A-20-18S	3,000 ± 100	118 ± 4
2	ASD-CAPW1105	3106A-20-18S	5,000 ± 100	197 ± 4

ASDBCAPW1203, ASDBCAPW1205



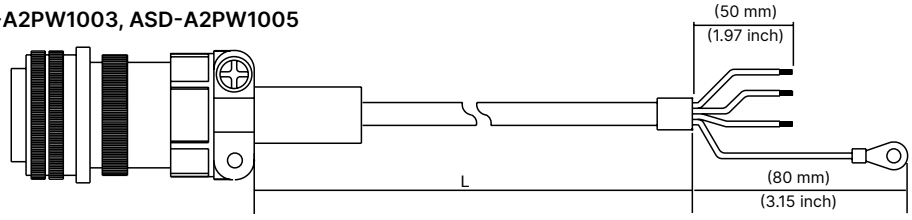
Item	Part No.	Straight	L	
			mm	inch
1	ASD-BCAPW1203	3106A-20-18S	3,000 ± 100	118 ± 4
2	ASDB-CAPW1205	3106A-20-18S	5,000 ± 100	197 ± 4

ASD-CAPW1303, ASD-CAPW1305 (with brake cable)



Item	Part No.	Straight	L	
			mm	inch
1	ASD-CAPW1303	3106A-20-18S	3,000 ± 100	118 ± 4
2	ASD-CAPW1305	3106A-20-18S	5,000 ± 100	197 ± 4

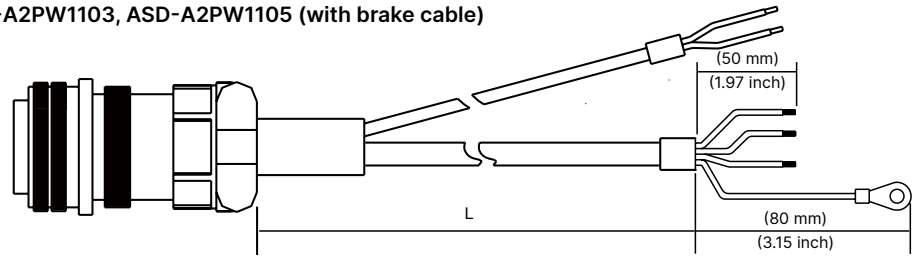
ASD-A2PW1003, ASD-A2PW1005



Item	Part No.	Straight	L	
			mm	inch
1	ASD-A2PW1003	3106A-20-18S	3,000 ± 100	118 ± 4
2	ASD-A2PW1005	3106A-20-18S	5,000 ± 100	197 ± 4

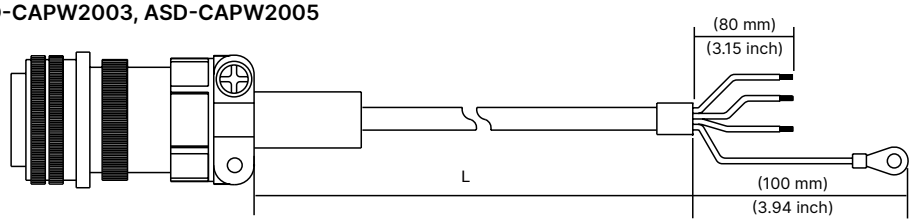
● Power Cables

ASD-A2PW1103, ASD-A2PW1105 (with brake cable)



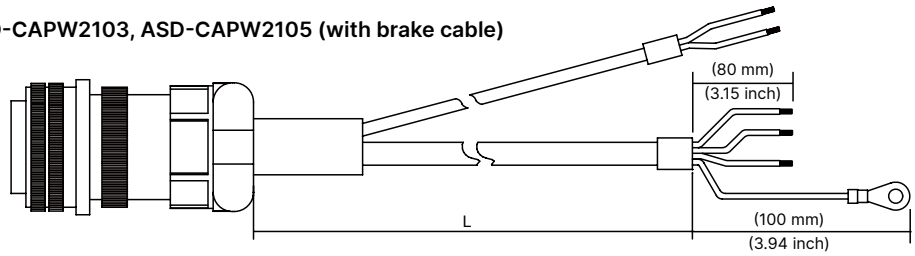
Item	Part No.	Straight	L	
			mm	inch
1	ASD-A2PW1103	3106A-20-18S	3,000 ± 100	118 ± 4
2	ASD-A2PW1105	3106A-20-18S	5,000 ± 100	197 ± 4

ASD-CAPW2003, ASD-CAPW2005



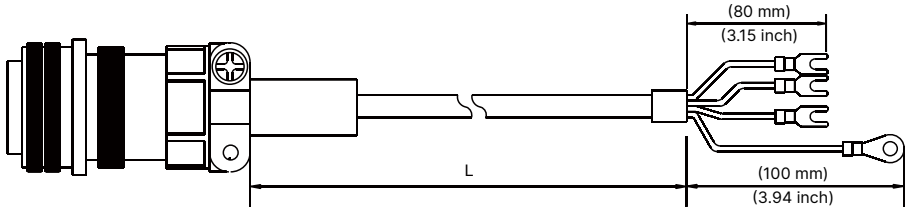
Item	Part No.	Straight	L	
			mm	inch
1	ASD-CAPW2003	3106A-24-11S	3,000 ± 100	118 ± 4
2	ASD-CAPW2005	3106A-24-11S	5,000 ± 100	197 ± 4

ASD-CAPW2103, ASD-CAPW2105 (with brake cable)



Item	Part No.	Straight	L	
			mm	inch
1	ASD-CAPW2103	3106A-24-11S	3,000 ± 100	118 ± 4
2	ASD-CAPW2105	3106A-24-11S	5,000 ± 100	197 ± 4

ASD-CAPW2203, ASD-CAPW2205

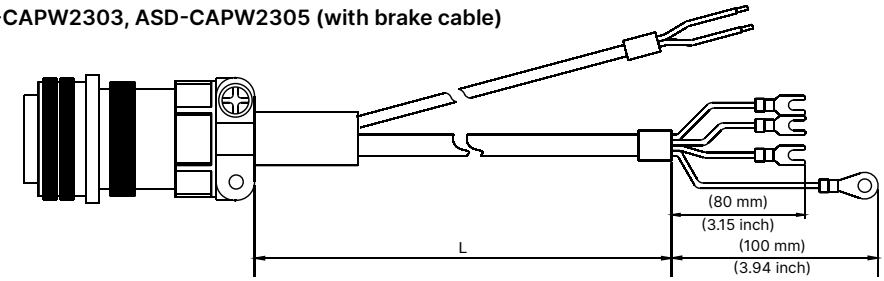


Item	Part No.	Straight	L	
			mm	inch
1	ASD-CAPW2203	3106A-24-11S	3,000 ± 100	118 ± 4
2	ASD-CAPW2205	3106A-24-11S	5,000 ± 100	197 ± 4

Optional Cables and Connectors

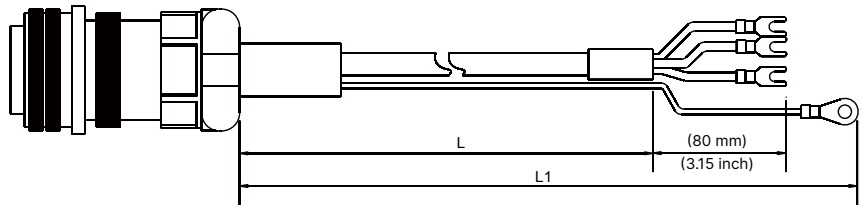
● Power Cables

ASD-CAPW2303, ASD-CAPW2305 (with brake cable)



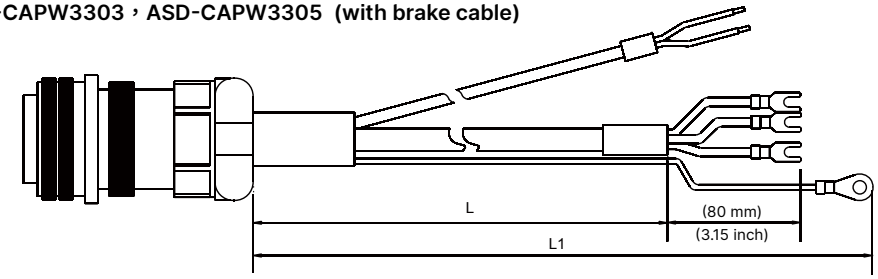
Item	Part No.	Straight	L	
			mm	inch
1	ASD-CAPW2303	3106A-24-11S	3,000 ± 100	118 ± 4
2	ASD-CAPW2305	3106A-24-11S	5,000 ± 100	197 ± 4

ASD-CAPW3203 › ASD-CAPW3205



Item	Part No.	Straight	L		L1	
			mm	inch	mm	inch
1	ASD-CAPW3203	3106A-24-11S	3,000 ± 100	118 ± 4	3,100 ± 100	122 ± 4
2	ASD-CAPW3205	3106A-24-11S	5,000 ± 100	197 ± 4	5,100 ± 100	201 ± 4

ASD-CAPW3303 › ASD-CAPW3305 (with brake cable)



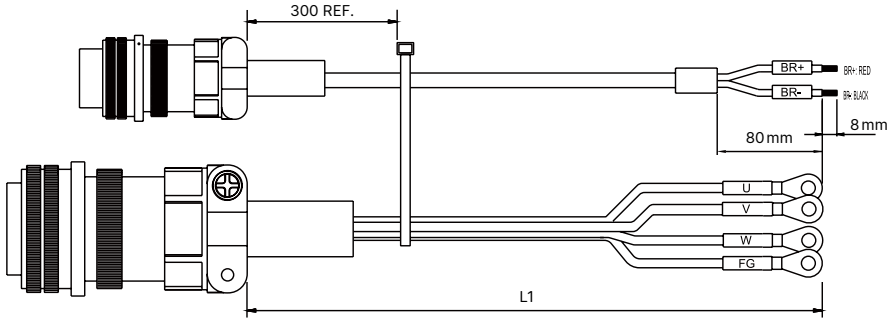
Item	Part No.	Straight	L		L1	
			mm	inch	mm	inch
1	ASD-CAPW3303	3106A-24-11S	3,000 ± 100	118 ± 4	3,100 ± 100	122 ± 4
2	ASD-CAPW3305	3106A-24-11S	5,000 ± 100	197 ± 4	5,100 ± 100	201 ± 4

ASD-CAPW4503, ASD-CAPW4505

Item	Part No.	Straight	L	
			mm	inch
1	ASD-CAPW4503	3106A-32-17S	3,100 ± 100	122 ± 4
2	ASD-CAPW4505	3106A-32-17S	5,100 ± 100	201 ± 4

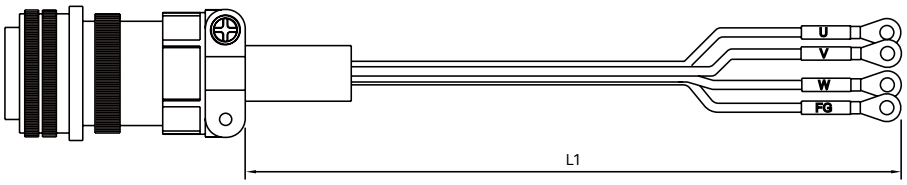
● Power Cables

ASD-CAPW4703, ASD-CAPW4705 (with brake cable)



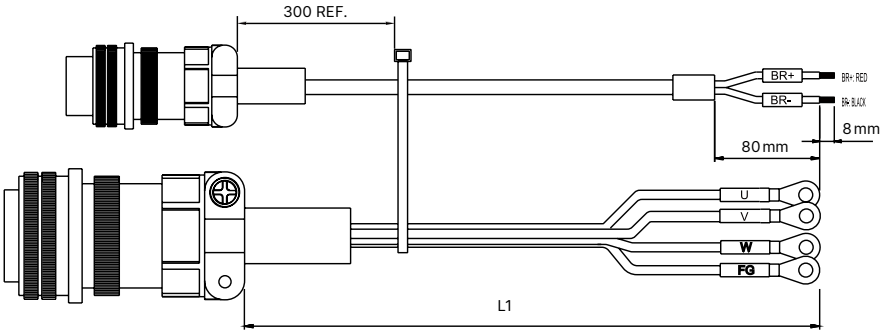
Item	Part No.	Straight	L	
			mm	inch
1	ASD-CAPW4703	3106A-32-17S	3,100 ± 100	122 ± 4
		3106A-10SL-4S	3,100 ± 100	122 ± 4
2	ASD-CAPW4705	3106A-32-17S	5,100 ± 100	201 ± 4
		3106A-10SL-4S	5,100 ± 100	201 ± 4

ASD-CAPW4603, ASD-CAPW4605



Item	Part No.	Straight	L	
			mm	inch
1	ASD-CAPW4603	3106A-32-17S	3,100 ± 100	122 ± 4
2	ASD-CAPW4605	3106A-32-17S	5,100 ± 100	201 ± 4

ASD-CAPW4803, ASD-CAPW4805 (with brake cable)

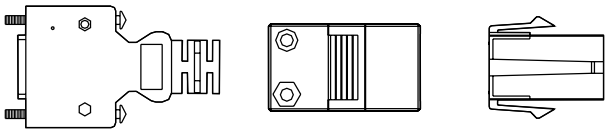


Item	Part No.	Straight	L	
			mm	inch
1	ASD-CAPW4803	3106A-32-17S	3,100 ± 100	122 ± 4
		3106A-10SL-4S	3,100 ± 100	122 ± 4
2	ASD-CAPW4805	3106A-32-17S	5,100 ± 100	201 ± 4
		3106A-10SL-4S	5,100 ± 100	201 ± 4

Optional Cables and Connectors

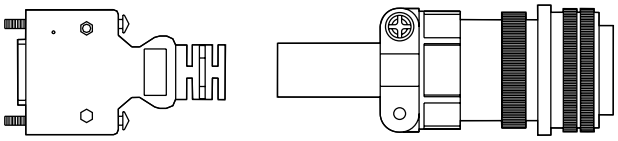
● Encoder Connectors

ASD-ABEN0000



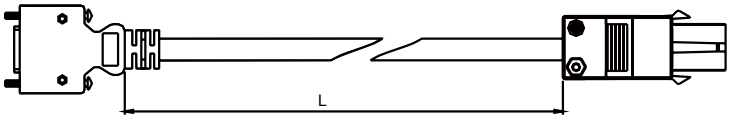
● Encoder Connectors

ASD-CAEN1000



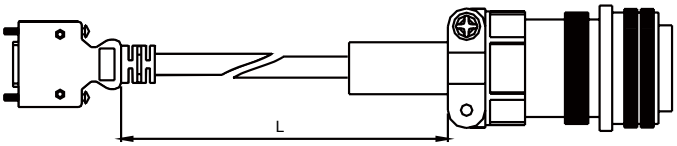
● Incremental Encoder Cables

ASD-ABEN0003 , ASD-ABEN0005



Item	Part No.	L	
		mm	inch
1	ASD-ABEN0003	3,000 ± 100	118 ± 4
2	ASD-ABEN0005	5,000 ± 100	197 ± 4

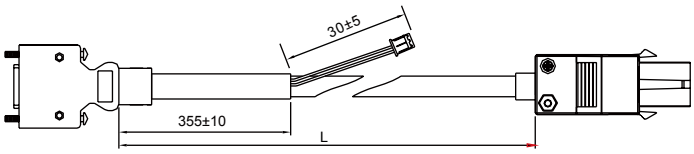
ASD-CAEN1003 , ASD-CAEN1005



Item	Part No.	Straight	L	
			mm	inch
1	ASD-CAEN1003	3106A-20-29S	3,000 ± 100	118 ± 4
2	ASD-CAEN1005	3106A-20-29S	5,000 ± 100	197 ± 4

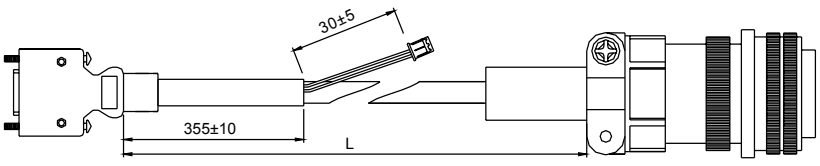
● Absolute Encoder Cables

ASD-A2EB0003 , ASD-A2EB0005



Item	Part No.	L	
		mm	inch
1	ASD-A2EB0003	3,,000 ± 100	118 ± 4
2	ASD-A2EB0005	5000 ± 100	197 ± 4

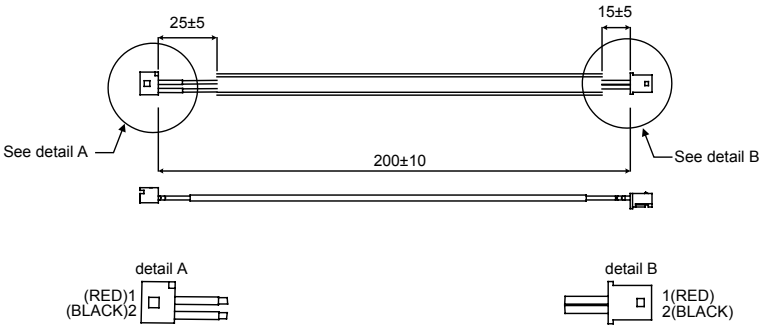
ASD-A2EB1003 , ASD-A2EB1005



Item	Part No.	L	
		mm	inch
1	ASD-A2EB1003	3,000 ± 100	118 ± 4
2	ASD-A2EB1005	5,000 ± 100	197 ± 4

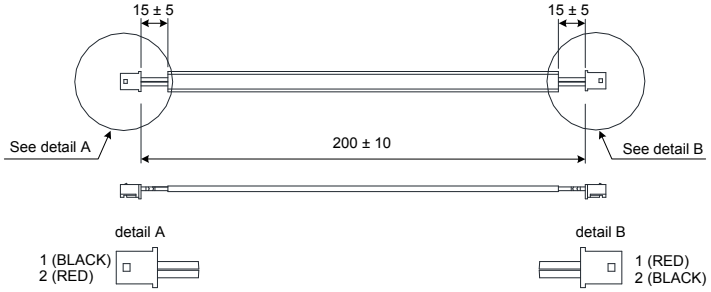
Battery Box Cord AW (Connects to the battery side of the encoder cable) Units: mm

3864573700



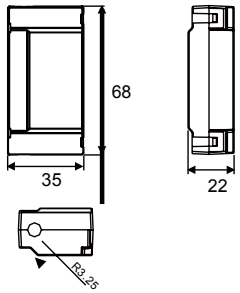
Battery Box Cord IW (Connects to CN8) Units: mm

3864811900

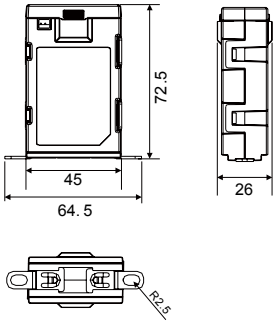


Battery Boxes with Batteries Units: mm

Single Battery Box
ASD-MDBT0100

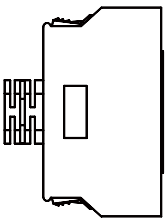


Dual Battery Box
ASD-MDBT0200



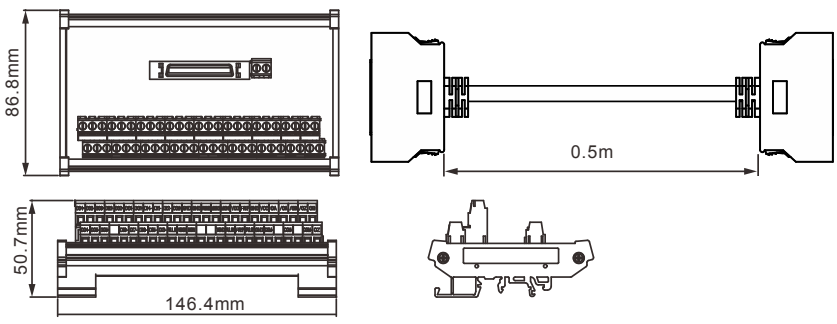
I/O Signal Connector (CN1)

ASD-CNSC0050



Terminal Block Module

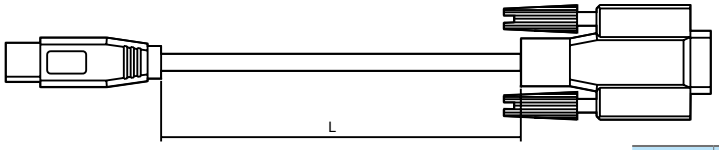
ASD-BM-50A



Optional Cables and Connectors

● RS-232 Communication Cable

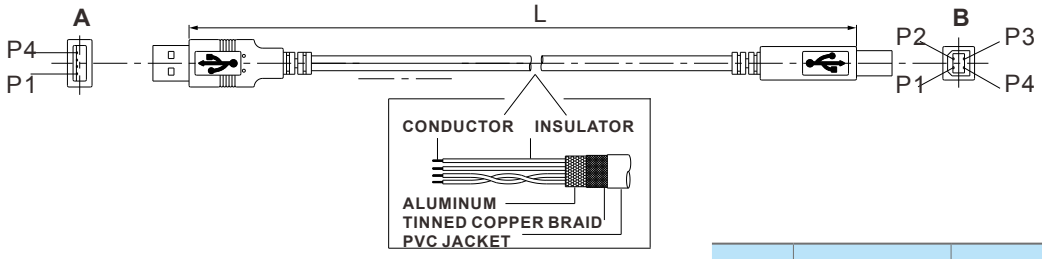
ASD-CARS0003



Item	Part No.	L	
		mm	inch
1	ASD-CARS0003	3,000 ± 100	118 ± 4

● Communication Cable between Drive and Computer (for PC)

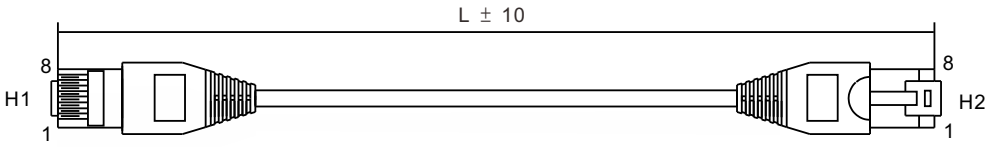
DOP-CAUSBAB



Item	Part No.	L	
		mm	inch
1	DOP-CAUSBAB	1,400 ± 30	55 ± 1.2

● CANopen Communication Cable

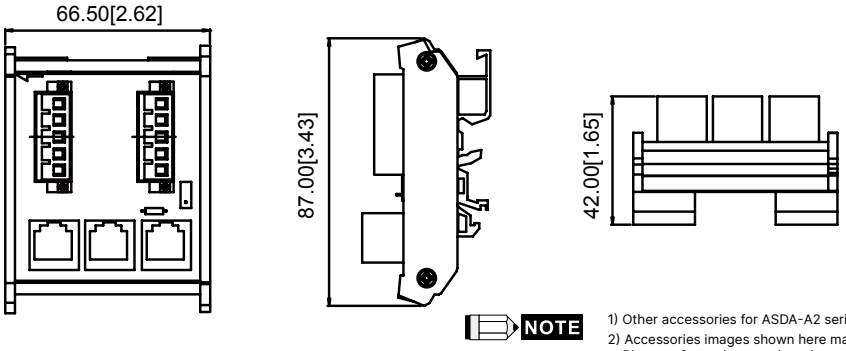
TAP-CB03 , TAP-CB05



Item	Part No.	L	
		mm	inch
1	TAP-CB03	300±10	11±0.4
2	TAP-CB05	500±10	19±0.4

● CANopen Distribution Box Units: mm[inch]

TAP-CN03

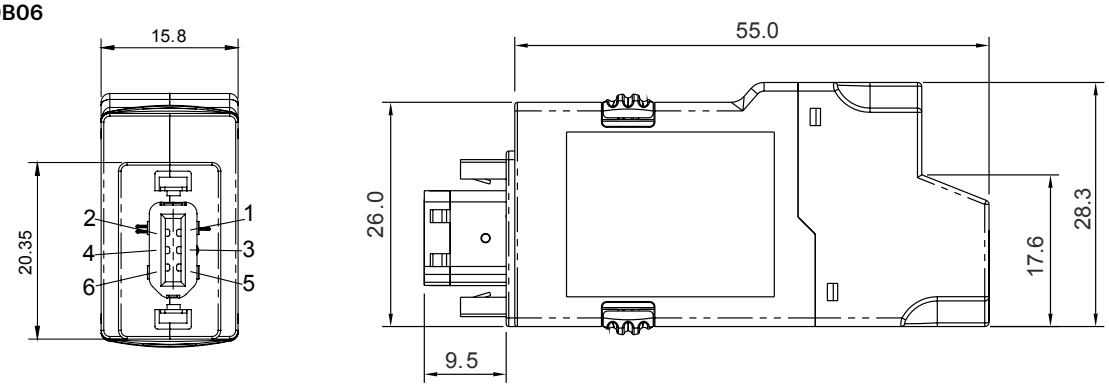


NOTE

1) Other accessories for ASDA-A2 series will be increased gradually.
2) Accessories images shown here may differ from actual product appearance. Please refer to the actual product appearance.

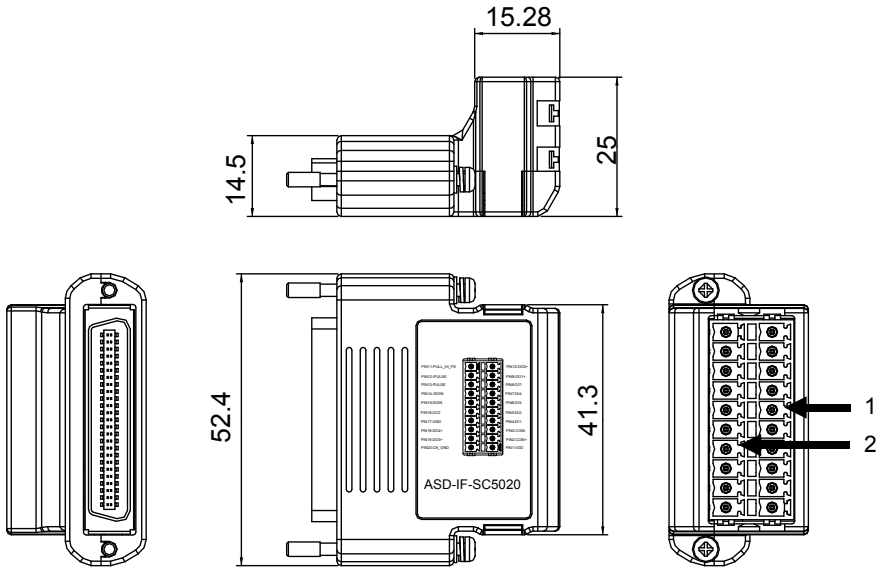
RS-485 Connector Units: mm[inch]

ASD-CNIE0B06

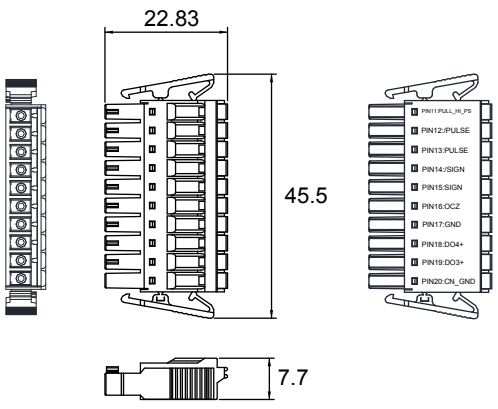


CN1 I/O Connector Units: mm[inch]

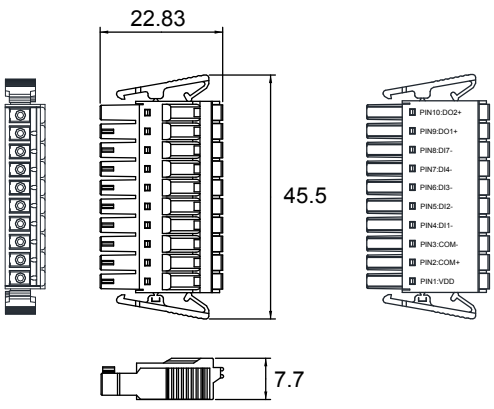
ASD-IF-SC5020



1.



2.



Servo Drive, Servo Motor and Accessories Combinations

220 V Series

100W Servo Drive and 50W Low Inertia Servo Motor

Servo Drive	ASD-A2-0121-□
Low Inertia Servo Motor	**ECMA-C1040F□S**
Power Cable (Without Brake)	ASD-ABPW000X
Power Connector (Without Brake)	ASDBCAPW0000
Power Cable (With Brake)	ASD-ABPW010X
Power Connectors (With Brake)	ASDBCAPW0100
Incremental Encoder Cable	ASD-ABEN000X
Absolute Encoder Cable	ASD-A2EB000X
Encoder Connectors	ASD-ABEN0000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

100W Servo Drive and 100W Low Inertia Servo Motor

Servo Drive	ASD-A2-0121-□
Low Inertia Servo Motor	**ECMA-C△0401□S**
Power Cable (Without Brake)	ASD-ABPW000X
Power Connector (Without Brake)	ASDBCAPW0000
Power Cable (With Brake)	ASD-ABPW010X
Power Connectors (With Brake)	ASDBCAPW0100
Incremental Encoder Cable	ASD-ABEN000X
Absolute Encoder Cable	ASD-A2EB000X
Encoder Connectors	ASD-ABEN0000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

200W Servo Drive and 200W Low Inertia Servo Motor

Servo Drive	ASD-A2-0221-□
Low Inertia Servo Motor	**ECMA-C△0602□S**
Power Cable (Without Brake)	ASD-ABPW000X
Power Connector (Without Brake)	ASDBCAPW0000
Power Cable (With Brake)	ASD-ABPW010X
Power Connector (With Brake)	ASDBCAPW0100
Incremental Encoder Cable	ASD-ABEN000X
Absolute Encoder Cable	ASD-A2EB000X
Encoder Connector	ASD-ABEN0000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

400W Servo Drive and 400W Low Inertia Servo Motor

Servo Drive	ASD-A2-0421-□
Low Inertia Servo Motor	**ECMA-C△0604□S** **ECMA-C△0604□H** **ECMA-C△0804□7**
Power Cable (Without Brake)	ASD-ABPW000X
Power Connector (Without Brake)	ASDBCAPW0000
Power Cable (With Brake)	ASD-ABPW010X
Power Connector (With Brake)	ASDBCAPW0100
Incremental Encoder Cable	ASD-ABEN000X
Absolute Encoder Cable	ASD-A2EB000X
Encoder Connector	ASD-ABEN0000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

400W Servo Drive and 500W Medium Servo Motor

Servo Drive	ASD-A2-0421-□
Medium Servo Motor	**ECMA-E△1305□S**
Power Cable (Without Brake)	ASD-CAPW100X
Power Cable (With Brake)	ASD-CAPW110X
Power Connector	ASD-CAPW1000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

400W Servo Drive and 300W High Inertia Servo Motor

Servo Drive	ASD-A2-0421-□
High Inertia Servo Motor	**ECMA-G△1303□S**
Power Cable (Without Brake)	ASD-CAPW100X
Power Cable (With Brake)	ASD-CAPW110X
Power Connector	ASD-CAPW1000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

750W Servo Drive and 750W Low Inertia Servo Motor

Servo Drive	ASD-A2-0721-□
Low Inertia Servo Motor	**ECMA-C△0807□S ECMA-C△0807□H ECMA-C△0907□S**
Power Cable (Without Brake)	ASD-ABPW000X
Power Connector (Without Brake)	ASDBCAPW0000
Power Cable (With Brake)	ASD-ABPW010X
Power Connector (With Brake)	ASDBCAPW0100
Incremental Encoder Cable	ASD-ABEN000X
Absolute Encoder Cable	ASD-A2EB000X
Encoder Connector	ASD-ABEN0000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

750W Servo Drive and 500W High Inertia Servo Motor

Servo Drive	ASD-A2-0721-□
High Inertia Servo Motor	**ECMA-F△1305□S**
Power Cable (Without Brake)	ASD-CAPW100X
Power Cable (With Brake)	ASD-CAPW110X
Power Connector (With Brake)	ASD-CAPW1000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

750W Servo Drive and 600W High Inertia Servo Motor

Servo Drive	ASD-A2-0721-□
High Inertia Servo Motor	**ECMA-G△1306□S**
Power Cable (Without Brake)	ASD-CAPW100X
Power Cable (With Brake)	ASD-CAPW110X
Power Connector	ASD-CAPW1000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

1kW Servo Drive and 1kW Low Inertia Servo Motor

Servo Drive	ASD-A2-1021-□
Low Inertia Servo Motor	**ECMA-C△1010□S**
Power Cable (Without Brake)	ASD-CAPW100X
Power Cable (With Brake)	ASD-CAPW110X
Power Connector (With Brake)	ASD-CAPW1000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

1kW Servo Drive and 1kW Low Inertia Servo Motor

Servo Drive	ASD-A2-1021-□
Low Inertia Servo Motor	**ECMA-C△0910□S**
Power Cable (Without Brake)	ASD-ABPW000X
Power Cables (With Brake)	ASD-ABPW010X
Power Connector (Without Brake)	ASDBCAPW0000
Power Connector (With Brake)	ASDBCAPW0100
Incremental Encoder Cable	ASD-ABEN000X
Absolute Encoder Cable	ASD-A2EB000X
Encoder Connector	ASD-ABEN0000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

1kW Servo Drive and 1kW Medium Servo Motor

Servo Drive	ASD-A2-1021-□
Medium Servo Motor	**ECMA-E△1310□S**
Power Cable (Without Brake)	ASD-CAPW100X
Power Cable (With Brake)	ASD-CAPW110X
Power Connector	ASD-CAPW1000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

Servo Drive, Servo Motor and Accessories Combinations

220 V Series

1kW Servo Drive and 850W High Inertia Servo Motor

Servo Drive	ASD-A2-1021-□
High Inertia Servo Motor	ECMA-F△1308□S
Power Cable (Without Brake)	ASD-CAPW100X
Power Cable (With Brake)	ASD-CAPW110X
Power Connector	ASD-CAPW1000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

1kW Servo Drive and 900W High Inertia Servo Motor

Servo Drive	ASD-A2-1021-□
High Inertia Servo Motor	ECMA-G△1309□S
Power Cable (Without Brake)	ASD-CAPW100X
Power Cable (With Brake)	ASD-CAPW110X
Power Connector	ASD-CAPW1000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

1.5kW Servo Drive and 1.5kW Medium Servo Motor

Servo Drive	ASD-A2-1521-□
Medium Servo Motor	ECMA-E△1315□S
Power Cable (Without Brake)	ASD-CAPW100X
Power Cable (With Brake)	ASD-CAPW110X
Power Connector	ASD-CAPW1000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

2kW Servo Drive and 2kW Low Inertia Servo Motor

Servo Drive	ASD-A2-2023-□
Low Inertia Servo Motor	ECMA-C△1020□S
Power Cables (Without Brake)	ASD-A2PW100X
Power Cables (With Brake)	ASD-A2PW110X
Power Connector	ASD-CAPW1000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

2kW Servo Drive and 2kW Medium Servo Motor

Servo Drive	ASD-A2-2023-□
Medium Servo Motor	ECMA-E△1320□S
Power Cable (Without Brake)	ASD-A2PW100X
Power Cable (With Brake)	ASD-A2PW110X
Power Connector	ASD-CAPW1000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

2kW Servo Drive and 2kW Medium Servo Motor

Servo Drive	ASD-A2-2023-□
Medium Servo Motor	ECMA-E△1820□S
Power Cable (Without Brake)	ASD-CAPW200X
Power Cable (With Brake)	ASD-CAPW210X
Power Connector	ASD-CAPW2000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

2kW Servo Drive and 1.3kW Medium-High Inertia Servo Motor

Servo Drive	ASD-A2-2023-□
Medium-High Inertia Servo Motor	**ECMA-F△1313□S**
Power Cable (Without Brake)	ASD-A2PW100X
Power Cable (With Brake)	ASD-A2PW110X
Power Connector	ASD-CAPW1000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

2kW Servo Drive and 1.8kW Medium-High Inertia Servo Motor

Servo Drive	ASD-A2-2023-□
Medium-High Inertia Servo Motor	**ECMA-F△1318□S**
Power Cable (Without Brake)	ASD-A2PW100X
Power Cable (With Brake)	ASD-A2PW110X
Power Connector	ASD-CAPW1000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

3kW Servo Drive and 3kW Low Inertia Servo Motor

Servo Drive	ASD-A2-3023-□
Low Inertia Servo Motor	**ECMA-C△1330□4**
Power Cable (Without Brake)	ASD-CAPW200X
Power Cable (With Brake)	ASD-CAPW210X
Power Connector	ASD-CAPW2000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

3kW Servo Drive and 3kW Medium Servo Motor

Servo Drive	ASD-A2-3023-□
Medium Servo Motor	**ECMA-E△1830□S**
Power Cable (Without Brake)	ASD-CAPW200X
Power Cable (With Brake)	ASD-CAPW210X
Power Connector	ASD-CAPW2000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

3kW Servo Drive and 3.5kW Medium-High Inertia Servo Motor

Servo Drive	ASD-A2-3023-□
Medium-High Inertia Servo Motor	**ECMA-E△1835□S**
Power Cable (Without Brake)	ASD-CAPW200X
Power Cable (With Brake)	ASD-CAPW210X
Power Connector	ASD-CAPW2000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

3kW Servo Drive and 3kW Medium-High Inertia Servo Motor

Servo Drive	ASD-A2-3023-□
Medium-High Inertia Servo Motor	**ECMA-F△1830□S**
Power Cable (Without Brake)	ASD-CAPW200X
Power Cable (With Brake)	ASD-CAPW210X
Power Connector	ASD-CAPW2000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

Servo Drive, Servo Motor and Accessories Combinations

220 V Series

4.5kW Servo Drive and 4.5kW Medium-High Inertia Servo Motor

Servo Drive	ASD-A2-4523-□
Medium-High Inertia Servo Motor	ECMA-F△1845□S
Power Cable (Without Brake)	ASD-CAPW320X
Power Cable (With Brake)	ASD-CAPW330X
Power Connector	ASD-CAPW2000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

5.5kW Servo Drive and 5.5kW Medium-High Inertia Servo Motor

Servo Drive	ASD-A2-5523-□
Medium-High Inertia Servo Motor	ECMA-F△1855□3
Power Cable (Without Brake)	ASD-CAPW450X
Power Cable (With Brake)	ASD-CAPW470X
Power Connector	ASD-CAPW4000
Brake Cable	ASD-CNBR1000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

7.5kW Servo Drive and 7.5kW Medium-High Inertia Servo Motor

Servo Drive	ASD-A2-7523-□
Medium-High Inertia Servo Motor	ECMA-F△1875□3
Power Cable (Without Brake)	ASD-CAPW450X
Power Cable (With Brake)	ASD-CAPW470X
Power Connector	ASD-CAPW4000
Brake Cable	ASD-CNBR1000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

111kW Servo Drive and 11kW Medium-High Inertia Servo Motor

Servo Drive	ASD-A2-1B23-□
Medium-High Inertia Servo Motor	ECMA-F1221B□3
Power Cable (Without Brake)	ASD-CAPW450X
Power Cable (With Brake)	ASD-CAPW470X
Power Connector	ASD-CAPW4000
Brake Cable	ASD-CNBR1000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

15kW Servo Drive and 15kW Medium-High Inertia Servo Motor

Servo Drive	ASD-A2-1F23-□
Medium-High Inertia Servo Motor	ECMA-F1 221F□S
Power Cable (Without Brake)	ASD-CAPW450X
Power Cable (With Brake)	ASD-CAPW470X
Power Connector	ASD-CAPW4000
Brake Cable	ASD-CNBR1000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

400 V Series

750W Servo Drive and 400W Low Inertia Servo Motor

Servo Drive	ASD-A2-0743-□
Low Inertia Servo Motor	**ECMA-J△0604□S**
Power Cable (Without Brake)	ASD-CAPW540X
Power Connector (Without Brake)	ASD-CAPW5400
Power Cable (With Brake)	ASD-CAPW510X
Power Connector (With Brake)	ASD-CAPW5100
Incremental Encoder Cable	ASD-ABEN000X
Absolute Encoder Cable	ASD-A2EB000X
Encoder Connector	ASD-ABEN0000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

750W Servo Drive and 750W Low Inertia Servo Motor

Servo Drive	ASD-A2-0743-□
Low Inertia Servo Motor	**ECMA-J△0807□S**
Power Cable (Without Brake)	ASD-CAPW540X
Power Connector (Without Brake)	ASD-CAPW5400
Power Cable (With Brake)	ASD-CAPW510X
Power Connector (With Brake)	ASD-CAPW5100
Incremental Encoder Cable	ASD-ABEN000X
Absolute Encoder Cable	ASD-A2EB000X
Encoder Connector	ASD-ABEN0000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

750W Servo Drive and 750W Low Inertia Servo Motor

Servo Drive	ASD-A2-0743-□
Low Inertia Servo Motor	**ECMA-J△0907□S**
Power Cable (Without Brake)	ASD-CAPW540X
Power Connector (Without Brake)	ASD-CAPW5400
Power Cable (With Brake)	ASD-CAPW510X
Power Connectors (With Brake)	ASD-CAPW5100
Incremental Encoder Cable	ASD-ABEN000X
Absolute Encoder Cable	ASD-A2EB000X
Encoder Connector	ASD-ABEN0000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

750W Servo Drive and 500W Medium Servo Motor

Servo Drive	ASD-A2-0743-□
Medium Servo Motor	**ECMA-K△1305□S**
Power Cable (Without Brake)	ASD-CAPW100X
Power Cable (With Brake)	ASD-CAPW110X
Power Connector	ASD-CAPW1000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

750W Servo Drive and 500W Medium-High Inertia Servo Motor

Servo Drive	ASD-A2-0743-□
Medium-High Inertia Servo Motor	**ECMA-L△1305□S**
Power Cable (Without Brake)	ASD-CAPW100X
Power Cable (With Brake)	ASD-CAPW110X
Power Connector	ASD-CAPW1000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

1kW Servo Drive and 850W High Inertia Servo Motor

Servo Drive	ASD-A2-1043-□
High Inertia Servo Motor	**ECMA-L△1308□S**
Power Cable (Without Brake)	ASD-CAPW100X
Power Cable (With Brake)	ASD-CAPW110X
Power Connector	ASD-CAPW1000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

Servo Drive, Servo Motor and Accessories Combinations

400 V Series

1kW Servo Drive and 1kW Low Inertia Servo Motor

Servo Drive	ASD-A2-1043-□
Low Inertia Servo Motor	**ECMA-J△0910□S**
Power Cable (Without Brake)	ASD-CAPW540X
Power Connector (Without Brake)	ASD-CAPW5400
Power Cable (With Brake)	ASD-CAPW510X
Power Connector (With Brake)	ASD-CAPW5100
Incremental Encoder Cable	ASD-ABEN000X
Absolute Encoder Cable	ASD-A2EB000X
Encoder Connector	ASD-ABEN0000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

1.5kW Servo Drive and 900W High Inertia Servo Motor

Servo Drive	ASD-A2-1543-□
High Inertia Servo Motor	**ECMA-M△1309□S**
Power Cable (Without Brake)	ASD-CAPW100X
Power Cable (With Brake)	ASD-CAPW110X
Power Connector	ASD-CAPW1000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

1kW Servo Drive and 1kW Medium Servo Motor

Servo Drive	ASD-A2-1043-□
Medium Servo Motor	**ECMA-K△1310□S**
Power Cable (Without Brake)	ASD-CAPW100X
Power Cable (With Brake)	ASD-CAPW110X
Power Connector	ASD-CAPW1000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

1.5kW Servo Drive and 1kW Low Inertia Servo Motor

Servo Drive	ASD-A2-1543-□
Low Inertia Servo Motor	**ECMA-J△1010□S**
Power Cable (Without Brake)	ASD-CAPW100X
Power Cable (With Brake)	ASD-CAPW110X
Power Connector	ASD-CAPW1000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

1.5kW Servo Drive and 1.3kW Medium-High Inertia Servo Motor

Servo Drive	ASD-A2-1543-□
Medium-High Inertia Servo Motor	**ECMA-L△1313□S**
Power Cable (Without Brake)	ASD-CAPW100X
Power Cable (With Brake)	ASD-CAPW110X
Power Connector	ASD-CAPW1000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

1.5kW Servo Drive and 1.5kW Medium Servo Motor

Servo Drive	ASD-A2-1543-□
Medium Servo Motor	**ECMA-K△1315□S**
Power Cable (Without Brake)	ASD-CAPW100X
Power Cable (With Brake)	ASD-CAPW110X
Power Connector	ASD-CAPW1000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

2kW Servo Drive and 2kW Low Inertia Servo Motor

Servo Drive	ASD-A2-2043-□
Low Inertia Servo Motor	**ECMA-J△1020□S**
Power Cable (Without Brake)	ASD-CAPW120X
Power Cable (With Brake)	ASD-CAPW130X
Power Connector	ASD-CAPW1000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

2kW Servo Drive and 2kW Medium Servo Motor

Servo Drive	ASD-A2-2043-□
Medium Servo Motor	**ECMA-K△1820□S**
Power Cable (Without Brake)	ASD-CAPW220X
Power Cable (With Brake)	ASD-CAPW230X
Power Connector	ASD-CAPW2000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

3kW Servo Drive and 3kW Medium-High Inertia Servo Motor

Servo Drive	ASD-A2-3043-□
Medium-High Inertia Servo Motor	**ECMA-L△1830□S**
Power Cable (Without Brake)	ASD-CAPW220X
Power Cable (With Brake)	ASD-CAPW230X
Power Connector	ASD-CAPW2000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

2kW Servo Drive and 2kW Medium-High Inertia Servo Motor

Servo Drive	ASD-A2-2043-□
Medium Servo Motor	**ECMA-K△1320□S**
Power Cable (Without Brake)	ASD-CAPW120X
Power Cable (With Brake)	ASD-CAPW130X
Power Connector	ASD-CAPW1000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

3kW Servo Drive and 3kW Low Inertia Servo Motor

Servo Drive	ASD-A2-3043-□
Low Inertia Servo Motor	**ECMA-J△1330□4**
Power Cable (Without Brake)	ASD-CAPW120X
Power Cable (With Brake)	ASD-CAPW130X
Power Connector	ASD-CAPW1000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

4.5kW Servo Drive and 4.5kW Medium-High Inertia Servo Motor

Servo Drive	ASD-A2-4543-□
Medium-High Inertia Servo Motor	**ECMA-L△1845□S**
Power Cable (Without Brake)	ASD-CAPW220X
Power Cable (With Brake)	ASD-CAPW230X
Power Connector	ASD-CAPW2000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

Servo Drive, Servo Motor and Accessories Combinations

400 V Series

5.5kW Servo Drive and 5.5kW Medium-High Inertia Servo Motor

Servo Drive	ASD-A2-5543-□
Medium-High Inertia Servo Motor	ECMA-L△1855□3
Power Cable (Without Brake)	ASD-CAPW220X
Power Cable (With Brake)	ASD-CAPW230X
Power Connector	ASD-CAPW2000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

7.5kW Servo Drive and 7.5kW Medium-High Inertia Servo Motor

Servo Drive	ASD-A2-7543-□
Medium-High Inertia Servo Motor	ECMA-L△1875□3
Power Cable (Without Brake)	ASD-CAPW320X
Power Cable (With Brake)	ASD-CAPW330X
Power Connector	ASD-CAPW2000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

((X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

11kW and 15kW models will be available soon
For the available models and related optional accessories, please visit our website at: www.deltaww.com, or please consult our local distributors.

11kW Servo Drive and 11kW Medium-High Inertia Servo Motor

Servo Drive	ASD-A2-1B43-□
Medium-High Inertia Servo Motor	ECMA-L1221B□3
Power Cable (Without Brake	ASD-CAPW450X
Power Cable (With Brake)	ASD-CAPW470X
Power Connector	ASD-CAPW4000
Brake Connector	ASD-CNBR1000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

11kW and 15kW models will be available soon
For the available models and related optional accessories, please visit our website at: www.deltaww.com, or please consult our local distributors.

15kW Servo Drive and 15kW Medium-High Inertia Servo Motor

Servo Drive	ASD-A2-1F43-□
Medium-High Inertia Servo Motor	ECMA-L1221F□S
Power Cable (Without Brake	ASD-CAPW460X
Power Cable (With Brake)	ASD-CAPW480X
Power Connector	ASD-CAPW4000
Brake Connector	ASD-CNBR1000
Incremental Encoder Cable	ASD-CAEN100X
Absolute Encoder Cable	ASD-A2EB100X
Encoder Connector	ASD-CAEN1000

(X=3 indicates cable length is 3m; X=5 indicates cable length is 5m)

Safety Information

Global Standards	ASDA-A2 series is designed to fully comply with demanding international standards, such as IEC, EN and others, for all fields of industrial automation technology.	
EMC Standards	EN61000-4-6	Level 3
	EN61000-4-3	Level 3
	EN61000-4-2	Level 2 and Level 3
	EN61000-4-4	Level 3
	EN61000-4-8	Level 4
	EN61000-4-5	Level 3
Conducted & Radiated Emissions	Complies with EN550011 Class A Group 1, with external EMC filter	
CE Marking	CE recognized. Complies with Directive 2006/95/EC of the European Parliament and EMC Directive 2004/108/EC.	
UL Approval	UL (U.S.), cUL (Canada) recognized.	
Test Standard	IEC/EN50178, IEC/EN60529 IP20	
Vibration	1G less than 20Hz, 0.6G 20 to 50Hz. Complies with IEC/EN50178	
Shock	15gn 11ms. Complies with IEC/EN600028-2-27	
Pollution Degree	Degree 2. Complies with IEC/EN61800-5-1	

Other Accessories

(for ASDA-A2 series all models)

Description	Delta Part Number
50-Pin I/O Connector (CN1)	ASD-CNSC0050
Terminal Block Module	ASD-BM-50A
RS-232 Communication Cable	ASD-CARS0003
Communication Cable between Drive and Computer (for PC)	DOP-CAUSBAB
CANopen Communication Cable	TAP-CB03 / TAP-CB05
CANopen Distribution Box	TAP-CN03
RS-485 Connector	ASD-CNIE0B06
Regenerative Resistor 400W 40Ω	BR400W040
Regenerative Resistor 1kW 20Ω	BR1K0W020
Regenerative Resistor 1.5kW 5Ω	BR1K5W005

Regenerative Resistor Specifications

220 V Series

Servo Drive (kW)	Specifications of Built-in Regenerative Resistors		Min. Allowable Resistance (Ohm)
	Resistance (parameter P1-52) (Ohm)	Capacity (parameter P1-53) (Watt)	
0.1	-	-	30 Ω
0.2	-	-	30 Ω
0.4	40 Ω	40 Ω	30 Ω
0.75	40 Ω	60 Ω	20 Ω
1.0	40 Ω	60 Ω	20 Ω
1.5	40 Ω	60 Ω	20 Ω
2.0	20 Ω	100 Ω	10 Ω
3.0	20 Ω	100 Ω	10 Ω
4.5	20 Ω	100 Ω	10 Ω
5.5	-	-	8 Ω
7.5	-	-	8 Ω
11	-	-	8 Ω
15	-	-	5 Ω

Footnote:

- 400W ~ 4.5kW servo drives provide a built-in regenerative resistor.
- When the fault, ALE05 (Regeneration Error) occurs, please increase the regenerative resistor capacity or decrease the regenerative resistor resistance (the regenerative resistor resistance should not be less than the minimum allowable resistance listed in the above table.)
- If the situation is not improved after increasing the regenerative resistor capacity or decreasing the regenerative resistor resistance, please purchase a regenerative resistor module.
- When combining multiple small-capacity regenerative resistors in parallel to increase the regenerative resistor capacity, make sure that the total resistance value of the regenerative resistors is not less than the minimum allowable resistance listed in the above table.

400 V Series

Servo Drive (kW)	Specifications of Built-in Regenerative Resistors		Min. Allowable Resistance (Ohm)
	Resistance (parameter P1-52) (Ohm)	Capacity (parameter P1-53) (Watt)	
0.4	80 Ω	100W	60 Ω
0.75	80 Ω	100W	60 Ω
1.0	80 Ω	100W	60 Ω
1.5	80 Ω	100W	40 Ω
2.0	-	-	40 Ω
3.0	-	-	30 Ω
4.5	-	-	20 Ω
5.5	-	-	20 Ω
7.5	-	-	15 Ω
11	-	-	15 Ω
15	-	-	10 Ω

Footnote:

- 750W ~ 1.5kW servo drives provide a built-in regenerative resistor.
- When the fault, ALE05 (Regeneration Error) occurs, please increase the regenerative resistor capacity or decrease the regenerative resistor resistance (the regenerative resistor resistance should not be less than the minimum allowable resistance listed in the above table.)
- If the situation is not improved after increasing the regenerative resistor capacity or decreasing the regenerative resistor resistance, please purchase a regenerative resistor module.
- When combining multiple small-capacity regenerative resistors in parallel to increase the regenerative resistor capacity, make sure that the total resistance value of the regenerative resistors is not less than the minimum allowable resistance listed in the above table.

Smarter. Greener. Together.

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ASDA-B2 Series

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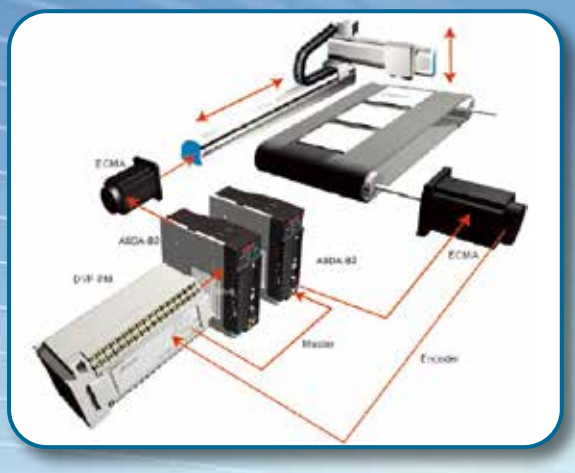
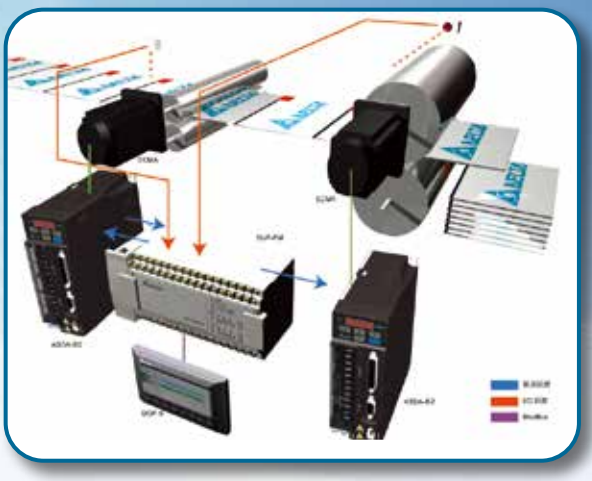
The high-performance, cost-effective ASDA-B2 Series servo motors and drives meet the requirements for general-purpose machine control applications in the industrial automation market and enhance the competitive advantage of servo systems.

The power rating of the ASDA-B2 Series ranges from 0.1kW to 3kW. The superior features of this series emphasize built-in motion control functions for general purpose applications and saving the cost of mechatronics integration. Delta's ASDA-B2 makes setting assembly, wiring, and operation convenient. In switching from other brands to Delta's ASDA-B2, the outstanding quality and features, and complete product lineup makes replacement simple and scalable. Customers that choose this value-based product gain noticeable competitive advantages in their market space. All of Delta's ASDA-B2 Series meet UL, cUL, CE, and RoHS standards.

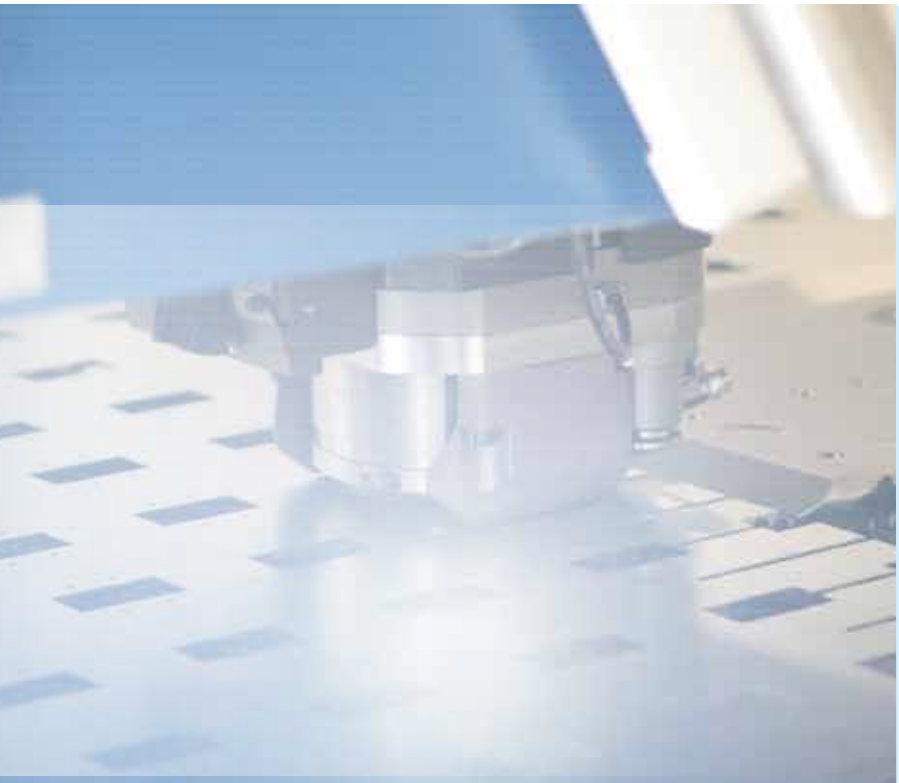
Transporting and Conveying Equipment



Cutting Machines



Electric Discharge Machines (EDM)



Sawing Machines

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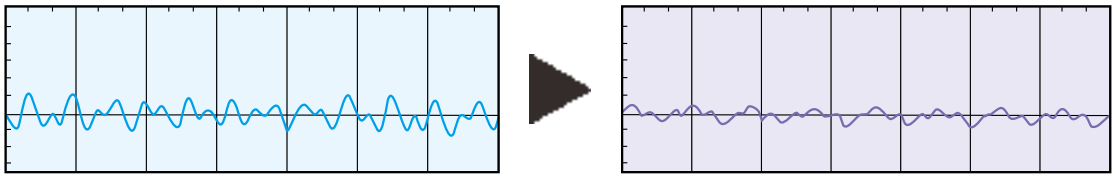
Product Features

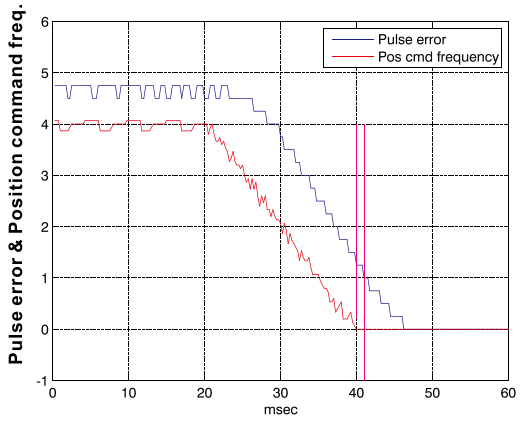
Implements High Precision Positioning Control

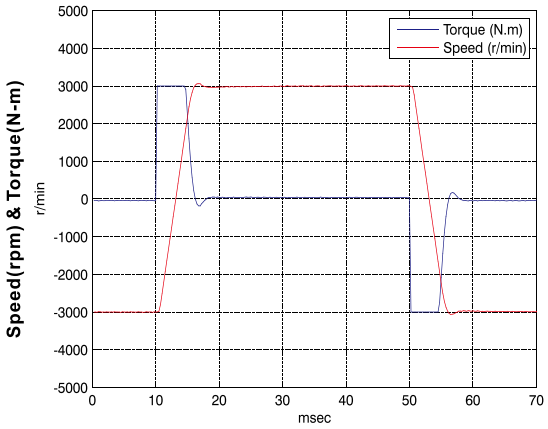
- ASDA-B2 Series servo drive supports 20-bit and 17-bit encoders. It satisfies the demand for high-precision positioning control and stable operation with lower speed.
- Applying the encoder with a higher resolution can reduce the cogging torque and improve the motor's precision.

2500ppr of Torque Ripple **17-bit of Torque Ripple**



- Outstanding performance with higher speed: Up to 550Hz frequency response and settling time is below 1ms.
- 10ms acceleration time from -3000r/min to 3000r/min when running without a load.

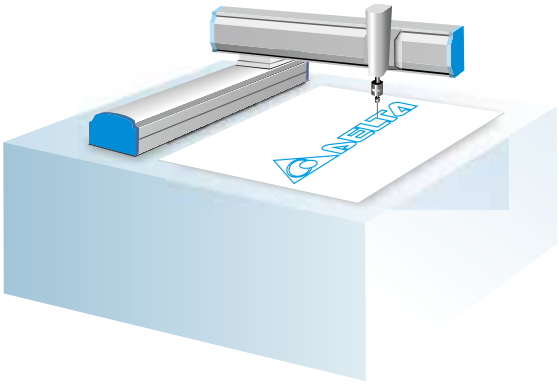




Example: Frame size 60mm and 400W servo motor.

Satisfies a Variety of Industry Requirements

- Three control modes available: Built-in position, Speed, and Torque. (Speed and Torque mode can be controlled by internal parameters or analog voltage.)
- High-speed differential command (up to 4Mpps) for high precision positioning control.
- Three notch filters are provided to suppress the mechanical resonance efficiently and make the system operate more smoothly.
- Lead friction compensation parameter is specified for the application of circular interpolation, Z-axis motion and ball screw, and others to reduce the loading of the controller.



- For bar feeders and other equipment requiring high torque output, motor protection parameters are offered to protect the mechanical system.

Offers Easy-To-Install Solution For Simple Start-Up

Separated power supply for main circuit and control circuit

- ASDA-B Series share the same power cables and encoder cables for easy installation and setup without extra accessories.
- Servo motor provides brake, oil seal, and other optional configurations for different applications.
- Separated power supply for main circuit and control circuit makes it easier to maintain the mechanism.
- 400W or above servo drives have built-in regenerative resistors, which simplify wiring and reduce the installation cost.
- Individual connectors (2 sets) for analog signal output, also simplifies the wiring.

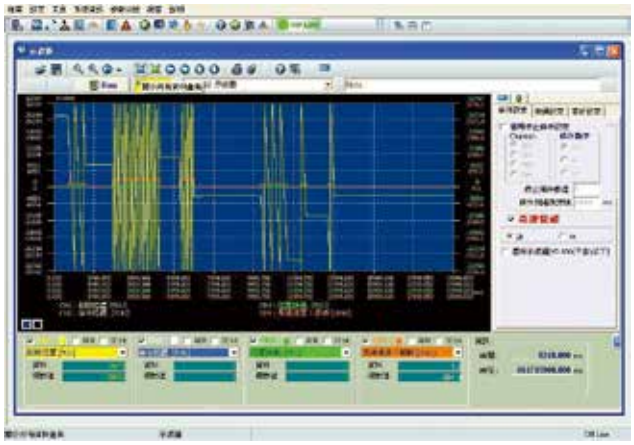
MON1

MON2

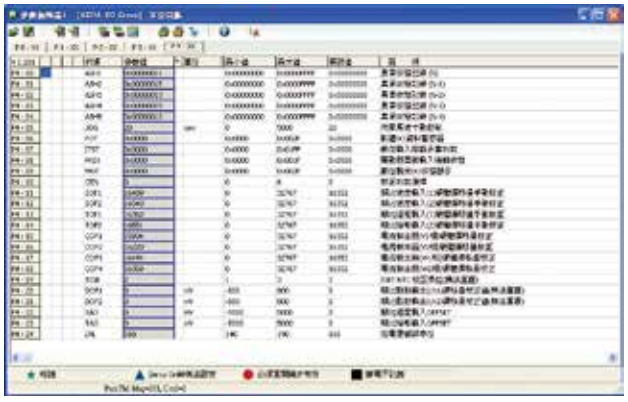
Supports two analog outputs

Fulfills Easy-To-Use Requirements For Versatile Operation

- User-friendly motor sizing software allows users to select the motor.
- ASDA-Soft configuration software (tuning software) is provided to meet performance requirements quickly.
- Easy-to-use digital keypad is ideal for setting parameters and enables users to directly monitor the servo drive and servo motor.
- Specific software communication cable ASD-CNUS0A08 (Optional) can improve communication quality and convenience of operation. (please refer to optional accessories on page 28)



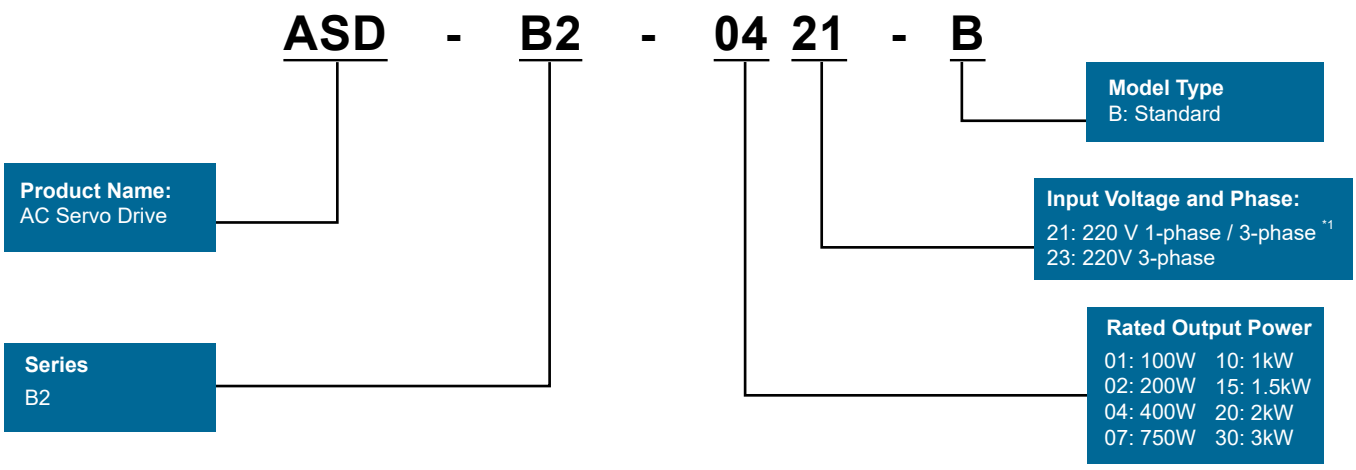
- On-line monitoring function for 4 channels (similar to a digital oscilloscope) is available. The monitoring data can be 16-bit (4 channels) and 32-bit (2 channels).



- Multi-functional parameter editor enables users to edit, modify, upload/download and print desired parameters in real time.

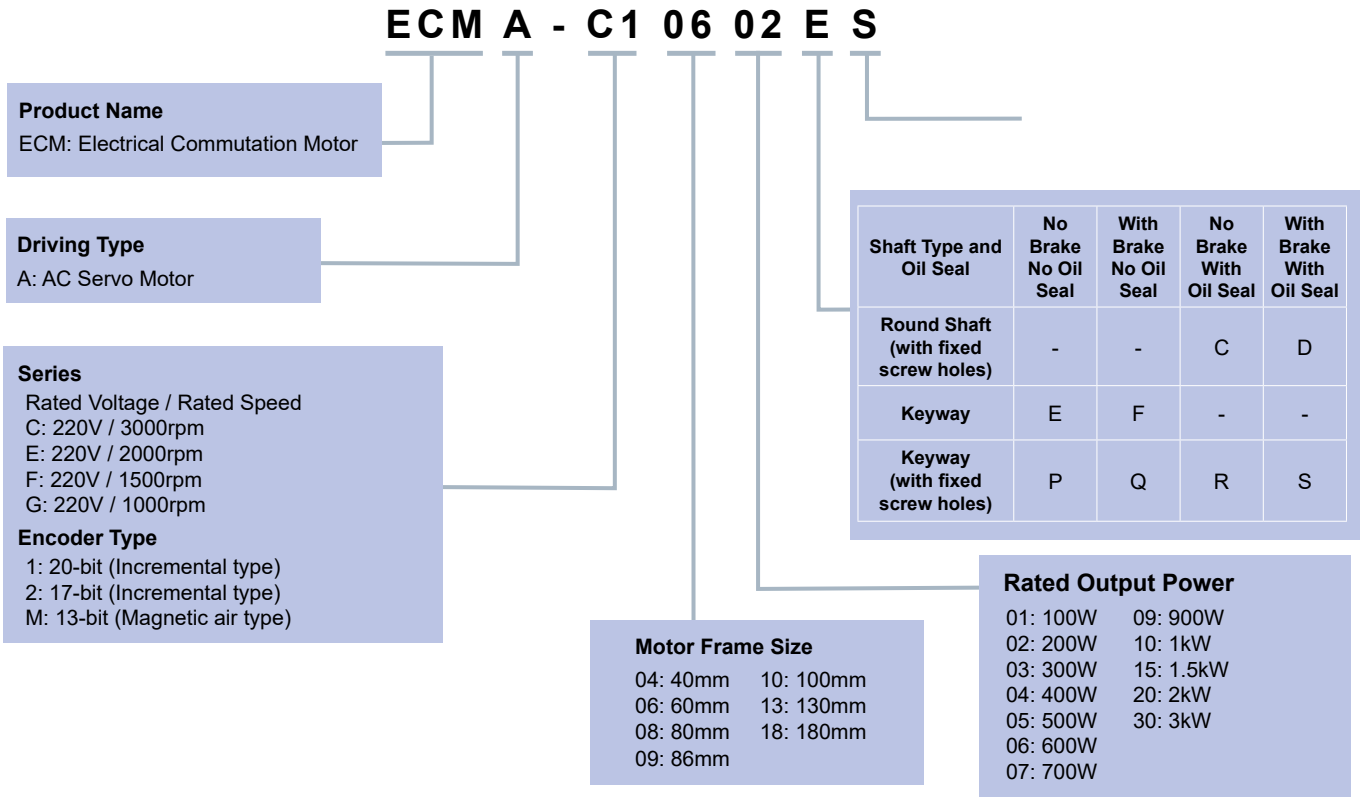
Model Name Explanation

ASDA-B2 Series Servo Drives



NOTE 1. Rated power of 100W to 1.5kW are marked number 21 with 220V, single-phase and three-phase connections

ECMA Series Servo Motors



Shaft Type and Oil Seal	No Brake No Oil Seal	With Brake No Oil Seal	No Brake With Oil Seal	With Brake With Oil Seal
Round Shaft (with fixed screw holes)	-	-	C	D
Keyway	E	F	-	-
Keyway (with fixed screw holes)	P	Q	R	S

Product Line-up

Servo Drive								
	0.1kW	200W	400W	750W	1.0kW	1.5kW	2kW	3kW
	ASD-B2-0121- B	ASD-B2-0221- B	ASD-B2-0421- B	ASD-B2-0721-B	ASD-B2-1021-B	ASD-B2-1521-B	ASD-B2-2023-B	ASD-B2-3023- B

Servo Motor								
	ECMA-C△0401☐S	ECMA-C△0602☐S	ECMA-C△0604☐S ECMA-C△0604☐H ECMA-C△0804☐7 ECMA-E△1305☐S ECMA-G△1303☐S	ECMA-C△0807☐S ECMA-C△0807☐H ECMA-G△1306☐S ECMA-GM1306PS ECMA-C△0907☐S	ECMA-C△1010☐S ECMA-E△1310☐S ECMA-G△1309☐S ECMA-GM1309PS ECMA-C△0910☐S ECMA-F△1308☐S	ECMA-E△1315☐S	ECMA-C △1020☐S ECMA-F △ 1313☐S ECMA-E △1320☐S ECMA-E △ 1820☐S ECMA-F △1318☐S	ECMA-E △1830☐S ECMA-F △1830☐S ECMA-E △1835☐S ECMA-C △1330☐4

Note:
1. (□) in the model names represent shaft end / brake or the number of oil seals.
2. (△) in the model names represent encoder types (△ =1: Incremental encoder, 20-bit; △ =2:Incremental encoder, 17-bit).

Part Names and Functions

LED Display

- The 5-digit, 7-segment LED displays the servo status or fault codes.

Charge LED

- A lit LED indicates that either power is connected to the servo drive or a residual charge is present in the drive's internal power components.

Operation Panel

- Function keys used to perform status display, monitor and diagnostic, function and parameter setting.
  Function Keys:
  MODE: Mode selection
  SHIFT: For shifting the cursor to the left
  ▲ : For increasing values
  ▼ : For decreasing values
  SET: For storing data

Control Circuit Terminal (L1c, L2c)

- Used to connect 200~230 V_{AC}, 50/60Hz single-phase or three-phase V_{AC} supply.

Main Circuit Terminal (R, S, T)

- Used to connect 200~230 V_{AC}, 50/60Hz commercial power supply.

Servo Motor Output (U, V, W)

- Used to connect the servo motor. Never connect the output terminal to the main circuit power as the AC servo drive may be damaged beyond repair if incorrect cables are connected to the output terminals.

Regenerative Resistor

1. When using an external resistor, connect it to P ⊕ and C, and ensure an open circuit between P ⊕ and D.
2. When using an internal resistor, ensure the circuit is closed between P ⊕ and D, and the circuit is open between P ⊕ and C
3. When using external braking unit, connect braking unit to P ⊕ and ⊖, and ensure an open circuit between P ⊕ and D, and P ⊕ and C.

Ground Terminal

I/O Interface

- Used to connect Delta's DVP Series PLC or other external controllers for controlling I/O signals.

Motor Encoder Interface

- Used to connect the encoder.

Serial Communication Port

- Used to connect PLC, HMI, and other controllers for RS-485/ RS-232 serial communication.

Reserved

Analog Voltage Output Terminal

- Used to provide two analog monitor outputs, MON1 and MON2.

Heatsink

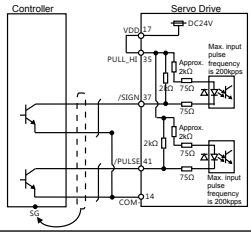
- Used to secure servo drive and for heat dissipation.

NOTE Please note that this only introduces a servo drive's basic functions. Specific models may have different functions.

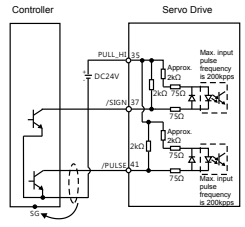
Wiring

Position (Pt) Control Mode (for Pulse Command Input)

Pulse input, for the use of internal power supply (Open-collector input)

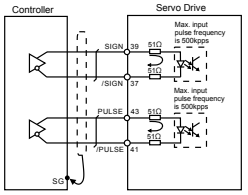


Pulse input, for the use of external power supply (Open-collector input)



Pulse input (Line driver)

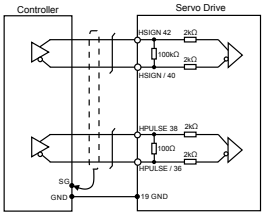
This is a 5V system,do not connect to 24V of power supply.



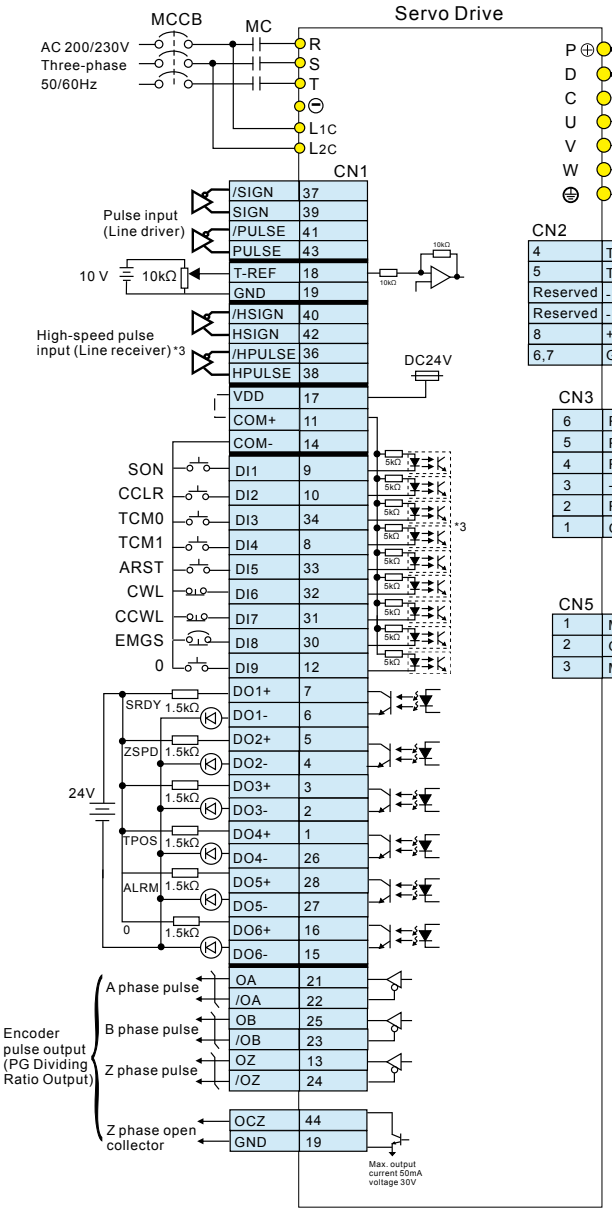
Caution: Because this photocoupler is a unidirectional optocoupler, please pay close attention on the current direction of input pulse command.

High-speed pulse input (Line receiver)

This is a 5V system,do not connect to 24V of power supply.



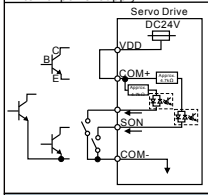
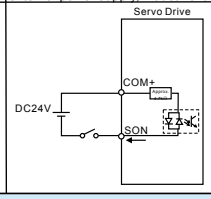
Caution: Ensure that the ground terminal of the controller and the servo drive are connected to each other.



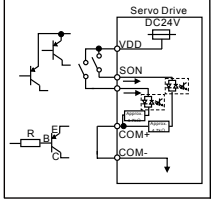
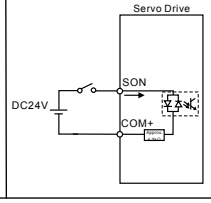
NOTE:
**1. 200W and below drives do not provide built-in regenerative resistor.*
**2. The brake coil has no polarity.*
**3. Please refer to SINK / SOURCE modes*

Use a relay or open-collector transistor to input signal

NPN transistor with multiple emitter fingers (SINK Mode)

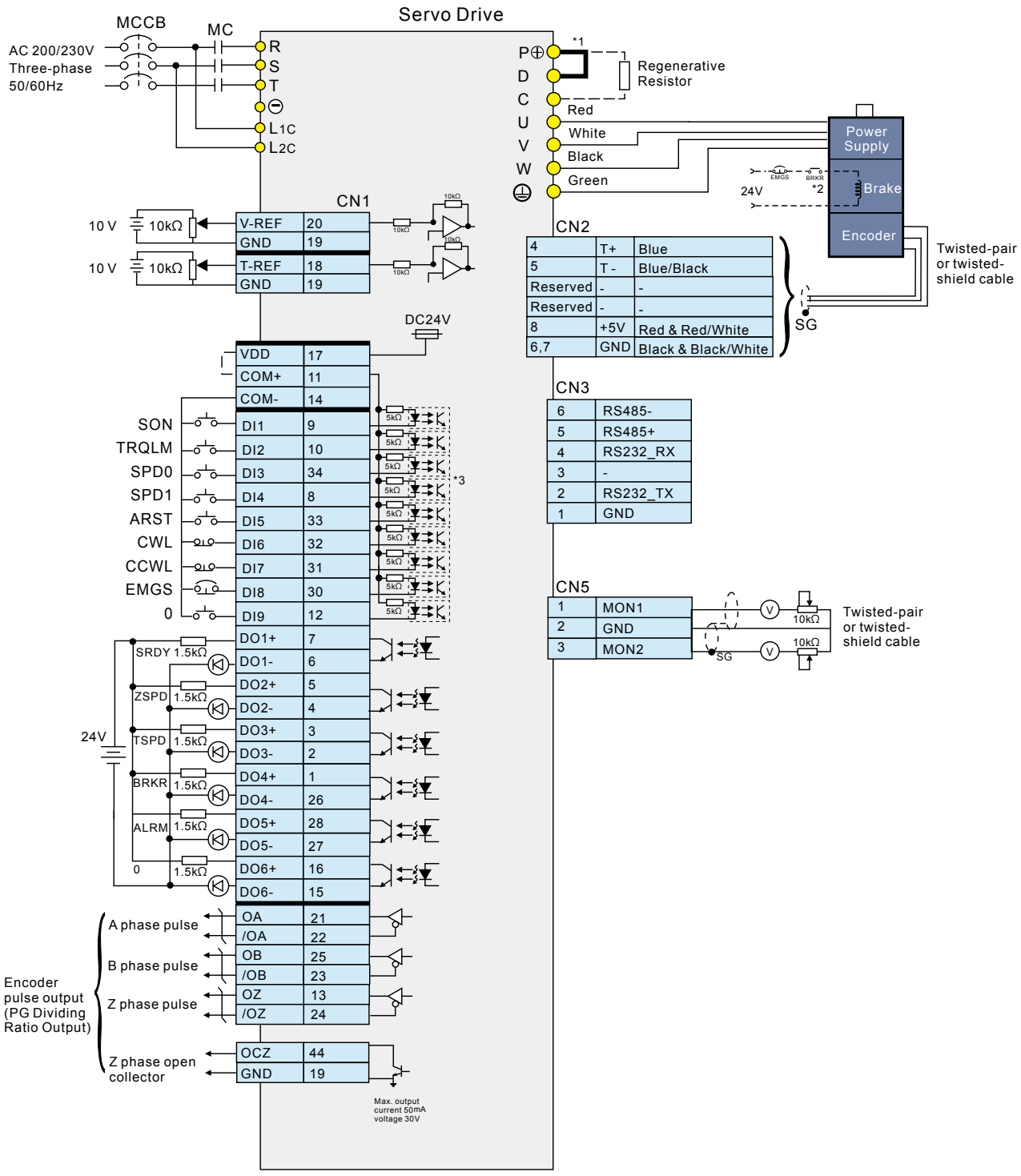
Wiring of DI signal, for the use of internal power supply	Wiring of DI signal, for the use of external power supply, inductive load
	

PNP transistor with multiple emitter fingers(SOURCE Mode)

Wiring of DI signal, for the use of internal power supply	Wiring of DI signal, for the use of external power supply
	

WARNING Caution: Do not use dual power supply. Failure to observe this caution may damage the servo drive.

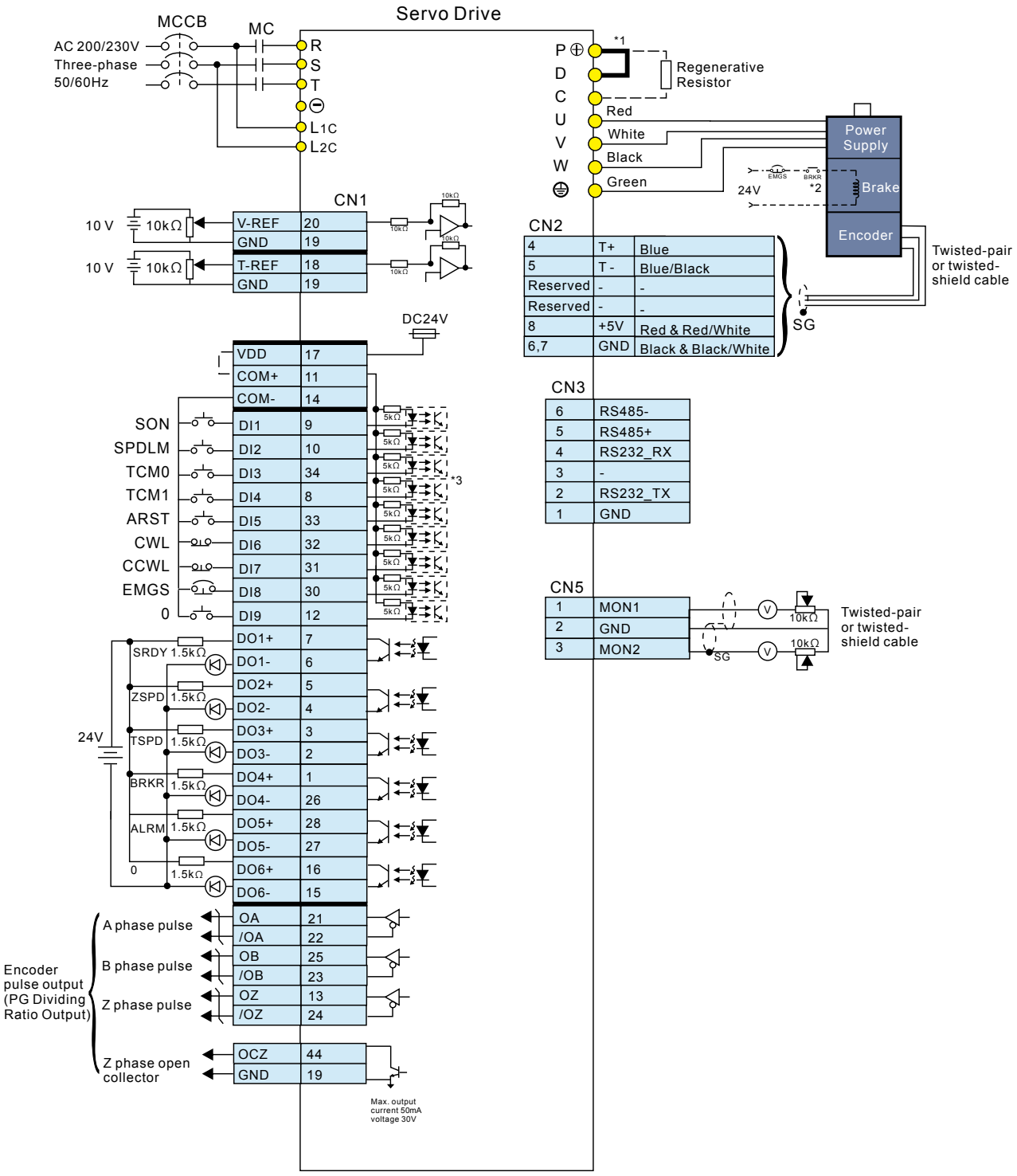
Speed (S) Control Mode



NOTE:
**1. 200W and below drives do not provide built-in regenerative resistor.*
**2. The brake coil has no polarity.*
**3. Please refer to SINK / SOURCE modes*

Wiring

Torque (T) Control Mode



NOTE:
*1. 200W and below drives do not provide built-in regenerative resistor.
*2. The brake coil has no polarity.
*3. Please refer to SINK / SOURCE modes

Selection of Regenerative Resistor

Servo Drive (kW)	Recommended Specifications for Built-in Regenerative Resistor		The capacity of built-in regenerative resistor (Watt)	Min. Allowable Resistance (Ohm)
	Resistance (Ohm) (parameter P1-52)	Capacity (Watt) (parameter P1-53)		
0.1	--	--	--	60Ω
0.2	--	--	--	60Ω
0.4	100Ω	60W	30W	60Ω
0.75	100Ω	60W	30W	60Ω
1.0	40Ω	60W	30W	30Ω
1.5	40Ω	60W	30W	30Ω
2.0	20Ω	100W	50W	15Ω
3.0	20Ω	100W	50W	15Ω

Note:
1) 100W ~ 200W of B2 servo drives have no built-in regenerative resistor.
2) When the fault, ALE05 (Regeneration Error) occurs, please increase the regenerative resistor capacity or decrease the regenerative resistor resistance (the regenerative resistor resistance should not be less than the minimum allowable resistance listed in the above table.)
3) If the issue persists, please purchase a regenerative resistor module.
4) When connecting to a regenerative resistor in parallel, make sure that the total resistance value of the regenerative resistors is not less than the minimum allowable resistance listed in the above table.

IEC: International Electrotechnical Commission
EN: Europaischen Normen
EMC: Electromagnetic Compatibility
IP: Ingress Protection Ratings

Specifications

ASDA-B2 Series			100 W	200 W	400 W	750 W	1 kW	1.5 kW	2 kW	3 kW
			01	02	04	07	10	15	20	30
Power Supply	Phase / Voltage		Three-phase 170 ~ 255 V_{AC} , 50/60 Hz ±5%						Three - phase 170 ~ 255 V_{AC}, 50/60 Hz ±5%	
			Single-phase 200 ~ 255 V_{AC} , 50/60 Hz ±5%							
	Input Current (3PH) (Units: Arms)		0.39	1.11	1.86	3.66	4.68	5.9	8.76	9.83
	Input Current (1PH) (Units: Arms)		0.69	1.92	4.5	6.78	8.88	10.3	-	-
	Continuous Output Current (Units: Arms)		0.9	1.55	2.6	5.1	7.3	8.3	13.4	19.4
Cooling System			Natural Air Circulation				Fan Cooling			
Encoder Resolution			17-bit (160,000 p/rev)							
Main Circuit Control			SVPWM (Space Vector Pulse Width Modulation) Control							
Control Mode			Auto / Manual							
Regenerative Resistor			None	Built-in						
Position Control Mode	Max. Input Pulse Frequency		Transmitted by differential: 500 K (low speed) / 4 Mpps (high-speed) Transmitted by open-collector: 200 Kpps							
	Pulse Type		Pulse + Direction, A phase + B phase, CCW pulse + CW pulse							
	Command Source		External pulse							
	Smoothing Strategy		Low-pass filter							
	E-gear Ratio		Electronic gear N/M multiple N: 1 ~ (2^{26} -1) / M: 1 ~ (2^{31} -1) (1/50 < N/M < 25600)							
	Torque Limit Operation		Set by parameters							
	Feed Forward Compensation		Set by parameters							
Speed Control Mode	Analog Input Command	Voltage Range	0 ~ ±10 V_{DC}							
		Input Resistance	10 KΩ							
		Time Constant	2.2 μs							
	Speed Control Range*1		1:5000							
	Command Source		External analog signal / Internal parameters							
	Smoothing Strategy		Low-pass and S-curve filter							
	Torque Limit		Set by parameters or via analog input							
	Bandwidth		Maximum 550 Hz							
	Speed Accuracy*2		±0.01% at 0 to 100% load fluctuation							
			±0.01% at ±10% power fluctuation							
			±0.01% at 0 °C to 50 °C ambient temperature fluctuation							

Specifications

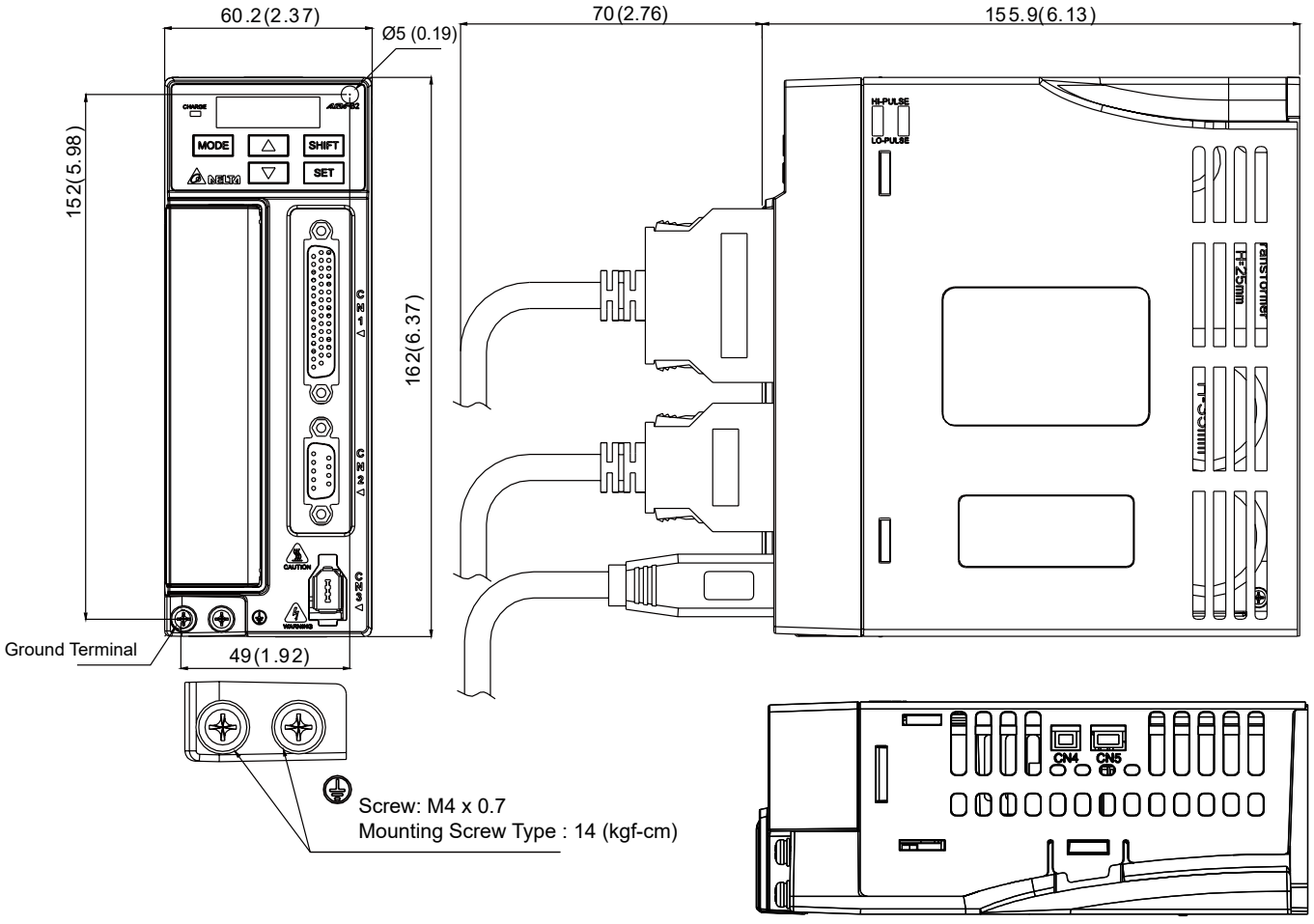
ASDA-B2 Series			100W	200W	400W	750W	1kW	1.5kW	2kW	3kW
			01	02	04	07	10	15	20	30
Torque Control Mode	Analog Input Command	Voltage Range	0 ~ ±10 V_{DC}							
		Input Resistance	10KΩ							
		Time Constant	2.2μs							
	Command Source		External analog signal / Internal parameters							
	Smoothing Strategy		Low-pass filter							
	Speed Limit		Set by parameters or via analog input							
Analog Monitor Output			Monitor signal can set by parameters (Output voltage range: ±8V)							
Digital Input / Output		Input	Servo on, Fault reset, Gain switch, Pulse clear, Zero clamp, Command input reverse control, Torque limit, Speed limit, Speed command selection, Speed/position mode switching, Speed/torque mode switching, Torque/position mode switching, Emergency stop, Positive/negative limit, Forward/reverse operation torque limit, Forward/reverse JOG input, E-gear N selection, Pulse input prohibition							
		Output	Encoder signal output (A, B, Z Line Driver / Z Open collector)							
			Servo on, Servo ready, Zero speed, Target speed reached, Target position reached, Torque limiting, Servo alarm, Brake control, Early warning for overload, Servo warning							
Protective Functions			Over current, Overvoltage, Under voltage, Overheat, Excessive speed deviation, Excessive position deviation, Encoder error, Emergency stop, Communication error, Short-circuit protection of terminal U, V, W and CN1, CN2, CN3							
Communication Interface			RS-232 / RS-485							
Environment	Installation Site		Indoor location (avoid direct sunlight), no corrosive liquid and gas (avoid oil mist, flammable gas, dust)							
	Altitude		Altitude 2000m or lower above sea level							
	Atmospheric Pressure		86kPa ~ 106kPa							
	Operating Temperature		0°C ~ 55°C (If operating temperature is above 45°C, forced cooling will be required)							
	Storage Temperature		-20°C ~ 65°C (-4°F to 149°F)							
	Humidity		0 to 90% (non-condensing)							
	Vibration		Under 20Hz, 9.80665m/s^2 (1G), 20 ~ 50Hz 5.88m/s^2 (0.6G)							
	IP Rating		IP20							
	Power System		TN System*3							
	Certifications		IEC/EN 61800-5-1 CE c UL US LISTED							

Footnote:
*1. When it is in rated load, the speed ratio is: the minimum speed (smooth operation) / rated speed.
*2. When the command is the rated speed, the velocity correction ratio is: (rotational speed with no load - rotational speed with full load) / rated speed.
*3. TN system: The neutral point of the power system connects to the ground directly. The exposed metal components connect to the ground via the protective earth conductor.

Dimensions

ASD-B2-0121
ASD-B2-0221
ASD-B2-0421
(100W / 200W / 400W)

Weight
1.07 (2.36)

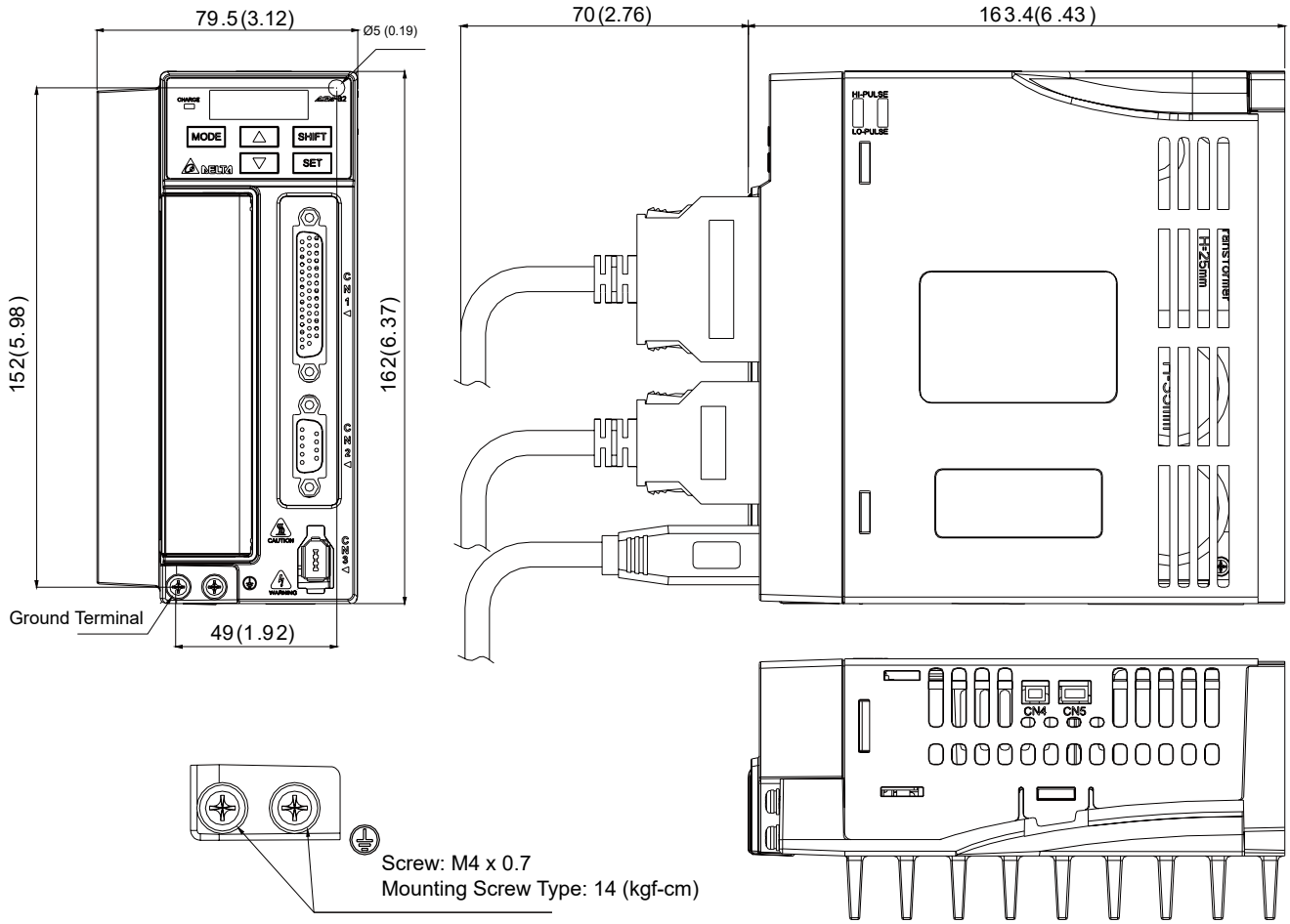


NOTE

1) Dimensions are in millimeters (inches); Weights are in kilograms (kg) and pounds (lbs).
2) Dimensions and weights of the servo drive may be updated without prior notice.

ASD-B2-0721
(750W)

Weight
1.54 (3.40)



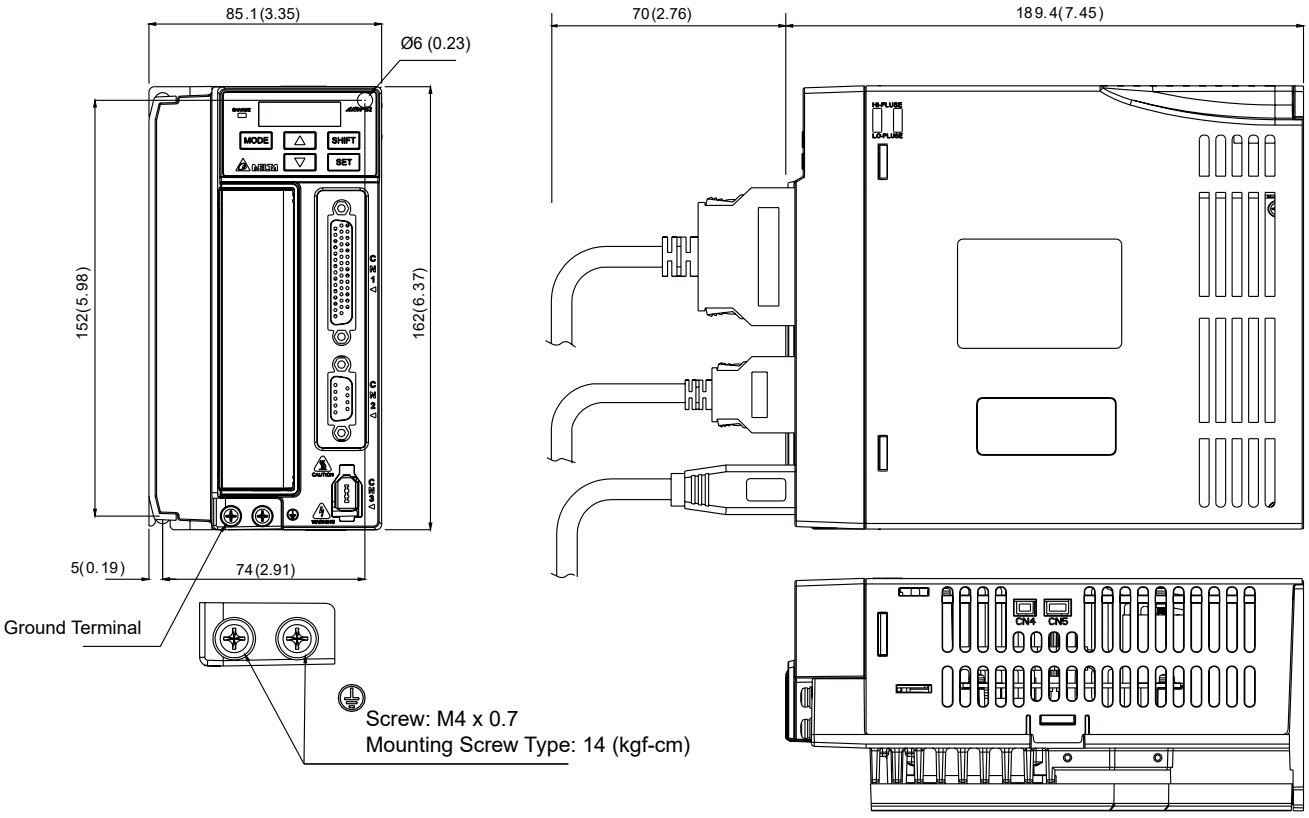
NOTE

1) Dimensions are in millimeters (inches); Weights are in kilograms (kg) and pounds (lbs).
2) Dimensions and weights of the servo drive may be updated without prior notice.

Dimensions

ASD-B2-1021
ASD-B2-1521
(1kW / 1.5kW)

Weight
1.72 (3.79)

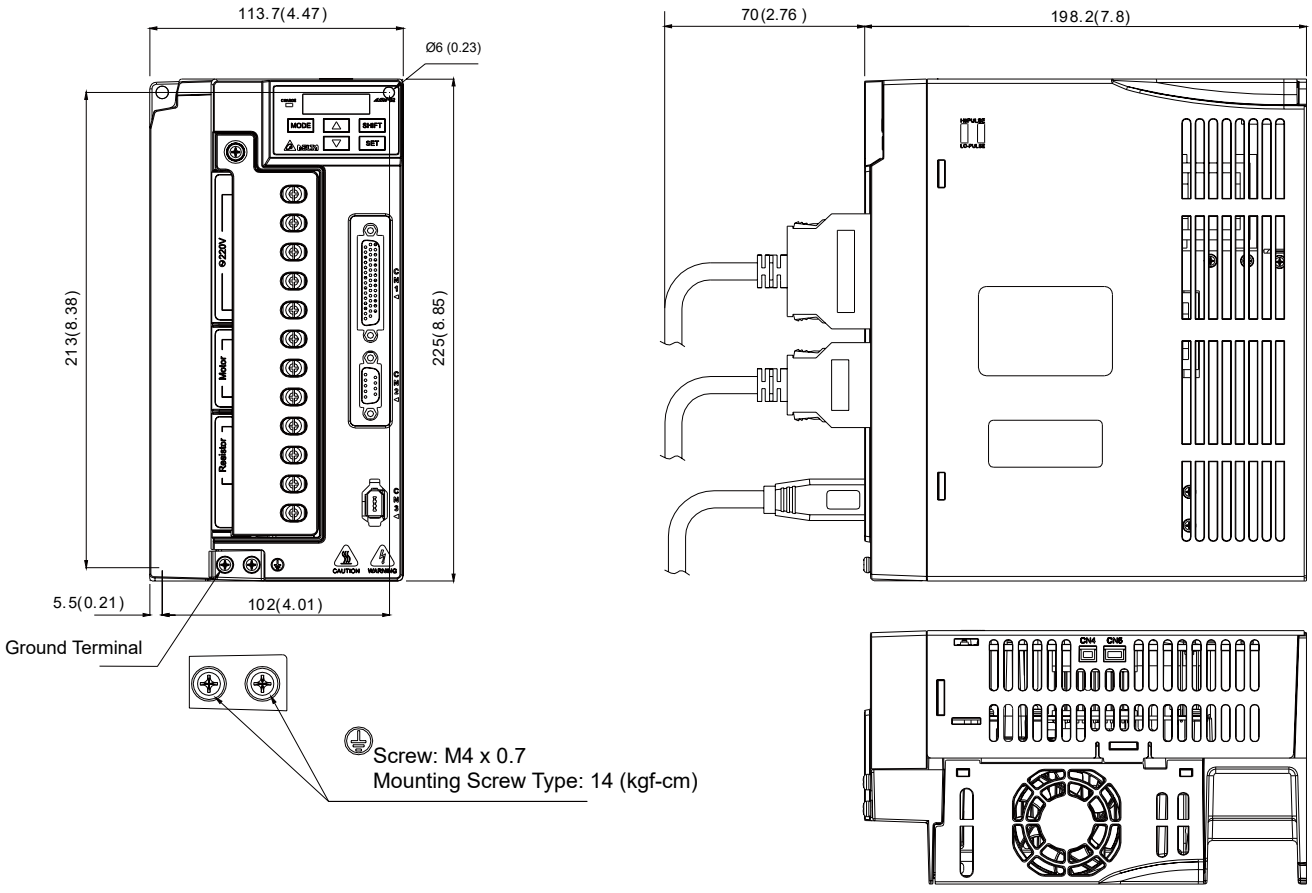


NOTE

1) Dimensions are in millimeters (inches); Weights are in kilograms (kg) and pounds (lbs).
2) Dimensions and weights of the servo drive may be updated without prior notice.

ASD-B2-2023
ASD-B2-3023
(2kW / 3kW)

Weight
2.67 (5.88)



NOTE

1) Dimensions are in millimeters (inches); Weights are in kilograms (kg) and pounds (lbs).
2) Dimensions and weights of the servo drive may be updated without prior notice.

Servo Motor Specifications

Low Inertia Series

Model: ECMA Series	C△04	C△06		C△08		C△09		C△10		C△13
	01	02	04□S	04	07	07	10	10	20	30
Rated power (kW)	0.1	0.2	0.4	0.4	0.75	0.75	1.0	1.0	2.0	3.0
Rated torque (N-m)*1	0.32	0.64	1.27	1.27	2.39	2.39	3.18	3.18	6.37	9.55
Maximum torque (N-m)	0.96	1.92	3.82	3.82	7.16	7.14	8.78	9.54	19.11	28.65
Rated speed (r/min)	3000					3000		3000		3000
Maximum speed (r/min)	5000					3000		5000		4500
Rated current (A)	0.90	1.55	2.6	2.6	5.1	3.66	4.25	7.3	12.05	17.2
Maximum current (A)	2.70	4.65	7.8	7.8	15.3	11	12.37	21.9	36.15	47.5
Power rating (kW/s)	27.7	22.4	57.6	24.0	50.4	29.6	38.6	38.1	90.6	71.8
Rotor inertia (x10-4kg-m^2)(without brake)	0.037	0.177	0.277	0.68	1.13	1.93	2.62	2.65	4.45	12.7
Mechanical constant (ms)	0.75	0.80	0.53	0.74	0.63	1.72	1.20	0.74	0.61	1.11
Torque constant-KT (N-m/A)	0.36	0.41	0.49	0.49	0.47	0.65	0.75	0.44	0.53	0.557
Voltage constant-KE(mV/(r/min)	13.6	16	17.4	18.5	17.2	24.2	27.5	16.8	19.2	20.98
Armature resistance (Ohm)	9.30	2.79	1.55	0.93	0.42	1.34	0.897	0.20	0.13	0.0976
Armature inductance (mH)	24.0	12.07	6.71	7.39	3.53	7.55	5.7	1.81	1.50	1.21
Electric constant (ms)	2.58	4.3	4.3	7.96	8.36	5.66	6.35	9.3	11.4	12.4
Insulation class	Class A (UL), Class B (CE)									
Insulation resistance	>100 MΩ, 500 V_{DC}									
Insulation strength	1.8k V_{AC}, 1 sec									
Weight (kg) (without brake)	0.5	1.2	1.6	2.1	3.0	2.9	3.8	4.3	6.2	7.8
Weight (kg) (with brake)	0.8	1.5	2.0	2.9	3.8	3.69	5.5	4.7	7.2	9.2
Max. radial shaft load (N)	78.4	196	196	245	245	245	245	490	490	490
Max. thrust shaft load (N)	39.2	68	68	98	98	98	98	98	98	98
Power rating (kW/s) (with brake)	25.6	21.3	53.8	22.1	48.4	29.3	37.9	30.4	82	65.1
Rotor inertia (x10-4kg-m^2) (with brake)	0.04	0.192	0.30	0.73	1.18	1.95	2.67	3.33	4.95	14.0
Mechanical constant (ms) (with brake)	0.81	0.85	0.57	0.78	0.65	1.74	1.22	0.93	0.66	1.22
Brake holding torque [Nt-m (min)]*2	0.3	1.3	1.3	2.5	2.5	2.5	2.5	8	8	10.0
Brake power consumption (at 20°C) [W]	7.3	6.5	6.5	8.2	8.2	8.2	8.2	18.7	18.7	19.0
Brake release time [ms (Max)]	5	10	10	10	10	10	10	10	10	10
Brake pull-in time [ms (Max)]	25	70	70	70	70	70	70	70	70	70
Vibration grade (μm)	15									
Operating temperature (°C)	0°C to 40°C (32°F to 104°F)									
Storage temperature (°C)	-10°C to 80°C (-14°F to 176°F)									
Operating humidity	20 to 90% RH (non-condensing)									
Storage humidity	20 to 90% RH (non-condensing)									
Vibration capacity	2.5G									
IP Rating	IP65 (when waterproof connectors are used, or when an oil seal is used to be fitted to the rotating shaft (an oil seal model is used))									
Certifications	CE cULus									

Footnote:
* 1 Rate torque values are continuous permissible values at 0~40°C ambient temperature when attaching with the sizes of heatsinks listed below:
ECMA-__04 / 06 / 08 : 250mm × 250mm × 6mm
ECMA-__10 : 300mm × 300mm × 12mm
ECMA-__13 : 400mm × 400mm × 20mm
ECMA-__18 : 550mm × 550mm × 30mm
ECMA-__22 : 650mm × 650mm × 30mm
Material type : Aluminum F40, F60, F80, F100, F130, F180, F220
*2 The holding brake is used to hold the motor shaft, not for braking the rotation. Never use it for decelerating or stopping the machine.

Servo Motor Specifications

Medium / High Inertia Series

Model: ECMA Series	E△13				E△18			G△13		
	05	10	15	20	20	30	35	03	06	09
Rated power (kW)	0.5	1.0	1.5	2.0	2.0	3.0	3.5	0.3	0.6	0.9
Rated torque (N-m)*1	2.39	4.77	7.16	9.55	9.55	14.32	16.71	2.86	5.73	8.59
Maximum torque (N-m)	7.16	14.3	21.48	28.65	28.65	42.97	50.13	8.59	17.19	21.48
Rated speed (r/min)	2000							1000		
Maximum speed (r/min)	3000							2000		
Rated current (A)	2.9	5.6	8.3	11.01	11.22	16.1	19.2	2.5	4.8	7.5
Maximum current (A)	8.7	16.8	24.9	33.03	33.66	48.3	57.6	7.5	14.4	22.5
Power rating (kW/s)	7.0	27.1	45.9	62.5	26.3	37.3	50.8	10.0	39.0	66.0
Rotor inertia (x10-4kg-m^2)(without brake)	8.17	8.41	11.18	14.59	34.68	54.95	54.95	8.17	8.41	11.18
Mechanical constant (ms)	1.91	1.51	1.10	0.96	1.62	1.06	1.08	1.84	1.40	1.06
Torque constant-KT (N-m/A)	0.83	0.85	0.87	0.87	0.85	0.89	0.87	1.15	1.19	1.15
Voltage constant-KE(mV/(r/min)	30.9	31.9	31.8	31.8	31.4	32.0	32	42.5	43.8	41.6
Armature resistance (Ohm)	0.57	0.47	0.26	0.174	0.119	0.052	0.052	1.06	0.82	0.43
Armature inductance (mH)	7.39	5.99	4.01	2.76	2.84	1.38	1.38	14.29	11.12	6.97
Electric constant (ms)	12.96	12.88	15.31	15.86	23.87	26.39	26.39	13.55	13.50	16.06
Insulation class	Class A (UL), Class B (CE)									
Insulation resistance	>100 MΩ, 500 V_{DC}									
Insulation strength	1.8k V_{AC}, 1 sec									
Weight (kg) (without brake)	6.8	7.0	7.5	7.8	13.5	18.5	18.5	6.8	7.0	7.5
Weight (kg) (with brake)	8.2	8.4	8.9	9.2	17.5	22.5	22.5	8.2	8.4	8.9
Max. radial shaft load (N)	490	490	490	490	1176	1470	490	490	490	490
Max. thrust shaft load (N)	98	98	98	98	490	490	98	98	98	98
Power rating (kW/s) (with brake)	6.4	24.9	43.1	57.4	24.1	35.9	48.9	9.2	35.9	62.1
Rotor inertia (x10-4kg-m^2) (with brake)	8.94	9.14	11.90	15.88	37.86	57.06	57.06	8.94	9.14	11.9
Mechanical constant (ms) (with brake)	2.07	1.64	1.19	1.05	1.77	1.10	1.12	2.0	1.51	1.13
Brake holding torque [Nt-m (min)]*2	10.0	10.0	10.0	10.0	25.0	25.0	25.0	10.0	10.0	10.0
Brake power consumption (at 20°C) [W]	19.0	19.0	19.0	19.0	20.4	20.4	20.4	19.0	19.0	19.0
Brake release time [ms (Max)]	10	10	10	10	10	10	10	10	10	10
Brake pull-in time [ms (Max)]	70	70	70	70	70	70	70	70	70	70
Vibration grade (μm)	15									
Operating temperature (°C)	0°C to 40°C (32°F to 104°F)									
Storage temperature (°C)	-10°C to 80°C (-14°F to 176°F)									
Operating humidity	20 to 90% RH (non-condensing)									
Storage humidity	20 to 90% RH (non-condensing)									
Vibration capacity	2.5G									
IP Rating	IP65 (when waterproof connectors are used, or when an oil seal is used to be fitted to the rotating shaft (an oil seal model is used))									
Certifications	CE cULus									

Footnote:
* 1 Rate torque values are continuous permissible values at 0~40°C ambient temperature when attaching with the sizes of heatsinks listed below:
ECMA-__04 / 06 / 08 : 250 mm × 250 mm × 6 mm
ECMA-__10 : 300 mm × 300 mm × 12 mm
ECMA-__13 : 400 mm × 400 mm × 20 mm
ECMA-__18 : 550 mm × 550 mm × 30 mm
ECMA-__22 : 650 mm × 650 mm × 30 mm
Material type : Aluminum F40, F60, F80, F100, F130, F180, F220
*2 The holding brake is used to hold the motor shaft, not for braking the rotation. Never use it for decelerating or stopping the machine.

Servo Motor Specifications

Medium high / High Inertia Series

Model: ECMA Series	FΔ13			FΔ18
	08	13	18	30
Rated power (kW)	0.85	1.3	1.8	3.0
Rated torque (N-m)*1	5.41	8.34	11.48	19.10
Maximum torque (N-m)	13.8	23.3	28.7	57.29
Rated speed (r/min)	1500			
Maximum speed (r/min)	3000			
Rated current (A)	7.1	12.6	13	19.4
Maximum current (A)	19.4	38.6	36	58.2
Power rating (kW/s)	21.52	34.78	52.93	66.4
Rotor inertia (x10-4kg-m^2)(without brake)	13.6	20	24.9	54.95
Mechanical constant (ms)	2.43	1.62	1.7	1.28
Torque constant-KT (N-m/A)	0.76	0.66	0.88	0.98
Voltage constant-KE(mV/(r/min)	29.2	24.2	32.2	35.0
Armature resistance (Ohm)	0.38	0.124	0.185	0.077
Armature inductance (mH)	4.77	1.7	2.6	1.27
Electric constant (ms)	12.55	13.71	14.05	16.5
Insulation class	Class A (UL), Class B (CE)			
Insulation resistance	>100 MΩ, 500 V_{DC}			
Insulation strength	1.8k V_{AC}, 1 sec			
Weight (kg) (without brake)	8.6	9.4	10.5	18.5
Weight (kg) (with brake)	10.0	10.8	11.9	22.5
Max. radial shaft load (N)	490	490	490	1470
Max. thrust shaft load (N)	98	98	98	490
Power rating (kW/s) (with brake)	19.78	32.66	50.3	63.9
Rotor inertia (x10-4kg-m^2) (with brake)	14.8	21.3	26.2	57.06
Mechanical constant (ms) (with brake)	2.65	1.73	1.79	1.33
Brake holding torque [Nt-m (min)]*2	10.0	10.0	10.0	25.0
Brake power consumption (at 20°C) [W]	19.0	19.0	19.0	20.4
Brake release time [ms (Max)]	10	10	10	10
Brake pull-in time [ms (Max)]	70	70	70	70
Vibration grade (μm)	15			
Operating temperature (°C)	0°C~ 40°C			
Storage temperature (°C)	-10°C to 80°C (-14°F to 176°F)			
Operating humidity	20 to 90% RH (non-condensing)			
Storage humidity	20 to 90% RH (non-condensing)			
Vibration capacity	2.5G			
IP Rating	IP65 (when waterproof connectors are used, or when an oil seal is used to be fitted to the rotating shaft (an oil seal model is used))			
Certifications	CE cULus			

Footnote:
*1 Rate torque values are continuous permissible values at 0 ~ 40° C ambient temperature when attaching with the sizes of heatsinks listed below:
ECMA-__04 / 06 / 08 : 250mm x 250mm x 6mm
ECMA-__10 : 300mm x 300mm x 12mm
ECMA-__13 : 400mm x 400mm x 20mm
ECMA-__18 : 550mm x 550mm x 30mm
ECMA-__22 : 650mm x 650mm x 35mm
Material type : Aluminum – F40, F60, F80, F100, F130, F180
*2 The holding brake is used to hold the motor shaft, not for braking the rotation. Never use it for decelerating or stopping the machine.

Servo Motor Specifications

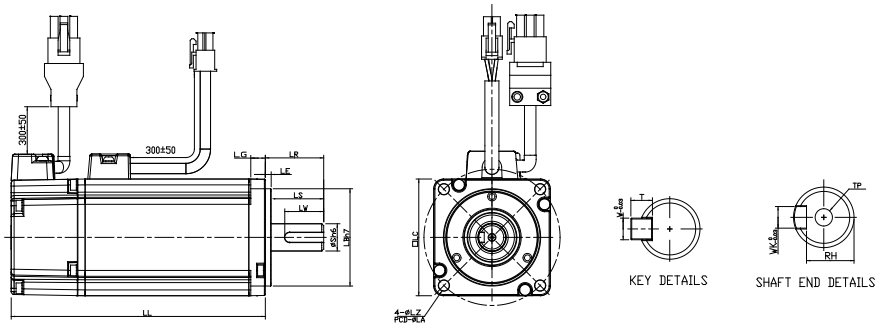
High Inertia Series

Model: ECMA Series	CΔ06	CΔ08
	04 □ H	07 □ H
Rated power (kW)	0.4	0.75
Rated torque (N-m)*1	1.27	2.39
Maximum torque (N-m)	3.82	7.16
Rated speed (r/min)	3000	
Maximum speed (r/min)	5000	
Rated current (A)	2.6	5.1
Maximum current (A)	7.8	15.3
Power rating (kW/s)	21.7	19.63
Rotor inertia (x10-4kg-m^2)(without brake)	0.743	2.91
Mechanical constant (ms)	1.42	1.6
Torque constant-KT (N-m/A)	0.49	0.47
Voltage constant-KE(mV/(r/min)	17.4	17.2
Armature resistance (Ohm)	1.55	0.42
Armature inductance (mH)	6.71	3.53
Electric constant (ms)	4.3	8.36
Insulation class	Class A (UL), Class B (CE)	
Insulation resistance	>100 MΩ, 500 V_{DC}	
Insulation strength	1.8k V_{AC}, 1 sec	
Weight (kg) (without brake)	1.8	3.4
Weight (kg) (with brake)	2.2	3.9
Max. radial shaft load (N)	196	245
Max. thrust shaft load (N)	68	98
Power rating (kW/s) (with brake)	21.48	19.3
Rotor inertia (x10-4kg-m^2) (with brake)	0.751	2.96
Mechanical constant (ms) (with brake)	1.43	1.62
Brake holding torque [Nt-m (min)]*2	1.3	2.5
Brake power consumption (at 20 °C) [W]	6.5	8.2
Brake release time [ms (Max)]	10	10
Brake pull-in time [ms (Max)]	70	70
Vibration grade (μm)	15	
Operating temperature (°C)	0 °C~ 40 °C	
Storage temperature (°C)	-10 °C to 80 °C (-14 °F to 176 °F)	
Operating humidity	20 to 90% RH (non-condensing)	
Storage humidity	20 to 90% RH (non-condensing)	
Vibration capacity	2.5 G	
IP Rating	IP65 (when waterproof connectors are used, or when an oil seal is used to be fitted to the rotating shaft (an oil seal model is used))	
Certifications	CE cULus	

Footnote:
*1 Rate torque values are continuous permissible values at 0 ~ 40° C ambient temperature when attaching with the sizes of heatsinks listed below:
ECMA-__04 / 06 / 08 : 250mm x 250mm x 6mm
ECMA-__10 : 300mm x 300mm x 12mm
ECMA-__13 : 400mm x 400mm x 20mm
ECMA-__18 : 550mm x 550mm x 30mm
ECMA-__22 : 650mm x 650mm x 35mm
Material type : Aluminum – F40, F60, F80, F100, F130, F180
*2 The holding brake is used to hold the motor shaft, not for braking the rotation. Never use it for decelerating or stopping the machine.

Servo Motor Dimensions

Motors - Frame Size 86mm and below



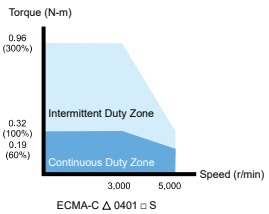
Units: mm

Model	C △ 0401 □ S	C △ 0602 □ S	C △ 0604 □ S	C △ 0604 □ H	C △ 0804 □ 7	C △ 0807 □ S	C △ 0807 □ H	C △ 0907 □ S	C △ 0910 □ S
LC	40	60	60	60	80	80	80	86	86
LZ	4.5	5.5	5.5	5.5	6.6	6.6	6.6	6.6	6.6
LA	46	70	70	70	90	90	90	100	100
S	8 ($^{+0}_{-0.009}$)	14 ($^{+0}_{-0.011}$)	14 ($^{+0}_{-0.011}$)	14 ($^{+0}_{-0.011}$)	14 ($^{+0}_{-0.011}$)	19 ($^{+0}_{-0.013}$)	19 ($^{+0}_{-0.013}$)	16 ($^{+0}_{-0.011}$)	16 ($^{+0}_{-0.011}$)
LB	30 ($^{+0}_{-0.021}$)	50 ($^{+0}_{-0.025}$)	50 ($^{+0}_{-0.025}$)	50 ($^{+0}_{-0.025}$)	70 ($^{+0}_{-0.030}$)	70 ($^{+0}_{-0.030}$)	70 ($^{+0}_{-0.030}$)	80 ($^{+0}_{-0.030}$)	80 ($^{+0}_{-0.030}$)
LL (without brake)	100.6	105.5	130.7	145.8	112.3	138.3	154.8	130.2	153.2
LL (with brake)	136.8	141.6	166.8	176.37	152.8	178	187.8	161.3	184.3
LS	20	27	27	27	27	32	32	30	30
LR	25	30	30	30	30	35	35	35	35
LE	2.5	3	3	3	3	3	3	3	3
LG	5	7.5	7.5	7.5	8	8	8	8	8
LW	16	20	20	20	20	25	25	20	20
RH	6.2	11	11	11	11	15.5	15.5	13	13
WK	3	5	5	5	5	6	6	5	5
W	3	5	5	5	5	6	6	5	5
T	3	5	5	5	5	6	6	5	5
TP	M3 Depth 8	M4 Depth 15	M4 Depth 15	M4 Depth 15	M4 Depth 15	M6 Depth 20	M6 Depth 20	M5 Depth 15	M5 Depth 15

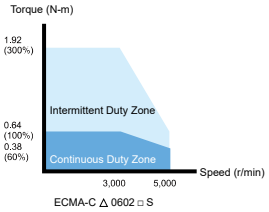
NOTE

1) Dimensions are in millimeters. Actual measured values are in metric units.
2) Dimensions of the servo motor may be updated without prior notice.
3) The boxes (□) in the model names represent shaft end/brake or the number of oil seal.
4) The boxes (△) in the model names represent encoder types (△ =1: Incremental encoder, 20-bit; △ =2: Incremental encoder, 17-bit).

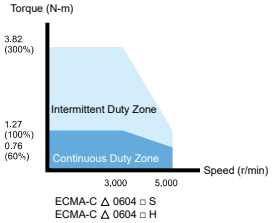
Speed-Torque Curves (T-N Curves)



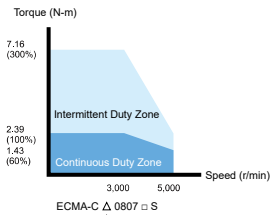
ECMA-C △ 0401 □ S



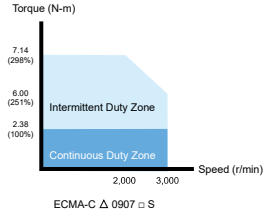
ECMA-C △ 0602 □ S



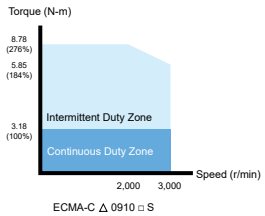
ECMA-C △ 0604 □ S
ECMA-C △ 0604 □ H
ECMA-C △ 0804 □ 7



ECMA-C △ 0807 □ S
ECMA-C △ 0807 □ H

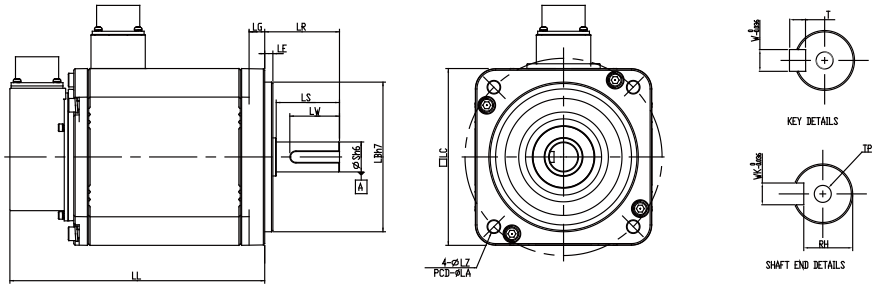


ECMA-C △ 0907 □ S



ECMA-C △ 0910 □ S

Motors - Frame Size 100mm ~ 130mm



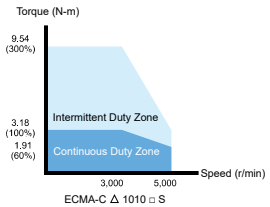
Units: mm

Model	C △ 1010 □ S	C △ 1020 □ S	C △ 1330 □ 4	E △ 1305 □ S	E △ 1310 □ S	E △ 1315 □ S
LC	100	100	130	130	130	130
LZ	9	9	9	9	9	9
LA	115	115	145	145	145	145
S	22 ($^{+0}_{-0.013}$)	22 ($^{+0}_{-0.013}$)	24 ($^{+0}_{-0.013}$)	22 ($^{+0}_{-0.013}$)	22 ($^{+0}_{-0.013}$)	22 ($^{+0}_{-0.013}$)
LB	95 ($^{+0}_{-0.035}$)	95 ($^{+0}_{-0.035}$)	110 ($^{+0}_{-0.035}$)	110 ($^{+0}_{-0.035}$)	110 ($^{+0}_{-0.035}$)	110 ($^{+0}_{-0.035}$)
LL (不帶煞車)	153.3	199	187.5	147.5	147.5	167.5
LL (帶煞車)	192.5	226	216	183.5	183.5	202
LS	37	37	47	47	47	47
LR	45	45	55	55	55	55
LE	5	5	6	6	6	6
LG	12	12	11.5	11.5	11.5	11.5
LW	32	32	36	36	36	36
RH	18	18	20	18	18	18
WK	8	8	8	8	8	8
W	8	8	8	8	8	8
T	7	7	7	7	7	7
TP	M6 Depth 20	M6 Depth 20	M6 Depth 20	M6 Depth 20	M6 Depth 20	M6 Depth 20

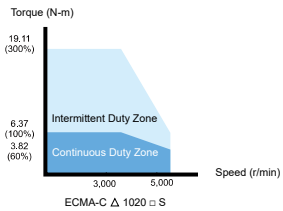
NOTE

1) Dimensions are in millimeters. Actual measured values are in metric units.
2) Dimensions of the servo motor may be updated without prior notice.
3) The boxes (□) in the model names represent shaft end / brake or the number of oil seal.
4) The boxes (△) in the model names represent encoder types (△ =1: Incremental encoder, 20-bit; △ =2: Incremental encoder, 17-bit).

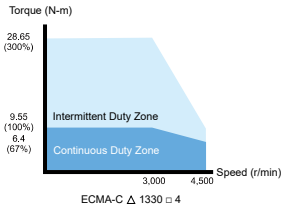
Speed-Torque Curves (T-N Curves)



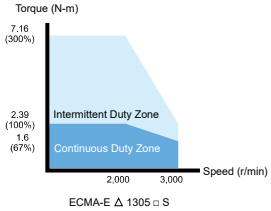
ECMA-C △ 1010 □ S



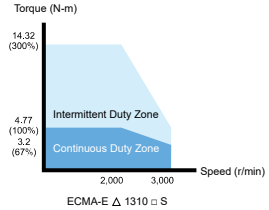
ECMA-C △ 1020 □ S



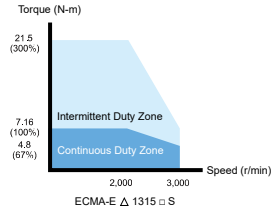
ECMA-C △ 1330 □ 4



ECMA-E △ 1305 □ S



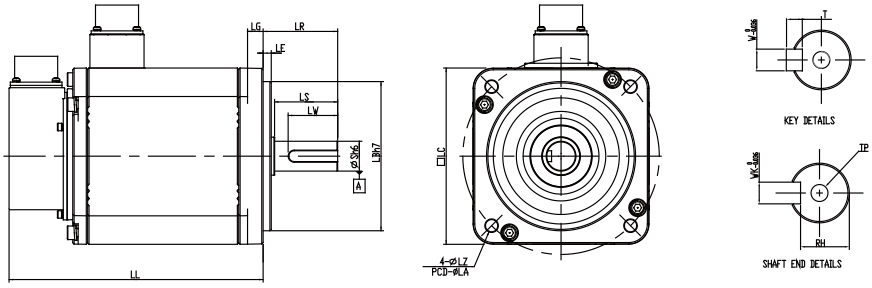
ECMA-E △ 1310 □ S



ECMA-E △ 1315 □ S

Servo Motor Dimensions

Motors - Frame Size 100mm ~ 130mm



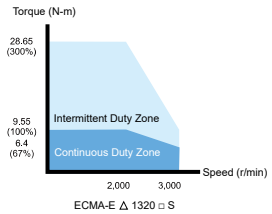
Units: mm

Model	E △ 1320 □ S	F △ 1308 □ S	F △ 1313 □ S	F △ 1318 □ S	G △ 1303 □ S	G △ 1306 □ S	G △ 1309 □ S
LC	130	130	130	130	130	130	130
LZ	9	9	9	9	9	9	9
LA	145	145	145	145	145	145	145
S	22 ($^{+0}_{-0.013}$)	22 ($^{+0}_{-0.013}$)	22 ($^{+0}_{-0.013}$)	22 ($^{+0}_{-0.013}$)	22 ($^{+0}_{-0.013}$)	22 ($^{+0}_{-0.013}$)	22 ($^{+0}_{-0.013}$)
LB	110 ($^{+0}_{-0.035}$)	110 ($^{+0}_{-0.035}$)	110 ($^{+0}_{-0.035}$)	110 ($^{+0}_{-0.035}$)	110 ($^{+0}_{-0.035}$)	110 ($^{+0}_{-0.035}$)	110 ($^{+0}_{-0.035}$)
LL (without brake)	187.5	152.5	187.5	202	147.5	147.5	163.5
LL (with brake)	216	181	216	230.7	183.5	183.5	198
LS	47	47	47	47	47	47	47
LR	55	55	55	55	55	55	55
LE	6	6	6	6	6	6	6
LG	11.5	11.5	11.5	11.5	11.5	11.5	11.5
LW	36	36	36	36	36	36	36
RH	18	18	18	18	18	18	18
WK	8	8	8	8	8	8	8
W	8	8	8	8	8	8	8
T	7	7	7	7	7	7	7
TP	M6 Depth 20	M6 Depth 20	M6 Depth 20	M6 Depth 20	M6 Depth 20	M6 Depth 20	M6 Depth 20

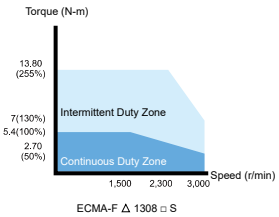
NOTE

1) Dimensions are in millimeters. Actual measured values are in metric units.
2) Dimensions of the servo motor may be updated without prior notice.
3) The boxes (□) in the model names represent shaft end / brake or the number of oil seal.
4) The boxes (△) in the model names represent encoder types (△ =1: Incremental encoder, 20-bit; △ =2: Incremental encoder, 17-bit).

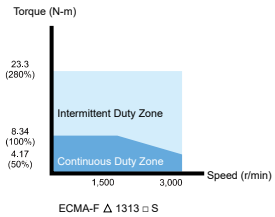
Speed-Torque Curves (T-N Curves)



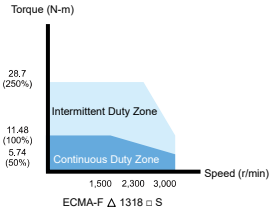
ECMA-E △ 1320 □ S



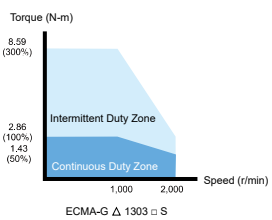
ECMA-F △ 1308 □ S



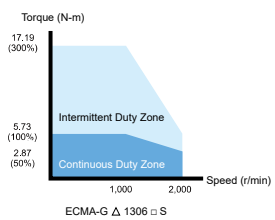
ECMA-F △ 1313 □ S



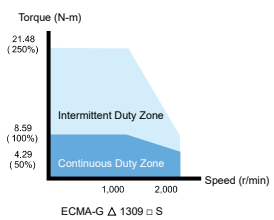
ECMA-F △ 1318 □ S



ECMA-G △ 1303 □ S

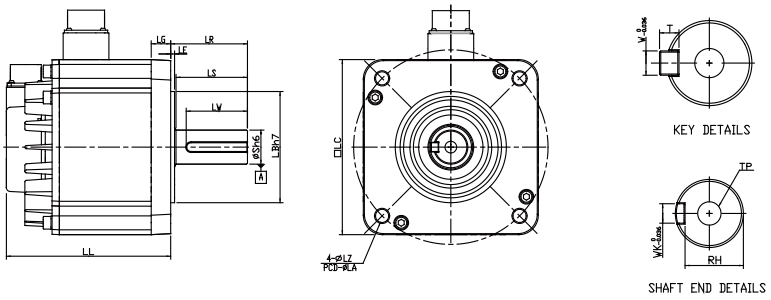


ECMA-G △ 1306 □ S



ECMA-G △ 1309 □ S

Motors - Frame Size 180mm



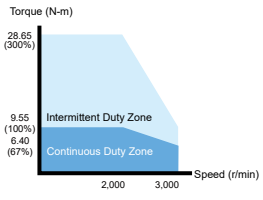
Units: mm

Model	E △ 1820 □ S	E △ 1830 □ S	F △ 1830 □ S	E △ 1835 □ S
LC	180	180	180	180
LZ	13.5	13.5	13.5	13.5
LA	200	200	200	200
S	35 ($^{+0}_{-0.016}$)	35 ($^{+0}_{-0.016}$)	35 ($^{+0}_{-0.016}$)	35 ($^{+0}_{-0.016}$)
LB	114.3 ($^{+0}_{-0.035}$)	114.3 ($^{+0}_{-0.035}$)	114.3 ($^{+0}_{-0.035}$)	114.3 ($^{+0}_{-0.035}$)
LL (without brake)	169	202.1	202.1	202.1
LL (with brake)	203.1	235.3	235.3	235.3
LS	73	73	73	73
LR	79	79	79	79
LE	4	4	4	4
LG	20	20	20	20
LW	63	63	63	63
RH	30	30	30	30
WK	10	10	10	10
W	10	10	10	10
T	8	8	8	8
TP	M12 Depth 25	M12 Depth 25	M12 Depth 25	M12 Depth 25

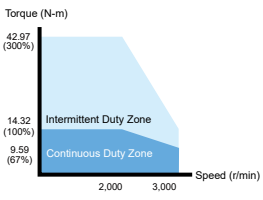
NOTE

1) Dimensions are in millimeters. Actual measured values are in metric units.
2) Dimensions of the servo motor may be updated without prior notice.
3) The boxes (□) in the model names represent shaft end / brake or the number of oil seal.
4) The boxes (△) in the model names represent encoder types (△ =1: Incremental encoder, 20-bit; △ =2: Incremental encoder, 17-bit).

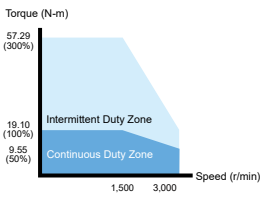
Speed-Torque Curves (T-N Curves)



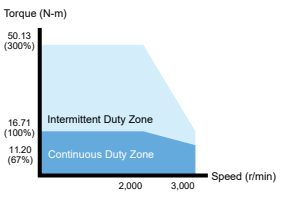
ECMA-E △ 1820 □ S



ECMA-E △ 1830 □ S



ECMA-F △ 1830 □ S



ECMA-E △ 1835 □ S

Optional Accessories

Power Cables

- 3m and 5m standard cables are available.
- Individual connectors are also provided for different demands.
- Two types are selectable: with brake and without brake.

CN1 I/O Connectors

- Used to connect to external (host) controller
- Delta Part Number: ASDBCNDS0044

CN1 Convenient Connector

- Delta Part Number: ASD-IF-DS4444

Encoder Cables

- 3m and 5m standard cables are available.
- Individual connectors are also provided for different demands.

Regenerative Resistors

- Two kinds of regenerative resistors are available, 400W / 40Ω and 1kW / 20Ω.

Terminal Block Modules

- 0.5m connection cable is provided for saving on installation space.
- Delta Part Number: ASD-MDDS4444

RS-485 Connectors

- Used to connect multiple ASDA Series products by RS-485 interface through Modbus serial communication.
- Delta Part Number: ASD-CNIE0B06

ASD-Soft Software
Communication Cables (for PC)

- Delta Part Number: ASD-CNUS0A08

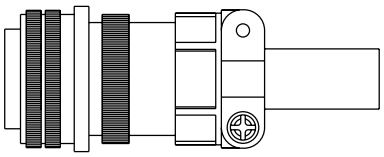
NOTE The figures are for illustration purposes only. Actual models may differ slightly in appearance from illustrations provided.

Optional Accessories

Power Connectors

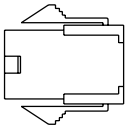
ASDBCAPW0000

ASD-CAPW1000

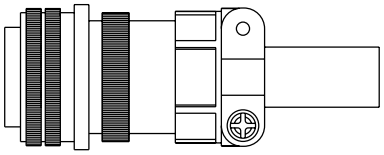


3106A-20-18S

ASDBCAPW0100



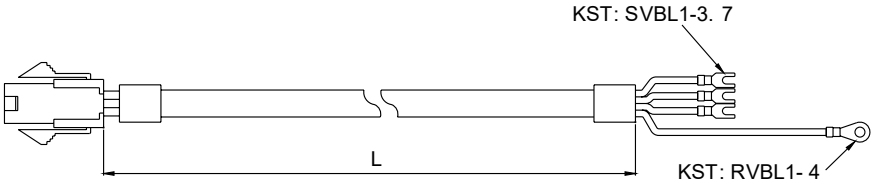
ASD-CAPW2000



3106A-24-11S

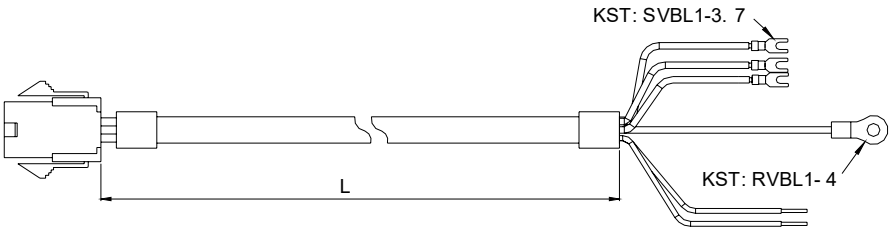
Power Cables

ASDBCAPW0203/0205



Item	Part No.	L	
		mm	inch
1	ASDBCAPW0203	3000 ± 50	118 ± 2
2	ASDBCAPW0205	5000 ± 50	197 ± 2

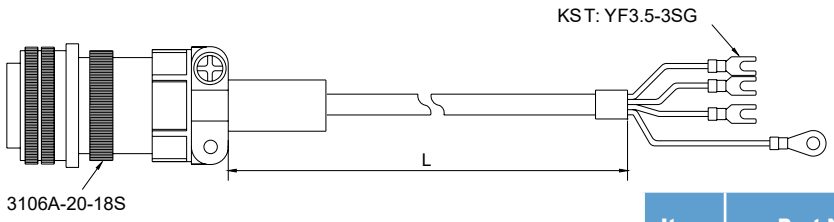
ASDBCAPW0303/0305



Item	Part No.	L	
		mm	inch
1	ASDBCAPW0303	3000 ± 50	118 ± 2
2	ASDBCAPW0305	5000 ± 50	197 ± 2

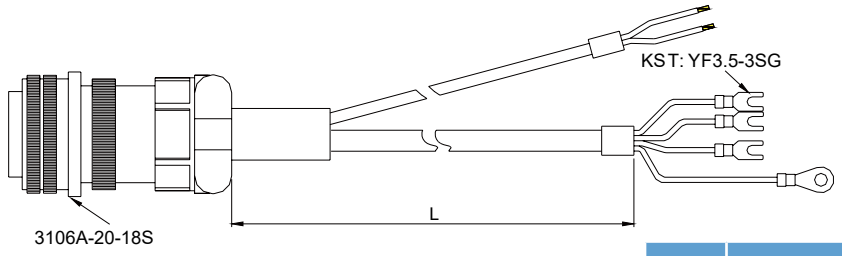
Power Cables

ASDBCAPW1203/1205



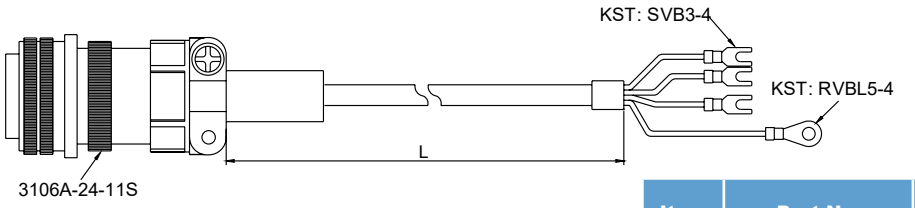
Item	Part No.	Straight	L	
			mm	inch
1	ASDBCAPW1203	3106A-20-18S	3000 ± 50	118 ± 2
2	ASDBCAPW1205	3106A-20-18S	5000 ± 50	197 ± 2

ASDBCAPW1303/1305



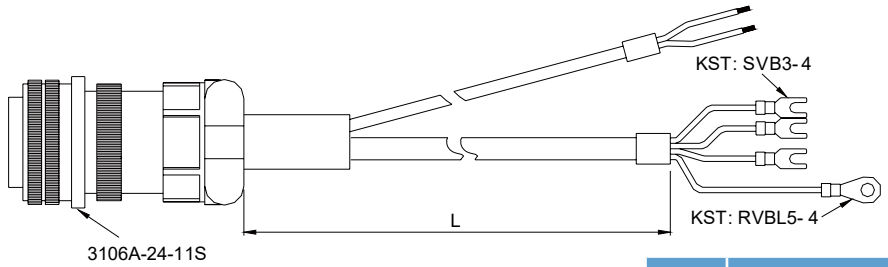
Item	Part No.	Straight	L	
			mm	inch
1	ASDBCAPW1303	3106A-20-18S	3000 ± 50	118 ± 2
2	ASDBCAPW1305	3106A-20-18S	5000 ± 50	197 ± 2

ASD-CAPW2203/2205



Item	Part No.	Straight	L	
			mm	inch
1	ASD-CAPW2203	3106A-24-11S	3000 ± 50	118 ± 2
2	ASD-CAPW2205	3106A-24-11S	5000 ± 50	197 ± 2

ASD-CAPW2303/2305



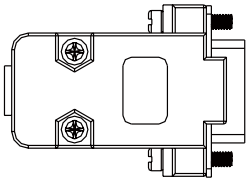
Item	Part No.	Straight	L	
			mm	inch
1	ASD-CAPW2303	3106A-24-11S	3000 ± 50	118 ± 2
2	ASD-CAPW2305	3106A-24-11S	5000 ± 50	197 ± 2

Optional Accessories

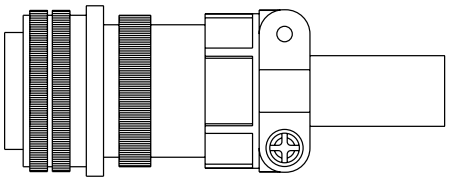
Encoder Connectors

ASDBCAEN0000

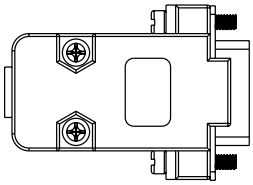
D-SUB Connector 9P



ASDBCAEN1000



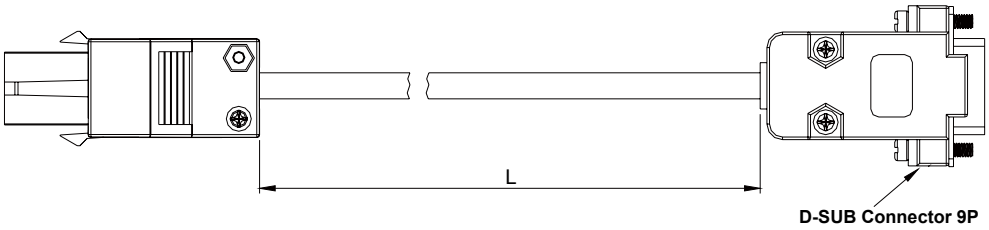
3106A-20-29S



D-SUB Connector 9P

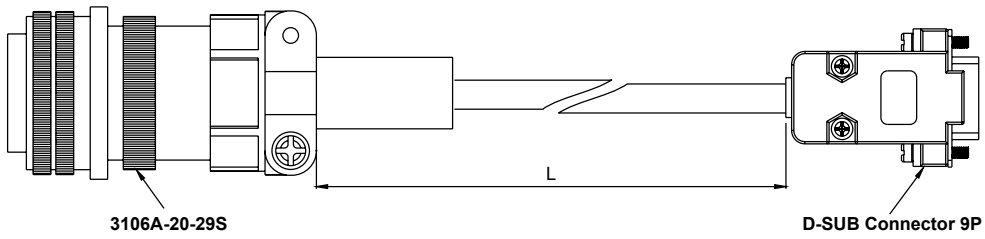
Encoder Cables

ASDBCAEN0003/0005



Item	Part No.	L	
		mm	inch
1	ASDBCAEN0003	3000 ± 50	118 ± 2
2	ASDBCAEN0005	5000 ± 50	197 ± 2

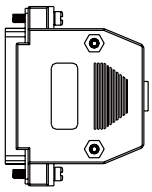
ASDBCAEN1003/1005



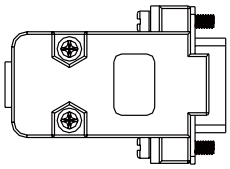
Item	Part No.	Straight	L	
			mm	inch
1	ASDBCAEN1003	3106A-20-29S	3000 ± 50	118 ± 2
2	ASDBCAEN1005	3106A-20-29S	5000 ± 50	197 ± 2

I/O Signal Connector

ASD-BCNDS0044
D-SUB 44 PIN PLUG



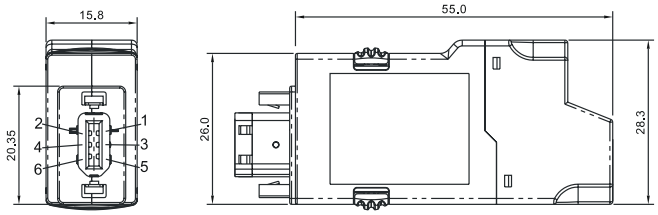
ASDBCAEN1000
D-SUB 15 PIN PLUG



RS-485 Connector

Dimensions are in mm

ASD-CNIE0B06

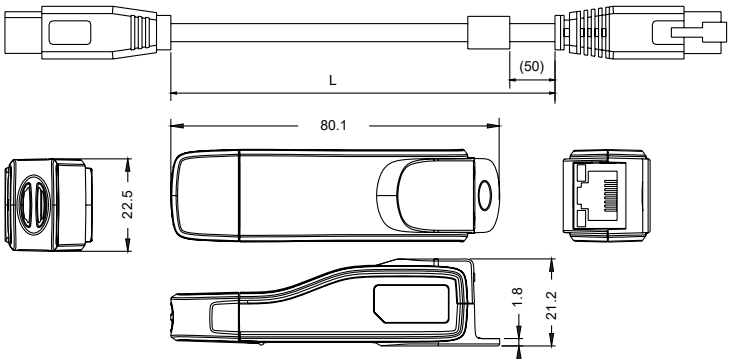


NOTE
1) More accessories for ASDA-B2 will be on the list.
2) Accessories images shown here may differ from the actual product.

Communication Cable between Drive and Computer (for PC)

Dimensions are in mm

ASD-CNUS0A08

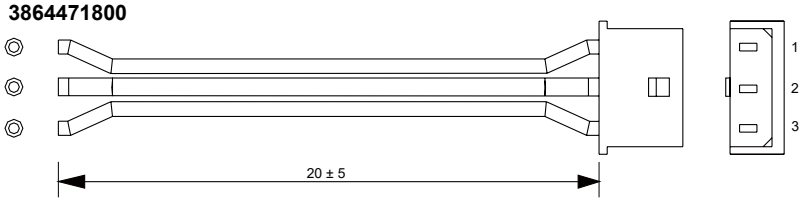


Title	Part No.Part No. : ASD-CNUS0A08	
Cable	L	3000 ± 100 mm
		118 ± 4 inch
Connector	RJ connector	RJ-45
	USB connector	A-type (USB V2.0)

Voltage Output Cable (Analog Signal)

Dimensions are in mm

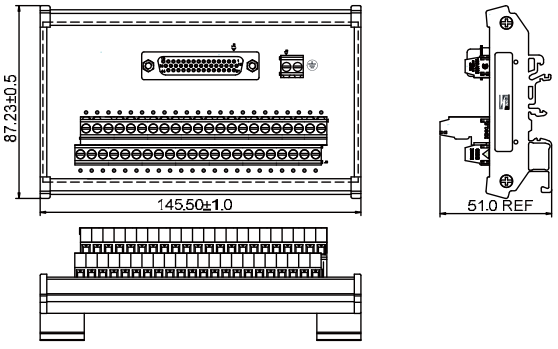
3864471800



Terminal Block Module

Dimensions are in mm

ASD-MDDS4444



Accessories Combinations

100W Servo Drive and 100W Low Inertia Servo Motor

Servo Drive	ASD-B2-0121-B
Low Inertia Servo Motor	ECMA-C △ 0401 □ S
Power Cables (Without Brake)	ASDBCAPW020X
Power Connectors (Without Brake)	ASDBCAPW0000
Power Cables (With Brake)	ASDBCAPW030X
Power Connectors (With Brake)	ASDBCAPW0100
Encoder Cables	ASDBCAEN000X
Encoder Connectors	ASDBCAEN0000

(X=3 indicates that the cable length is 3m; X=5 indicates that the cable length is 5m)

200W Servo Drive and 200W Low Inertia Servo Motor

Servo Drive	ASD-B2-0221-B
Low Inertia Servo Motor	ECMA-C △ 0602 □ S
Power Cables (Without Brake)	ASDBCAPW020X
Power Connectors (Without Brake)	ASDBCAPW0000
Power Cables (With Brake)	ASDBCAPW030X
Power Connectors (With Brake)	ASDBCAPW0100
Encoder Cables	ASDBCAEN000X
Encoder Connectors	ASDBCAEN0000

(X=3 indicates that the cable length is 3m; X=5 indicates that the cable length is 5m)

400W Servo Drive and 400W Low Inertia Servo Motor

Servo Drive	ASD-B2-0421-B
Low Inertia Servo Motor	ECMA-C △ 0604 □ S ECMA-C △ 0804 □ 7 ECMA-CM0604PS
Power Cables (Without Brake)	ASDBCAPW020X
Power Connectors (Without Brake)	ASDBCAPW0000
Power Cables (With Brake)	ASDBCAPW030X
Power Connectors (With Brake)	ASDBCAPW0100
Encoder Cables	ASDBCAEN000X
Encoder Connectors	ASDBCAEN0000

(X=3 indicates that the cable length is 3m; X=5 indicates that the cable length is 5m)

400W Servo Drive and 400W High Inertia Servo Motor

Servo Drive	ASD-B2-0421-B
High Inertia Servo Motor	ECMA-C △ 0604 □ H
Power Cables (Without Brake)	ASDBCAPW020X
Power Connectors (Without Brake)	ASDBCAPW0000
Power Cables (With Brake)	ASDBCAPW030X
Power Connectors (With Brake)	ASDBCAPW0100
Encoder Cables	ASDBCAEN000X
Encoder Connectors	ASDBCAEN0000

(X=3 indicates that the cable length is 3m; X=5 indicates that the cable length is 5m)

400W Servo Drive and 500W Medium Inertia Servo Motor

Servo Drive	ASD-B2-0421-B
Medium Inertia Servo Motor	ECMA-E △ 1305 □ S
Power Cables (Without Brake)	ASDBCAPW120X
Power Cables (With Brake)	ASDBCAPW130X
Power Connectors	ASD-CAPW1000
Incremental Encoder Cables	ASDBCAEN100X
Encoder Connectors	ASDBCAEN1000

(X=3 indicates that the cable length is 3m; X=5 indicates that the cable length is 5m)

400W Servo Drive and 300W High Inertia Servo Motor

Servo Drive	ASD-B2-0421-B
High Inertia Servo Motor	ECMA-G △ 1303 □ S
Power Cables (Without Brake)	ASDBCAPW120X
Power Cables (With Brake)	ASDBCAPW130X
Power Connectors	ASD-CAPW1000
Encoder Cables	ASDBCAEN100X
Encoder Connectors	ASDBCAEN1000

(X=3 indicates that the cable length is 3m; X=5 indicates that the cable length is 5m)

750W Servo Drive and 600W High Inertia Servo Motor

Servo Drive	ASD-B2-0721-B
High Inertia Servo Motor	ECMA-G △ 1306 □ S ECMA-GM1306PS
Power Cables (Without Brake)	ASDBCAPW120X
Power Cables (With Brake)	ASDBCAPW130X
Power Connectors	ASD-CAPW1000
Encoder Cables	ASDBCAEN100X
Encoder Connectors	ASDBCAEN1000

(X=3 indicates that the cable length is 3m; X=5 indicates that the cable length is 5m)

750W Servo Drive and 750W Low Inertia Servo Motor

Servo Drive	ASD-B2-0721-B
Low Inertia Servo Motor	ECMA-C △ 0807 □ S ECMA-C △ 0907 □ 7 ECMA-CM0807PS
Power Cables (Without Brake)	ASDBCAPW020X
Power Connectors (Without Brake)	ASDBCAPW0000
Power Cables (With Brake)	ASDBCAPW030X
Power Connectors (With Brake)	ASDBCAPW0100
Encoder Cables	ASDBCAEN000X
Encoder Connectors	ASDBCAEN0000

(X=3 indicates that the cable length is 3m; X=5 indicates that the cable length is 5m)

Accessories Combinations

750W Servo Drive and 750W High Inertia Servo Motor

Servo Drive	ASD-B2-0721-B
High Inertia Servo Motor	ECMA-C △ 0807□H
Power Cables (Without Brake)	ASDBCAPW020X
Power Connectors (Without Brake)	ASDBCAPW0000
Power Cables (With Brake)	ASDBCAPW030X
Power Connectors (With Brake)	ASDBCAPW0100
Encoder Cables	ASDBCAEN000X
Encoder Connectors	ASDBCAEN0000

(X=3 indicates that the cable length is 3m; X=5 indicates that the cable length is 5m)

1kW Servo Drive and 850W Low Inertia Servo Motor

Servo Drive	ASD-B2-1021-B
Low Inertia Servo Motor	ECMA-F △ 1308 □ S
Power Cables (Without Brake)	ASDBCAPW120X
Power Cables (With Brake)	ASDBCAPW130X
Power Connectors	ASD-CAPW1000
Encoder Cables	ASDBCAEN100X
Encoder Connectors	ASDBCAEN1000

(X=3 indicates that the cable length is 3m; X=5 indicates that the cable length is 5m)

1kW Servo Drive and 1kW Low Inertia Servo Motor

Servo Drive	ASD-B2-1021-B
Low Inertia Servo Motor	ECMA-C △ 1010 □ S
Power Cables (Without Brake)	ASDBCAPW120X
Power Cables (With Brake)	ASDBCAPW130X
Power Connectors	ASD-CAPW1000
Encoder Cables	ASDBCAEN100X
Encoder Connectors	ASDBCAEN1000

(X=3 indicates that the cable length is 3m; X=5 indicates that the cable length is 5m)

1kW Servo Drive and 1kW Low Inertia Servo Motor

Servo Drive	ASD-B2-1021-B
Low Inertia Servo Motor	ECMA-C △ 0910 □ S
Power Cables (Without Brake)	ASDBCAPW020X
Power Connectors (Without Brake)	ASDBCAPW0000
Power Cables (With Brake)	ASDBCAPW030X
Power Connectors (With Brake)	ASDBCAPW0100
Incremental Encoder Cables	ASDBCAEN000X
Encoder Connectors	ASDBCAEN0000

(X=3 indicates that the cable length is 3m; X=5 indicates that the cable length is 5m)

1kW Servo Drive and 1kW Medium Inertia Servo Motor

Servo Drive	ASD-B2-1021-B
Medium Inertia Servo Motor	ECMA-E △ 1310 □ S
Power Cables (Without Brake)	ASDBCAPW120X
Power Cables (With Brake)	ASDBCAPW130X
Power Connectors	ASD-CAPW1000
Encoder Cables	ASDBCAEN100X
Encoder Connectors	ASDBCAEN1000

(X=3 indicates that the cable length is 3m; X=5 indicates that the cable length is 5m)

1kW Servo Drive and 900W High Inertia Servo Motor

Servo Drive	ASD-B2-1021-B
High Inertia Servo Motor	ECMA-G △ 1309 □ S ECMA-GM1309PS
Power Cables (Without Brake)	ASDBCAPW120X
Power Cables (With Brake)	ASDBCAPW130X
Power Connectors	ASD-CAPW1000
Encoder Cables	ASDBCAEN100X
Encoder Connectors	ASDBCAEN1000

(X=3 indicates that the cable length is 3m; X=5 indicates that the cable length is 5m)

1.5kW Servo Drive and 1.5kW Medium Inertia Servo Motor

Servo Drive	ASD-B2-1521-B
Medium Inertia Servo Motor	ECMA-E △ 1315 □ S
Power Cables (Without Brake)	ASDBCAPW120X
Power Cables (With Brake)	ASDBCAPW130X
Power Connectors	ASD-CAPW1000
Encoder Cables	ASDBCAEN100X
Encoder Connectors	ASDBCAEN1000

(X=3 indicates that the cable length is 3m; X=5 indicates that the cable length is 5m)

2kW Servo Drive and 2kW Low Inertia Servo Motor

Servo Drive	ASD-B2-2023-B
Low Inertia Servo Motor	ECMA-C △ 1020 □ S
Power Cables (Without Brake)	ASDBCAPW120X
Power Cables (With Brake)	ASDBCAPW130X
Power Connectors	ASDBCAPW1000
Encoder Cables	ASDBCAEN100X
Encoder Connectors	ASDBCAEN1000

(X=3 indicates that the cable length is 3m; X=5 indicates that the cable length is 5m)

Accessories Combinations

2kW Servo Drive and 2kW Medium Inertia Servo Motor

Servo Drive	ASD-B2-2023-B
Medium Inertia Servo Motor	ECMA-E △ 1320 □ S
Power Cables (Without Brake)	ASDBCAPW120X
Power Cables (With Brake)	ASDBCAPW130X
Power Connectors	ASD-CAPW1000
Encoder Cables	ASDBCAEN100X
Encoder Connectors	ASDBCAEN1000

(X=3 indicates that the cable length is 3m; X=5 indicates that the cable length is 5m)

2kW Servo Drive and 2kW Medium Inertia Servo Motor

Servo Drive	ASD-B2-2023-B
Medium Inertia Servo Motor	ECMA-E △ 1820 □ S
Power Cables (Without Brake)	ASD-CAPW220X
Power Cables (With Brake)	ASD-CAPW230X
Power Connectors	ASD-CAPW2000
Encoder Cables	ASDBCAEN100X
Encoder Connectors	ASDBCAEN1000

(X=3 indicates that the cable length is 3m; X=5 indicates that the cable length is 5m)

2kW Servo Drive and 1.3kW Medium High Inertia Servo Motor

Servo Drive	ASD-B2-2023-B
Medium High Inertia Servo Motor	ECMA-F11313 □ S
Power Cables (Without Brake)	ASDBCAPW120X
Power Cables (With Brake)	ASDBCAPW130X
Power Connectors	ASD-CAPW1000
Encoder Cables	ASDBCAEN100X
Encoder Connectors	ASDBCAEN1000

(X=3 indicates that the cable length is 3m; X=5 indicates that the cable length is 5m)

2kW Servo Drive and 1.8kW Medium High Inertia Servo Motor

Servo Drive	ASD-B2-2023-B
Medium High Inertia Servo Motor	ECMA-F11318 □ S
Power Cables (Without Brake)	ASDBCAPW120X
Power Cables (With Brake)	ASDBCAPW130X
Power Connectors	ASD-CAPW1000
Encoder Cables	ASDBCAEN100X
Encoder Connectors	ASDBCAEN1000

(X=3 indicates that the cable length is 3m; X=5 indicates that the cable length is 5m)

3kW Servo Drive and 3kW Low Inertia Servo Motor

Servo Drive	ASD-B2-3023-B
Low Inertia Servo Motor	ECMA-C △ 1330 □ 4
Power Cables (Without Brake)	ASDBCAPW120X
Power Cables (With Brake)	ASDBCAPW130X
Power Connectors	ASD-CAPW1000
Encoder Cables	ASDBCAEN100X
Encoder Connectors	ASDBCAEN1000

(X=3 indicates that the cable length is 3m; X=5 indicates that the cable length is 5m)

3kW Servo Drive and 3kW Medium Inertia Servo Motor

Servo Drive	ASD-B2-3023-B
Medium Inertia Servo Motor	ECMA-E △ 1830 □ S
Power Cables (Without Brake)	ASD-CAPW220X
Power Cables (With Brake)	ASD-CAPW230X
Power Connectors	ASD-CAPW2000
Encoder Cables	ASDBCAEN100X
Encoder Connectors	ASDBCAEN1000

(X=3 indicates that the cable length is 3m; X=5 indicates that the cable length is 5m)

3kW Servo Drive and 3.5kW Medium Inertia Servo Motor

Servo Drive	ASD-B2-3023-B
Medium Inertia Servo Motor	ECMA-E △ 1835 □ S
Power Cables (Without Brake)	ASD-CAPW220X
Power Cables (With Brake)	ASD-CAPW230X
Power Connectors	ASD-CAPW2000
Encoder Cables	ASDBCAEN100X
Encoder Connectors	ASDBCAEN1000

(X=3 indicates that the cable length is 3m; X=5 indicates that the cable length is 5m)

3kW Servo Drive and 3kW Medium High Inertia Servo Motor

Servo Drive	ASD-B2-3023-B
Medium High Inertia Servo Motor	ECMA-F △ 1830 □ S
Power Cables (Without Brake)	ASD-CAPW220X
Power Cables (With Brake)	ASD-CAPW230X
Power Connectors	ASD-CAPW2000
Encoder Cables	ASDBCAEN100X
Encoder Connectors	ASDBCAEN1000

(X=3 indicates that the cable length is 3m; X=5 indicates that the cable length is 5m)

Other Accessories (for ASDA-B2 Series all models)

Description	Delta Part Number
Communication Cable between Servo Drive and Computer	ASD-CARS0003
Regenerative Resistor 400W 100Ω	BR400W040
Regenerative Resistor 1kW 1000Ω	BR1K0W020

Smarter. Greener. Together.

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Digitized Automation for a Changing World

Delta AC Servo Drive & Motor
ASDA-B3 Series

www.deltaww.com

Delta Standard Servo System ASDA-B3

High Efficiency, User-Friendly, and Stable

The high tolerance and stable operation of the Delta standard servo system ASDA-B3 series creates a highly efficient and user-friendly operation environment with precise motion control functions that optimize production efficiency and output value.

With the best motion control solutions, Delta boosts industry momentum and works with customers to create an innovative future.

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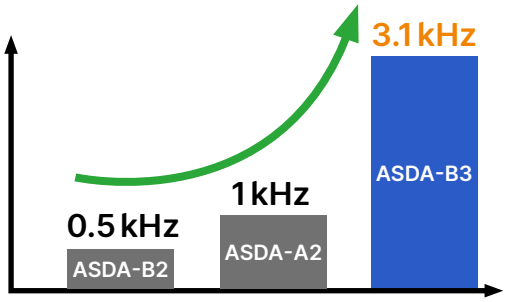
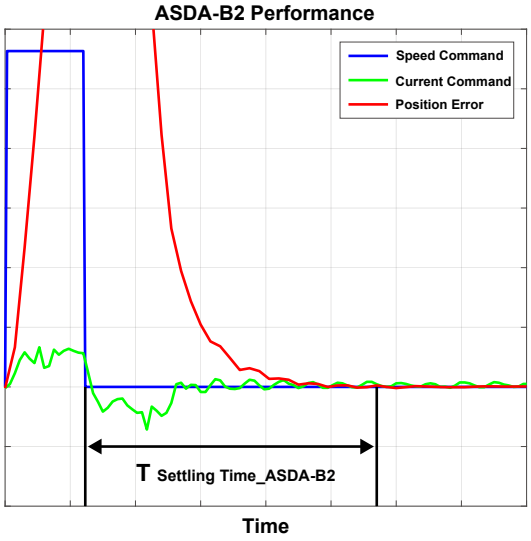
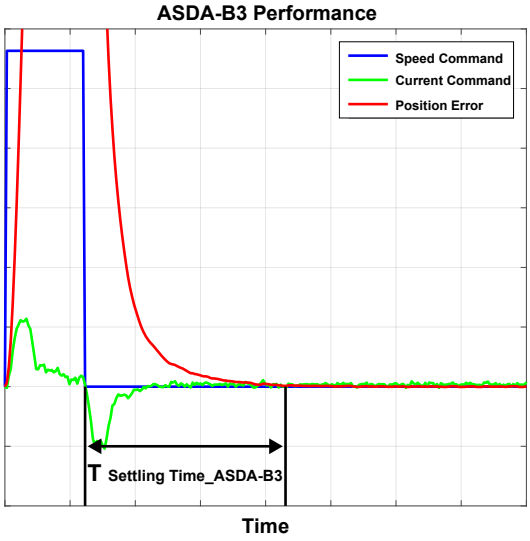
Optimized Performance

High Response Bandwidth

- Higher responsiveness: From 0.5 kHz of the ASDA-B2 series to 3.1 kHz of the ASDA-B3 series
- Increased productivity: Settling time reduced by 40%







Higher Load Tolerance

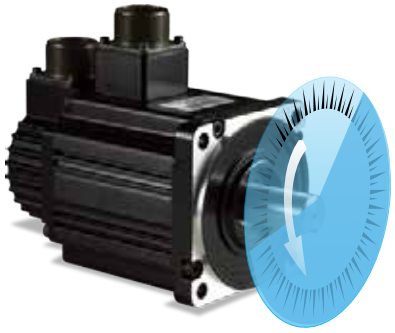
- Enhances positioning precision and optimizes the system
- Higher response bandwidth with the same load conditions

	ASDA-B2	ASD-B3	ASDA-B2	ASD-B3	ASDA-B2	ASD-B3
Actual Load Inertia Ratio	30 times		50 times		70 times	
Speed Loop Bandwidth in Position Mode	Approx. 150 Hz	Approx. 250 Hz	Approx. 30 Hz	Approx. 150 Hz	Max. performance	Approx. 20 Hz

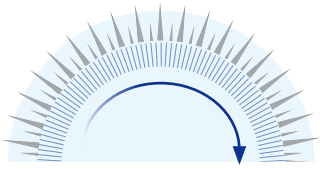
24-bit Absolute Encoder

- Enhances positioning precision with a resolution of 16,777,216 pulses per revolution
- Stable operation at low speeds improves machine performance
- Absolute encoder retains the motor's position when the power is off

16,777,216 pulses for one single turn

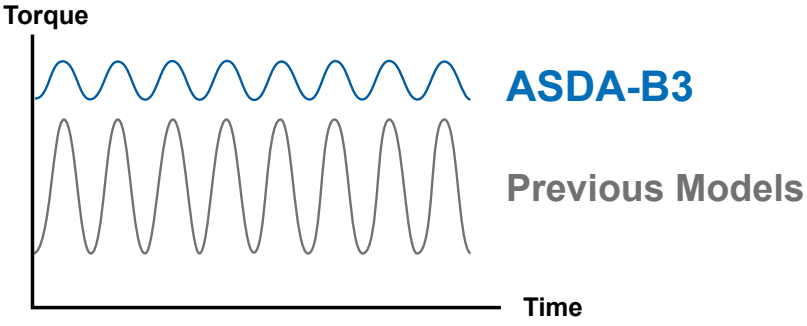


46,603 pulses in one degree



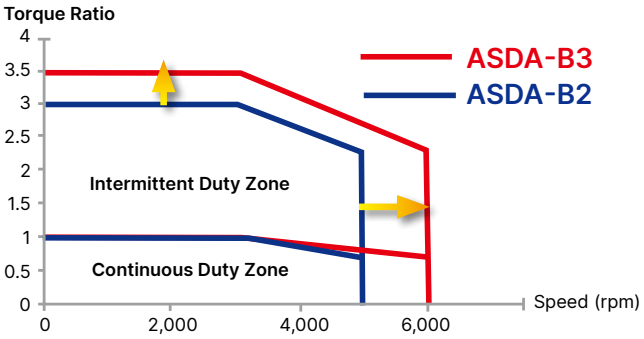
Low Cogging Torque

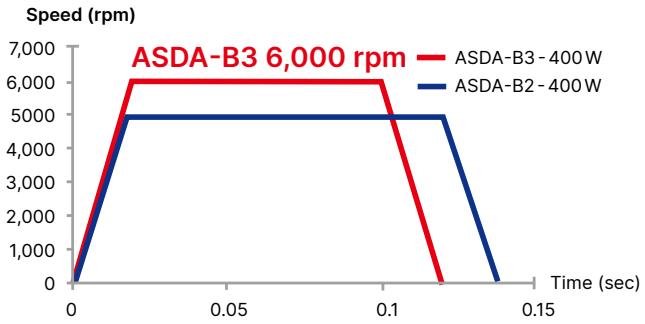
The cogging torque is 50% of previous models which increases the smoothness of constant speed operation and low speed machining



Increased Speed and Torque

- Motor speed increased to 6,000 rpm
- Torque overload ratio increased to 3.5 times and the time required for acceleration and deceleration is shortened
- Significantly increases productivity and efficiency

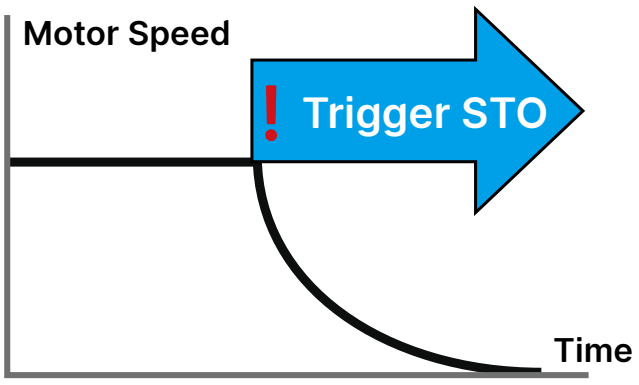




Safe Torque Off (STO) Function

- Built-in STO function ensures personnel safety
- Complies with IEC/EN 61800-5-2
- SIL2 Level

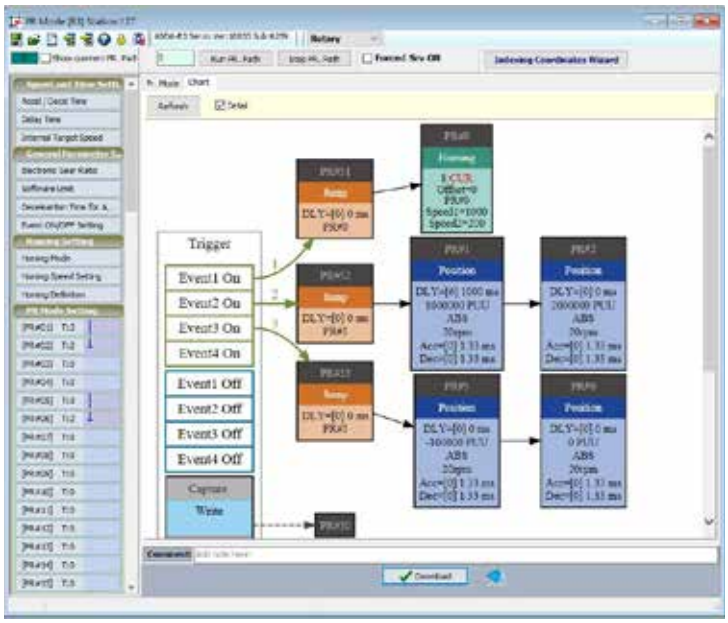
Note: ASDA-B3A 400V certification in process



Various Motion Functions

PR Mode

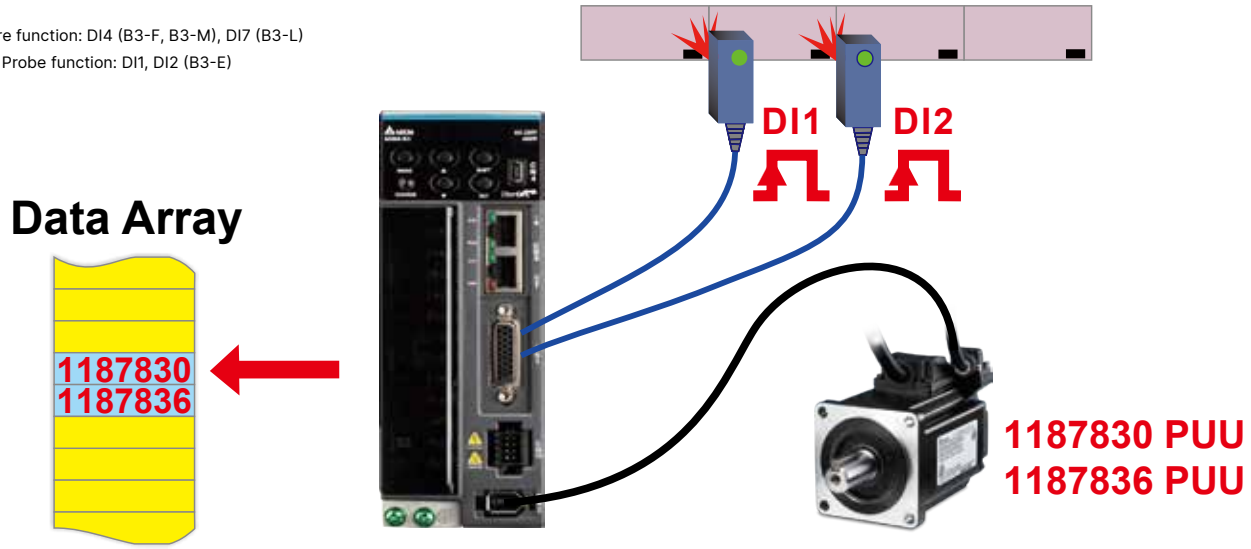
- Supports up to 99 PR paths for flexible motion command planning
- Intuitive operation interface with graphics
- Homing modes, position commands, and speed commands
- Overlap command, interrupt command, jump command, and parameter settings



High-Speed Capture Function

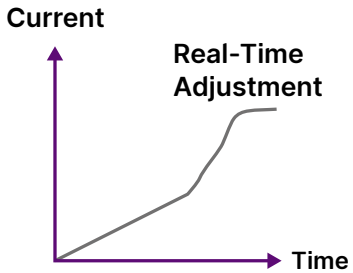
- Supports the Capture function for instantly capturing position coordinates with one set of DI
- Supports the Touch Probe function with two sets of DIs in the EtherCAT communication mode

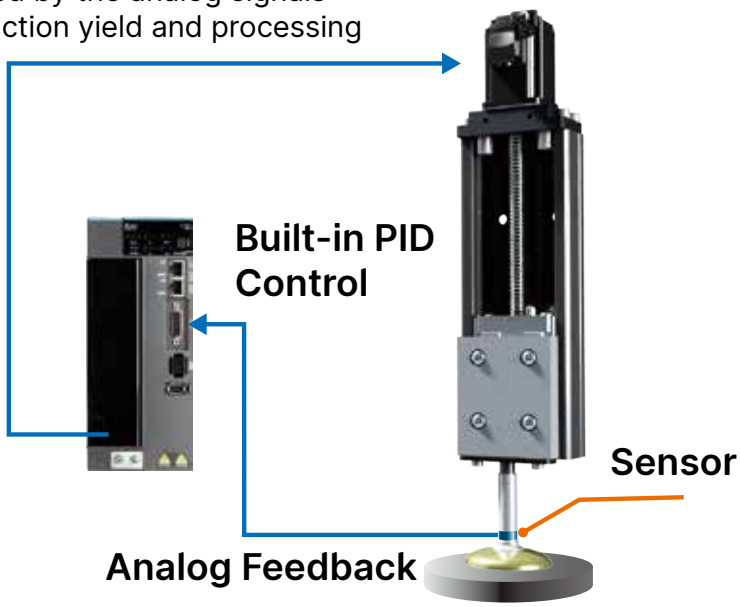
Note:
Capture function: DI4 (B3-F, B3-M), DI7 (B3-L)
Touch Probe function: DI1, DI2 (B3-E)

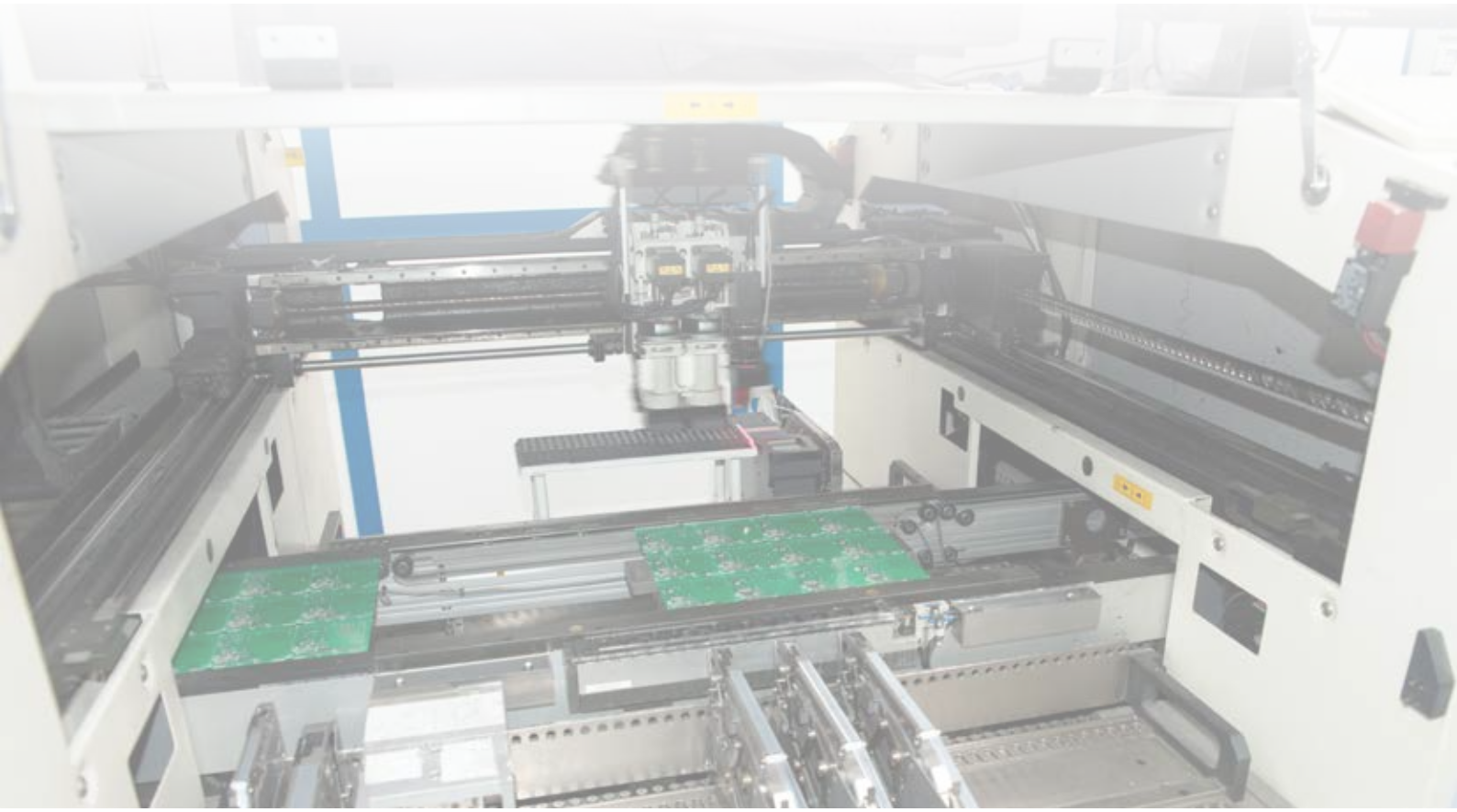


Analog Feedback PID Control

- Supports analog signal input
- Real-time and precise PID control enabled by the analog signals from the external sensor improves production yield and processing performance







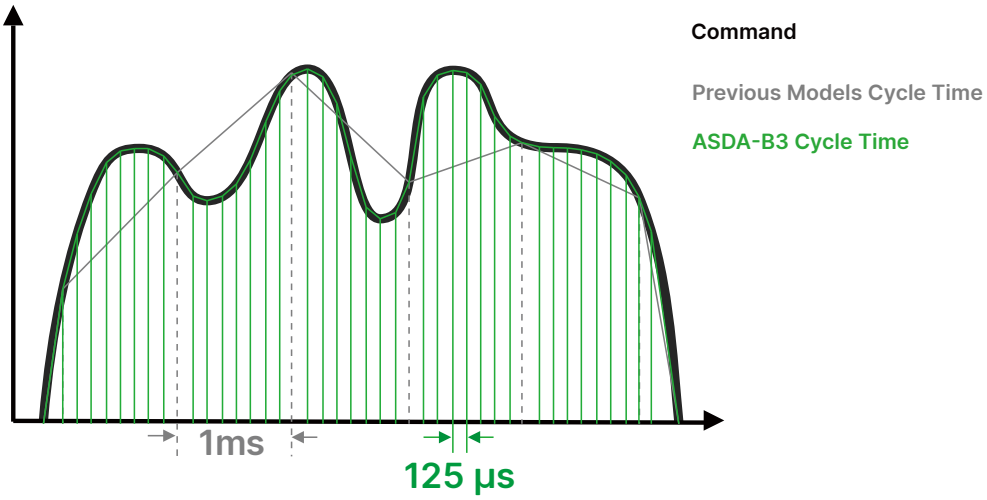
EtherCAT Communication Functions

Complies with the IEC 61158 and IEC 61800-7 fieldbus standards

Shorter Synchronization Cycle

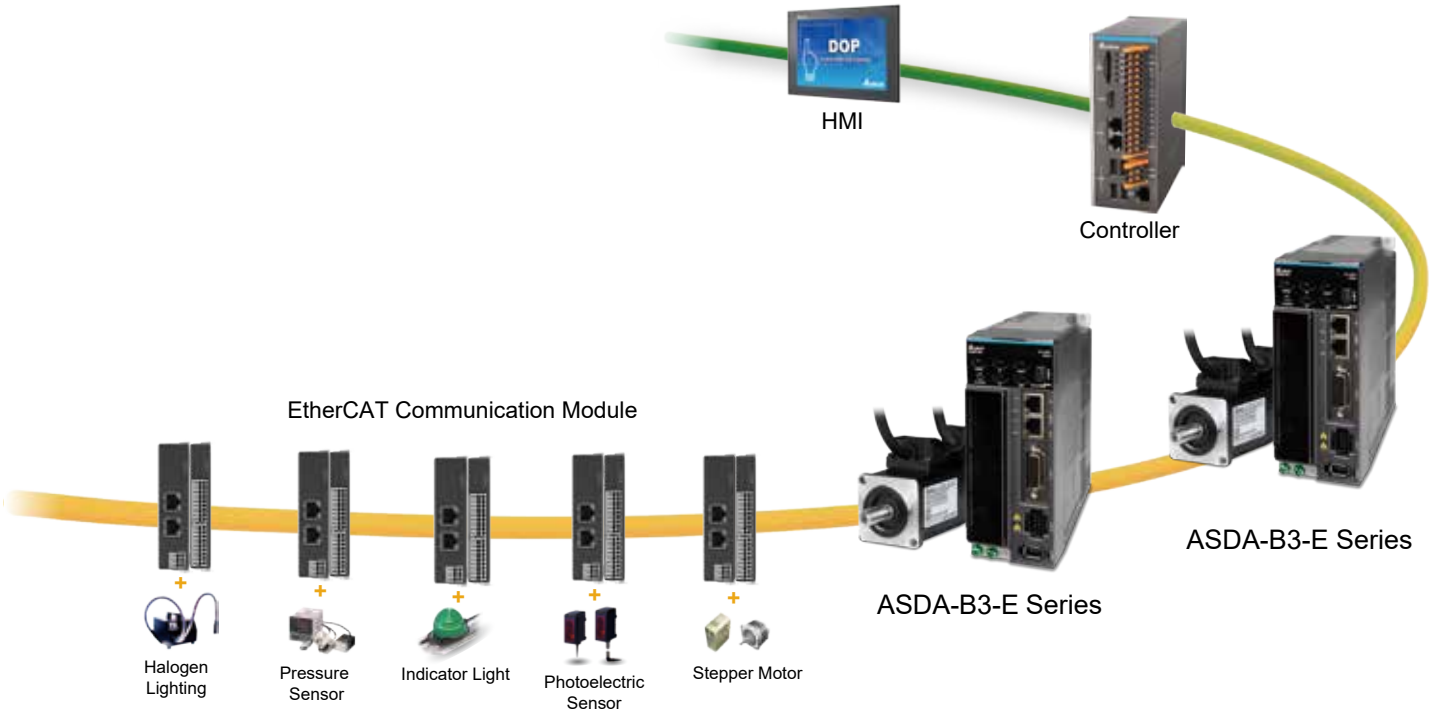
- The synchronization cycle of the ASDA-B3 series is 125 µs, which is 8 times faster than that of the ASDA-A2 series

Synchronization Cycle



Simplified Wiring

In contrast to single-axis pulse wiring which is complicated and difficult to repair, the EtherCAT high-speed communication greatly reduces the wiring and inspection time. It is suitable for multi-axis control and can also connect remote I/O modules with a single wiring.



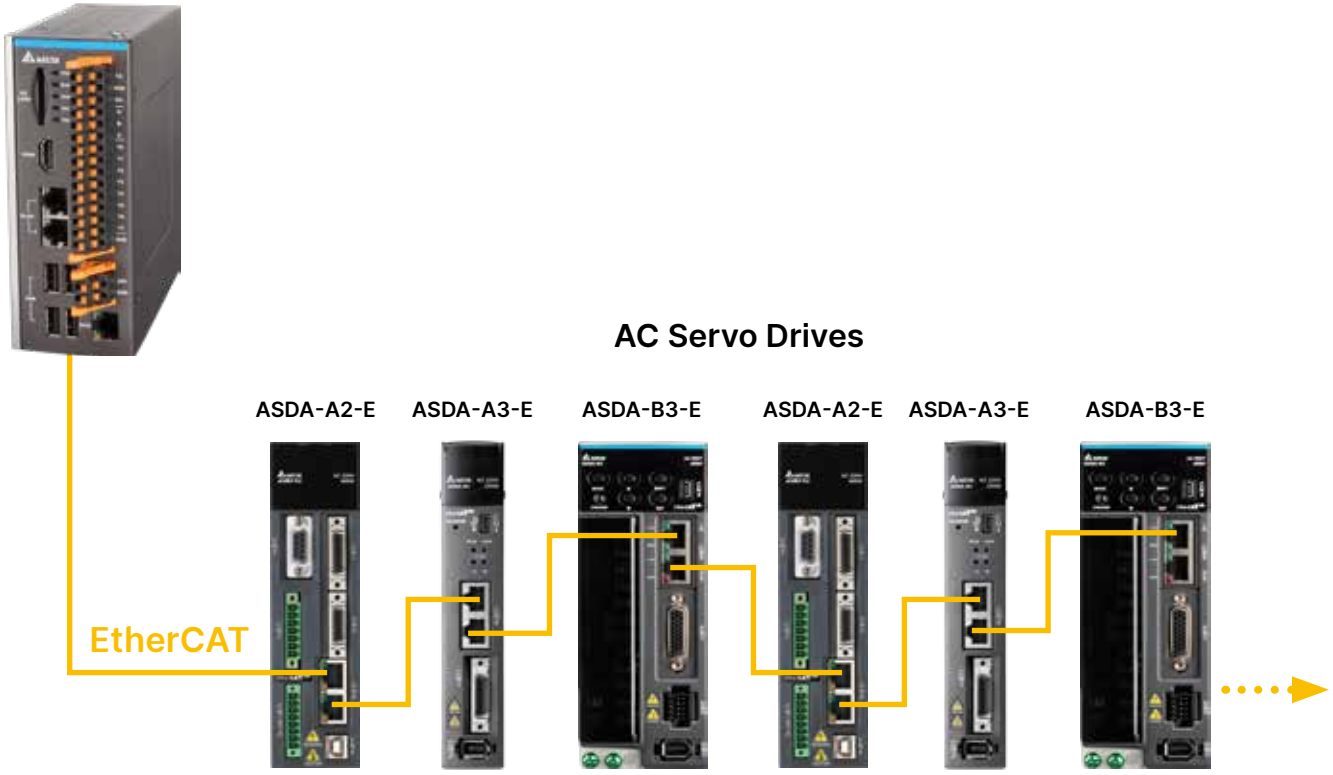
Longer Connection Distance

The maximum distance between two servo stations is 50 m and a maximum of 65,536 axes can be connected

Compatible with Previous Models

The ASDA-B3 series models are compatible with the ASDA-A2 and ASDA-A3 series

Note: The communication cycle of the ASDA-A2 series is 1 ms, so when previous and new models are used together, the set value cannot be lower than this specification



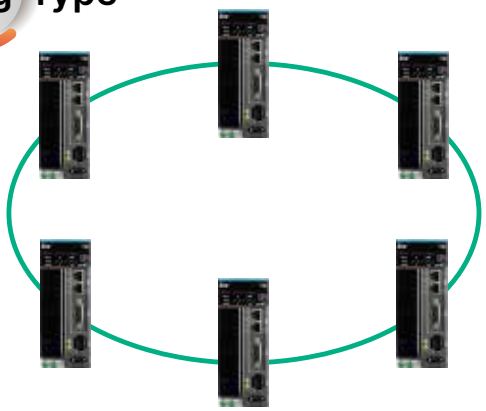
PROFINET Communication Functions

Complies with IEC 61158 and IEC 61784 standards

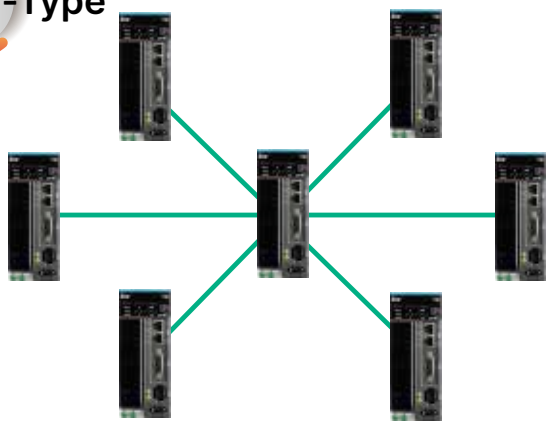
Simple Wiring & Cost Efficiency

- The open industrial Ethernet communication protocol can complete various data transmissions through the bus and also supports various topologies to meet the needs of different applications as well as intensive parameter synchronous allocation to I/O signal transmissions, achieving smooth data transmission and security protection mechanisms.

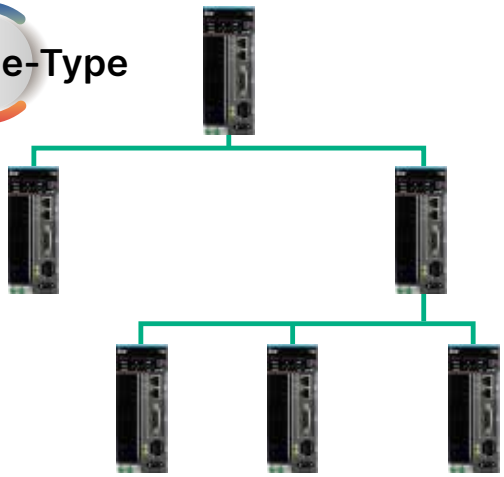
Ring-Type



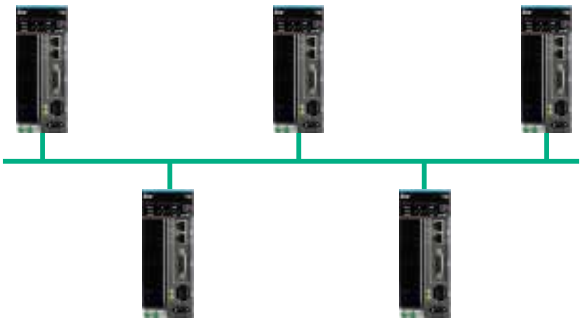
Star-Type



Tree-Type



Linear-Type



Shorter Synchronization Cycle

- The ASDA-B3A Series has a 1 ms synchronization cycle

Long Connection Distance

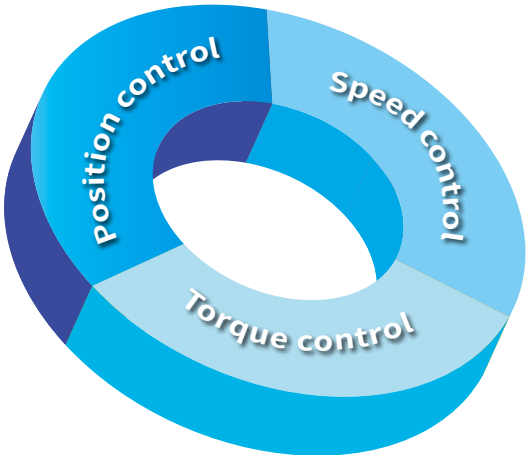
- The longest distance between two stations can reach 50 m, and the servo allows a maximum number of serially connected axes of 65,536 axes

Supports Communication Protocol

RT: Real-time communication protocol for PROFINET IO exchange applications.
Min. response time is 1 ms

IRT: Isochronous real-time communication protocol is based on the topology structure to achieve optimal synchronization of PROFINET IO communication and equipment. Min. response time is 1 ms

Message Function



Position control

Basic positioning control (111)
Cycle synchronized positioning control (3, 102, 105)

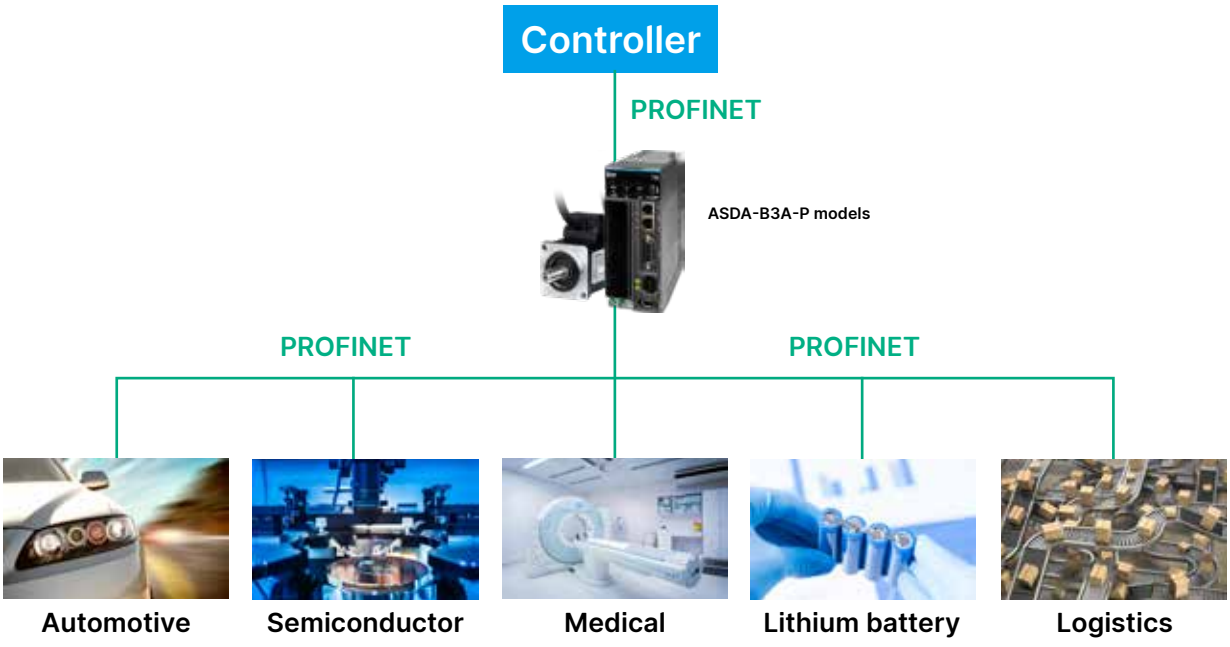
Speed control

Basic speed control (1)
Speed regulation control (111)
Cycle synchronized speed control (3, 102, 105)

Torque control

Torque limit control (3+750, 102+750, 105+750) *

***Under development**

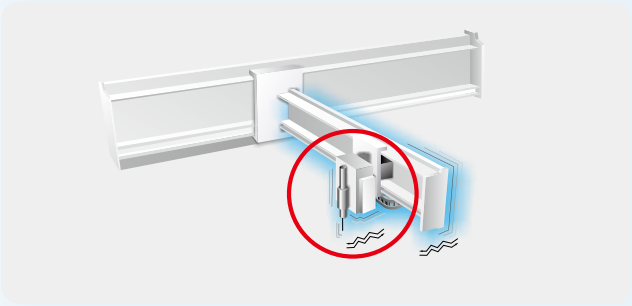


Vibration Suppression Functions

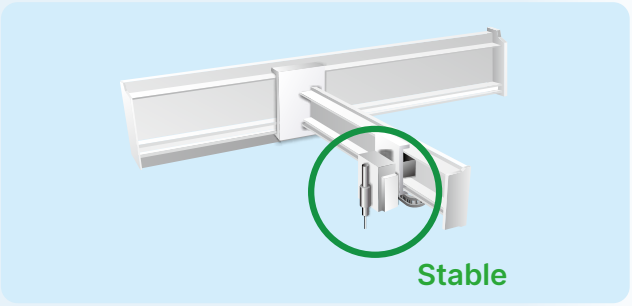
Vibration Elimination

- Low frequency vibration suppression applies Delta's unique algorithm to adjust low rigidity machine structures
- Two sets of built-in vibration elimination settings reduce jitter at the machine endpoint while maintaining a good command response

Without Vibration Elimination - Machine endpoint vibrates when settling

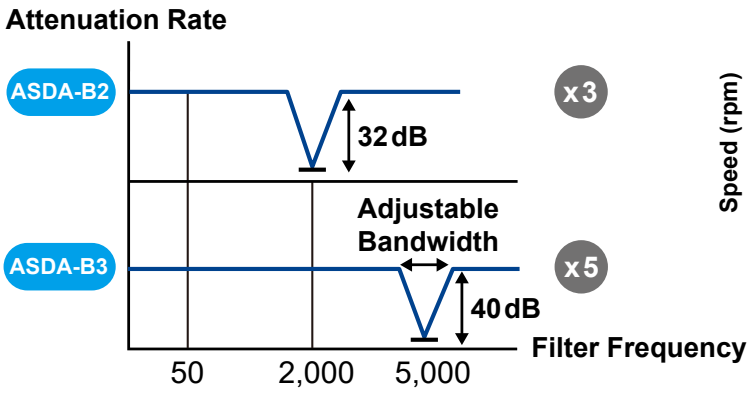


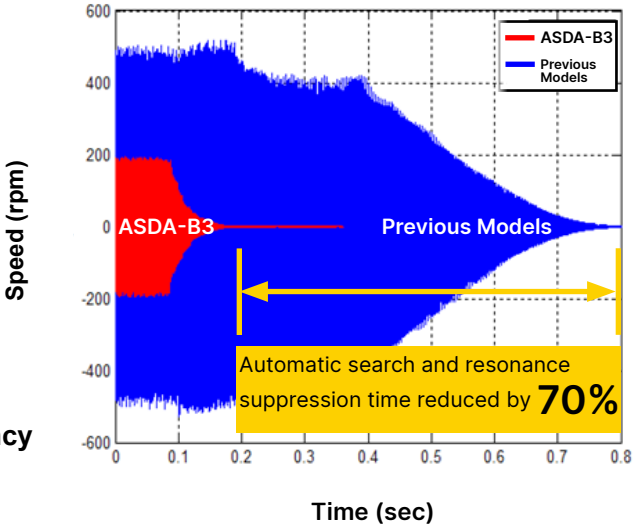
With Vibration Elimination - Machine endpoint is stable when settling



Advanced Notch Filter

- High frequency resonance suppression increased from 3 sets to 5 sets compared with previous models
- Filter bandwidth increased to 5,000 Hz
- Automatically searches for the resonance frequency point and completes the resonance suppression; this reduces the time by 70% compared with previous models and is less likely to damage the machine

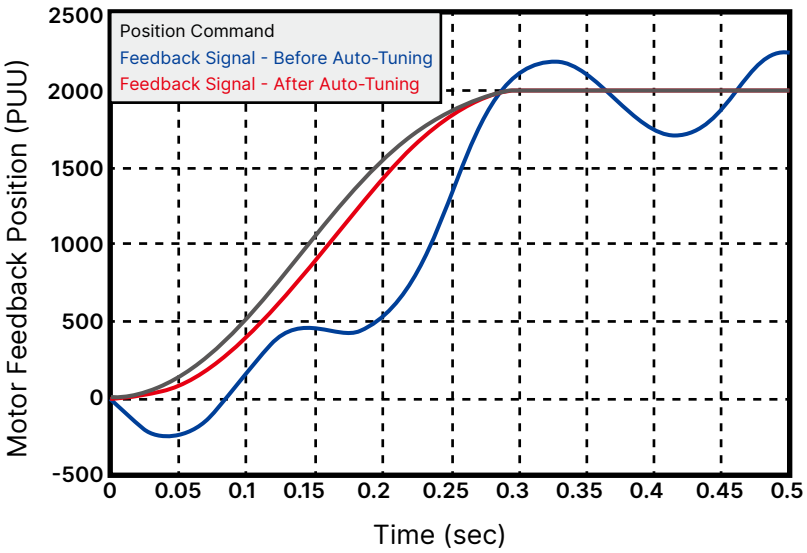




Self-Diagnosis and Adaptation

Outstanding Self-Adjusting Capability

- Dedicated algorithm allows easy tuning with simple settings, which improves the efficiency of equipment assembly and testing
- Suitable for applications with flexible machine structures and large variations in inertia



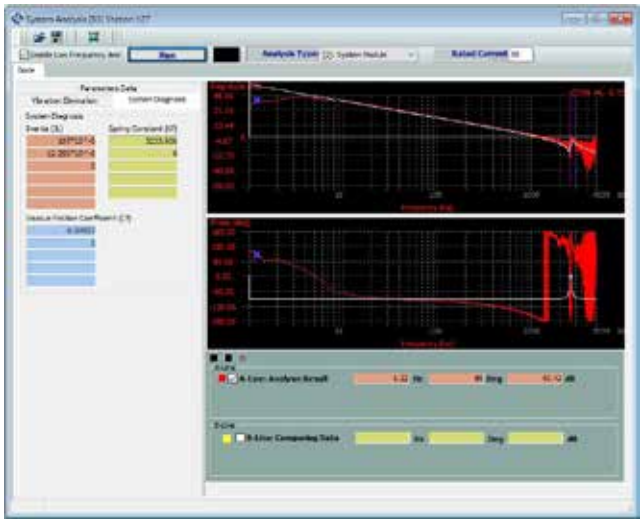
System Analysis Tool

Mechanical Stiffness Diagnosis

- Diagnoses the mechanism elasticity and damping coefficient, and converts the machine structure characteristics into data
- Ensures consistency of mass production machines through data collection

Frequency Domain Response Analysis

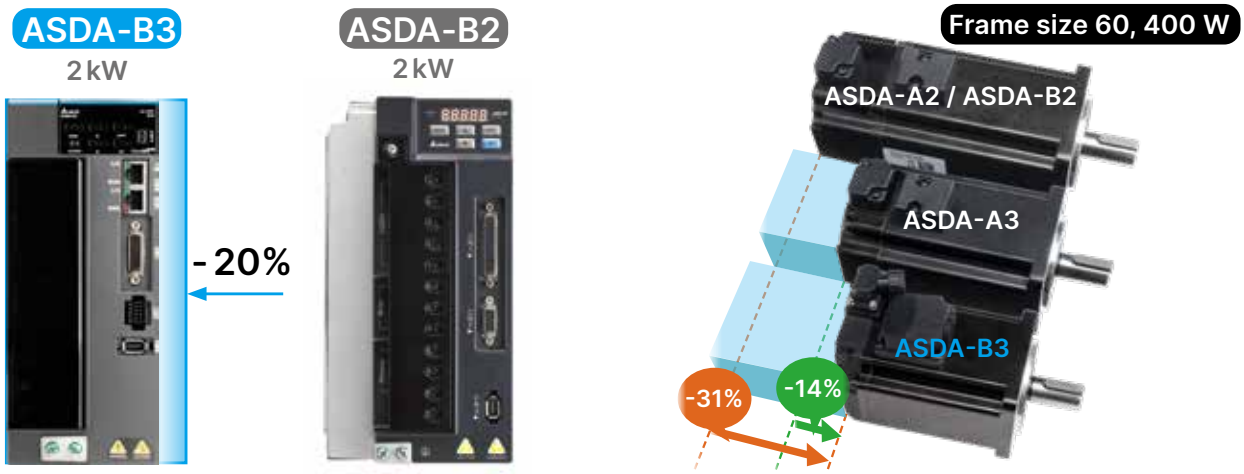
- Ensures system stability
- Compares the phases before and after gain adjustment to ensure the safety margin of the system



Energy-Saving and Compact Size

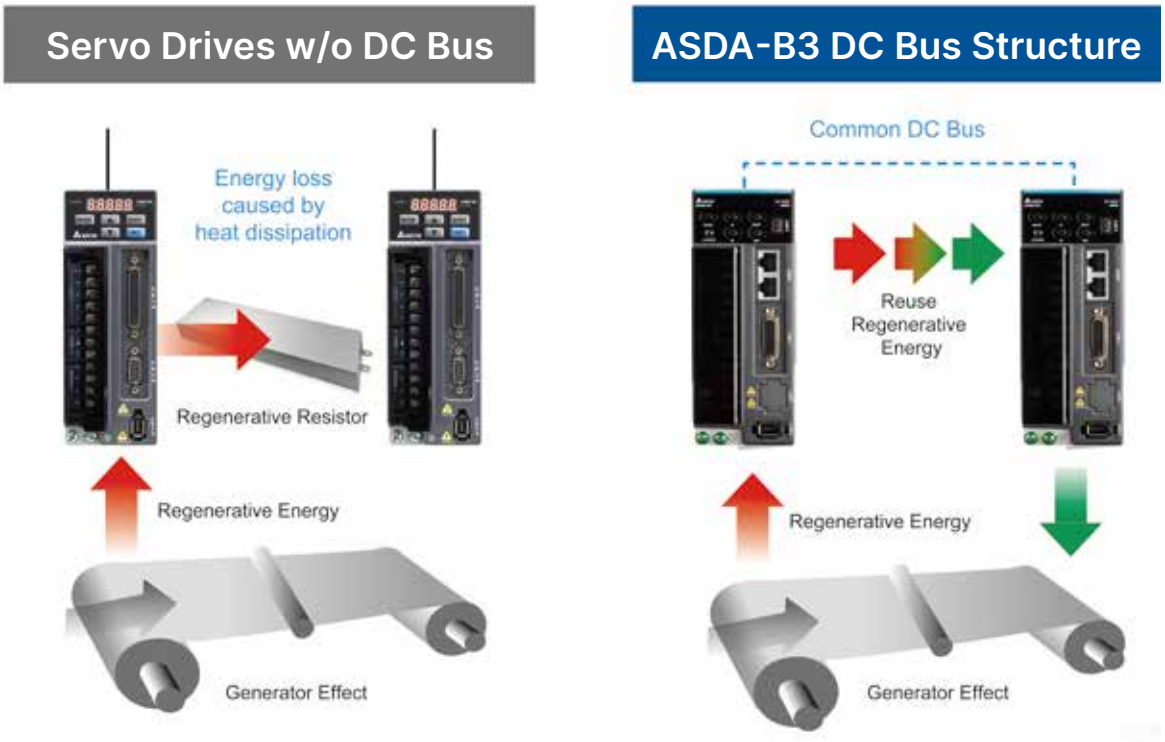
Compact Size

- The size of the servo drive is reduced up to 20%, so it requires less space in the distribution board which meets the need for more compact equipment
- The size of the servo motor is reduced up to 31% for less space and cost efficiency



Common DC Bus

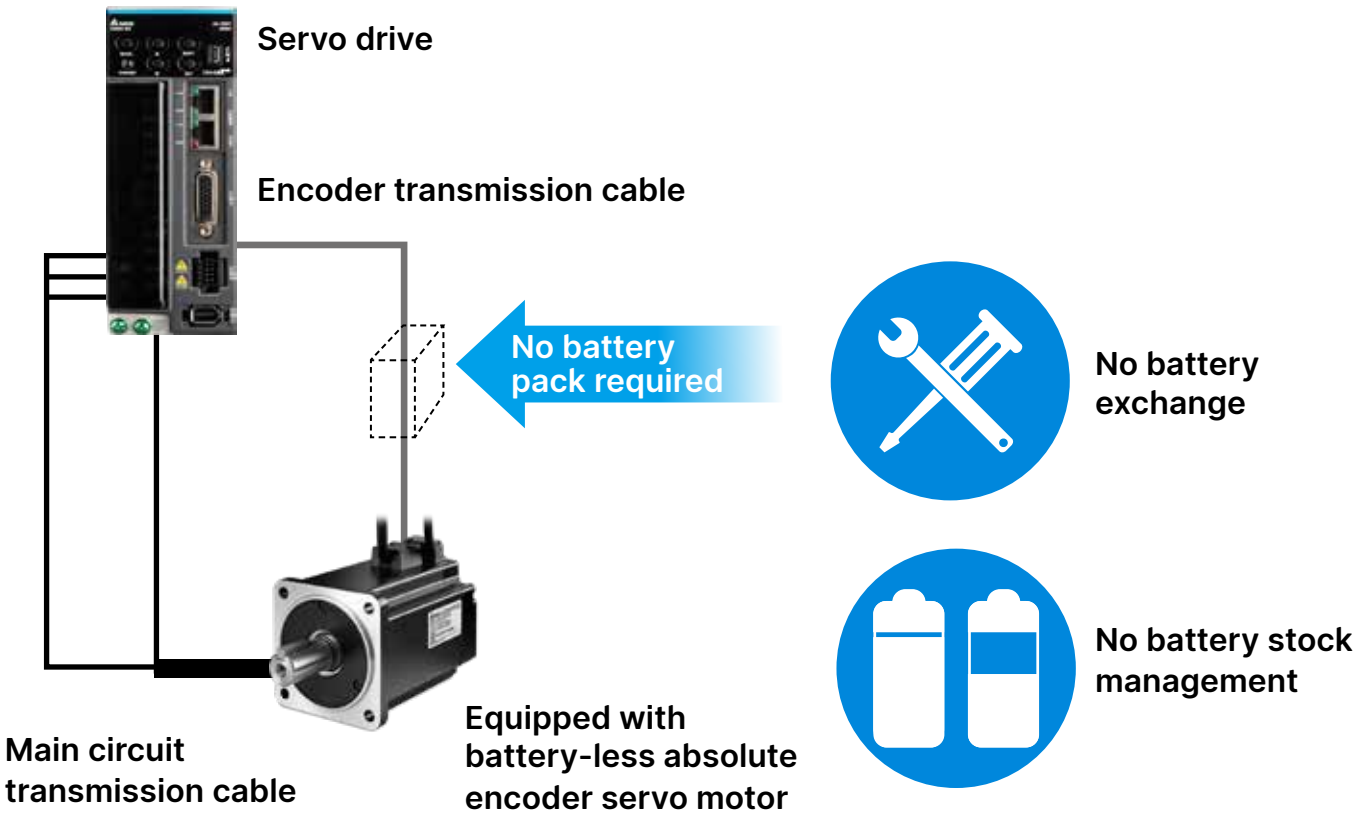
- The servo drives can share the DC Bus to reuse regenerative energy for reducing energy consumption
- When multiple servo drives share the common DC Bus, fewer regenerative resistors are required for cost efficiency



Battery-Less Absolute Encoder

- Electromagnetic induction: When the power is off, the magnet on the encoder shaft rotates. The magnetic field changes are used to induce the electrical energy generated by the Wiegand wire coil to record the number of turns of the encoder for final absolute position
- No gear set: As it records laps for a long period, problems with gear life and mechanism will occur
- No battery pack: Reduces battery maintenance time, avoids battery exhaustion and anomalies, avoids lithium battery transportation

Reduced Cost & Maintenance

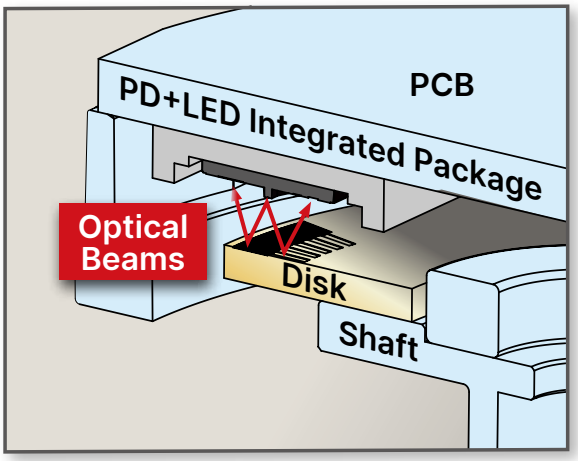


Multiple Selections

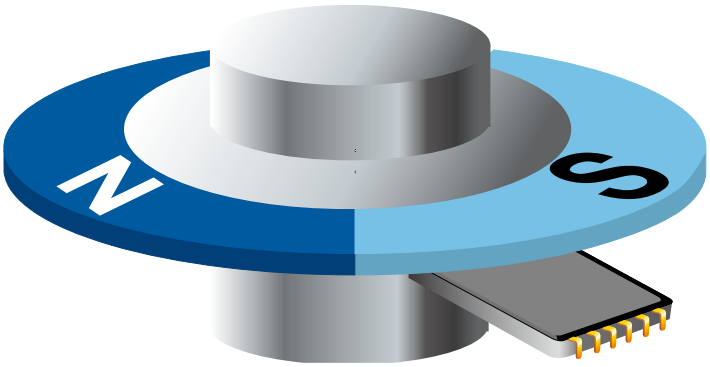
High Resolution Encoder

- High resolution for more precise positioning
- The incremental encoder can retain the single-turn absolute position without the need to execute homing after cycling the power
- After the absolute encoder is powered off, the number of turns and position are retained
- 24-bit optical encoder: The encoder is lighter and thinner with the reflective sensor technology; the exclusive optical sensor compensation function improves product reliability
- 17-bit magnetic encoder: The magnetic induction technology improves the capability to prevent vibration and increases the oil resistance level

Optical Encoder



Magnetic Encoder



High Compatibility

- Compatible with the ASDA-A2 / ASDA-B2 / ASDA-A3 series motors for easier replacement
- Motors of high, medium, and low inertia are available for different applications

High inertia motor: Suitable for applications that require speed stability or resistance to external forces
Medium inertia motor: Suitable for applications with general mechanical equipment
Low inertia motor: Suitable for high-speed positioning and high response applications

ECM-B3 Motor

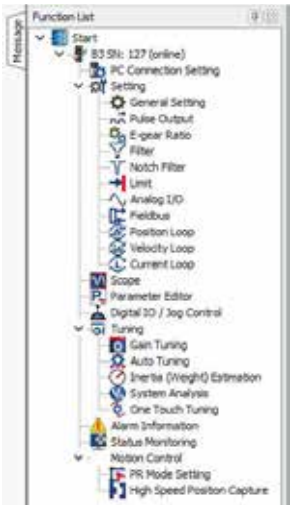
ECM-A3 Motor

ECMA / ECMC Motor

User-Friendly Software Interface

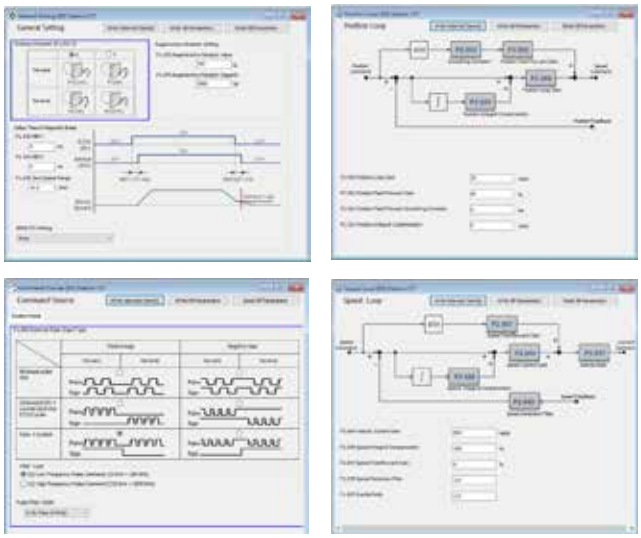
Function List Tree View

- Well-organized function list for quick access
- Expandable and collapsible nodes for easier and more efficient operation



Graphical Parameter Setting

- Intuitive graphic illustrations for gain adjustment and parameter settings



Auto-Tuning Function

- Step-by-step and conversational UI for servo gain adjustment

Advanced Gain Adjustment Function

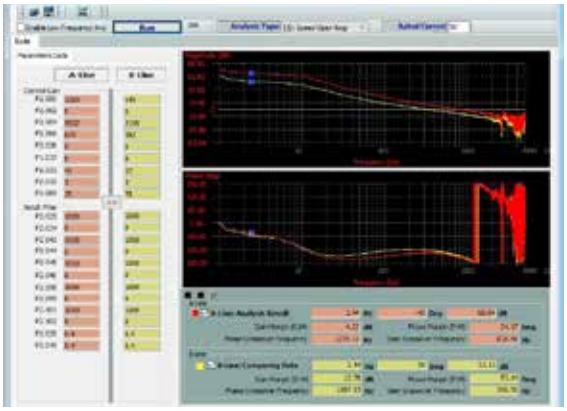
- Provides advanced gain adjustment modes for fine tuning according to different applications and operating characteristics
- Step-by-step software interface to guide users

User-Friendly Software Interface

System Analysis Interface

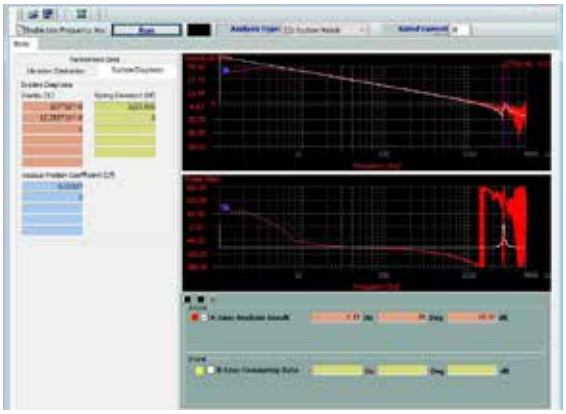
- **Speed Open-Loop Mode**

  Determines if the current system is the most optimized and thus improves the design



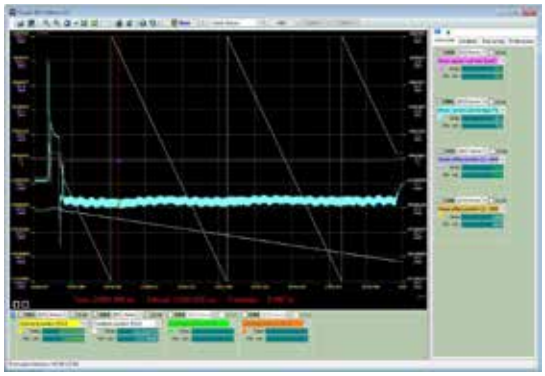
- **System Module Mode**

  Measures the mechanical stiffness of the mechanism in this mode

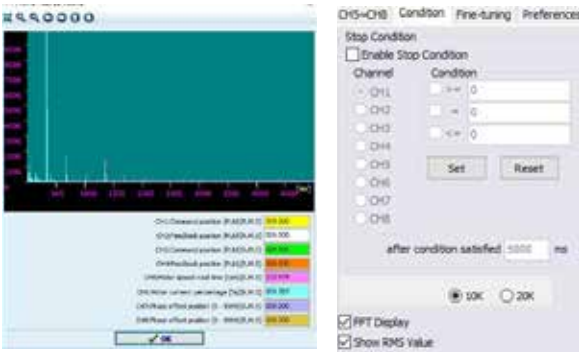


Oscilloscope Function

- Maximum of 8 channels with 16-bit data size and update frequency of 8 kHz
- 4 high-resolution channels with 32-bit data size and update frequency of 8 kHz
- 4 channels of high sampling rate with 16-bit data size and update frequency of 16 kHz



- Drag the cursor to specify the area for instant FFT (Fast Fourier Transform) and RMS calculation
- Set the triggering conditions for collecting data



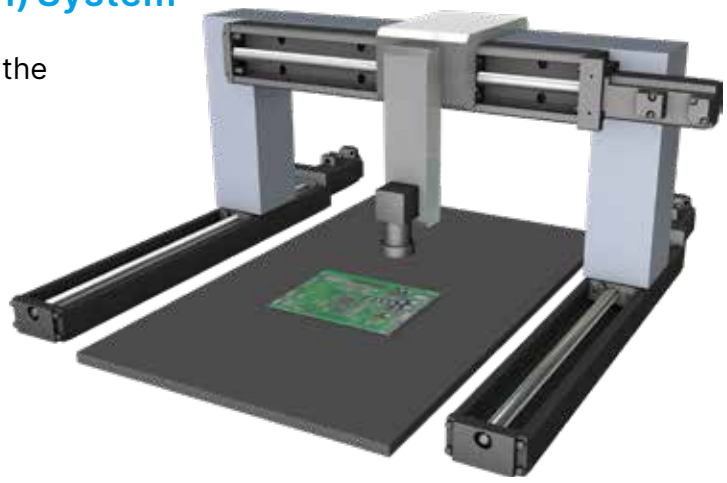
Graphical PR Path Programming Interface

- Graphical PR procedures with detailed settings for better command programming and editing

Applications

AOI (Automatic Optical Inspection) System

- Shorter setting time of ASDA-B3 shortens the detection time which also increases the production capacity



Tool Magazine and Turret

- Shorter response time of ASDA-B3 significantly reduces the tool changing time
- New communication trigger function for the tool magazine increases the number of tools without occupying DI points
- Common DC Bus function reduces the use of regenerative resistors and improves the power consumption efficiency

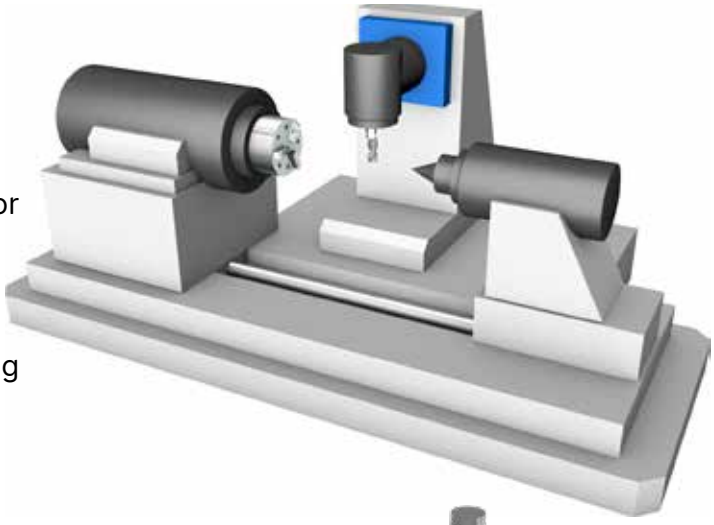
Wafer Pick and Place Machine

- Analog feedback of the PID control with external sensors provides precision control of downward pressure
- Two-stage downward motion planning with high speed and soft landing improves productivity and yield

Applications

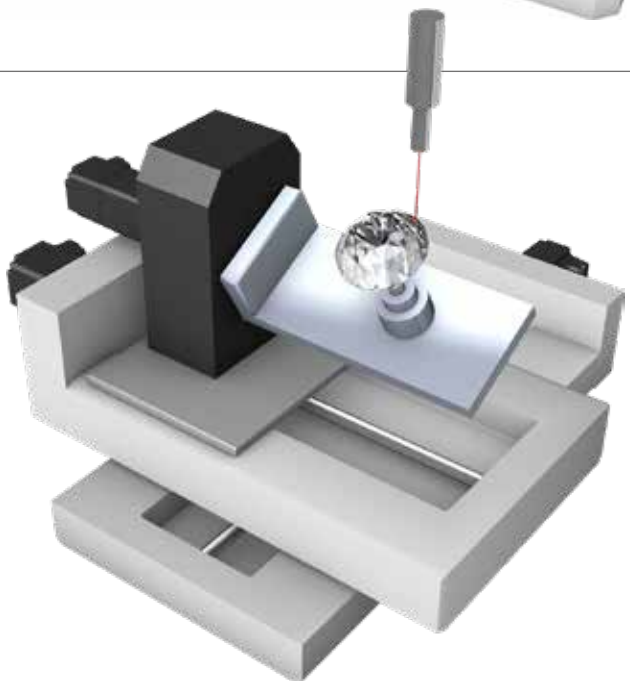
Machine Tool

- Low cogging torque for more stable machining
- Advanced friction compensation function for better performance when changing directions
- Two-degrees-of-freedom control architecture for optimized trajectory tracking



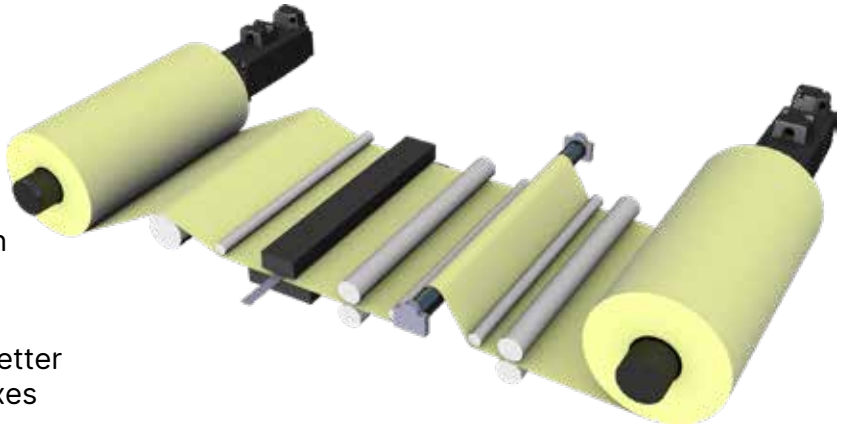
Diamond Cutting Machine

- High inertia motor facilitates the diamond polishing process with high precision and stability
- Low cogging torque for higher machining stability
- Two-degrees-of-freedom control architecture for optimized trajectory tracking



Winding Machine

- Communication type servo drives support the analog input function, facilitating multi-axis communication for tension control
- High-speed fieldbus with the communication cycle of 125 µs for better synchronization between multiple axes
- Stable tension control with acceleration and deceleration S-curve



Servo Drive & Accessories

Power Supply

220 V

100 W - 1.5 kW Single / Three-phase 200 - 230V

2 kW - 3 kW Three-phase 200 - 230V

400V

1 - 7.5kW Three-phase 380 - 440V

No Fuse Braker (NFB)

Protects the drive from instant maximum current due to power ON/OFF or electrical shorts

Magnetic Contactor (MC)

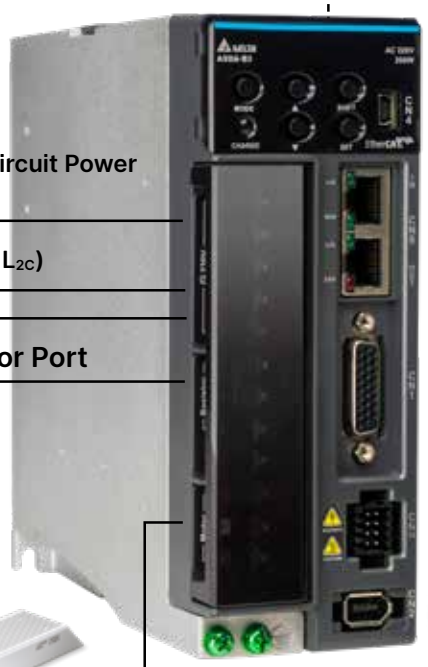
When an anomaly occurs, the ALARM notification output by the servo drive can control the magnetic contactor to cut off the power.

8 Mini USB Port (CN4)

Connects PC for software operation

Connects with ASDA-SOFT with standard USB Mini connection cable

Mini USB Communication Module (P.67)



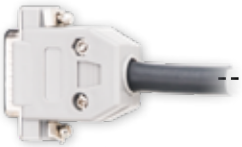
3 Main Circuit Power (RST)

4 Control Circuit (L_{1C} L_{2C})

5 Regenerative Resistor Port (P⊕DC)

9 COM Port Connector (CN3/CN6)

CN3 CANopen Communication Cable (P.64)
CN3 CANopen Distribution Box (P.65)
CN3 RS-485 Tap (P.65)
CN3 RS-485 / CANopen Terminal Resistor (P.66)
CN6 DMCNET Terminal Resistor (P.66)



10 I/O Connector (CN1)

Terminal Block Module (P.64)
CN1 Connector (P.65)
CN1 Quick Connector (P.65)

11 STO (CN10)

B3A models only

Regenerative Resistor

6 Servo Drive Output (UVW)

Power Connector (P.58)
Power Cable (P.59 - P.62)

12 Encoder Connector (CN2)

Encoder Connector (P.62)
Encoder Cable- Incremental Type (P.62)
Encoder Cable- Absolute Type (P.63)

Note: Under high-interference environment, installing a USB isolator is recommended (Delta's product model: UC-ADP01-A)

Servo Drive Interface

No.	Name	Description
①	-	7-segment display
②	CHARGE	Power indicator
③	RST	Main circuit terminal; connects to the power supply (200 - 230 V_{AC}, 50/60 Hz)
④	L_{1C}, L_{2C}	Control circuit terminal; connects to single-phase power supply (200 - 230 V_{AC}, 50/60 Hz)
⑤	Regenerative Resistor	Connects to an external regenerative resistor, external regenerative braking unit, or the built-in regenerative resistor
⑥	UVW	Servo drive current output; connects to the motor power connector U, V, W. Do not connect to the main circuit power. Incorrect wiring will cause damage to the servo drive.
⑦	Ground Terminal	Connects to the ground wire for the power and servo motor
⑧	CN4	USB connector (Mini USB); connects to PC
⑨	CN3	Modbus communication port (B3-L / B3A-L)
	CN3	CANopen high-speed communication port (B3-M / B3A-M)
	CN6	DMCNET high-speed communication port (B3-F / B3A-F)
	CN6	EtherCAT high-speed communication port (B3-E / B3A-E)
⑩	CN1	I/O signal interface; connects to the PLC or controls I/O
⑪	CN10	STO connector; only available on B3A models
⑫	CN2	Encoder connector; connects to the encoder of the servo motors

Accessories

Power Cables

- 3 m, 5 m, 10 m, and 20 m standard cables are available
- Standard power connectors and IP67 waterproof connectors are available
- With options of brake and without brake

Encoder Cables

- 3 m, 5 m, 10 m, and 20 m standard cables are available
- Standard encoder connectors and IP67 waterproof connectors are available

USB Cables

- Connects the PC and the servo drive for ASDA-Soft operation
- Mini USB Type B communication port, compatible with USB 2.0

Regenerative Resistor

- Refer to Section 2.8 in the ASDA-B3 user manual for selection

Note: Under high-interference environment, installing a USB isolator is recommended
(Delta's product model: UC-ADP01-A)

Servo System Combination Table

220 V

Built-in Motor						Drive	Power Cable		Power
Frame Size	Output (W)	Model Name	Rotational Inertia ($x10^{-4}kg.m^2$) Standard / With Brake	Rated / Max. Speed (rpm)	Rated / Max. Current (A)	Model Name	Standard	Torsion-Resistant	Standard
40	100	ECM-B3L-C ☐2 0401RB1 ECM-B3L-C ☐2 0401SB1	0.0299 / 0.0315	3,000 / 6,000	0.857 / 3.44	ASD-B3①-0121-②	ACS3-AFPWSRXX ACS3-ABPWSRXX ACS3-AFPWSR0C ACS3-ABPWSR0C	ACS3-AFPRSRXX ACS3-ABPRSRXX ACS3-AFPRSR0C ACS3-ABPRSR0C	ACS3-AFPW ACS3-ABPW ACS3-AFPW ACS3-ABPW
60	200	ECM-B3M-C ☐2 0602RB1 ECM-B3M-C ☐2 0602SB1	0.141 / 0.151	3,000 / 6,000	1.42 / 6.62	ASD-B3①-0221-②			
	200	ECM-B3H– C ☐2 0602RB1 ECM-B3H– C ☐2 0602SB1	0.265 / 0.28	3,000 / 6,700	1.48 / 5.98	ASD-B3①-0221-②			
	400	ECM-B3M-C ☐2 0604RB1 ECM-B3M-C ☐2 0604SB1	0.254 / 0.264	3,000 / 6,000	2.40 / 9.47	ASD-B3①-0421-②			
	400	ECM-B3H– C ☐2 0604RB1 ECM-B3H– C ☐2 0604SB1	0.523 / 0.538	3,000 / 6,700	2.15 / 8.37	ASD-B3①-0421-②			
80	750	EECM-B3M-C ☐2 0807RB1 ECM-B3M-C ☐2 0807SB1	1.07 / 1.13	3,000 / 6,000	4.27 / 15.8	ASD-B3①-0721-② ASD-B3①-1021-②			
	750	ECM-B3H– C ☐2 0807RB1 ECM-B3H– C ☐2 0807SB1	1.55 / 1.62	3,000 / 6,700	4.13 / 16.1	ASD-B3①-0721-② ASD-B3①-1021-②			

Note:
1. Cable model name: The "XX" stands for cable length. 03 = 3 m, 05 = 5 m, 10 = 10 m, 20 = 20 m.
2. Servo motor model name: ☐2 = encoder type, ☐3 = type of shaft and oil seal, ☐4 = shaft diameter and connector type, ☐5 = special code.
3. Servo drive model name: ① = product series, ② = model code.
4. Cables are divided into direct (towards motor shaft) and reverse (towards encoder) exit direction. For details, please refer to the ordering information.

Connector & Cable						Connector Only (No Cable)		
r Cable with Brake		Encoder Cable (Incremental Type)		Encoder Cable (Absolute Type)				
d	Torsion-Resistant	Standard	Torsion-Resistant	Standard	Torsion-Resistant	Power Connector	Power Connector (with brake) / Brake Connector	Encoder Connector
SSXX	ACS3-AFPRSSXX	ACS3-AFEASIXX	ACS3-AFERSIXX	ACS3-AFEASAXX	ACS3-AFERSAXX			
SSXX	ACS3-ABPRSSXX	ACS3-ABEASIXX	ACS3-ABERSIXX	ACS3-ABEASAXX	ACS3-ABERSAXX	ACS3-AFPWSS00	ACS3-AFPWSS00	ACS3-CNENC200 + ACS3-AFEASA00
SS0C	ACS3-AFPRSS0C	ACS3-AFEASI0C	ACS3-AFERSI0C	ACS3-AFEASA0C	ACS3-AFERSA0C	ACS3-ABPWSS00	ACS3-ABPWSS00	
SS0C	ACS3-ABPRSS0C	ACS3-ABEASI0C	ACS3-ABERSI0C	ACS3-ABEASA0C	ACS3-ABERSA0C			

Servo System Combination Table

220 V

Motor with Line (Frame Size 40 ~ 80)						Drive	Power Cable		Pow
Frame Size	Output (W)	Model Name	Rotational Inertia ($x10^{-4}kg.m^2$) Standard / With Brake	Rated / Max. Speed (rpm)	Rated / Max. Current (A)	Model Name	Standard	Torsion-Resistant	Standa
40	100	ECM-B3L-C 2 0401RS1	0.0299 / 0.0315	3,000 / 6,000	0.857 / 3.44	ASD-B3①-0121-②	ACS3-CAP W11XX	ACS3-CAPF11XX	ACS3-CAP
		ECM-B3L-C 2 0401SS1							
60	200	ECM-B3M-C 2 0602RS1	0.141 / 0.151	3,000 / 6,000	1.42 / 6.62	ASD-B3①-0221-②			
		ECM-B3M-C 2 0602SS1							
	200	ECM-B3H– C 2 0602RS1	0.265 / 0.28	3,000 / 6,700	1.48 / 5.98	ASD-B3①-0221-②			
		ECM-B3H– C 2 0602SS1							
	400	ECM-B3M-C 2 0604RS1	0.254 / 0.264	3,000 / 6,000	2.40 / 9.47	ASD-B3①-0421-②			
		ECM-B3M-C 2 0604SS1							
	400	ECM-B3H– C 2 0604RS1	0.523 / 0.538	3,000 / 6,700	2.15 / 8.37	ASD-B3①-0421-②			
		ECM-B3H– C 2 0604SS1							
80	750	ECM-B3M-C 2 0807RS1	1.07 / 1.13	3,000 / 6,000	4.27 / 15.8	ASD-B3①-0721-②			
		ECM-B3M-C 2 0807SS1			4.27 / 15.8				
	750	ECM-B3H– C 2 20807RS1	1.55 / 1.62	3,000 / 6,700	4.13 / 16.1	ASD-B3①-0721-②			
		ECM-B3H– C 2 20807SS1				ASD-B3①-1021-②			
	750	ECM-B3G– C 2 20807RS1	2.91 / 2.96	3,000 / 6,000	4.27 / 15.8	ASD-B3①-0721-②			
		ECM-B3G– C 2 20807SS1				ASD-B3①-1021-②			
	1,000	ECM-B3M-C 2 0810RS1	1.37 / 1.4	3,000 / 6,000	5.00 / 18.2	ASD-B3①-1021-②			
		ECM-B3M-C 2 0810SS1							

Note:
1. Cable model name: The "XX" stands for cable length. 03 = 3 m, 05 = 5 m, 10 = 10 m, 20 = 20 m.
2. Servo motor model name: 2 = encoder type, 3 = type of shaft and oil seal, 4 = shaft diameter and connector type, 5 = special code.
3. Servo drive model name: ① = product series, ② = model code.

Connector & Cable						Connector Only (No Cable)		
er Cable with Brake		Encoder Cable (Incremental Type)		Encoder Cable (Absolute Type)				
rd	Torsion-Resistant	Standard	Torsion-Resistant	Standard	Torsion-Resistant	Power Connector	Power Connector (with brake) / Brake Connector	Encoder Connector
W21XX	ACS3-CAPF21XX	ACS3-CAEN01XX	ACS3-CAEF01XX	ACS3-CAEA01XX	ACS3-CAEB01XX	ACS3-CAPW1000	ACS3-CAPW2000	ACS3-CNENC200 + ACS3-CAEN0000

Servo System Combination Table

220 V

Frame Size 100 ~ 220						Drive	Power Cable		Power
Frame Size	Output (W)	Model Name	Rotational Inertia ($x10^{-4}kg.m^2$) Standard / With Brake	Rated / Max. Speed (rpm)	Rated / Max. Current (A)	Model Name	Standard	Torsion-Resistant	Standard
100	1,000	ECM-B3M-C ② 1010RS1	2.78 / 3.06	3,000 / 6,000	6.05 / 18.4	ASD-B3①-1021-②	ACS3-CAP WA2XX ACS3-CRP WA2XX	ACS3-CAPFA2XX ACS3-CRPFA2XX	ACS3-CABR ACS3-CRBR
		ECM-B3M-C ② 1010SS1							
	1,500	ECM-B3M-C ② 1015RS1	3.69 / 3.97	3,000 / 6,000	7.48 / 22.8	ASD-B3①-1521-②			
		ECM-B3M-C ② 1015SS1							
	2,000	ECM-B3M-C ② 1020RS1	4.68 / 4.95	3,000 / 6,000	9.96 / 30.7	ASD-B3①-2023-②			
		ECM-B3M-C ② 1020SS1							
130	850	ECM-B3H-L ② 1308RS1	12.44 / 12.62	1,500 / 4,000	6.65 / 20.0	ASD-B3①-1021-②			
		ECM-B3H-L ② 1308SS1							
	1,000	ECM-B3M-E ② 1310RS1	7.79 / 7.94	2,000 / 3,000	5.96 / 19.9	ASD-B3①-1021-②			
		ECM-B3M-E ② 1310SS1							
	1,300	ECM-B3H-L ② 1313RS1	18 / 18.14	1,500 / 4,000	7.7 / 23.9	ASD-B3①-1521-②			
		ECM-B3H-L ② 1313SS1							
	1,500	ECM-B3M-E ② 1315RS1	11.22 / 11.37	2,000 / 3,000	8.17 / 26.82	ASD-B3①-1521-② ASD-B3①-2023-②			
		ECM-B3M-E ② 1315SS1							
	1,800	ECM-B3H-L ② 1318RS1	22.6 / 22.8	1,500 / 4,000	11.5 / 36.1	ASD-B3①-2023-②	ACS3-CAP WA3XX ACS3-CRP WA3XX	ACS3-CAPFA3XX ACS3-CRPFA3XX	
		ECM-B3H-L ② 1318SS1							
	2,000	ECM-B3M-E ② 1320RS1	14.65 / 14.8	2,000 / 3,000	10.59 / 34.20	ASD-B3①-2023-②			
		ECM-B3M-E ② 1320SS1							
180	2,000	ECM-B3M-E ② 1820RS1	29.11 / 30.38	2,000 / 3,000	11.43 / 36.21	ASD-B3①-2023-②	ACS3-CAP WC4XX ACS3-CRP WC4XX	ACS3-CAPFC4XX ACS3-CRPFC4XX	
		ECM-B3M-E ② 1820SS1							
	3,000	ECM-B3M-F ② 1830RS1	53.63 / 54.9	1,500 / 3,000	18.21 / 58.9	ASD-B3①-3023-②	ACS3-CAP WC5XX ACS3-CRP WC5XX	ACS3-CAPFC5XX ACS3-CRPFC5XX	
		ECM-B3M-F ② 1830SS1							

Note:
1. Cable model name: The "XX" stands for cable length. 03 = 3 m, 05 = 5 m, 10 = 10 m, 20 = 20 m.
2. Servo motor model name: ② = encoder type.
3. Servo drive model name: ① = product series, ② = model code.
4. Cables are divided into straight and angular connectors. For details, please refer to the ordering information.

Connector & Cable						Connector Only (No Cable)		
r Cable with Brake		Encoder Cable (Incremental Type)		Encoder Cable (Absolute Type)				
d	Torsion-Resistant	Standard	Torsion-Resistant	Standard	Torsion-Resistant	Power Connector	Power Connector (with brake) / Brake Connector	Encoder Connector
						ACS3-CAP WA000 ACS3-CRP WA000		
A1XX A1XX	ACS3-CABFA1XX ACS3-CRBFA1XX	ACS3-CAENA1XX ACS3-CRENA1XX	ACS3-CAEFA1XX ACS3-CREFA1XX	ACS3-CAEAA1XX ACS3-CREAA1XX	ACS3-CAEBA1XX ACS3-CREBA1XX		ACS3-CABRA000 ACS3-CRBRA000	ACS3-CNENC200 + ACS3-CAENA000 ACS3-CRENA000
						ACS3-CAP WC000 ACS3-CRP WC000		

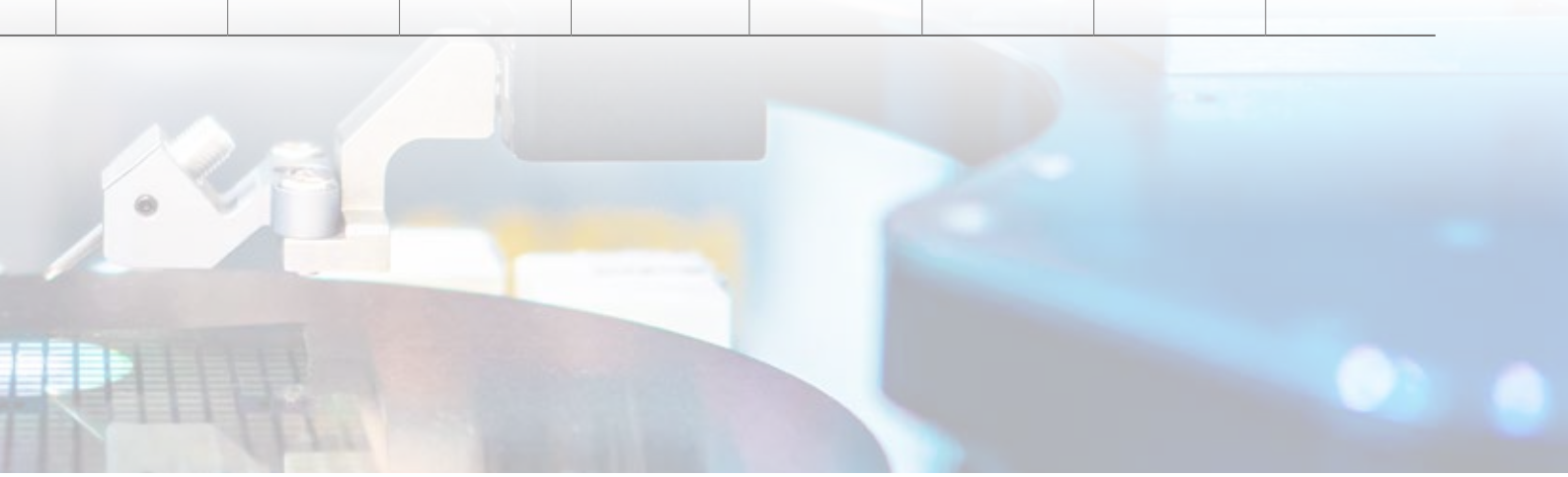
Servo System Combination Table

220 V

A3L Motor						Drive	Power Cable		Power
Frame Size	Output (W)	Model Name	Rotational Inertia ($x10^{-4}kg.m^2$) Standard / With Brake	Rated / Max. Speed (rpm)	Rated / Max. Current (A)	Model Name	Standard	Torsion-Resistant	Standard
40	100	ECM-A3L-C ② 0401RS1	0.04 / 0.0426	3,000 / 6,000	0.9 / 3.88	ASD-B3①-0121-②	ACS3-CAPW11XX	ACS3-CAPF11XX	ACS3-CAPW
		ECM-A3L-C ② 0401SS1							
60	200	ECM-A3L-C ② 0602RS1	0.09 / 0.12	3,000 / 6,000	1.45 / 6.2	ASD-B3①-0221-②			
		ECM-A3L-C ② 0602SS1							
	400	ECM-A3L-C ② 0604RS1	0.15 / 0.18	3,000 / 6,000	2.65 / 10.1	ASD-B3①-0421-②			
		ECM-A3L-C ② 0604SS1							
80	400	ECM-A3L-C ② 0804RS1	0.352 / 0.408	3,000 / 6,000	2.6 / 10.6	ASD-B3①-0421-②			
		ECM-A3L-C ② 0804SS1							
	750	ECM-A3L-C ② 0807RS1	0.559 / 0.614	3,000 / 6,000	5.1 / 20.6	ASD-B3①-0721-② ASD-B3①-1021-②			
		ECM-A3L-C ② 0807SS1							

Note:
1. Cable model name: The "XX" stands for cable length. 03 = 3 m, 05 = 5 m, 10 = 10 m, 20 = 20 m.
2. Servo motor model name: ② = encoder type, ③ = type of shaft and oil seal, ④ = shaft diameter and connector type, ⑤ = special code.
3. Servo drive model name: ① = product series, ② = model code.

Connector & Cable						Connector Only (No Cable)		
r Cable with Brake		Encoder Cable (Incremental Type)		Encoder Cable (Absolute Type)				
d	Torsion-Resistant	Standard	Torsion-Resistant	Standard	Torsion-Resistant	Power Connector	Power Connector (with brake) / Brake Connector	Encoder Connector
/21XX	ACS3-CAPF21XX	ACS3-CAEN01XX	ACS3-CAEF01XX	ACS3-CAEA01XX	ACS3-CAEB01XX	ACS3-CAPW1000	ACS3-CAPW2000	ACS3-CNENC200 + ACS3-CAEN0000



Servo System Combination Table

400 V

Frame Size 40 ~ 220						Drive	Power Cable		Pow
Frame Size	Output (W)	Model Name	Rotational Inertia ($x10^{-4}kg.m^2$) Standard / With Brake	Rated / Max. Speed (rpm)	Rated / Max. Current (A)	Model Name	Standard	Torsion-Resistant	Standa
60	400	ECM-B3M-J ☒ 0604RS1	0.254 / 0.264	3,000 / 6,000	1.35 / 5.2	ASD-B3①-1043-②	ACS3-CAP W31XX	ACS3-CAPF31XX	
		ECM-B3M-J ☒ 0604SS1							
80	750	ECM-B3M-J ☒ 0807RS1	1.07 / 1.13	3,000 / 6,000	2.15 / 7.9	ASD-B3①-1043-②			
		ECM-B3M-J ☒ 0807SS1				ASD-B3①-1543-②			
100	1,000	ECM-B3M-J ☒ 1010RS1	2.78 / 3.06	3,000 / 6,000	3.03 / 9.21	ASD-B3①-1043-②	ACS3-CAP WA2XX ACS3-CRP WA2XX	ACS3-CAPFA2XX ACS3-CRPFA2XX	
		ECM-B3M-J ☒ 1010SS1				ASD-B3①-1543-②			
	1,500	ECM-B3M-J ☒ 1015RS1	3.69 / 3.97	3,000 / 6,000	3.73 / 11.4	ASD-B3①-1543-②			
		ECM-B3M-J ☒ 1015SS1				ASD-B3①-2043-②			
	2,000	ECM-B3M-J ☒ 1020RS1	4.68 / 4.95	3,000 / 6,000	5 / 15.3	ASD-B3①-2043-②			
		ECM-B3M-J ☒ 1020SS1							
130	850	ECM-B3H-L ☒ 1308RS1	12.44 / 12.62	1,500 / 4,000	3.35 / 10	ASD-B3①-1043-②			ACS3-CAB ACS3-CRB
		ECM-B3H-L ☒ 1308SS1				ASD-B3①-1543-②			
	1,000	ECM-B3M-K ☒ 1310RS1	7.79 / 7.94	2,000 / 3,000	3 / 9.95	ASD-B3①-1043-②			
		ECM-B3M-K ☒ 1310SS1				ASD-B3①-1543- ②			
	1,300	ECM-B3H-L ☒ 1313RS1	18 / 18.14	1,500 / 4,000	3.85 / 12	ASD-B3①-1543-②			
		ECM-B3H-L ☒ 1313SS1				ASD-B3①-2043-②			
	1,500	ECM-B3M-K ☒ 1315RS1	11.22 / 11.37	2,000 / 3,000	4.09 / 13.37	ASD-B3①-1543-②			
		ECM-B3M-K ☒ 1315SS1				ASD-B3①-2043-②			
	1,800	ECM-B3H-L ☒ 1318RS1	22.6 / 22.8	1,500 / 4,000	5.75 / 18.1	ASD-B3①-2043-②			
		ECM-B3H-L ☒ 1318SS1							
	2,000	ECM-B3M-K ☒ 1320RS1	14.65 / 14.8	2,000 / 3,000	5.3 / 17.1	ASD-B3①-2043-②			
		ECM-B3M-K ☒ 1320SS1							
180	2,000	ECM-B3M-K ☒ 1820RS1	29.11 / 30.38	2,000 / 3,000	5.7 / 18.1	ASD-B3①-2043-②	ACS3-CAP WC3XX ACS3-CRP WC3XX	ACS3-CAPFC3XX ACS3-CRPFC3XX	
		ECM-B3M-K ☒ 1820SS1							
	3,000	ECM-B3M-L ☒ 1830RS1	53.63 / 54.9	1,500 / 3,000	9.1 / 29.45	ASD-B3①-3043-②			
		ECM-B3M-L ☒ 1830SS1				ASD-B3①-4543-②			
	4,500	ECM-B3M-L ☒ 1845RS1	67.73 / 69.15	1,500 / 4,000	13.3 / 35.35	ASD-B3①-4543-②	ACS3-CAP WC4XX ACS3-CRP WC4XX	ACS3-CAPFC4XX ACS3-CRPFC4XX	
		ECM-B3M-L ☒ 1845SS1							
	5,500	ECM-B3M-L ☒ 1855R31	98.88 / 100.1	1,500 / 4,000	15.3 / 49.29	ASD-B3①-5543-②	ACS3-CAP WE6XX ACS3-CRP WE6XX	ACS3-CAPFE6XX ACS3-CRPFE6XX	
		ECM-B3M-L ☒ 1855S31							
	7,500	ECM-B3M-L ☒ 1875R31	134.95 / 136.24	1,500 / 4,000	22.1 / 56.68	ASD-B3①-7543-②			
		ECM-B3M-L ☒ 1875S31							

Note:
1. Cable model name: The "XX" stands for cable length. 03 = 3 m, 05 = 5 m, 10 = 10 m, 20 = 20 m.
2. Servo motor model name: ☒ = encoder type.
3. Cables are divided into standard, high flex, straight, and angular connectors.
   For details, please refer to the ordering information .

Connector & Cable						Connector Only (No Cable)		
ver Cable with Brake		Encoder Cable (Incremental Type)		Encoder Cable (Absolute Type)				
ard	Torsion-Resistant	Standard	Torsion-Resistant	Standard	Torsion-Resistant	Power Connector	Power Connector (with brake) / Brake Connector	Encoder Connector
		ACS3-CAEN01XX	ACS3-CAEF01XX	ACS3-CAEA01XX	ACS3-CAEB01XX	ACS3-CAPW1000	ACS3-CAPW2000	
						ACS3-CAPWA000 ACS3-CRPWA000		
RA1XX RA1XX	ACS3-CABFA1XX ACS3-CRBFA1XX	ACS3-CAENA1XX ACS3-CRENA1XX	ACS3-CAEFA1XX ACS3-CREFA1XX	ACS3-CAEAA1XX ACS3-CREAA1XX	ACS3-CAEBA1XX ACS3-CREBA1XX		ACS3-CABRA000 ACS3-CRBRA000	ACS3-CNENC200 + ACS3-CAENA000 ACS3-CRENA000
						ACS3-CAPWC000 ACS3-CRPWC000		
						ACS3-CAPWC000 ACS3-CRPWC000		
						ACS3-CAPWE000 ACS3-CRPWE000		

Servo Drive Model Information

ASD-B3 Series Servo Drive

ASD - B3 - 04 21 - L

Product Name
AC Servo Drive

Product Series
B3 series
B3A series

Rated Power Output
01: 100 W
02: 200 W
04: 400 W
07: 750 W
10: 1 kW
15: 1.5 kW
20: 2 kW
30: 3 kW
45: 4.5 kW
55: 5.5 kW
75: 7.5 kW

Input Voltage and Phase
21: 220V single-/three-phase
23: 220V three-phase
43: 400V three-phase

Model Code

ASD-B3

Code	PT Mode Pulse Input	PR Mode	RS-485	Analog Voltage Control	CANopen	DMCNET	EtherCAT	STO
L	✓	✓	✓	✓	-	-	-	-
M	-	✓	-	✓	✓	-	-	-
F	-	✓	-	✓	-	✓	-	-
E	-	✓	-	✓	-	-	✓	-

ASD-B3A*1

Code	PT Mode Pulse Input	PR Mode	RS-485	Analog Voltage Control	CANopen	DMCNET	EtherCAT	PROFINET	STO*2
L	✓	✓	✓	✓	-	-	-	-	✓
M	✓	✓	✓	✓	✓	-	-	-	✓
F	✓	✓	-	✓	-	✓	-	-	✓
E	✓	✓	-	✓	-	-	✓	-	✓
P	-	✓	-	-	-	-	-	✓	✓

*1. B3A supports dynamic brake function
*2. B3A 200V supports STO (SIL2); B3A 400V STO (SIL3) certification in process

Note: The model information is for reference only. Not all kinds of permutations are available.
Please contact the distributor near your region or Delta for the details.

Servo Drive Specifications

ASD-B3			100W 01	200W 02	400W 04	750W 07	1kW 10	1.5kW 15	2kW 20	3kW 30
Power Supply	Phase / Voltage		Single-phase / Three-phase 220V$_{AC}$						Three-phase 220V$_{AC}$	
	Permissible Voltage		Single-phase / Three-phase 200 - 230V$_{AC}$, -15% to 10%						Three-phase 200 - 230V$_{AC}$, -15% to 10%	
	Input Current (3PH) (Unit: Arms)		0.88	1.29	2.04	3.52	5.72	6.33	7.6	10.3
	Input Current (1PH) (Unit: Arms)		1.47	2.35	3.74	6.47	10.4	11.7	-	-
	Continuous Output Current (Unit: Arms)		0.9	1.55	2.65	5.1	7.3	8.3	13.4	19.4
	Max. Instantaneous Output Current (Unit: Arms)		3.88	7.07	10.6	14.14	21.21	24.3	38.3	53.03
	Final Power Dissipation (W)		19.8	24.1	35.0	60.0	79.1	99.0	123.2	174.0
Regenerative Resistor	Built0in Regenerative Resistor	Resistance (Ohm)	-	-	100	100	100	100	20	20
		Capacity (Watt)	-	-	40	40	40	40	80	80
	External Minimum Allowable Resistance Value(Ohm)		60	60	60	60	30	30	15	15
Cooling Method			Natural cooling				Fan cooling			
Drive Resolution			24-bit (16,777,216 pls/rev)							
Main Circuit Control			SVPWM control							
Tuning Mode			Auto / Manual							
Position Control Mode	Pulse Type (only for pulse control mode)		Pulse + Direction; A phase + B phase; CCW pulse +CW pulse							
	Max. Output Pulse Frequency (only for pulse control mode)		Pulse + direction: 4 Mpps; CCW pulse + CW pulse: 4 Mpps; A phase + B phase: single-phase 2 Mpps; Open collector: 200 Kpps							
	Command Source		External pulse (only for pulse control mode) / Internal register (PR mode)							
	Smoothing Method		Low-pass, S-curve, and moving filters							
	E-Gear Ratio		E-Gear ratio: N / M times, limited to (1 / 4 < N / M < 262144) N: 1 - 536870911/M: 1 - 2147483647							
	Torque Limit		Parameter settings							
	Feed Forward Compensation		Parameter settings							
Speed Control Mode	Analog Command Input	Voltage Range	0 to ±10 V$_{DC}$							
		Resolution	12-bit							
		Input Impedance	1MΩ							
		Time Constant	25μs							
	Speed Control Range[*1]		1 : 6000							
	Command Source		External analog command / Internal register							
	Smoothing Method		Low-pass and S-curve filters							
	Torque Limit		Parameter settings or analog input							
	Bandwidth		Maximum 3.1kHz							
	Speed Calibration Ratio[*2]		±0.01% at 0% to 100% load fluctuation							
			±0.01% at ±10% power fluctuation							
			±0.01% at 0°C to 50°C ambient temperature fluctuation							
Torque Control Mode	Analog Command Input	Voltage Range	0 to ±10 V$_{DC}$							
		Input Impedance	1MΩ							
		Time Constant	25μs							
	Command Source		External analog command / Internal register							
	Smoothing Method		Low-pass filter							
	Speed Limit		Parameter settings or analog input							
Analog Monitor Output			Monitoring signal can be set with parameters (voltage output range: ±8V); resolution: 10-bit							
Digital Input / Output	Input		L: 9 Inputs; M, F, E: 4 Inputs; P: 6 Inputs							
	Output		L: 6 Outputs; M, F, E: 2 Outputs; P: 3 Outputs							
Protection Function			Overcurrent, Overvoltage, Undervoltage, Overheat, Regeneration error, Overload, Excessive speed deviation, Excessive position deviation, Encoder error, Adjustment error, Emergency stop, Forward / reverse limit error, Serial communication error, RST leak phase, Serial communication timeout, Short-circuit protection for terminals U, V, W							
Communication Interface			USB/RS-485/CANopen/DMCNET/EtherCAT							
Environment	Installation Site		Indoors (avoid direct sunlight), no corrosive vapor (avoid fumes, flammable gases, and dust)							
	Altitude		Altitude 2000 m or lower above sea level							
	Atmospheric Pressure		86kPa-106kPa							
	Operating Temperature		0°C to 55°C (If operating temperature is above 45°C, forced cooling is required)							
	Storage Temperature		-20°C to 65°C							
	Humidity		0 to 90% RH (non-condensing)							
	Vibration		10 Hz ~ 57 Hz：0.075 mm amplitude，58 Hz ~ 150 Hz：1G							
	IP Rating		IP20							
	Power System		TN system [*3*4]							
	Certifications		IEC/EN/UL 61800-5-1							

Notes:
*1. Within the rated load, the speed ratio is: the minimum speed (smooth operation) / rated speed.
*2. Within the rated speed, the speed calibration ratio is: (rotational speed with no load - rotational speed with full load) / rated speed.
*3. TN system: the neutral point of the power system connects directly to the ground. The exposed metal components connect to the ground through the protective ground conductor.
*4. Use a single-phase three-wire power system for the single-phase power model.
*5. ASDA-B3A complies with the TUV Functional Safety certification.

Servo Drive Specifications

400 V

ASD-B3			1kW	1.5kW	2kW	3kW	4.5kW	5.5kW	7.5kW
			10	15	20	30	45	55	75
Main Circuit Power Supply	Phase / Voltage		Three-phase 400 V_{AC}						
	Permissible Voltage		Three-phase 380 - 440 V_{AC}, -10% - +10%						
	Input Current (3PH) (Unit: Arms)		2.91	3.52	5.06	6.14	12	14.5	20
	Inrush Current (Unit: Arms)		5.66	5.66	5.66	5.66	37.72	37.72	37.72
Control Power Supply	Phase / Voltage		Single-phase 400 V_{AC}						
	Permissible Voltage		Single-phase 380 - 400 V_{AC}, -10% - +10%						
	Input Current (3PH) (Unit: Arms)		0.1	0.1	0.1	0.1	0.13	0.13	0.13
	Input Current (1PH) (Unit: Arms)		37.72	37.72	37.72	37.72	37.72	37.72	37.72
Continuous Output Current (Unit: Arms)			3.37	4.09	5.96	9.11	13.3	15.34	22.11
Max. Instantaneous Output Current (Unit: Arms)			7.07	10.6	18.98	27.33	35.35	49.29	53.03
Power Loss (W)			43.6	59.0	105.8	157.0	185.0	204.0	349.0
Regenerative Resistor	Built-in Regenerative Resistor	Resistance (Ohm)	100	100	50	50	35	35	35
		Capacity (Watt)	80	80	80	80	100	100	100
	External Minimum Allowable Resistance Value (Ohm)		80	60	45	40	35	25	25
Cooling Method			Fan cooling						
Drive Resolution			24-bit (16777216 p/rev)						
Main Circuit Control			SVPW Mcontrol						
Tuning Mode			Auto / Manual						
Position Control Mode	Pulse Type (only for pulse control mode)		Pulse + Direction; A phase + B phase; CCW pulse + CW pulse						
	Max. Output Pulse Frequency (only for pulse control mode)		Pulse + direction: 4 Mpps; CCW pulse + CW pulse: 4 Mpps; A phase + B phase: single-phase 2 Mpps; Open collector: 200 Kpps						
	Command Source		External pulse (only for pulse control mode) / Internal register (PR mode)						
	Smoothing Method		Low-pass, S-curve, and moving filters						
	E-Gear Ratio		E-Gear ratio: N / M times, limited to (1/4 < N/M < 262144) N: 1 - 536870911 / M: 1 - 2147483647						
	Torque Limit		Parameter settings						
	Feed Forward Compensation		Parameter settings						
Speed Control Mode	Analog Command Input	Voltage Range	0 - ± 10 V_{DC}						
		Resolution	12-bit						
		Input Impedance	1MΩ						
		Time Constant	25μs						
	Speed Control Range[*1]		1:6000						
	Command Source		External analog command / Internal register						
	Smoothing Method		Low-pass and S-curve filters						
	Torque Limit		Parameter settings or analog input						
	Bandwidth		Maximum 3.1kHz						
	Speed Calibration Ratio[*2]		± 0.01% at 0% to 100% load fluctuation						
			± 0.01% at ± 10% power fluctuation						
			± 0.01% at 0ºC to 50ºC ambient temperature fluctuation						
Torque Control Mode	Analog Command Input	Voltage Range	0 - ± 10 V_{DC}						
		Input Impedance	1MΩ						
		Time Constant	25μs						
	Command Source		External analog command / Internal register						
	Smoothing Method		Low-pass filter						
	Speed Limit		Parameter settings or analog input						
Analog Monitor Output			Monitoring signal can be set with parameters (voltage output range: ± 8V); resolution: 10-bit						
Digital Input			L: 9 Inputs; M, F, E: 4 Inputs						
Digital Output			L: 6 Outputs; M, F, E: 2 Outputs						
Protection Function			Overcurrent, Overvoltage, Undervoltage, Overheat, Regeneration error, Overload, Excessive speed deviation, Excessive position deviation, Encoder error, Adjustment error, Emergency stop, Forward / reverse limit error, Serial communication error, RST leak phase, Serial communication timeout, Short-circuit protection for terminals U, V, W						
Communication Interface			RS-485 / USB / CANopen / DMCNET / EtherCAT						
Environment	Installation Site		Indoors (avoid direct sunlight), no corrosive vapor (avoid fumes, flammable gases, and dust)						
	Altitude		Altitude 2000 m or lower above sea level						
	Atmospheric Pressure		86kPa - 106kPa						
	Operating Temperature		0˚C - 55˚C (If operating temperature is above 45ºC, forced cooling is required)						
	Storage Temperature		-20˚C - 65˚C						
	Humidity		0 - 90% RH (non-condensing)						
	Vibration		0Hz - 57Hz: 0.075 mm amplitude, 58Hz - 150Hz: 1G						
	IP Rating		IP20						
	Power System		TN system[*3*4]						
	Certifications		IEC/EN 61800-5-1 CE						

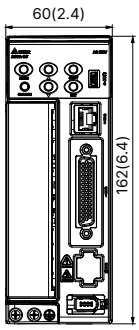
Notes:
*1. Within the rated load, the speed ratio is: the minimum speed (smooth operation) / rated speed
*2. Within the rated speed, the speed calibration ratio is: (rotational speed with no load - rotational speed with full load) / rated speed
*3. TN system: the neutral point of the power system connects directly to the ground. The exposed metal components connect to the ground through the protective ground conductor
*4. Use a single-phase three-wire power system for the single-phase power model
*5. B3A TUV Functional Safety certification in process

Dimensions - 220 V

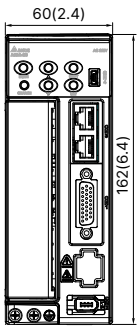
100 W / 200 W / 400 W

Weight	Unit
0.9 kg	mm (inch)

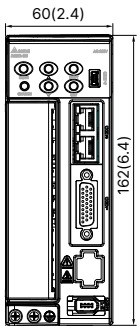
B3-L

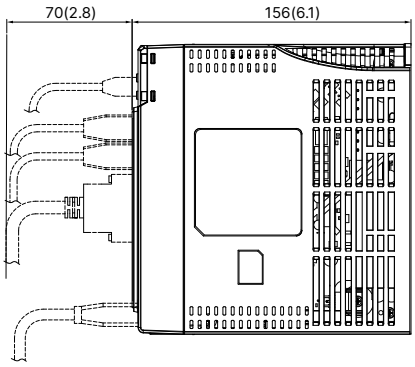


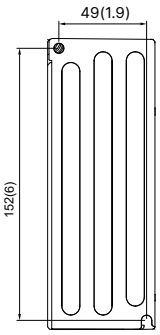
B3-M/F/P



B3-E



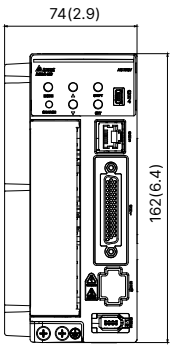




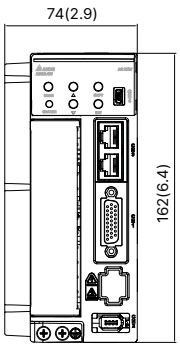
750 W

Weight	Unit
1.2 kg	mm (inch)

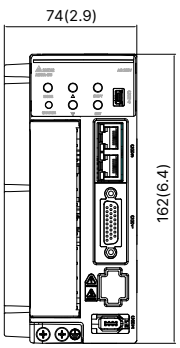
B3-L

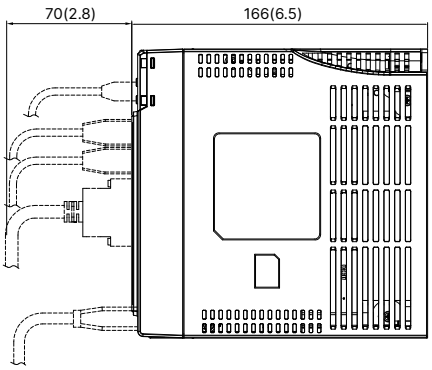


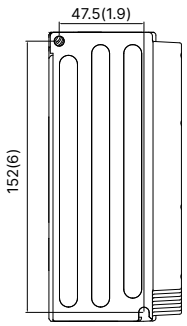
B3-M/F/P



B3-E



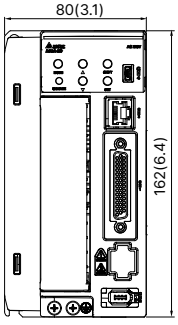




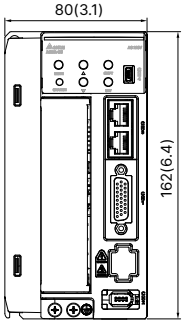
1 kW / 1.5 kW

Weight	Unit
1.8 kg	mm (inch)

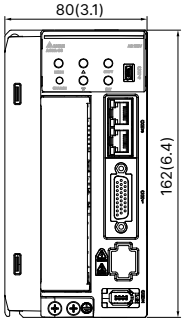
B3-L

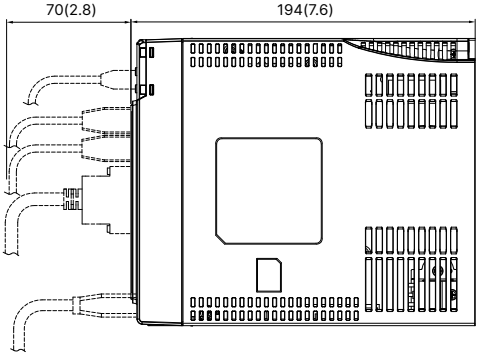


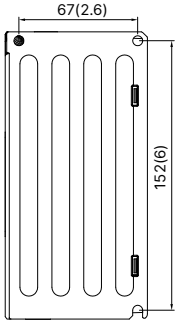
B3-M/F/P



B3-E





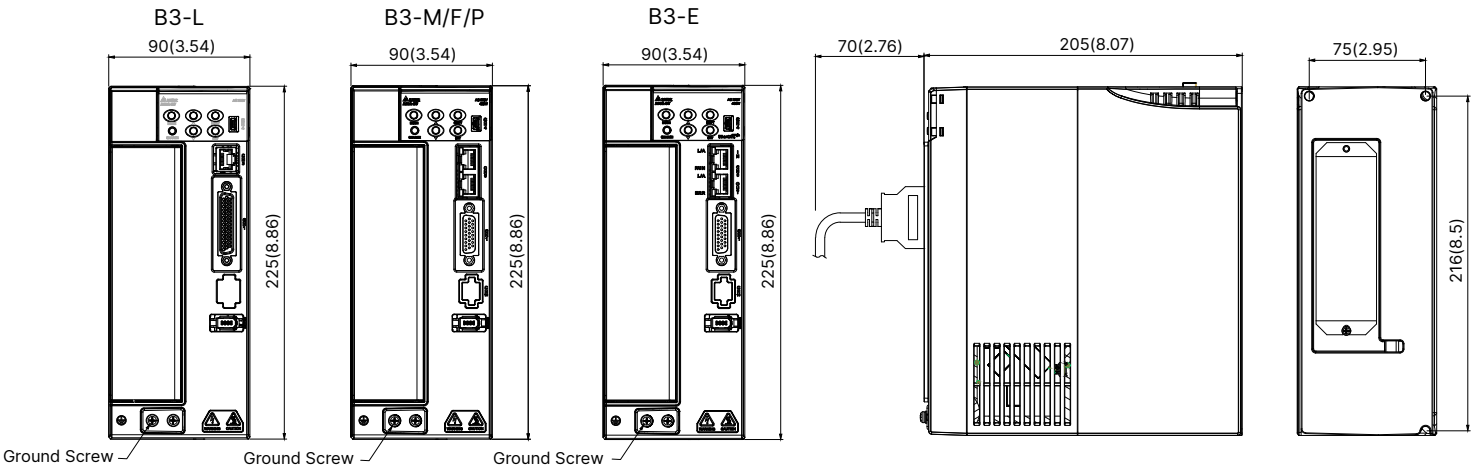


Servo Drive Specifications

Dimensions - 220 V

2 kW / 3 kW

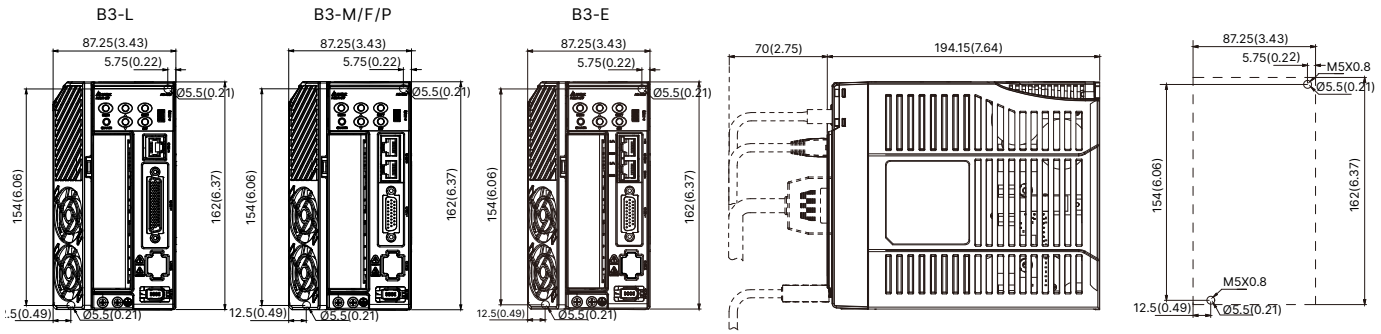
Weight	Unit
2.8 kg	mm (inch)



Dimensions - 400 V

2 kW / 3 kW

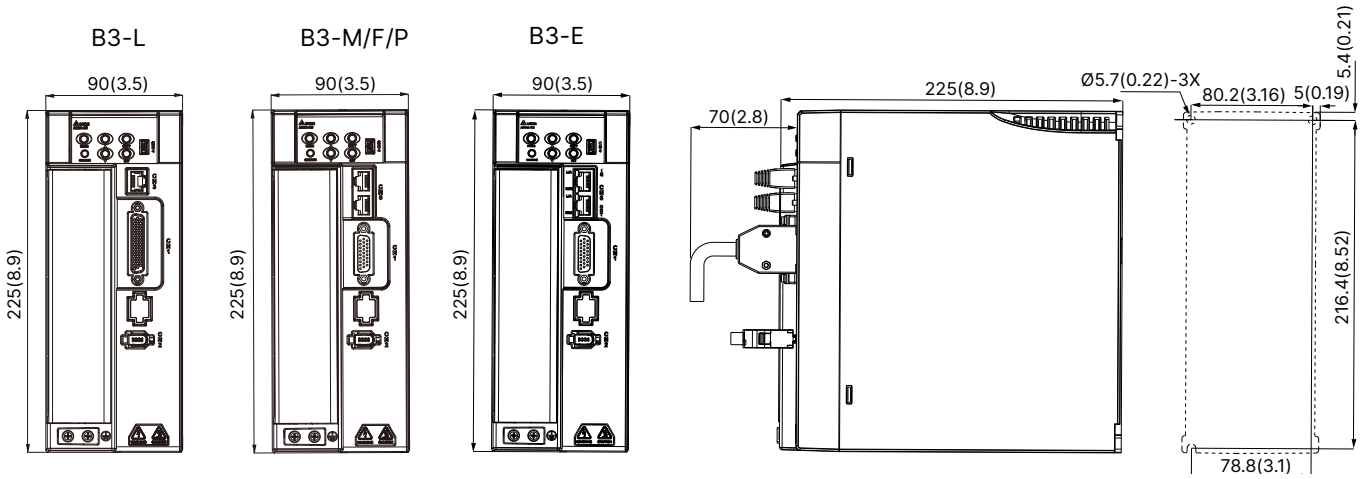
	Weight	Unit
1 kW / 1.5 kW	1.6 kg	mm (inch)
2 kW / 3 kW	1.7 kg	mm (inch)



Dimensions - 400 V

4.5 kW / 5.5 kW / 7.5 kW

Weight	Unit
2.9 kg	mm (inch)



Servo Motor Model Information

ECM-B3 Series Servo Motor

ECM - B3 M - C A 06 04 R B 1

Product Name

ECM:
Electronic Commutation Motor

Series

B3 series

Inertia

H: High inertia
M: Medium inertia
L: Low inertia
G: Ultra-High inertia

Rated Voltage and Speed

C: 220V/3,000 rpm
E: 220V/2,000 rpm
F: 220V/1,500 rpm
J: 400V/3,000 rpm
K: 400V/2,000 rpm
L: 400V/1,500 rpm

Encoder Type

A: 24-bit absolute optical encoder
Resolution of single turn: 24-bit
Resolution of multiple turns: 16-bit
B: 24-bit absolute magnetic/optical battery-less encoder
2: 24-bit incremental optical encoder
P: 17-bit absolute magnetic optical encoder
Resolution of single turn: 17-bit
Resolution of multiple turns: 16-bit
M: 17-bit incremental magnetic optical encoder

Motor Frame Size

04：40mm 06：60mm
08：80mm 10：100mm
13：130mm 18：180mm
22：220mm

Rated Power Output

01：100W 02：200W
04：400W 07：750W
08：850W 10：1kW
13：1.3kW 15：1.5kW
18：1.8kW 20：2kW
30：3kW 45：4.5kW
55：5.5kW 75：7.5kW
1B：11kW 1F：15kW

Type of Shaft and Oil Seal	w/o Brake with Oil Seal	with Brake with Oil Seal
Keyway (with fixed screw holes)	R	S

Shaft Diameter	40/60/80	100/130/180/220
B	IP67 Built-in connector. Standard shaft diameter	
S	Standard connector with wire + standard shaft diameter	Mil-spec connector + standard shaft diameter
7	Standard connector with wire + standard shaft diameter* * For F80 400W model	
3		Mil-spec connector + special shaft diameter (42 mm)*

*Shafts of special diameter are used for 400 W motors with the frame size of 80 mm

Special Code

1: Standard products

Note: The model information is for reference only. Not all kinds of model permutations are available.
Please contact the distributor near your region or Delta for the details.

ECM-A3 Series Servo Motor

ECM - A3 H - C Y 06 04 R S 1

Product Name

ECM：
Electronic Commutation Motor

Series

A3 series

Inertia

H: High inertia
L: Low inertia

Rated Voltage and Speed

C: 220V/3,000rpm

Encoder Type

Y: 24-bit absolute optical encoder
Resolution of single turn: 24-bit
Resolution of multiple turns*1:
1: 24-bit incremental optical encoder*2
A: 24-bit absolute magnetic optical encoder
Resolution of single turn: 24-bit
Resolution of multiple turns*1: 16-bit
2: 24-bit incremental magnetic optical encoder*2

*1. Number of turns
*2. Can be used as a single-turn absolute encoder

Motor Frame Size

04：40mm 06：60mm
08：80mm

Rated Power Output

0F：50W 01：100W
02：200W 04：400W
07：750W

Type of Shaft and Oil Seal	w/o Brake w/o Oil Seal	with Brake w/o Oil Seal	w/o Brake with Oil Seal	with Brake with Oil Seal
Round Shaft (with fixed screw)	-	-	C	D
Keyway (with fixed screw holes)	P*	Q*	R	S

*Not standing models

Shaft Diameter

S: Standard connector and standard shaft diameter
7: Standard connector and special shaft diameter (14 mm)*
J: IP67 waterproof connector and standard shaft diameter
K: IP67 waterproof connector and special shaft diameter (14 mm)*

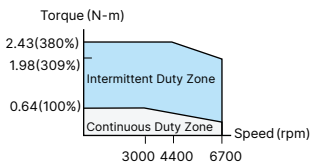
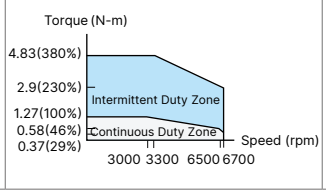
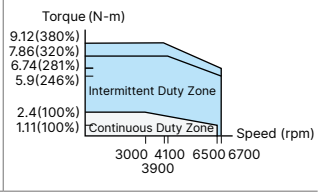
*Shafts of special diameter are used for 400 W motors with the frame size of 80 mm

Special Code

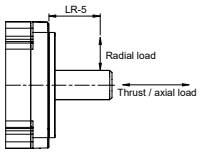
1: Standard products
Z: Refer to the note for dimensions on page 49

ECM-B3 Series Servo Motor Specifications

Electrical Specifications - 220 V

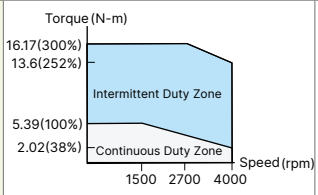
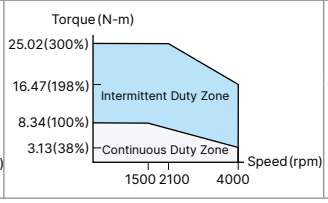
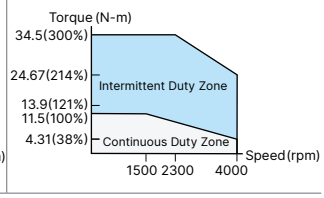
	ECM-B3H-C 2 0602	ECM-B3H-C 2 0604	ECM-B3H-C 2 0807
Rated Power (kW)	0.2	0.4	0.75
Rated Torque (N-m)*2	0.64	1.27	2.4
Maximum Torque (N-m)	2.43	4.83	9.12
Rated Speed (rpm)	3,000		
Maximum Speed (rpm)	6,700		
Rated Current (Arms)	1.48	2.15	4.13
Max. Instantaneous Current (Arms)	5.98	8.37	16.1
Rated Power Rate (kW/s)	15.5	30.8	37.2
Rated Power Rate (kW/s) with brake	14.6	30.0	35.6
Rotor Inertia ($\times 10^{-4}$kg.m^2)	0.265	0.523	1.55
Rotor Inertia ($\times 10^{-4}$kg.m^2) with brake	0.28	0.538	1.62
Mechanical Time Constant (ms)	1.73	1.23	0.781
Mechanical Time Constant (ms) with brake	1.82	1.27	0.816
Torque Constant -KT (N-m/A)	0.432	0.591	0.581
Voltage Constant -KE (mV/(rpm))	15.5	21.4	20.57
Armature Resistance (Ohm)	4.17	2.85	0.575
Armature Inductance (mH)	5.87	4.50	1.00
Electrical Time Constant (ms)	1.41	1.58	1.74
Weight – without brake (kg)	0.68	1.05	2.15
Weight – with brake (kg)	1.23	1.6	2.95
Max. Radial Loading (N)*5	245	245	392
Max. Axial Loading (N)*5	74	74	147
Brake Working Voltage	24 V_{DC} ±10%		
Brake Power Consumption (at 20°C)[W]	7.6	7.6	10
Brake Holding Torque [Nt-m (min)] *3	1.3	1.3	3.8
Brake Release Time [ms (Max)]	20	20	40
Brake Pull-In Time [ms (Max)]	50	60	80
Derating (%) (with oil seal)	10	5	5
Torque Feature (T-N Curve)			
Insulation Class	Class A (UL), Class B (CE)		
Insulation Resistance	> 100 MΩ, DC 500V		
Insulation Strength	1.8 kVac, 1 sec		
Vibration Level (μm)	V15		
Operating Temperature	-20°C ~ 60°C*4		
Storage Temperature	-20°C ~ 80°C		
Storage & Operation Humidity	20 ~ 90%RH (non-condensing)		
Vibration Capacity	2.5 G		
IP Rating	IP67 (when using waterproof connections and when an oil seal is fitted to the rotating shaft (for an oil seal model))		
Certifications			

Notes:
1. In the servo motor model name, 1 represents the motor inertia and 2 represents the encoder type.
2. The rated torque is the continuous permissible torque between 0 to 40°C operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F40, F60, F80: 250 mm x 250 mm x 6 mm
   Material: aluminum
3. The built-in servo motor brake is only for keeping the object in a stopped state.
   Do not use it for deceleration or as a dynamic brake
4. If the operating temperature is over 40°C, refer to the power derating curves of B3 motors on page 37.
5. Please follow the max. tolerant loading of the motor shaft end listed below during operation

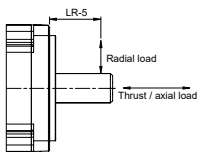


ECM-B3H Series Servo Motor Specifications

Electrical Specifications - 200 V

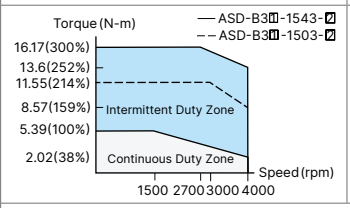
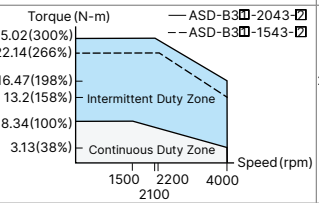
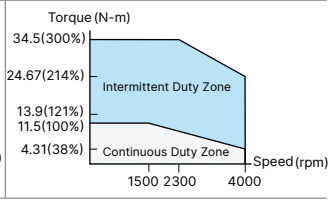
	ECM-B3H-F 2 1308	ECM-B3H-F 2 1313	ECM-B3H-F 2 1318
Rated Power (kW)	0.85	1.3	1.8
Rated Torque (N-m)*2	5.39	8.34	11.5
Maximum Torque (N-m)	16.17	25.02	34.5
Rated Speed (rpm)	1,500		
Maximum Speed (rpm)	4,000		
Rated Current (Arms)	6.65	7.7	11.5
Max. Instantaneous Current (Arms)	20	23.9	36.1
Rated Power Rate (kW/s)	23.4	38.6	58.5
Rated Power Rate (kW/s) with brake	23	38.3	58
Rotor Inertia ($\times 10^{-4}$kg.m^2)	12.44	18	22.6
Rotor Inertia ($\times 10^{-4}$kg.m^2) with brake	12.62	18.14	22.8
Mechanical Time Constant (ms)	2.48	1.98	1.7
Mechanical Time Constant (ms) with brake	2.52	1.99	1.71
Torque Constant -KT (N-m/A)	0.811	1.08	1
Voltage Constant -KE (mV/(rpm))	29.8	38.8	35.3
Armature Resistance (Ohm)	0.46	0.44	0.253
Armature Inductance (mH)	2.5	2.76	1.7
Electrical Time Constant (ms)	5.43	6.27	6.72
Weight – without brake (kg)	6	7	8
Weight – with brake (kg)	7.5	8.5	9.5
Max. Radial Loading (N)*5	490	686	980
Max. Axial Loading (N)*5	98	343	392
Brake Working Voltage	24 V_{DC} ±10%		
Brake Power Consumption (at 20°C)[W]	17.6	17.6	17.6
Brake Holding Torque [Nt-m (min)] *3	9.5	9.5	9.5
Brake Release Time [ms (Max)]	60	60	60
Brake Pull-In Time [ms (Max)]	120	120	120
Derating (%) (with oil seal)	5	5	5
Torque Feature (T-N Curve)			
Insulation Class	Class A (UL), Class B (CE)		
Insulation Resistance	> 100 MΩ, DC 500V		
Insulation Strength	1.8 kVac, 1 sec		
Vibration Level (μm)	V15		
Operating Temperature	-20°C ~ 60°C*4		
Storage Temperature	-20°C ~ 80°C		
Storage & Operation Humidity	20 ~ 90%RH (non-condensing)		
Vibration Capacity	2.5 G		
IP Rating	IP67 (when using waterproof connections and when an oil seal is fitted to the rotating shaft (for an oil seal model))		
Certifications			

Notes:
1. In the servo motor model name, 1 represents the motor inertia and 2 represents the encoder type.
2. The rated torque is the continuous permissible torque between 0 to 40ºC operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F100: 300 mm x 300 mm x 12 mm
   F130: 400 mm x 400 mm x 20 mm
   Material: aluminum
3. The built-in servo motor brake is only for keeping the object in a stopped state. Do not use it for deceleration or as a dynamic brake
4. If the operating temperature is over 40ºC, refer to the power derating curves of B3 motors on page 37.
5. Please follow the max. tolerant loading of the motor shaft end listed below during operation

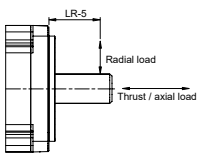


ECM-B3H Series Servo Motor Specifications

Electrical Specifications - 200 V

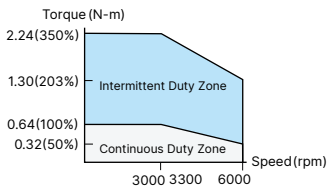
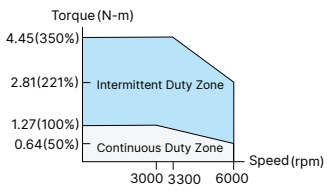
	ECM-B3H-L ② 1308	ECM-B3H-L ② 1313	ECM-B3H-L ② 1318
Rated Power (kW)	0.85	1.3	1.8
Rated Torque (N-m)*2	5.39	8.34	11.5
Maximum Torque (N-m)	16.17	25.02	34.5
Rated Speed (rpm)	1,500		
Maximum Speed (rpm)	4,000		
Rated Current (Arms)	3.35	3.85	5.75
Max. Instantaneous Current (Arms)	10	12	18.1
Rated Power Rate (kW/s)	23.4	38.6	58.5
Rated Power Rate (kW/s) with brake	23	38.3	58
Rotor Inertia ($\times10^{-4}$kg.m^2)	12.44	18	22.6
Rotor Inertia ($\times10^{-4}$kg.m^2) with brake	12.62	18.14	22.8
Mechanical Time Constant (ms)	2.5	1.97	1.69
Mechanical Time Constant (ms) with brake	2.54	1.99	1.71
Torque Constant -KT (N-m/A)	1.61	2.17	2
Voltage Constant -KE (mV/(rpm))	59.5	77.6	70.7
Armature Resistance (Ohm)	1.84	1.76	1.01
Armature Inductance (mH)	10	11	6.8
Electrical Time Constant (ms)	5.43	6.25	6.73
Weight – without brake (kg)	6	7	8
Weight – with brake (kg)	7.5	8.5	9.5
Max. Radial Loading (N)*5	490	686	980
Max. Axial Loading (N)*5	98	343	392
Brake Working Voltage	24 V_{DC} ±10%		
Brake Power Consumption (at 20°C)[W]	24	24	24
Brake Holding Torque [Nt-m (min)] *3	16	16	16
Brake Release Time [ms (Max)]	60	60	60
Brake Pull-In Time [ms (Max)]	120	120	120
Derating (%) (with oil seal)	5	5	5
Torque Feature (T-N Curve)			
Insulation Class	Class A (UL), Class B (CE)		
Insulation Resistance	> 100 MΩ, DC 500V		
Insulation Strength	1.8 kVac, 1 sec		
Vibration Level (μm)	V15		
Operating Temperature	-20°C ~ 60°C*4		
Storage Temperature	-20°C ~ 80°C		
Storage & Operation Humidity	20 ~ 90%RH (non-condensing)		
Vibration Capacity	2.5 G		
IP Rating	IP67 (when using waterproof connections and when an oil seal is fitted to the rotating shaft (for an oil seal model))		
Certifications			

Notes:
1. In the servo motor model name, ① represents the motor inertia and ② represents the encoder type.
2. The rated torque is the continuous permissible torque between 0 to 40ºC operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F100: 300 mm x 300 mm x 12 mm
   F130: 400 mm x 400 mm x 20 mm
   Material: aluminum
3. The built-in servo motor brake is only for keeping the object in a stopped state. Do not use it for deceleration or as a dynamic brake
4. If the operating temperature is over 40ºC, refer to the power derating curves of B3 motors on page 37.
5. Please follow the max. tolerant loading of the motor shaft end listed below during operation

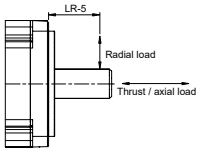


ECM-B3M Series Servo Motor Specifications

Electrical Specifications - 200 V

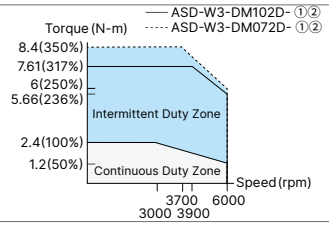
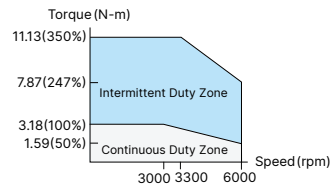
	ECM-B3M-C 2 0602	ECM-B3M-C 2 0604
Rated Power (kW)	0.2	0.4
Rated Torque (N-m)*2	0.64	1.27
Maximum Torque (N-m)	2.24	4.45
Rated Speed (rpm)	3,000	
Maximum Speed (rpm)	6,000	
Rated Current (Arms)	1.42	2.40
Max. Instantaneous Current (Arms)	6.62	9.47
Rated Power Rate (kW/s)	29.05	63.50
Rated Power Rate (kW/s) with brake	27.13	61.09
Rotor Inertia ($\times 10^{-4}$kg.m^2)	0.141	0.254
Rotor Inertia ($\times 10^{-4}$kg.m^2) with brake	0.151	0.264
Mechanical Time Constant (ms)	0.91	0.52
Mechanical Time Constant (ms) with brake	0.97	0.54
Torque Constant -KT (N-m/A)	0.45	0.53
Voltage Constant -KE (mV/(rpm))	16.96	19.76
Armature Resistance (Ohm)	4.71	2.04
Armature Inductance (mH)	12.18	6.50
Electrical Time Constant (ms)	2.59	3.19
Weight – without brake (kg)	0.9	1.2
Weight – with brake (kg)	1.3	1.6
Max. Radial Loading (N)*5	245	245
Max. Axial Loading (N)*5	74	74
Brake Working Voltage	24 V_{DC} ± 10%	
Brake Power Consumption (at 20°C)[W]	7.6	7.6
Brake Holding Torque [Nt-m (min)] *3	1.3	1.3
Brake Release Time [ms (Max)]	20	20
Brake Pull-In Time [ms (Max)]	50	50
Derating (%) (with oil seal)	10	5
Torque Feature (T-N Curve)		
Insulation Class	Class A (UL), Class B (CE)	
Insulation Resistance	> 100 M Ω , DC 500V	
Insulation Strength	1.8 kVac, 1 sec	
Vibration Level (μm)	V15	
Operating Temperature	-20°C ~ 60°C*4	
Storage Temperature	-20°C ~ 80°C	
Storage & Operation Humidity	20 ~ 90%RH (non-condensing)	
Vibration Capacity	2.5 G	
IP Rating	IP67 (when using waterproof connections and when an oil seal is fitted to the rotating shaft (for an oil seal model))	
Certifications		

Notes:
1. In the servo motor model name, 1 represents the motor inertia and 2 represents the encoder type.
2. The rated torque is the continuous permissible torque between 0 to 40ºC operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F100: 300 mm x 300 mm x 12 mm
   F130: 400 mm x 400 mm x 20 mm
   Material: aluminum
3. The built-in servo motor brake is only for keeping the object in a stopped state. Do not use it for deceleration or as a dynamic brake
4. If the operating temperature is over 40ºC, refer to the power derating curves of B3 motors on page 37.
5. Please follow the max. tolerant loading of the motor shaft end listed below during operation

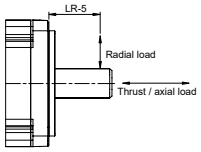


ECM-B3M Series Servo Motor Specifications

Electrical Specifications - 200 V

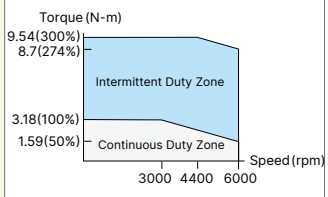
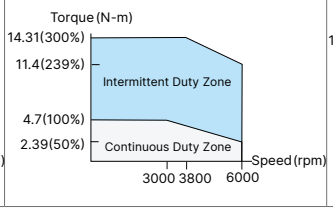
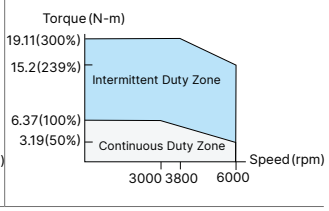
	ECM-B3M-C ② 0807	ECM-B3M-C ② 0810
Rated Power (kW)	0.75	1
Rated Torque (N-m)*2	2.4	3.18
Maximum Torque (N-m)	8.4	11.13
Rated Speed (rpm)	3,000	
Maximum Speed (rpm)	6,000	
Rated Current (Arms)	4.27	5
Max. Instantaneous Current (Arms)	15.8	18.2
Rated Power Rate (kW/s)	53.83	73.8
Rated Power Rate (kW/s) with brake	50.97	72.2
Rotor Inertia ($\times 10^{-4}$kg.m^2)	1.07	1.37
Rotor Inertia ($\times 10^{-4}$kg.m^2) with brake	1.13	1.4
Mechanical Time Constant (ms)	0.54	0.48
Mechanical Time Constant (ms) with brake	0.57	0.49
Torque Constant -KT (N-m/A)	0.56	0.64
Voltage Constant -KE (mV/(rpm))	20.17	23.15
Armature Resistance (Ohm)	0.55	0.495
Armature Inductance (mH)	2.81	2.63
Electrical Time Constant (ms)	5.11	5.31
Weight – without brake (kg)	2.34	2.82
Weight – with brake (kg)	3.15	3.6
Max. Radial Loading (N)*5	392	392
Max. Axial Loading (N)*5	147	147
Brake Working Voltage	24 V_{DC} ±10%	24 V_{DC} ±10%
Brake Power Consumption (at 20°C)[W]	8	10
Brake Holding Torque [Nt-m (min)] *3	2.5	3.8
Brake Release Time [ms (Max)]	20	40
Brake Pull-In Time [ms (Max)]	60	80
Derating (%) (with oil seal)	5	5
Torque Feature (T-N Curve)		
Insulation Class	Class A (UL), Class B (CE)	
Insulation Resistance	> 100 MΩ, DC 500V	
Insulation Strength	1.8 kVac, 1 sec	
Vibration Level (μm)	V15	
Operating Temperature	-20°C ~ 60°C*4	
Storage Temperature	-20°C ~ 80°C	
Storage & Operation Humidity	20 ~ 90%RH (non-condensing)	
Vibration Capacity	2.5 G	
IP Rating	IP67 (when using waterproof connections and when an oil seal is fitted to the rotating shaft (for an oil seal model))	
Certifications		

Notes:
1. In the servo motor model name, ① represents the motor inertia and ② represents the encoder type.
2. The rated torque is the continuous permissible torque between 0 to 40ºC operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F100: 300 mm x 300 mm x 12 mm
   F130: 400 mm x 400 mm x 20 mm
   Material: aluminum
3. The built-in servo motor brake is only for keeping the object in a stopped state. Do not use it for deceleration or as a dynamic brake
4. If the operating temperature is over 40ºC, refer to the power derating curves of B3 motors on page 37.
5. Please follow the max. tolerant loading of the motor shaft end listed below during operation

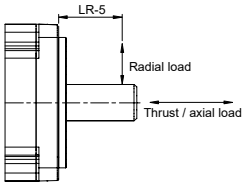


ECM-B3M Series Servo Motor Specifications 電氣規

Electrical Specifications - 200 V

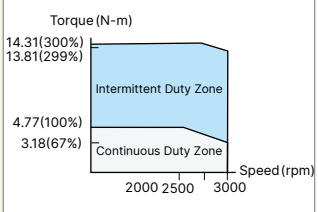
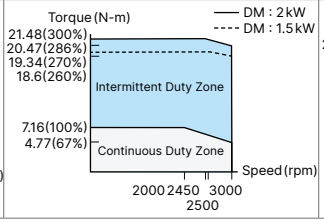
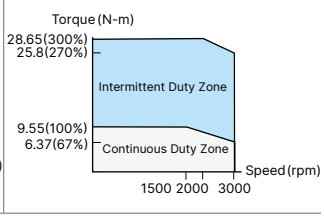
	ECM-B3M-C ☐ 1010	ECM-B3M-C ☐ 1015	ECM-B3M-C ☐ 1020
Rated Power (kW)	1	1.5	2
Rated Torque (N-m)*2	3.18	4.77	6.37
Maximum Torque (N-m)	9.54	14.3	19.1
Rated Speed (rpm)	3,000		
Maximum Speed (rpm)	6,000		
Rated Current (Arms)	6.05	7.48	9.96
Max. Instantaneous Current (Arms)	18.4	22.8	30.7
Rated Power Rate (kW/s)	36.4	61.7	86.7
Rated Power Rate (kW/s) with brake	33	57.3	82
Rotor Inertia ($\times10^{-4}$kg.m^2)	2.78	3.69	4.68
Rotor Inertia ($\times10^{-4}$kg.m^2) with brake	3.06	3.97	4.95
Mechanical Time Constant (ms)	0.741	0.552	0.523
Mechanical Time Constant (ms) with brake	0.815	0.594	0.554
Torque Constant -KT (N-m/A)	0.526	0.638	0.64
Voltage Constant -KE (mV/(rpm))	19.8	23.8	23.7
Armature Resistance (Ohm)	0.265	0.217	0.162
Armature Inductance (mH)	1.86	1.71	1.23
Electrical Time Constant (ms)	7.02	7.88	7.59
Weight – without brake (kg)	3.56	4.37	5.09
Weight – with brake (kg)	4.88	5.68	6.51
Max. Radial Loading (N)*5	490	490	490
Max. Axial Loading (N)*5	196	196	196
Brake Working Voltage	24 V_{DC} ±10%		
Brake Power Consumption (at 20°C)[W]	17.6	17.6	17.6
Brake Holding Torque [Nt-m (min)] *3	9.5	9.5	9.5
Brake Release Time [ms (Max)]	50	50	50
Brake Pull-In Time [ms (Max)]	110	110	110
Derating (%) (with oil seal)	5	5	5
Torque Feature (T-N Curve)			
Insulation Class	Class F (UL), Class F (CE)		
Insulation Resistance	> 100 MΩ, DC 500 V		
Insulation Strength	1.8k Vac, 1 sec		
Vibration Level (μm)	V15		
Operating Temperature	-20°C - 60°C*4		
Storage Temperature	-20°C - 80°C		
Storage & Operation Humidity	20 - 90% RH (non-condensing)		
Vibration Capacity	2.5 G		
IP Rating	IP67 (when using waterproof connections and when an oil seal is fitted to the rotating shaft (for an oil seal model))		
Certifications			

Notes:
1. In the servo motor model name, 2 represents the encoder type.
2. The rated torque is the continuous permissible torque between 0 to 40ºC operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F130: 400 mm x 400 mm x 20 mm
   Material: aluminum
3. The built-in servo motor brake is only for keeping the object in a stopped state.
4. If the operating temperature is over 40ºC, refer to the power derating curves of B3 motors on page 37.
5. Please follow the max. tolerant loading of the motor shaft end listed below during operation

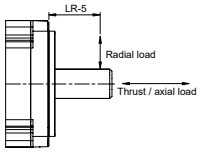


ECM-B3M Series Servo Motor Specifications

Electrical Specifications - 200 V

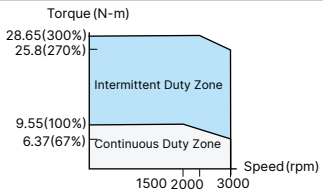
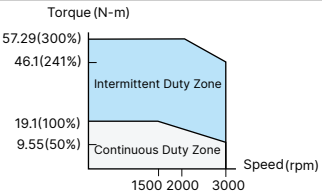
	ECM-B3M-E ② 1310	ECM-B3M-E ② 1315	ECM-B3M-E ② 1320
Rated Power (kW)	1	1.5	2
Rated Torque (N-m)*2	4.77	7.16	9.55
Maximum Torque (N-m)	14.3	21.48	28.65
Rated Speed (rpm)	2,000		
Maximum Speed (rpm)	3,000		
Rated Current (Arms)	5.96	8.17	10.59
Max. Instantaneous Current (Arms)	19.9	26.82	34.2
Rated Power Rate (kW/s)	29.21	45.69	62.25
Rated Power Rate (kW/s) with brake	28.66	45.09	61.62
Rotor Inertia ($\times 10^{-4}$kg.m^2)	7.79	11.22	14.65
Rotor Inertia ($\times 10^{-4}$kg.m^2) with brake	7.94	11.37	14.8
Mechanical Time Constant (ms)	1.46	1.1	1.03
Mechanical Time Constant (ms) with brake	1.49	1.12	1.04
Torque Constant -KT (N-m/A)	0.8	0.88	0.9
Voltage Constant -KE (mV/(rpm))	29.3	31.69	32.7
Armature Resistance (Ohm)	0.419	0.26	0.198
Armature Inductance (mH)	4	2.81	2.18
Electrical Time Constant (ms)	9.55	10.81	11.01
Weight – without brake (kg)	4.9	6.7	7
Weight – with brake (kg)	6.3	7.4	8.5
Max. Radial Loading (N)*5	490	686	980
Max. Axial Loading (N)*5	98	343	392
Brake Working Voltage	24 V_{DC} ±10%		
Brake Power Consumption (at 20°C)[W]	21.5	21.5	21.5
Brake Holding Torque [Nt-m (min)] *3	10	10	10
Brake Release Time [ms (Max)]	50	50	50
Brake Pull-In Time [ms (Max)]	110	110	110
Derating (%) (with oil seal)	5	5	5
Torque Feature (T-N Curve)			
Insulation Class	Class A (UL), Class B (CE)		
Insulation Resistance	> 100 MΩ , DC 500V		
Insulation Strength	1.8 kVac, 1 sec		
Vibration Level (μm)	V15		
Operating Temperature	-20°C ~ 60°C*4		
Storage Temperature	-20°C ~ 80°C		
Storage & Operation Humidity	20 ~ 90%RH (non-condensing)		
Vibration Capacity	2.5 G		
IP Rating	IP67 (when using waterproof connections and when an oil seal is fitted to the rotating shaft (for an oil seal model))		
Certifications	cULus CE		

Notes:
1. In the servo motor model name, 2 represents the encoder type.
2. The rated torque is the continuous permissible torque between 0 to 40°C operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F180: 550 mm x 550 mm x 30 mm
   Material: aluminum
3. The built-in servo motor brake is only for keeping the object in a stopped state.
4. If the operating temperature is over 40°C, refer to the power derating curves of B3 motors on page 37.
5. Please follow the max. tolerant loading of the motor shaft end listed below during operation



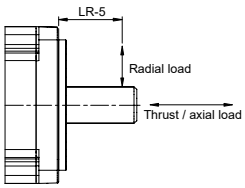
ECM-B3M Series Servo Motor Specifications 電氣規

Electrical Specifications - 200 V

	ECM-B3M-E ☐ 1820	ECM-B3M-F ☐ 1830
Rated Power (kW)	2	3
Rated Torque (N-m)*2	9.55	19.1
Maximum Torque (N-m)	28.65	57.29
Rated Speed (rpm)	2,000	1,500
Maximum Speed (rpm)	3,000	3,000
Rated Current (Arms)	11.43	18.21
Max. Instantaneous Current (Arms)	36.21	58.9
Rated Power Rate (kW/s)	31.33	68.02
Rated Power Rate (kW/s) with brake	30.02	66.45
Rotor Inertia ($\times 10^{-4}$kg.m^2)	29.11	53.63
Rotor Inertia ($\times 10^{-4}$kg.m^2) with brake	30.38	54.9
Mechanical Time Constant (ms)	1.83	1.21
Mechanical Time Constant (ms) with brake	1.91	1.24
Torque Constant -KT (N-m/A)	0.836	1.05
Voltage Constant -KE (mV/(rpm))	31.6	37.9
Armature Resistance (Ohm)	0.159	0.086
Armature Inductance (mH)	2.34	1.52
Electrical Time Constant (ms)	14.72	17.67
Weight – without brake (kg)	10	13.9
Weight – with brake (kg)	13.7	17.6
Max. Radial Loading (N)*5	1470	1470
Max. Axial Loading (N)*5	490	490
Brake Working Voltage	24 V_{DC} ±10%	
Brake Power Consumption (at 20˚C)[W]	31	31
Brake Holding Torque [Nt-m (min)] *3	25	55
Brake Release Time [ms (Max)]	30	50
Brake Pull-In Time [ms (Max)]	120	150
Derating (%) (with oil seal)	0	5
Torque Feature (T-N Curve)		
Insulation Class	Class A (UL), Class B (CE)	
Insulation Resistance	> 100 MΩ, DC 500 V	
Insulation Strength	2.3 k Vac, 1 sec	
Vibration Level (μm)	V15	
Operating Temperature	-20˚C ~ 60˚C*4	
Storage Temperature	-20˚C ~ 80˚C	
Storage & Operation Humidity	20 ~ 90% RH (non-condensing)	
Vibration Capacity	2.5 G	
IP Rating	IP67 (when using waterproof connections and when an oil seal is fitted to the rotating shaft (for an oil seal model))	
Certifications		

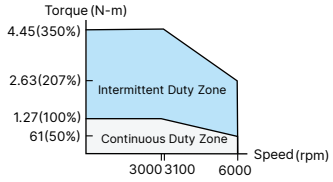
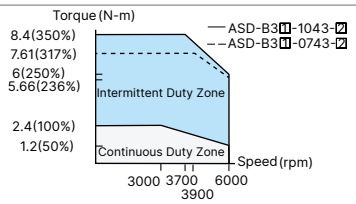
Notes:
1. In the servo motor model name, 2 represents the encoder type.
2. The rated torque is the continuous permissible torque between 0 to 40ºC operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F130: 400 mm x 400 mm x 20 mm
   Material: aluminum
3. The built-in servo motor brake is only for keeping the object in a stopped state.
4. If the operating temperature is over 40ºC, refer to the power derating curves of B3 motors on page 37.

5. Please follow the max. tolerant loading of the motor shaft end listed below during operation

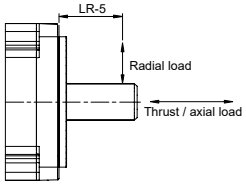


ECM-B3M Series Servo Motor Specifications

Electrical Specifications - 400 V

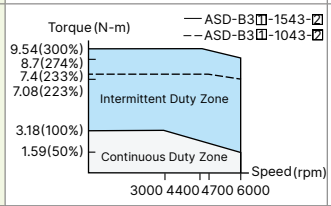
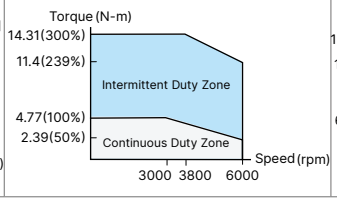
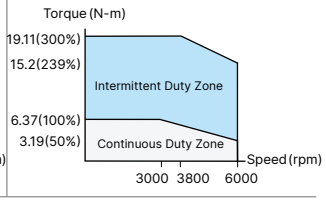
	ECM-B3M-J ☐2 0604	ECM-B3M-J ☐2 0807
Rated Power (kW)	0.4	0.75
Rated Torque (N-m)*2	1.27	2.4
Maximum Torque (N-m)	4.45	8.4
Rated Speed (rpm)	3,000	
Maximum Speed (rpm)	6,000	
Rated Current (Arms)	1.35	2.15
Max. Instantaneous Current (Arms)	5.2	7.9
Rated Power Rate (kW/s)	63.5	53.83
Rated Power Rate (kW/s) with brake	61.09	50.97
Rotor Inertia ($\times 10^{-4}$kg.m^2)	0.254	1.07
Rotor Inertia ($\times 10^{-4}$kg.m^2) with brake	0.264	1.13
Mechanical Time Constant (ms)	0.53	0.55
Mechanical Time Constant (ms) with brake	0.55	0.58
Torque Constant -KT (N-m/A)	0.94	1.12
Voltage Constant -KE (mV/(rpm))	34.66	40.34
Armature Resistance (Ohm)	6.47	2.2
Armature Inductance (mH)	20.6	11.2
Electrical Time Constant (ms)	3.18	5.09
Weight – without brake (kg)	1.2	2.34
Weight – with brake (kg)	1.6	3.15
Max. Radial Loading (N)*5	245	392
Max. Axial Loading (N)*5	74	147
Brake Working Voltage	24 V_{DC} ±10%	
Brake Power Consumption (at 20°C)[W]	7.6	8
Brake Holding Torque [Nt-m (min)] *3	1.3	2.5
Brake Release Time [ms (Max)]	20	20
Brake Pull-In Time [ms (Max)]	50	60
Derating (%) (with oil seal)	5	5
Torque Feature (T-N Curve)		
Insulation Class	Class A (UL), Class B (CE)	
Insulation Resistance	> 100 MΩ, DC 500 V	
Insulation Strength	2.3 k Vac, 1 sec	
Vibration Level (μm)	V15	
Operating Temperature	-20°C ~ 60°C*4	
Storage Temperature	-20°C ~ 80°C	
Storage & Operation Humidity	20 ~ 90% RH (non-condensing)	
Vibration Capacity	2.5 G	
IP Rating	IP67 (when using waterproof connections and when an oil seal is fitted to the rotating shaft (for an oil seal model))	
Certifications		

Notes:
1. In the servo motor model name, 2 represents the encoder type.
2. The rated torque is the continuous permissible torque between 0 to 40°C operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F100: 300 mm x 300 mm x 12 mm
   F130: 400 mm x 400 mm x 20 mm
   Material: aluminum
3. The built-in servo motor brake is only for keeping the object in a stopped state.
4. If the operating temperature is over 40°C, refer to the power derating curves of B3 motors on page 37.
5. Please follow the max. tolerant loading of the motor shaft end listed below during operation



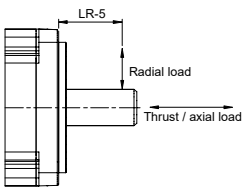
ECM-B3M Series Servo Motor Specifications

Electrical Specifications - 400 V

	ECM-B3M-J ☐2 1010	ECM-B3M-J ☐2 1015	ECM-B3M-J ☐2 1020
Rated Power (kW)	1	1.5	2
Rated Torque (N-m)*2	3.18	4.77	6.37
Maximum Torque (N-m)	9.54	14.3	19.1
Rated Speed (rpm)	3,000		
Maximum Speed (rpm)	6,000		
Rated Current (Arms)	3.03	3.73	5
Max. Instantaneous Current (Arms)	9.21	11.4	15.3
Rated Power Rate (kW/s)	36.4	61.7	86.7
Rated Power Rate (kW/s) with brake	33	57.3	82
Rotor Inertia ($\times10^{-4}$kg.m^2)	2.78	3.69	4.68
Rotor Inertia ($\times10^{-4}$kg.m^2) with brake	3.06	3.97	4.95
Mechanical Time Constant (ms)	0.737	0.546	0.528
Mechanical Time Constant (ms) with brake	0.811	0.587	0.559
Torque Constant -KT (N-m/A)	1.05	1.28	1.27
Voltage Constant -KE (mV/(rpm))	39.5	47.8	47.2
Armature Resistance (Ohm)	1.05	0.864	0.646
Armature Inductance (mH)	7.5	6.63	4.89
Electrical Time Constant (ms)	7.14	7.67	7.57
Weight – without brake (kg)	3.56	4.37	5.09
Weight – with brake (kg)	4.88	5.68	6.505
Max. Radial Loading (N)*5	490	490	490
Max. Axial Loading (N)*5	196	196	196
Brake Working Voltage	24 V_{DC} ±10%		
Brake Power Consumption (at 20°C)[W]	17.6	17.6	17.6
Brake Holding Torque [Nt-m (min)] *3	9.5	9.5	9.5
Brake Release Time [ms (Max)]	50	50	50
Brake Pull-In Time [ms (Max)]	110	110	110
Derating (%) (with oil seal)	5	5	5
Torque Feature (T-N Curve)			
Insulation Class	Class A (UL), Class B (CE)		
Insulation Resistance	> 100 MΩ, DC 500 V		
Insulation Strength	2.3 k Vac, 1 sec		
Vibration Level (μm)	V15		
Operating Temperature	-20°C ~ 60°C*4		
Storage Temperature	-20°C ~ 80°C		
Storage & Operation Humidity	20 ~ 90% RH (non-condensing)		
Vibration Capacity	2.5 G		
IP Rating	IP67 (when using waterproof connections and when an oil seal is fitted to the rotating shaft (for an oil seal model))		
Certifications			

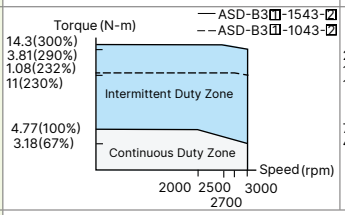
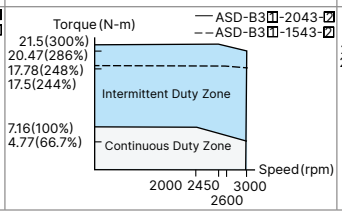
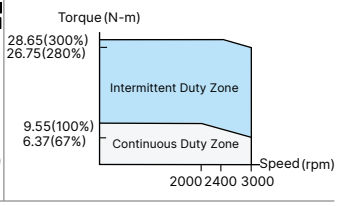
Notes:
1. In the servo motor model name, 2 represents the encoder type.
2. The rated torque is the continuous permissible torque between 0 to 40°C operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F130: 400 mm x 400 mm x 20 mm
   Material: aluminum
3. The built-in servo motor brake is only for keeping the object in a stopped state.
4. If the operating temperature is over 40°C, refer to the power derating curves of B3 motors on page 37.

5. Please follow the max. tolerant loading of the motor shaft end listed below during operation

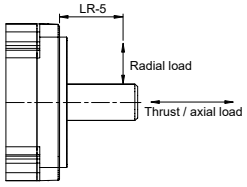


ECM-B3M Series Servo Motor Specifications

Electrical Specifications - 400 V

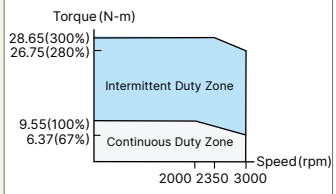
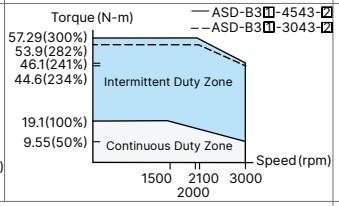
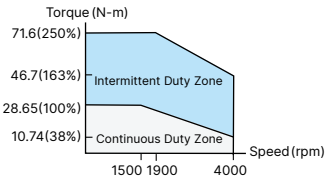
	ECM-B3M-K ☐2 1310	ECM-B3M-K ☐2 1315	ECM-B3M-K ☐2 1320
Rated Power (kW)	1	1.5	2
Rated Torque (N-m)*2	4.77	7.16	9.55
Maximum Torque (N-m)	14.3	21.48	28.65
Rated Speed (rpm)	2,000		
Maximum Speed (rpm)	3,000		
Rated Current (Arms)	3	4.09	5.3
Max. Instantaneous Current (Arms)	9.95	13.37	17.1
Rated Power Rate (kW/s)	29.21	45.69	62.25
Rated Power Rate (kW/s) with brake	28.66	45.09	61.62
Rotor Inertia ($\times 10^{-4}$kg.m^2)	7.79	11.22	14.65
Rotor Inertia ($\times 10^{-4}$kg.m^2) with brake	7.94	11.37	14.8
Mechanical Time Constant (ms)	1.47	1.1	1.03
Mechanical Time Constant (ms) with brake	1.5	1.12	1.04
Torque Constant -KT (N-m/A)	1.59	1.75	1.8
Voltage Constant -KE (mV/(rpm))	58.6	63.38	65.4
Armature Resistance (Ohm)	1.68	1.04	0.792
Armature Inductance (mH)	16	11.2	8.72
Electrical Time Constant (ms)	9.52	10.8	11
Weight – without brake (kg)	4.9	6	7
Weight – with brake (kg)	6.3	7.4	8.5
Max. Radial Loading (N)*5	490	686	980
Max. Axial Loading (N)*5	98	343	392
Brake Working Voltage	24 V_{DC} ±10%		
Brake Power Consumption (at 20°C)[W]	21.5	21.5	21.5
Brake Holding Torque [Nt-m (min)] *3	10	10	10
Brake Release Time [ms (Max)]	50	50	50
Brake Pull-In Time [ms (Max)]	110	110	110
Derating (%) (with oil seal)	5	5	5
Torque Feature (T-N Curve)			
Insulation Class	Class A (UL), Class B (CE)		
Insulation Resistance	> 100 MΩ, DC 500 V		
Insulation Strength	2.3 k Vac, 1 sec		
Vibration Level (μm)	V15		
Operating Temperature	-20°C ~ 60°C*4		
Storage Temperature	-20°C ~ 80°C		
Storage & Operation Humidity	20 ~ 90% RH (non-condensing)		
Vibration Capacity	2.5 G		
IP Rating	IP67 (when using waterproof connections and when an oil seal is fitted to the rotating shaft (for an oil seal model))		
Certifications			

Notes:
1. In the servo motor model name, 2 represents the encoder type.
2. The rated torque is the continuous permissible torque between 0 to 40ºC operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F130: 400 mm x 400 mm x 20 mm
   Material: aluminum
3. The built-in servo motor brake is only for keeping the object in a stopped state.
4. If the operating temperature is over 40ºC, refer to the power derating curves of B3 motors on page 37.
5. Please follow the max. tolerant loading of the motor shaft end listed below during operation



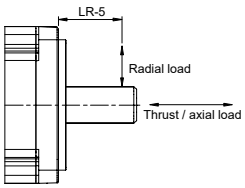
ECM-B3M Series Servo Motor Specifications

Electrical Specifications - 400 V

	ECM-B3M-K ☐2 1820	ECM-B3M-L ☐2 1830	ECM-B3M-L ☐2 1845
Rated Power (kW)	2	3	4.5
Rated Torque (N-m)*2	9.55	19.1	28.65
Maximum Torque (N-m)	28.65	57.29	71.6
Rated Speed (rpm)	2,000	1,500	1,500
Maximum Speed (rpm)	3,000	3,000	4,000
Rated Current (Arms)	5.7	9.1	13.3
Max. Instantaneous Current (Arms)	18.1	29.45	35.35
Rated Power Rate (kW/s)	31.33	68.02	121
Rated Power Rate (kW/s) with brake	30.02	66.45	119
Rotor Inertia ($\times10^{-4}$kg.m^2)	29.11	53.63	67.73
Rotor Inertia ($\times10^{-4}$kg.m^2) with brake	30.38	54.9	69.15
Mechanical Time Constant (ms)	1.83	1.21	1.07
Mechanical Time Constant (ms) with brake	1.91	1.24	1.09
Torque Constant -KT (N-m/A)	1.68	2.1	2.15
Voltage Constant -KE (mV/(rpm))	63.2	75.8	78.8
Armature Resistance (Ohm)	0.636	0.344	0.255
Armature Inductance (mH)	9.36	6.08	4.68
Electrical Time Constant (ms)	14.72	17.67	18.4
Weight – without brake (kg)	10	13.9	16.5
Weight – with brake (kg)	13.7	17.6	20.2
Max. Radial Loading (N)*5	1,470	1,470	1,470
Max. Axial Loading (N)*5	490	490	490
Brake Working Voltage	24 V_{DC} ±10%		
Brake Power Consumption (at 20°C)[W]	31	31	31
Brake Holding Torque [Nt-m (min)] *3	25	25	55
Brake Release Time [ms (Max)]	30	30	50
Brake Pull-In Time [ms (Max)]	120	120	150
Derating (%) (with oil seal)	5	5	0
Torque Feature (T-N Curve)			
Insulation Class	Class A (UL), Class B (CE)		Class F (UL), Class F (CE)
Insulation Resistance	> 100 MΩ, DC 500 V		
Insulation Strength	2.3k Vac, 1 sec		
Vibration Level (μm)	V15		
Operating Temperature	-20°C ~ 60°C*4		
Storage Temperature	-20°C ~ 80°C		
Storage & Operation Humidity	20 ~ 90% RH (non-condensing)		
Vibration Capacity	2.5 G		
IP Rating	IP67 (when using waterproof connections and when an oil seal is fitted to the rotating shaft (for an oil seal model))		
Certifications			

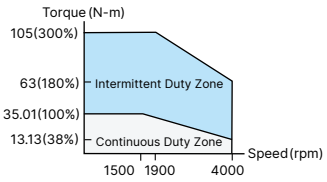
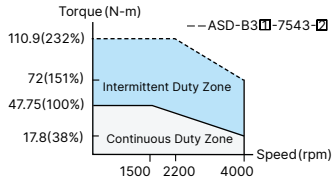
Notes:
1. In the servo motor model name, 2 represents the encoder type.
2. The rated torque is the continuous permissible torque between 0 to 40ºC operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F130: 400 mm x 400 mm x 20 mm
   Material: aluminum
3. The built-in servo motor brake is only for keeping the object in a stopped state.
4. If the operating temperature is over 40ºC, refer to the power derating curves of B3 motors on page 37.

5. Please follow the max. tolerant loading of the motor shaft end listed below during operation

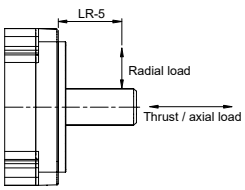


ECM-B3M Series Servo Motor Specifications

Electrical Specifications - 400 V

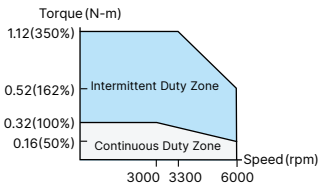
	ECM-B3M-L ☐2 1855	ECM-B3M-L ☐2 1875
Rated Power (kW)	5.5	7.5
Rated Torque (N-m)*2	35.01	47.75
Maximum Torque (N-m)	105	119
Rated Speed (rpm)	1,500	
Maximum Speed (rpm)	4,000	
Rated Current (Arms)	15.3	22.1
Max. Instantaneous Current (Arms)	49.29	56.68
Rated Power Rate (kW/s)	124	169
Rated Power Rate (kW/s) with brake	122	167
Rotor Inertia ($\times 10^{-4}$kg.m^2)	98.88	134.95
Rotor Inertia ($\times 10^{-4}$kg.m^2) with brake	100.1	136.24
Mechanical Time Constant (ms)	1.01	1.01
Mechanical Time Constant (ms) with brake	1.02	1.02
Torque Constant -KT (N-m/A)	2.29	2.16
Voltage Constant -KE (mV/(rpm))	81.8	77.4
Armature Resistance (Ohm)	0.182	0.12
Armature Inductance (mH)	3.48	2.27
Electrical Time Constant (ms)	19.1	18.9
Weight – without brake (kg)	21.2	27.2
Weight – with brake (kg)	24.9	30.9
Max. Radial Loading (N)*5	1764	1764
Max. Axial Loading (N)*5	588	588
Brake Working Voltage	24 V_{DC} ±10%	
Brake Power Consumption (at 20°C)[W]	31	31
Brake Holding Torque [Nt-m (min)] *3	55	55
Brake Release Time [ms (Max)]	50	50
Brake Pull-In Time [ms (Max)]	150	150
Derating (%) (with oil seal)	0	0
Torque Feature (T-N Curve)		
Insulation Class	Class F (UL), Class F (CE)	
Insulation Resistance	> 100 MΩ, DC 500 V	
Insulation Strength	2.3 k Vac, 1 sec	
Vibration Level (μm)	V 15	
Operating Temperature	-20°C ~ 60°C*4	
Storage Temperature	-20°C ~ 80°C	
Storage & Operation Humidity	20 ~ 90% RH (non-condensing)	
Vibration Capacity	2.5 G	
IP Rating	IP67 (when using waterproof connections and when an oil seal is fitted to the rotating shaft (for an oil seal model))	
Certifications		

Notes:
1. In the servo motor model name, 2 represents the encoder type.
2. The rated torque is the continuous permissible torque between 0 to 40°C operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F130: 400 mm x 400 mm x 20 mm
   Material: aluminum
3. The built-in servo motor brake is only for keeping the object in a stopped state.
4. If the operating temperature is over 40°C, refer to the power derating curves of B3 motors on page 37.
5. Please follow the max. tolerant loading of the motor shaft end listed below during operation

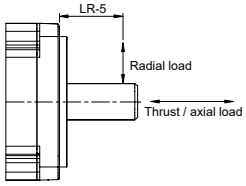


ECM-B3L Series Servo Motor Specifications

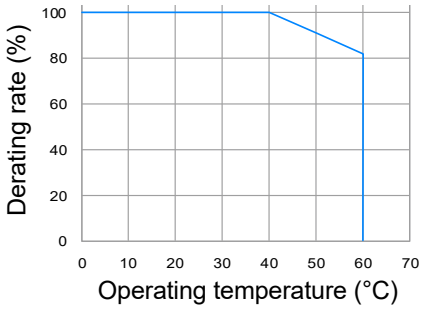
Electrical Specifications - 220 V

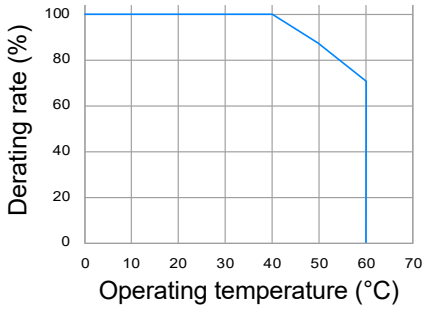
	ECM-B3L-C☐0401
Rated Power (kW)	0.1
Rated Torque (N-m)*2	0.32
Maximum Torque (N-m)	1.12
Rated Speed (rpm)	3,000
Maximum Speed (rpm)	6,000
Rated Current (Arms)	0.857
Max. Instantaneous Current (Arms)	3.44
Rated Power Rate (kW/s)	34.25
Rated Power Rate (kW/s) with brake	32.51
Rotor Inertia ($\times 10^{-4}$kg.m^2)	0.0299
Rotor Inertia ($\times 10^{-4}$kg.m^2) with brake	0.0315
Mechanical Time Constant (ms)	0.5
Mechanical Time Constant (ms) with brake	0.53
Torque Constant -KT (N-m/A)	0.374
Voltage Constant -KE (mV/(rpm))	13.8
Armature Resistance (Ohm)	8.22
Armature Inductance (mH)	19.1
Electrical Time Constant (ms)	2.32
Weight – without brake (kg)	0.5
Weight – with brake (kg)	0.7
Max. Radial Loading (N)*5	78
Max. Axial Loading (N)*5	54
Brake Working Voltage	24 V_{DC} ± 10%
Brake Power Consumption (at 20°C)[W]	6.1
Brake Holding Torque [Nt-m (min)] *3	0.3
Brake Release Time [ms (Max)]	20
Brake Pull-In Time [ms (Max)]	35
Derating (%) (with oil seal)	10
Torque Feature (T-N Curve)	
Insulation Class	Class A (UL), Class B (CE)
Insulation Resistance	> 100 MΩ, DC 500 V
Insulation Strength	1.8k V_{AC}, 1 sec
Vibration Level (μm)	V15
Operating Temperature	-20°C ~ 60°C*4
Storage Temperature	-20°C ~ 80°C
Storage & Operation Humidity	20 ~ 90% RH (non-condensing)
Vibration Capacity	2.5G
IP Rating	IP67 (when using waterproof connections and when an oil seal is fitted to the rotating shaft (for an oil seal model))
Certifications	

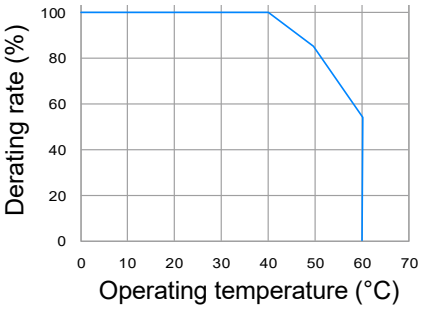
Notes:
1. In the servo motor model name, 2 represents the encoder type.
2. The rated torque is the continuous permissible torque between 0 to 40ºC operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F130: 400 mm x 400 mm x 20 mm
   Material: aluminum
3. The built-in servo motor brake is only for keeping the object in a stopped state.
4. If the operating temperature is over 40ºC, refer to the power derating curves of B3 motors on page 37.
5. Please follow the max. tolerant loading of the motor shaft end listed below during operation

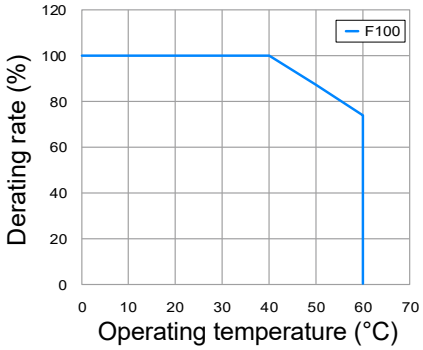


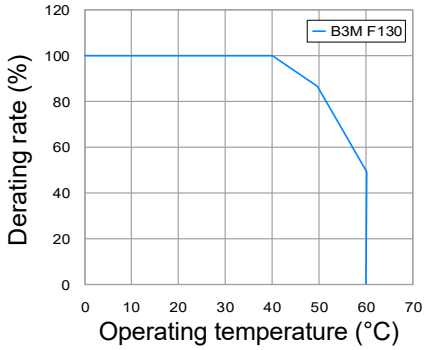
Power Derating Curves

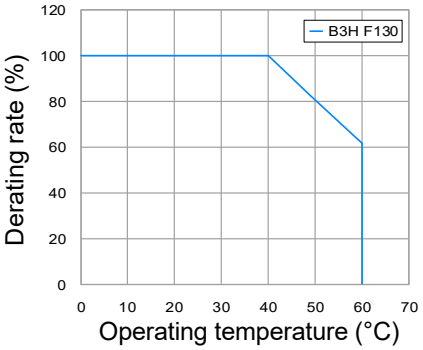


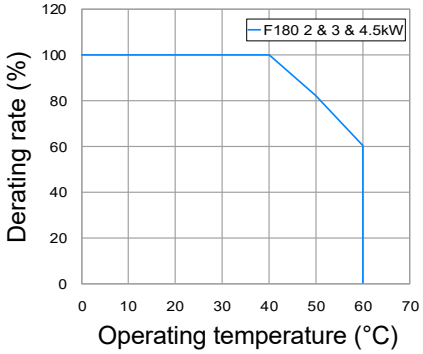


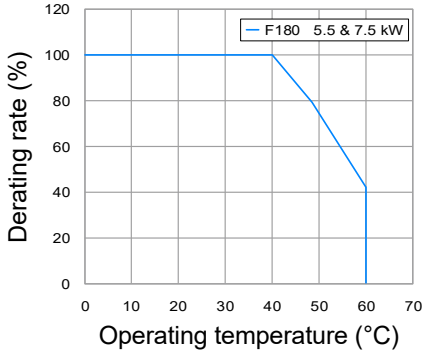








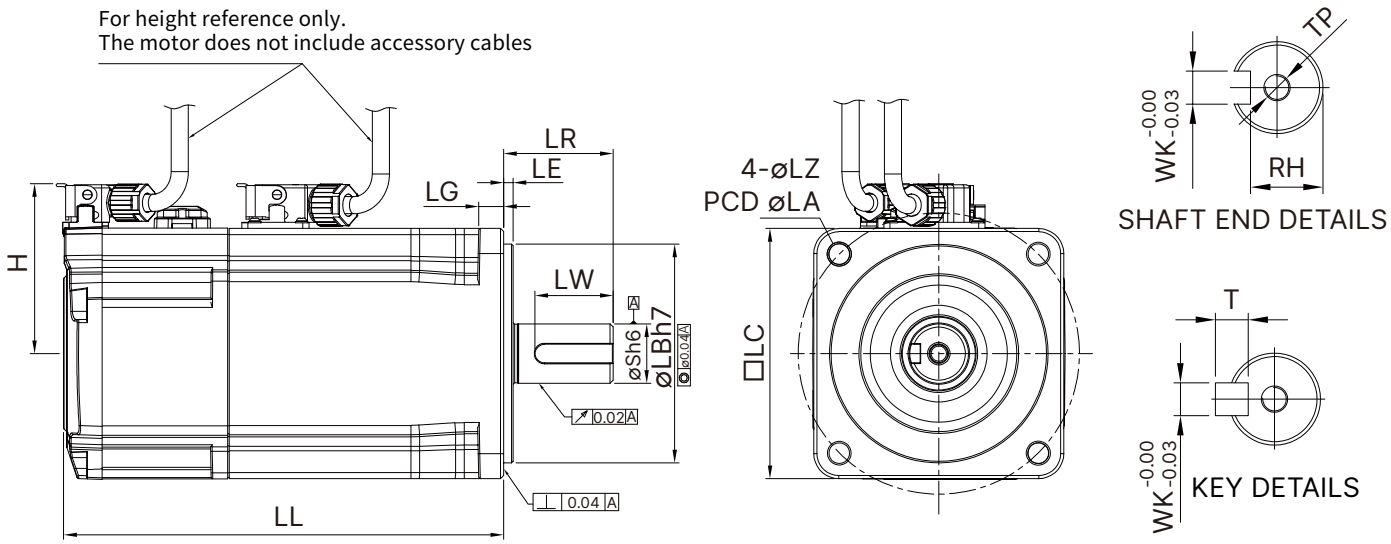




Note: Applicable for 220V and 400V models

ECM-B3 Built-in Series Servo Motor Specifications

220 V Dimensions of Motors with Frame Size of 80 mm or Below



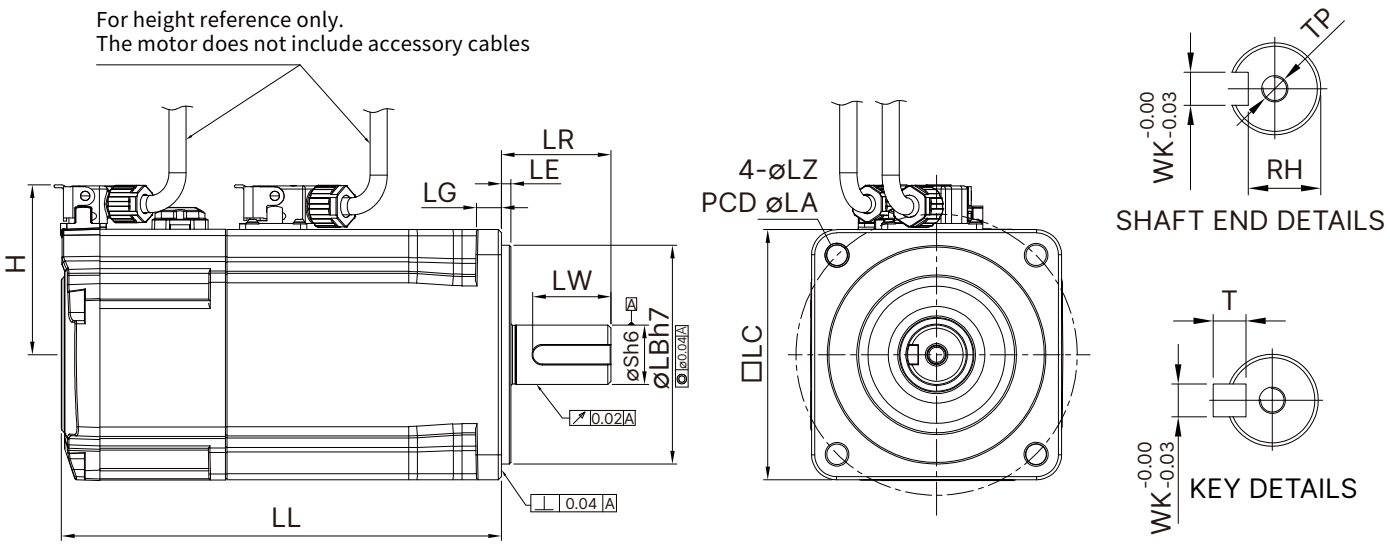
Model	B3L-C ② 0401	B3M-C ② 0602	B3M-C ② 0604	B3M-C ② 0807
LC	40	60	60	80
LZ	5.5	5.5	5.5	6.6
LA	70	70	70	90
S	14($^{+0}_{-0.011}$)	14($^{+0}_{-0.011}$)	14($^{+0}_{-0.011}$)	19($^{+0}_{-0.013}$)
LB	50($^{+0}_{-0.025}$)	50($^{+0}_{-0.025}$)	50($^{+0}_{-0.025}$)	70($^{+0}_{-0.030}$)
LL (w/o brake)	76.2	72.5	91	105.2
LL (with brake)	107.7	104.4	122.9	144.8
LH	300	300	300	300
LP	300	300	300	300
H	44	44	44	54
LR	30	30	30	35
LE	2.5	3	3	3
LG	7.5	7.5	7.5	8
LW	20	20	20	25
RH	11	11	11	15.5
WK	5	5	5	6
W	5	5	5	6
T	5	5	5	6
TP	M4 Depth 15	M4 Depth 15	M4 Depth 15	M6 Depth 20

Note: 1. Servo motor model name: ② = encoder type
2. The length of battery-less encoder frame LL increases as shown below

F40	F60	F80
+5.8 mm	+6.4 mm	+6 mm

ECM-B3 Built-in Series Servo Motor Specifications

220 V Dimensions of Motors with Frame Size of 80 mm or Below



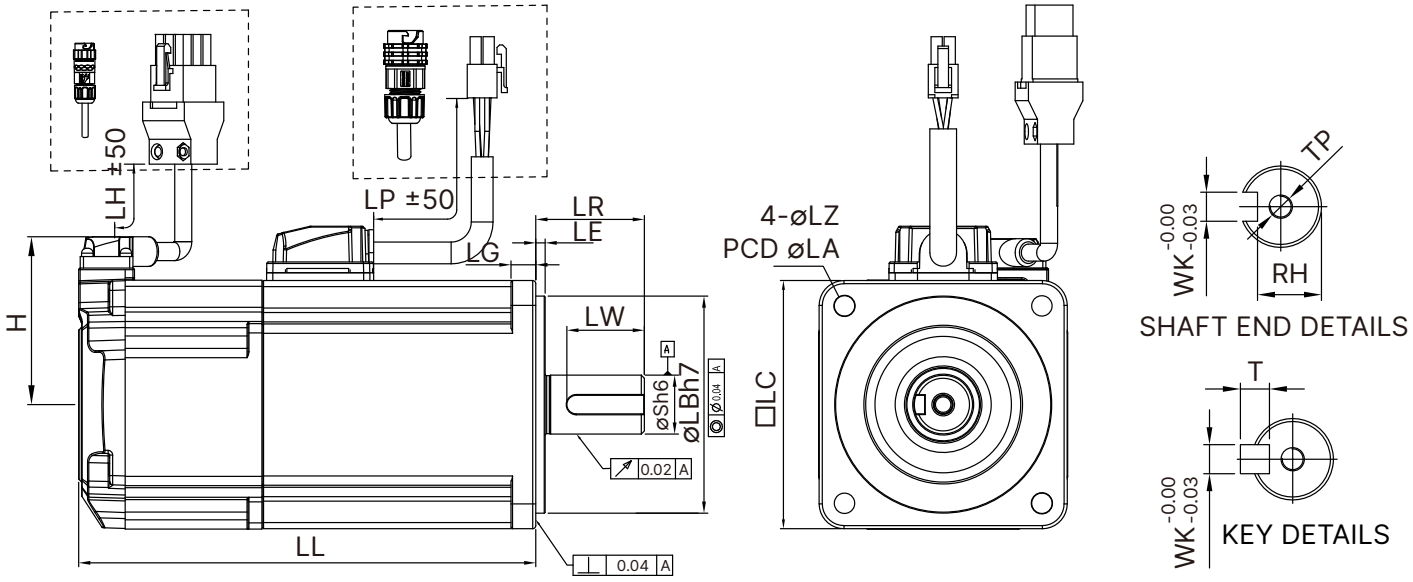
Model	B3M-C ② 0810	B3H-C ② 0602	B3H-C ② 0604	B3H-C ② 807
LC	80	60	60	80
LZ	6.6	5.5	5.5	6.6
LA	90	70	70	90
S	19($^{+0}_{-0.013}$)	14($^{+0}_{-0.011}$)	14($^{+0}_{-0.011}$)	19($^{+0}_{-0.013}$)
LB	70($^{+0}_{-0.030}$)	50($^{+0}_{-0.025}$)	50($^{+0}_{-0.025}$)	70($^{+0}_{-0.030}$)
LL (w/o brake)	118.8	69.6	87.45	95.4
LL (with brake)	154.4	101.5	119.35	131
LH	300	300	300	300
LP	300	300	300	300
H	54	44	44	54
LR	35	30	30	35
LE	3	3	3	3
LG	8	7.5	7.5	8
LW	25	20	20	25
RH	15.5	11	11	15.5
WK	6	5	5	6
W	6	5	5	6
T	6	5	5	6
TP	M6 Depth 20	M4 Depth 15	M4 Depth 15	M6 Depth 20

Note: 1. Servo motor model name: ② = encoder type
2. The length of battery-less encoder frame LL increases as shown below

F40	F60	F80
+5.8 mm	+6.4 mm	+6 mm

ECM-B3 Series Servo Motor with Line Type Specifications

220 V Dimensions of Motors with Frame Size of 80 mm

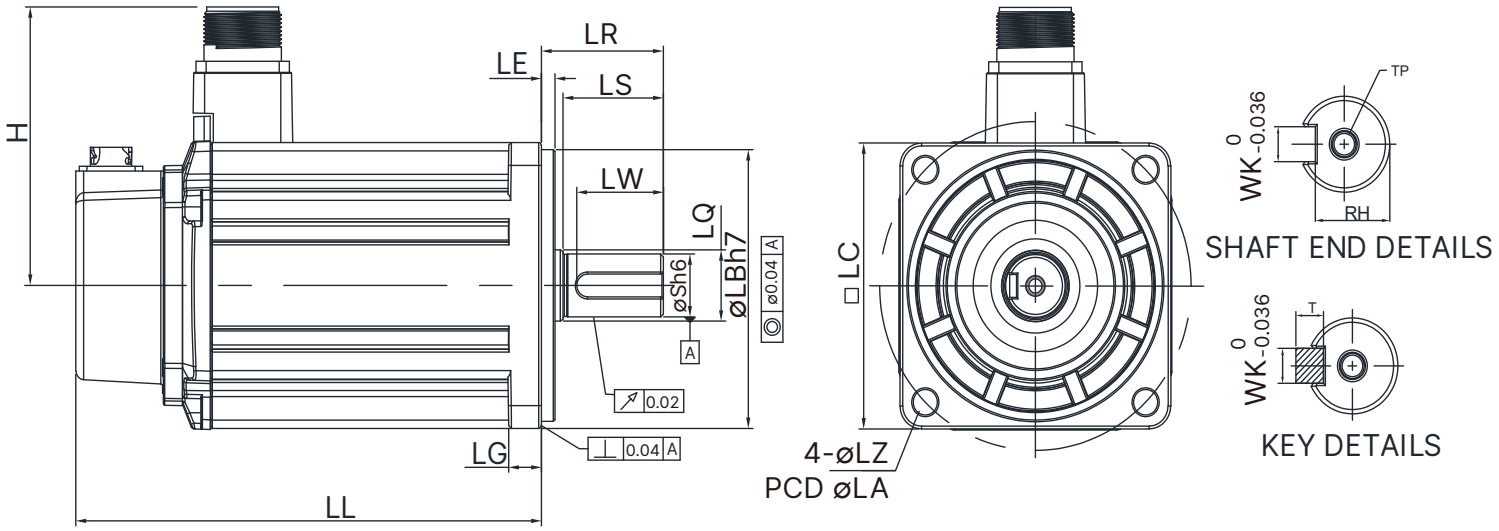


Model	B3L-C ② 0401	B3M-C ② 0602	B3M-C ② 0604	B3M-C ② 0807	B3M-C ② 0810
LC	40	60	60	80	80
LZ	4.5	5.5	5.5	6.6	6.6
LA	46	70	70	90	90
S	8($^{+0}_{-0.009}$)	14($^{+0}_{-0.011}$)	14($^{+0}_{-0.011}$)	19($^{+0}_{-0.013}$)	19($^{+0}_{-0.013}$)
LB	30($^{+0}_{-0.021}$)	50($^{+0}_{-0.025}$)	50($^{+0}_{-0.025}$)	70($^{+0}_{-0.030}$)	70($^{+0}_{-0.030}$)
LL (w/o brake)	77.6	72.5	91	105.2	118.7
LL (with brake)	111.7	109.4	127.9	144.8	158.3
LH	300	300	300	300	300
LP	300	300	300	300	300
H	40	48.5	48.5	58.5	58.5
LR	25	30	30	35	35
LE	2.5	3	3	3	3
LG	5	7.5	7.5	8	8
LW	16	20	20	25	25
RH	6.2	11	11	15.5	15.5
WK	3	5	5	6	6
W	3	5	5	6	6
T	3	5	5	6	6
TP	M3 Depth 8	M4 Depth 15	M4 Depth 15	M6 Depth 20	M6 Depth20

Note: 1. Servo motor model name: ② = encoder type

ECM-B3 Series Servo Motor Specifications

220 V & 400 V Dimensions of Motors with Frame Size of 100 mm



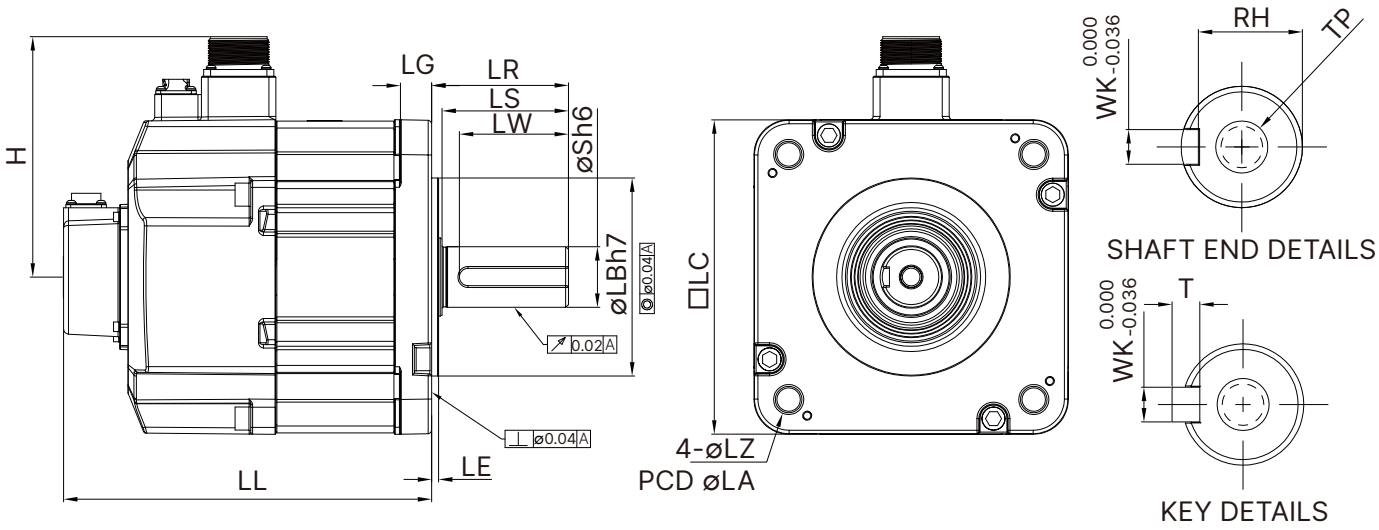
Model	B3M-C ② 1010 B3M-J ② 1010	B3M-C ② 1015 B3M-J ② 1015	B3M-C ② 1020 B3M-J ② 1020
LC	100	100	100
LZ	9	9	9
LA	115	115	115
S	22($^{+0}_{-0.013}$)	22($^{+0}_{-0.013}$)	22($^{+0}_{-0.013}$)
LB	95($^{+0}_{-0.03}$)	95($^{+0}_{-0.03}$)	95($^{+0}_{-0.03}$)
LL (w/o brake)	141.8	156.8	171.8
LL (with brake)	179.9	194.9	209.9
H	97.4	97.4	97.4
LS	37	37	37
LR	45	45	45
LQ	25	25	25
LE	5	5	5
LG	12	12	12
LW	32	32	32
RH	18	18	18
WK	8	8	8
W	8	8	8
T	7	7	7
TP	M6 Depth 12	M6 Depth 12	M6 Depth 12

Note: 1. Servo motor model name: ② = encoder type
2. The length of battery-less encoder frame LL increases as shown below

F100/F130/F180
+6.5 mm

ECM-B3 Series Servo Motor Specifications

220 V & 400 V Dimensions of Motors with Frame Size of 130 mm



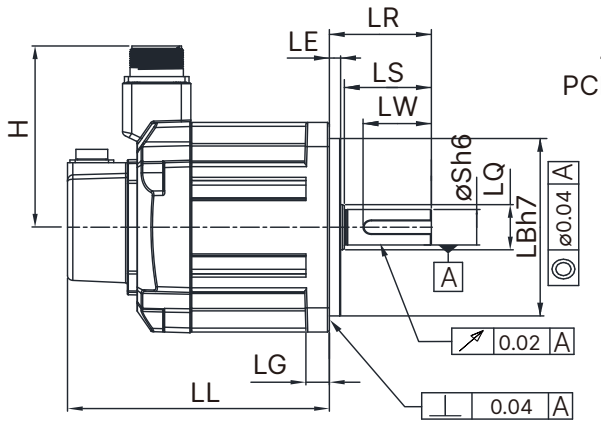
Model	B3M-E ② 1310	B3M-E ② 1315	B3M-E ② 1320	B3M-F ② 1308	B3M-F ② 1313	B3H-F ② 1318
	B3M-K ② 1310	B3M-K ② 1315	B3M-K ② 1320	B3M-K ② 1308	B3M-K ② 1313	B3M-K ② 1318
LC	130	130	130	130	130	130
LZ	9	9	9	9	9	9
LA	145	145	145	145	145	145
S	22($^{+0}_{-0.013}$)	22($^{+0}_{-0.013}$)	22($^{+0}_{-0.013}$)	22($^{+0}_{-0.013}$)	22($^{+0}_{-0.013}$)	22($^{+0}_{-0.013}$)
LB	110($^{+0}_{-0.035}$)	110($^{+0}_{-0.035}$)	110($^{+0}_{-0.035}$)	110($^{+0}_{-0.035}$)	110($^{+0}_{-0.035}$)	110($^{+0}_{-0.035}$)
LL (w/o brake)	127.9	139.9	151.9	127.9	139.9	151.9
LL (with brake)	168.5	180.5	192.5	168.5	180.5	192.5
H	115	115	115	115	115	115
LS	47	47	47	47	47	47
LR	55	55	55	55	55	55
LQ	28	28	28	28	28	28
LE	6	6	6	6	6	6
LG	12.5	12.5	12.5	12.5	12.5	12.5
LW	36	36	36	36	36	36
RH	18	18	18	18	18	18
WK	8	8	8	8	8	8
W	8	8	8	8	8	8
T	7	7	7	7	7	7
TP	M6 Depth 12	M6 Depth 12	M6 Depth 12	M6 Depth 12	M6 Depth 12	M6 Depth 12

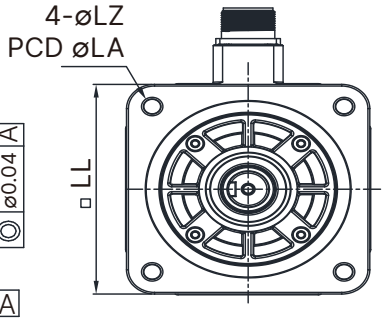
Note: 1. Servo motor model name: ② = encoder type
2. The length of battery-less encoder frame LL increases as shown below (except for 7.5 kW)

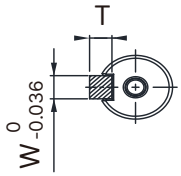
F100/F130/F180
+6.5 mm

ECM-B3 Series Servo Motor Specifications

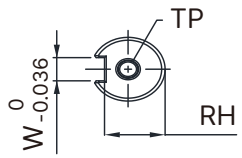
220 V & 400 V Dimensions of Motors with Frame Size of 180 mm







KEY DETAILS



SHAFT END DETAILS

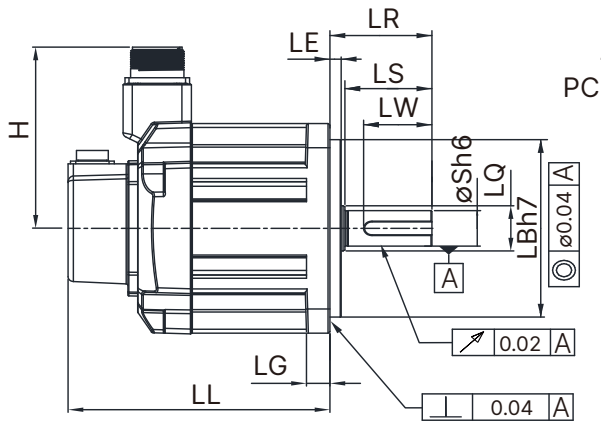
Model	B3M-E ② 1820 B3M-K ② 1820	B3M-F ② 1830 B3M-L ② 1830	B3M-L ② 1845
LC	180	180	180
LZ	13.5	13.5	13.5
LA	200	200	200
S	35($^{+0}_{-0.016}$)	35($^{+0}_{-0.016}$)	35($^{+0}_{-0.016}$)
LB	114.3($^{+0}_{-0.035}$)	114.3($^{+0}_{-0.035}$)	114.3($^{+0}_{-0.035}$)
LL (w/o brake)	137.5	160.5	174
LL (with brake)	189.5	212.5	226
H	139	139	139
LS	73	73	73
LR	79	79	79
LQ	45	45	45
LE	4	4	4
LG	18	18	18
LW	63	63	63
RH	30	30	30
WK	10	10	10
W	10	10	10
T	8	8	8
TP	M12 Depth 25	M12 Depth 25	M12 Depth 25

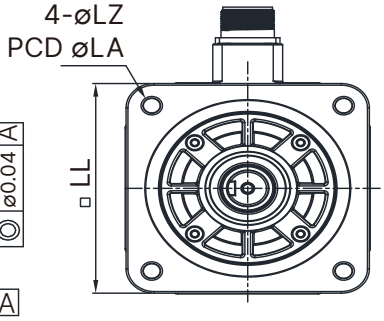
Note: 1. Servo motor model name: ② = encoder type
2. The length of battery-less encoder frame LL increases as shown below (except for 7.5 kW)

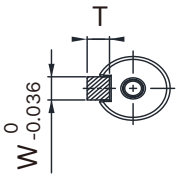
F100/F130/F180
+6.5 mm

ECM-B3 Series Servo Motor Specifications

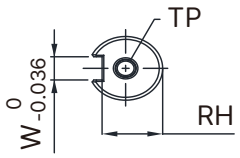
220 V Dimensions of Motors with Frame Size of 180 mm







KEY DETAILS



SHAFT END DETAILS

Model	B3M-L ② 1855	B3M-L ② 1875
LC	180	180
LZ	13.5	13.5
LA	200	200
S	42($^{+0}_{-0.016}$)	42($^{+0}_{-0.016}$)
LB	114.3($^{+0}_{-0.035}$)	114.3($^{+0}_{-0.035}$)
LL (w/o brake)	218	260.1
LL (with brake)	265	307.1
H	144.5	144.5
LS	108.5	108.5
LR	113	113
LQ	45	45
LE	4	4
LG	18	18
LW	90	90
RH	37	37
WK	12	12
W	12	12
T	8	8
TP	M16 Depth 32	M16 Depth 32

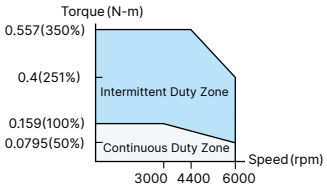
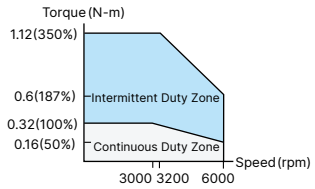
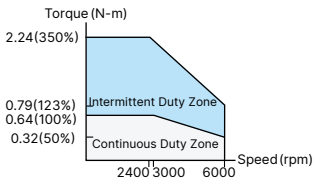
Note: 1. Servo motor model name: ② = encoder type
2. The length of battery-less encoder frame LL increases as shown below (except for 7.5 kW)

F100/F130/F180
+6.5 mm

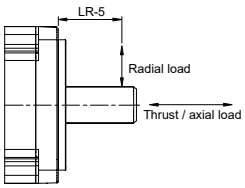
ECM-A3 Series Servo Motor Specifications

Electrical Specifications

Low Inertia Motor ECM-A3L Series

	ECM-A3L-C□2 040F[*1]	ECM-A3L-C□2 0401[*1]	ECM-A3L-C□2 0602[*1]
Rated Power (kW)	0.05	0.1	0.2
Rated Torque (N-m)[*2]	0.159	0.32	0.64
Maximum Torque (N-m)	0.557	1.12	2.24
Rated Speed (rpm)	3,000		
Maximum Speed (rpm)	6,000		
Rated Current (Arms)	0.66	0.9	1.45
Max. Instantaneous Current (Arms)	2.82	3.88	6.2
Rated Power Rate (kW/s)[*3]	11 (9.9)	25.6 (24)	45.5 (34.1)
Rotor Inertia ($\times10^{-4}$kg.m^2)[*3]	0.0229 (0.0255)	0.04 (0.0426)	0.09 (0.12)
Mechanical Time Constant (ms)[*3]	1.28 (1.44)	0.838 (0.892)	0.64 (0.85)
Torque Constant -KT (N-m/A)	0.241	0.356	0.441
Voltage Constant -KE (mV/(rpm))	9.28	13.3	16.4
Armature Resistance (Ohm)	12.1	9.47	4.9
Armature Inductance (mH)	18.6	16.2	18.52
Electrical Time Constant (ms)	1.54	1.71	3.78
Brake Holding Torque [Nt-m (min)] [*4]	0.32	0.32	1.3
Brake Power Consumption (at 20°C)[W]	6.1	6.1	7.2
Brake Release Time [ms (Max.)]	20	20	20
Brake Pull-In Time [ms (Max.)]	35	35	50
Max. Radial Loading (N)[*5]	78	78	245
Max. Axial Loading (N)[*5]	54	54	74
Weight (kg)[*3]	0.38 (0.68)	0.5 (0.8)	1.1 (1.6)
Derating (%) (with oil seal)	20	10	10
Torque Feature (T-N Curve)			
Insulation Class	Class A (UL), Class B (CE)		
Insulation Resistance	> 100 MΩ, DC 500 V		
Insulation Strength	2.3 k Vac, 1 sec		
Vibration Level (μm)	V 15		
Operating Temperature	0°C ~ 40°C		
Storage Temperature	-10°C ~ 80°C		
Storage & Operation Humidity	20 ~ 90% RH (non-condensing)		
Vibration Capacity	2.5 G		
IP Rating	IP67 (when using waterproof connections and when an oil seal is fitted to the rotating shaft (for an oil seal model))		
Certifications	CE cULus		

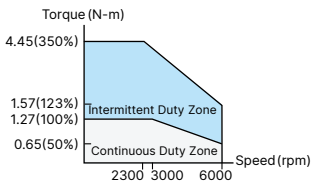
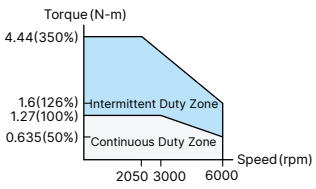
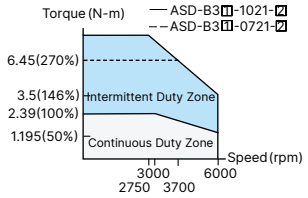
Notes:
1. In the servo motor model name, 2 represents the encoder type.
2. The rated torque is the continuous permissible torque between 0 to 40°C operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F130: 400 mm x 400 mm x 20 mm
   Material: aluminum
3. The built-in servo motor brake is only for keeping the object in a stopped state.
4. If the operating temperature is over 40°C, refer to the power derating curves of B3 motors on page 37.
5. Please follow the max. tolerant loading of the motor shaft end listed below during operation



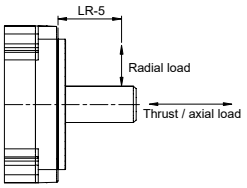
ECM-A3 Series Servo Motor Specifications

Electrical Specifications

Low Inertia Motor ECM-A3L Series

	ECM-A3L-C□2 0604*1	ECM-A3L-C□2 0804*1	ECM-A3L-C□2 0807*1
Rated Power (kW)	0.4	0.4	0.75
Rated Torque (N-m)*2	1.27	1.27	2.39
Maximum Torque (N-m)	4.45	4.44	8.36
Rated Speed (rpm)	3,000		
Maximum Speed (rpm)	6,000		
Rated Current (Arms)	2.65	2.6	5.1
Max. Instantaneous Current (Arms)	10.1	10.6	20.6
Rated Power Rate (kW/s)*3	107.5 (89.6)	45.8 (39.5)	102.2 (93)
Rotor Inertia ($\times 10^{-4}$kg.m^2)*3	0.15 (0.18)	0.352 (0.408)	0.559 (0.614)
Mechanical Time Constant (ms)*3	0.41 (0.5)	0.68 (0.78)	0.44 (0.48)
Torque Constant -KT (N-m/A)	0.479	0.488	0.469
Voltage Constant -KE (mV/(rpm))	18	17.9	17
Armature Resistance (Ohm)	2.27	1.6	0.6
Armature Inductance (mH)	10.27	10.6	4.6
Electrical Time Constant (ms)	4.52	6.63	7.67
Brake Holding Torque [Nt-m (min)] *4	1.3	2.5	2.5
Brake Power Consumption (at 20˚C)[W]	7.2	8	8
Brake Release Time [ms (Max.)]	20	20	20
Brake Pull-In Time [ms (Max.)]	50	60	60
Max. Radial Loading (N)*5	245	392	392
Max. Axial Loading (N)*5	74	147	147
Weight (kg)*3	1.4 (1.9)	2.05 (2.85)	2.8 (3.6)
Derating (%) (with oil seal)	5	5	5
Torque Feature (T-N Curve)			
Insulation Class	Class A (UL), Class B (CE)		
Insulation Resistance	> 100 MΩ, DC 500 V		
Insulation Strength	1.8k V_{AC}, 1 sec		
Vibration Level (μm)	V15		
Operating Temperature	0˚C ~ 40˚C		
Storage Temperature	-10˚C ~ 80˚C		
Storage & Operation Humidity	20 ~ 90% RH (non-condensing)		
Vibration Capacity	2.5G		
IP Rating	IP67 (when using waterproof connections and when an oil seal is fitted to the rotating shaft (for an oil seal model))		
Certifications			

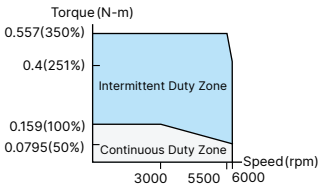
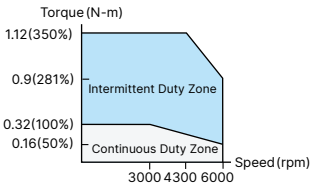
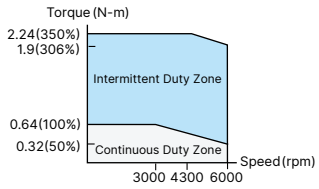
Notes:
1. In the servo motor model name, 1 represents the motor inertia and 2 represents the encoder type.
2. The rated torque is the continuous permissible torque between 0 to 40ºC operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F40, F60, F80: 250 mm x 250 mm x 6 mm
   Material: aluminum
3. ( ) = motor with brake
4. The built-in servo motor brake is only for keeping the object in a stopped state. Do not use it for deceleration or as a dynamic brake.
5. Please follow the max. tolerant loading of the motor shaft end listed below during operation



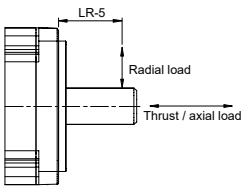
ECM-A3 Series Servo Motor Specifications

Electrical Specifications

ECM-A3H High Inertia Series Servo Motor

	ECM-A3H-C2 040F*1	ECM-A3H-C2 0401*1	ECM-A3H-C2 0602*1
Rated Power (kW)	0.05	0.1	0.2
Rated Torque (N-m)*2	0.159	0.32	0.64
Maximum Torque (N-m)	0.557	1.12	2.24
Rated Speed (rpm)	3,000		
Maximum Speed (rpm)	6,000		
Rated Current (Arms)	0.64	0.9	1.45
Max. Instantaneous Current (Arms)	2.59	3.64	5.3
Rated Power Rate (kW/s)*3	5.56 (4.89)	13.6 (12.5)	16.4 (14.6)
Rotor Inertia ($\times 10^{-4}$kg.m^2)*3	0.0455 (0.0517)	0.0754 (0.0816)	0.25 (0.28)
Mechanical Time Constant (ms)*3	2.52 (2.86)	1.43 (1.55)	1.38 (1.54)
Torque Constant -KT (N-m/A)	0.248	0.356	0.441
Voltage Constant -KE (mV/(rpm))	9.54	12.9	16.4
Armature Resistance (Ohm)	12.5	8.34	3.8
Armature Inductance (mH)	13.34	11	8.15
Electrical Time Constant (ms)	1.07	1.32	2.14
Brake Holding Torque [Nt-m (min)] *4	0.32	0.32	1.3
Brake Power Consumption (at 20°C)[W]	6.1	6.1	7.2
Brake Release Time [ms (Max.)]	20	20	20
Brake Pull-In Time [ms (Max.)]	35	35	50
Max. Radial Loading (N)*5	78	78	245
Max. Axial Loading (N)*5	54	54	74
Weight (kg)*3	0.38 (0.68)	0.5 (0.8)	1.1 (1.6)
Derating (%) (with oil seal)	20	10	10
Torque Feature (T-N Curve)			
Insulation Class	Class A (UL), Class B (CE)		
Insulation Resistance	> 100 MΩ, DC 500 V		
Insulation Strength	1.8k VAC, 1 sec		
Vibration Level (μm)	V15		
Operating Temperature	0°C ~ 40°C		
Storage Temperature	-10°C ~ 80°C		
Storage & Operation Humidity	20 ~ 90% RH (non-condensing)		
Vibration Capacity	2.5 G		
IP Rating	IP67 (when using waterproof connections and when an oil seal is fitted to the rotating shaft (for an oil seal model))		
Certifications			

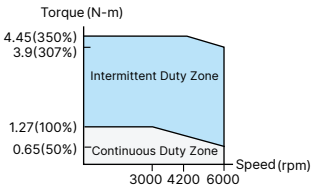
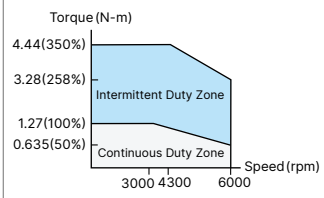
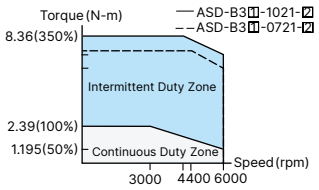
Notes:
1. In the servo motor model name, 1 represents the motor inertia and 2 represents the encoder type.
2. The rated torque is the continuous permissible torque between 0 to 40°C operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F40, F60, F80: 250 mm x 250 mm x 6 mm
   Material: aluminum
3. ( ) = motor with brake
4. The built-in servo motor brake is only for keeping the object in a stopped state. Do not use it for deceleration or as a dynamic brake.
5. Please follow the max. tolerant loading of the motor shaft end listed below during operation



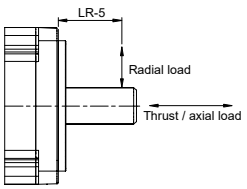
ECM-A3 Series Servo Motor Specifications

Electrical Specifications

High Inertia Motor ECM-A3H Series

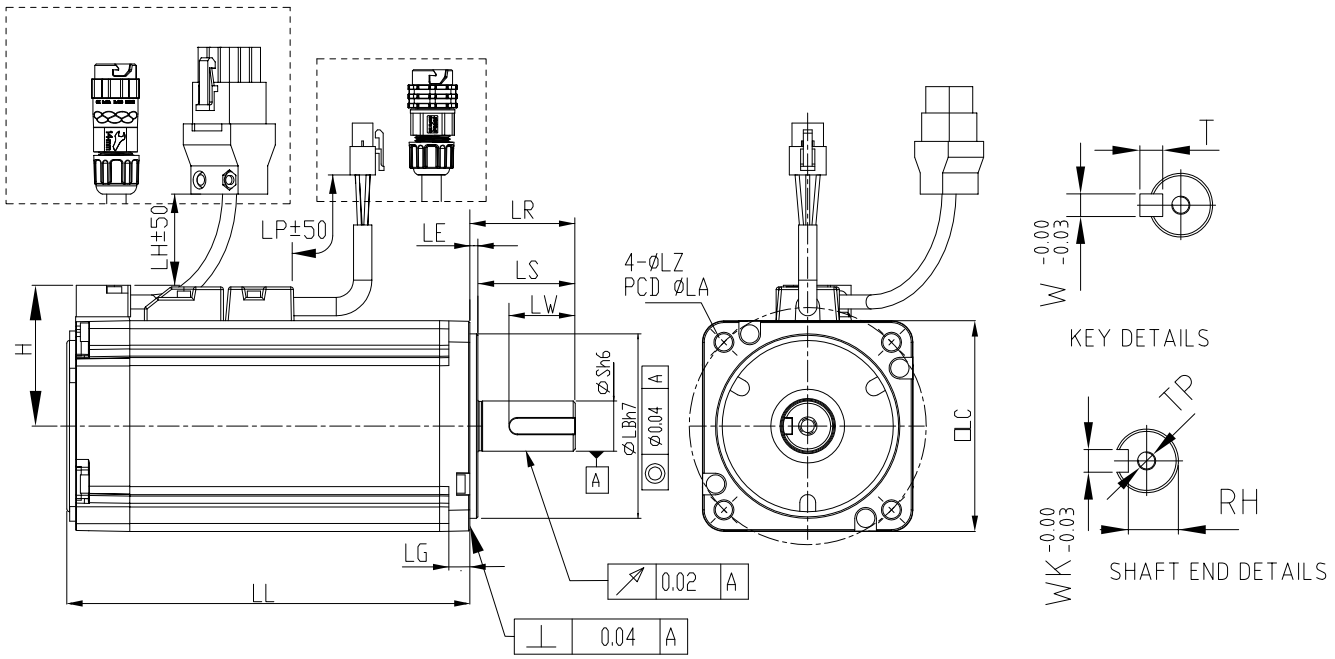
	ECM-A3H-C□2 0604*1	ECM-A3H-C□2 0804*1	ECM-A3H-C□2 0807*1
Rated Power (kW)	0.4	0.4	0.75
Rated Torque (N-m)*2	1.27	1.27	2.39
Maximum Torque (N-m)	4.45	4.44	8.36
Rated Speed (rpm)			
Maximum Speed (rpm)			
Rated Current (Arms)	2.65	2.6	4.61
Max. Instantaneous Current (Arms)	9.8	9.32	16.4
Rated Power Rate (kW/s)*3	35.8 (33.6)	17.5 (15.07)	37.8 (34.41)
Rotor Inertia ($\times10^{-4}$kg.m^2)*3	0.45 (0.48)	0.92 (1.07)	1.51 (1.66)
Mechanical Time Constant (ms)*3	0.96 (1.02)	1.32 (1.54)	0.93 (1.02)
Torque Constant -KT (N-m/A)	0.479	0.49	0.52
Voltage Constant -KE (mV/(rpm))	17.2	17.9	18.7
Armature Resistance (Ohm)	1.68	1.19	0.57
Armature Inductance (mH)	4.03	4.2	2.2
Electrical Time Constant (ms)	2.40	3.53	3.86
Brake Holding Torque [Nt-m (min)] *4	1.3	2.5	2.5
Brake Power Consumption (at 20˚C)[W]	7.2	8	8
Brake Release Time [ms (Max.)]	20	20	20
Brake Pull-In Time [ms (Max.)]	50	60	60
Max. Radial Loading (N)*5	245	392	392
Max. Axial Loading (N)*5	74	147	147
Weight (kg)*3	1.4 (1.9)	2.05 (2.85)	2.8 (3.6)
Derating (%) (with oil seal)	5	5	5
Torque Feature (T-N Curve)			
Insulation Class	Class A (UL), Class B (CE)		
Insulation Resistance	> 100 MΩ, DC 500 V		
Insulation Strength	1.8k Vac, 1 sec		
Vibration Level (μm)	V15		
Operating Temperature	0˚C ~ 40˚C		
Storage Temperature	-10˚C ~ 80˚C		
Storage & Operation Humidity	20 - 90%RH (non-condensing)		
Vibration Capacity	2.5G		
IP Rating	IP67 (when using waterproof connections and when an oil seal is fitted to the rotating shaft (for an oil seal model))		
Certifications			

Notes:
1. In the servo motor model name, 1 represents the motor inertia and 2 represents the encoder type.
2. The rated torque is the continuous permissible torque between 0 to 40ºC operating temperature which is suitable for the servo motor mounted with the following heat sink dimensions.
   F40, F60, F80: 250 mm x 250 mm x 6 mm
   Material: aluminum
3. ( ) = motor with brake
4. The built-in servo motor brake is only for keeping the object in a stopped state. Do not use it for deceleration or as a dynamic brake.
5. Please follow the max. tolerant loading of the motor shaft end listed below during operation



ECM-A3 Series Servo Motor Specifications

Dimensions of Motors with Frame Size of 80 mm or Below

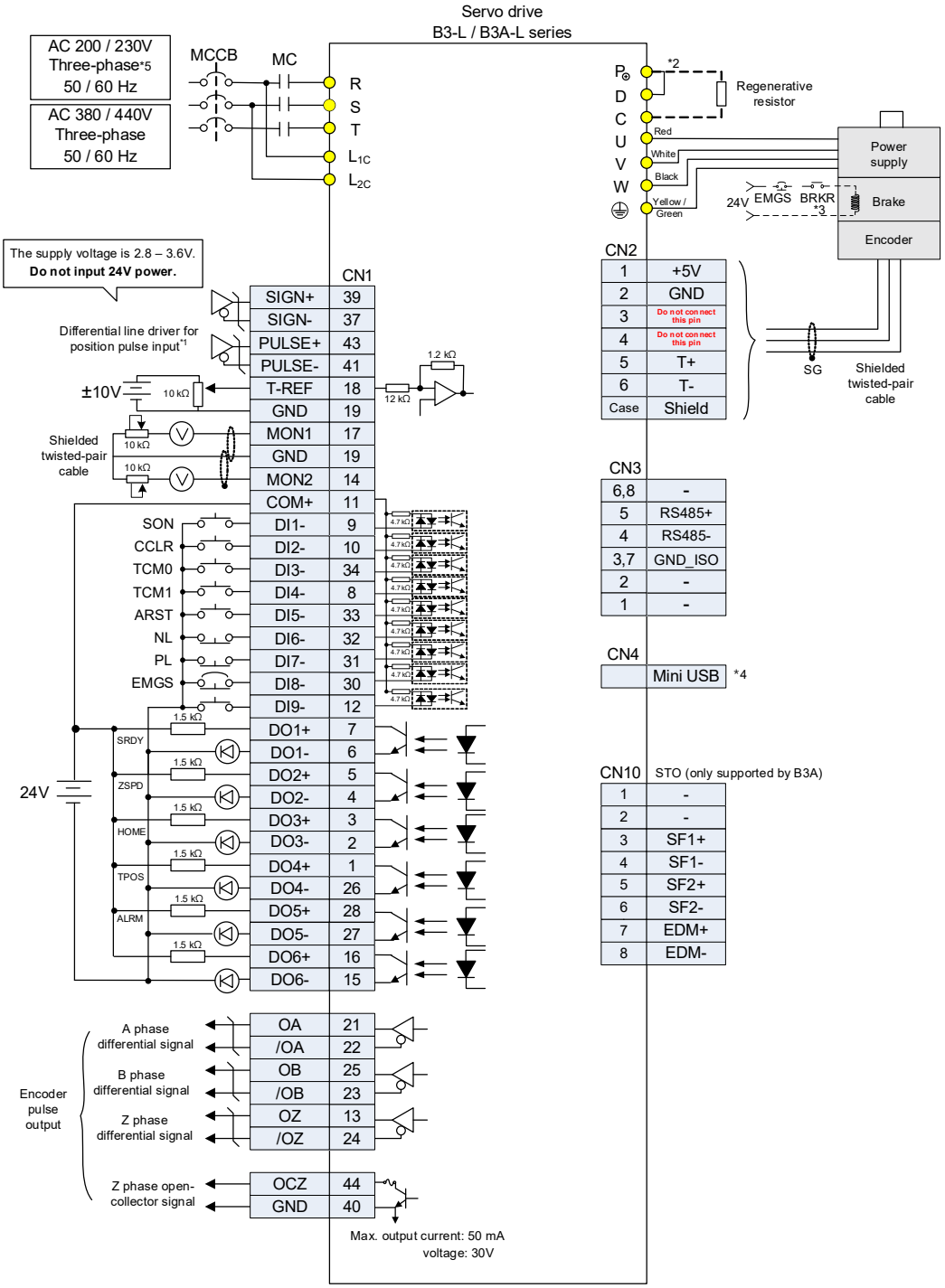


Model	C 2 040F 3 4 5	C 2 0401 3 4 5	C 2 0602 3 4 5	C 2 0604 3 4 5	C 2 0804 3 4 5	C 2 0807 3 4 5
LC	40	40	60	60	80	80
LZ	4.5	4.5	5.5	5.5	6.6	6.6
LA	46	46	70	70	90	90
S	8($^{+0}_{-0.009}$)	8($^{+0}_{0.009}$)	14($^{+0}_{-0.011}$)	14($^{+0}_{-0.011}$)	14($^{+0}_{-0.011}$)	19($^{+0}_{-0.013}$)
LB	30($^{+0}_{-0.021}$)	30($^{+0}_{-0.021}$)	50($^{+0}_{-0.025}$)	50($^{+0}_{-0.025}$)	70($^{+0}_{-0.030}$)	70($^{+0}_{-0.030}$)
LL (w/o brake)	70.6	85.3	84	106	93.7	115.8
LL (with brake)	105.4	120.1	117.6	139.7	131.2	153.2
LH	300	300	300	300	300	300
LP	300	300	300	300	300	300
H	34	34	43.5	43.5	54.5	54.5
LS	21.5	21.5	27	27	27	37
LR	25	25	30	30	30	40
LE	2.5	2.5	3	3	3	3
LG	5	5	7.5	7.5	8	8
LW	16	16	20	20	20	25
RH	6.2	6.2	11	11	11	15.5
WK	3	3	5	5	5	6
W	3	3	5	5	5	6
T	3	3	5	5	5	6
TP	M3 Depth 6	M3 Depth 6	M4 Depth 8	M4 Depth 8	M4 Depth 8	M6 Depth 10

Notes:
1. In the servo motor model name, 2 represents the encoder type, 3 represents the brake or keyway / oil seal type, 4 represents the shaft diameter and connector type, and 5 represents the special code.
2. When the special code of the C2 0807 3 4 5 model is Z, then its LS = 32 and LR = 35.
4. When the 4 in the motor model name is J or K, the connector is an IP67 waterproof connector

Control Mode Wiring

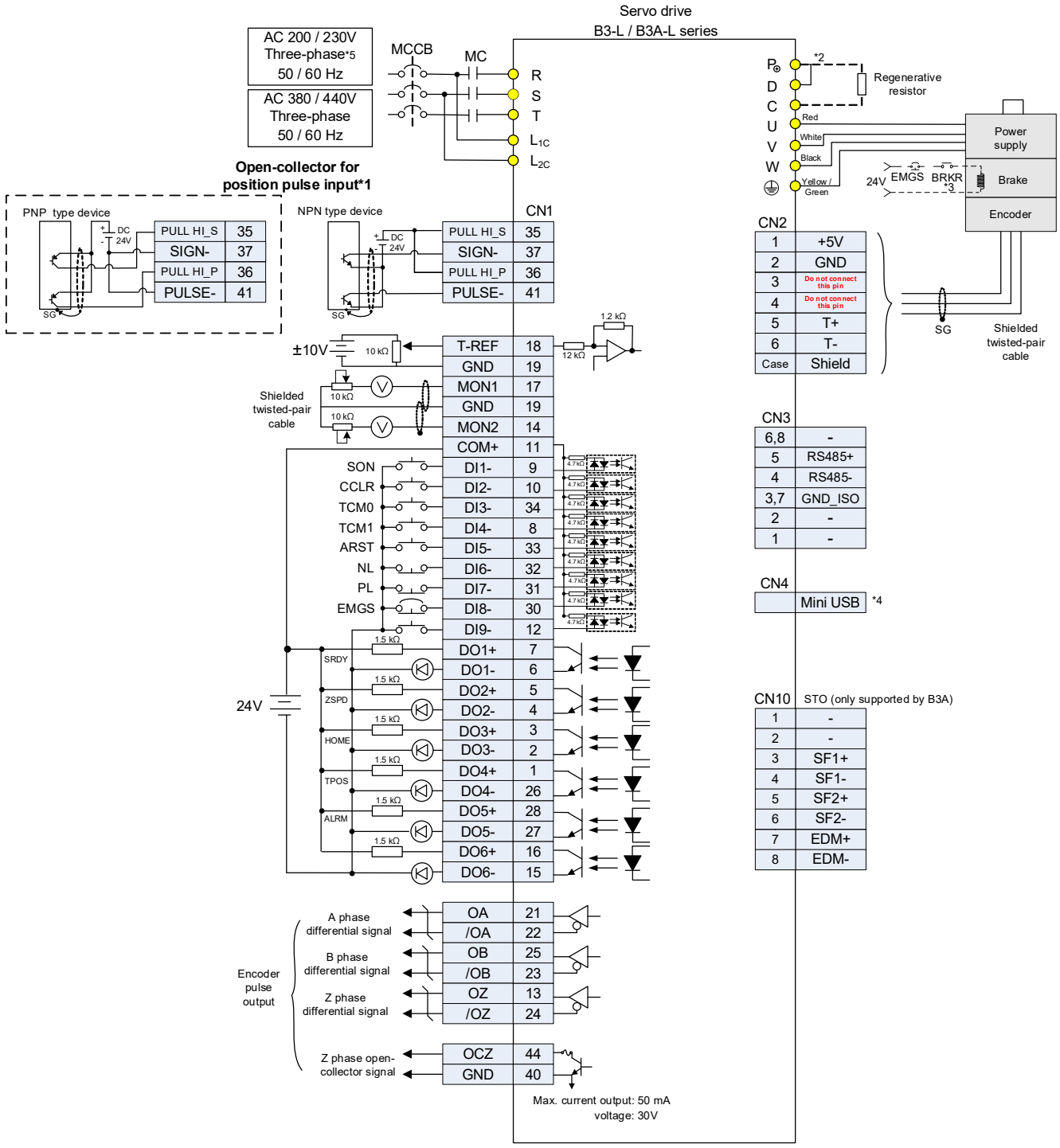
Position (PT) Mode Standard Wiring (Differential Pulse Signals)



Notes:
*1: Refer to Section 3.3.7 in the ASDA-B3 user manual for CN1 wiring
*2: Models of 200 W and below have no built-in brake resistor
*3: The brake coil has no polarity
*4: Connects to Mini USB (for PC communication)
*5: Models of 1.5 kW and below can use single-phase power supply

Control Mode Wiring

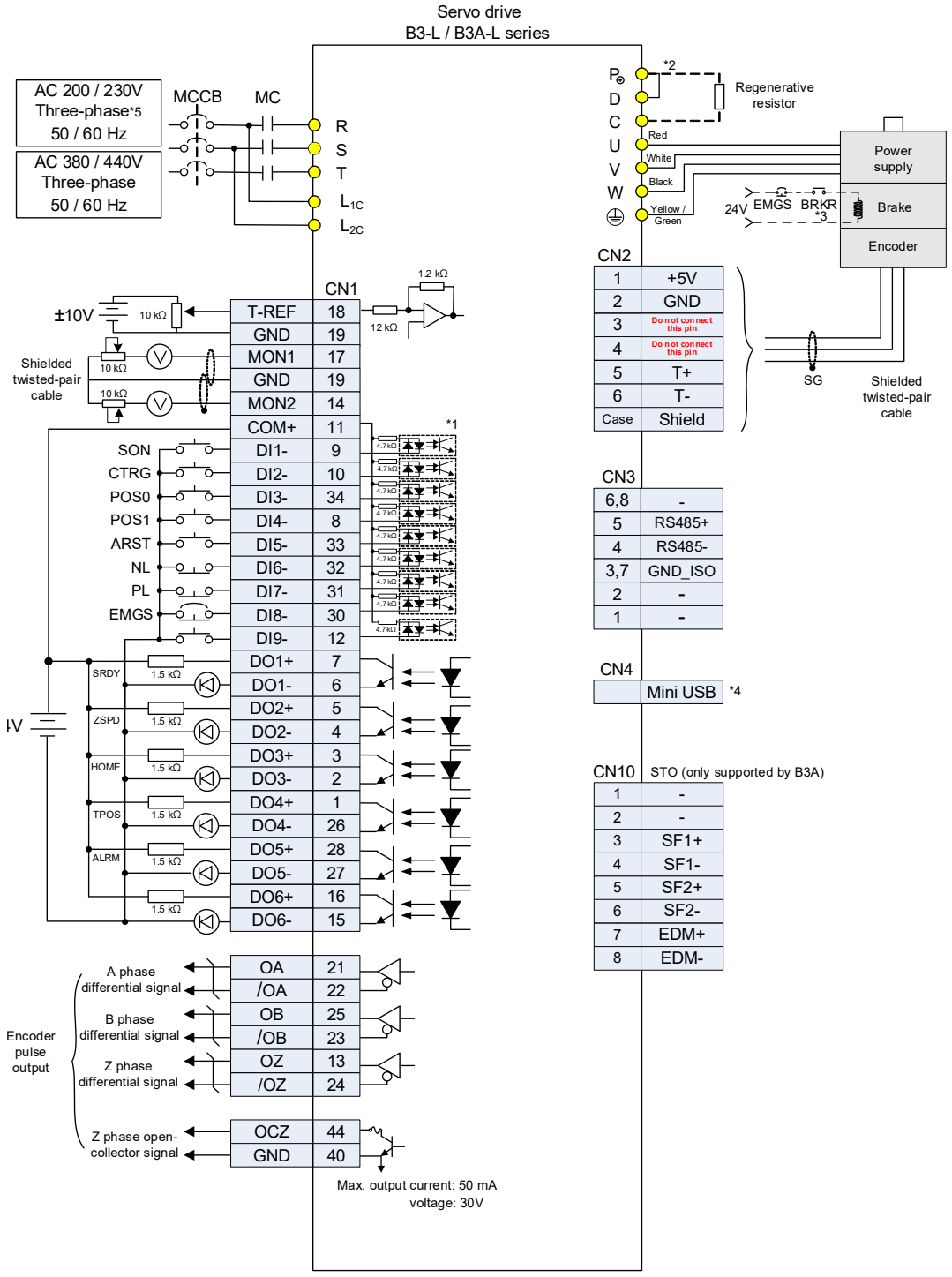
Position (PT) Control Mode (Open-Collector Pulse Signals)



Notes:
*1: Refer to Section 3.3.7 in the ASDA-B3 user manual for CN1 wiring
*2: Models of 200 W and below have no built-in brake resistor
*3: The brake coil has no polarity
*4: Connects to Mini USB (for PC communication)
*5: Models of 1.5 kW and below can use single-phase power supply

Control Mode Wiring

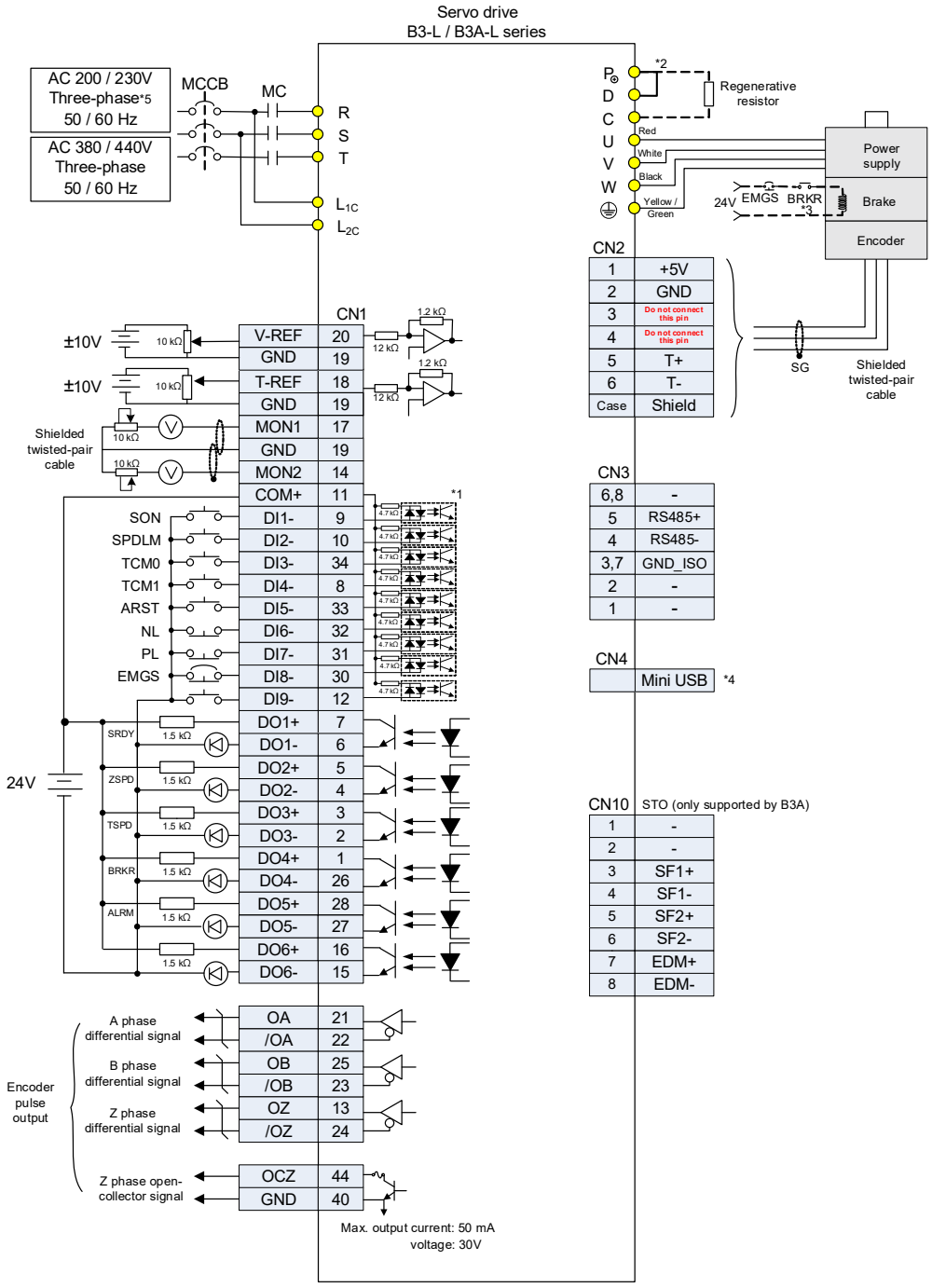
Position (PR) Mode Standard Wiring (Internal Position Commands)



Notes:
*1: Refer to Section 3.3.7 in the ASDA-B3 user manual for CN1 wiring
*2: Models of 200 W and below have no built-in brake resistor
*3: The brake coil has no polarity
*4: Connects to Mini USB (for PC communication)
*5: Models of 1.5 kW and below can use single-phase power supply

Control Mode Wiring

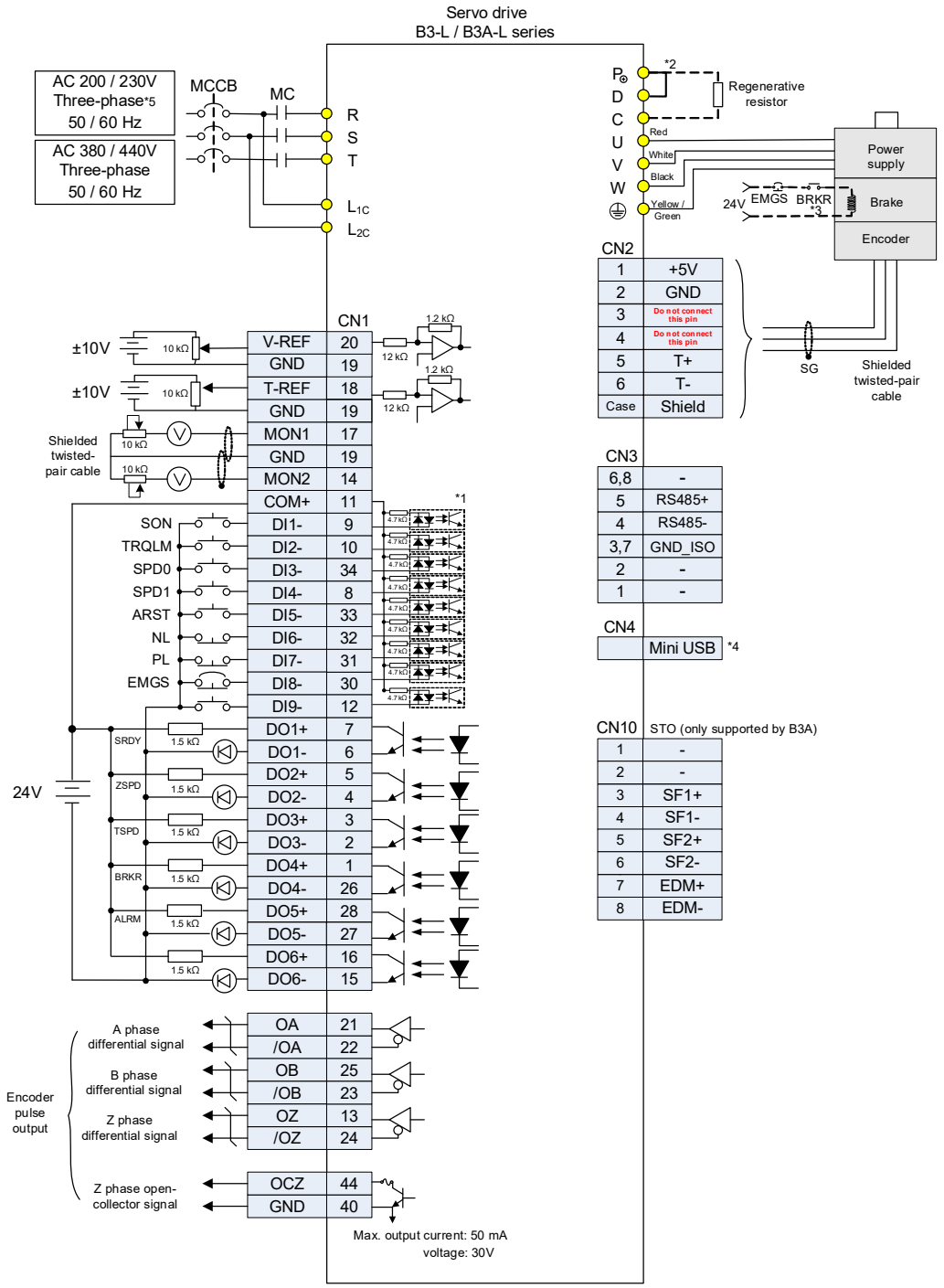
Torque (T) Mode Standard Wiring



Notes:
*1: Refer to Section 3.3.7 in the ASDA-B3 user manual for CN1 wiring
*2: Models of 200 W and below have no built-in brake resistor
*3: The brake coil has no polarity
*4: Connects to Mini USB (for PC communication)
*5: Models of 1.5 kW and below can use single-phase power supply

Control Mode Wiring

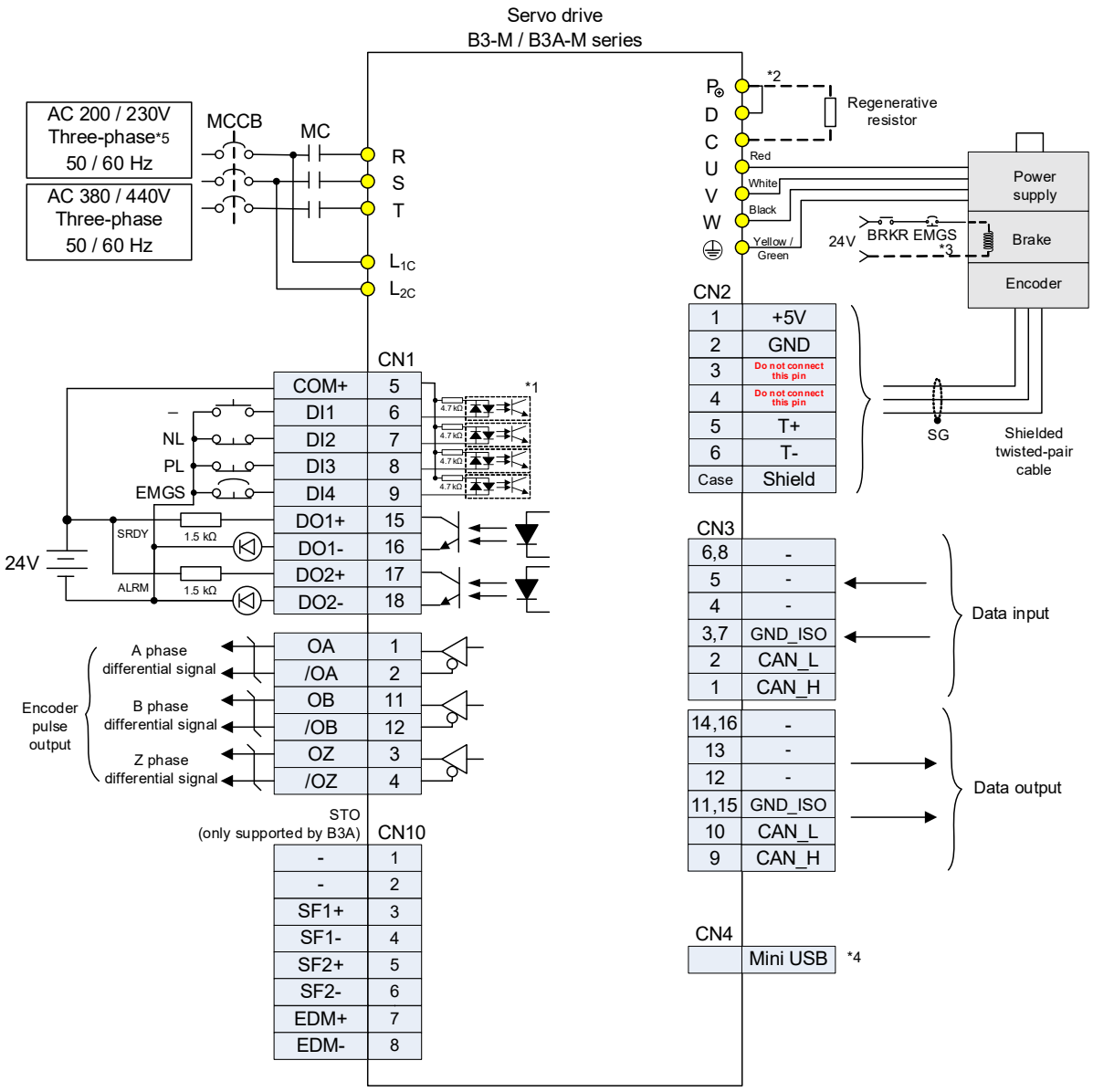
Speed (S) Mode Standard Wiring



Notes:
*1: Refer to Section 3.3.7 in the ASDA-B3 user manual for CN1 wiring
*2: Models of 200 W and below have no built-in brake resistor
*3: The brake coil has no polarity
*4: Connects to Mini USB (for PC communication)
*5: Models of 1.5 kW and below can use single-phase power supply

Control Mode Wiring

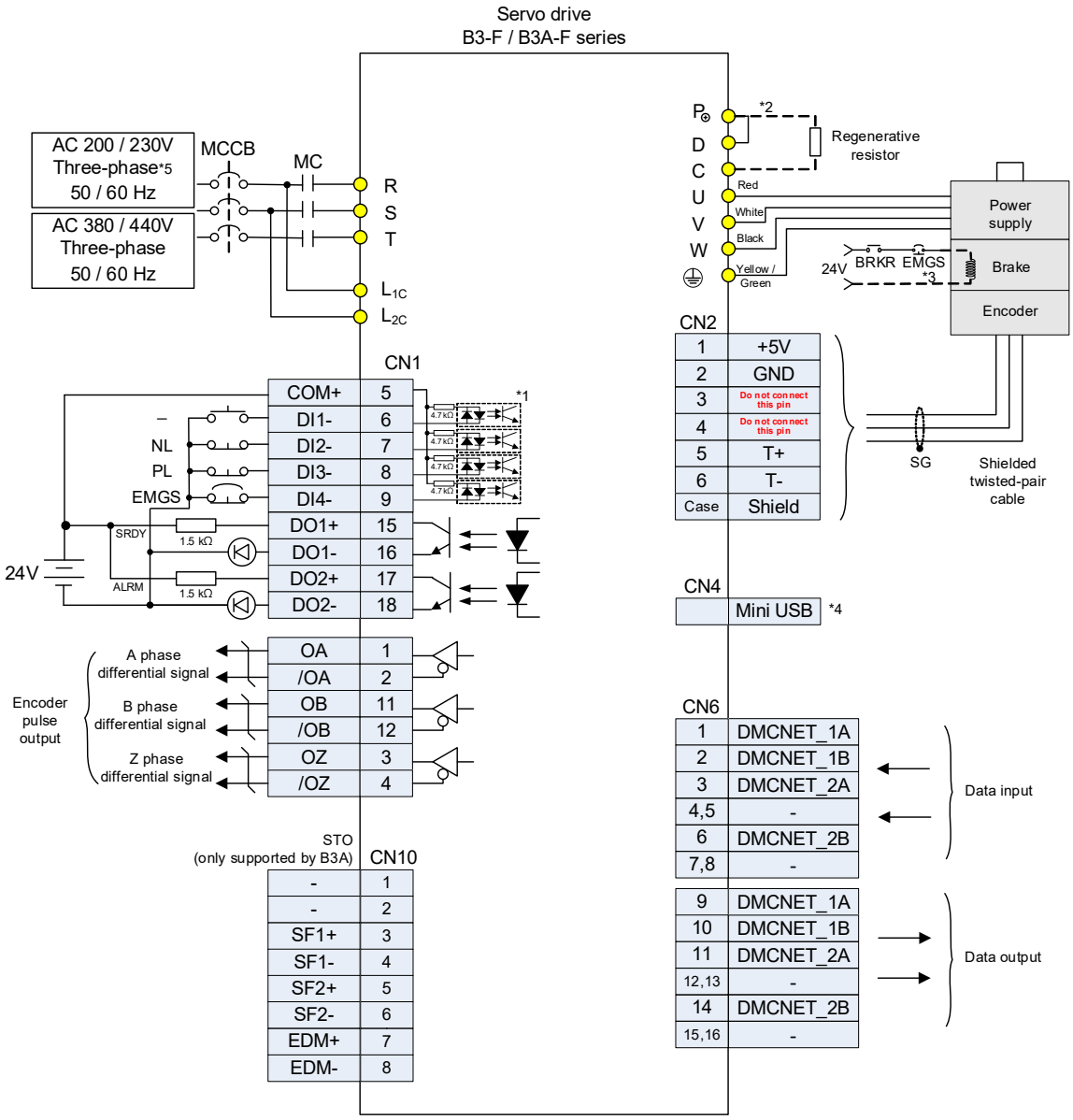
CANopen Communication Mode Standard Wiring



Notes:
*1: Refer to Section 3.3.7 in the ASDA-B3 user manual for CN1 wiring
*2: Models of 200 W and below have no built-in brake resistor
*3: The brake coil has no polarity
*4: Connects to Mini USB (for PC communication)
*5: Models of 1.5 kW and below can use single-phase power supply

Control Mode Wiring

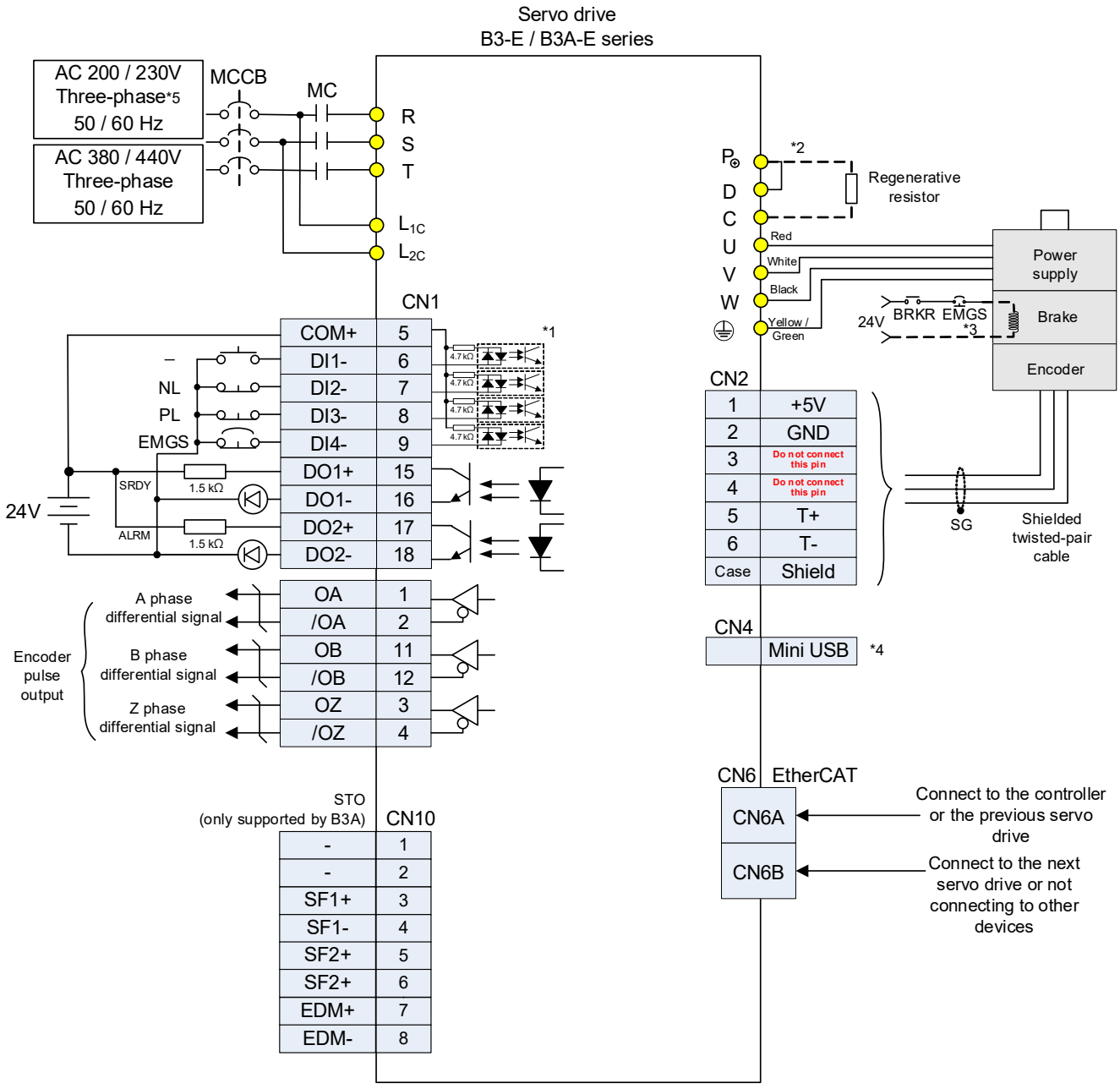
DMCNET Communication Mode Standard Wiring



Notes:
*1: Refer to Section 3.3.7 in the ASDA-B3 user manual for CN1 wiring
*2: Models of 200 W and below have no built-in brake resistor
*3: The brake coil has no polarity
*4: Connects to Mini USB (for PC communication)
*5: Models of 1.5 kW and below can use single-phase power supply

Control Mode Wiring

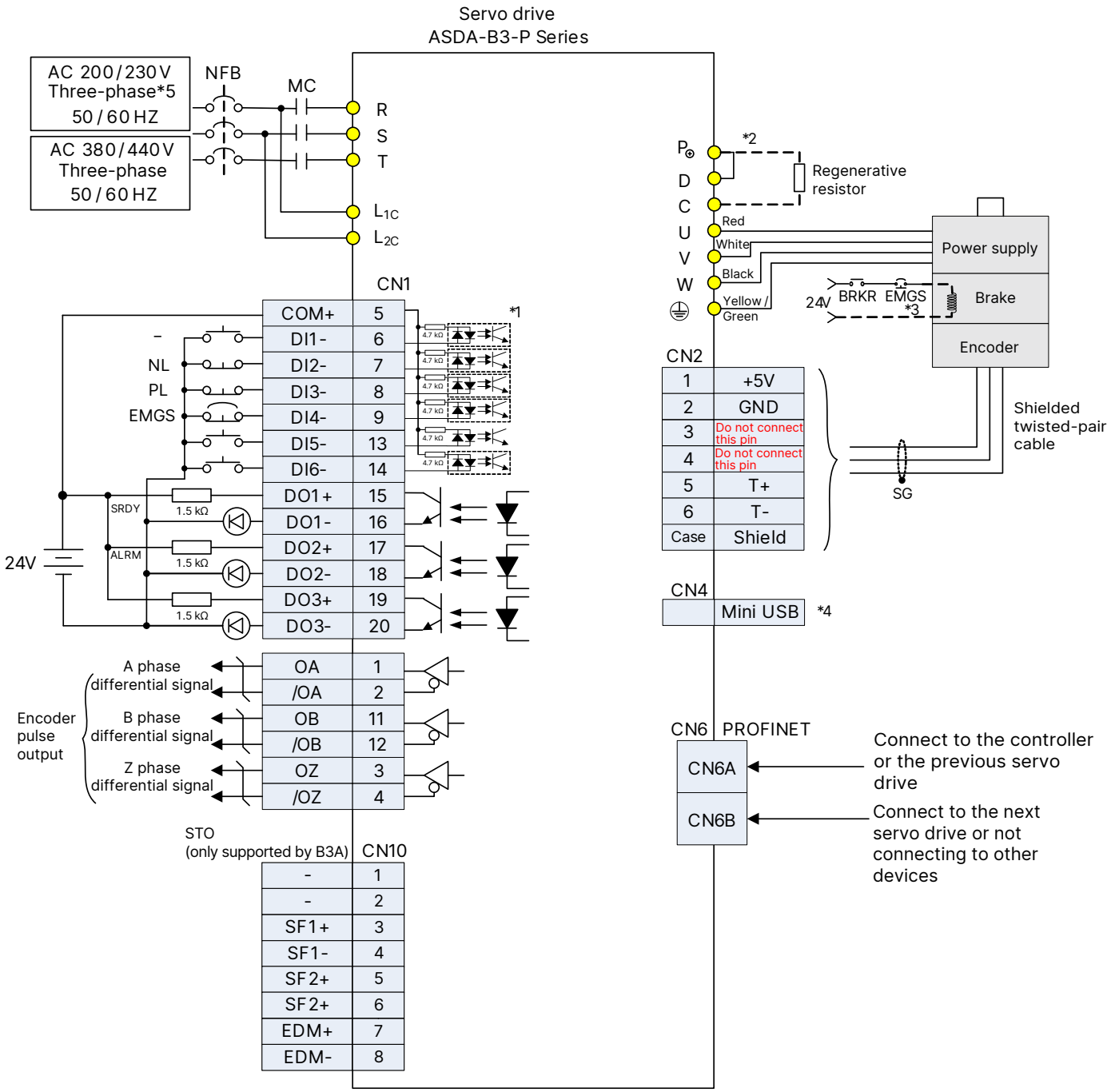
EtherCAT Communication Mode Standard Wiring



Notes:
*1: Refer to Section 3.3.7 in the ASDA-B3 user manual for CN1 wiring
*2: Models of 200 W and below have no built-in brake resistor
*3: The brake coil has no polarity
*4: Connects to Mini USB (for PC communication)
*5: Models of 1.5 kW and below can use single-phase power supply

Control Mode Wiring

PROFINET Communication Mode Standard Wiring



Notes:
*1: Refer to Section 3.3.7 in the ASDA-B3 user manual for CN1 wiring
*2: Models of 200 W and below have no built-in brake resistor
*3: The brake coil has no polarity
*4: Connects to Mini USB (for PC communication)
*5: Models of 1.5 kW and below can use single-phase power supply

Ordering Information

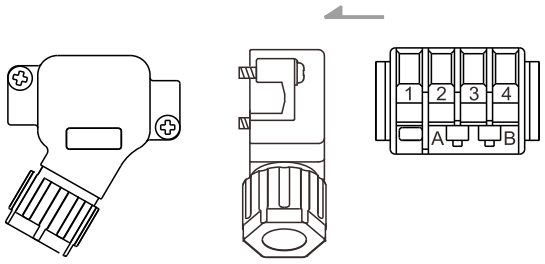
Accessories

Built-in Motor with Frame Size of 80 mm or Below

Power Connectors

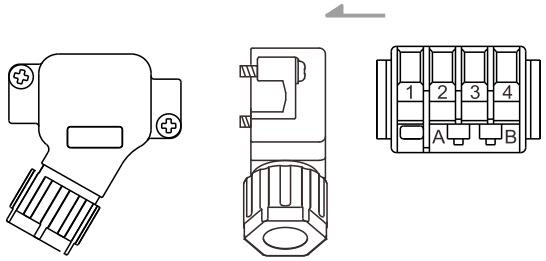
ACS3-AFPWSS00

With or w/o brake
Cable exit direction towards motor shaft



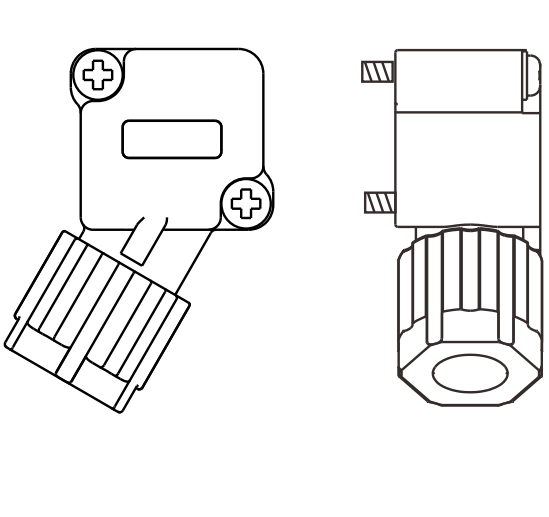
ACS3-ABPWSS00

With or w/o brake
Cable exit direction towards encoder



Encoder Connectors

ACS3-AFEASA00



Cable exit direction towards motor shaft

Cable exit direction towards encoder

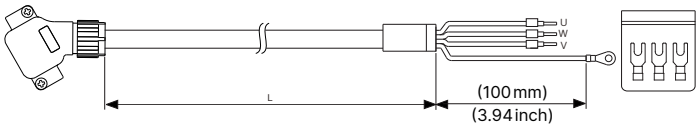
Ordering Information

Accessories

200 V Built-in Motor with Frame Size of 80 mm or Below

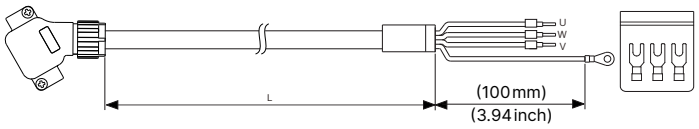
Power Connectors

Without brake - cable exit direction towards motor shaft



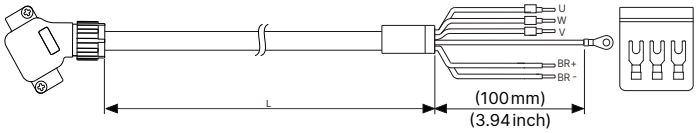
Cable	Model Name	UVW AWG (mm²)	L mm	L inch
Standard	ACS3-AFP WSR03	20 (0.5)	3,000 ± 50	118 ± 2
	ACS3-AFP WSR05	20 (0.5)	5,000 ± 50	197 ± 2
	ACS3-AFP WSR10	20 (0.5)	10,000 ± 50	394 ± 4
	ACS3-AFP WSR20	20 (0.5)	20,000 ± 50	787 ± 4
Torsion-Resistant	ACS3-AFPRSR03	20 (0.5)	3,000 ± 50	118 ± 2
	ACS3-AFPRSR05	20 (0.5)	5,000 ± 50	197 ± 2
	ACS3-AFPRSR10	20 (0.5)	10,000 ± 50	394 ± 4
	ACS3-AFPRSR20	20 (0.5)	20,000 ± 50	787 ± 4

Without brake - cable exit direction towards encoder



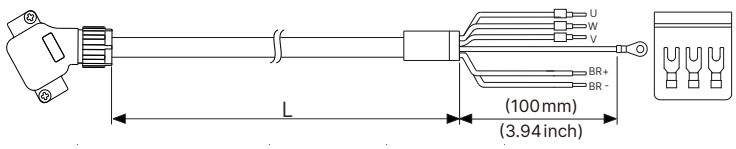
Cable	Model Name	UVW AWG (mm²)	L mm	L inch
Standard	ACS3-ABP WSR03	20 (0.5)	3,000 ± 50	118 ± 2
	ACS3-ABP WSR05	20 (0.5)	5,000 ± 50	197 ± 2
	ACS3-ABP WSR10	20 (0.5)	10,000 ± 50	394 ± 4
	ACS3-ABP WSR20	20 (0.5)	20,000 ± 50	787 ± 4
Torsion-Resistant	ACS3-ABPRSR03	20 (0.5)	3,000 ± 50	118 ± 2
	ACS3-ABPRSR05	20 (0.5)	5,000 ± 50	197 ± 2
	ACS3-ABPRSR10	20 (0.5)	10,000 ± 50	394 ± 4
	ACS3-ABPRSR20	20 (0.5)	20,000 ± 50	787 ± 4

With brake - cable exit direction towards motor shaft



Cable	Model Name	UVW AWG (mm²)	L mm	L inch
Standard	ACS3-AFP WSS03	20 (0.5)	3,000 ± 50	118 ± 2
	ACS3-AFP WSS05	20 (0.5)	5,000 ± 50	197 ± 2
	ACS3-AFP WSS10	20 (0.5)	10,000 ± 50	394 ± 4
	ACS3-AFP WSS20	20 (0.5)	20,000 ± 50	787 ± 4
Torsion-Resistant	ACS3-AFPRSS03	20 (0.5)	3,000 ± 50	118 ± 2
	ACS3-AFPRSS05	20 (0.5)	5,000 ± 50	197 ± 2
	ACS3-AFPRSS10	20 (0.5)	10,000 ± 50	394 ± 4
	ACS3-AFPRSS20	20 (0.5)	20,000 ± 50	787 ± 4

With brake - cable exit direction towards encoder



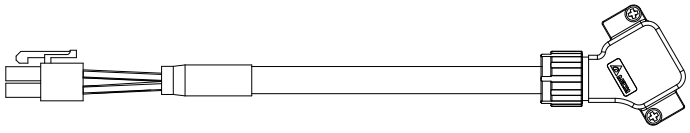
Cable	Model Name	UVW AWG (mm²)	L mm	L inch
Standard	ACS3-ABP WSS03	20 (0.5)	3,000 ± 50	118 ± 2
	ACS3-ABP WSS05	20 (0.5)	5,000 ± 50	197 ± 2
	ACS3-ABP WSS10	20 (0.5)	10,000 ± 50	394 ± 4
	ACS3-ABP WSS20	20 (0.5)	20,000 ± 50	787 ± 4
Torsion-Resistant	ACS3-ABPRSS03	20 (0.5)	3,000 ± 50	118 ± 2
	ACS3-ABPRSS05	20 (0.5)	5,000 ± 50	197 ± 2
	ACS3-ABPRSS10	20 (0.5)	10,000 ± 50	394 ± 4
	ACS3-ABPRSS20	20 (0.5)	20,000 ± 50	787 ± 4

Ordering Information

Accessories

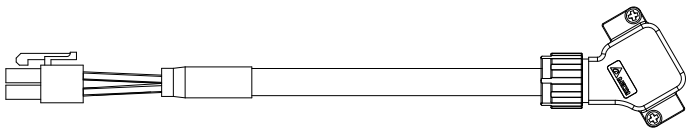
200 V Built-in Motor with Frame Size of 80 mm or Below

Power Connector w/o Brake



Cable	Model Name	UVW AWG (mm^2)	L mm	L inch
Standard	ACS3-AFPWSR0C	20 (0.5)	300 ± 30	11.8 ± 1.18
	ACS3-AFPWSR0E	20 (0.5)	500 ± 30	19.7 ± 1.18
	ACS3-AFPWSR0G	20 (0.5)	700 ± 30	27.5 ± 1.18
	ACS3-AFPWSR0J	20 (0.5)	900 ± 30	35.4 ± 1.18
	ACS3-ABPWSR0C	20 (0.5)	300 ± 30	11.8 ± 1.18
	ACS3-ABPWSR0E	20 (0.5)	500 ± 30	19.7 ± 1.18
	ACS3-ABPWSR0G	20 (0.5)	700 ± 30	27.5 ± 1.18
	ACS3-ABPWSR0J	20 (0.5)	900 ± 30	35.4 ± 1.18
Torsion-Resistant	ACS3-AFPFSR0C	20 (0.5)	300 ± 30	11.8 ± 1.18
	ACS3-AFPFSR0E	20 (0.5)	500 ± 30	19.7 ± 1.18
	ACS3-AFPFSR0G	20 (0.5)	700 ± 30	27.5 ± 1.18
	ACS3-AFPFSR0J	20 (0.5)	900 ± 30	35.4 ± 1.18
	ACS3-ABPFSR0C	20 (0.5)	300 ± 30	11.8 ± 1.18
	ACS3-ABPFSR0E	20 (0.5)	500 ± 30	19.7 ± 1.18
	ACS3-ABPFSR0G	20 (0.5)	700 ± 30	27.5 ± 1.18
	ACS3-ABPFSR0J	20 (0.5)	900 ± 30	35.4 ± 1.18

Power Connector with Brake



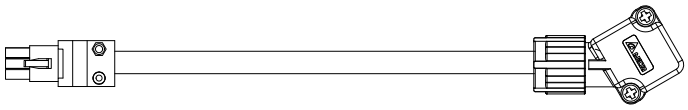
Cable	Model Name	UVW AWG (mm^2)	L mm	L inch
Standard	ACS3-AFPWSS0C	20 (0.5) + 24 (0.2)	300 ± 30	11.8 ± 1.18
	ACS3-AFPWSS0E	20 (0.5) + 24 (0.2)	500 ± 30	19.7 ± 1.18
	ACS3-AFPWSS0G	20 (0.5) + 24 (0.2)	700 ± 30	27.5 ± 1.18
	ACS3-AFPWSS0J	20 (0.5) + 24 (0.2)	900 ± 30	35.4 ± 1.18
	ACS3-ABPWSS0C	20 (0.5) + 24 (0.2)	300 ± 30	11.8 ± 1.18
	ACS3-ABPWSS0E	20 (0.5) + 24 (0.2)	500 ± 30	19.7 ± 1.18
	ACS3-ABPWSS0G	20 (0.5) + 24 (0.2)	700 ± 30	27.5 ± 1.18
	ACS3-ABPWSS0J	20 (0.5) + 24 (0.2)	900 ± 30	35.4 ± 1.18
Torsion-Resistant	ACS3-AFPFSS0C	20 (0.5) + 24 (0.2)	300 ± 30	11.8 ± 1.18
	ACS3-AFPFSS0E	20 (0.5) + 24 (0.2)	500 ± 30	19.7 ± 1.18
	ACS3-AFPFSS0G	20 (0.5) + 24 (0.2)	700 ± 30	27.5 ± 1.18
	ACS3-AFPFSS0J	20 (0.5) + 24 (0.2)	900 ± 30	35.4 ± 1.18
	ACS3-ABPFSS0C	20 (0.5) + 24 (0.2)	300 ± 30	11.8 ± 1.18
	ACS3-ABPFSS0E	20 (0.5) + 24 (0.2)	500 ± 30	19.7 ± 1.18
	ACS3-ABPFSS0G	20 (0.5) + 24 (0.2)	700 ± 30	27.5 ± 1.18
	ACS3-ABPFSS0J	20 (0.5) + 24 (0.2)	900 ± 30	35.4 ± 1.18

Ordering Information

Accessories

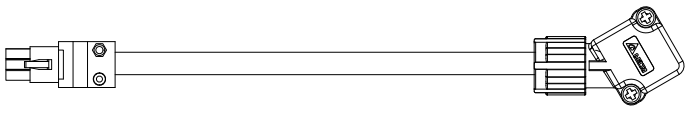
200 V Built-in Motor with Frame Size of 80 mm or Below

Signal Connector - Battery-Less / Incremental



Cable	Model Name	UVW AWG (mm^2)	L mm	L inch
Standard	ACS3-AFEASI0C	22 (0.3) + 26 (0.13)	300 ± 30	11.8 ± 1.18
	ACS3-AFEASI0E	22 (0.3) + 26 (0.13)	500 ± 30	19.7 ± 1.18
	ACS3-AFEASI0G	22 (0.3) + 26 (0.13)	700 ± 30	27.5 ± 1.18
	ACS3-AFEASI0J	22 (0.3) + 26 (0.13)	900 ± 30	35.4 ± 1.18
	ACS3-ABEASI0C	22 (0.3) + 26 (0.13)	300 ± 30	11.8 ± 1.18
	ACS3-ABEASI0E	22 (0.3) + 26 (0.13)	500 ± 30	19.7 ± 1.18
	ACS3-ABEASI0G	22 (0.3) + 26 (0.13)	700 ± 30	27.5 ± 1.18
	ACS3-ABEASI0J	22 (0.3) + 26 (0.13)	900 ± 30	35.4 ± 1.18
Torsion-Resistant	ACS3-AFERSI0C	22 (0.3) + 26 (0.13)	300 ± 30	11.8 ± 1.18
	ACS3-AFERSI0E	22 (0.3) + 26 (0.13)	500 ± 30	19.7 ± 1.18
	ACS3-AFERSI0G	22 (0.3) + 26 (0.13)	700 ± 30	27.5 ± 1.18
	ACS3-AFERSI0J	22 (0.3) + 26 (0.13)	900 ± 30	35.4 ± 1.18
	ACS3-ABERSI0C	22 (0.3) + 26 (0.13)	300 ± 30	11.8 ± 1.18
	ACS3-ABERSI0E	22 (0.3) + 26 (0.13)	500 ± 30	19.7 ± 1.18
	ACS3-ABERSI0G	22 (0.3) + 26 (0.13)	700 ± 30	27.5 ± 1.18
	ACS3-ABERSI0J	22 (0.3) + 26 (0.13)	900 ± 30	35.4 ± 1.18

Signal Connector - Absolute



Cable	Model Name	UVW AWG (mm^2)	L mm	L inch
Standard	ACS3-AFEASA0C	22 (0.3) + 26 (0.13)	300 ± 30	11.8 ± 1.18
	ACS3-AFEASA0E	22 (0.3) + 26 (0.13)	500 ± 30	19.7 ± 1.18
	ACS3-AFEASA0G	22 (0.3) + 26 (0.13)	700 ± 30	27.5 ± 1.18
	ACS3-AFEASA0J	22 (0.3) + 26 (0.13)	900 ± 30	35.4 ± 1.18
	ACS3-ABEASA0C	22 (0.3) + 26 (0.13)	300 ± 30	11.8 ± 1.18
	ACS3-ABEASA0E	22 (0.3) + 26 (0.13)	500 ± 30	19.7 ± 1.18
	ACS3-ABEASA0G	22 (0.3) + 26 (0.13)	700 ± 30	27.5 ± 1.18
	ACS3-ABEASA0J	22 (0.3) + 26 (0.13)	900 ± 30	35.4 ± 1.18
Torsion-Resistant	ACS3-AFERSA0C	22 (0.3) + 26 (0.13)	300 ± 30	11.8 ± 1.18
	ACS3-AFERSA0E	22 (0.3) + 26 (0.13)	500 ± 30	19.7 ± 1.18
	ACS3-AFERSA0G	22 (0.3) + 26 (0.13)	700 ± 30	27.5 ± 1.18
	ACS3-AFERSA0J	22 (0.3) + 26 (0.13)	900 ± 30	35.4 ± 1.18
	ACS3-ABERSA0C	22 (0.3) + 26 (0.13)	300 ± 30	11.8 ± 1.18
	ACS3-ABERSA0E	22 (0.3) + 26 (0.13)	500 ± 30	19.7 ± 1.18
	ACS3-ABERSA0G	22 (0.3) + 26 (0.13)	700 ± 30	27.5 ± 1.18
	ACS3-ABERSA0J	22 (0.3) + 26 (0.13)	900 ± 30	35.4 ± 1.18

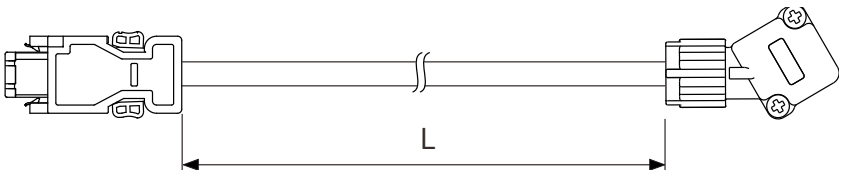
Ordering Information

Accessories

200 V Built-in Motor with Frame Size of 80 mm or Below

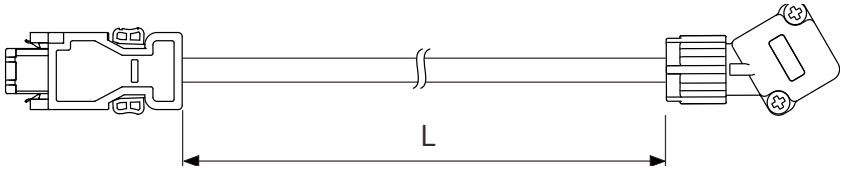
Battery-Less / Incremental Encoder Connectors

Cable exit direction towards motor shaft



Cable	Model Name	L	
		mm	inch
Standard	ACS3-AFEASI03	3,000 ± 50	118 ± 2
	ACS3-AFEASI05	5,000 ± 50	197 ± 2
	ACS3-AFEASI10	10,000 ± 50	394 ± 4
	ACS3-AFEASI20	20,000 ± 50	787 ± 4
Torsion-Resistant	ACS3-AFERSI03	3,000 ± 50	118 ± 2
	ACS3-AFERSI05	5,000 ± 50	197 ± 2
	ACS3-AFERSI10	10,000 ± 50	394 ± 4
	ACS3-AFERSI20	20,000 ± 50	787 ± 4

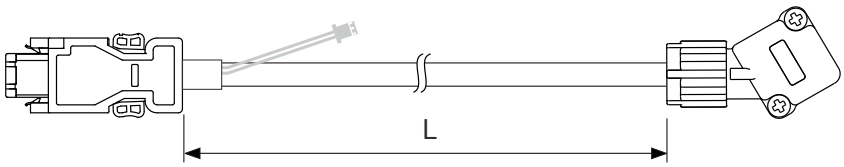
Cable exit direction towards encoder



Cable	Model Name	L	
		mm	inch
Standard	ACS3-ABEASI03	3,000 ± 50	118 ± 2
	ACS3-ABEASI05	5,000 ± 50	197 ± 2
	ACS3-ABEASI10	10,000 ± 50	394 ± 4
	ACS3-ABEASI20	20,000 ± 50	787 ± 4
Torsion-Resistant	ACS3-ABERSI03	3,000 ± 50	118 ± 2
	ACS3-ABERSI05	5,000 ± 50	197 ± 2
	ACS3-ABERSI10	10,000 ± 50	394 ± 4
	ACS3-ABERSI20	20,000 ± 50	787 ± 4

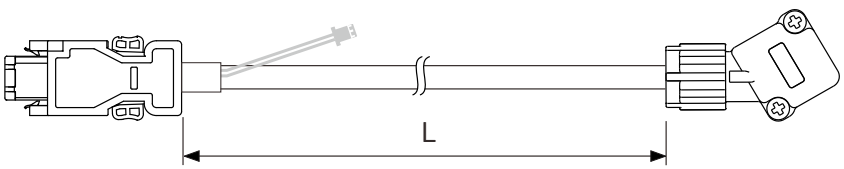
Absolute Encoder Connectors

Cable exit direction towards motor shaft



Cable	Model Name	L	
		mm	inch
Standard	ACS3-AFEASA03	3,000 ± 50	118 ± 2
	ACS3-AFEASA05	5,000 ± 50	197 ± 2
	ACS3-AFEASA10	10,000 ± 50	394 ± 4
	ACS3-AFEASA20	20,000 ± 50	787 ± 4
Torsion-Resistant	ACS3-AFERSA03	3,000 ± 50	118 ± 2
	ACS3-AFERSA05	5,000 ± 50	197 ± 2
	ACS3-AFERSA10	10,000 ± 50	394 ± 4
	ACS3-AFERSA20	20,000 ± 50	787 ± 4

Cable exit direction towards encoder



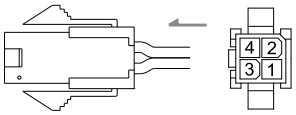
Cable	Model Name	L	
		mm	inch
Standard	ACS3-ABEASA03	3,000 ± 50	118 ± 2
	ACS3-ABEASA05	5,000 ± 50	197 ± 2
	ACS3-ABEASA10	10,000 ± 50	394 ± 4
	ACS3-ABEASA20	20,000 ± 50	787 ± 4
Torsion-Resistant	ACS3-ABERSA03	3,000 ± 50	118 ± 2
	ACS3-ABERSA05	5,000 ± 50	197 ± 2
	ACS3-ABERSA10	10,000 ± 50	394 ± 4
	ACS3-ABERSA20	20,000 ± 50	787 ± 4

Ordering Information

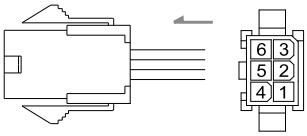
Accessories

Power Connectors (For F80 and below)

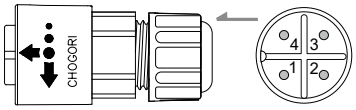
ASDBCAPW0000 (Motor 220 V & 400 V)
(for F80 and below)



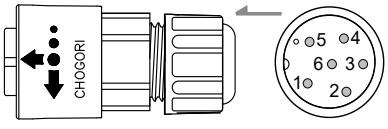
ASDBCAPW0100 (Motor 220 V & 400 V)
(for F80 and below with brake)



ACS3-CNPW1A00
(for F80 and below)
IP67 waterproof connector, for 220 V

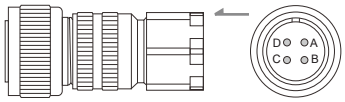


ACS3-CNPW2A00
(for F80 and below)
IP67 waterproof connector, for 220 V

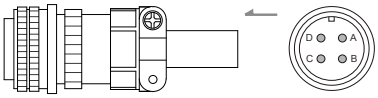


Mil-Spec Connectors (For F100 and above)

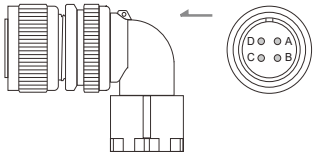
ACS3-CAPWA000
(for F100 - F130)
Mil-Spec: MIL 3106A18-10S



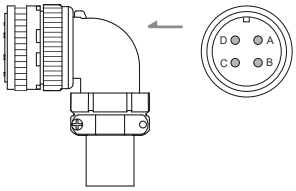
ACS3-CAPWE000
(for F180 5.5 / 7.5 kW & F200)
Mil-Spec: MIL 3106A32-17S



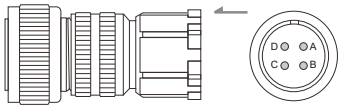
ACS3-CRPWA000
(for F100 - F130)
Mil-Spec: MIL 3108A18-10S



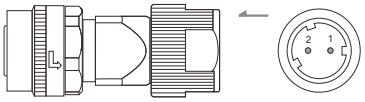
ACS3-CRPWE000
(for F180 5.5 / 7.5 kW & F200)
Mil-Spec: MIL 3108A32-17S



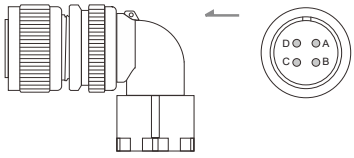
ACS3-CAPWC000
(for F180 2 / 3 / 4.5 kW)
Mil-Spec: MIL 3106A22-22S



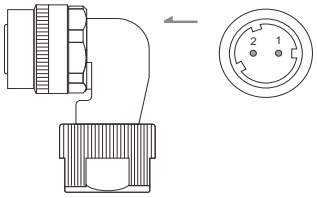
ACS3-CABRA000
(for F100 - F220 with brake)
Mil-Spec: CMV1-SP2S



ACS3-CRPWC000
(for F180 2 / 3 / 4.5 kW)
Mil-Spec: MIL 3108A22-22S



ACS3-CRBRA000
(for F100 - F220 with brake)
Mil-Spec: CMV1-AP2S



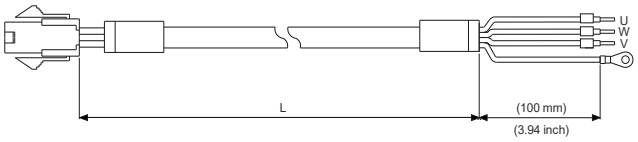
Ordering Information

Accessories

Power Cable

F40 - F80

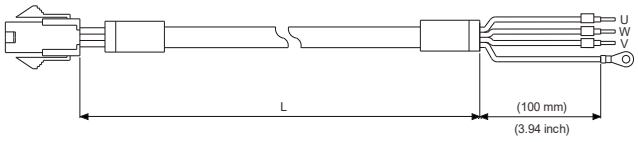
A3 / B3 motor, w/o brake, 220V



Cable	Model Name	UVW AWG (mm^2)	L mm	L inch
Standard	ACS3-CAPW1103	18 (0.82)	3,000 ± 50	118 ± 2
	ACS3-CAPW1105	18 (0.82)	5,000 ± 50	197 ± 2
	ACS3-CAPW1110	18 (0.82)	10,000 ± 50	394 ± 4
	ACS3-CAPW1120	18 (0.82)	20,000 ± 50	787 ± 4
Torsion-Resistant	ACS3-CAPF1103	18 (0.82)	3,000 ± 50	118 ± 2
	ACS3-CAPF1105	18 (0.82)	5,000 ± 50	197 ± 2
	ACS3-CAPF1110	18 (0.82)	10,000 ± 50	394 ± 4
	ACS3-CAPF1120	18 (0.82)	20,000 ± 50	787 ± 4

F40 - F80

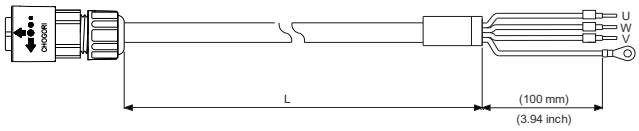
A3 / B3 motor, w/o brake, 400V



Cable	Model Name	UVW AWG (mm^2)	L mm	L inch
Standard	ACS3-CAPW3103	18 (0.82)	3,000 ± 50	118 ± 2
	ACS3-CAPW3105	18 (0.82)	5,000 ± 50	197 ± 2
	ACS3-CAPW3110	18 (0.82)	10,000 ± 50	394 ± 4
	ACS3-CAPW3120	18 (0.82)	20,000 ± 50	787 ± 4
Torsion-Resistant	ACS3-CAPF3103	18 (0.82)	3,000 ± 50	118 ± 2
	ACS3-CAPF3105	18 (0.82)	5,000 ± 50	197 ± 2
	ACS3-CAPF3110	18 (0.82)	10,000 ± 50	394 ± 4
	ACS3-CAPF3120	18 (0.82)	20,000 ± 50	787 ± 4

F40 - F80

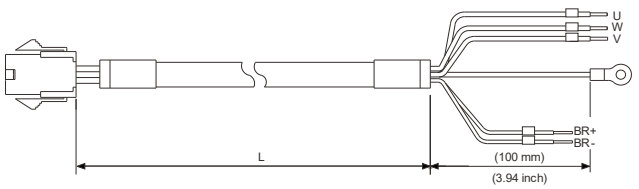
A3 / B3 motor, w/o brake, IP67 waterproof connector, 220V



Cable	Model Name	UVW AWG (mm^2)	L mm	L inch
Standard	ACS3-CAPW5103	18 (0.82)	3,000 ± 50	118 ± 2
	ACS3-CAPW5105	18 (0.82)	5,000 ± 50	197 ± 2
	ACS3-CAPW5110	18 (0.82)	10,000 ± 100	394 ± 4
	ACS3-CAPW5120	18 (0.82)	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CAPF5103	18 (0.82)	3,000 ± 50	118 ± 2
	ACS3-CAPF5105	18 (0.82)	5,000 ± 50	197 ± 2
	ACS3-CAPF5110	18 (0.82)	10,000 ± 100	394 ± 4
	ACS3-CAPF5120	18 (0.82)	20,000 ± 100	787 ± 4

F40 - F80

A3 / B3 motor, with brake (220V & 400V)



Cable	Model Name	UVW AWG (mm^2)	L mm	L inch
Standard	ACS3-CAPW2103	18 (0.82)	3,000 ± 50	118 ± 2
	ACS3-CAPW2105	18 (0.82)	5,000 ± 50	197 ± 2
	ACS3-CAPW2110	18 (0.82)	10,000 ± 100	394 ± 4
	ACS3-CAPW2120	18 (0.82)	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CAPF2103	18 (0.82)	3,000 ± 50	118 ± 2
	ACS3-CAPF2105	18 (0.82)	5,000 ± 50	197 ± 2
	ACS3-CAPF2110	18 (0.82)	10,000 ± 100	394 ± 4
	ACS3-CAPF2120	18 (0.82)	20,000 ± 100	787 ± 4

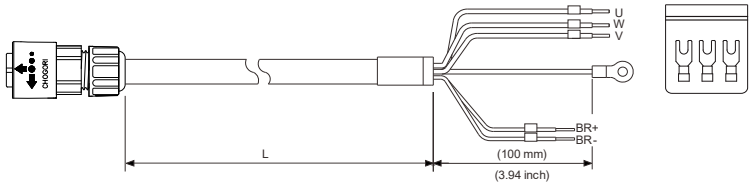
Ordering Information

Accessories

Power Cable

F40 ~ F80

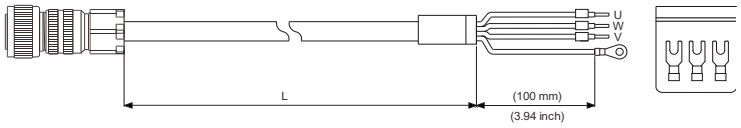
A3 / B3 motor, with brake, IP67 waterproof connector, for 220 V



Cable	Model Name	UVW AWG (mm²)	L mm	L inch
Standard	ACS3-CAP W6103	18 (0.82)	3,000 ± 50	118 ± 2
	ACS3-CAP W6105	18 (0.82)	5,000 ± 50	197 ± 2
	ACS3-CAP W6110	18 (0.82)	10,000 ± 100	394 ± 4
	ACS3-CAP W6120	18 (0.82)	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CAPF6103	18 (0.82)	3,000 ± 50	118 ± 2
	ACS3-CAPF6105	18 (0.82)	5,000 ± 50	197 ± 2
	ACS3-CAPF6110	18 (0.82)	10,000 ± 100	394 ± 4
	ACS3-CAPF6120	18 (0.82)	20,000 ± 100	787 ± 4

F100 ~ F130

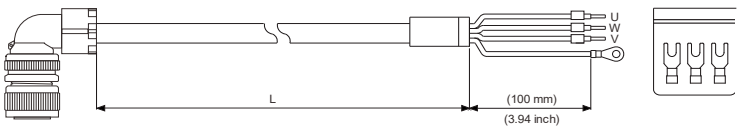
B3 motor, w/o brake, straight connector



Cable	Model Name	UVW AWG (mm²)	L mm	L inch
Standard	ACS3-CAP WA203	16 (1.3)	3,000 ± 50	118 ± 2
	ACS3-CAP WA205	16 (1.3)	5,000 ± 50	197 ± 2
	ACS3-CAP WA210	16 (1.3)	10,000 ± 100	394 ± 4
	ACS3-CAP WA220	16 (1.3)	20,000 ± 100	787 ± 4
	ACS3-CAP WA303	14 (2.1)	3,000 ± 50	118 ± 2
	ACS3-CAP WA305	14 (2.1)	5,000 ± 50	197 ± 2
	ACS3-CAP WA310	14 (2.1)	10,000 ± 100	394 ± 4
	ACS3-CAP WA320	14 (2.1)	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CAPFA203	16 (1.3)	3,000 ± 50	118 ± 2
	ACS3-CAPFA205	16 (1.3)	5,000 ± 50	197 ± 2
	ACS3-CAPFA210	16 (1.3)	10,000 ± 100	394 ± 4
	ACS3-CAPFA220	16 (1.3)	20,000 ± 100	787 ± 4
	ACS3-CAPFA303	14 (2.1)	3,000 ± 50	118 ± 2
	ACS3-CAPFA305	14 (2.1)	5,000 ± 50	197 ± 2
	ACS3-CAPFA310	14 (2.1)	10,000 ± 100	394 ± 4
	ACS3-CAPFA320	14 (2.1)	20,000 ± 100	787 ± 4

F100 ~ F130

B3 motor, w/o brake, angular connector



Cable	Model Name	UVW AWG (mm²)	L mm	L inch
Standard	ACS3-CRP WA203	16 (1.3)	3,000 ± 50	118 ± 2
	ACS3-CRP WA205	16 (1.3)	5,000 ± 50	197 ± 2
	ACS3-CRP WA210	16 (1.3)	10,000 ± 100	394 ± 4
	ACS3-CRP WA220	16 (1.3)	20,000 ± 100	787 ± 4
	ACS3-CRP WA303	14 (2.1)	3,000 ± 50	118 ± 2
	ACS3-CRP WA305	14 (2.1)	5,000 ± 50	197 ± 2
	ACS3-CRP WA310	14 (2.1)	10,000 ± 100	394 ± 4
	ACS3-CRP WA320	14 (2.1)	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CRPFA203	16 (1.3)	3,000 ± 50	118 ± 2
	ACS3-CRPFA205	16 (1.3)	5,000 ± 50	197 ± 2
	ACS3-CRPFA210	16 (1.3)	10,000 ± 100	394 ± 4
	ACS3-CRPFA220	16 (1.3)	20,000 ± 100	787 ± 4
	ACS3-CRPFA303	14 (2.1)	3,000 ± 50	118 ± 2
	ACS3-CRPFA305	14 (2.1)	5,000 ± 50	197 ± 2
	ACS3-CRPFA310	14 (2.1)	10,000 ± 100	394 ± 4
	ACS3-CRPFA320	14 (2.1)	20,000 ± 100	787 ± 4

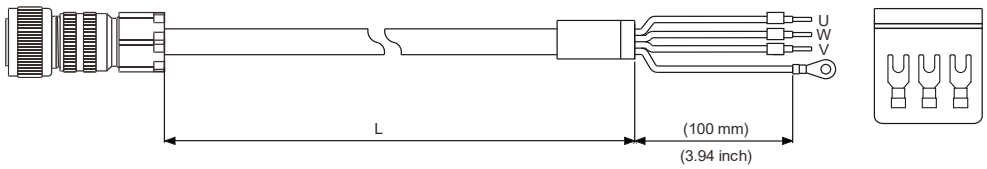
Ordering Information

Accessories

Power Cable

F180, 2/3/4.5 kW

B3 motor, w/o brake, straight connector

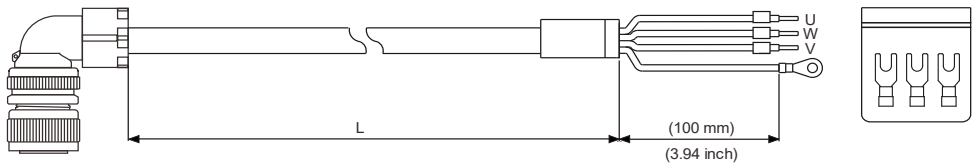


Cable	Model Name	UVW	L	
		AWG (mm²)	mm	inch
Standard	ACS3-CAP WC303	14 (2.1)	3,000 ± 50	118 ± 2
	ACS3-CAP WC305	14 (2.1)	5,000 ± 50	197 ± 2
	ACS3-CAP WC310	14 (2.1)	10,000 ± 100	394 ± 4
	ACS3-CAP WC320	14 (2.1)	20,000 ± 100	787 ± 4
	ACS3-CAP WC403	12 (3.3)	3,000 ± 50	118 ± 2
	ACS3-CAP WC405	12 (3.3)	5,000 ± 50	197 ± 2
	ACS3-CAP WC410	12 (3.3)	10,000 ± 100	394 ± 4
	ACS3-CAP WC420	12 (3.3)	20,000 ± 100	787 ± 4
	ACS3-CAP WC503	10 (5.3)	3,000 ± 50	118 ± 2
	ACS3-CAP WC505	10 (5.3)	5,000 ± 50	197 ± 2
	ACS3-CAP WC510	10 (5.3)	10,000 ± 100	394 ± 4
	ACS3-CAP WC520	10 (5.3)	20,000 ± 100	787 ± 4
	ACS3-CAP WC603	8 (8.4)	3,000 ± 50	118 ± 2
	ACS3-CAP WC605	8 (8.4)	5,000 ± 50	197 ± 2
	ACS3-CAP WC610	8 (8.4)	10,000 ± 100	394 ± 4
	ACS3-CAP WC620	8 (8.4)	20,000 ± 100	787 ± 4

Cable	Model Name	UVW	L	
		AWG (mm²)	mm	inch
Torsion-Resistant	ACS3-CAPFC303	14 (2.1)	3,000 ± 50	118 ± 2
	ACS3-CAPFC305	14 (2.1)	5,000 ± 50	197 ± 2
	ACS3-CAPFC310	14 (2.1)	10,000 ± 100	394 ± 4
	ACS3-CAPFC320	14 (2.1)	20,000 ± 100	787 ± 4
	ACS3-CAPFC403	12 (3.3)	3,000 ± 50	118 ± 2
	ACS3-CAPFC405	12 (3.3)	5,000 ± 50	197 ± 2
	ACS3-CAPFC410	12 (3.3)	10,000 ± 100	394 ± 4
	ACS3-CAPFC420	12 (3.3)	20,000 ± 100	787 ± 4
	ACS3-CAPFC503	10 (5.3)	3,000 ± 50	118 ± 2
	ACS3-CAPFC505	10 (5.3)	5,000 ± 50	197 ± 2
	ACS3-CAPFC510	10 (5.3)	10,000 ± 100	394 ± 4
	ACS3-CAPFC520	10 (5.3)	20,000 ± 100	787 ± 4
	ACS3-CAPFC603	8 (8.4)	3,000 ± 50	118 ± 2
	ACS3-CAPFC605	8 (8.4)	5,000 ± 50	197 ± 2
	ACS3-CAPFC610	8 (8.4)	10,000 ± 100	394 ± 4
	ACS3-CAPFC620	8 (8.4)	20,000 ± 100	787 ± 4

F180, 2/3/4.5 kW

B3 motor, w/o brake, angular connector



Cable	Model Name	UVW	L	
		AWG (mm²)	mm	inch
Standard	ACS3-CRP WC303	14 (2.1)	3,000 ± 50	118 ± 2
	ACS3-CRP WC305	14 (2.1)	5,000 ± 50	197 ± 2
	ACS3-CRP WC310	14 (2.1)	10,000 ± 100	394 ± 4
	ACS3-CRP WC320	14 (2.1)	20,000 ± 100	787 ± 4
	ACS3-CRP WC403	12 (3.3)	3,000 ± 50	118 ± 2
	ACS3-CRP WC405	12 (3.3)	5,000 ± 50	197 ± 2
	ACS3-CRP WC410	12 (3.3)	10,000 ± 100	394 ± 4
	ACS3-CRP WC420	12 (3.3)	20,000 ± 100	787 ± 4
	ACS3-CRP WC503	10 (5.3)	3,000 ± 50	118 ± 2
	ACS3-CRP WC505	10 (5.3)	5,000 ± 50	197 ± 2
	ACS3-CRP WC510	10 (5.3)	10,000 ± 100	394 ± 4
	ACS3-CRP WC520	10 (5.3)	20,000 ± 100	787 ± 4
	ACS3-CRP WC603	8 (8.4)	3,000 ± 50	118 ± 2
	ACS3-CRP WC605	8 (8.4)	5,000 ± 50	197 ± 2
	ACS3-CRP WC610	8 (8.4)	10,000 ± 100	394 ± 4
	ACS3-CRP WC620	8 (8.4)	20,000 ± 100	787 ± 4

Cable	Model Name	UVW	L	
		AWG (mm²)	mm	inch
Torsion-Resistant	ACS3-CRPFC303	14 (2.1)	3,000 ± 50	118 ± 2
	ACS3-CRPFC305	14 (2.1)	5,000 ± 50	197 ± 2
	ACS3-CRPFC310	14 (2.1)	10,000 ± 100	394 ± 4
	ACS3-CRPFC320	14 (2.1)	20,000 ± 100	787 ± 4
	ACS3-CRPFC403	12 (3.3)	3,000 ± 50	118 ± 2
	ACS3-CRPFC405	12 (3.3)	5,000 ± 50	197 ± 2
	ACS3-CRPFC410	12 (3.3)	10,000 ± 100	394 ± 4
	ACS3-CRPFC420	12 (3.3)	20,000 ± 100	787 ± 4
	ACS3-CRPFC503	10 (5.3)	3,000 ± 50	118 ± 2
	ACS3-CRPFC505	10 (5.3)	5,000 ± 50	197 ± 2
	ACS3-CRPFC510	10 (5.3)	10,000 ± 100	394 ± 4
	ACS3-CRPFC520	10 (5.3)	20,000 ± 100	787 ± 4
	ACS3-CRPFC603	8 (8.4)	3,000 ± 50	118 ± 2
	ACS3-CRPFC605	8 (8.4)	5,000 ± 50	197 ± 2
	ACS3-CRPFC610	8 (8.4)	10,000 ± 100	394 ± 4
	ACS3-CRPFC620	8 (8.4)	20,000 ± 100	787 ± 4

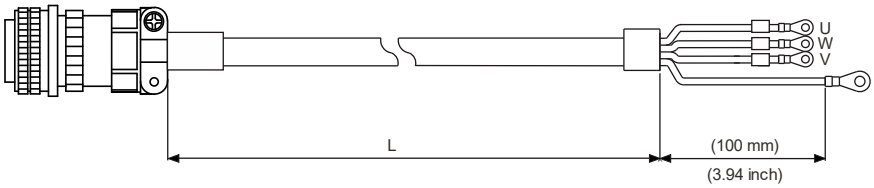
Ordering Information

Accessories

Power Cable

F180, 5.5/7.5 kW

B3 motor, w/o brake, straight connector

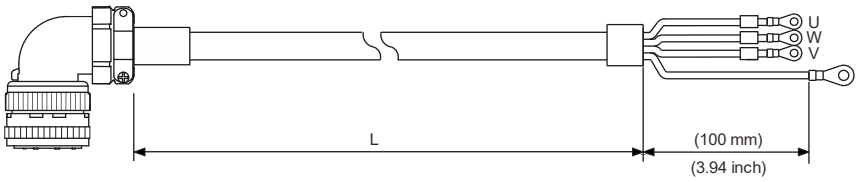


Cable	Model Name	UVW	L	
		AWG (mm²)	mm	inch
Standard	ACS3-CAP WE603	8 (8.4)	3,000 ± 50	118 ± 2
	ACS3-CAP WE605	8 (8.4)	5,000 ± 50	197 ± 2
	ACS3-CAP WE610	8 (8.4)	10,000 ± 100	394 ± 4
	ACS3-CAP WE620	8 (8.4)	20,000 ± 100	787 ± 4
	ACS3-CAP WE703	6 (13.3)	3,000 ± 50	118 ± 2
	ACS3-CAP WE705	6 (13.3)	5,000 ± 50	197 ± 2
	ACS3-CAP WE710	6 (13.3)	10,000 ± 100	394 ± 4
	ACS3-CAP WE720	6 (13.3)	20,000 ± 100	787 ± 4
	ACS3-CAP WE803	4 (21.2)	3,000 ± 50	118 ± 2
	ACS3-CAP WE805	4 (21.2)	5,000 ± 50	197 ± 2
	ACS3-CAP WE810	4 (21.2)	10,000 ± 100	394 ± 4
	ACS3-CAP WE820	4 (21.2)	20,000 ± 100	787 ± 4

Cable	Model Name	UVW	L	
		AWG (mm²)	mm	inch
Torsion-Resistant	ACS3-CAPFC303	14 (2.1)	3,000 ± 50	118 ± 2
	ACS3-CAPFC305	14 (2.1)	5,000 ± 50	197 ± 2
	ACS3-CAPFC310	14 (2.1)	10,000 ± 100	394 ± 4
	ACS3-CAPFC320	14 (2.1)	20,000 ± 100	787 ± 4
	ACS3-CAPFC403	12 (3.3)	3,000 ± 50	118 ± 2
	ACS3-CAPFC405	12 (3.3)	5,000 ± 50	197 ± 2
	ACS3-CAPFC410	12 (3.3)	10,000 ± 100	394 ± 4
	ACS3-CAPFC420	12 (3.3)	20,000 ± 100	787 ± 4
	ACS3-CAPFC503	10 (5.3)	3,000 ± 50	118 ± 2
	ACS3-CAPFC505	10 (5.3)	5,000 ± 50	197 ± 2
	ACS3-CAPFC510	10 (5.3)	10,000 ± 100	394 ± 4
	ACS3-CAPFC520	10 (5.3)	20,000 ± 100	787 ± 4

F180, 5.5/7.5 kW

B3 motor, w/o brake, angular connector



Cable	Model Name	UVW	L	
		AWG (mm²)	mm	inch
Standard	ACS3-CRP WE603	8 (8.4)	3,000 ± 50	118 ± 2
	ACS3-CRP WE605	8 (8.4)	5,000 ± 50	197 ± 2
	ACS3-CRP WE610	8 (8.4)	10,000 ± 100	394 ± 4
	ACS3-CRP WE620	8 (8.4)	20,000 ± 100	787 ± 4
	ACS3-CRP WE703	6 (13.3)	3,000 ± 50	118 ± 2
	ACS3-CRP WE705	6 (13.3)	5,000 ± 50	197 ± 2
	ACS3-CRP WE710	6 (13.3)	10,000 ± 100	394 ± 4
	ACS3-CRP WE720	6 (13.3)	20,000 ± 100	787 ± 4
	ACS3-CRP WE803	4 (21.2)	3,000 ± 50	118 ± 2
	ACS3-CRP WE805	4 (21.2)	5,000 ± 50	197 ± 2
	ACS3-CRP WE810	4 (21.2)	10,000 ± 100	394 ± 4
	ACS3-CRP WE820	4 (21.2)	20,000 ± 100	787 ± 4

Cable	Model Name	UVW	L	
		AWG (mm²)	mm	inch
Torsion-Resistant	ACS3-CRPFE603	8 (8.4)	3,000 ± 50	118 ± 2
	ACS3-CRPFE605	8 (8.4)	5,000 ± 50	197 ± 2
	ACS3-CRPFE610	8 (8.4)	10,000 ± 100	394 ± 4
	ACS3-CRPFE620	8 (8.4)	20,000 ± 100	787 ± 4
	ACS3-CRPFE703	6 (13.3)	3,000 ± 50	118 ± 2
	ACS3-CRPFE705	6 (13.3)	5,000 ± 50	197 ± 2
	ACS3-CRPFE710	6 (13.3)	10,000 ± 100	394 ± 4
	ACS3-CRPFE720	6 (13.3)	20,000 ± 100	787 ± 4
	ACS3-CRPFE803	4 (21.2)	3,000 ± 50	118 ± 2
	ACS3-CRPFE805	4 (21.2)	5,000 ± 50	197 ± 2
	ACS3-CRPFE810	4 (21.2)	10,000 ± 100	394 ± 4
	ACS3-CRPFE820	4 (21.2)	20,000 ± 100	787 ± 4

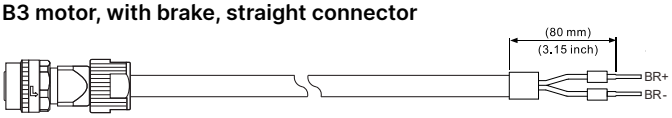
Ordering Information

Accessories

Power Cable

F100 - F220 Brake Cable

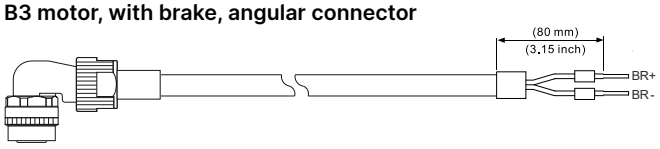
B3 motor, with brake, straight connector



Cable	Model Name	UVW AWG (mm²)	L mm	L inch
Standard	ACS3-CABRA103	20 (0.5)	3,000 ± 50	118 ± 2
	ACS3-CABRA105	20 (0.5)	5,000 ± 50	197 ± 2
	ACS3-CABRA110	20 (0.5)	10,000 ± 100	394 ± 4
	ACS3-CABRA120	20 (0.5)	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CABFA103	20 (0.5)	3,000 ± 50	118 ± 2
	ACS3-CABFA105	20 (0.5)	5,000 ± 50	197 ± 2
	ACS3-CABFA110	20 (0.5)	10,000 ± 100	394 ± 4
	ACS3-CABFA120	20 (0.5)	20,000 ± 100	787 ± 4

F100 - F220 Brake Cable

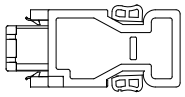
B3 motor, with brake, angular connector



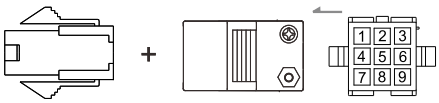
Cable	Model Name	UVW AWG (mm²)	L mm	L inch
Standard	ACS3-CRBRA103	20 (0.5)	3,000 ± 50	118 ± 2
	ACS3-CRBRA105	20 (0.5)	5,000 ± 50	197 ± 2
	ACS3-CRBRA110	20 (0.5)	10,000 ± 100	394 ± 4
	ACS3-CRBRA120	20 (0.5)	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CRBFA103	20 (0.5)	3,000 ± 50	118 ± 2
	ACS3-CRBFA105	20 (0.5)	5,000 ± 50	197 ± 2
	ACS3-CRBFA110	20 (0.5)	10,000 ± 100	394 ± 4
	ACS3-CRBFA120	20 (0.5)	20,000 ± 100	787 ± 4

Encoder Connectors

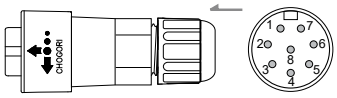
ACS3-CNENC200
(connecting to drive)



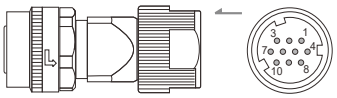
ACS3-CAEN0000
(for F80 and below)



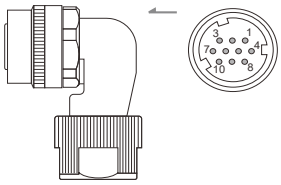
ACS3-CNEN2A00
(for F80 and below)
IP67 waterproof connector



ACS3-CAENA000
(for F100 - F180)
Mil-Spec: CMV1-SP10S



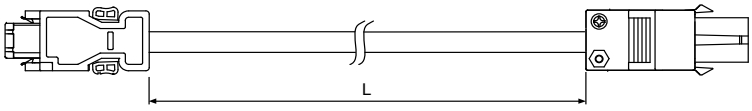
ACS3-CRENA000
(for F100 - F180)
Mil-Spec: CMV1-AP10S



Encoder Cable (Incremental Type)

F40 ~ F80

B3 motor, w/o brake, straight connector



Cable	Model Name	L mm	L inch
Standard	ACS3-CAEN0103	3,000 ± 50	118 ± 2
	ACS3-CAEN0105	5,000 ± 50	197 ± 2
	ACS3-CAEN0110	10,000 ± 100	394 ± 4
	ACS3-CAEN0120	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CAEF0103	3,000 ± 50	118 ± 2
	ACS3-CAEF0105	5,000 ± 50	197 ± 2
	ACS3-CAEF0110	10,000 ± 100	394 ± 4
	ACS3-CAEF0120	20,000 ± 100	787 ± 4

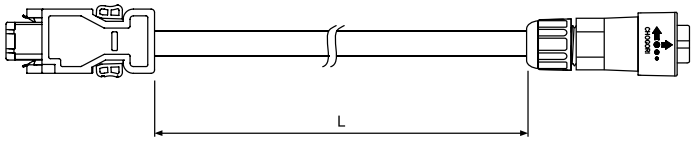
Ordering Information

Accessories

Encoder Cable (Incremental Type)

F40~F80

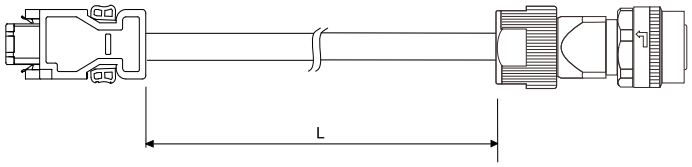
A3/B3 motor, IP67 waterproof connector



Cable	Model Name	L	
		mm	inch
Standard	ACS3-CAEN1103	3,000 ± 50	118 ± 2
	ACS3-CAEN1105	5,000 ± 50	197 ± 2
	ACS3-CAEN1110	10,000 ± 100	394 ± 4
	ACS3-CAEN1120	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CAEF1103	3,000 ± 50	118 ± 2
	ACS3-CAEF1105	5,000 ± 50	197 ± 2
	ACS3-CAEF1110	10,000 ± 100	394 ± 4
	ACS3-CAEF1120	20,000 ± 100	787 ± 4

F100~F180

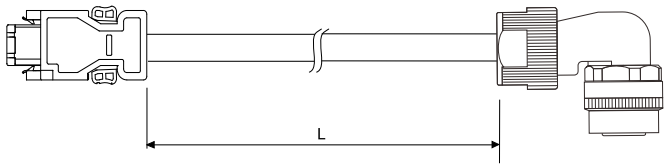
B3 motor, straight connector



Cable	Model Name	L	
		mm	inch
Standard	ACS3-CAENA103	3,000 ± 50	118 ± 2
	ACS3-CAENA105	5,000 ± 50	197 ± 2
	ACS3-CAENA110	10,000 ± 100	394 ± 4
	ACS3-CAENA120	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CAEFA103	3,000 ± 50	118 ± 2
	ACS3-CAEFA105	5,000 ± 50	197 ± 2
	ACS3-CAEFA110	10,000 ± 100	394 ± 4
	ACS3-CAEFA120	20,000 ± 100	787 ± 4

F100~F180

A3/B3 motor, angular connector

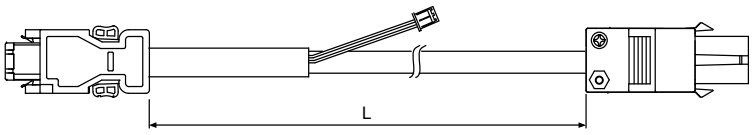


Cable	Model Name	L	
		mm	inch
Standard	ACS3-CREN0103	3,000 ± 50	118 ± 2
	ACS3-CREN0105	5,000 ± 50	197 ± 2
	ACS3-CREN0110	10,000 ± 100	394 ± 4
	ACS3-CREN0120	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CREF0103	3,000 ± 50	118 ± 2
	ACS3-CREF0105	5,000 ± 50	197 ± 2
	ACS3-CREF0110	10,000 ± 100	394 ± 4
	ACS3-CREF0120	20,000 ± 100	787 ± 4

Encoder Cable (Absolute Type)

F40~F80

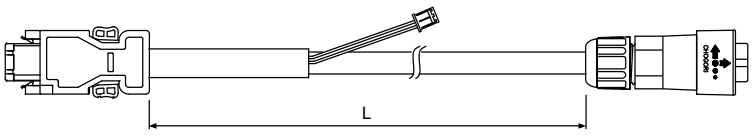
A3/B3 motor



Cable	Model Name	L	
		mm	inch
Standard	ACS3-CAEA0103	3,000 ± 50	118 ± 2
	ACS3-CAEA0105	5,000 ± 50	197 ± 2
	ACS3-CAEA0110	10,000 ± 100	394 ± 4
	ACS3-CAEA0120	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CAEB0103	3,000 ± 50	118 ± 2
	ACS3-CAEB0105	5,000 ± 50	197 ± 2
	ACS3-CAEB0110	10,000 ± 100	394 ± 4
	ACS3-CAEB0120	20,000 ± 100	787 ± 4

F40~F80

A3/B3 motor, IP67 waterproof connector



Cable	Model Name	L	
		mm	inch
Standard	ACS3-CAEA1103	3,000 ± 50	118 ± 2
	ACS3-CAEA1105	5,000 ± 50	197 ± 2
	ACS3-CAEA1110	10,000 ± 100	394 ± 4
	ACS3-CAEA1120	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CAEB1103	3,000 ± 50	118 ± 2
	ACS3-CAEB1105	5,000 ± 50	197 ± 2
	ACS3-CAEB1110	10,000 ± 100	394 ± 4
	ACS3-CAEB1120	20,000 ± 100	787 ± 4

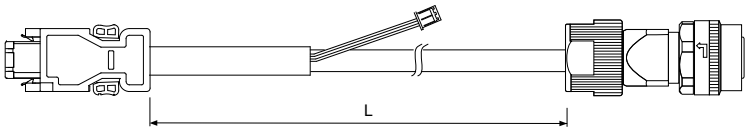
Ordering Information

Accessories

Encoder Cable (Absolute Type)

F100 - F180

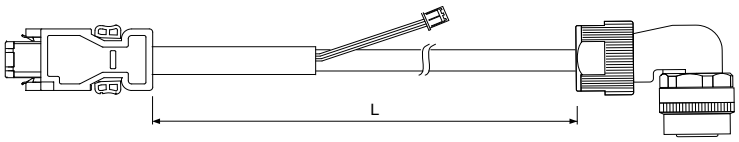
A3 / B3 motor, straight connector



Cable	Model Name	L	
		mm	inch
Standard	ACS3-CAEAA103	3,000 ± 50	118 ± 2
	ACS3-CAEAA105	5,000 ± 50	197 ± 2
	ACS3-CAEAA110	10,000 ± 100	394 ± 4
	ACS3-CAEAA120	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CAEBA103	3,000 ± 50	118 ± 2
	ACS3-CAEBA105	5,000 ± 50	197 ± 2
	ACS3-CAEBA110	10,000 ± 100	394 ± 4
	ACS3-CAEBA120	20,000 ± 100	787 ± 4

F100 - F180

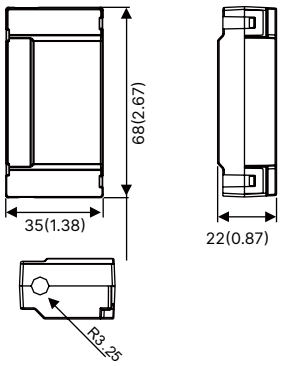
A3 / B3 motor, angular connector



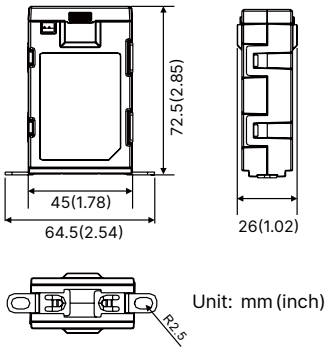
Cable	Model Name	L	
		mm	inch
Standard	ACS3-CREAA103	3,000 ± 50	118 ± 2
	ACS3-CREAA105	5,000 ± 50	197 ± 2
	ACS3-CREAA110	10,000 ± 100	394 ± 4
	ACS3-CREAA120	20,000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CREBA103	3,000 ± 50	118 ± 2
	ACS3-CREBA105	5,000 ± 50	197 ± 2
	ACS3-CREBA110	10,000 ± 100	394 ± 4
	ACS3-CREBA120	20,000 ± 100	787 ± 4

Absolute Battery Box

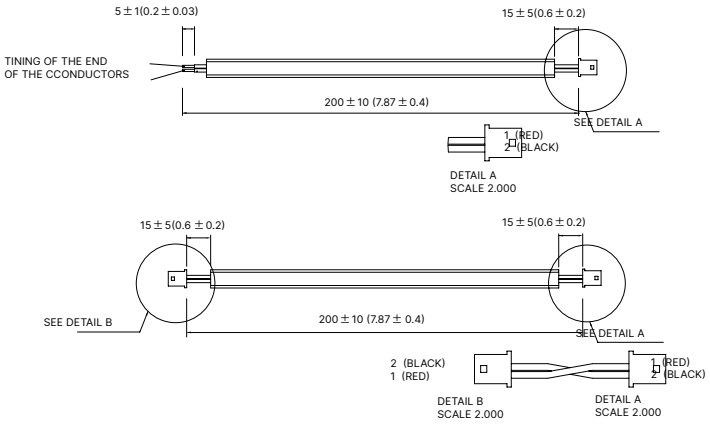
Single Battery Box
ASD-MDBT0100



Double Battery Box
ASD-MDBT0200



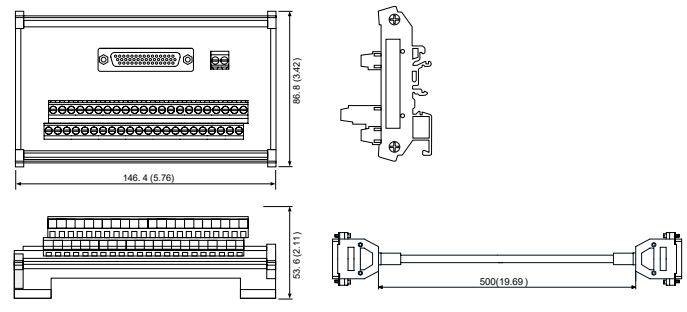
Unit: mm (inch)



Note: Contact Delta Global Service team if ordering battery box cord only

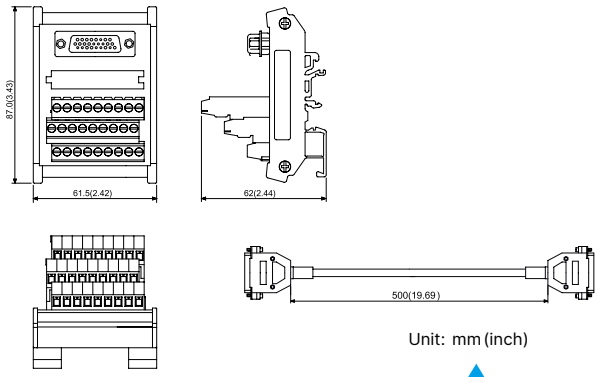
CN1 Terminal Block Module

ACS3-MDTB4400 (for B3-L)



Unit: mm (inch)

ACS3-MDTD2600 (for B3-M, F, and E)



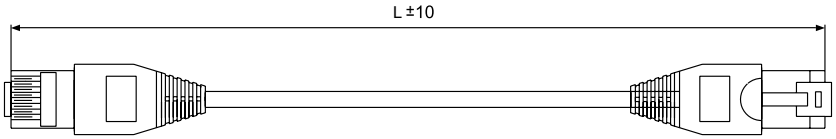
Unit: mm (inch)

Ordering Information

Accessories

CCN3 CANopen Communication Cable

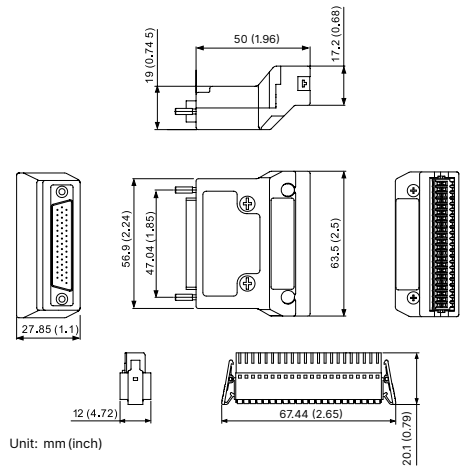
UC-CMC030-01A 、 UC-CMC050-01A



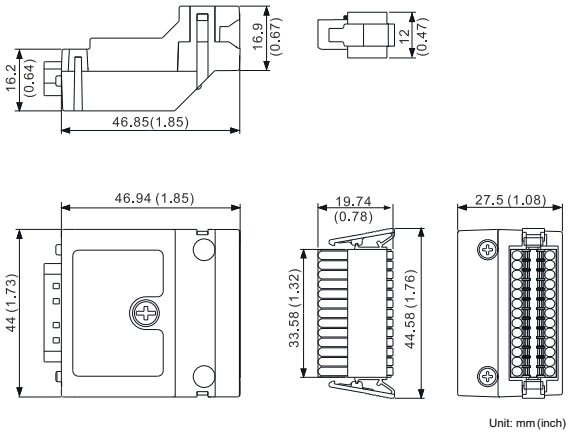
Item	Part No.	L	
		mm	inch
1	UC-CMC030-01A	3,000 ± 10	11 ± 0.4
2	UC-CMC050-01A	5,000 ± 10	19 ± 0.4

CN1 Connectors

ACS3-IFSC4444 (for B3-L)

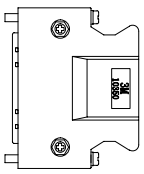


ACS3-IFSC2626 (for B3-M, F, and E)

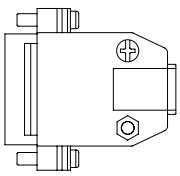


CN1 Connectors

ACS3-CNTB0400 (for B3-L)

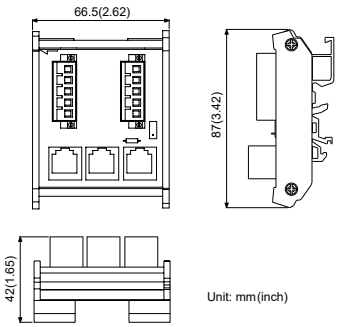


ACS3-CNTB0500 (for B3-M, F, and E)



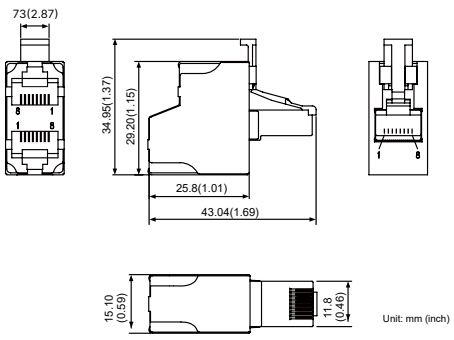
CN3 CANopen Distribution Box

TAP-CN03



CN3 RS-485 Tap

ACS3-CNADC3RC

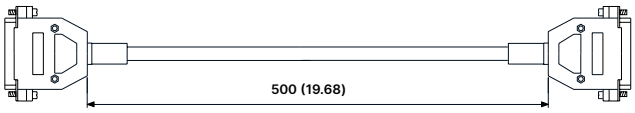


Ordering Information

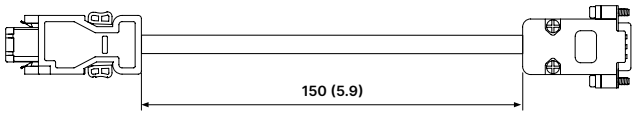
Accessories

B3 / B2 Conversion Cables

B3/B2 CN1 con Version cable (for B3-L)
ACS3-CABDC1



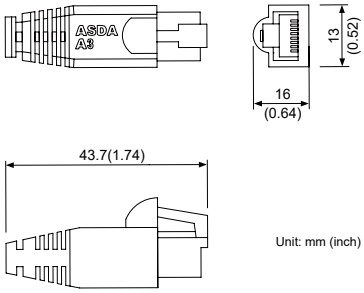
B3/B2 CN2 conversion cable
ACS3-CABDC2



Unit: mm (inch)

CN3 RS-485 / CANOpen Terminal Resistor

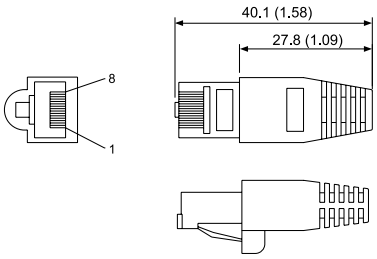
ACS3-CNADC3TR



Unit: mm (inch)

CN6 DMCNET Terminal Resistor

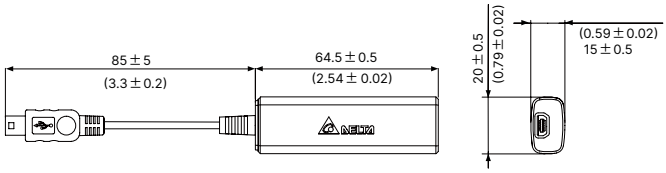
ASD-TR-DM0008

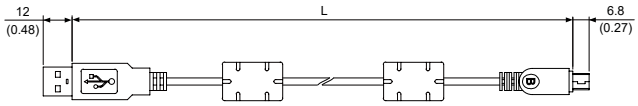


Unit: mm (inch)

CN4 Mini USB Communication Module

UC-PRG015-01B、UC-PRG030-01B



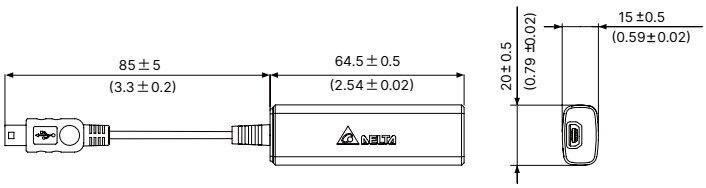


Unit: mm (inch)

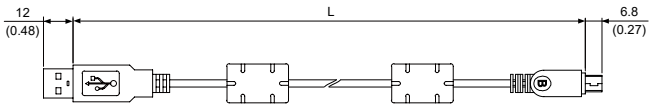
Item	Part No.	L	
		mm	inch
1	UC-PRG015-01B	1,500±10	59±4
2	UC-PRG030-01B	3,000±10	118±4

CN4 Mini USB Communication Module

UC-ADP01-A



UC-PRG015-01A、UC-PRG030-01A



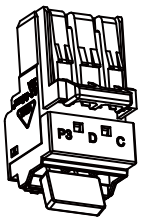
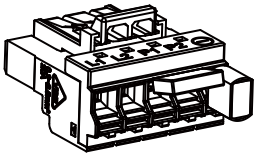
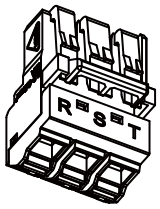
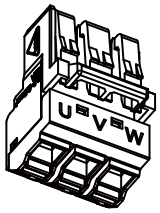
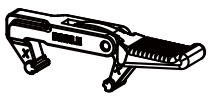
Unit: mm (inch)

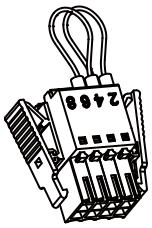
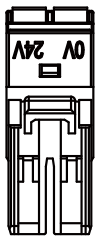
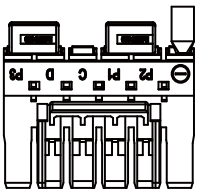
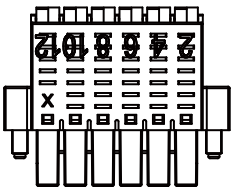
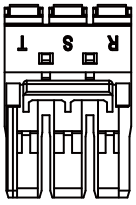
Item	Part No.	L	
		mm	inch
1	UC-PRG015-01A	1,500±10	59±4
2	UC-PRG030-01A	3,000±10	118±4

Ordering Information

A3 Motor Accessory

Service Bag P/N	Contents
3535043600	A + B + C + D + E
3535043300	A + B + C + D + E + F
3534998200	G + H + J + D + E + F
3535003400	G + H + I + J + D + E + F
3534993900	I + F
3534999700	F

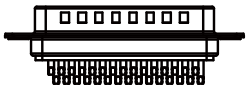
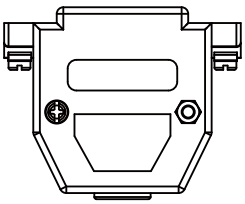
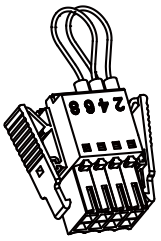
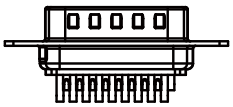
Item	P/N	Picture
A	3050608746	
B	3050606746	
C	3050605546	
D	3050605646	
E	3479065500	

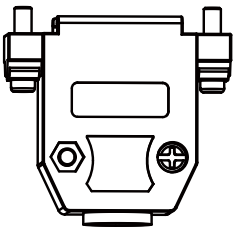
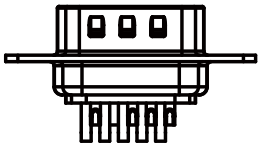
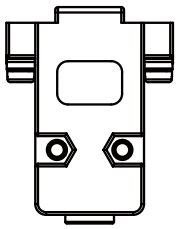
Item	P/N	Picture
F	3050027000	
G	3050606846	
H	3050609246	
I	3050611946	
J	3050609346	

Ordering Information

B3 Motor Accessory

Service Bag P/N	Contents
3534667300	A + B
3534851300	A + B + C
3534850500	D + E
3534781100	C + D + E
3525801800	F + G

Item	P/N	Picture
A	3074046787	
B	3050038500	
C	3050027000	
D	307404258Z	

Item	P/N	Picture
E	3050038600	
F	3074047782	
G	3050038400	

Servo Drive Standards

Standard	ASD-B3 servo drive conforms to the highest standards and recommendations for electrical industrial control equipment (IEC, EN)
EMC Immunity	EN61000-4-6 Level 3
	EN61000-4-3 Level 3
	EN61000-4-2 Level 2 and 3
	EN61000-4-4 Level 3
	EN61000-4-8 Level 4
	EN61000-4-5 Level 3
Conducted and Radiated EMC Interference of Servo Drive	EN61800-3 Level 3, with external EMC filter
CE Marking	B3 series servo drives have the CE marking and conform to the European Union Low Voltage Directive (2014/35/EU) and EMC Directive (2014/30/EU)
Product Certification	UL (USA); cUL (CA) Note: B3 400V (with no UL)
STO	EN 61800-5-2:2007
	EN 61800-5-2:2017
	EN 61800-5-1:2007 + A1:2017, 4.3, 5.2.3.8, 5.2.6
	EN IEC 61800-3:2018
	EN 62061:2005 + AC:2010 + A1:2013 + A2:2015
	EN ISO 13849-1:2015
	EN 61508 Parts 1-7:2010
Protection Level	IEC / EN50178, IP20
Vibration Resistance Protection	20 Hz and below (1G), 20 ~ 50 Hz (0.6 G) conforms to IEC / EN50178
Shock Resistance Protection	15 gn 11 ms conforms to IEC / EN600028-2-27

Servo Drive Standards

Pollution Degree	Degree 2 conforms to IEC/EN61800-5-1
CE	EN 60034-1
Certification	UL, CE, cRUus
Protection Level	IP67
Vibration Resistance Protection	30 Hz ≦ f ≦ 2,000 Hz Fix Acceleration: 5 G
Energy Efficiency Certification	CHINA ENERGY (Power > 550 W)

Smarter. Greener. Together.

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DELTA_IA-ASDA_ASDA-B3_C_EN_20240703

DELTA_IA-ASDA_ASDA-B3_C_EN_20240502

ASDA-B3

- Alimentación:
  1 ph 230 Vac de 0,1 – 1,5 kW
- Comunicación RS-485/232, CANOpen o EtherCAT
- Encoder incremental o absoluto de alta resolución con 24 bits (16,777,216 p/rev)
- Ancho de banda de alta respuesta (3,1 kHz)
- Par de arranque bajo
- Aumenta la velocidad y el par
- Función de parada segura (STO)
- Modo interno de posicionamiento flexible (Modo PR)
- Función de captura de alta velocidad
- Control PID de retroalimentación analógica
- Supresión automática de resonancia
- Ahorro de energía y tamaño de reducido

ASDA B2

- Alimentación: 1 ph 230 Vac de 0,1 – 1,5 Kw.
- Comunicación RS-485/232.
- Encoder incremental de alta resolución con 17 bits (160,000 p/rev)
- Admite entrada de pulsos (hasta 4Mbps)
- 3 modos de control: posición, velocidad y par.
- Fácil instalación para su puesta en marcha.

ASDA A2

- Alimentación:
  1 ph 230 Vac de 0,1 – 1,5 kW
  3 ph 400 Vac de 0,4 – 15 kW
- Comunicación RS-485/232, CANOpen o EtherCAT

- Encoder incremental o absoluto de alta resolución con 20 bits (1,280,000 p/rev)
- Ancho de banda de alta respuesta (1 kHz)
- Control de alta precisión
- Control de Supresión de vibración
- Modo interno de posicionamiento flexible (Modo PR)
- Control de leva electrónica incorporada (E-CAM)
- Control por lazo cerrado completo (capaz de leer señales de segunda retroalimentación)