



DELTA ELECTRONICS, INC.  
www.delta.com.tw/industrialautomation

### **IABU Headquarters**

#### **Delta Electronics, Inc.**

##### **Taoyuan1**

31-1, Xingbang Road, Guishan Industrial Zone,  
Taoyuan County 33370, Taiwan, R.O.C.  
TEL: 886-3-362-6301 / FAX: 886-3-362-7267

### **Asia**

#### **Delta Electronics (Jiang Su) Ltd.**

##### **Wujiang Plant3**

1688 Jiangxing East Road,  
Wujiang Economy Development Zone,  
Wujiang City, Jiang Su Province,  
People's Republic of China (Post code: 215200)  
TEL: 86-512-6340-3008 / FAX: 86-512-6340-7290

#### **Delta Greentech (China) Co., Ltd.**

238 Min-Xia Road, Cao-Lu Industry Zone, Pudong, Shanghai,  
People's Republic of China  
Post code : 201209  
TEL: 021-58635678 / FAX: 021-58630003

#### **Delta Electronics (Japan), Inc.**

##### **Tokyo Office**

Delta Shibadaimon Building, 2-1-14  
Shibadaimon, Minato-Ku, Tokyo, 105-0012,  
Japan  
TEL: 81-3-5733-1111 / FAX: 81-3-5733-1211

#### **Delta Electronics (Korea), Inc.**

234-9, Duck Soo Building 7F, Nonhyun-Dong,  
Kangnam-Gu, Seoul, Korea 135-010  
TEL: 82-2-515-5305 / FAX: 82-2-515-5302

#### **Delta Electronics (Singapore) Pte. Ltd.**

8 Kaki Bukit Road 2, #04-18 Ruby Warehouse Complex,  
Singapore 417841  
TEL: 65-6747-5155 / FAX: 65-6744-9228

#### **Delta Power Solutions (India) Pte. Ltd.**

Plot No. 28, Sector-34, EHTP  
Gurgaon-122001 Haryana, India  
TEL: 91-124-416-9040 / FAX: 91-124-403-6045

### **America**

#### **Delta Products Corporation (USA)**

##### **Raleigh Office**

P.O. Box 12173, 5101 Davis Drive,  
Research Triangle Park, NC 27709, U.S.A.  
TEL: 1-919-767-3813 / FAX: 1-919-767-3969

#### **Delta Products Corporation (Brazil)**

##### **Sao Paulo Office**

Rua Jardim Ivone, 17 Cjs 13/14-Paraiso  
04105-020-Sao Paulo-SP-Brazil  
TEL: 55-11-3568-3875 / FAX: 55-11-3568-3865

### **Europe**

#### **Deltronics (The Netherlands) B.V.**

##### **Eindhoven Office**

De Witbogt 15, 5652 AG Eindhoven, The Netherlands  
TEL: 31-40-2592850 / FAX: 31-40-2592851

\*We reserve the right to change the information in this catalogue without prior notice

ASDA-B\_C\_EN\_20090604



DELTA ELECTRONICS, INC.

# ASDA-B

## DELTA ASDA-B AC Servo System



www.delta.com.tw/industrialautomation



# ASDA-B

# AC Servo System

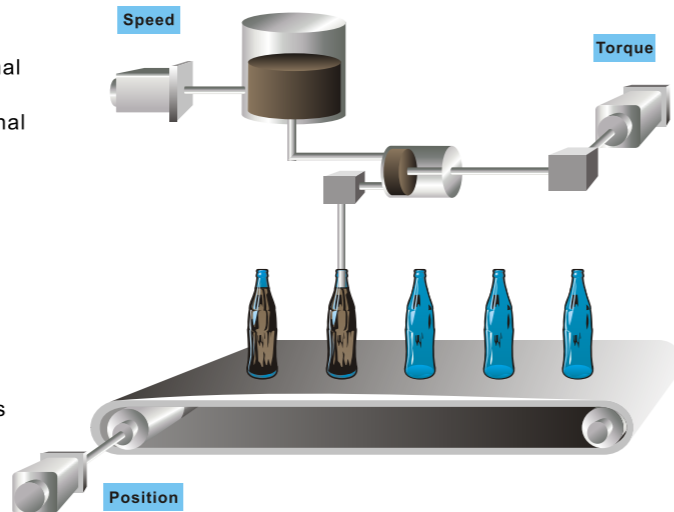
# ASDA-B

## Features

### Operation (All-in-One)

#### Position/Speed/Torque Modes

- ◆ Position : External pulse command
- ◆ Speed : External analog command, 3 groups of internal speed parameters
- ◆ Torque : External analog command, 3 groups of internal torque parameters



#### Three kinds of Dual Modes

- ◆ Position / Speed
- ◆ Speed / Torque
- ◆ Position / Torque

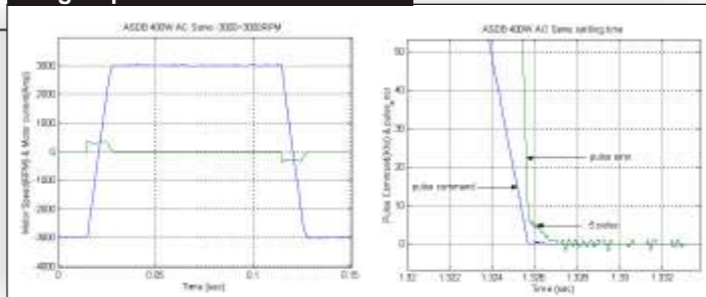
#### Speed / Torque Limit Operation

- ◆ Speed Limit : In Torque mode, speed limit operation is achieved via external analog command or internal parameters
- ◆ Torque Limit : In Position/Speed mode, torque limit operation is achieved via external analog command or internal parameters

### Excellent Performance

- ◆ Motor settling time below 2ms
- ◆ Speed Responsiveness  
Characteristic: 250Hz
- ◆ 14ms accel. time from running without load -3000 rpm to 3000 rpm

#### High speed DSP ! Excellent !

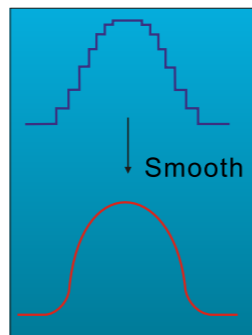


### Smoothing Strategy

#### S-curve Profile for Speed Mode

In Speed mode, smoothing curves are provided for stability improvement with higher accuracy.

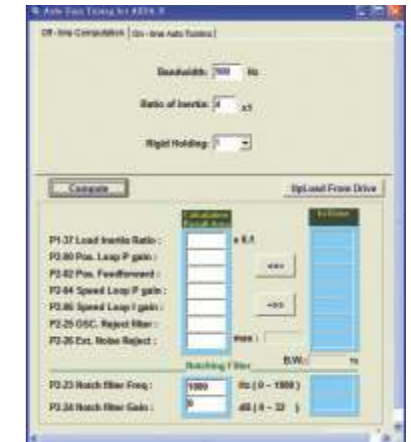
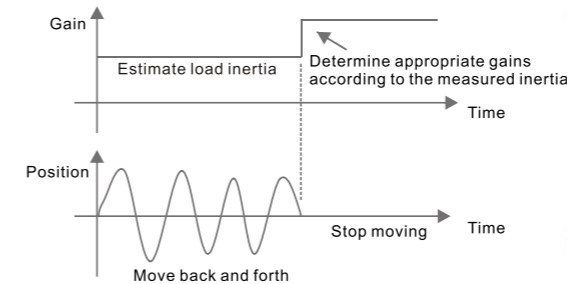
- ◆ Using smoothing curves can run the motor more smoothly in response to a sudden operation command. Efficiently improve the machinery performance and extend the life of machinery system.
- ◆ When operation commands are suddenly changed, the user can use smoothing curves to achieve continuous and stable performance no matter the motor is accelerating or decelerating.



### Tuning Technology

#### Auto-tuning

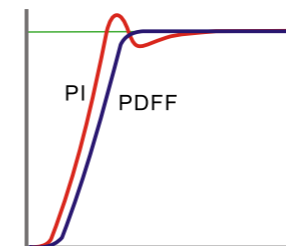
- ◆ The servo drive will move back and forth to estimate the load inertia. When the servo drive stop moving back and forth, it can determine the appropriate gains according to the measured inertia. Also, the user can define the responsiveness gains manually.



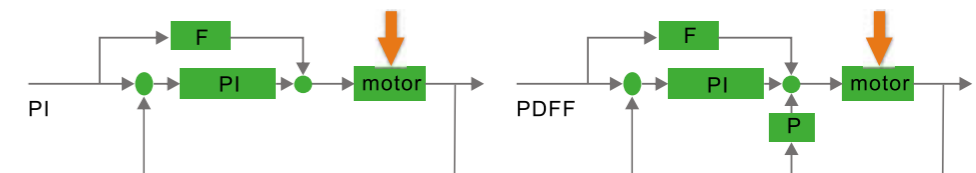
### PI / PDFF Control Structure

#### PI / PDFF Structure

PI - Proportional - Integral Control  
PDFF - Pseudo - Derivative Feedback and Feedforward  
◆ In speed control loop, not only current PI auto-tuning mode but also PDFF auto-tuning mode is available.



	PI	PDFF
System Parameters	2	3
Characteristics	Less parameters but easy to adjust	More parameters and more flexible
	Overshoot easily occur	Can reduce overshoot through appropriate settings of parameters



### User-friendly Interface

#### Handheld Digital Keypad

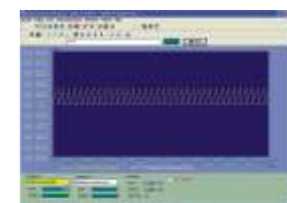
- ◆ Provide powerful auxiliary functions, very convenient to use and helpful for operation, e.g. JOG, ARST, etc.
- ◆ Internal memory blocks, able to upload and download parameters rapidly between servo drive and PC via ASDA\_B\_SW.  
-- ASD-PU-01A capable of saving 25 groups of parameters  
-- ASD-PU-01B capable of saving 4 groups of parameters
- ◆ Built-in auto-tuning function offers quick and fast gain adjustment during operation.



ASD-PU-01B ASD-PU-01A

#### ASDA\_B\_SW Window based Software

- ◆ Multilingual display interface provides fast communication and useful editing environment.
- ◆ Built-in 2 channels real-time digital oscilloscope function (single-point sampling time is 0.5ms). Capable of viewing and displaying various signals.
- ◆ Status monitor / DI, DO signals can be controlled via serial communication.

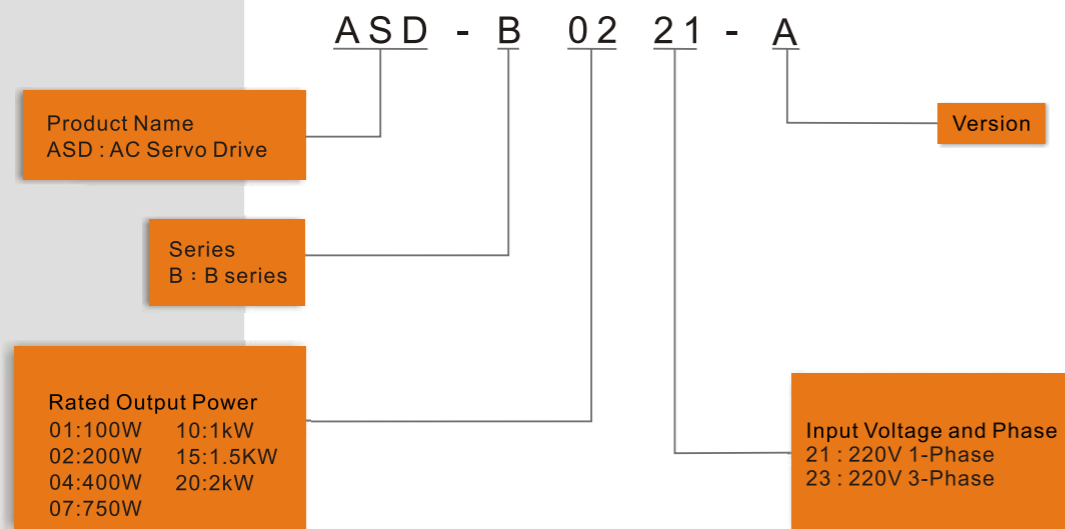


# AC Servo System

## Model Explanation



### Servo Drive ASDA-B series

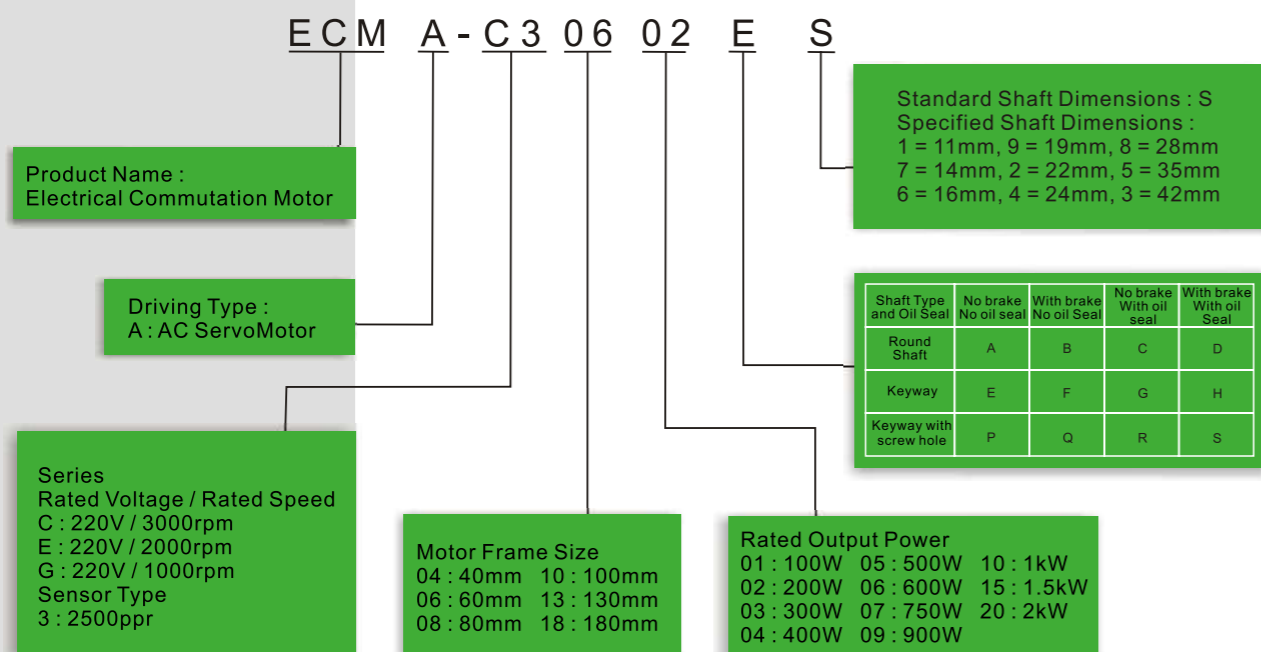


### Servo Drive and Servo Motor Combinations

Servo Drive		Servo Motor
Power	Model Name	
100W	ASD-B0121-A	ECMA-C30401 □ S(100W)
200W	ASD-B0221-A	ECMA-C30602 □ S(200W)
400W	ASD-B0421-A	ECMA-C30604 □ S(400W) ECMA-C30804 □ 7(400W) ECMA-E31305 □ S(500W) ECMA-G31303 □ S(300W)
750W	ASD-B0721-A	ECMA-C30807 □ S(750W) ECMA-G31306 □ S(600W)
1000W	ASD-B1021-A	ECMA-C31010 □ S(1000W) ECMA-E31310 □ S(1000W) ECMA-G31309 □ S(900W)
1500W	ASD-B1521-A	ECMA-E31315 □ S(1500W)
2000W	ASD-B2023-A	ECMA-C31020 □ S(2000W) ECMA-E31320 □ S(2000W) ECMA-E31820 □ S(2000W)

Note : The boxes (□) at the ends of the model names are for shaft type or options ( keyway, brake and oil seal ).

### Servo Motor ECMA series



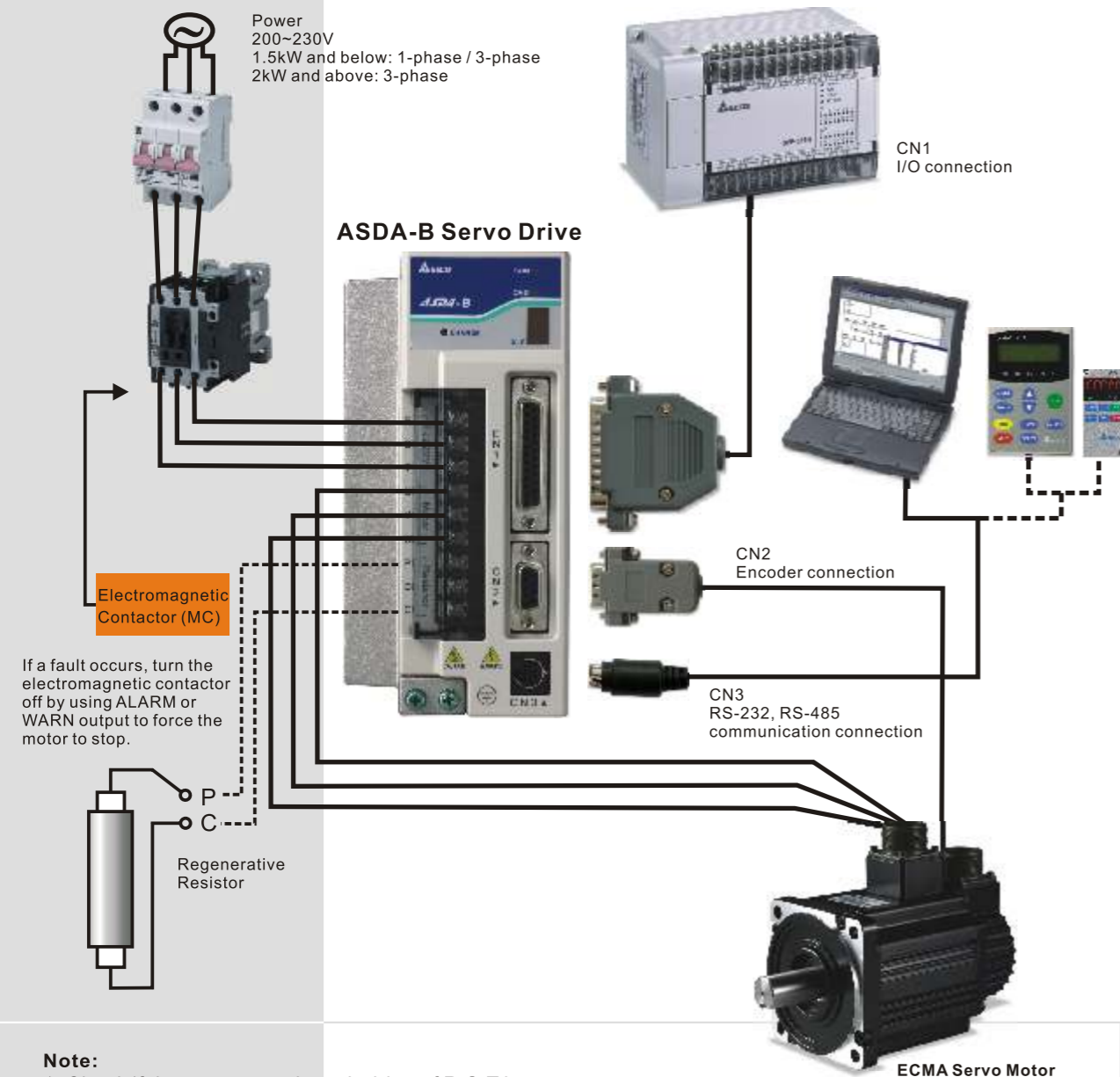


# AC Servo System

## Configuration



### System Configuration



**Note:**

1. Check if the power supply and wiring of R,S,T is correct.
2. Check if the wiring of U,V,W is correct.
3. When using an external regenerative resistor, ensure P and C is closed, and P and D is open.  
When using an internal regenerative resistor, connect regenerative resistor to P and D, and ensure an open circuit between P and C.
4. If an alarm displays or an emergency stop occurs, turn the electromagnetic contactor off by using ALARM or WARN output to force the motor to stop.
5. Delta provides two kinds of handheld digital keypad, ASD-PU-01A and ASD-PU-01B to meet the user's requirements.

### Servo Drive Specifications (ASDA-B Series)

Mode : ASDA-B Series		01	02	04	07	10	15	20			
Power supply	Voltage / Frequency	Three-phase or Single-phase 220VAC						Three-phase 220VAC			
	Permissible Voltage Range	Three-phase or Single-phase 200~230VAC, -15%~10%						Three-phase 200~230VAC, -15%~10%			
	Permissible Frequency Range	50 / 60 Hz ± 5%									
Cooling System		Natural Air Circulation				Fan Cooling					
Encoder Resolution / Feedback Resolution		2500ppr / 10000ppr									
Control of Main Circuit		SVPWM (Space Vector Pulse Width Modulation) Control									
Tuning Modes		Auto / Manual									
Regenerative Resistor		None				Built-in					
Position Control Mode	Max. Input Pulse Frequency	Max. 500KPPS (Line driver) / Max. 200KPPS (Open collector)									
	Pulse Type	Pulse + Direction, A phase + B phase, CCW pulse + CW pulse									
	Command Source	External pulse train									
	Smoothing Strategy	Low-pass smoothing filter									
	Electronic Gear	Electronic gear N/M multiple, N: 1~32767, M: 1:32767(1/50<N/M<200)									
	Torque Limit Operation	Set by parameters									
	Feed Forward Compensation	Set by parameters									
	Speed Control Mode	Analog Input Command	Voltage Range	0~±10 VDC							
			Input Resistance	10K Ω							
			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 Operation	Set by parameters										
Frequency Response Characteristic	Maximum 250Hz										
Torque Control Mode	Analog Input Command	Voltage Range	0~±10 VDC								
		Input Resistance	10K Ω								
		Time Constant	2.2 μs								
Permissible Time for Overload	8 sec. Under 200% rated output										
Command Source	External analog signal / Internal parameters										
Smoothing Strategy	Low-pass smoothing filter										
Speed Limit Operation	Set by parameters										
Digital Input/Output	Input	Servo On, Reset, Gain switching, Low speed CLAMP, Speed/Torque limit enabled, Emergency stop, Forward / Reverse inhibit limit									
		Internal parameter selection, Torque limit activation, Speed limit activation, Control mode selection (Position / Speed mode selection, Speed / Torque mode selection, Position / Torque mode selection)									
Output	Encoder signal output (A, B, Z phase Line Driver / Z phase Open Collector)										
	Servo ready, Servo On, Zero speed, Speed reached, Positioning completed, Reached torques limits, Servo alarm output (Servo fault), Electromagnetic brake, Output Overload Warning, Servo Warning Output										
Protective Functions		Overcurrent, Overvoltage, Undervoltage, Motor overheated, Regeneration error, Overload, Overspeed, Excessive deviation, Encoder error, Emergency stop activated, Memory error, Serial communication error									
Communication Interface		RS-232 / RS-485									
Environment	Installation Site	Indoor location (free from direct sunlight), no corrosive liquid and gas (far away from oil mist, flammable gas, dust)									
	Altitude	Altitude 1000m or lower above sea level									
	Atmospheric pressure	86kPA to 106kPA									
	Operating Temperature	0°C to 45°C (If operating temperature is above specified range, forced cooling will be required)									
	Storage Temperature	-20°C to 65°C									
	Humidity	0 to 90% (non-condensing)									
	Vibration	10Hz ≤ F ≤ 57Hz 0.075mm 57Hz < F ≤ 150Hz 1G									
	IP rating	IP20									
Power System	TN / TT System *3										
Approvals											

\* 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.  
 TT system: A power distribution system having one point directly earthed, the exposed conductive parts of the installation being connected to earth independent of the power system.



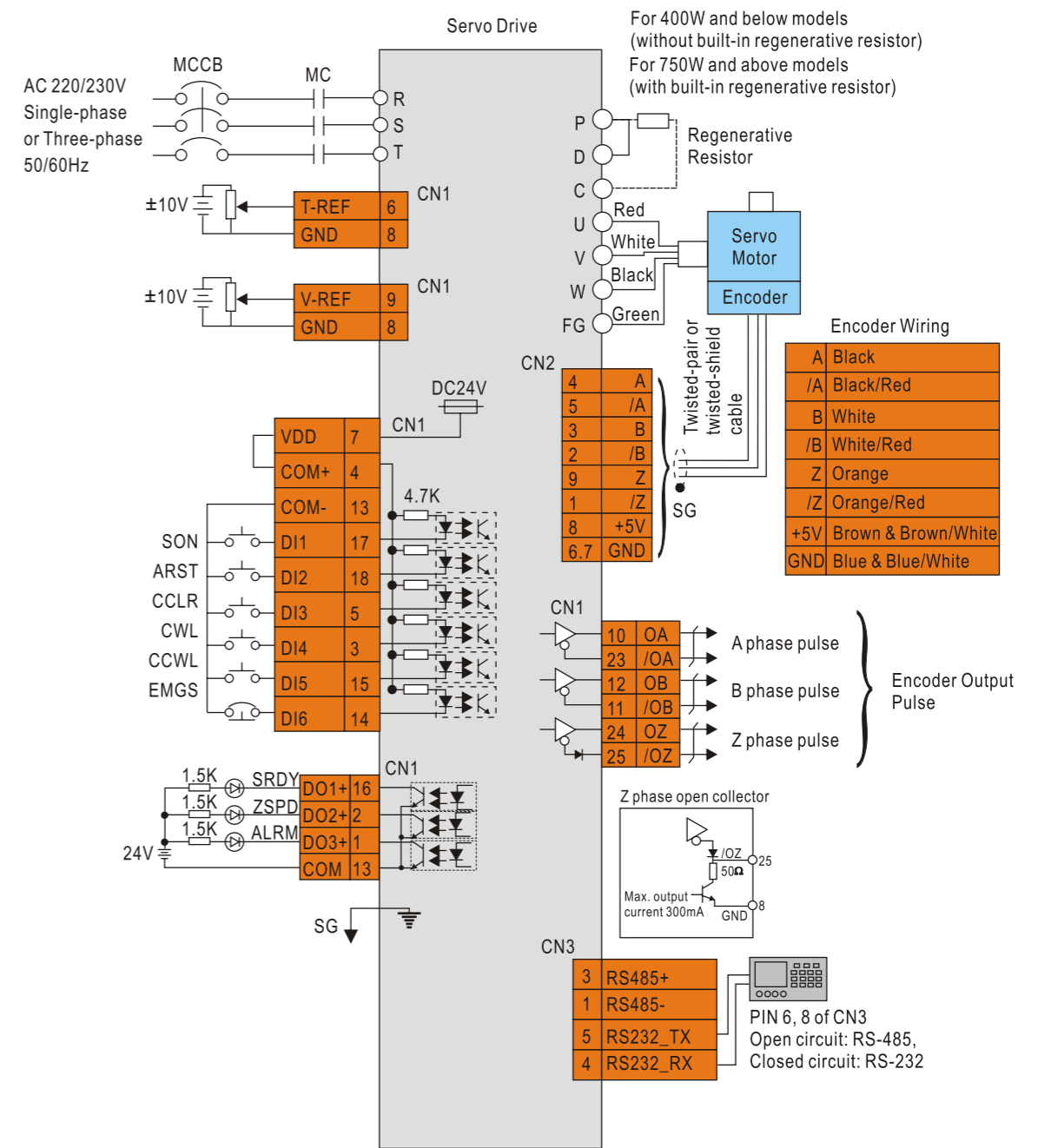
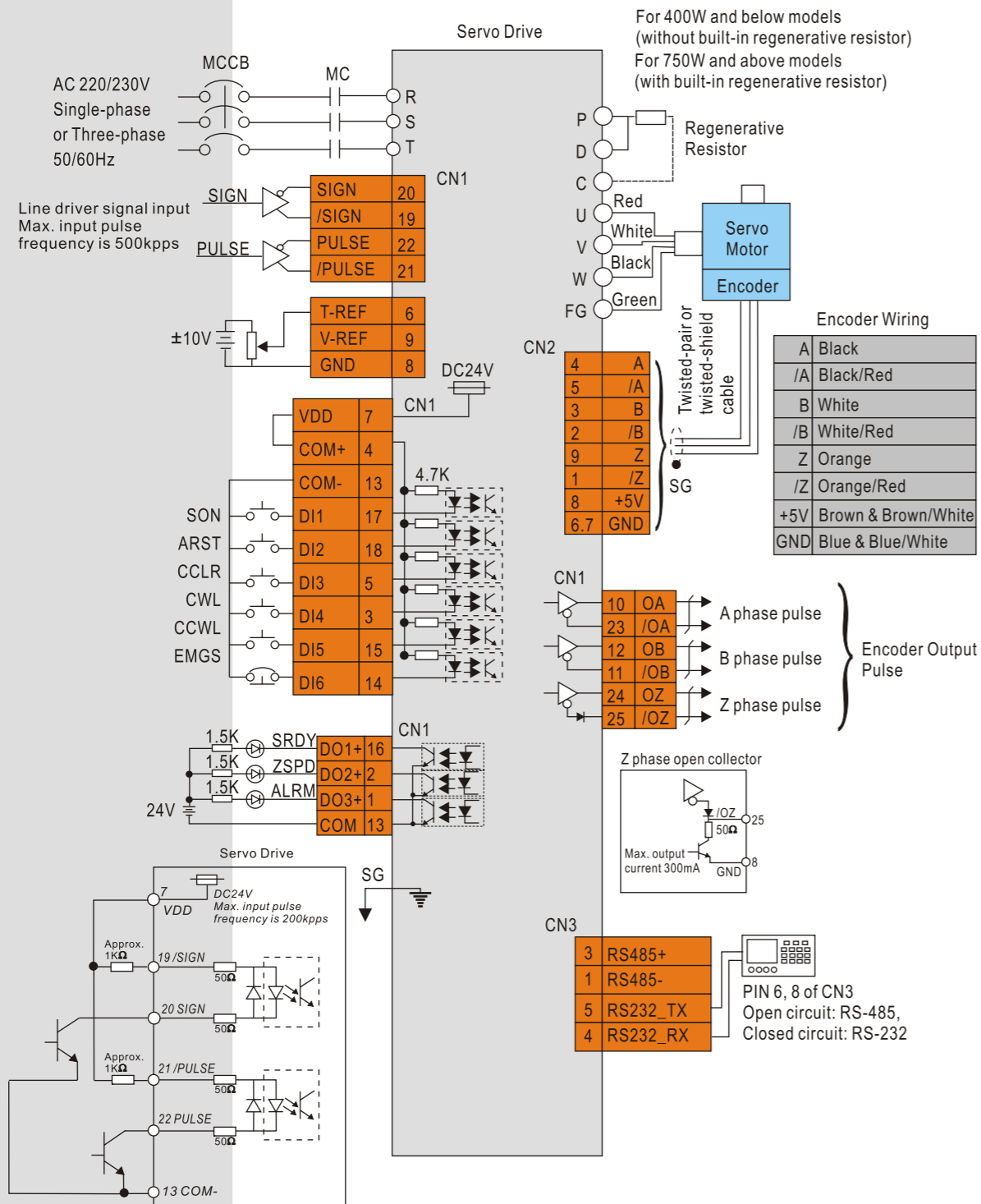
# AC Servo System

## Standard Connection Example



### Position(P) Control Mode

### Speed(S) Control Mode

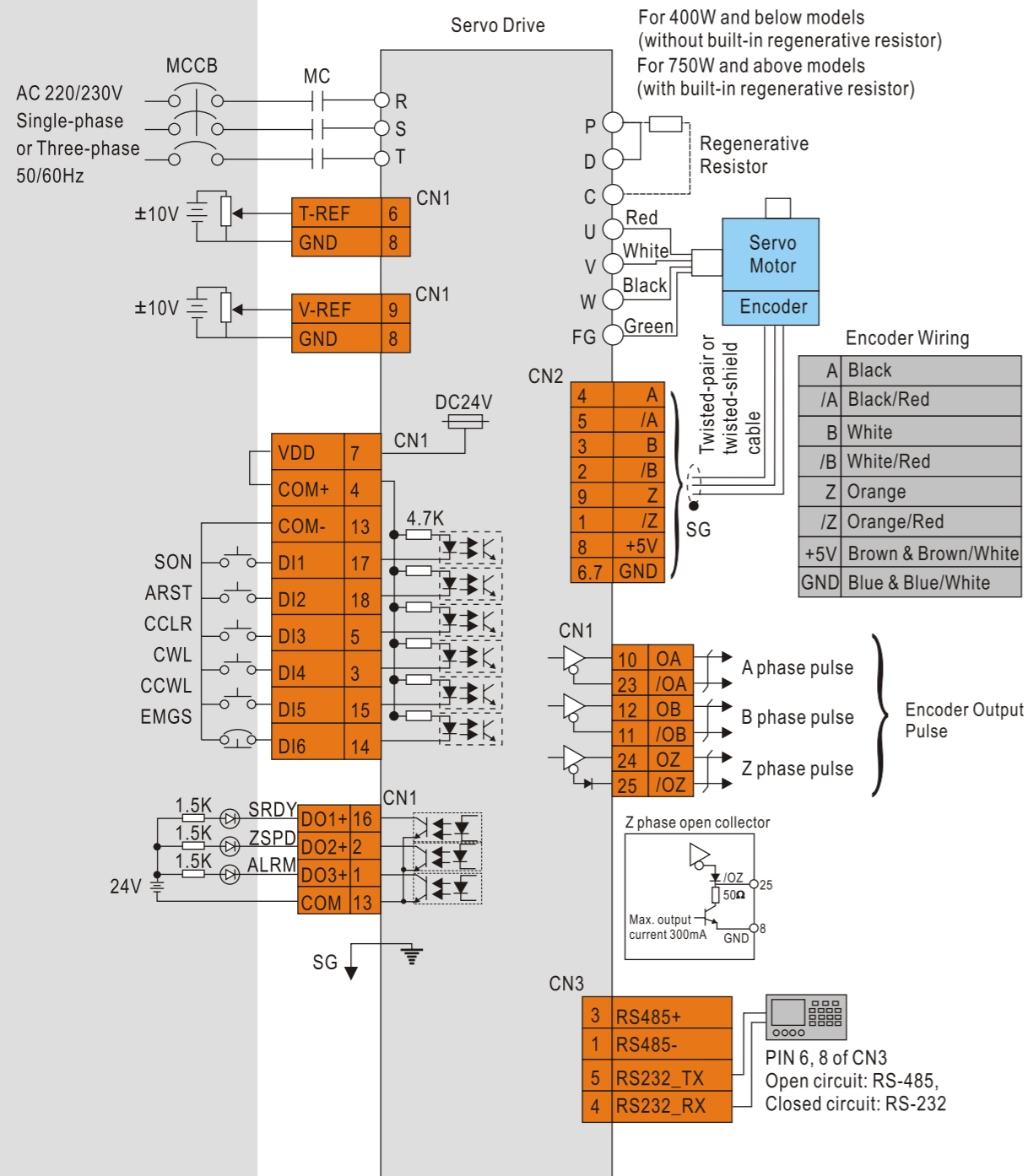


# AC Servo System

## Standard Connection Example



### Torque(T) Control Mode



### Servo Motor Specifications

#### Low Inertia Servo Motor

Model: ECMA Series	C304		C306		C308		C310	
	01	02	04	04	07	10	20	
Rated output power (kW)	0.1	0.2	0.4	0.4	0.75	1.0	2.0	
Rated torque (N.m)	0.32	0.64	1.27	1.27	2.39	3.18	6.37	
Maximum torque (N.m)	0.96	1.92	3.82	3.82	7.16	9.54	19.11	
Rated speed (rpm)	3000							
Maximum speed (rpm)	5000							
Rated current (A)	0.9	1.55	2.6	2.6	5.1	7.3	12.05	
Maximum current (A)	2.7	4.60	7.8	7.8	15.3	21.9	36.15	
Power rating (kW/s) (without brake)	27.7	22.4	57.6	24.0	50.4	38.1	90.6	
Rotor moment of inertia (Kg.m <sup>2</sup> ) (without brake)	0.037E-4	0.177E-4	0.277E-4	0.68E-4	1.13E-4	2.65E-4	4.45E-4	
Mechanical time constant (ms) (without brake)	0.75	0.80	0.53	0.74	0.63	0.74	0.61	
Torque constant-KT (N.m/A)	0.36	0.41	0.49	0.49	0.47	0.44	0.53	
Voltage constant-KE (mV/rpm)	13.6	16	17.4	18.5	17.2	16.8	19.2	
Armature resistance (Ohm)	9.3	2.79	1.55	0.93	0.42	0.20	0.13	
Armature inductance (mH)	24	12.07	6.71	7.39	3.53	1.81	1.50	
Electrical time constant (ms)	2.58	4.3	4.3	7.96	8.37	9.3	11.4	
Insulation class	Class A (UL), Class B (CE)							
Insulation resistance	100MΩ, DC 500V							
Insulation strength	AC 1500 V, 60 seconds							
Weight (kg) (without brake)	0.5	1.2	1.6	2.1	3.0	4.3	6.2	
Weight (kg) (with brake)	-	1.5	2.0	2.9	3.8	4.7	7.2	
Max. radial shaft load (N)	78.4	196	196	245	245	490	490	
Max. thrust shaft load (N)	39.2	68	68	98	98	98	98	
Power rating (kW/s) (with brake)	-	21.3	53.8	22.1	48.4	30.4	82	
Rotor moment of inertia (Kg.m <sup>2</sup> ) (with brake)	-	0.192E-4	0.30E-4	0.73E-4	1.18E-4	3.33E-4	4.953E-4	
Mechanical time constant (ms) (with brake)	-	0.85	0.57	0.78	0.65	0.93	0.66	
Brake holding torque [Nt.m (min)]	-	1.3	1.3	2.5	2.5	12	12	
Brake power consumption (at 20 °C) [W]	-	7.2	7.2	8.5	8.5	19.4	19.4	
Brake release time [ms (Max)]	-	10	10	10	10	10	10	
Brake pull-in time [ms (Max)]	-	70	70	70	70	70	70	
Vibration grade (um)	15							
Operating temperature	0 to 40°C (32 to 104°F)							
Storage temperature	-10 to 80°C (-14 to 176°F)							
Operating humidity	20~90%RH (non-condensing)							
Storage humidity	20~90%RH (non-condensing)							
Vibration capacity	2.5G							
IP rating	IP65 (using waterproof connectors and shaft seal installation (or using oil seal models))							
Approvals								




# AC Servo System

## Standard Connection Example

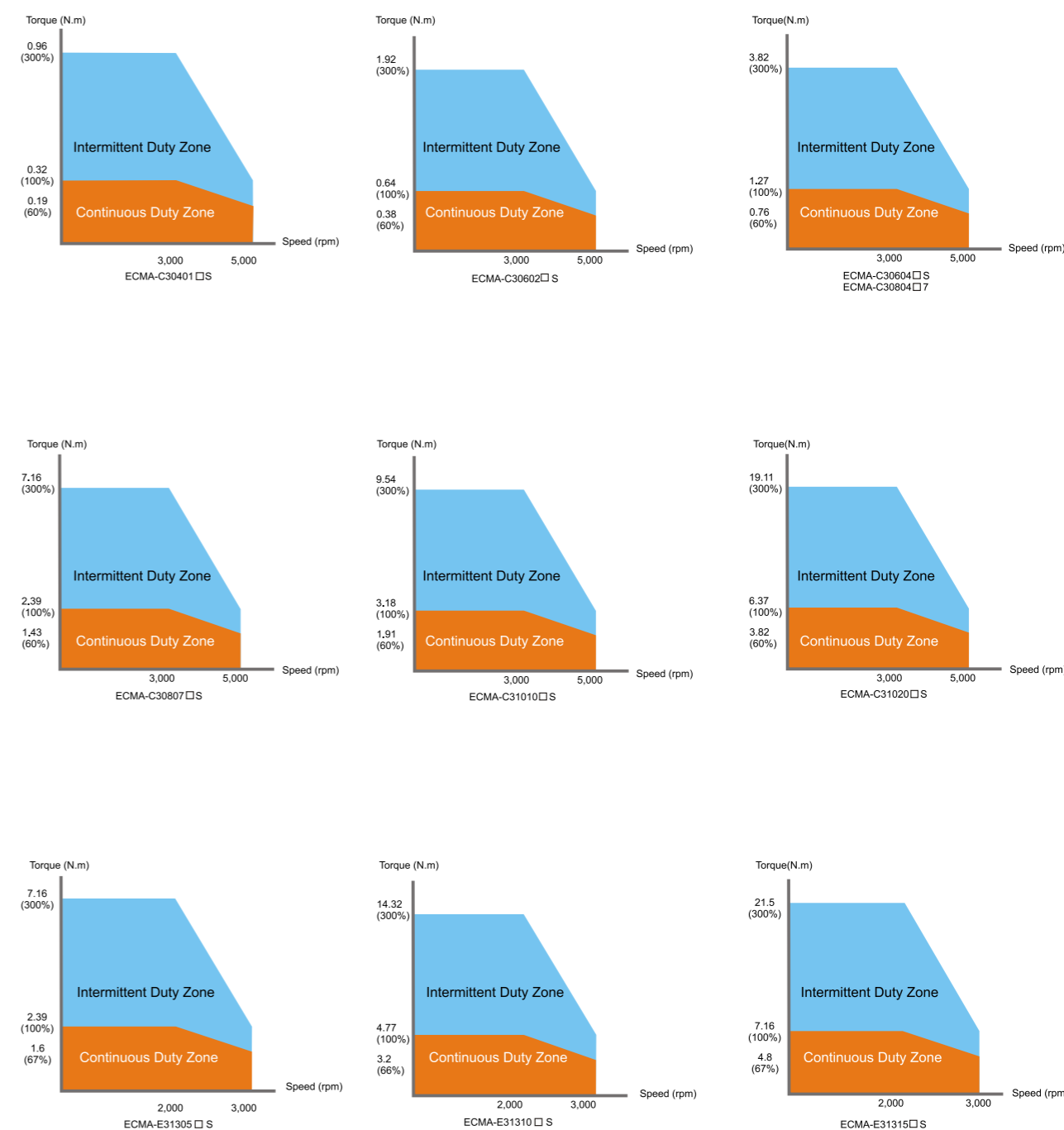
# ASDA-B

### Servo Motor Specifications

#### Medium / High Inertia Servo Motor

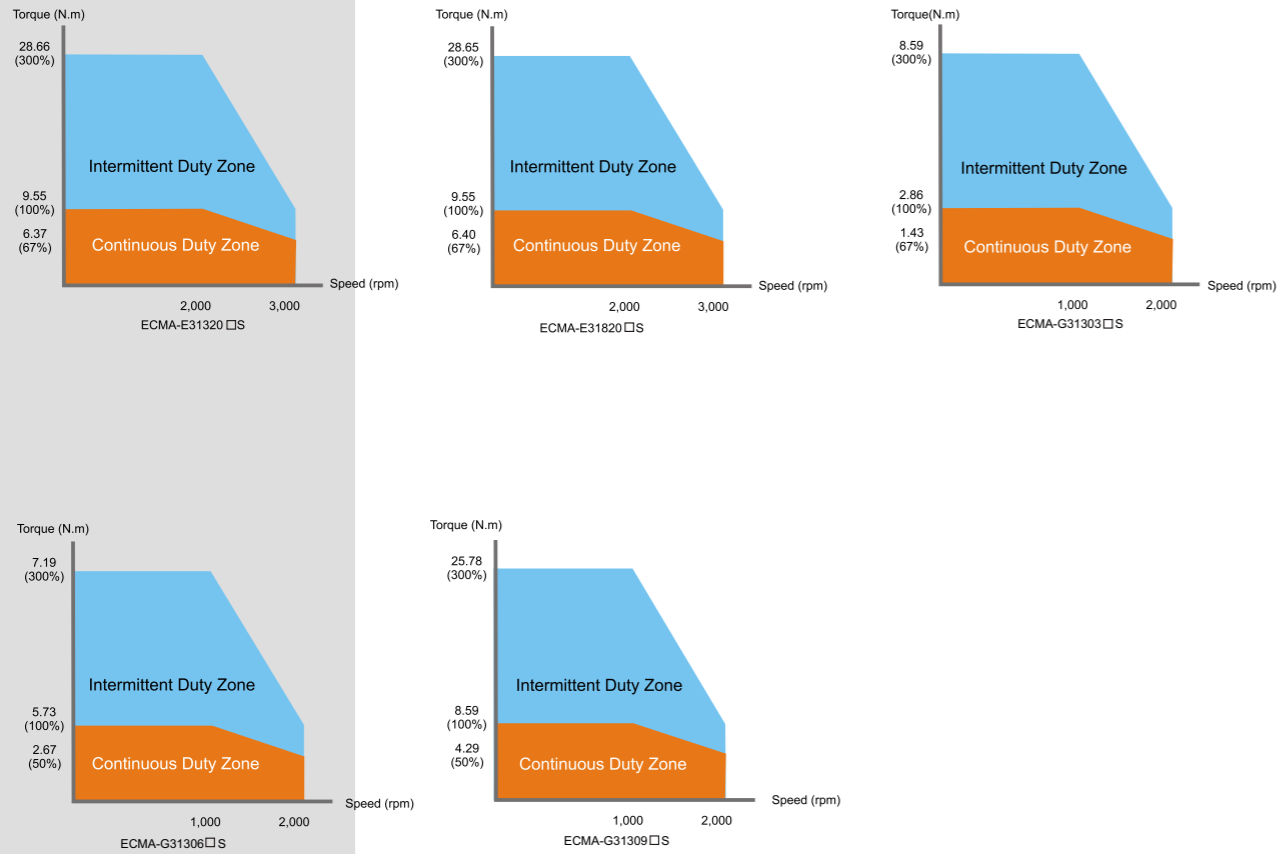
Model: ECMA Series	E313				E318	G313		
	05	10	15	20	20	03	06	09
Rated output power (kW)	0.5	1.0	1.5	2.0	2.0	0.3	0.6	0.9
Rated torque (N.m)	2.39	4.77	7.16	9.55	9.55	2.86	5.73	8.59
Maximum torque (N.m)	7.16	14.3	21.48	28.65	28.65	8.59	17.19	21.48
Rated speed (rpm)	2000				1000			
Maximum speed (rpm)	3000				2000			
Rated current (A)	2.9	5.6	8.3	11.01	11.22	2.5	4.8	7.5
Maximum current (A)	8.7	16.8	24.9	33.03	33.66	7.5	14.4	22.5
Power rating (kW/s) (without brake)	7	27.1	45.9	62.5	26.3	10.0	39.0	66.0
Rotor moment of inertia (Kg.m <sup>2</sup> ) (without brake)	8.17E-4	8.41E-4	11.18E-4	14.59E-4	34.68E-4	8.17E-4	8.41E-4	11.18E-4
Mechanical time constant (ms) (without brake)	1.91	1.51	1.10	0.96	1.62	1.82	1.40	1.06
Torque constant-KT (N.m/A)	0.83	0.85	0.87	0.87	0.85	1.15	1.19	1.15
Voltage constant-KE (mV/rpm)	30.9	31.9	31.8	31.8	31.4	42.5	43.8	41.6
Armature resistance (Ohm)	0.57	0.47	0.26	0.174	0.119	1.06	0.82	0.43
Armature inductance (mH)	7.39	5.99	4.01	2.76	2.84	14.29	11.12	6.97
Electrical time constant (ms)	12.96	12.88	15.31	15.86	23.87	13.55	13.50	16.06
Insulation class	Class A ( UL ) , Class B ( CE )							
Insulation resistance	100MΩ , DC 500V							
Insulation strength	AC 1500 V, 60 secretary							
Weight (kg) (without brake)	6.8	7	7.5	7.8	13.5	6.8	7	7.5
Weight (kg) (with brake)	8.2	8.4	8.9	9.2	17.5	8.2	8.4	8.9
Max. radial shaft load (N)	490	490	490	490	1176	490	490	490
Max. thrust shaft load (N)	98	98	98	98	490	98	98	98
Power rating (kW/s) (with brake)	6.4	24.9	43.1	59.7	24.1	9.2	35.9	62.1
Rotor moment of inertia (Kg.m <sup>2</sup> ) (with brake)	8.94E-4	9.14E-4	11.90E-4	15.88E-4	37.86E-4	8.94E-4	9.14E-4	11.9E-4
Mechanical time constant (ms) (with brake)	2.07	1.64	1.19	1.05	1.77	2.0	1.51	1.13
Brake holding torque [Nt-m (min)]	16.5	16.5	16.5	16.5	25	16.5	16.5	16.5
Brake power consumption (at 20 °C) [W]	21.0	21.0	21.0	21.0	31.1	21.0	21.0	21.0
Brake release time [ms (Max)]	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Brake pull-in time [ms (Max)]	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Vibration grade (um)	15							
Operating temperature	0 to 40°C(32 to 104°F)							
Storage temperature	-10 to 80°C(-14 to 176°F)							
Operating humidity	20~90%RH (non-condensing)							
Storage humidity	20~90%RH (non-condensing)							
Vibration capacity	2.5G							
IP rating	IP65 (using waterproof connectors and shaft seal installation (or using oil seal models))							
Approvals								

### Speed-Torque Curves



## Accessories

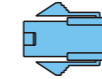
### Speed-Torque Curves



### Servo Accessories

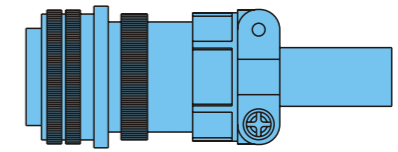
#### Power Connectors

ASDBCAPW0000



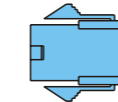
Title	Part No.	Manufacturer
Housing	C4201H00-2*2PA	JOWLE
Terminal	C4201TOP-2	JOWLE

ASD-CAPW1000



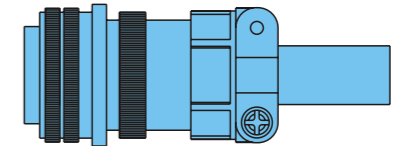
MS 3106A-20-18S

ASDBCAPW0100



Title	Part No.	Manufacturer
Housing	C4201H00-2*3PA	JOWLE
Terminal	C4201TOP-2	JOWLE

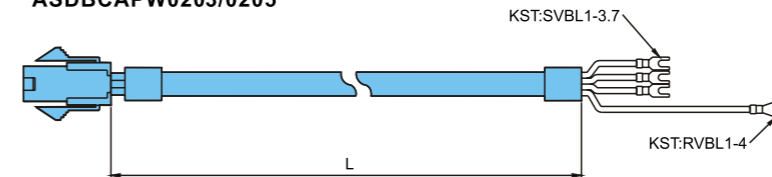
ASD-CAPW2000



MS 3106A-24-11S

#### Power Cables

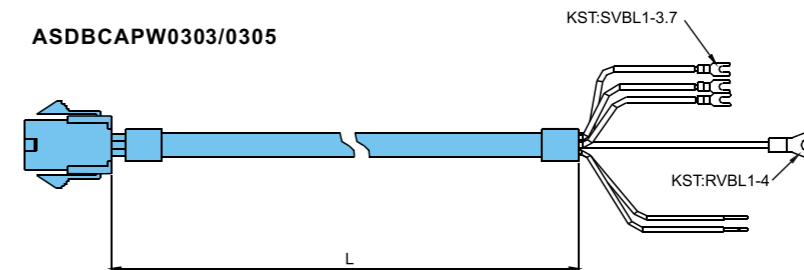
ASDBCAPW0203/0205



Title	Part No.	Manufacturer
Housing	C4201H00-2*2PA	JOWLE
Terminal	C4201TOP-2	JOWLE

Item	Part No.	L	
		mm	inc
1	ASDBCAPW0203	3000 ± 10	118 ± 2
2	ASDBCAPW0205	5000 ± 10	197 ± 2

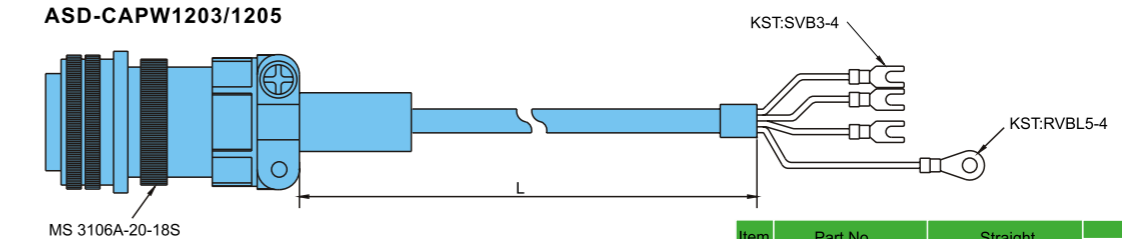
ASDBCAPW0303/0305



Title	Part No.	Manufacturer
Housing	C4201H00-2*3PA	JOWLE
Terminal	C4201TOP-2	JOWLE

Item	Part No.	L	
		mm	inc
1	ASDBCAPW0303	3000 ± 10	118 ± 2
2	ASDBCAPW0305	5000 ± 10	197 ± 2

ASD-CAPW1203/1205



Item	Part No.	Straight	L	
			mm	inc
1	ASD-CAPW1203	3106A-20-18S	3000 ± 50	118 ± 2
2	ASD-CAPW1205	3106A-20-18S	5000 ± 50	197 ± 2



## Accessories

### Servo Accessories

#### Power Cables

##### ASD-CAPW1303/1305

3106A-20-18A

KST:SVB3-4

KST:RVBL5-4

Item	Part No.	Straight	L	
			mm	inc
1	ASD-CAPW1303	3106A-20-18S	3000 ± 50	118 ± 2
2	ASD-CAPW1305	3106A-20-18S	5000 ± 50	197 ± 2

##### ASD-CAPW2203/2205

MS 3106A-24-11S

KST:SVB3-4

KST:RVBL5-4

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

##### ASD-CAPW2303/2305

MS 3106A-24-11S

KST:SVB3-4

KST:RVBL5-4

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

#### Encoder Connectors

##### ASDBCAEN0000

D-SUB Connector 9P

Title	Part No.	Manufacturer
Housing	AMP(1-172161-9)	AMP
Terminal	AMP(170359-3)	AMP
CLAMP	DELTA(34703237XX)	DELTA

##### ASDBCAEN1000

MS 3106A-20-29S

D-SUB Connector 9P

#### Encoder Cables

##### ASDBCAEN0003/0005

D-SUB Connector 9P

Title	Part No.	Manufacturer
Housing	AMP(1-172161-9)	AMP
Terminal	AMP(170359-3)	AMP
CLAMP	DELTA(3470323XX)	DELTA

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

##### ASDBCAEN1003/1005

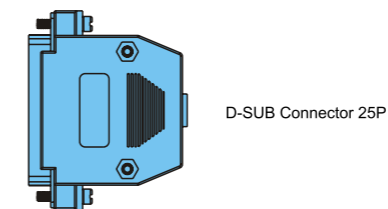
MS 3106A-20-29S

D-SUB Connector 9P

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

#### I/O Signal Connector

##### ASDBCNDS0025



#### Communication Cables

(for Keypad, connecting a ASDA-B servo drive to a Keypad)

##### ASDBCADK0001

Mini-Din 8Pin

1000mm ± 15

Title	Part No.	Manufacturer
BoxHeader	3071420300	DELTA
Cover	3140311100	DELTA
Housing	254I-K-14PD	JAWS
Terminal	254I-T-G	JAWS

# AC Servo System

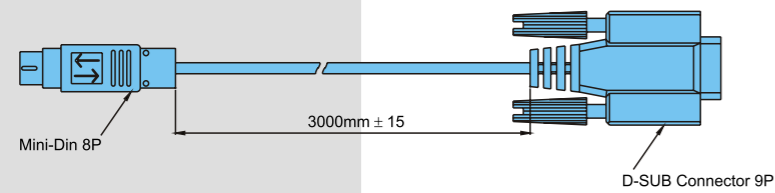
## Accessories



### Servo Accessories

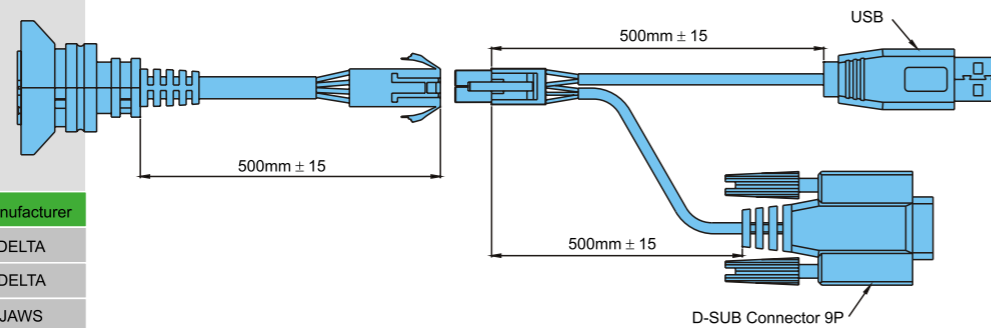
#### Communication Cables(for PC, connecting a ASDA-B servo drive to a PC)

DVPACAB2A30



#### Communication Cables(for Keypad, connecting a PC to a Keypad)

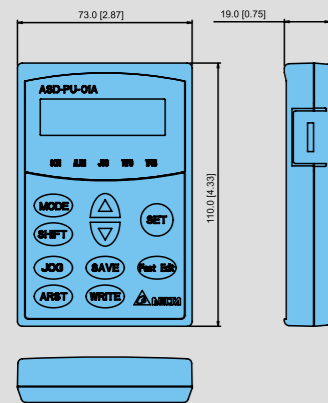
ASDBCACK0001



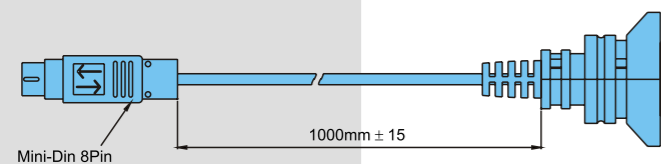
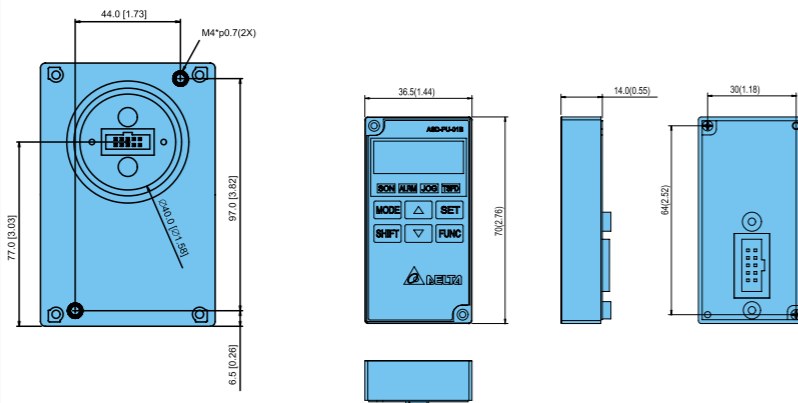
Title	Part No.	Manufacturer
BoxHeader	3071420300	DELTA
Cover	3140311100	DELTA
Housing	254I-K-14PD	JAWS
Terminal	254I-T-G	JAWS

#### Keypad(including communication cable)

ASD-PU-01A



ASD-PU-01B



Title	Part No.	Manufacturer
BoxHeader	3071420300	DELTA
Cover	3140311100	DELTA
Housing	254I-K-14PD	JAWS
Terminal	254I-T-G	JAWS

### Servo Drive, Servo Motor and Accessories Combinations 100W Servo Drive and Applicable Servo Motor

Servo Drive	ASD-B0121-A			
Low inertia Servo Motor	ECMA-C30401□S			
Cable	Without Brake		With Brake	
	3M	5M	3M	5M
	Motor Power Cable ASDBCAPW0203	Motor Power Cable ASDBCAPW0205	-	-
Encoder Cable ASDBCAEN0003	Encoder Cable ASDBCAEN0005	-	-	
Connector	Power Connector ASDBCAPW0000			
	Encoder Connector ASDBCAEN0000			

### 200W Servo Drive and Applicable Servo Motor

Servo Drive	ASD-B0221-A			
Low inertia Servo Motor	ECMA-C30602□S			
Cable	Without Brake		With Brake	
	3M	5M	3M	5M
	Motor Power Cable ASDBCAPW0203	Motor Power Cable ASDBCAPW0205	Motor Power Cable ASDBCAPW0303	Motor Power Cable ASDBCAPW0305
Encoder Cable ASDBCAEN0003	Encoder Cable ASDBCAEN0005	Encoder Cable ASDBCAEN0003	Encoder Cable ASDBCAEN0005	
Connector	Power Connector ASDBCAPW0000		Power Connector ASDBCAPW0100	
	Encoder Connector ASDBCAEN0000			

### 400W Servo Drive and Applicable Servo Motor

Servo Drive	ASD-B0421-A			
Low inertia Servo Motor	ECMA-C30604□S ECMA-C30804□7			
Cable	Without Brake		With Brake	
	3M	5M	3M	5M
	Motor Power Cable ASDBCAPW0203	Motor Power Cable ASDBCAPW0205	Motor Power Cable ASDBCAPW0303	Motor Power Cable ASDBCAPW0305
Encoder Cable ASDBCAEN0003	Encoder Cable ASDBCAEN0005	Encoder Cable ASDBCAEN0003	Encoder Cable ASDBCAEN0005	
Connector	Power Connector ASDBCAPW0000		Power Connector ASDBCAPW0100	
	Encoder Connector ASDBCAEN0000			



# AC Servo System

## Accessories



### Servo Drive, Servo Motor and Accessories Combinations

#### 400W Servo Drive and Applicable Servo Motor

Servo Drive	ASD-B0421-A			
Medium inertia Servo Motor	ECMA-E31305□S			
Cable	Without Brake		With Brake	
	3M	5M	3M	5M
	Motor Power Cable ASD-CAPW1203	Motor Power Cable ASD-CAPW1205	Motor Power Cable ASD-CAPW1303	Motor Power Cable ASD-CAPW1305
Encoder Cable ASDBCAEN1003	Encoder Cable ASDBCAEN1005	Encoder Cable ASDBCAEN1003	Encoder Cable ASDBCAEN1005	
Connector	Power Connector ASD-CAPW1000			
	Encoder Connector ASDBCAEN1000			

#### 400W Servo Drive and Applicable Servo Motor

Servo Drive	ASD-B0421-A			
High inertia Servo Motor	ECMA-G31303□S			
Cable	Without Brake		With Brake	
	3M	5M	3M	5M
	Motor Power Cable ASD-CAPW1203	Motor Power Cable ASD-CAPW1205	Motor Power Cable ASD-CAPW1303	Motor Power Cable ASD-CAPW1305
Encoder Cable ASDBCAEN1003	Encoder Cable ASDBCAEN1005	Encoder Cable ASDBCAEN1003	Encoder Cable ASDBCAEN1005	
Connector	Power Connector ASD-CAPW1000			
	Encoder Connector ASDBCAEN1000			

#### 750W Servo Drive and Applicable Servo Motor

Servo Drive	ASD-B0721-A			
Low inertia Servo Motor	ECMA-C30807□S			
Cable	Without Brake		With Brake	
	3M	5M	3M	5M
	Motor Power Cable ASDBCAPW0203	Motor Power Cable ASDBCAPW0205	Motor Power Cable ASDBCAPW0303	Motor Power Cable ASDBCAPW0305
Encoder Cable ASDBCAEN0003	Encoder Cable ASDBCAEN0005	Encoder Cable ASDBCAEN0003	Encoder Cable ASDBCAEN0003	
Connector	Power Connector ASDBCAPW0000		Power Connector ASDBCAPW0100	
	Encoder Connector ASDBCAEN0000			

#### 750W Servo Drive and Applicable Servo Motor

Servo Drive	ASD-B0721-A			
High inertia Servo Motor	ECMA-G31306□S			
Cable	Without Brake		With Brake	
	3M	5M	3M	5M
	Motor Power Cable ASD-CAPW1203	Motor Power Cable ASD-CAPW1205	Motor Power Cable ASD-CAPW1303	Motor Power Cable ASD-CAPW1305
Encoder Cable ASDBCAEN1003	Encoder Cable ASDBCAEN1005	Encoder Cable ASDBCAEN1003	Encoder Cable ASDBCAEN1005	
Connector	Power Connector ASD-CAPW1000			
	Encoder Connector ASDBCAEN1000			

#### 1kW Servo Drive and Applicable Servo Motor

Servo Drive	ASD-B1021-A			
Low inertia Servo Motor	ECMA-C31010□S			
Cable	Without Brake		With Brake	
	3M	5M	3M	5M
	Motor Power Cable ASD-CAPW1203	Motor Power Cable ASD-CAPW1205	Motor Power Cable ASD-CAPW1303	Motor Power Cable ASD-CAPW1305
Encoder Cable ASDBCAEN1003	Encoder Cable ASDBCAEN1005	Encoder Cable ASDBCAEN1003	Encoder Cable ASDBCAEN1005	
Connector	Power Connector ASD-CAPW1000			
	Encoder Connector ASDBCAEN1000			

#### 1kW Servo Drive and Applicable Servo Motor

Servo Drive	ASD-B1021-A			
Medium inertia Servo Motor	ECMA-E31310□S			
Cable	Without Brake		With Brake	
	3M	5M	3M	5M
	Motor Power Cable ASD-CAPW1203	Motor Power Cable ASD-CAPW1205	Motor Power Cable ASD-CAPW1303	Motor Power Cable ASD-CAPW1305
Encoder Cable ASDBCAEN1003	Encoder Cable ASDBCAEN1005	Encoder Cable ASDBCAEN1003	Encoder Cable ASDBCAEN1005	
Connector	Power Connector ASD-CAPW1000			
	Encoder Connector ASDBCAEN1000			

# Accessories



## Servo Drive, Servo Motor and Accessories Combinations

### 1kW Servo Drive and Applicable Servo Motor

Servo Drive	ASD-B1021-A			
High inertia Servo Motor	ECMA-G31309□S			
Cable	Without Brake		With Brake	
	3M	5M	3M	5M
	Motor Power Cable ASD-CAPW1203	Motor Power Cable ASD-CAPW1205	Motor Power Cable ASD-CAPW1303	Motor Power Cable ASD-CAPW1305
Encoder Cable ASDBCAEN1003	Encoder Cable ASDBCAEN1005	Encoder Cable ASDBCAEN1003	Encoder Cable ASDBCAEN1005	
Connector	Power Connector ASD-CAPW1000			
	Encoder Connector ASDBCAEN1000			

### 2kW Servo Drive and Applicable Servo Motor

Servo Drive	ASD-B2023-A			
Medium inertia Servo Motor	ECMA-E31320□S			
Cable	Without Brake		With Brake	
	3M	5M	3M	5M
	Motor Power Cable ASD-CAPW1203	Motor Power Cable ASD-CAPW1205	Motor Power Cable ASD-CAPW1303	Motor Power Cable ASD-CAPW1305
Encoder Cable ASDBCAEN1003	Encoder Cable ASDBCAEN1005	Encoder Cable ASDBCAEN1003	Encoder Cable ASDBCAEN1005	
Connector	Power Connector ASD-CAPW1000			
	Encoder Connector ASDBCAEN1000			

### 1.5kW Servo Drive and Applicable Servo Motor

Servo Drive	ASD-B1521-A			
Medium inertia Servo Motor	ECMA-E31315□S			
Cable	Without Brake		With Brake	
	3M	5M	3M	5M
	Motor Power Cable ASD-CAPW1203	Motor Power Cable ASD-CAPW1205	Motor Power Cable ASD-CAPW1303	Motor Power Cable ASD-CAPW1305
Encoder Cable ASDBCAEN1003	Encoder Cable ASDBCAEN1005	Encoder Cable ASDBCAEN1003	Encoder Cable ASDBCAEN1005	
Connector	Power Connector ASD-CAPW1000			
	Encoder Connector ASDBCAEN1000			

### 2kW Servo Drive and Applicable Servo Motor

Servo Drive	ASD-B2023-A			
Medium inertia Servo Motor	ECMA-E31820□S			
Cable	Without Brake		With Brake	
	3M	5M	3M	5M
	Motor Power Cable ASD-CAPW2203	Motor Power Cable ASD-CAPW2205	Motor Power Cable ASD-CAPW2303	Motor Power Cable ASD-CAPW2305
Encoder Cable ASDBCAEN1003	Encoder Cable ASDBCAEN1005	Encoder Cable ASDBCAEN1003	Encoder Cable ASDBCAEN1005	
Connector	Power Connector ASD-CAPW2000			
	Encoder Connector ASDBCAEN1000			

### 2kW Servo Drive and Applicable Servo Motor

Servo Drive	ASD-B2023-A			
Low inertia Servo Motor	ECMA-C31020□S			
Cable	Without Brake		With Brake	
	3M	5M	3M	5M
	Motor Power Cable ASD-CAPW1203	Motor Power Cable ASD-CAPW1205	Motor Power Cable ASD-CAPW1303	Motor Power Cable ASD-CAPW1305
Encoder Cable ASDBCAEN1003	Encoder Cable ASDBCAEN1005	Encoder Cable ASDBCAEN1003	Encoder Cable ASDBCAEN1005	
Connector	Power Connector ASD-CAPW1000			
	Encoder Connector ASDBCAEN1000			

Other Accessories (Applicable for ASDA-B series all models)	
Description	Model Name
25Pin I/O signal connector (CN1)	ASDBCND50025
Communication cable, for Keypad, connecting a ASDA-B servo drive to a Keypad	ASDBCADK0001
Communication cable, for PC, connecting a ASDA-B servo drive to a PC	DVPACAB2A30
Communication cable, for Keypad, connecting a PC to a Keypad	ASDBCACK0001
Keypad	ASD-PU-01A ASD-PU-01B

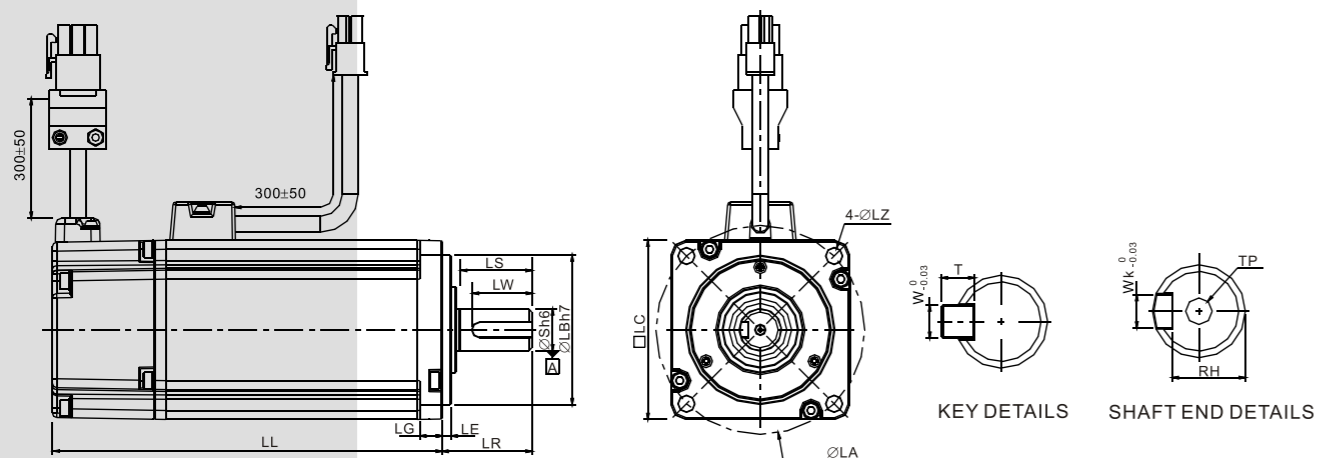
# AC Servo System

## Dimensions

# ASPA-B

### Dimensions of Servo Motor

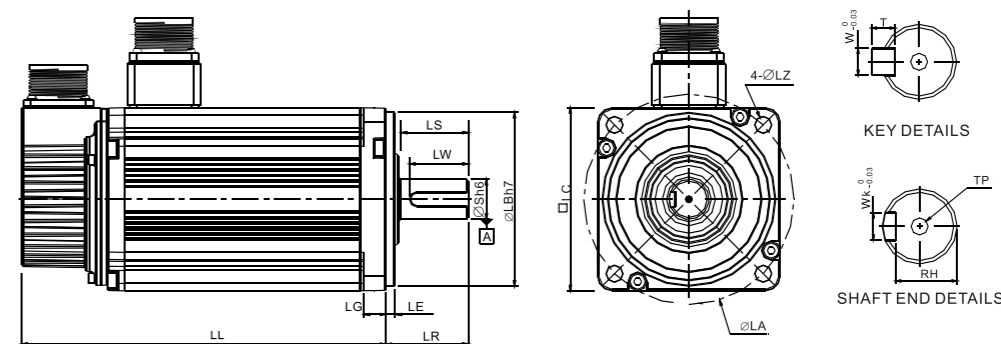
#### ECMA Series Motor Frame Size: 80mm and below Models (Units: mm)



Model	C30401□S	C30602□S	C30604□S	C30804□7	C30807□S
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	14	14	14	19
LB	30	50	50	70	70
LL (w/o brake)	100.6	105.5	130.7	112.3	138.3
LL (with brake)	136.6	141.6	166.8	152.8	178
LS (w/o oilseal)	20	27	27	27	32
LS (with oilseal)	20	24	24	24.5	29.5
LR	25	30	30	30	35
LE	3	3	3	3	3
LG	5	7.5	7.5	8	8
LW	16	20	20	20	25
RH	6.2	11	11	11	15.5
WK	3	5	5	5	6
W	3	5	5	5	6
T	3	5	5	5	6
TP	M3xP0.5 Depth:8mm	M4xP0.7 Depth:15mm	M4xP0.7 Depth:15mm	M4xP0.7 Depth:15mm	M6xP1 Depth:20mm

Note:  
1. The boxes (□) in the model names are for optional configurations (brake, shaft type and oil seal).  
2. The dimensions of "TP" are the special specifications. If necessary, please contact your distributor.

#### ECMA Series Motor Frame Size: 100mm and above Models (Units: mm)



Model	G31303□S	E31305□S	G31306□S	G31309□S	C31010□S
LC	130	130	130	130	100
LZ	9	9	9	9	9
LA	145	145	145	145	115
S	22	22	22	22	22
LB	110	110	110	110	95
LL (without brake)	147.5	147.5	147.5	163.5	153.25
LL (with brake)	183.5	183.5	183.5	198	192.5
LS	47	47	47	47	37
LR	55	55	55	55	45
LE	6	6	6	6	5
LG	11.5	11.5	11.5	11.5	12
LW	36	36	36	36	32
RH	18	18	18	18	18
WK	8	8	8	8	8
W	8	8	8	8	8
T	7	7	7	7	7
TP	M3xP0.5 Depth:8mm	M4xP0.7 Depth:15mm	M4xP0.7 Depth:15mm	M4xP0.7 Depth:15mm	M6xP1 Depth:20mm

Model	E31310□S	E31315□S	C31020□S	E31320□S	E31820□S
LC	130	130	100	130	180
LZ	9	9	9	9	13.5
LA	145	145	115	145	200
S	22	22	22	22	35
LB	110	110	95	110	114.3
LL (w/o brake)	147.5	167.5	199	187.5	169
LL (with brake)	183.5	202	226	216	203.1
LS	47	47	37	47	73
LR	55	55	45	55	79
LE	6	6	5	6	4
LG	11.5	11.5	12	11.5	20
LW	36	36	32	36	63
RH	18	18	18	18	30
WK	8	8	8	8	10
W	8	8	8	8	10
T	7	7	7	7	8
TP	M3xP0.5 Depth:8mm	M4xP0.7 Depth:15mm	M4xP0.7 Depth:15mm	M4xP0.7 Depth:15mm	M6xP1 Depth:20mm

Note:  
1. The boxes (□) in the model names are for optional configurations (brake, shaft type and oil seal).  
2. The dimensions of "TP" are the special specifications. If necessary, please contact your distributor.



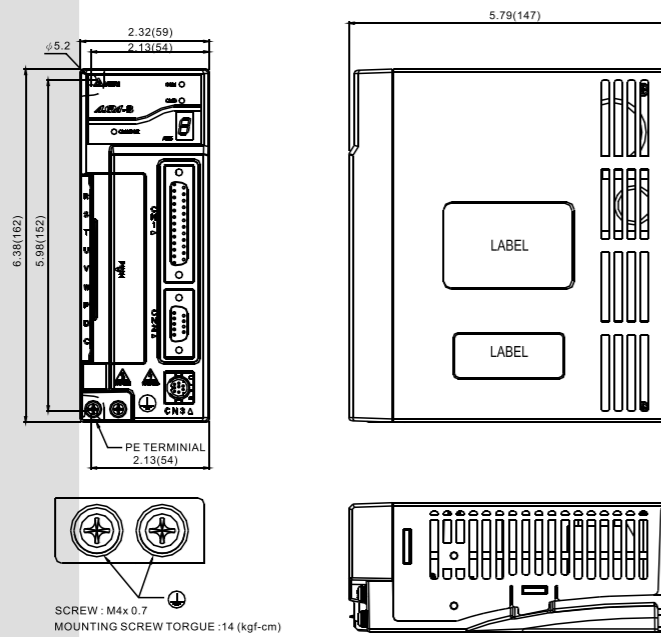
# AC Servo System

# ASDA-B

## Dimensions

### Dimensions of Servo Drive

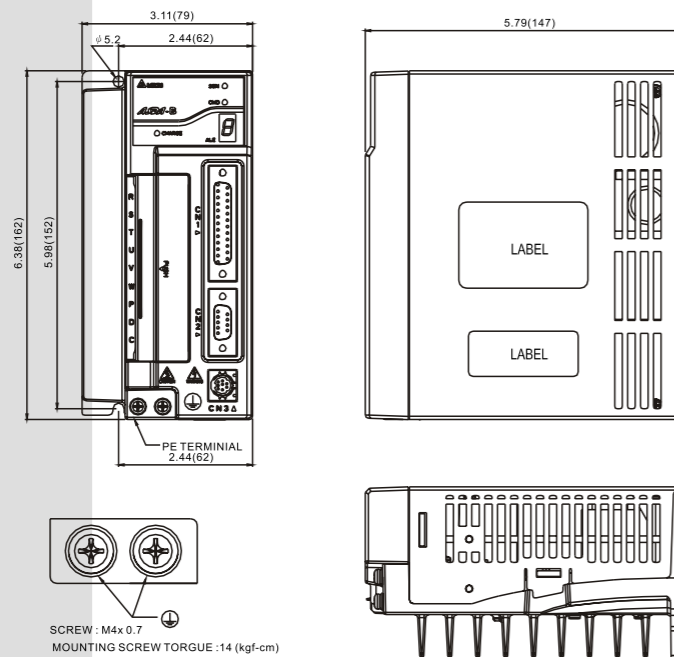
#### ASD-B0121-A, ASD-B0221-A, ASD-B0421-A (100W to 400W)



**WEIGHT**  
2.64(1.2)

**NOTE** 1)Dimensions are in millimeters and (inches). Weights are in pounds and (kilograms).  
2)We reserve the right to change the dimensions and weights without prior notice

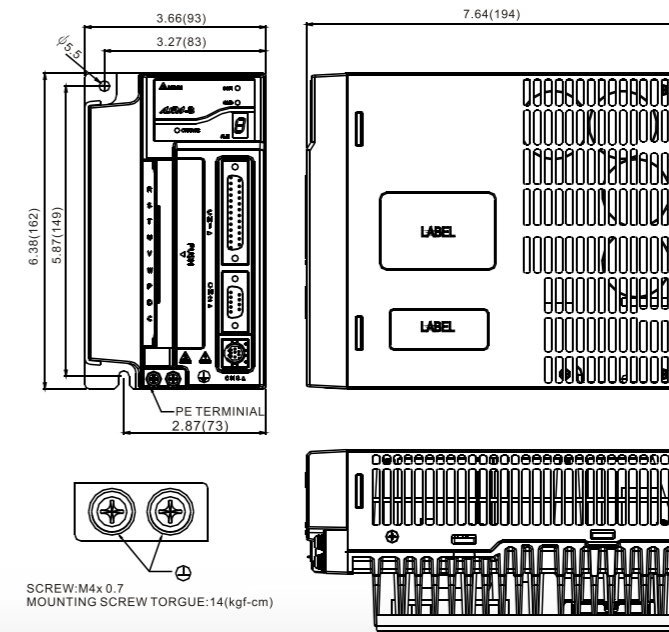
#### ASD-B0721-A(750W)



**WEIGHT**  
3.3(1.5)

**NOTE** 1)Dimensions are in millimeters and (inches). Weights are in pounds and (kilograms).  
2)We reserve the right to change the dimensions and weights without prior notice

#### ASD-B1021-A, ASD-B1521-A, ASD-B2023-A (1kW to 2kW)



**WEIGHT**  
4.4(2.0)

**NOTE** 1)Dimensions are in millimeters and (inches). Weights are in pounds and (kilograms).  
2)We reserve the right to change the dimensions and weights without prior notice

