

ASDA-A2 Servo Drive and Motor Combinations

Product Line-up

Servo Drive

						
0.2kW	0.4kW	0.75kW	1.0kW	1.5kW	2kW	3kW
ASD-A2-0221-□	ASD-A2-0421-□	ASD-A2-0721-□	ASD-A2-1021-□	ASD-A2-1521-□	ASD-A2-2023-□	ASD-A2-3023-□

Servo Motor

						
ECMA-C10602□S	ECMA-C10604□S ECMA-C10804□7 ECMA-E11305□S ECMA-G11303□S	ECMA-C10807□S ECMA-G11306□S	ECMA-C11010□S ECMA-E11310□S ECMA-G11309□S*	ECMA-E11315□S	ECMA-C11020□S ECMA-E11320□S ECMA-E11820□S	ECMA-E11830□S ECMA-F11830□S

Note : 1. The boxes □ at the ends of the servo drive model names are for optional configurations (second feedback signal, CANopen and extension digital input port). For the actual model name, please refer to the model explanation of the servo drive.
2. The boxes □ in the servo motor model names are for optional configurations (keyway, brake and oil seal).
3. * Will be availble soon

Model Explanation

● ASDA-A2 Series Servo Drive

A S D - A 2 0 4 2 1 - B

- **A S D - A 2** — Product Name : AC Servo Drive; Series A2 : A2 Series
- **0 4** — Rated Output Power
  - 02:200W
  - 04:400W
  - 07:750W
  - 10:1kW
  - 15:1.5kW
  - 20:2kW
  - 30:3kW
- **2 1** — Input Voltage and Phase
  - 21 : 220V 1-Phase/3-Phase
  - 23 : 220V 3-Phase
- **B** — Type (see the table below)

Type	Second Feedback Signal (For full closed-loop control)	CANopen	Digital Input Extension Port
M (Communication Type)	Yes	Yes	No
U (Internal Position Control Type)	Yes	No	Yes

● ECMA series Servo Motor

E C M A - C 1 0 6 0 2 E S

- **E C M** — Product Type
  ECM : Electrical Commutation Motor
- **A** — Driving Type
  A : AC Servo Motor
- **C** — Series
  Rated Voltage / Rated Speed
  C : 220V / 3000rpm
  E : 220V / 2000rpm
  F : 220V / 1500rpm
  G : 220V / 1000rpm
  Sensor Type
  2 : 20-bit (3kW and below models)
- **0 6** — Motor Frame Size
  06 : 60mm
  08 : 80mm
  10 : 100mm
  13 : 130mm
  18 : 180mm
- **0 2** — Rated Output Power
  02 : 200W
  03 : 300W
  04 : 400W
  05 : 500W
  06 : 600W
  07 : 750W
  09 : 900W
  10 : 1kW
  15 : 1.5kW
  20 : 2kW
  30 : 3kW
- **E** — Shaft Type and Oil seal

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	A	B	C	D
Keyway	E	F	G	H
Keyway with screw hole (Note 1)	P	Q	R	S

- **S** — Standard Shaft Dimensions : S
  Specified Shaft Dimensions : 7=14mm

Note : 1 Only frame size 180mm servo motors are available.



ECMA Series Servo Motors

ASDA-A2

Features

ECMA series servo motors are permanent AC servo motors from 200W to 3kW, capable of combining with 200 to 230V ASDA-A2 series AC servo drives. There are 60mm, 80mm, 100mm, 130mm and 180mm six kinds of frame sizes are available. The motor speed is from 1000 r/min to 5000 r/min and the torque output is from 1.92 N-M to 57.29 N-M. In terms of optional configurations, ECMA series provides brake and oil seal to fully support our customers' needs. In addition, it also offers round shaft and keyway two different shaft selections for various applications.



Specifications Low Inertia Series

Model: ECMA Series	C106		C108		C110	
	02	04	04	07	10	20
Rated output power (kW)	0.2	0.4	0.4	0.75	1.0	2.0
Rated torque (N-m)	0.64	1.27	1.27	2.39	3.18	6.37
Maximum torque (N-m)	1.92	3.82	3.82	7.16	9.54	19.11
Rated speed (r/min)	3000					
Maximum speed (r/min)	5000					
Rated current (A)	1.55	2.6	2.6	5.1	7.3	12.05
Maximum current (A)	4.6	7.8	7.8	15.3	21.9	36.15
Power rating (kW/s)	22.4	57.6	24.0	50.4	38.1	90.6
Rotor moment of inertia ($Kg.m^2$) (without brake)	0.177E-4	0.277E-4	0.68E-4	1.13E-4	2.65E-4	4.15E-4
Mechanical time constant (ms)	0.80	0.53	0.74	0.63	0.74	0.61
Torque constant-KT (N-m/A)	0.41	0.49	0.49	0.47	0.44	0.53
Voltage constant-KE (mV/(r/min))	16	17.4	18.5	17.2	16.8	19.2
Armature resistance (Ohm)	2.79	1.55	0.93	0.42	0.20	0.13
Armature inductance (mH)	12.07	6.71	7.39	3.53	1.81	1.50
Electrical time constant (ms)	4.3	4.3	7.96	8.37	9.3	11.4
Insulation class	Class A (UL), Class B (CE)					
Insulation resistance	>100M, DC 500V					
Insulation strength	1500V AC, 60 seconds					
Weight (kg) (without brake)	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)	196	196	245	245	490	490
Max. thrust shaft load (N)	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 ($Kg.m^2$) (with brake)	0.192-E-4	0.30-E-4	0.73-E-4	1.18-E-4	3.33E-4	4.953-E-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	15					
Operating temperature	0~40					
Storage temperature	-10~80					
Operating humidity	20~90%RH (non-condensing)					
Storage humidity	20~90%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 CE Mark Safety Approved; cULus					



ECMA Series Servo Motors

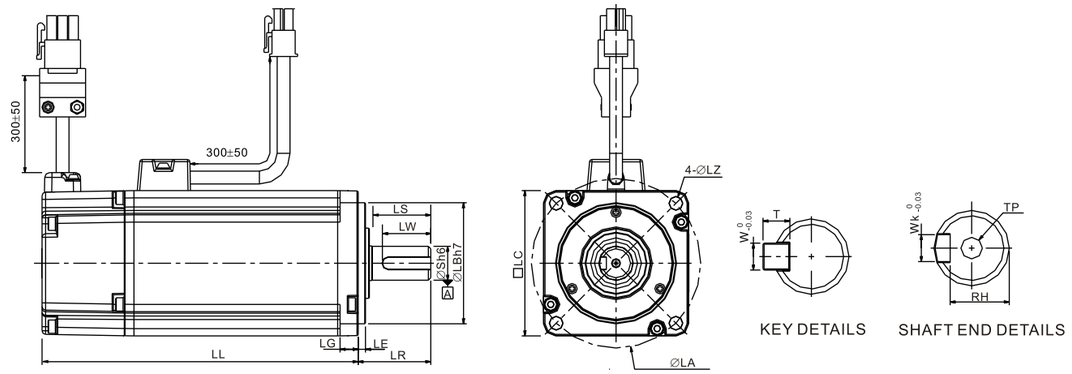
ASDA-A2

Specifications Medium-High Inertia Series

Model: ECMA Series	E113				E118		F118	G113		
	05	10	15	20	20	30	30	03	06	09
Rated output power (kW)	0.5	1.0	1.5	2.0	2.0	3.0	3.0	0.3	0.6	0.9
Rated torque (N-m)	2.39	4.77	7.16	9.55	9.55	14.32	19.10	2.86	5.73	8.59
Maximum torque (N-m)	7.16	14.3	21.48	28.65	28.65	42.97	57.29	8.59	17.19	21.48
Rated speed (r/min)	2000						1500	1000		
Maximum speed (r/min)	3000							2000		
Rated current (A)	2.9	5.6	8.3	11.01	11.22	16.1	19.4	2.5	4.8	7.5
Maximum current (A)	8.7	16.8	24.9	33.03	33.66	48.3	58.2	7.5	14.4	22.5
Power rating (kW/s)	7.0	27.1	45.9	62.5	26.3	37.3	66.4	10.0	39.0	66.0
Rotor moment of inertia ($Kg.m^2$) (without brake)	8.17E-4	8.41E-4	11.18E-4	14.59E-4	34.68E-4	54.95E-4	54.95E-4	8.17E-4	8.41E-4	11.18E-4
Mechanical time constant (ms)	1.91	1.51	1.10	0.96	1.62	1.06	1.28	1.84	1.40	1.06
Torque constant-KT (N-m/A)	0.83	0.85	0.87	0.87	0.85	0.89	0.98	1.15	1.19	1.15
Voltage constant-KE (mV/(r/min))	30.9	31.9	31.8	31.8	31.4	32	35	42.5	43.8	41.6
Armature resistance (Ohm)	0.57	0.47	0.26	0.174	0.119	0.052	0.077	1.06	0.82	0.43
Armature inductance (mH)	7.39	5.99	4.01	2.76	2.84	1.38	1.27	14.29	11.12	6.97
Electrical time constant (ms)	12.96	12.88	15.31	15.86	23.87	26.39	16.51	13.55	13.50	16.06
Insulation class	Class A (UL), Class B (CE)									
Insulation resistance	>100M, DC 500V									
Insulation strength	1500V AC, 60 seconds									
Weight (kg) (without brake)	6.8	7	7.5	7.8	13.5	18.5	18.5	6.8	7	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	1470	490	490	490
Max. thrust shaft load (N)	98	98	98	98	490	490	490	98	98	98
Power rating (kW/s) (with brake)	6.4	24.9	43.1	59.7	24.1	35.9	63.9	9.2	35.9	62.1
Rotor moment of inertia ($Kg.m^2$) (with brake)	8.94-E-4	9.14-E-4	11.90-E-4	15.88-E-4	37.86-E-4	57.06-E-4	57.06-E-4	8.94-E-4	9.14-E-4	11.9-E-4
Mechanical time constant (ms) (with brake)	2.07	1.64	1.19	1.05	1.77	1.10	1.33	2.0	1.51	1.13
Brake holding torque [Nt-m (min)]	16.5	16.5	16.5	16.5	25	25	25	16.5	16.5	16.5
Brake power consumption (at 20°C) [W]	21.0	21.0	21.0	21.0	31.1	31.1	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	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	25.0	25.0
Vibration grade	15									
Operating temperature	0~40									
Storage temperature	-10~80									
Operating humidity	20~90%RH (non-condensing)									
Storage humidity	20~90%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 Mark Safety Approved; cULus									

Dimensions

- **ECMA Series Servo Motors Frame Size 80mm and below (Units: mm)**

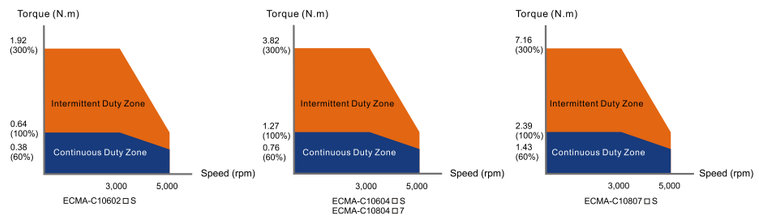


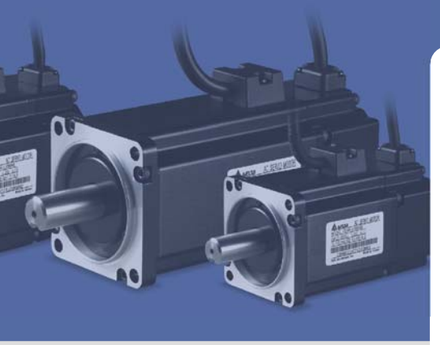
Model	C10602□S	C10604□S	C10804□7	C10807□S
LC	60	60	80	80
LZ	5.5	5.5	6.6	6.6
LA	70	70	90	90
S	14	14	14	19
LB	50	50	70	70
LL(Without Brake)	105.5	130.7	112.3	138.3
LL(With Brake)	141.6	166.8	152.8	178
LS(Without Oil Seal)	27	27	27	32
LS(With Oil Seal)	24	24	24.5	29.5
LR	30	30	30	35
LE	3	3	3	3
LG	7.5	7.5	8	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	M4xP0.7 Depth:15mm	M4xP0.7 Depth:15mm	M4xP0.7 Depth:15mm	M6xP1 Depth:20mm

NOTE

1) Dimensions are in millimeters. Weights are in kilograms (kg) and (pounds (lbs)).
2) Dimensions and weights of the servo motor 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)



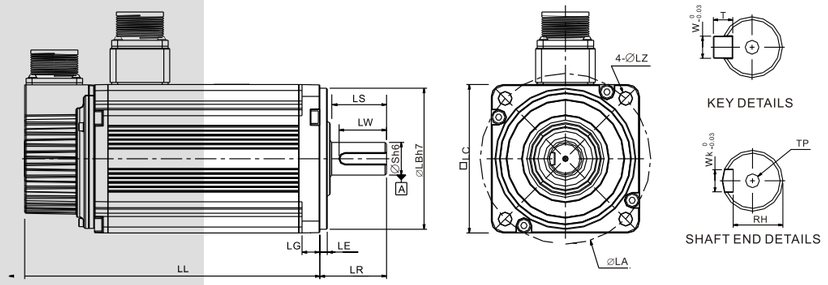


ECMA Series Servo Motors

ASDA-A2

Dimensions

- **ECMA Series Servo Motors Frame Size 100mm and above (Units: mm)**

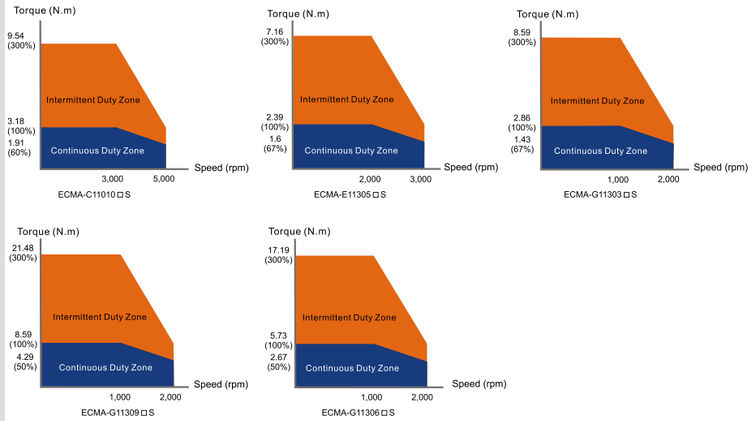


Model	G11303□S	E11305□S	G11306□S	G11309□S	C11010□S
LC	130	130	130	130	100
LZ	9	9	9	9	9
LA	145	145	145	145	115
S	22	22	22	22	22
LB	110	110	110	110	95
LL(Without Brake)	147.5	147.5	147.5	163.5	153.25
LL(With Brake)	183.5	183.5	183.5	198	192.5
LS	47	47	47	47	37
LR	55	55	55	55	45
LE	6	6	6	6	5
LG	11.5	11.5	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	M6xP1 Depth:20mm	M6xP1 Depth:20mm	M6xP1 Depth:20mm	M6xP1 Depth:20mm	M6xP1 Depth:20mm

NOTE

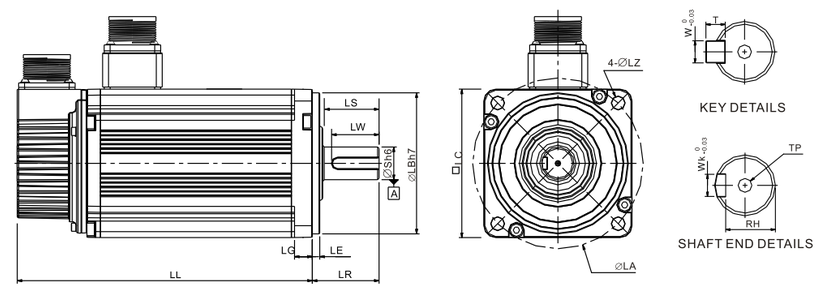
1) Dimensions are in millimeters. Weights are in kilograms (kg) and (pounds (lbs)).
2) Dimensions and weights of the servo motor may be revised without prior notice.
3) The boxes (□) in the model names are for optional configurations (keyway, brake and oil seal).

Speed-Torque Curves (T-N Curves)



Dimensions

- **ECMA Series Servo Motors Frame Size 100mm and above (Units: mm)**

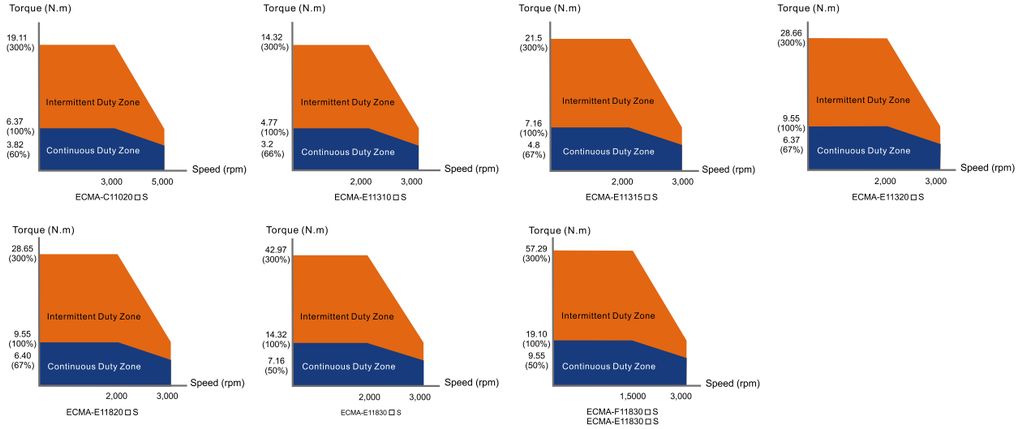


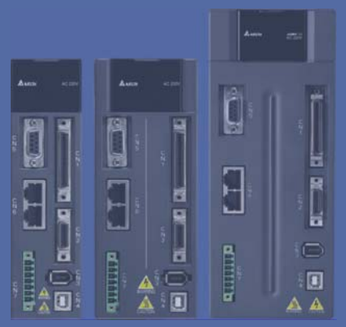
Model	E11310□S	E11315□S	C11020□S	E11320□S	E11820□S	E11830□S	F11830□S
LC	130	130	100	130	180	180	180
LZ	9	9	9	9	13.5	13.5	13.5
LA	145	145	115	145	200	200	200
S	22	22	22	22	35	35	35
LB	110	110	95	110	114.3	114.3	114.3
LL(Without Brake)	147.5	167.5	199	187.5	169	202.1	202.1
LL(With Brake)	183.5	202	226	216	203.1	235.3	235.1
LS	47	47	37	47	73	73	73
LR	55	55	45	55	79	79	79
LE	6	6	5	6	4	4	4
LG	11.5	11.5	12	11.5	20	20	20
LW	36	36	32	36	63	63	63
RH	18	18	18	18	30	30	30
WK	8	8	8	8	10	10	10
W	8	8	8	8	10	10	10
T	7	7	7	7	8	8	8
TP	M6xP1 Depth:20mm	M6xP1 Depth:20mm	M6xP1 Depth:20mm	M6xP1 Depth:20mm	M12xP1.75 Depth:25mm	M12xP1.75 Depth:25mm	M12xP1.75 Depth:25mm

NOTE

1) Dimensions are in millimeters. Weights are in kilograms (kg) and (pounds (lbs)).
2) Dimensions and weights of the servo motor 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)





ASDA-A2 Series Servo Drives

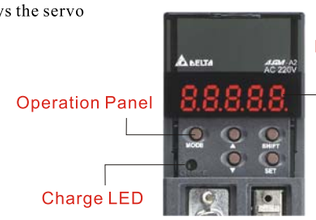
Part Names and Functions

● LED Display / Operation Panel / Charge LED

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

■ Operation Panel
Used function keys 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.





*
● Second Signal Feedback Port

■ Used to connect optical 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

■ Used to connect CANopen networks. 1-in/1-out communication ports are easy for serial connection.
■ CANbus interface, supporting motion modes for CANopen Ds402 implementation.

● Motor Encoder Interface

■ Used to connect the encoder of the servo motor

*
● Extension Digital Input Connection Port

■ Used to connect removable digital input terminal block. Max. 6 digital inputs could be added.

● Serial Communication Port

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

● USB Connection Port

■ Used to connect personal computer or notebook.Ver 1.1 USB is equipped as standard.
■ Direct connectivity to personal computer or notebook, capable of accessing data through ASDA-A2 Soft configuration software.
■ Monitor speed upon software is up to 1Mbps.

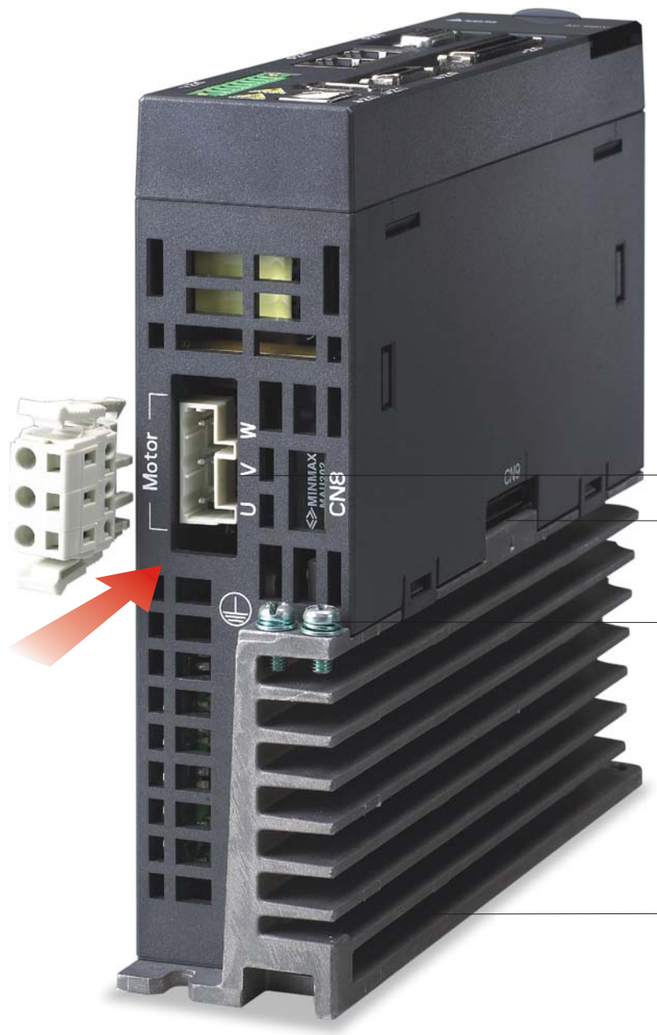
● Internal & External Regenerative Resistor Terminal / Control Circuit Terminal / Main Circuit Terminal

■ 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.
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.

■ Control Circuit Terminal (L1c, L2c) Used to connect 200~230Vac, 50/60Hz single-phase or three-phase Vac supply.

■ Main Circuit Terminal (R, S, T) Used to connect 200~230Vac, 50/60Hz commercial power supply.

■ When using external braking unit, connect braking unit to P⊕ and ⊖ .



● 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 destr oyed beyond repair if incorrect cables are connected to the output terminals.

● Extension Port

● Ground Terminal

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

● Heatsink

■ Used to secure servo drive and for hear dissipation.

Please note:
***This is a Delta optional part.**

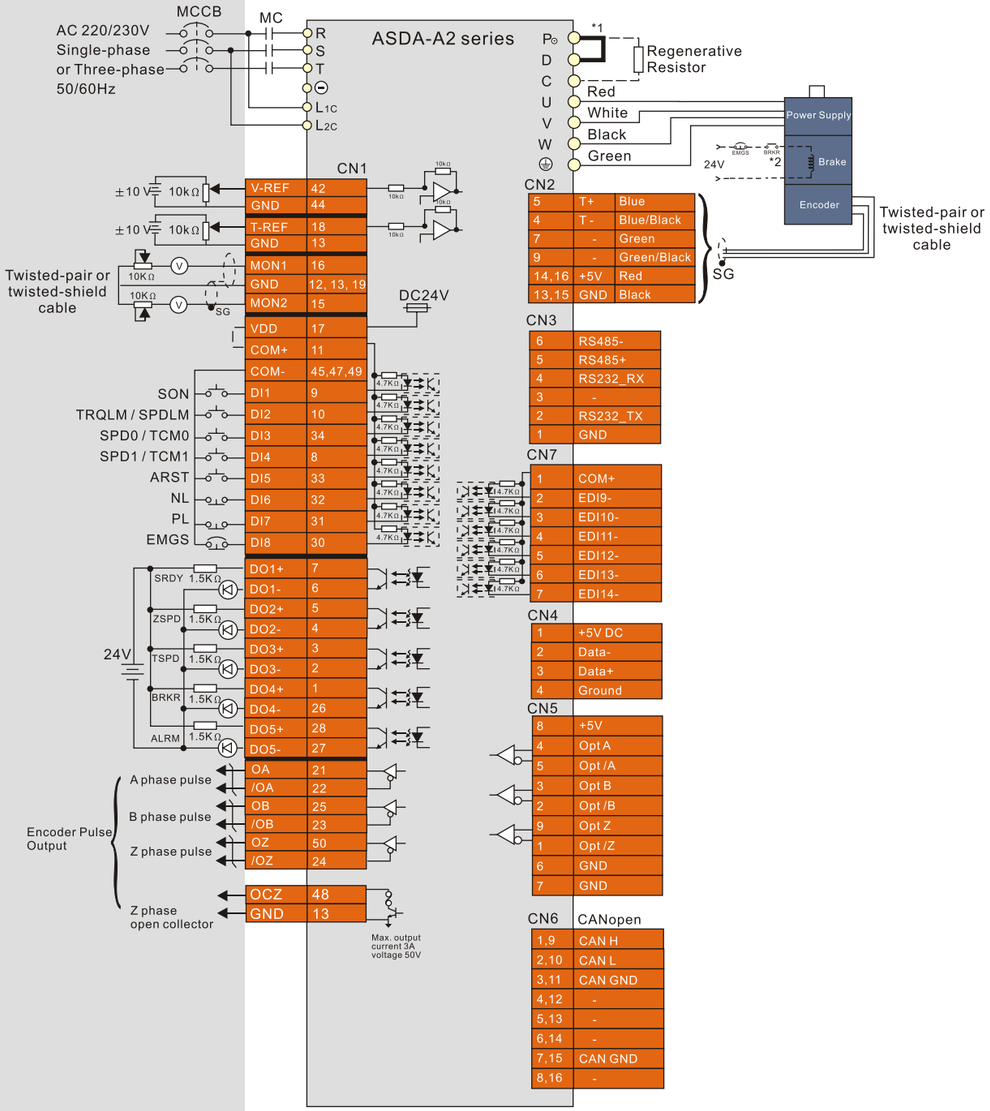


ASDA-A2 Series Servo Drives

ASDA-A2

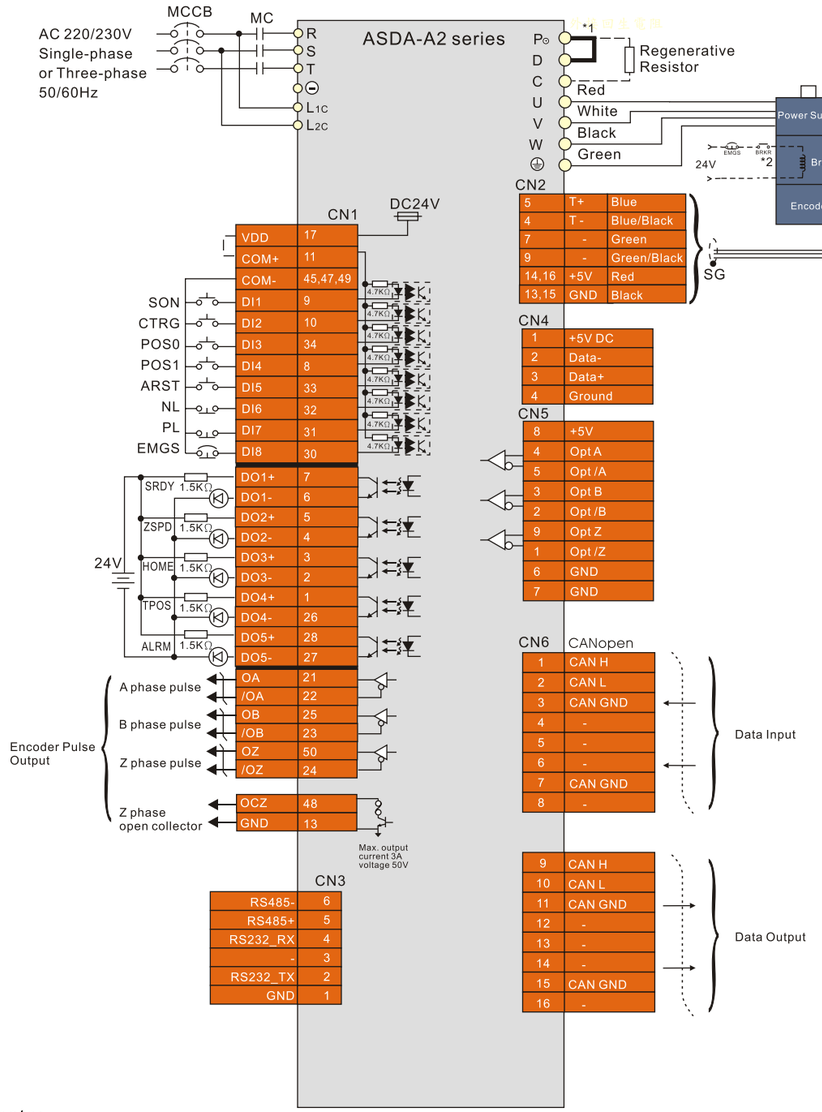
Standard Connection Examples

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



Please note:
*1 400W and below drives do not provide built-in regenerative resistor.
*2 The coil of brake has no polarity.

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



Please note:
*1 400W and below drives do not provide built-in regenerative resistor.
*2 The coil of brake has no polarity.



ASDA-A2 Series Servo Drives

ASDA-A2

Specifications

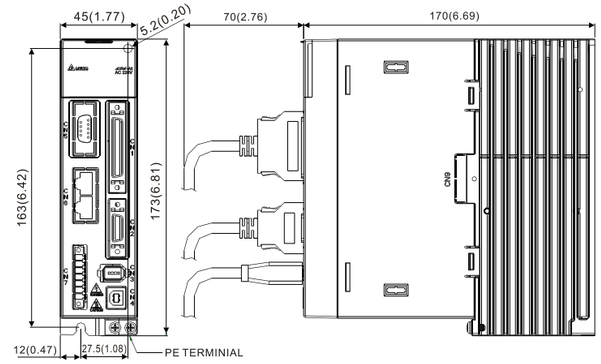
ASDA-A2 Series			200W	400W	750W	1kW	1.5kW	2kW	3kW
			02	04	07	10	15	20	30
Power supply	Phase / Voltage		Three-phase or Single-phase 220VAC					Three-phase 220VAC	
	Permissible Voltage Range		Three-phase or Single-phase 200 ~ 230VAC, -15%~10%					Three-phase 200 ~ 230VAC, -15%~10%	
	Permissible Frequency Range		50 / 60 Hz ± 5%						
Cooling System			Natural Air Circulation			Fan Cooling			
Encoder Resolution/Feedback Resolution			20-bit (1280000 p/rev)						
Control of Main Circuit			SVPWM Control						
Tuning Modes			Max. 500Kpps (Line driver), Max. 200Kpps (Open collector);Max. 4Mpps (Line receiver)						
Dynamic Brake			None		Built-in				
Position Control Mode	Max. Input Pulse Frequency		Max. 500Kpps (Line driver), Max. 200Kpps (Open collector) Max. 4Mpps (Line receiver)						
	Pulse Type		Pulse + Direction, A phase + B phase, CCW pulse + CW pulse						
	Command Source		External pulse train (Pt mode) / Internal parameters (Pr mode)						
	Smoothing Strategy		Low-pass and Moving filter						
	Electronic Gear		Electronic gear N/M multiple N: 1~32767, M: 1:32767(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 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 or via Analog input						
	Frequency Response Characteristic		Maximum 1kHz						
	Speed Accuracy*2 (at rated rotation speed)		0.01% or less at load fluctuation 0 to 100%						
			0.01% or less at power fluctuation ±10%						
			0.01% or less at ambient temperature fluctuation 0°C to 50°C						
Torque Control Mode	Analog Input Command	Voltage Range	0~±10 VDC						
		Input Resistance	10K Ω						
		Time Constant	2.2 μs						
	Command Source		External analog signal / Internal parameters						
	Smoothing Strategy		Low-pass filter						
	Speed Limit Operation		Parameter Setting or via Analog input						
Analog Monitor Output			Monitor signal can set by parameters (Output voltage range: ±8V)						
Digital Input/Output		Input	Servo On, Reset, Gain switching, Pulse clear, Zero speed CLAMP, Speed/Torque limit enabled, Position command selection, 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, 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						
			Encoder signal output (A, B, Z Line Driver and Z Open Collector)						
		Output	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 comm and 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, Full-closed loop excessive deviation, 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						
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~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	9.80665m/s^2 (1G) less than 20Hz, 5.88m/ s^2 (0.6G) 20 to 50Hz						
		IP Rating	IP20						
		Power System	TN System*3						
		Approvals	CE Mark Safety Approved; UL/cUL Safety Approved; IEC / EN 61800-5-1, UL508C						

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.

Dimensions

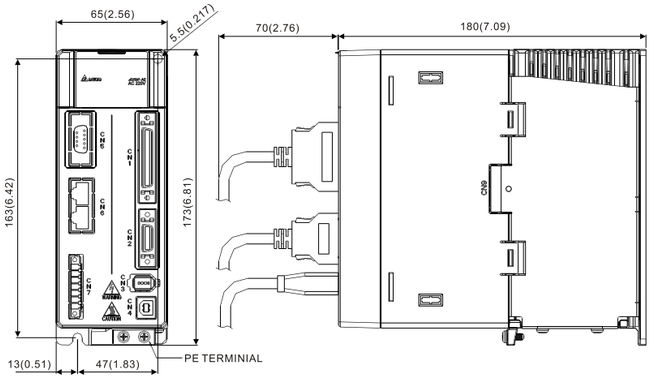
200W / 400W

Weight
1.5 (3.3)



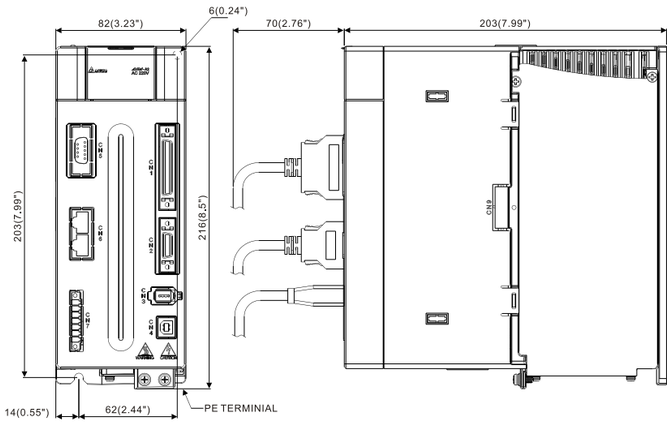
750W / 1.0kW / 1.5kW

Weight
2.0 (4.4)



2.0kW / 3.0kW

Weight
2.89 (6.36)



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



ASDA-A2 Optional Accessories

Servo Drive, Servo Motor and Accessories Combinations

200W Servo Drive and 200W Low Inertia Servo Motor

Servo Drive	ASD-A2-0221-□			
Servo Motor	ECMA-C10602□S			
Cable	Without Brake		With Brake	
	3M	5M	3M	5M
	Power Cables ASD-ABPW0003	Power Cables ASD-ABPW0005	Power Cables ASD-ABPW0103	Power Cables ASD-ABPW0105
	Encoder Cables ASD-ABEN0003	Encoder Cables ASD-ABEN0005	Encoder Cables ASD-ABEN0003	Encoder Cables ASD-ABEN0005
Connector	Power Connectors ASDBCAPW0000		Power Connectors ASDBCAPW0100	
	Encoder Cables ASD-ABEN0000			

400W Servo Drive and 400W Low Inertia Servo Moto

Servo Drive	ASD-A2-0421-□			
Servo Motor	ECMA-C10604□S ECMA-C10804□7			
Cable	Without Brake		With Brake	
	3M	5M	3M	5M
	Power Cables ASD-ABPW0003	Power Cables ASD-ABPW0005	Power Cables ASD-ABPW0103	Power Cables ASD-ABPW0105
	Encoder Cables ASD-ABEN0003	Encoder Cables ASD-ABEN0005	Encoder Cables ASD-ABEN0003	Encoder Cables ASD-ABEN0005
Connector	Power Connectors ASDBCAPW0000		Power Connectors ASDBCAPW0100	
	Encoder Cables ASD-ABEN0000			

400W Servo Drive and 500W Medium Inertia Servo Motor

Servo Drive	ASD-A2-0421-□			
Servo Motor	ECMA-E11305□S			
Cable	Without Brake		With Brake	
	3M	5M	3M	5M
	Power Cables ASD-CAPW1003	Power Cables ASD-CAPW1005	Power Cables ASD-CAPW1103	Power Cables ASD-CAPW1105
	Encoder Cables ASD-CAEN1003	Encoder Cables ASD-CAEN1005	Encoder Cables ASD-CAEN1003	Encoder Cables ASD-CAEN1005
Connector	Power Connectors ASD-CAPW1000			
	Encoder Cables ASD-CAEN1000			

400W Servo Drive and 300W High Inertia Servo Motor

Servo Drive	ASD-A2-0421-□			
Servo Motor	ECMA-G11303□S			
Cable	Without Brake		With Brake	
	3M	5M	3M	5M
	Power Cables ASD-CAPW1003	Power Cables ASD-CAPW1005	Power Cables ASD-CAPW1103	Power Cables ASD-CAPW1105
	Encoder Cables ASD-CAEN1003	Encoder Cables ASD-CAEN1005	Encoder Cables ASD-CAEN1003	Encoder Cables ASD-CAEN1005
Connector	Power Connectors ASD-CAPW1000			
	Encoder Cables ASD-CAEN1000			

750W Servo Drive and 750W Low Inertia Servo Motor

Servo Drive	ASD-A2-0721-□			
Servo Motor	ECMA-C10807□S			
Cable	Without Brake		With Brake	
	3M	5M	3M	5M
	Power Cables ASD-ABPW0003	Power Cables ASD-ABPW0005	Power Cables ASD-ABPW0103	Power Cables ASD-ABPW0105
	Encoder Cables ASD-ABEN0003	Encoder Cables ASD-ABEN0005	Encoder Cables ASD-ABEN0003	Encoder Cables ASD-ABEN0005
Connector	Power Connectors ASDBCAPW0000		Power Connectors ASDBCAPW0100	
	Encoder Cables ASD-ABEN0000			

750W Servo Drive and 600W High Inertia Servo Motor

Servo Drive	ASD-A2-0721-□			
Servo Motor	ECMA-G11306□S			
Cable	Without Brake		With Brake	
	3M	5M	3M	5M
	Power Cables ASD-CAPW1003	Power Cables ASD-CAPW1005	Power Cables ASD-CAPW1103	Power Cables ASD-CAPW1105
	Encoder Cables ASD-CAEN1003	Encoder Cables ASD-CAEN1005	Encoder Cables ASD-CAEN1003	Encoder Cables ASDBCAEN1005
Connector	Power Connectors ASD-CAPW1000			
	Encoder Cables ASD-CAEN1000			



ASDA-A2 Optional Accessories

Servo Drive, Servo Motor and Accessories Combinations

1kW Servo Drive and 1kW Low Inertia Servo Motor

Servo Drive	ASD-A2-1021-□			
Servo Motor	ECMA-C11010□S			
Cable	Without Brake		With Brake	
	3M	5M	3M	5M
	Power Cables ASD-CAPW1003	Power Cables ASD-CAPW1005	Power Cables ASD-CAPW1103	Power Cables ASD-CAPW1105
	Encoder Cables ASD-CAEN1003	Encoder Cables ASD-CAEN1005	Encoder Cables ASD-CAEN1003	Encoder Cables ASD-CAEN1005
Connector	Power Connectors ASD-CAPW1000			
	Encoder Cables ASD-CAEN1000			

1kW Servo Drive and 1kW Medium Inertia Servo Motor

Servo Drive	ASD-A2-1021-□			
Servo Motor	ECMA-E11310□S			
Cable	Without Brake		With Brake	
	3M	5M	3M	5M
	Power Cables ASD-CAPW1003	Power Cables ASD-CAPW1005	Power Cables ASD-CAPW1103	Power Cables ASD-CAPW1105
	Encoder Cables ASD-CAEN1003	Encoder Cables ASD-CAEN1005	Encoder Cables ASD-CAEN1003	Encoder Cables ASD-CAEN1005
Connector	Power Connectors ASD-CAPW1000			
	Encoder Cables ASD-CAEN1000			

1kW Servo Drive and 900W High Inertia Servo Motor

Servo Drive	ASD-A2-1021-□			
Servo Motor	ECMA-G11309□S			
Cable	Without Brake		With Brake	
	3M	5M	3M	5M
	Power Cables ASD-CAPW1003	Power Cables ASD-CAPW1005	Power Cables ASD-CAPW1103	Power Cables ASD-CAPW1105
	Encoder Cables ASD-CAEN1003	Encoder Cables ASD-CAEN1005	Encoder Cables ASD-CAEN1003	Encoder Cables ASD-CAEN1005
Connector	Power Connectors ASD-CAPW1000			
	Encoder Cables ASD-CAEN1000			

1.5kW Servo Drive and 1.5kW Medium Inertia Servo Motor

Servo Drive	ASD-A2-1521-□			
Servo Motor	ECMA-E11315□S			
Cable	Without Brake		With Brake	
	3M	5M	3M	5M
	Power Cables ASD-CAPW1003	Power Cables ASD-CAPW1005	Power Cables ASD-CAPW1103	Power Cables ASD-CAPW1105
	Encoder Cables ASD-CAEN1003	Encoder Cables ASD-CAEN1005	Encoder Cables ASD-CAEN1003	Encoder Cables ASD-CAEN1005
Connector	Power Connectors ASD-CAPW1000			
	Encoder Cables ASD-CAEN1000			

2kW Servo Drive and 2kW Low Inertia Servo Motor

Servo Drive	ASD-A2-2023-□			
Servo Motor	ECMA-C11020□S			
Cable	Without Brake		With Brake	
	3M	5M	3M	5M
	Power Cables ASD-A2PW1003	Power Cables ASD-A2PW1005	Power Cables ASD-A2PW1103	Power Cables ASD-A2PW1105
	Encoder Cables ASD-CAEN1003	Encoder Cables ASD-CAEN1005	Encoder Cables ASD-CAEN1003	Encoder Cables ASD-CAEN1005
Connector	Power Connectors ASD-CAPW1000			
	Encoder Cables ASD-CAEN1000			

2kW Servo Drive and 2kW Medium Inertia Servo Motor

Servo Drive	ASD-A2-2023-□			
Servo Motor	ECMA-E11320□S			
Cable	Without Brake		With Brake	
	3M	5M	3M	5M
	Power Cables ASD-A2PW1003	Power Cables ASD-A2PW1005	Power Cables ASD-A2PW1103	Power Cables ASD-A2PW1105
	Encoder Cables ASD-CAEN1003	Encoder Cables ASD-CAEN1005	Encoder Cables ASD-CAEN1003	Encoder Cables ASD-CAEN1005
Connector	Power Connectors ASD-CAPW1000			
	Encoder Cables ASD-CAEN1000			

Servo Drive	ASD-A2-2023-□			
Servo Motor	ECMA-E11820□S			
Cable	Without Brake		With Brake	
	3M	5M	3M	5M
	Power Cables ASD-CAPW2003	Power Cables ASD-CAPW2005	Power Cables ASD-CAPW2103	Power Cables ASD-CAPW2105
	Encoder Cables ASD-CAEN1003	Encoder Cables ASD-CAEN1005	Encoder Cables ASD-CAEN1003	Encoder Cables ASD-CAEN1005
Connector	Power Connectors ASD-CAPW2000			
	Encoder Cables ASD-CAEN1000			



Servo Drive, Servo Motor and Accessories Combinations

3kW Servo Drive and 3kW Medium Inertia Servo Motor

Servo Drive	ASD-A2-3023-□			
Servo Motor	ECMA-E11830□S			
Cable	Without Brake		With Brake	
	3M	5M	3M	5M
	Power Cables ASD-CAPW2003	Power Cables ASD-CAPW2005	Power Cables ASD-CAPW2103	Power Cables ASD-CAPW2105
	Encoder Cables ASD-CAEN1003	Encoder Cables ASD-CAEN1005	Encoder Cables ASD-CAEN1003	Encoder Cables ASD-CAEN1005
Connector	Power Connectors ASD-CAPW2000			
	Encoder Cables ASD-CAEN1000			

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

Servo Drive	ASD-A2-3023-□			
Servo Motor	ECMA-F11830□S			
Cable	Without Brake		With Brake	
	3M	5M	3M	5M
	Power Cables ASD-CAPW2003	Power Cables ASD-CAPW2005	Power Cables ASD-CAPW2103	Power Cables ASD-CAPW2105
	Encoder Cables ASD-CAEN1003	Encoder Cables ASD-CAEN1005	Encoder Cables ASD-CAEN1003	Encoder Cables ASD-CAEN1005
Connector	Power Connectors ASD-CAPW2000			
	Encoder Cables ASD-CAEN1000			

Other Accessories (for ASDA-A2 series all models)	
Description	Delta Part Number
50Pin I/O signal 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-CB04
CANopen Distribution Box	TAP-CN03
Regenerative Resistor 400W 40Ω	BR400W040
Regenerative Resistor 1kW 20Ω	BR1K0W020

Regenerative Resistor Specifications

Servo Drive (kW)	Recommended Specifications for Built-in Regenerative Resistor		Recommended Specifications for External Regenerative Resistor	Min. Allowable Resistance (Ohm)
	Resistance (Ohm) (parameter P1-52)	Capacity (Watt) (parameter P1-53)		
0.2	-	-	50Ω	40Ω
0.4	-	-	40Ω	30Ω
0.75	40Ω	60W	30Ω	20Ω
1.0	40Ω	60W	30Ω	20Ω
1.5	40Ω	60W	30Ω	20Ω
2.0	20Ω	100W	30Ω	20Ω
3.0	20Ω	100W	15Ω	10Ω

Note:

1) There is no built-in regenerative resistor for 400W and below ASDA-A2 series servo drive.
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 situation could not be improved after increasing the regenerative resistor capacity or decreasing the regenerative resistor resistance, please purchase regenerative resistor module.
4) 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 should not be less than the minimum allowable resistance listed in the above table.

Safety Information

Global Standards	ASDA-A2 series is designed to fully comply with demanding international standards, i.e. IEC and EN, etc. for all fields of industrial automation technology.	
EMS standard	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	