Digitized Automation for a Changing World

Delta AC Servo Drive & Motor ASDA-E3 Series

www.deltaww.com

Simple and Stable

The Delta Servo System ASDA-E3 Series inherits the features of the ASDA-B3 Series with more simplified wiring and a user-friendly interface for fast implementation.

With faster response time, the servo drive ASD-E3 Series and servo motor ECM-E3 Series are a perfect match, which meets the needs of various industrial automation scenarios. Suitable for principal applications such as transmitting, transporting, positioning, and more, the ASDA-E3 Series can also play a crucial part in achieving stable performance, enhancing productivity and efficiency, and providing high added value to customers.

Table of Contents

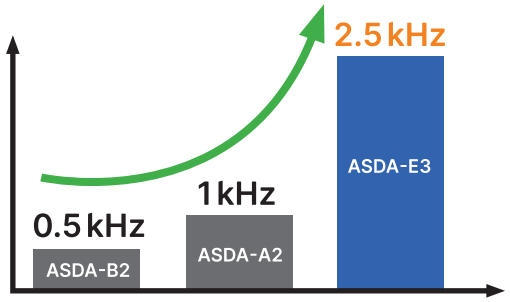
Features

Servo System ASDA-E3 Series

Performance Optimization

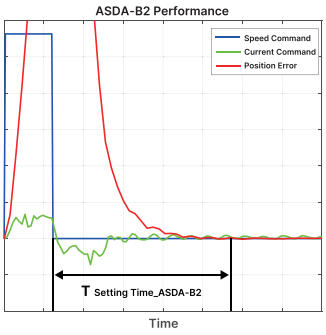
Response Bandwidth

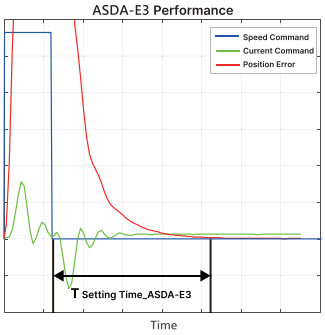
- Higher responsiveness: From 0.5 kHz (ASDA-B2 series) to 2.5 kHz (ASDA-E3 series)



Increased Productivity

- Settling time reduced by 13%





Performance Enhancement

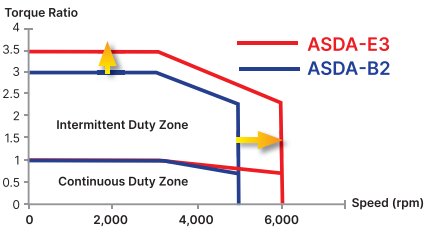
Enhances positioning precision and optimizes the system

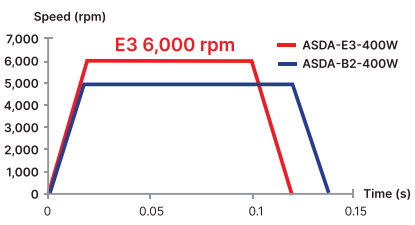
- Higher response bandwidth with the same load conditions

	ASDA-B2	ASDA-E3	ASDA-B2	ASDA-E3	ASDA-B2	ASDA-E3
Actual Load Inertia Ratio	30 times		50 times		70 times	
Speed Loop Bandwidth in Position Mode	Approx. 150 Hz	Approx. 200 Hz	Approx. 30 Hz	Approx. 120 Hz	Max. performance	Approx. 16 Hz

Increased Speed and Torque

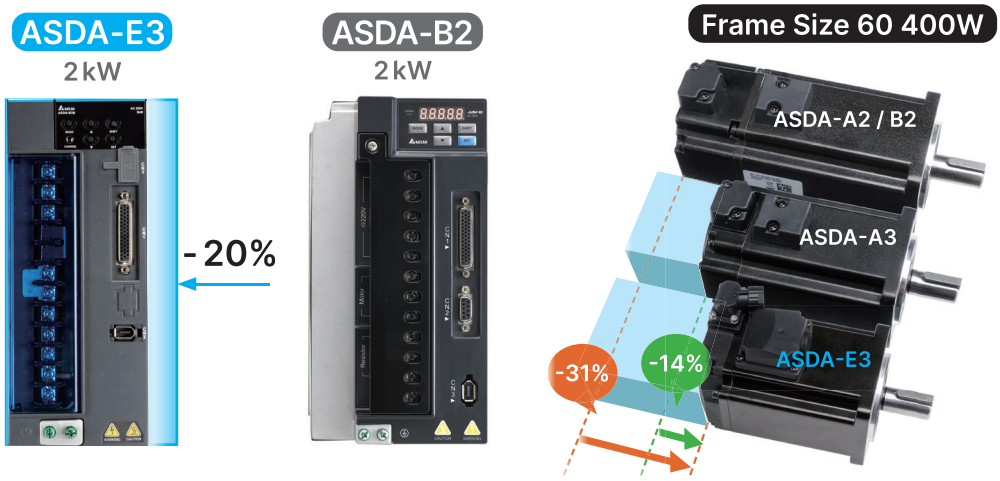
- Peak speed increases to 6,000 rpm
- Torque overload ratio raises to 3.5 times
- Significantly improves productivity and efficiency





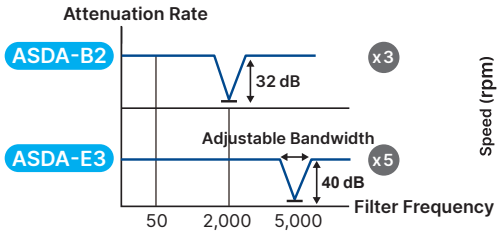
Less Installation Space

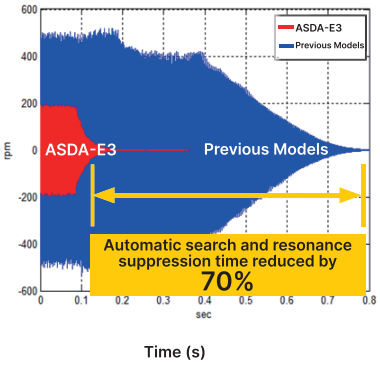
- Compared with the ASDA-B2, the size of the ASDA-E3 servo drive is reduced up to 20%
- The size of the ASDA-E3M servo motor is reduced up to 25%



Vibration Suppression Functions

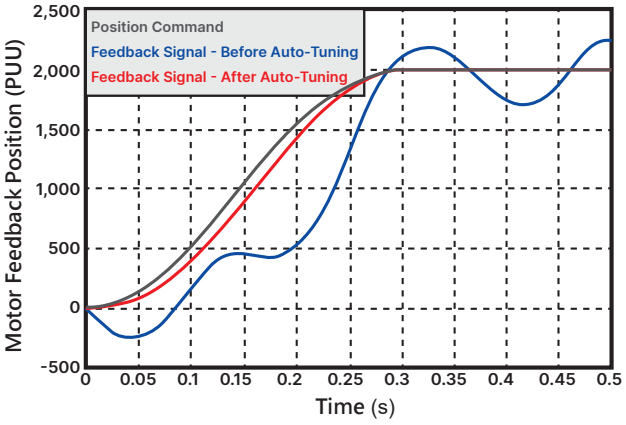
- 5 sets of high frequency resonance suppression
- Filter bandwidth increased to 5,000 Hz
- Automatically searches for the resonance frequency point and completes the resonance suppression





Self-Diagnosis and Adaptation

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



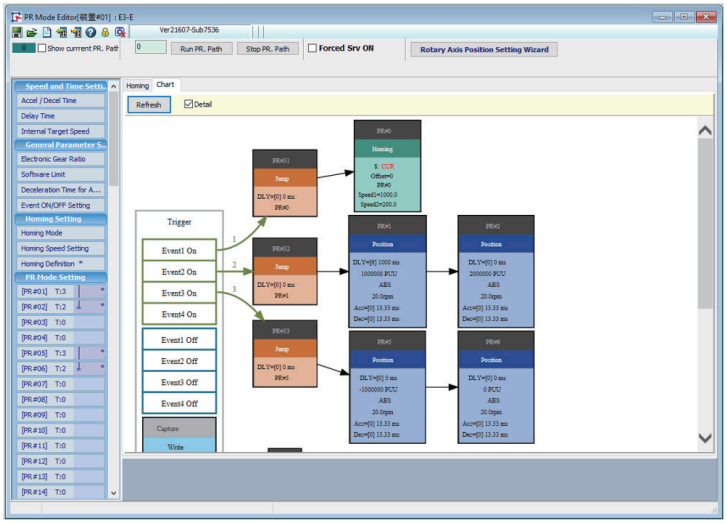
Features

Servo System ASDA-E3 Series

Superior Functions

Motion Inside (E3-E Only)

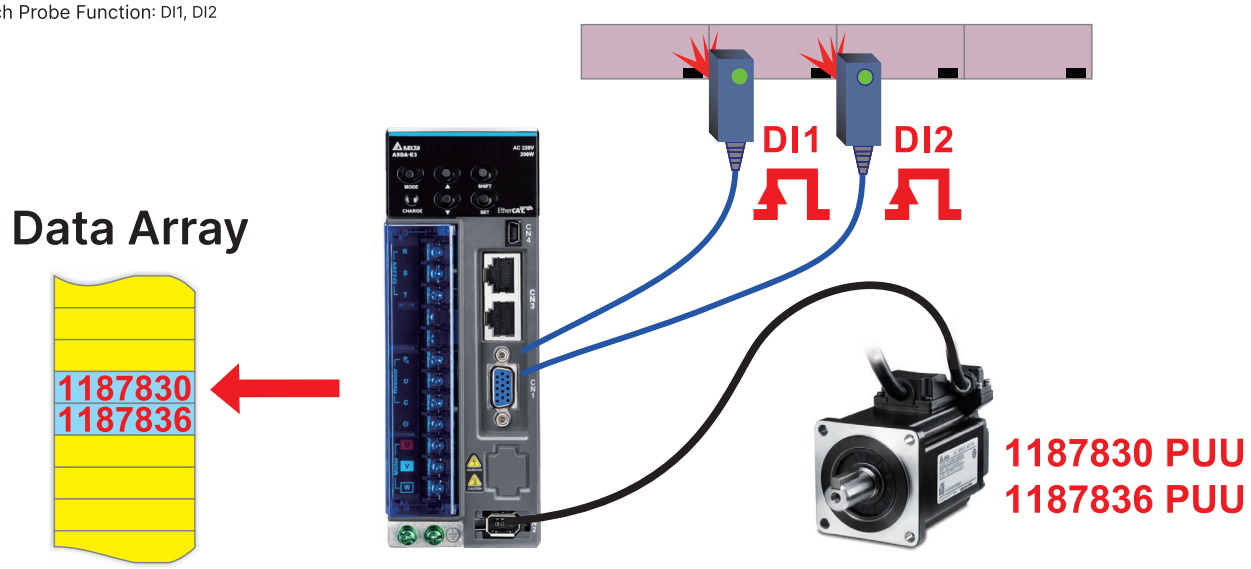
- Supports up to 99 PR paths for flexible motion command planning
- Condition jump commands
- Intuitive operation interface with graphics
- Homing modes, position commands, and speed commands
- Overlap command, interrupt command, jump command, and parameter settings



High-Speed Capture Function

- Supports the Touch Probe function with two sets of DIs in the EtherCAT communication mode

Note: Touch Probe Function: DI1, DI2



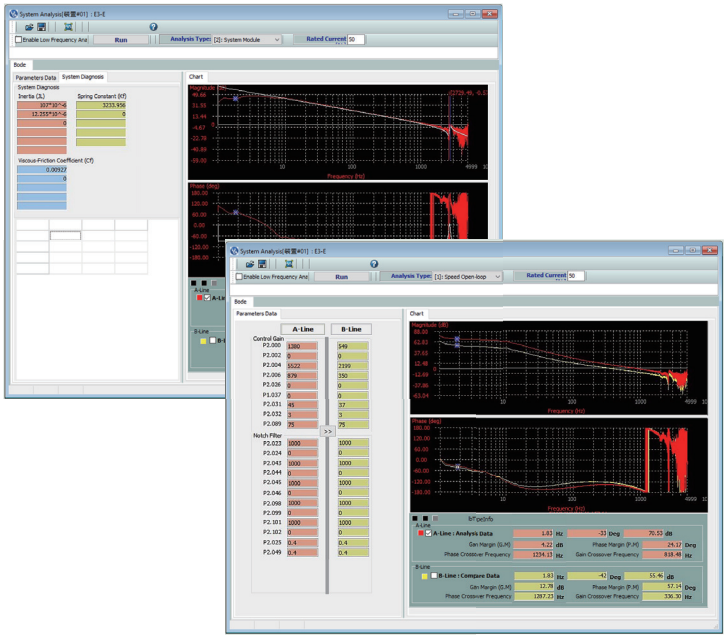
System Analysis Tool

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

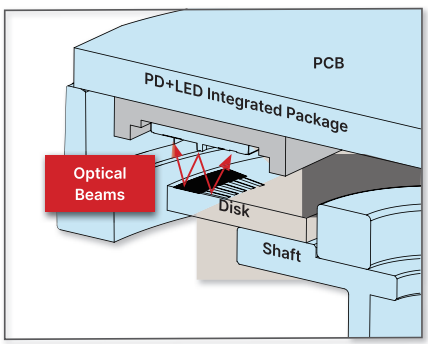
- Ensures system stability
- Compares the phases before and after gain adjustment to ensure the safety margin of the system



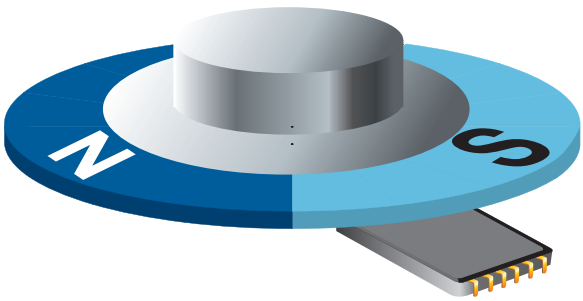
High Resolution Encoder

- 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
- 22-bit optical encoder: The encoder is lighter, thinner, and energy-efficient with an exclusive sensor compensation function improving encoder's precision
- 17-bit magnetic encoder: The magnetic induction technology improves the capability to prevent vibration and increases the oil resistance level

Optical Encoder



Magnetic Encoder

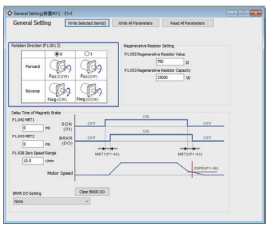
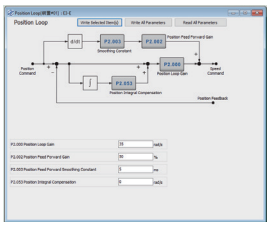
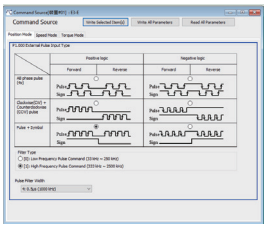
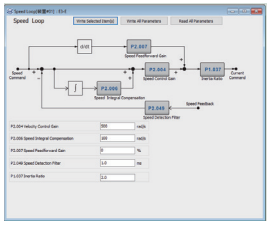


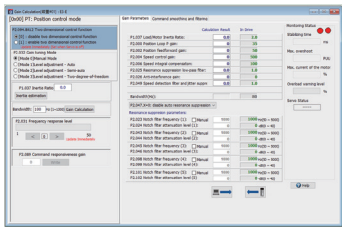
Features

Servo System ASDA-E3 Series

Graphical Parameter Setting

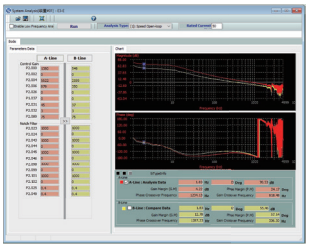
- Intuitive graphic illustrations for gain adjustment and parameter settings



Advanced Gain Adjustment Function

- Provides advanced gain adjustment modes for fine tuning according to different applications and operating characteristics



System Analysis Interface

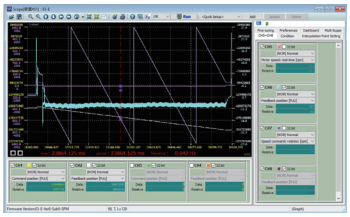
Speed Open-Loop Mode

- Optimizes the entire system and thus improves the design

System Module Mode

- Measures the mechanical stiffness of the mechanism in this mode

Oscilloscope Function



Supports ASD-E3-L:

- Maximum of 4 channels with 16-bit data size and update frequency of 2 kHz
- 2 high-resolution channels with 32-bit data size and update frequency of 2 kHz
- 2 high-resolution channels with 16-bit data size and update frequency of 4 kHz

Supports ASD-E3-E:

- Maximum of 8 channels with 16-bit data size and update frequency of 10 kHz
- 4 high-resolution channels with 32-bit data size and update frequency of 10 kHz
- 4 high-resolution channels with 16-bit data size and update frequency of 20 kHz

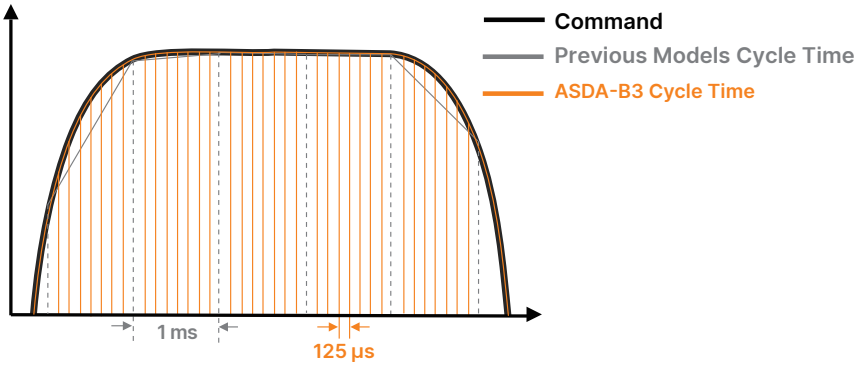
EtherCAT Communication Functions

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

Supports every CoE and command modes of the CiA402

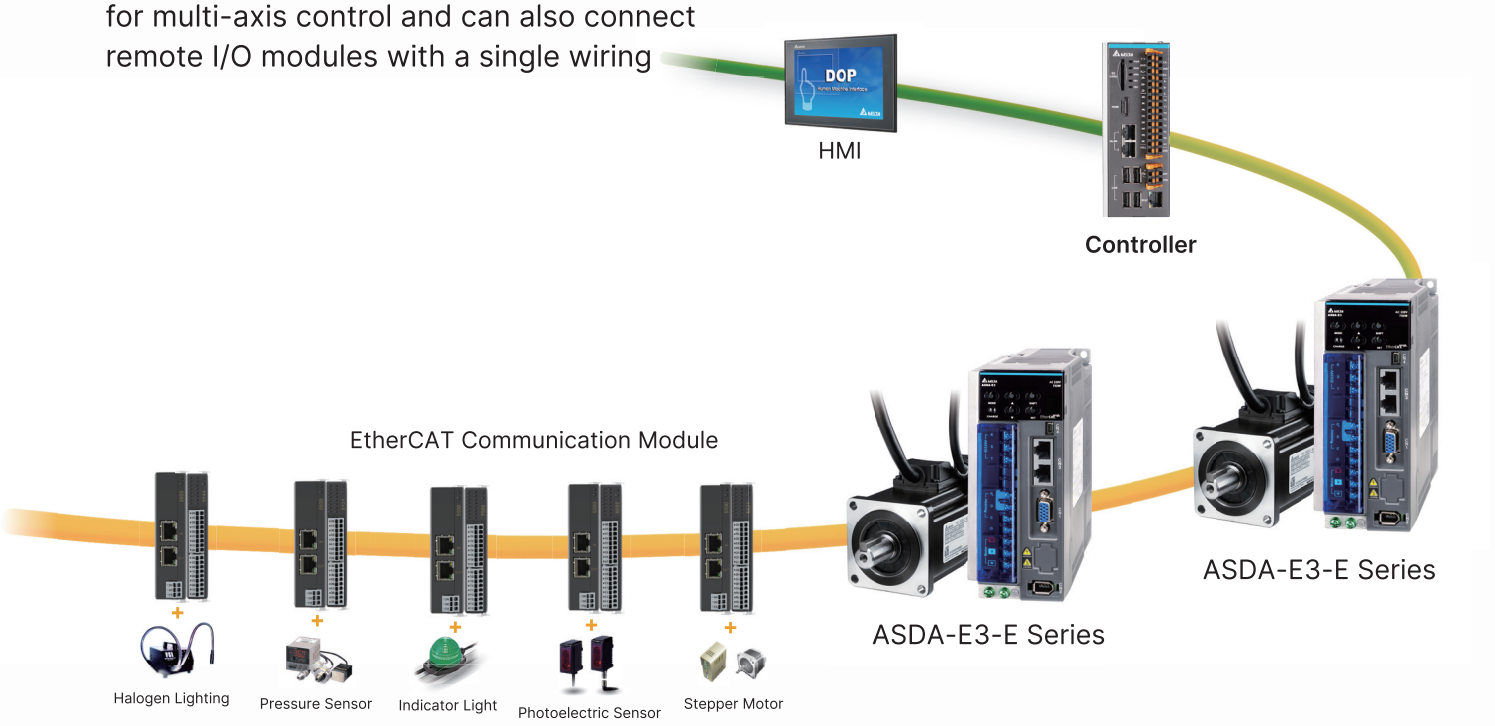
Shorter Synchronization Cycle

The synchronization cycle of the ASDA-E3 series is 125 μs, which is 8 times faster than that of the ASDA-A2 series



Simplified Wiring

- Single-axis pulse wiring is reduced. Suitable for multi-axis control and can also connect remote I/O modules with a single wiring



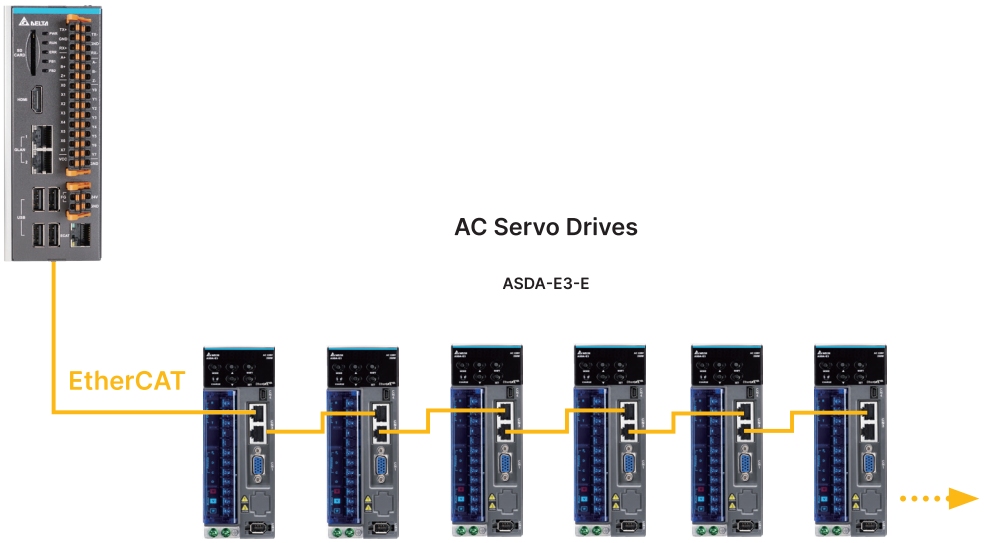
Features

Servo System ASDA-E3 Series

EtherCAT Communication

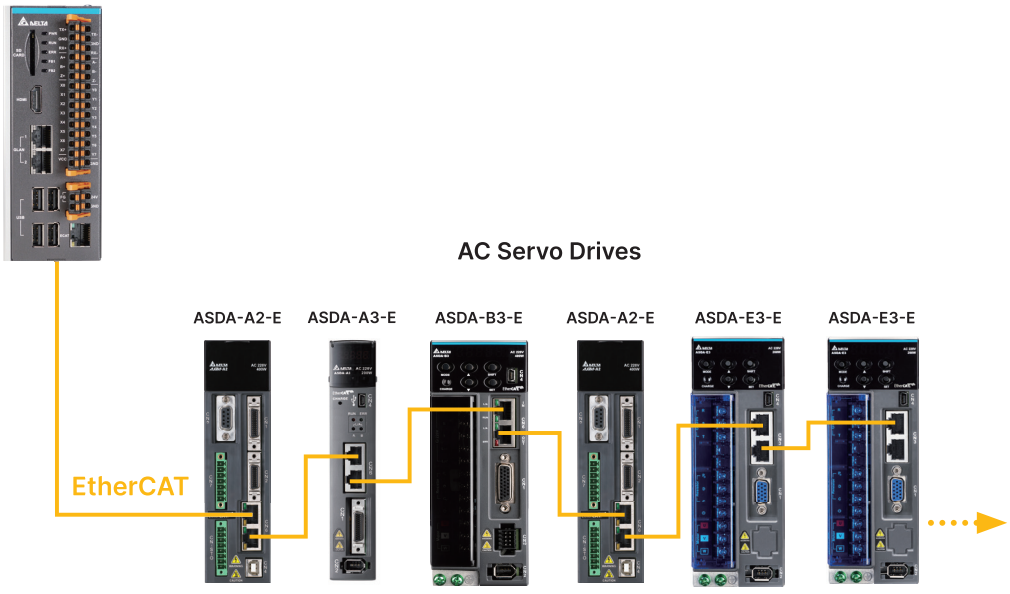
Longer Connection Distance

- The maximum distance between two servo stations is 50 m. The axes of connection hinge on the upper control equipment



Compatible with Previous Models

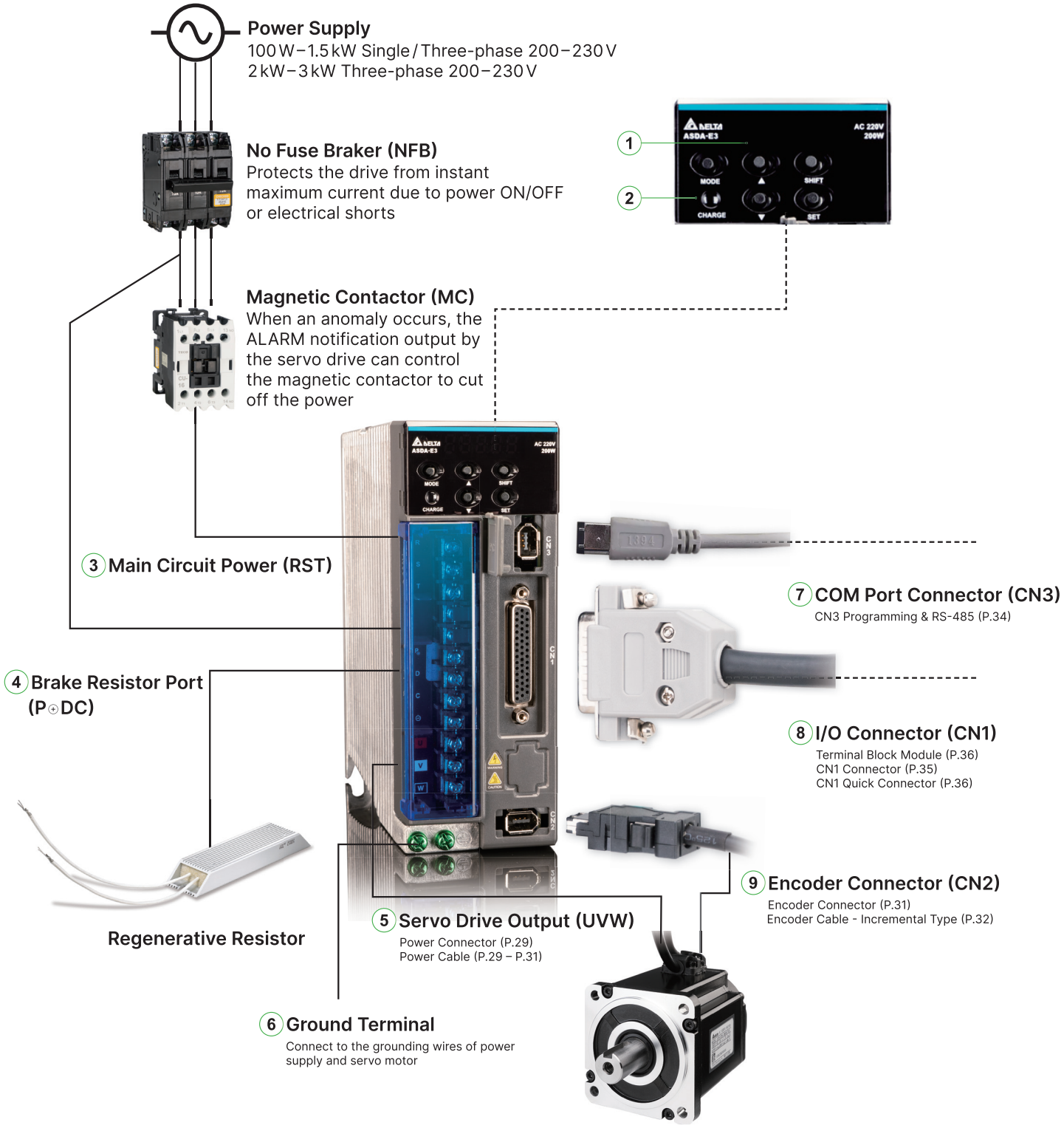
EtherCAT of the ASDA-A3 / B3 / E3 series are compatible with the ASDA-A2-E series.
The communication cycle is based on update speed



Servo Drive Introduction

Servo System ASDA-E3 Series

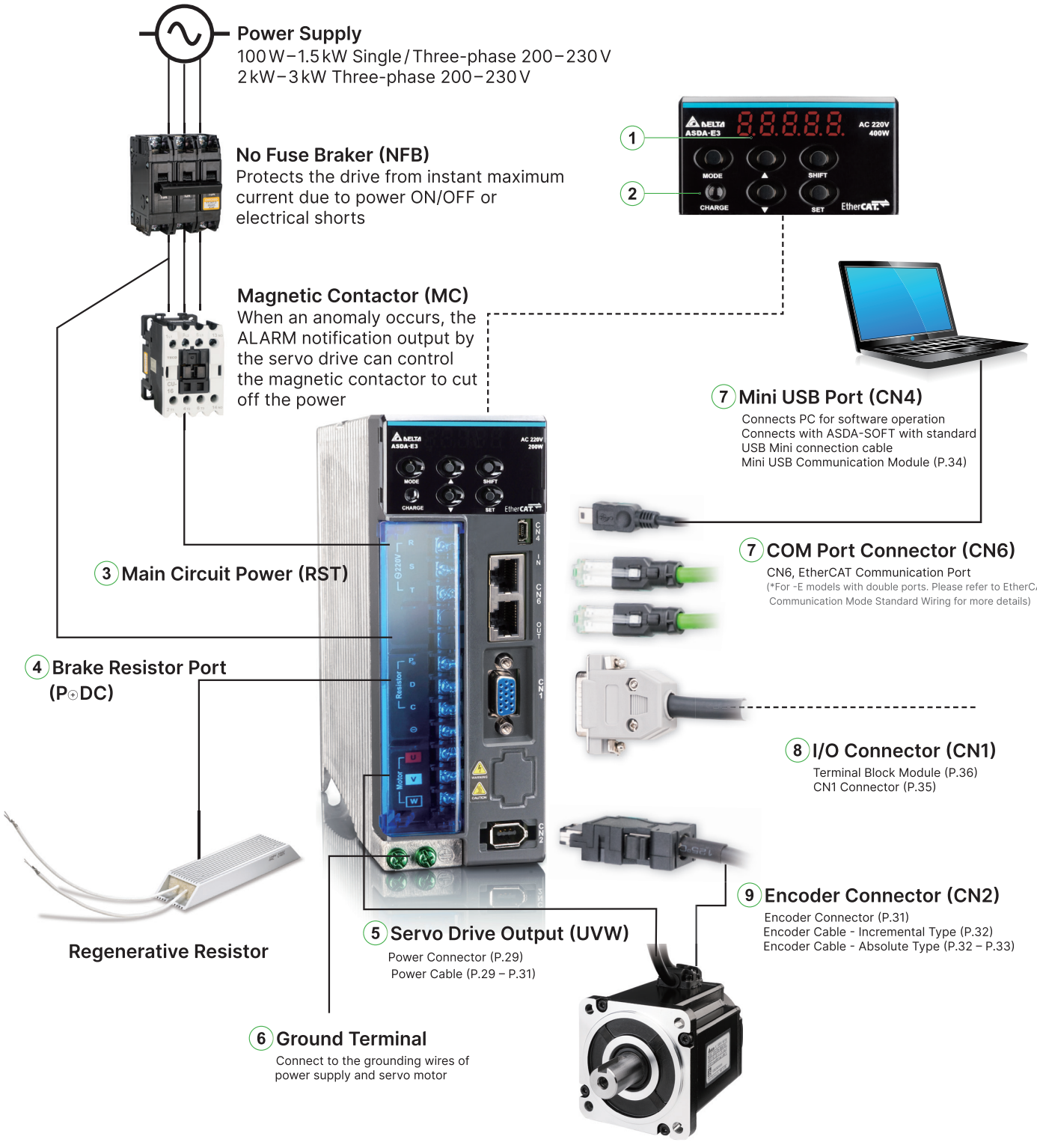
Servo Drive & Accessories (For E3-L)



Servo Drive Introduction

Servo System ASDA-E3 Series

Servo Drive & Accessories (For E3-E)



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	Regenerative Resistor	Connects to an external regenerative resistor, external regenerative braking unit, or the built-in regenerative resistor
⑤	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
⑥	Ground Terminal	Connects to the ground wire for the power and servo motor
⑦	CN3	Modbus communication port; connects to RS-485 (for communication) or RS-232 (for communication / PC) (E3-L)
	CN4	Mini USB connector; connects to PC (E3-E)
	CN6	EtherCAT high-speed communication port (E3-E)
⑧	CN1	I/O signal interface; connects to the PLC or controls I/O
⑨	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
- With options of brake and without brake

Encoder Cables

- 3 m, 5 m, 10 m, and 20 m standard cables are available

Parameter Communication Cables

- Connects the PC and the servo drive for ASDA-Soft operation
- Model: ACS3-CNUS0A08 (E3-L)*
- Model: UC-PRG015-01B (E3-E)

*Recent encoding naming of the 3rd generation servo, which is identical to the ASD-CNUS0A08 cable of the ASDA-B2 series

Regenerative Resistor Specifications

ASDA-E3 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
Regenerative Resistor	Built-in Regenerative Resistor	Resistance (Ohm)	N/A	N/A	N/A	100	100	100	20	20
		Capacity (Watt)	N/A	N/A	N/A	40	40	40	80	80
	External Minimum Allowable Resistance Value (Ohm)		60	60	60	60	30	30	15	15

Combination Table

Servo System ASDA-E3 Series

Motor							Drive	Power Cable		Powe
Type	Power Supply	Output (W)	Model Name	Rotational Inertia ($x10^{-4}kg.m^2$) Standard / With Brake	Rated / Max. Speed (rpm)	Rated / Max. Torque (N-m)	Model Name	Standard	Torsion-Resistant	Standar
ECM-E3L	Single- / Three-phase	100	ECM-E3L-C 2 0401 3 4 E	0.0299 / 0.0315	3000 / 6000	0.32 / 1.12	ASD-E3-0121-②	ACS3-CAPW11XX	ACS3-CAPF11XX	ACS3-CAPW
ECM-E3M	Single- / Three-phase	200	ECM-E3M-C 2 0602 3 4 E	0.141 / 0.151		0.64 / 2.24	ASD-E3-0221-②			
	Single- / Three-phase	400	ECM-E3M-C 2 0604 3 4 E	0.254 / 0.264		1.27 / 4.45	ASD-E3-0421-②			
	Single- / Three-phase	750	ECM-E3M-C 2 0807 3 4 E	1.07 / 1.13		2.4 / 8.4	ASD-E3-0721- ②			
							ASD-E3-1021- ②			
	Single- / Three-phase	1000	ECM-E3M-E 2 1310 3 4 E	7.79 / 7.94	2000 / 3000	4.77 / 14.3	ASD-E3-1021-②	ACS3-CAPWA2XX (S)(W) ACS3-CRPWA2XX (R)(W)	ACS3-CAPFA2XX (S)(W) ACS3-CRPFA2XX (R)(W)	ACS3-CABRA1 ACS3-CRBRA1
	Single- / Three-phase	1500	ECM-E3M-E 2 1315 3 4 E	11.22 / 11.37		7.16 / 19.93	ASD-E3-1521-②			
						7.16 / 21.48	ASD-E3-2023-②			
	Three-phase	2000	ECM-E3M-E 2 1320 3 4 E	14.65 / 14.8		9.55 / 28.65	ASD-E3-2023- ②	ACS3-CAPWA3XX (S)(W) ACS3-CRPWA3XX (R)(W)	ACS3-CAPFA3XX (S)(W) ACS3-CRPFA3XX (R)(W)	
	Three-phase	3000	ECM-E3M-F 2 1830 3 4 E	53.63 / 54.9	1500 / 3000	19.1 / 52.3	ASD-E3-3023- ②	ACS3-CAPWC5XX (S)(W) ACS3-CRPWC5XX (R)(W)	ACS3-CAPFC5XX (S)(W) ACS3-CRPFC5XX (R)(W)	

Note:
1. Model name with (W) = IP67 water-proof connector; (D) = drive connector; (M) = motor connector; (S) = straight connector; (R) = angular connector; (B) = single brake connector, power connector required.
2. Cable model name: The "XX" stands for cable length. 03 = 3m, 05 = 5m, 10 = 10m, 20 = 20m.
3. Servo motor model name: 2 = encoder type, 3 = type of shaft and oil seal, 4 = shaft diameter and connector type.
4. Servo drive model name: 2 = model code.

Connector & Cable						Connector Only (No Cable)		
r 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
/21XX	ACS3-CAPF21XX	ACS3-CAEN01XX	ACS3-CAEF01XX	ACS3-CAEA01XX	ACS3-CAEB01XX	ACS3-CAPW1000	ACS3-CAPW2000	ACS3-CNENC200 (D) + ACS3-CAEN0000 (M)
XX (S)(W) XX (R)(W)	ACS3-CABFA1XX (S)(W) ACS3-CRBFA1XX (R)(W)	ACS3-CAENA1XX (S)(W) ACS3-CRENA1XX (R)(W)	ACS3-CAEFA1XX (S)(W) ACS3-CREFA1XX (R)(W)	ACS3-CAEAA1XX (S)(W) ACS3-CREAA1XX (R)(W)	ACS3-CAEBA1XX (S)(W) ACS3-CREBA1XX (R)(W)	ACS3-CAPWA000 (S)(W) ACS3-CRPWA000 (R)(W)	ACS3-CABRA000 (B)(S)(W) ACS3-CRBRA000 (B)(R)(W)	ACS3-CNENC200 (D) + ACS3-CNENA000 (M)(S)(W) ACS3-CRENA000 (M)(R)(W)
						ACS3-CAPWC000 (S)(W) ACS3-CRPWC000 (R)(W)		

Model Name

Servo System ASDA-E3 Series

Servo Drive ASD-E3 Series

ASD - E3 - 04 21 - L

Product Name
AC Servo Drive

Product Series
E3 Series

Rated Power Output

01: 100 W	10: 1 kW
02: 200 W	15: 1.5 kW
04: 400 W	20: 2 kW
07: 750 W	30: 3 kW

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

Model Code
See the ASD-E3 table below

ASD-E3

Code	PT Mode Pulse Input	PR Mode	RS-485	Analog Voltage Control	CANopen	DMCNET	EtherCAT	STO
L	○	X	○	○	X	X	X	X
E	X	○	X	X	X	X	○	X

Specifications

Servo System ASDA-E3 Series

Servo Drives

ASD-E3			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		Single-phase / Three-phase 220 V_{AC}						Three-phase 220 V_{AC}	
	Permissible Voltage		Single-phase / Three-phase 200 ~ 230 V_{AC}, -15% ~ 10%						Three-phase 200 ~ 230 V_{AC}, -15% ~ 10%	
	Input Current (3PH) (Unit: Arms)		0.82	1.26	2.0	3.33	5.25	5.8	8.1	10.9
	Input Current (1PH) (Unit: Arms)		1.51	2.28	3.7	6.37	10.0	11.3	-	-
	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
Regenerative Resistor	Built-in Regenerative Resistor	Resistance (Ohm)	N/A	N/A	N/A	100	100	100	20	20
		Capacity (Watt)	N/A	N/A	N/A	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 (16777216 p/rev)							
Main Circuit Control			SVPWM control							
Tuning Mode			Auto / Manual							
Position Control Mode	Pulse Type		Pulse + Direction; A phase + B phase; CCW pulse + CW pulse							
	Max. Output Pulse Frequency		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 / Internal register (incompatible with E3-L)							
	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	-10 ~ +10 V_{DC}							
		Resolution	12-bit							
		Input Impedance	1 MΩ							
		Time Constant	25 μs							
	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		2.5 kHz							
	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	-10 ~ +10 V_{DC}							
		Input Impedance	1 MΩ							
		Time Constant	25 μs							
	Command Source		External analog command / Internal register Low-pass filter							
	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; E: 6 Inputs. For function setting, please refer to Chapter 8 - Table 8.1 Digital Input (DI)							
	Output		L: 6 Inputs; E: 3 Inputs. For function setting, please refer to Chapter 8 - Table 8.2 Digital Output (DO)							
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 / RS-232 / USB / EtherCAT[*5]							
Environment	Installation Site		Indoors (avoid direct sunlight), no corrosive vapor (avoid fumes, flammable gases, and dust)							
	Altitude		Altitude 2,000 m or lower above sea level							
	Atmospheric Pressure		86 kPa ~ 106 kPa							
	Operating Temperature		0°C ~ 45°C (If operating temperature is above 45°C, derates 10% with every 5°C of elevation, forced cooling is required)							
	Storage Temperature		-20°C ~ 65°C							
	Humidity		0 ~ 90% (RH non-condensing)							
	Vibration		20 Hz less than 9.80665 m/s^2 (1G), 20 ~ 50 Hz 5.88 m/s^2 (0.6 G)							
	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 to the ground through the protective ground conductor.
*4. Use a single-phase three-wire power system for the single-phase power model.
*5. USB and EtherCAT support E3-E only.

Servo Drive Specifications

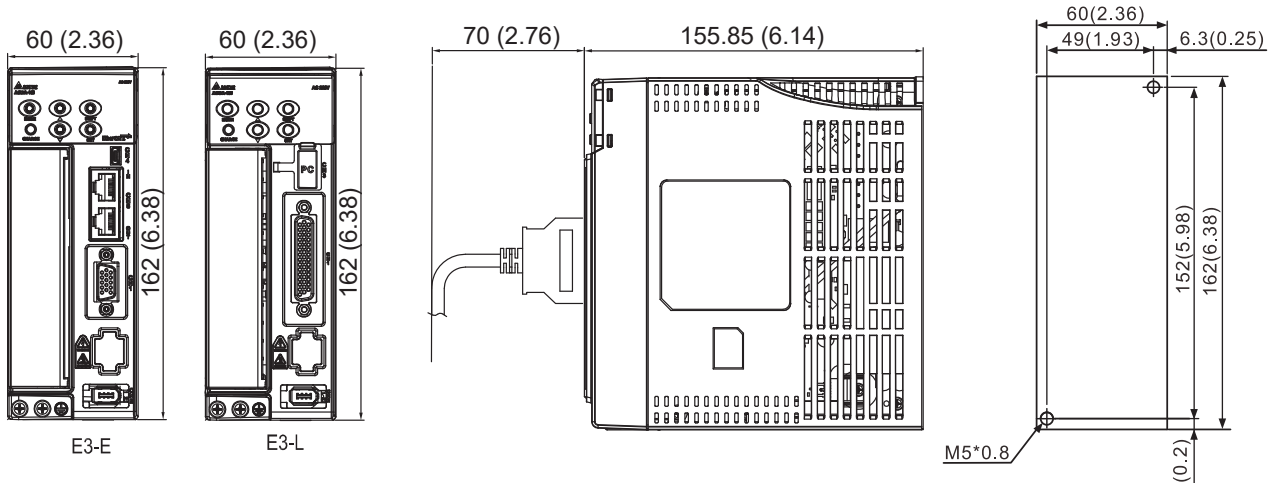
Servo System ASDA-E3 Series

Dimensions

(For E3-L & E3-E)

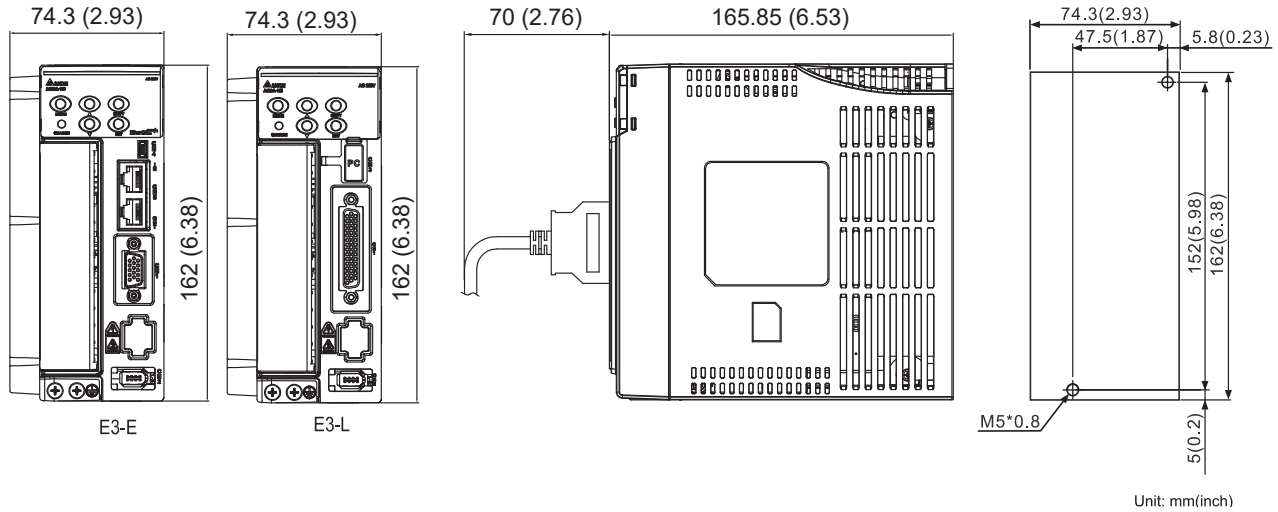
100 W / 200 W / 400 W

Weight	Unit
0.9 kg (1.98 lb)	mm (inch)



750 W

Weight	Unit
1.2 kg (2.64 lb)	mm (inch)

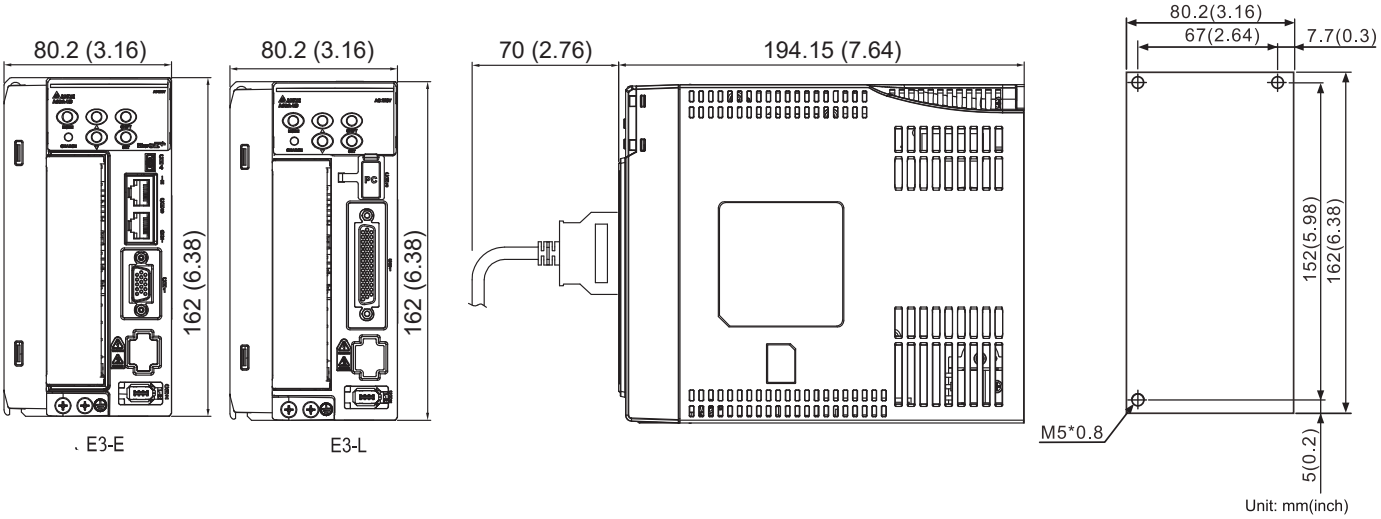


Unit: mm(inch)

(For E3-L & E3-E)

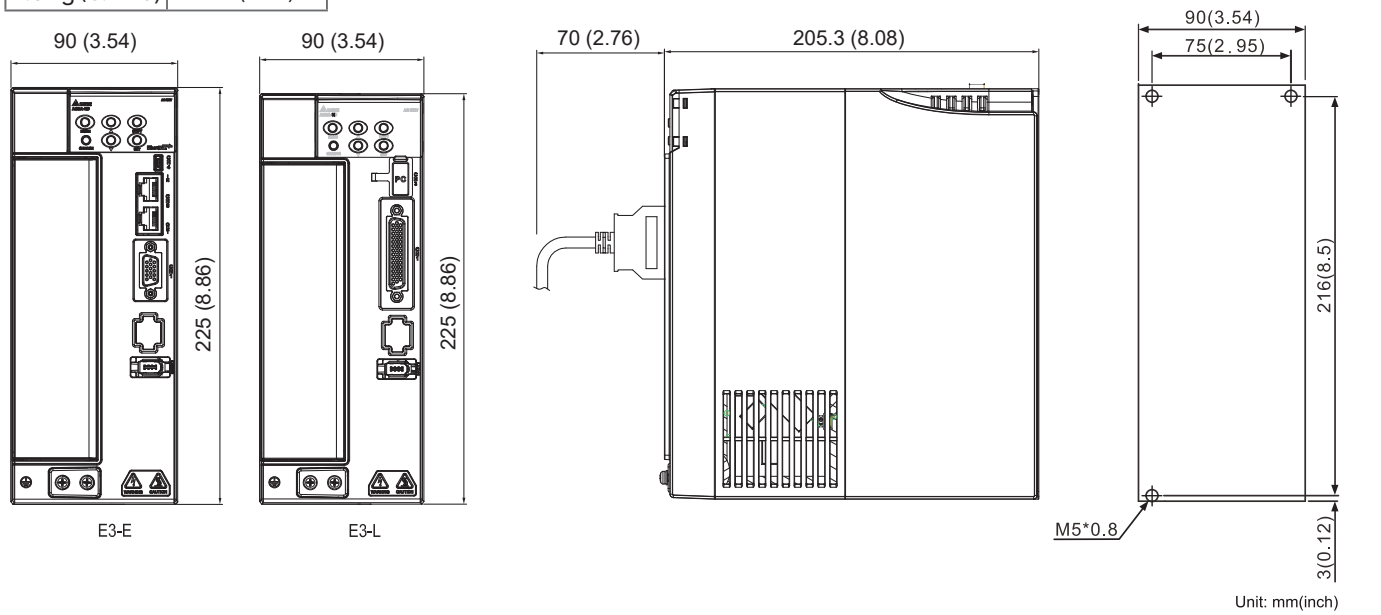
1 kW / 1.5 kW

Weight	Unit
1.8 kg (3.96 lb)	mm (inch)



2 kW / 3 kW

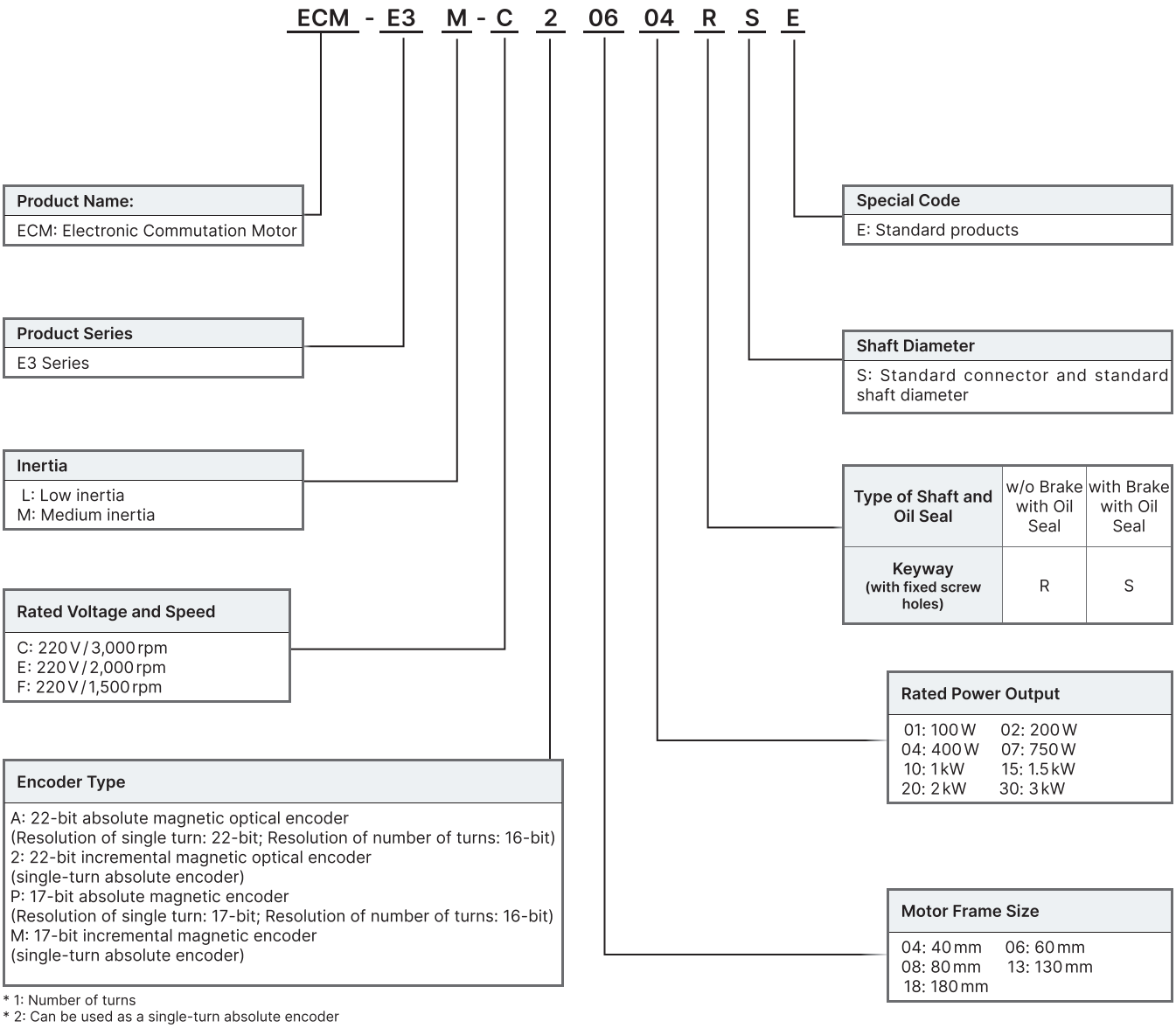
Weight	Unit
2.8 kg (6.17 lb)	mm (inch)



Model Name

Servo System ASDA-E3 Series

Servo Motor ECM-E3 Series



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

Note 1: 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.
Note 2: E3-L Drive is incompatible with absolute encoder (include singe-turn absolute encoder).
The whole series motors will be used with incremental encoder. E3-E communication type servo drives support absolute encoder.

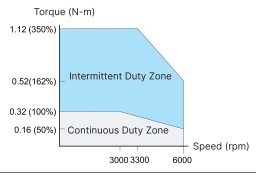
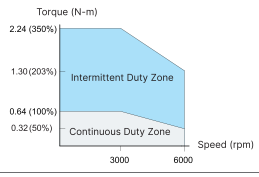
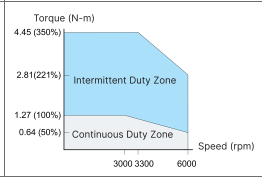
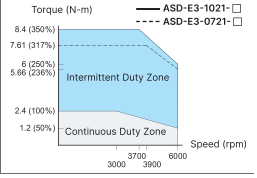
Specifications

Servo System ASDA-E3 Series

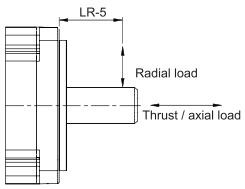
Servo Motors

Electrical Specifications

Medium Inertia Motor ECM-E3M Series

ECM	E3L-C ② 0401 □□ E	E3M-C ② 0602 □□ E	E3M-C ② 0604 □□ E	E3M-C ② 0807 □□ E
Rated Power (kW)	0.1	0.2	0.4	0.75
Rated Torque (N-m)*2	0.32	0.64	1.27	2.4
Maximum Torque (N-m)	1.12	2.24	4.45	8.4
Rated Speed (rpm)	3,000			
Maximum Speed (rpm)	6,000			
Rated Current (Arms)	0.857	1.42	2.40	4.27
Max. Instantaneous Current (Arms)	3.44	6.62	9.47	15.80
Rated Power Rate (kW/s)*3	34.25 (32.51)	29.05 (27.13)	63.50 (61.09)	53.83 (50.97)
Rotor Inertia (× 10^{-4}kg.m^2)*3	0.0299 (0.0315)	0.141 (0.151)	0.254 (0.264)	1.07 (1.13)
Mechanical Time Constant (ms)*3	0.50 (0.53)	0.91 (0.97)	0.52 (0.54)	0.54 (0.57)
Torque Constant -KT (N-m/A)	0.374	0.45	0.53	0.56
Voltage Constant -KE (mV/(rpm))	13.8	16.96	19.76	20.17
Armature Resistance (Ohm)	8.22	4.71	2.04	0.55
Armature Inductance (mH)	19.1	12.18	6.50	2.81
Electrical Time Constant (ms)	2.32	2.59	3.19	5.11
Weight (kg)*3	0.5 (0.7)	0.9 (1.3)	1.2 (1.6)	2.34 (3.15)
Max. Radial Loading (N)*6	78	245	245	392
Max. Axial Loading (N)*6	54	74	74	147
Brake Working Voltage	24 V_{DC} ± 10%			
Brake Holding Torque [Nt-m (min)]*2	0.3	1.3	1.3	2.5
Brake Power Consumption (at 20° C)[W]	6.1	7.6	7.6	8
Brake Release Time [ms (Max.)]	20	20	20	20
Brake Pull-in Time [ms (Max.)]	35	50	50	60
Derating (%) (with oil seal)	10	10	5	5
Torque Feature (T-N Curve)				
Insulation Class	Class B (CE)			
Insulation Resistance	> 100 MΩ, DC 500 V			
Insulation Strength	1.8 kVac, 1 sec			
Vibration Level (μm)	V15			
Operating Temperature	-20°C ~ 60°C*3			
Storage Temperature	-20°C ~ 80°C			
Operation & Storage Humidity	20 ~ 90%RH (non-condensing)			
Vibration Capacity	2.5 G			
IP Rating	IP65 (power cable and signal cable excluded)			
Certifications	CE			

Notes:
1. 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
   F180: 550 mm x 550 mm x 30 mm
   Material: aluminum
2. 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.
3. If the operating temperature is over 40° C, refer to the power derating curves of E3 motors on page 22.
4. In the servo motor model name, 2 represents the encoder type.
5. ( ) = motor with brake.
6. Please follow the tolerant loading of the motor shaft end listed on the right during operation.



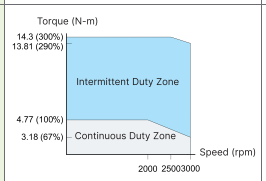
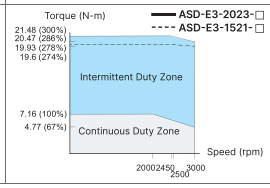
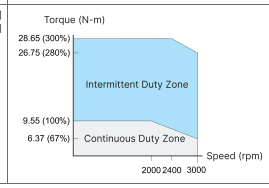
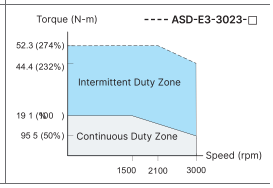
Specifications

Servo System ASDA-E3 Series

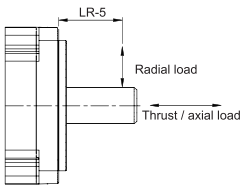
Servo Motors

Electrical Specifications

Medium Inertia Motor ECM-E3M Series

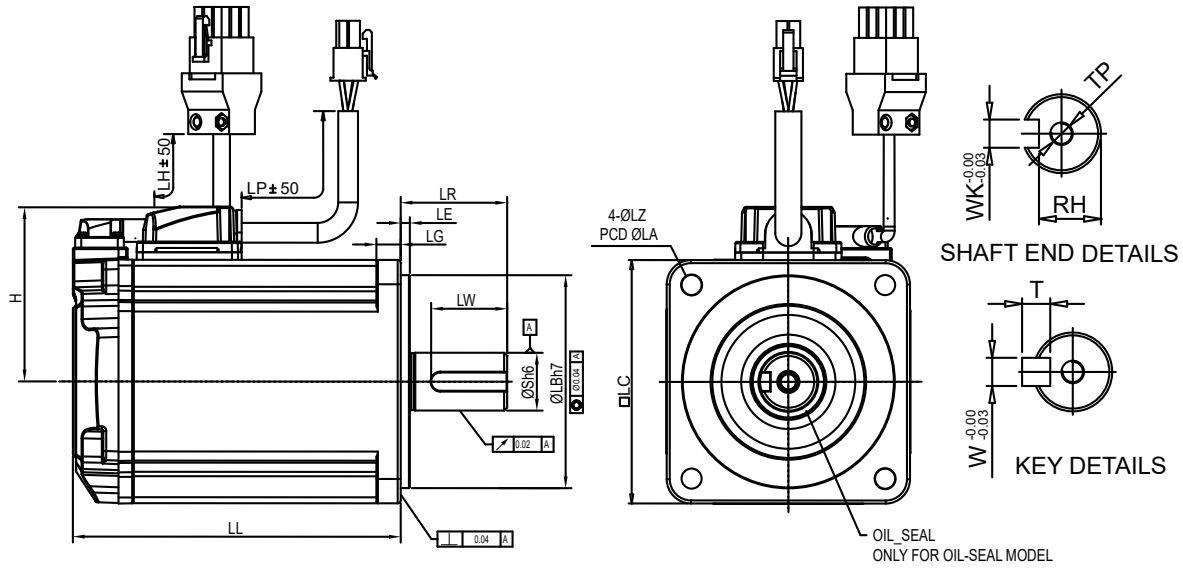
ECM	E3M-E ☐2 1310 ☐☐ E	E3M-E ☐2 1315 ☐☐ E	E3M-E ☐2 1320 ☐☐ E	E3M-F ☐2 1830 ☐☐ E
Rated Power (kW)	1	1.5	2	3
Rated Torque (N-m)*2	4.77	7.16	9.55	19.1
Maximum Torque (N-m)	14.3	21.48	28.65	57.29
Rated Speed (rpm)	2000			1500
Maximum Speed (rpm)	3,000			
Rated Current (Arms)	5.96	8.17	10.59	18.21
Max. Instantaneous Current (Arms)	19.9	26.82	34.20	58.9
Rated Power Rate (kW/s)*3	29.21 (28.66)	45.69 (45.09)	62.25 (61.62)	68.02 (66.45)
Rotor Inertia (× 10^{-4}kg.m^2)*3	7.79 (7.94)	11.22 (11.37)	14.65 (14.8)	53.63 (54.9)
Mechanical Time Constant (ms)*3	1.46 (1.49)	1.10 (1.12)	1.03 (1.04)	1.21 (1.24)
Torque Constant -KT (N-m/A)	0.80	0.88	0.90	1.05
Voltage Constant -KE (mV/(rpm))	29.30	31.69	32.70	37.9
Armature Resistance (Ohm)	0.419	0.260	0.198	0.086
Armature Inductance (mH)	4	2.81	2.18	1.52
Electrical Time Constant (ms)	9.55	10.81	11.01	17.67
Weight (kg)*3	4.9 (6.3)	6.0 (7.4)	7.0 (8.5)	13.9 (17.6)
Max. Radial Loading (N)*6	490	686	980	1470
Max. Axial Loading (N)*6	98	343	392	490
Brake Working Voltage	24V_{DC} ± 10%			
Brake Holding Torque [Nt-m (min)]*2	10	10	10	25
Brake Power Consumption (at 20°C)[W]	21.5	21.5	21.5	31
Brake Release Time [ms (Max.)]	50	50	50	30
Brake Pull-in Time [ms (Max.)]	110	110	110	120
Derating (%) (with oil seal)	5	5	5	5
Torque Feature (T-N Curve)				
Insulation Class	Class B (CE)			
Insulation Resistance	> 100 MΩ, DC 500 V			
Insulation Strength	1.8 kVac, 1 sec			
Vibration Level (μm)	V15			
Operating Temperature	-20°C ~ 60°C*3			
Storage Temperature	-20°C ~ 80°C			
Operation & Storage Humidity	20 ~ 90%RH (non-condensing)			
Vibration Capacity	2.5 G			
IP Rating	IP65 (when using waterproof connections and when an oil seal is fitted to the rotating shaft (for an oil seal model))			
Certifications	CE			

Notes:
1. 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
   F180: 550 mm x 550 mm x 30 mm
   Material: aluminum
2. 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.
3. If the operating temperature is over 40° C, refer to the power derating curves of E3 motors on page 22.
4. In the servo motor model name, 2 represents the encoder type.
5. ( ) = motor with brake.
6. Please follow the tolerant loading of the motor shaft end listed on the right during operation.



Servo Motors

Dimensions of Motors with Frame Size of 80 mm or Below



Model	C 2 0401 3 4 E	C 2 0602 3 4 E	C 2 0604 3 4 E	C 2 0807 3 4 E
LC	40	60	60	80
LZ	4.5	5.5	5.5	6.6
LA	46	70	70	90
S	8 (+0 -0.009)	14 (+0 -0.011)	14 (+0 -0.011)	19 (+0 -0.013)
LB	30 (+0 -0.021)	50 (+0 -0.025)	50 (+0 -0.025)	70 (+0 -0.030)
LL (w/o brake)	77.6	72.5	91	105.2
LL(with brake)	111.7	109.4	127.9	144.8
LH	300	300	300	300
LP	300	300	300	300
H	37.5	47.5	47.5	57.5
LR	25	30	30	35
LE	2.5	3	3	3
LG	5	7.5	7.5	8
LW	16	20	20	25
RH	6.2	11	11	15.5
WK	3	5	5	6
W	3	5	5	6
T	3	5	5	6
TP	M3 Depth8	M4 Depth15	M4 Depth15	M6 Depth20

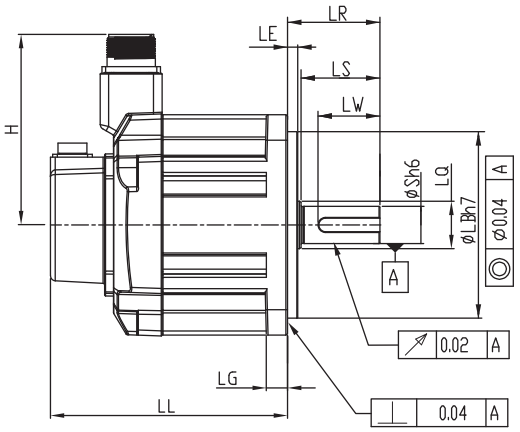
Notes:
1. In the servo motor model name, 2 represents the encoder type, 3 represents the brake or keyway / oil seal type, 4 represents the shaft diameter and connector type.

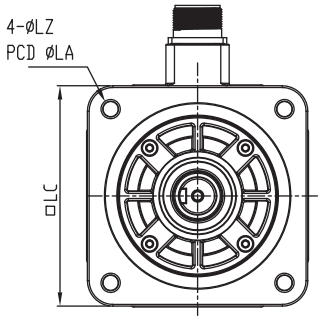
Specifications

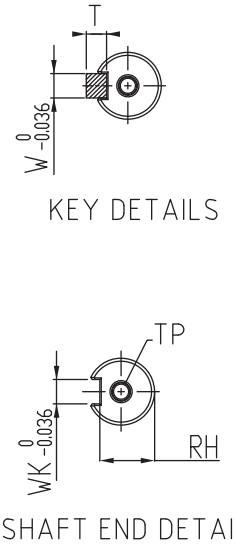
Servo System ASDA-E3 Series

Servo Motors

Dimensions of Motors with Frame Size of 130 / 180 mm





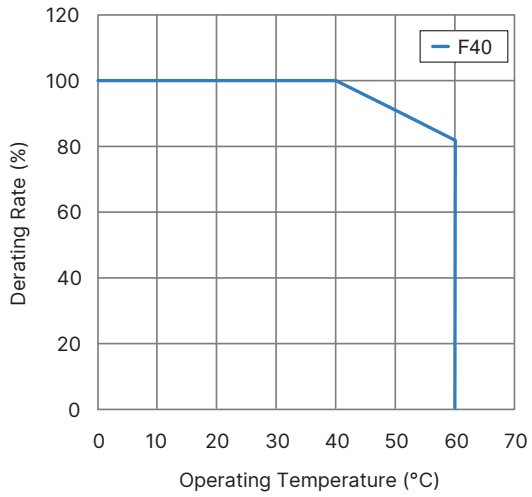


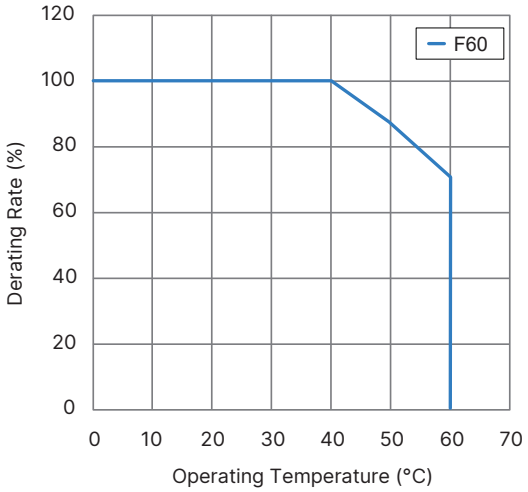
Model	E 2 1310 3 4 E	E 2 1315 3 4 E	E 2 1320 3 4 E	F 2 1830 3 4 E
LC	130	130	130	180
LZ	9	9	9	13.5
LA	145	145	145	200
S	22 ($^{+0}_{-0.013}$)	22 ($^{+0}_{-0.013}$)	22 ($^{+0}_{-0.013}$)	35 ($^{+0}_{-0.016}$)
LB	110 ($^{+0}_{-0.035}$)	110 ($^{+0}_{-0.035}$)	110 ($^{+0}_{-0.035}$)	114.3 ($^{+0}_{-0.035}$)
LL (w/o brake)	127.9	139.9	151.9	160.5
LL(with brake)	168.5	180.5	192.5	212.5
H	115	115	115	139
LS	47	47	47	73
LR	55	55	55	79
LQ	28	28	28	45
LE	6	6	6	4
LG	12.5	12.5	12.5	18
LW	36	36	36	63
RH	18	18	18	30
WK	8	8	8	10
W	8	8	8	10
T	7	7	7	8
TP	M6 Depth12	M6 Depth12	M6 Depth12	M12 Depth25

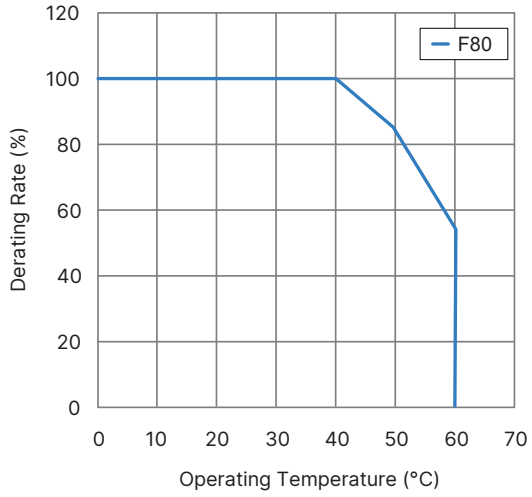
Notes:
1. In the servo motor model name, 2 represents the encoder type, 3 represents the brake or keyway / oil seal type, 4 represents the shaft diameter and connector type.

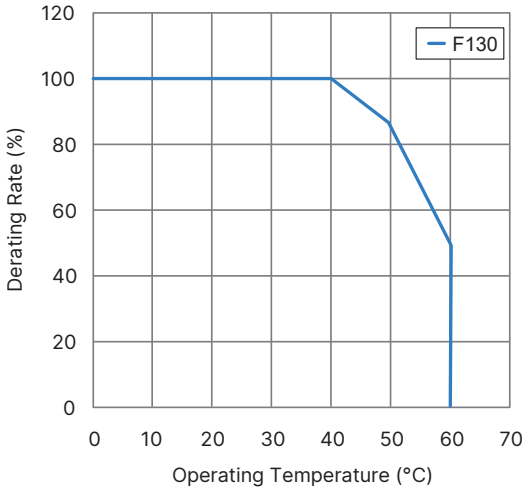
Servo Motors

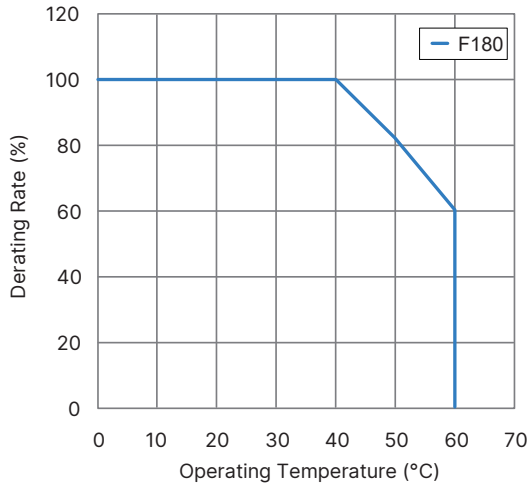
Power Derating Curves







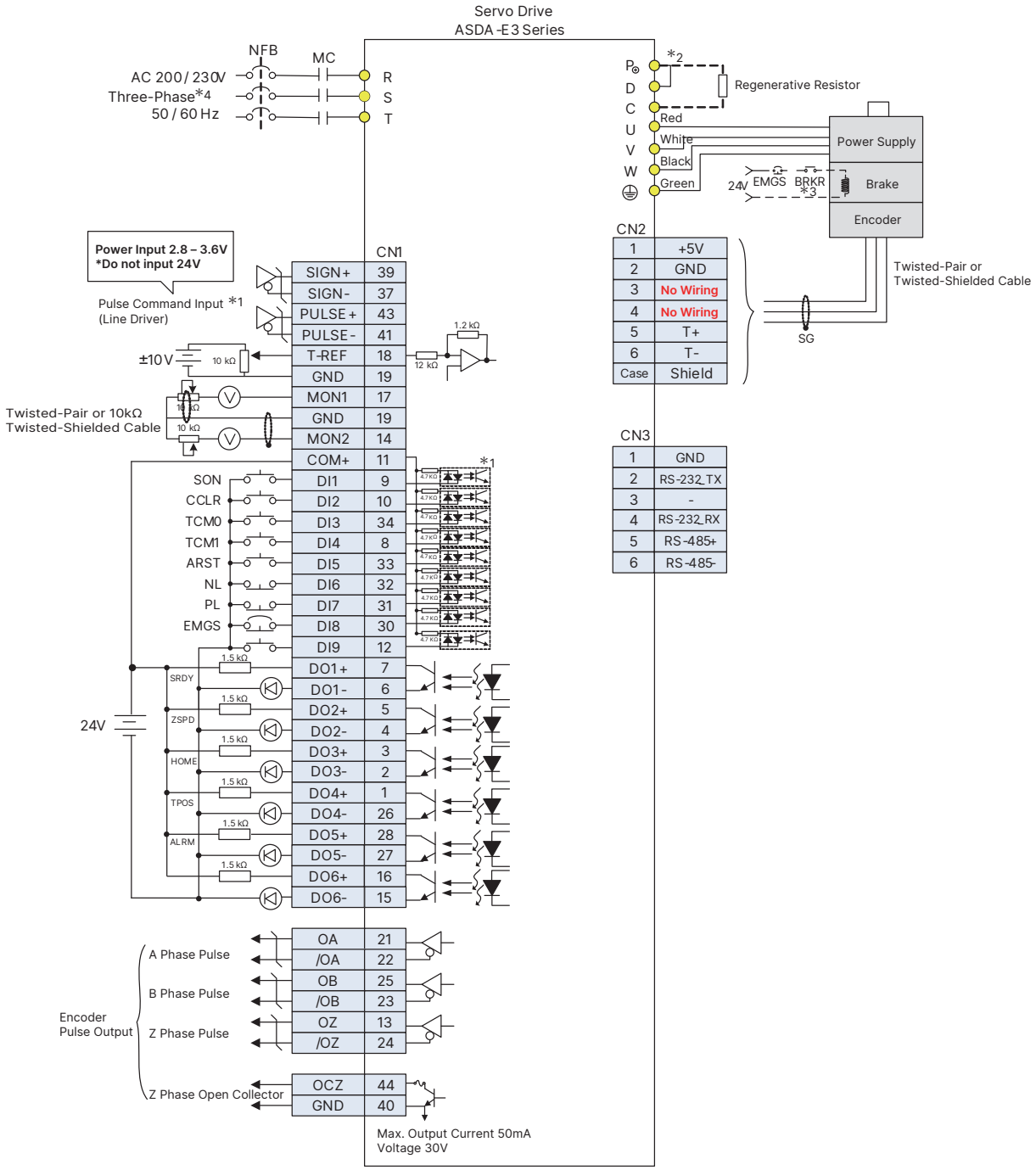




Control Mode Wiring

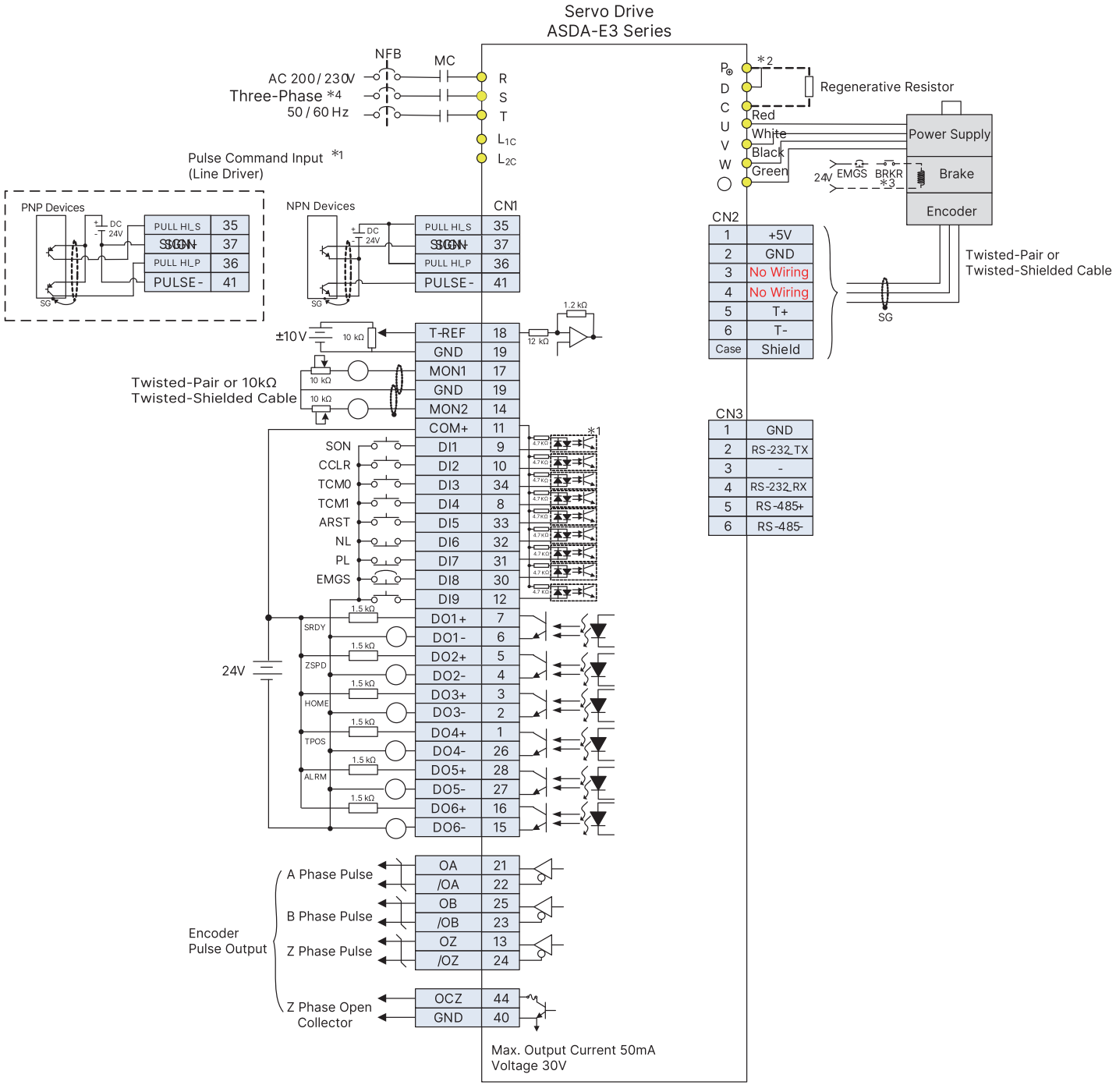
Servo System ASDA-E3 Series

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



Notes:
*1: Refer to Section 3.3.6 in the ASDA-E3 user manual for CN1 wiring.
*2: Models of 400W and below have no built-in brake resistor.
*3: The brake coil has no polarity.
*4: Models of 1.5kW and below can use single-phase power supply.

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

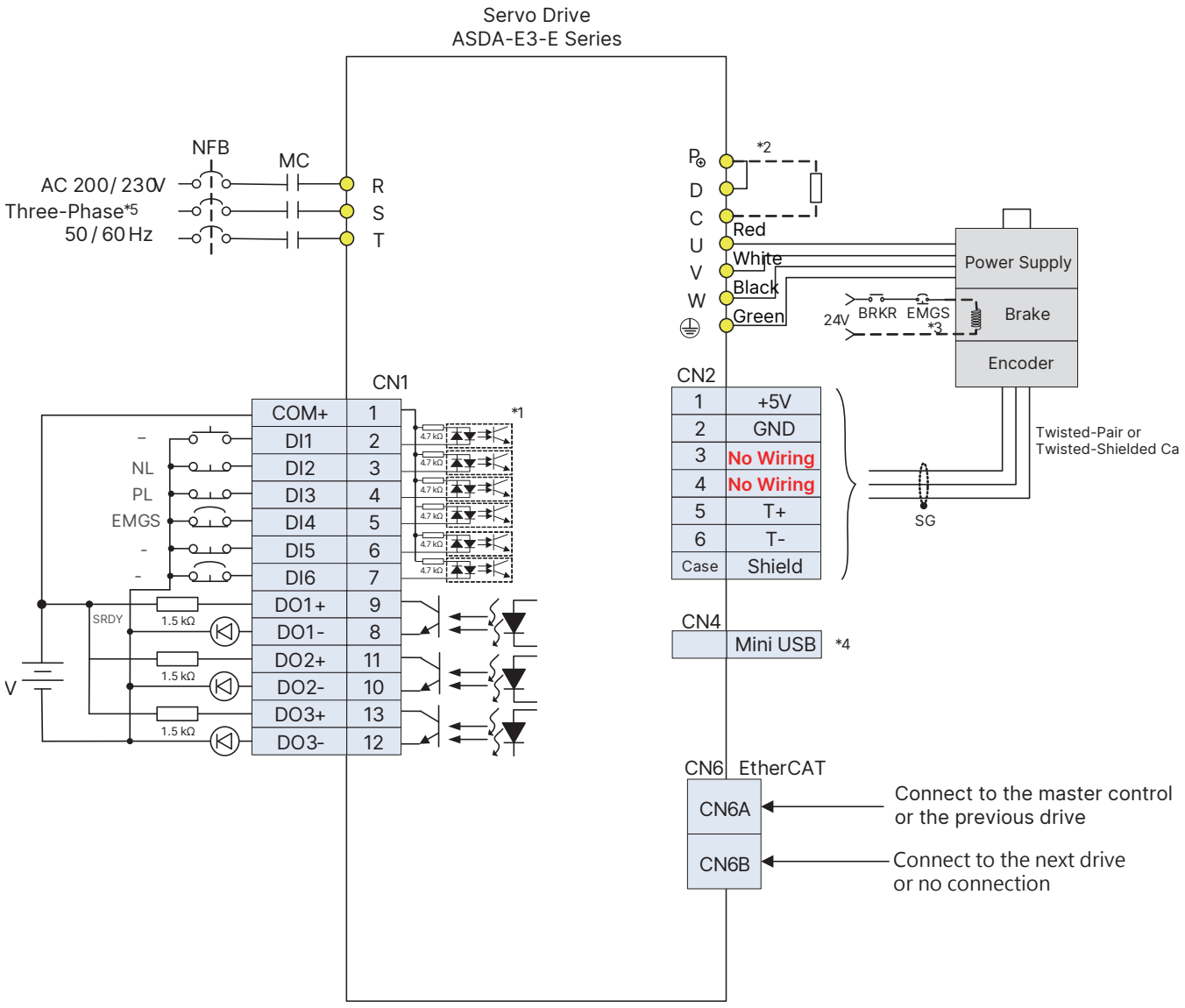


Notes:
*1: Refer to Section 3.3.6 in the ASDA-E3 user manual for CN1 wiring.
*2: Models of 400W and below have no built-in brake resistor.
*3: The brake coil has no polarity.
*4: Models of 1.5kW and below can use single-phase power supply.

Control Mode Wiring

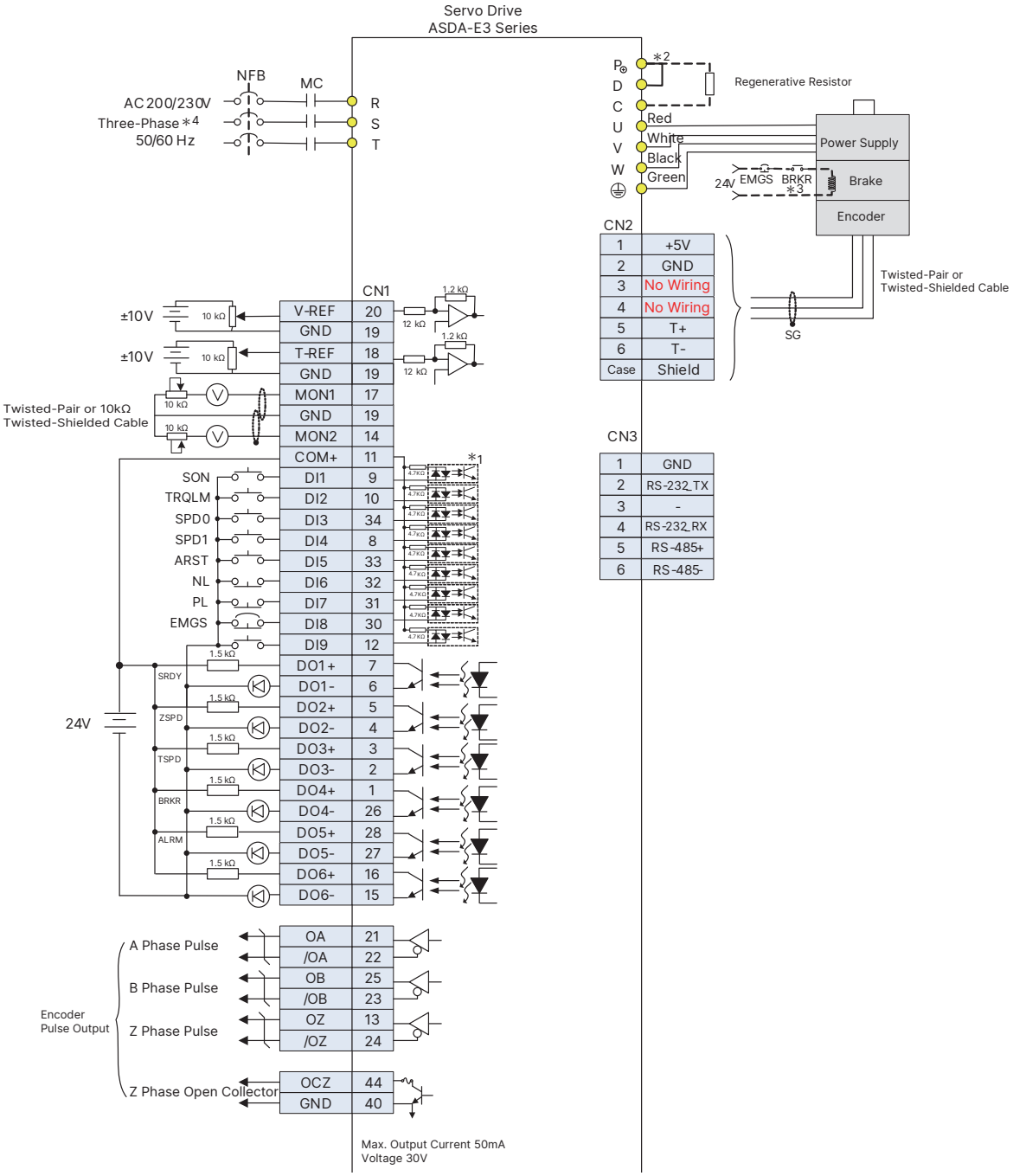
Servo System ASDA-E3 Series

Position (PT) Control Mode
(For Internal Position Procedure Editing)



Notes:
*1: Refer to Section 3.3.6 in the ASDA-E3 user manual for CN1 wiring.
*2: Models of 400W 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 1.5kW and below can use single-phase power supply.

Speed (S) Mode Standard Wiring

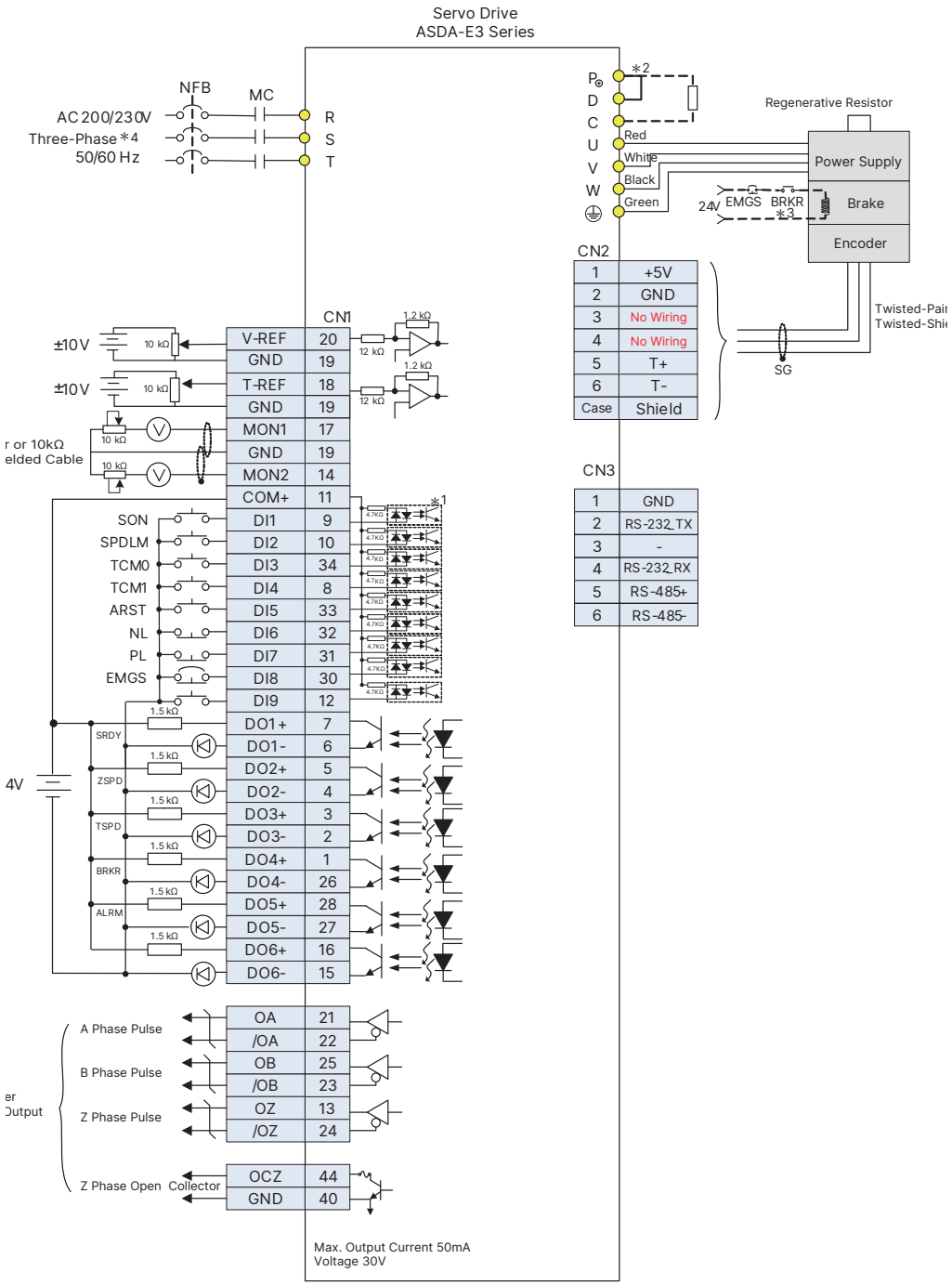


Notes:
*1: Refer to Section 3.3.6 in the ASDA-E3 user manual for CN1 wiring.
*2: Models of 400W and below have no built-in brake resistor.
*3: The brake coil has no polarity.
*4: Models of 1.5kW and below can use single-phase power supply.

Control Mode Wiring

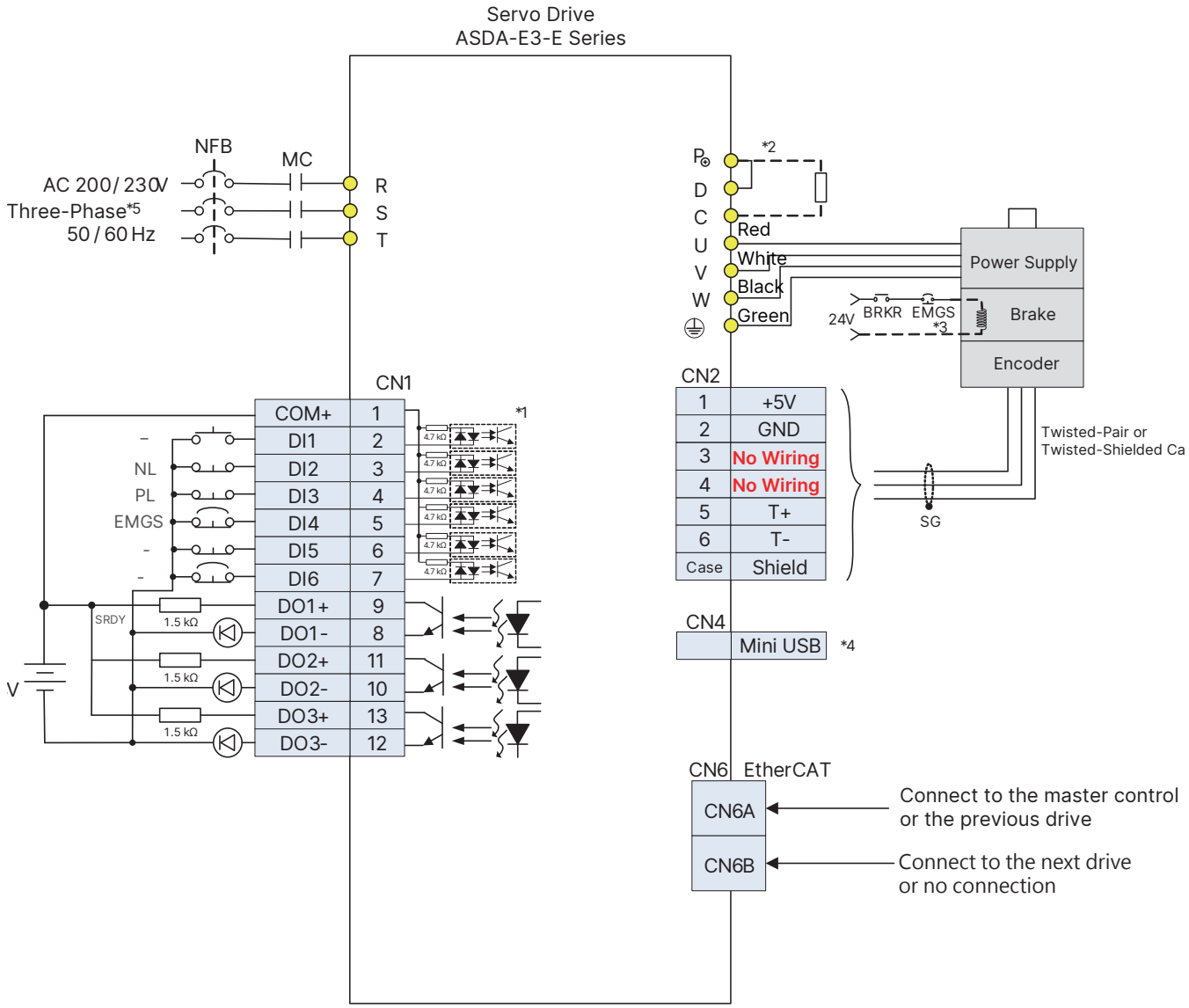
Servo System ASDA-E3 Series

Torque (T) Mode Standard Wiring



Notes:
*1: Refer to Section 3.3.6 in the ASDA-E3 user manual for CN1 wiring.
*2: Models of 400W and below have no built-in brake resistor.
*3: The brake coil has no polarity.
*4: Models of 1.5kW and below can use single-phase power supply.

EtherCAT Communication Mode Standard Wiring (For E3-E)



Notes:
*1: Refer to Section 3.3.6 in the ASDA-E3 user manual for CN1 wiring.
*2: Models of 400W 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 1.5kW and below can use single-phase power supply.

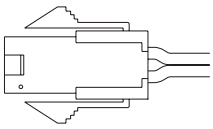
Ordering Information

Servo System ASDA-E3 Series

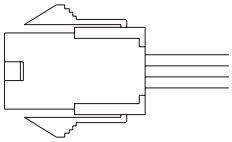
Accessories

Power Connectors

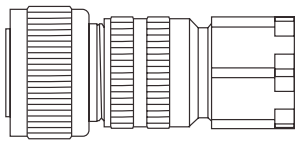
ACS3-CAPW1000
(For F80 and below)



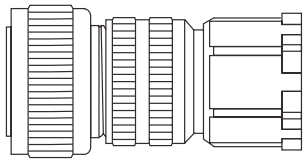
ACS3-CAPW2000
(For F80 and below with brake)



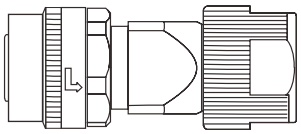
ACS3-CAPWA000
(For F100 – F130)
Mil-Spec: MIL 3106A18-10S



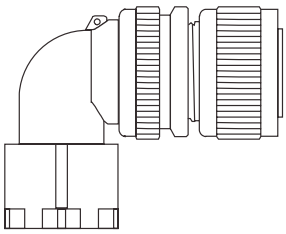
ACS3-CAPWC000
(For F180)
Mil-Spec: MIL 3106A22-22S



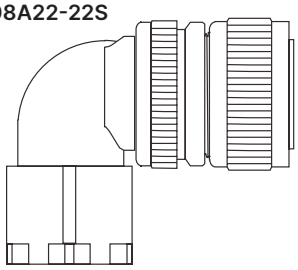
ACS3-CABRA000
(For F100 – F180 with brake)
Mil-Spec: CMV1-SP2S



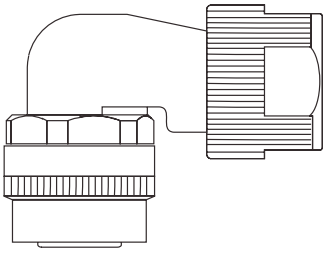
ACS3-CRPWA000
(For F100 – F130)
Mil-Spec: MIL 3108A18-10S



ACS3-CRPWC000
(For F180)
Mil-Spec: MIL 3108A22-22S

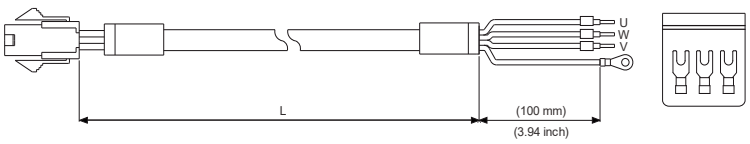


ACS3-CRBRA000
(For F100 – F180 with brake)
Mil-Spec: CMV1-AP2S



Power Cables

For F80 and below

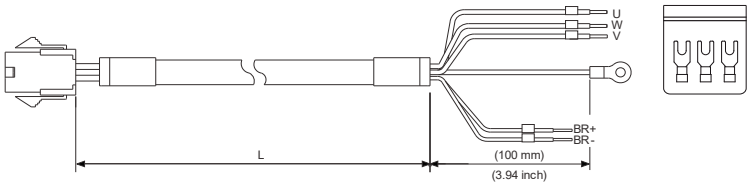


Cable	Model Name	UVW	L	
		AWG (mm^2)	mm	inch
Standard	ACS3-CAPW1103	18 (0.82)	3000 ± 50	118 ± 2
	ACS3-CAPW1105	18 (0.82)	5000 ± 50	197 ± 2
	ACS3-CAPW1110	18 (0.82)	10000 ± 50	394 ± 4
	ACS3-CAPW1120	18 (0.82)	20000 ± 50	787 ± 4
Torsion-Resistant	ACS3-CAPF1103	18 (0.82)	3000 ± 50	118 ± 2
	ACS3-CAPF1105	18 (0.82)	5000 ± 50	197 ± 2
	ACS3-CAPF1110	18 (0.82)	10000 ± 50	394 ± 4
	ACS3-CAPF1120	18 (0.82)	20000 ± 50	787 ± 4

Accessories

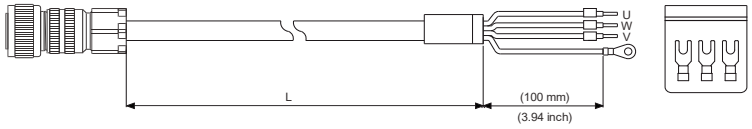
Power Connectors

For F80 and below with brake



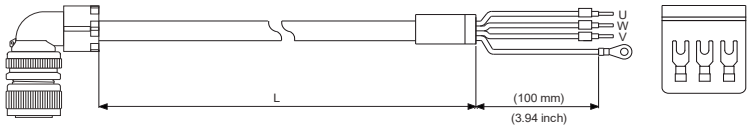
Cable	Model Name	UVW AWG (mm^2)	L mm	L inch
Standard	ACS3-CAPW2103	18 (0.82)	3000 ± 50	118 ± 2
	ACS3-CAPW2105	18 (0.82)	5000 ± 50	197 ± 2
	ACS3-CAPW2110	18 (0.82)	10000 ± 100	394 ± 4
	ACS3-CAPW2120	18 (0.82)	20000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CAPF2103	18 (0.82)	3000 ± 50	118 ± 2
	ACS3-CAPF2105	18 (0.82)	5000 ± 50	197 ± 2
	ACS3-CAPF2110	18 (0.82)	10000 ± 100	394 ± 4
	ACS3-CAPF2120	18 (0.82)	20000 ± 100	787 ± 4

For F100 – F130



Cable	Model Name	UVW AWG (mm^2)	L mm	L inch
Standard	ACS3-CAPWA203	16 (1.3)	3000 ± 50	118 ± 2
	ACS3-CAPWA205	16 (1.3)	5000 ± 50	197 ± 2
	ACS3-CAPWA210	16 (1.3)	10000 ± 100	394 ± 4
	ACS3-CAPWA220	16 (1.3)	20000 ± 100	787 ± 4
	ACS3-CAPWA303	14 (2.1)	3000 ± 50	118 ± 2
	ACS3-CAPWA305	14 (2.1)	5000 ± 50	197 ± 2
	ACS3-CAPWA310	14 (2.1)	10000 ± 100	394 ± 4
	ACS3-CAPWA320	14 (2.1)	20000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CAPFA203	16 (1.3)	3000 ± 50	118 ± 2
	ACS3-CAPFA205	16 (1.3)	5000 ± 50	197 ± 2
	ACS3-CAPFA210	16 (1.3)	10000 ± 100	394 ± 4
	ACS3-CAPFA220	16 (1.3)	20000 ± 100	787 ± 4
	ACS3-CAPFA303	14 (2.1)	3000 ± 50	118 ± 2
	ACS3-CAPFA305	14 (2.1)	5000 ± 50	197 ± 2
	ACS3-CAPFA310	14 (2.1)	10000 ± 100	394 ± 4
	ACS3-CAPFA320	14 (2.1)	20000 ± 100	787 ± 4

For F100 – F130 with brake



Cable	Model Name	UVW AWG (mm^2)	L mm	L inch
Standard	ACS3-CRPWA203	16 (1.3)	3000 ± 50	118 ± 2
	ACS3-CRPWA205	16 (1.3)	5000 ± 50	197 ± 2
	ACS3-CRPWA210	16 (1.3)	10000 ± 100	394 ± 4
	ACS3-CRPWA220	16 (1.3)	20000 ± 100	787 ± 4
	ACS3-CRPWA303	14 (2.1)	3000 ± 50	118 ± 2
	ACS3-CRPWA305	14 (2.1)	5000 ± 50	197 ± 2
	ACS3-CRPWA310	14 (2.1)	10000 ± 100	394 ± 4
	ACS3-CRPWA320	14 (2.1)	20000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CRPFA203	16 (1.3)	3000 ± 50	118 ± 2
	ACS3-CRPFA205	16 (1.3)	5000 ± 50	197 ± 2
	ACS3-CRPFA210	16 (1.3)	10000 ± 100	394 ± 4
	ACS3-CRPFA220	16 (1.3)	20000 ± 100	787 ± 4
	ACS3-CRPFA303	14 (2.1)	3000 ± 50	118 ± 2
	ACS3-CRPFA305	14 (2.1)	5000 ± 50	197 ± 2
	ACS3-CRPFA310	14 (2.1)	10000 ± 100	394 ± 4
	ACS3-CRPFA320	14 (2.1)	20000 ± 100	787 ± 4

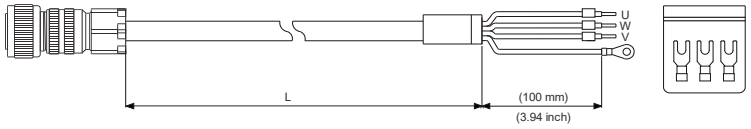
Ordering Information

Servo System ASDA-E3 Series

Accessories

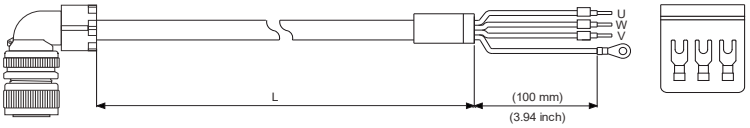
Power Connectors

(For F180 straight connector)



Cable	Model Name	UVW AWG (mm^2)	L mm	L inch
Standard	ACS3-CAPWC403	12 (3.3)	3000 ± 50	118 ± 2
	ACS3-CAPWC405	12 (3.3)	5000 ± 50	197 ± 2
	ACS3-CAPWC410	12 (3.3)	10000 ± 100	394 ± 4
	ACS3-CAPWC420	12 (3.3)	20000 ± 100	787 ± 4
	ACS3-CAPWC503	10 (5.3)	3000 ± 50	118 ± 2
	ACS3-CAPWC505	10 (5.3)	5000 ± 50	197 ± 2
	ACS3-CAPWC510	10 (5.3)	10000 ± 100	394 ± 4
	ACS3-CAPWC520	10 (5.3)	20000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CAPFC403	12 (3.3)	3000 ± 50	118 ± 2
	ACS3-CAPFC405	12 (3.3)	5000 ± 50	197 ± 2
	ACS3-CAPFC410	12 (3.3)	10000 ± 100	394 ± 4
	ACS3-CAPFC420	12 (3.3)	20000 ± 100	787 ± 4
	ACS3-CAPFC503	10 (5.3)	3000 ± 50	118 ± 2
	ACS3-CAPFC505	10 (5.3)	5000 ± 50	197 ± 2
	ACS3-CAPFC510	10 (5.3)	10000 ± 100	394 ± 4
	ACS3-CAPFC520	10 (5.3)	20000 ± 100	787 ± 4

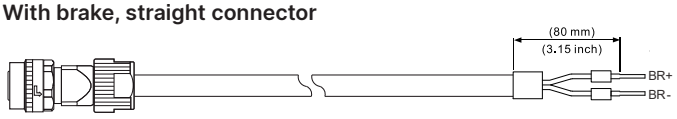
(For F180 angular connector)



Cable	Model Name	UVW AWG (mm^2)	L mm	L inch
Standard	ACS3-CRPWC403	12 (3.3)	3000 ± 50	118 ± 2
	ACS3-CRPWC405	12 (3.3)	5000 ± 50	197 ± 2
	ACS3-CRPWC410	12 (3.3)	10000 ± 100	394 ± 4
	ACS3-CRPWC420	12 (3.3)	20000 ± 100	787 ± 4
	ACS3-CRPWC503	10 (5.3)	3000 ± 50	118 ± 2
	ACS3-CRPWC505	10 (5.3)	5000 ± 50	197 ± 2
	ACS3-CRPWC510	10 (5.3)	10000 ± 100	394 ± 4
	ACS3-CRPWC520	10 (5.3)	20000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CRPFC403	12 (3.3)	3000 ± 50	118 ± 2
	ACS3-CRPFC405	12 (3.3)	5000 ± 50	197 ± 2
	ACS3-CRPFC410	12 (3.3)	10000 ± 100	394 ± 4
	ACS3-CRPFC420	12 (3.3)	20000 ± 100	787 ± 4
	ACS3-CRPFC503	10 (5.3)	3000 ± 50	118 ± 2
	ACS3-CRPFC505	10 (5.3)	5000 ± 50	197 ± 2
	ACS3-CRPFC510	10 (5.3)	10000 ± 100	394 ± 4
	ACS3-CRPFC520	10 (5.3)	20000 ± 100	787 ± 4

For F100 - F180 Brake Cable

With brake, straight connector



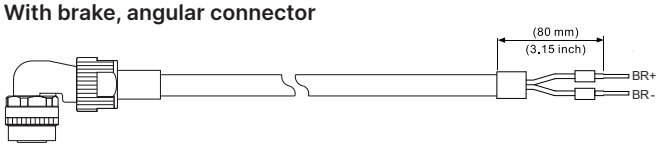
Cable	Model Name	UVW AWG (mm^2)	L mm	L inch
Standard	ACS3-CABRA103	20 (0.5)	3000 ± 50	118 ± 2
	ACS3-CABRA105	20 (0.5)	5000 ± 50	197 ± 2
	ACS3-CABRA110	20 (0.5)	10000 ± 100	394 ± 4
	ACS3-CABRA120	20 (0.5)	20000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CABFA103	20 (0.5)	3000 ± 50	118 ± 2
	ACS3-CABFA105	20 (0.5)	5000 ± 50	197 ± 2
	ACS3-CABFA110	20 (0.5)	10000 ± 100	394 ± 4
	ACS3-CABFA120	20 (0.5)	20000 ± 100	787 ± 4

Accessories

Power Connectors

F100 - F180 Brake Cable

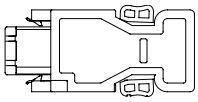
With brake, angular connector



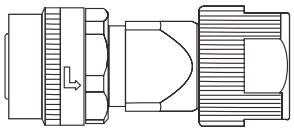
Cable	Model Name	UVW AWG (mm^2)	L mm	L inch
Standard	ACS3-CRBRA103	20 (0.5)	3000 ± 50	118 ± 2
	ACS3-CRBRA105	20 (0.5)	5000 ± 50	197 ± 2
	ACS3-CRBRA110	20 (0.5)	10000 ± 100	394 ± 4
	ACS3-CRBRA120	20 (0.5)	20000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CRBFA103	20 (0.5)	3000 ± 50	118 ± 2
	ACS3-CRBFA105	20 (0.5)	5000 ± 50	197 ± 2
	ACS3-CRBFA110	20 (0.5)	10000 ± 100	394 ± 4
	ACS3-CRBFA120	20 (0.5)	20000 ± 100	787 ± 4

Encoders Connectors

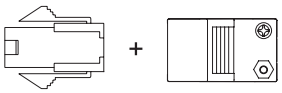
ACS3-CNENC200
(Connecting to drive)



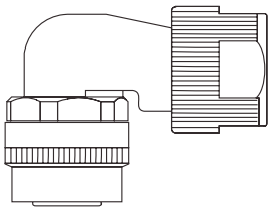
ACS3-CAENA000
(For F100 - F180)
Mil-Spec: CMV1-SP10S



ACS3-CAEN0000
(For F80 and below)



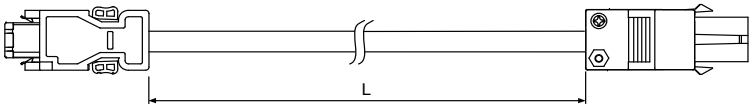
ACS3-CRENA000
(For F100 - F180)
Mil-Spec: CMV1-AP10S



Encoder Cables (Incremental Type)

For F40 - F80

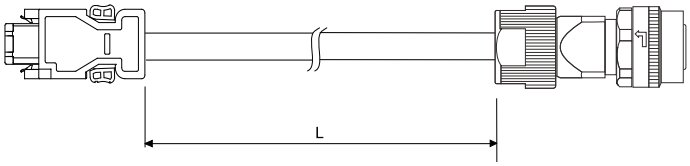
Straight connector



Cable	Model Name	L mm	L inch
Standard	ACS3-CAEN0103	3000 ± 50	118 ± 2
	ACS3-CAEN0105	5000 ± 50	197 ± 2
	ACS3-CAEN0110	10000 ± 100	394 ± 4
	ACS3-CAEN0120	20000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CAEF0103	3000 ± 50	118 ± 2
	ACS3-CAEF0105	5000 ± 50	197 ± 2
	ACS3-CAEF0110	10000 ± 100	394 ± 4
	ACS3-CAEF0120	20000 ± 100	787 ± 4

For F100 - F180

Straight connector



Cable	Model Name	L mm	L inch
Standard	ACS3-CAENA103	3000 ± 50	118 ± 2
	ACS3-CAENA105	5000 ± 50	197 ± 2
	ACS3-CAENA110	10000 ± 100	394 ± 4
	ACS3-CAENA120	20000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CAEFA103	3000 ± 50	118 ± 2
	ACS3-CAEFA105	5000 ± 50	197 ± 2
	ACS3-CAEFA110	10000 ± 100	394 ± 4
	ACS3-CAEFA120	20000 ± 100	787 ± 4

Ordering Information

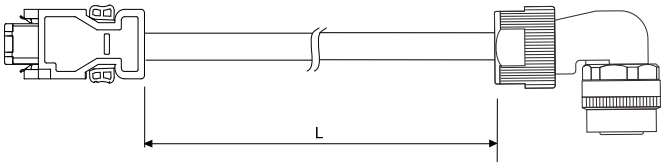
Servo System ASDA-E3 Series

Accessories

Encoder Cables (Incremental Type)

For F100 - F180

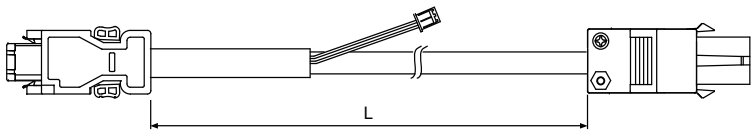
Angular connector



Cable	Model Name	L	
		mm	inch
Standard	ACS3-CREN0103	3000 ± 50	118 ± 2
	ACS3-CREN0105	5000 ± 50	197 ± 2
	ACS3-CREN0110	10000 ± 100	394 ± 4
	ACS3-CREN0120	20000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CREF0103	3000 ± 50	118 ± 2
	ACS3-CREF0105	5000 ± 50	197 ± 2
	ACS3-CREF0110	10000 ± 100	394 ± 4
	ACS3-CREF0120	20000 ± 100	787 ± 4

Encoder Cables (Absolute Type)

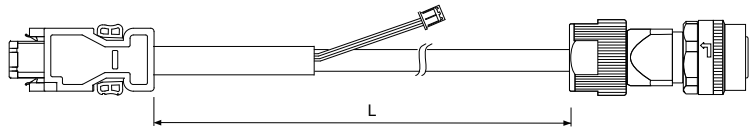
For F40 - F80



Cable	Model Name	L	
		mm	inch
Standard	ACS3-CAEA0103	3000 ± 50	118 ± 2
	ACS3-CAEA0105	5000 ± 50	197 ± 2
	ACS3-CAEA0110	10000 ± 100	394 ± 4
	ACS3-CAEA0120	20000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CAEB0103	3000 ± 50	118 ± 2
	ACS3-CAEB0105	5000 ± 50	197 ± 2
	ACS3-CAEB0110	10000 ± 100	394 ± 4
	ACS3-CAEB0120	20000 ± 100	787 ± 4

For F100 - F180

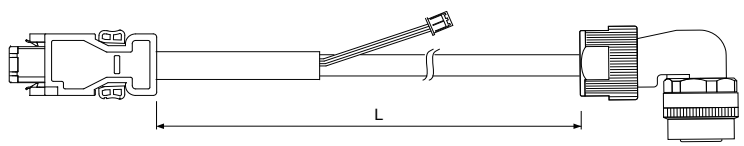
Straight connector



Cable	Model Name	L	
		mm	inch
Standard	ACS3-CAEAA103	3000 ± 50	118 ± 2
	ACS3-CAEAA105	5000 ± 50	197 ± 2
	ACS3-CAEAA110	10000 ± 100	394 ± 4
	ACS3-CAEAA120	20000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CAEBA103	3000 ± 50	118 ± 2
	ACS3-CAEBA105	5000 ± 50	197 ± 2
	ACS3-CAEBA110	10000 ± 100	394 ± 4
	ACS3-CAEBA120	20000 ± 100	787 ± 4

For F100 - F180

Angular connector

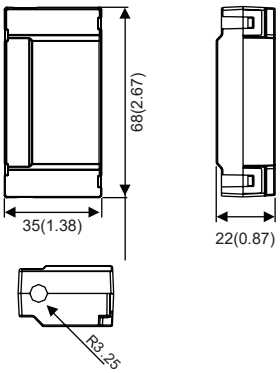


Cable	Model Name	L	
		mm	inch
Standard	ACS3-CREAA103	3000 ± 50	118 ± 2
	ACS3-CREAA105	5000 ± 50	197 ± 2
	ACS3-CREAA110	10000 ± 100	394 ± 4
	ACS3-CREAA120	20000 ± 100	787 ± 4
Torsion-Resistant	ACS3-CREBA103	3000 ± 50	118 ± 2
	ACS3-CREBA105	5000 ± 50	197 ± 2
	ACS3-CREBA110	10000 ± 100	394 ± 4
	ACS3-CREBA120	20000 ± 100	787 ± 4

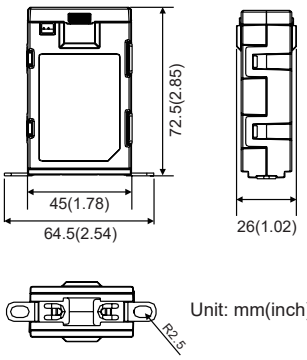
Accessories

Absolute Battery Box

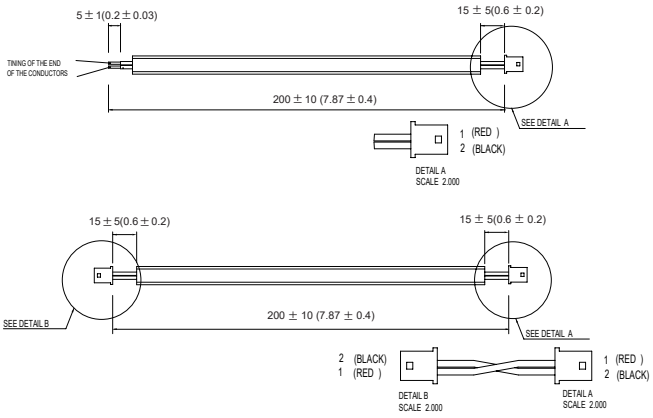
Single Battery Box
ASD-MDBT0100



Double Battery Box
ASD-MDBT0200



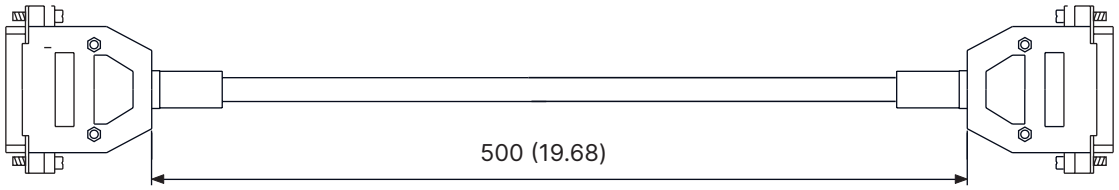
Unit: mm(inch)



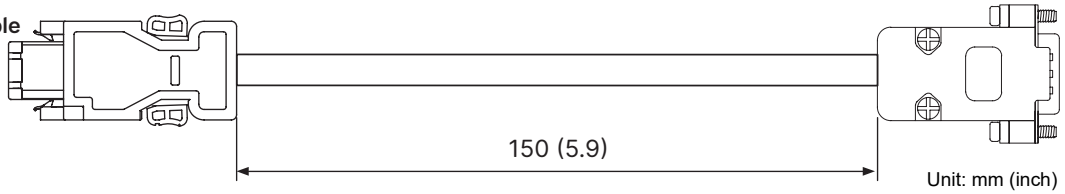
Note: Contact Delta Global Service team if ordering battery box cord only.

E3/B2 Conversion Cables

E3/B2 CN1 Conversion Cable
ACS3-CABDC1



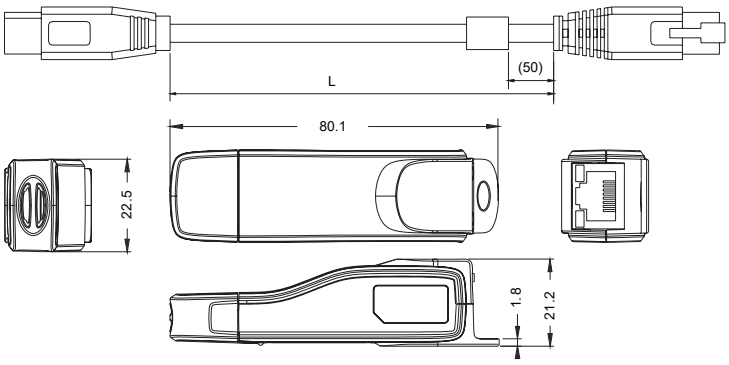
E3/B2 CN2 Conversion Cable
ACS3-CABDC2



Unit: mm (inch)

CN3 Drive & Computer Communication Cable (For E3-L)

ACS3-CNUS0A08



Title	Model Name : ACS3-CNUS0A08	
Cable	L	3000 ± 100 mm
		118 ± 4 inch
Connector	RJ connector	RJ-45
	USB connector	A-type (USB V2.0)

*Recent encoding naming of the 3rd generation servo, which is identical to the ASD-CNUS0A08 cable of ASDA-B2 series

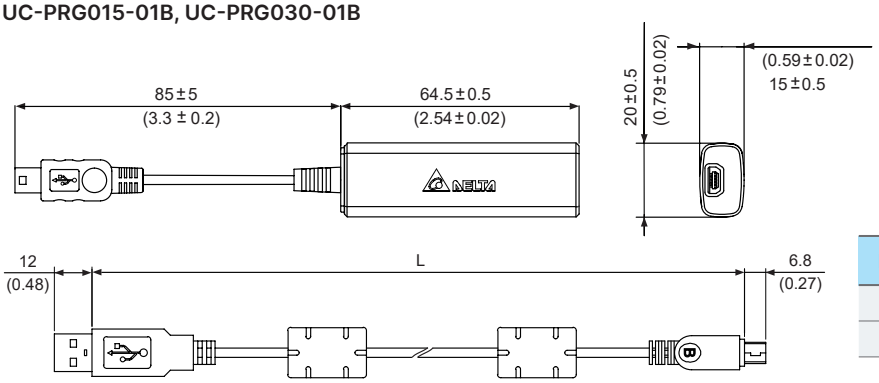
Ordering Information

Servo System ASDA-E3 Series

Accessories

CN4 Mini USB Communication Module (For E3-E)

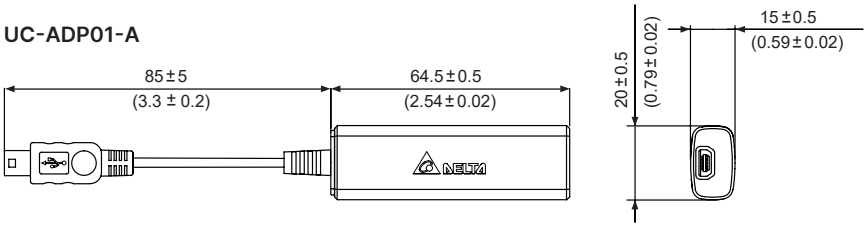
UC-PRG015-01B, UC-PRG030-01B



Unit: mm (inch)

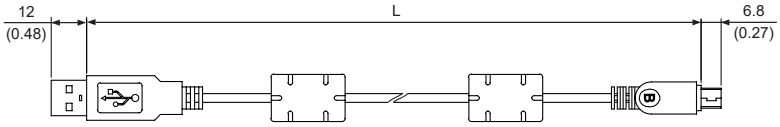
Item	Model Name	L	
		mm	inch
1	UC-PRG015-01B	1500 ± 10	59 ± 4
2	UC-PRG030-01B	3000 ± 10	118 ± 4

UC-ADP01-A



UC-PRG015-01A, UC-PRG030-01A

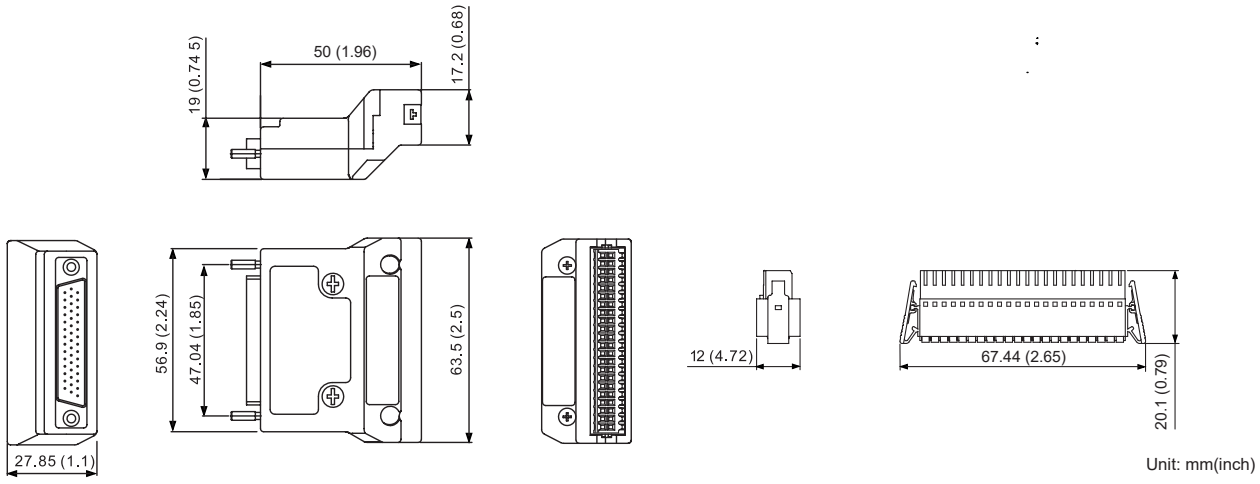
Unit: mm (inch)



Item	Model Name	L	
		mm	inch
1	UC-PRG015-01A	1500 ± 10	59 ± 4
2	UC-PRG030-01A	3000 ± 10	118 ± 4

CN1 Connectors

ACS3-IFSC4444 (For E3-L)

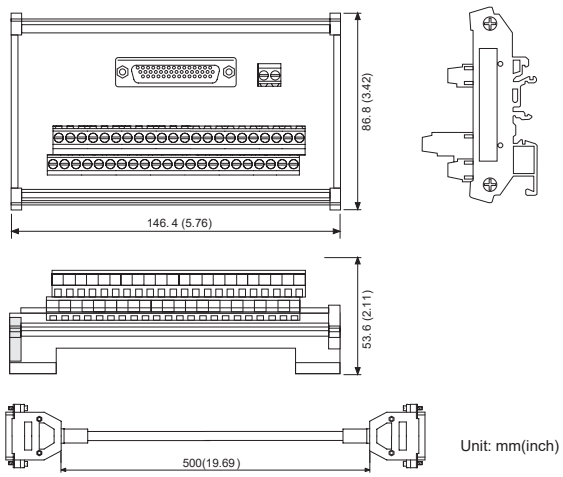


Unit: mm(inch)

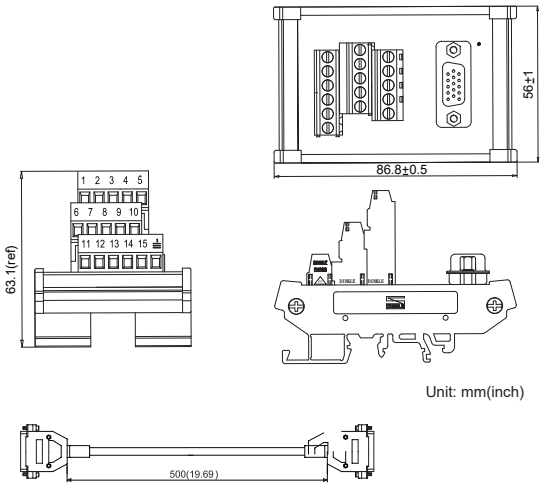
Accessories

CN1 Terminal Block Module

ACS3-MDTB4400 (For E3-L)

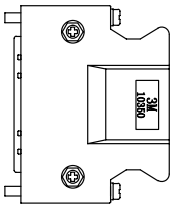


ACS3-MDTB1500 (For E3-E)

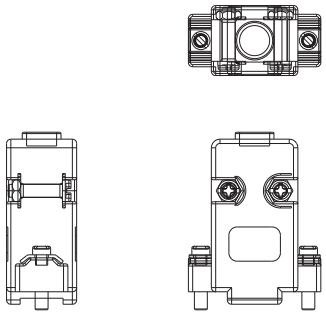


CN1 Connectors

ACS3-CNTB0400 (For E3-L)



ACS3-CNTB0800 (For E3-E)



Servo Drive Standards

Standard	ASD-E3 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	E3 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)
Protection Level	IEC/EN50178 , IP20
Vibration Resistance Protection	20 Hz and below (1G), 20 – 50 Hz (0.6G), conforms to IEC/EN50178
Shock Resistance Protection	15 gn 11ms; conforms to IEC/EN600028-2-27
Pollution Degree	Degree 2 conforms to IEC/EN61800-5-1

Smarter. Greener. Together.

Industrial Automation Headquarters

Taiwan: Delta Electronics, Inc.
Taoyuan Technology Center
No.18, Xinglong Rd., Taoyuan District,
Taoyuan City 33068, Taiwan
TEL: +886-3-362-6301 / FAX: +886-3-371-6301

Asia

China: Delta Electronics (Shanghai) Co., Ltd.
No.182 Minyu Rd., Pudong Shanghai, P.R.C.
Post code : 201209
TEL: +86-21-6872-3988 / FAX: +86-21-6872-3996
Customer Service: 400-820-9595

Japan: Delta Electronics (Japan), Inc.
Industrial Automation Sales Department
2-1-14 Shibadaimon, Minato-ku
Tokyo, Japan 105-0012
TEL: +81-3-5733-1155 / FAX: +81-3-5733-1255

Korea: Delta Electronics (Korea), Inc.
1511, 219, Gasan Digital 1-Ro., Geumcheon-gu,
Seoul, 08501 South Korea
TEL: +82-2-515-5305 / FAX: +82-2-515-5302

Singapore: Delta Energy Systems (Singapore) Pte Ltd.
4 Kaki Bukit Avenue 1, #05-04, Singapore 417939
TEL: +65-6747-5155 / FAX: +65-6744-9228

India: Delta Electronics (India) Pvt. Ltd.
Plot No.43, Sector 35, HSIIDC Gurgaon,
PIN 122001, Haryana, India
TEL: +91-124-4874900 / FAX: +91-124-4874945

Thailand: Delta Electronics (Thailand) PCL.
909 Soi 9, Moo 4, Bangpoo Industrial Estate (E.P.Z),
Pattana 1 Rd., T.Phraksa, A.Muang,
Samutprakarn 10280, Thailand
TEL: +66-2709-2800 / FAX: +66-2709-2827

Australia: Delta Electronics (Australia) Pty Ltd.
Unit 2, Building A, 18-24 Ricketts Road,
Mount Waverley, Victoria 3149 Australia
Mail: IA.au@deltaww.com
TEL: +61-1300-335-823 / +61-3-9543-3720

Americas

USA: Delta Electronics (Americas) Ltd.
5101 Davis Drive, Research Triangle Park, NC 27709, U.S.A.
TEL: +1-919-767-3813 / FAX: +1-919-767-3969

Brazil: Delta Electronics Brazil Ltd.
Estrada Velha Rio-São Paulo, 5300 Eugênio de
Melo - São José dos Campos CEP: 12247-004 - SP - Brazil
TEL: +55-12-3932-2300 / FAX: +55-12-3932-237

Mexico: Delta Electronics International Mexico S.A. de C.V.
Gustavo Baz No. 309 Edificio E PB 103
Colonia La Loma, CP 54060
Tlalnepantla, Estado de México
TEL: +52-55-3603-9200

EMEA

EMEA Headquarters: Delta Electronics (Netherlands) B.V.
Sales: Sales.IA.EMEA@deltaww.com
Marketing: Marketing.IA.EMEA@deltaww.com
Technical Support: iatechnicalsupport@deltaww.com
Customer Support: Customer-Support@deltaww.com
Service: Service.IA.emea@deltaww.com
TEL: +31(0)40 800 3900

BENELUX: Delta Electronics (Netherlands) B.V.
Automotive Campus 260, 5708 JZ Helmond, The Netherlands
Mail: Sales.IA.Benelux@deltaww.com
TEL: +31(0)40 800 3900

DACH: Delta Electronics (Netherlands) B.V.
Coesterweg 45,D-59494 Soest,Germany
Mail: Sales.IA.DACH@deltaww.com
TEL: +49 2921 987 238

France: Delta Electronics (France) S.A.
ZI du bois Challand 2,15 rue des Pyrénées,
Lisses, 91090 Evry Cedex, France
Mail: Sales.IA.FR@deltaww.com
TEL: +33(0)1 69 77 82 60

Iberia: Delta Electronics Solutions (Spain) S.L.U
Ctra. De Villaverde a Vallecas, 265 1º Dcha Ed.
Hormigueras – P.I. de Vallecas 28031 Madrid
TEL: +34(0)91 223 74 20

Carrer Llacuna 166, 08018 Barcelona, Spain
Mail: Sales.IA.Iberia@deltaww.com

Italy: Delta Electronics (Italy) S.r.l.
Via Meda 2–22060 Novedrate(CO)
Piazza Grazioli 18 00186 Roma Italy
Mail: Sales.IA.Italy@deltaww.com
TEL: +39 039 8900365

Turkey: Delta Greentech Elektronik San. Ltd. Sti. (Turkey)
Şerifali Mah. Hendem Cad. Kule Sok. No:16-A
34775 Ümraniye – İstanbul
Mail: Sales.IA.Turkey@deltaww.com
TEL: + 90 216 499 9910

MEA: Eltek Dubai (Eltek MEA DMCC)
OFFICE 2504, 25th Floor, Saba Tower 1,
Jumeirah Lakes Towers, Dubai, UAE
Mail: Sales.IA.MEA@deltaww.com
TEL: +971(0)4 2690148

DELTA_IA-ASDA_ASDA-A3_C_EN_20240119