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Summa ED3L Series

Full Digital AC Servo System

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ED3L Servo Drive

Excellent performance

Feature-rich

Reliable and easy to use

Cost-effective

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ED3L VS ProNet Plus

ProNet Plus Series

- **Power range：** 0.05kW~22kW
- **Voltage：** 200VAC, 400VAC
- **Matching motor：**
  EMJ/EM3A/EMG/EML/EMB
- **Communication：**
  EtherCAT/Pulse/Analog/CanOpen

Summa ED3L Series

- **Power range：** 0.05kW~7.5kW
- **Voltage：** 200VAC/300VDC
  400VAC/600VDC
- **Matching motor：** EM3A/EM3J/EM3G/EMG
- **Communication：** EtherCAT/Pulse/Analog/CanOpen/**Profinet**
- **Function：** Autotuning 、 Full range frequency vibration suppression、 zero stacking、 comprehensive protection

2022

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ED3L Model

ED3L -	02	A	E	A -	FS01
ED3L servo drive	Rated power	Voltage	Function	Encoder type	Extend function
	Sign spec A5: 0.05KW 01: 0.1KW 02: 0.2KW 04: 0.4KW 08: 0.75KW 10: 1.0KW 15: 1.5KW 20: 2.0KW 30: 3.0KW 50: 5.0KW 75: 7.5KW	Sign Spec A: 200VAC D: 400VAC	Sign Spec E: EtherCAT M:Pulse/CANopen P: Profinet	Sign Spec A: Serial encoder C: linear motor with ABZ encoder	FS01- Support STO function

*Only ED3L-04AEC and ED3L-10AEC support linear motor with ABZ incremental encoder

* Default model without extend function

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ED3L Product Type

Voltage	200VAC Single/Three phase				200VAC Three phase	
Power	50W/100W	200W/400W	750W	1kW	1.5kW	2kW
Outline	Outline A H172 W40 D180mm		Outline B H172 W55 D180mm		Outline C H172 W70 D180mm	
Voltage	400VAC three phase					
Power	1kW	1.5kW	2kW	3kW	5kW	7.5kW
Outline	Outline D H172 W60 D180mm		Outline E H172 W90 D180mm		Outline F H260 W90 D230mm	

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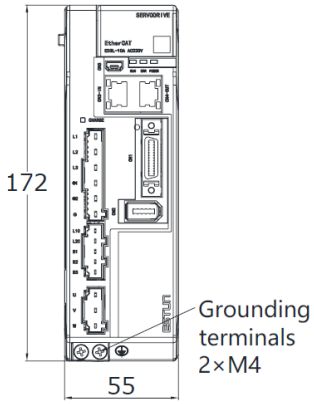
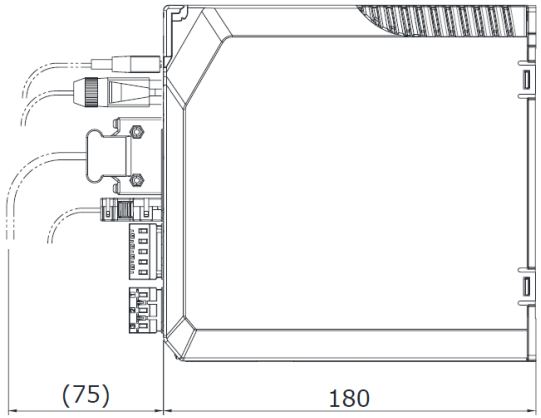
New Dimensions

ED3L

Servo Drive

	Pronet plus	ED3L
Power	50W～400W	50W～400W
W (mm)	40	40
H (mm)	160	172
D (mm)	180	180
	750W/1kW	750W/1kW
W (mm)	84	55
H (mm)	186	172
D (mm)	180	180
	1.5kW/2kW	1.5kW/2kW
W (mm)	100	70
H (mm)	186	172
D (mm)	180	180





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General Specification

ED3L-□□AMA

Item			Specification
Torque control	Input signal	Command voltage	DC±10V(DC±0V~±10V: variable setting range)
	Contact instruction	Torque set	4 torque contacts
Speed control	Input signal	Command voltage	DC±10V(DC±0V~±10V: variable setting range)
	Contact instruction	Speed selection	1st speed ~ 7th speed
Position control	Instruction pulse	Type	Choose one from sign + pulse train, CCW+CW pulse train, 2-phase pulse (90° phase difference) (A phase + B phase)
	PCP instruction	Position set	32 position contacts
	Encoder frequency division pulse output		Phase A, Phase B, Phase C: Line drive output Frequency division pulse number: arbitrary frequency division allowed
I/O Signals	Input signal		Operating voltage: 24 VDC ± 20% Input Channel Number: 10 (2 of which can be used for Touch Probe)
	Output signal		Operating voltage: 5 VDC~30 VDC Output Channel Number: 4 (one of which is for servo alarm only)

ED3L-□□AEA

Item		Specification
I/O Signals	Input signal	Range of operating voltage: 24 VDC ± 20% Number of input channels: 5 (2 of which can be used for Touch Probe)
	Output signal	Range of operating voltage: 5 VDC~30 VDC Number of output channels: 3 (one of which is for servo alarm only)
EtherCAT communication	Applicable communication standards	IEC 61158 Type12, IEC 61800-7 CiA402 Drive Profile
	Physical layer	100BASE-TX (IEEE802.3)
	Bus connection	CN3-IN (RJ45): EtherCAT Signal IN CN4-OUT (RJ45): EtherCAT Signal OUT
	Cables	Cat.5 twisted pair (4 pairs of shielded twisted pair)
	FoE (File Over EtherCAT)	Download new firmware using FoE protocol

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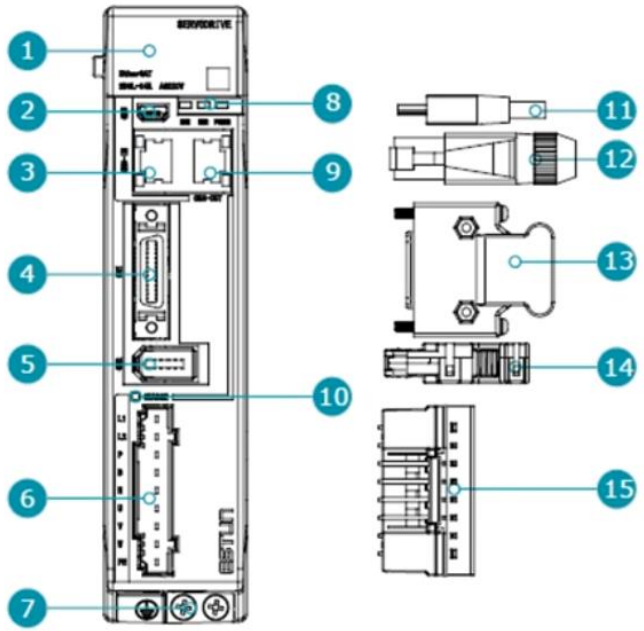
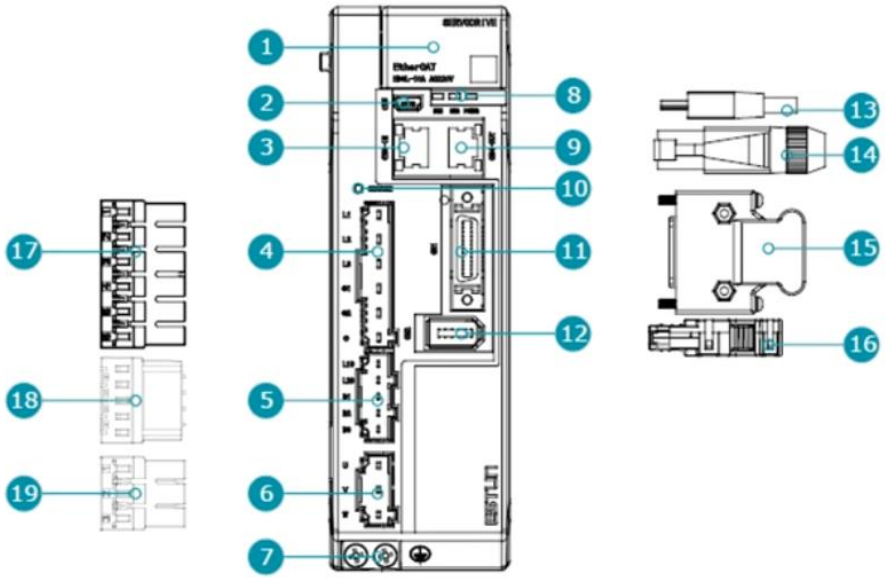
200V Product Outline

200V 50W-400W



200V 750W-2KW



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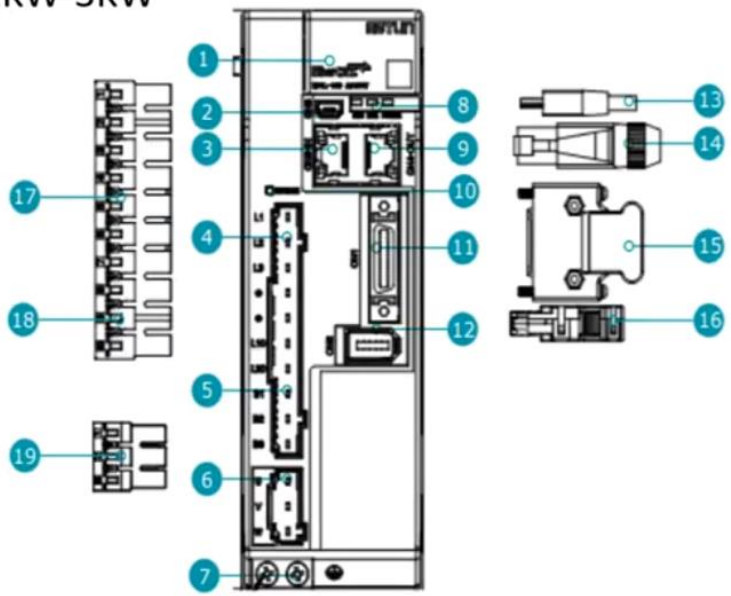
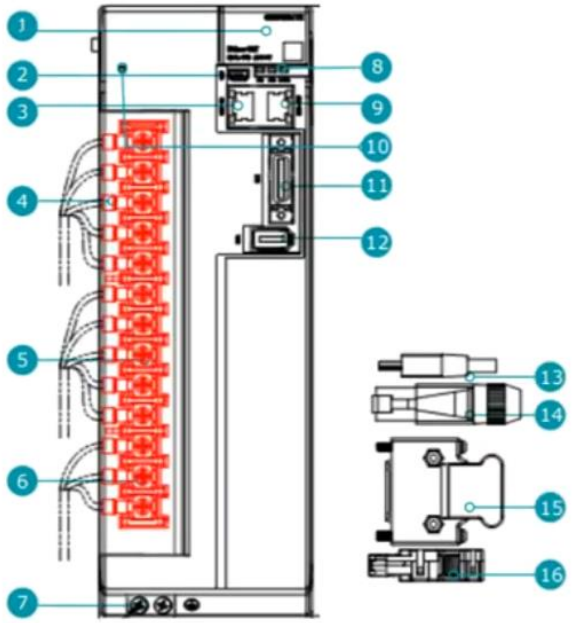
400V Product Outline

400V 1KW-3KW



400V 5KW-7.5KW



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ProNet Plus (CANopen) VS ED3L (CANopen)

	ProNet Plus (CANopen)	ED3L(CANopen)
Power range	50w-22kw	50w-7.5kw
Voltage	200VAC/400VAC	200VAC/400VAC, 300VDC/600VDC
Matching motor	EM3A/EMG/EML/EMB	EM3A/EM3J/EM3G/EMG
CN1 IO connector	50PIN	50PIN
CN2 encoder connector	20PIN	10PIN
ESVIEW	ESVIEW V3	ESVIEW V4
ESVIEW Cable	USB-RS485(RJ45)	Min USB-Double Shielded magnetic rings-1M5

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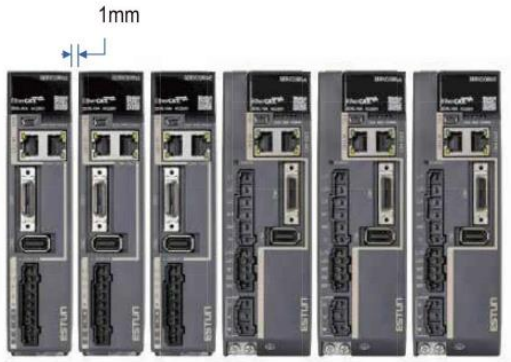
ED3L Features

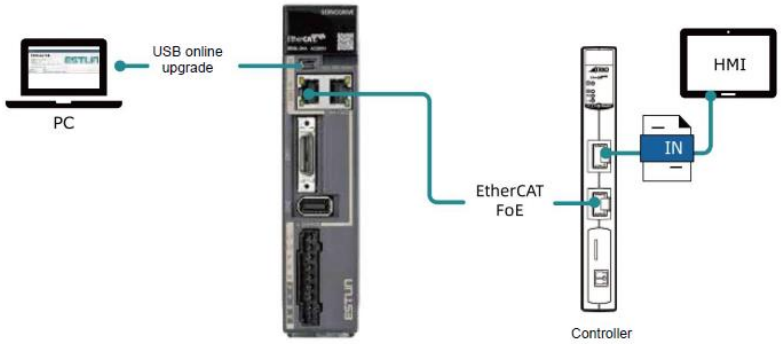
Zero Stacking

Supports installation with a spacing of 1mm, saving the space of electrical cabinet



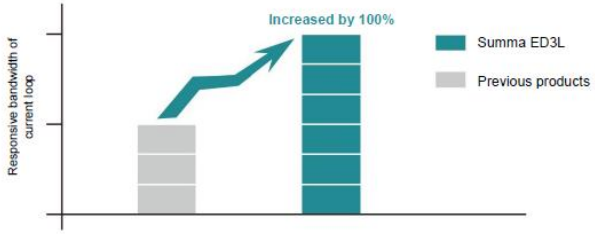
Upgrading firmware through USB or FoE

Use of USB or FoE, allowing to upgrade the firmware of servo drive products without disassembling the machine



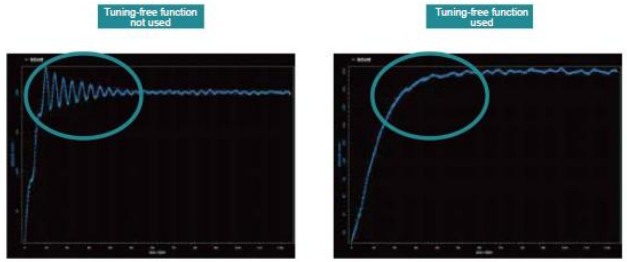
High Response

A cycle of current loop lasts 62.5μs, and the minimum bus communication cycle of EtherCAT lasts 125μs



Smart Tuning

Support tuning-free, and auto-tuning mode; automatic offline parameter tuning function, to give better usability



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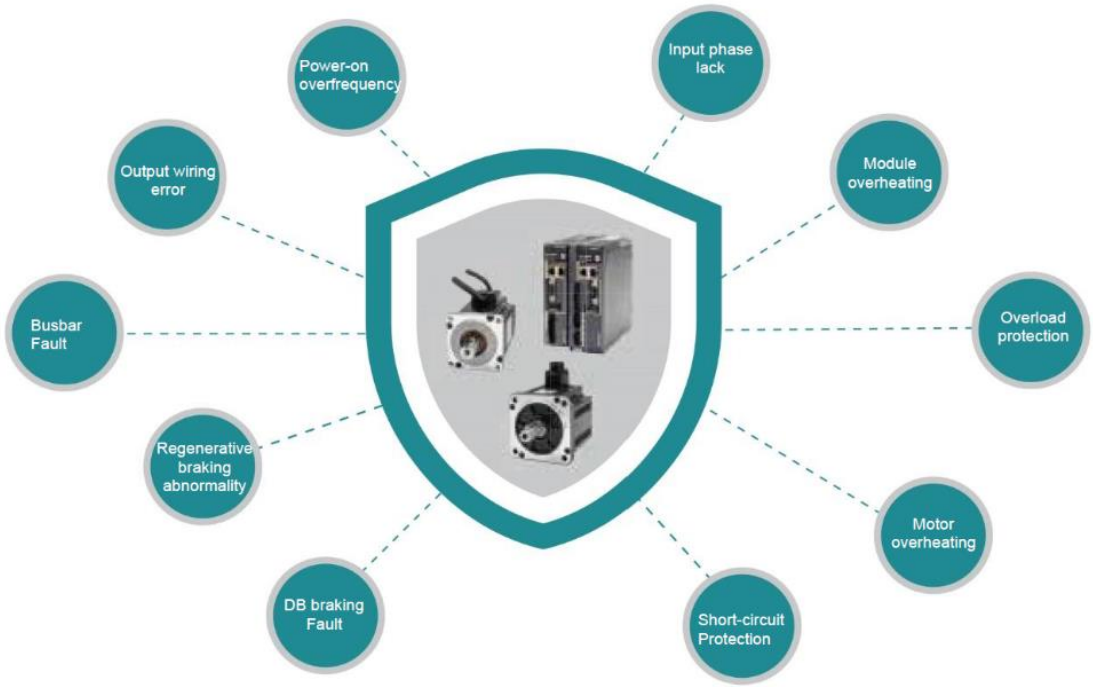
ED3L Features

Comprehensive Protection

Improve the reliability of product use and fully tap the system performance

- -Input phase lack
- -Module overheating
- -Overload protection
- -Motor overheating
- -Short-circuit protection
- -DB braking fault
- -Regenerative braking abnormality
- -Busbar fault
- -Output wiring error
- -Power-on overfrequency



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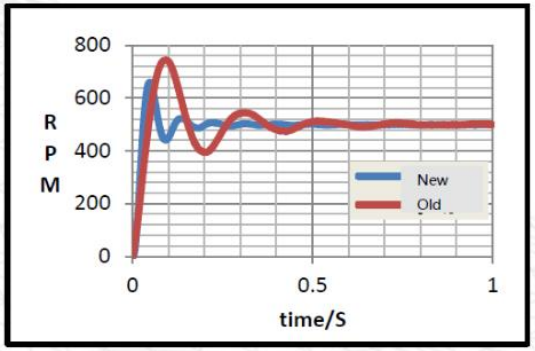
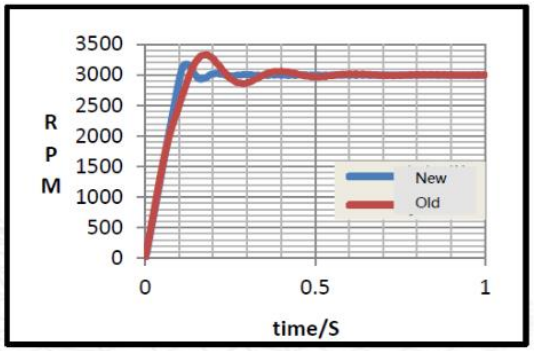
Intelligent Tuning

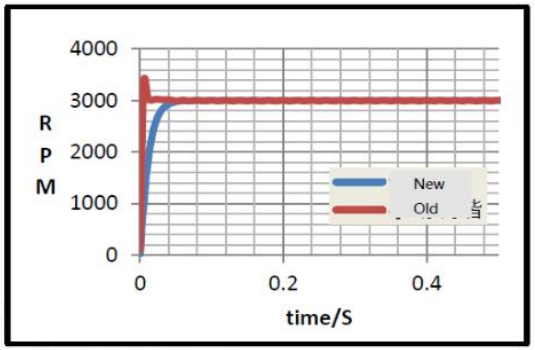
Factory setting works in tuning-free mode, no servo gain adjustment is required



500rpm 27 times inertia



3000rpm 27 times inertia



3000rpm without load

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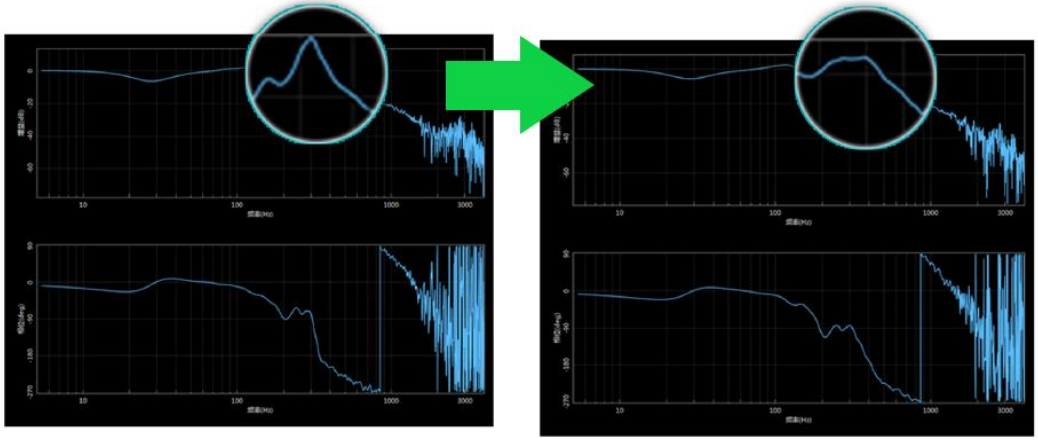
Vibration suppression

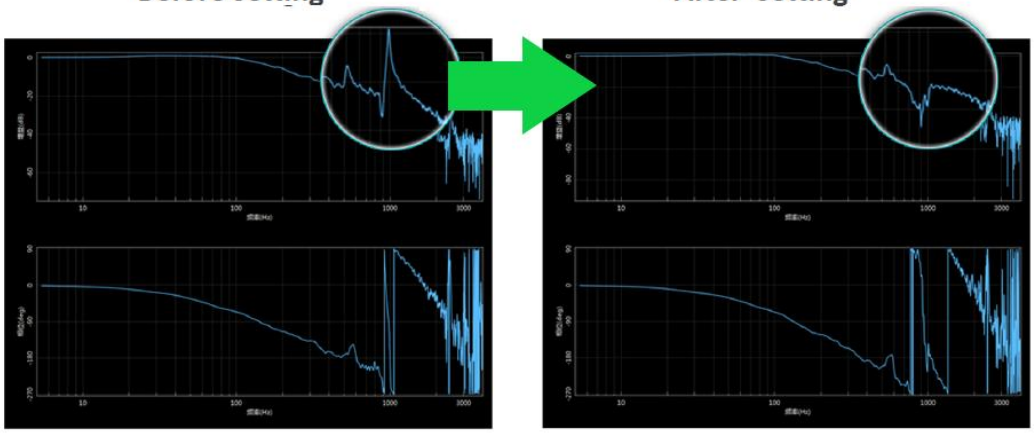
Use the ESView mechanical analyzer to give the frequency characteristics of the screw stage (open loop), increase the servo rigidity until mechanical resonance occurs, and use the speed closed loop mode to measure the frequency characteristics



Before setting

After setting

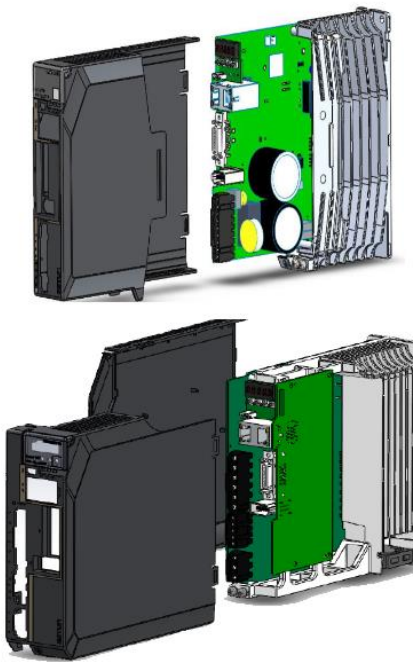
Set the resonance frequency to the Notch filter, and then use the mechanical analyzer to measure the speed closed-loop frequency characteristics



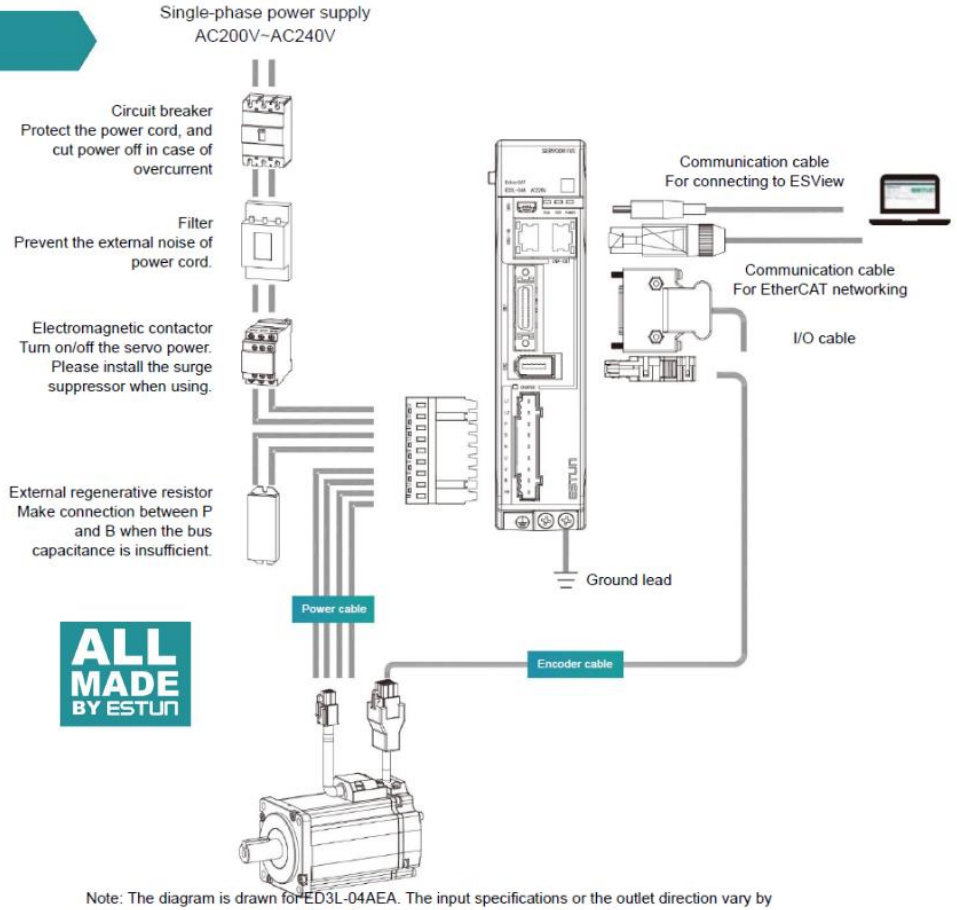
Before setting

After setting

Wiring / Outline



Wiring

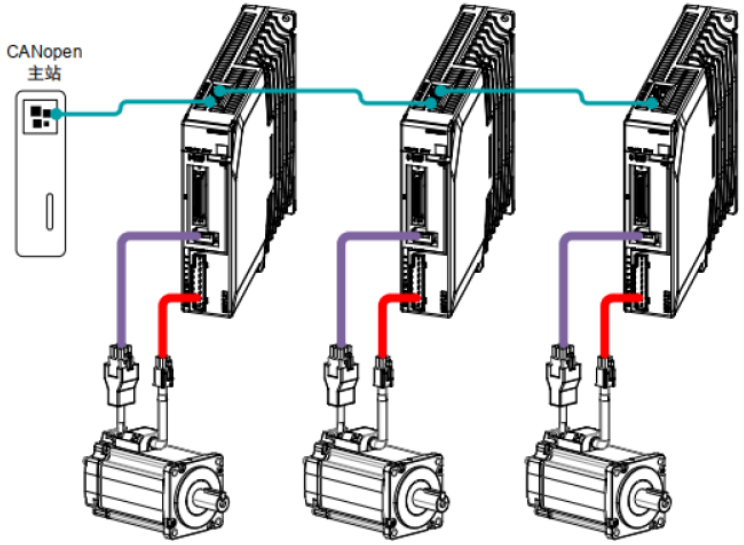


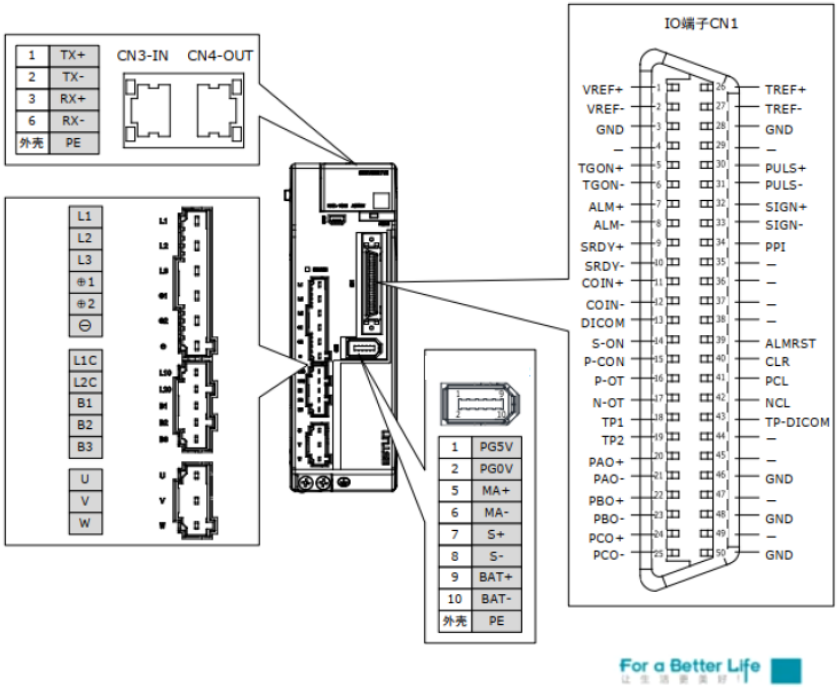
Note: The diagram is drawn for ED3L-04AEA. The input specifications or the outlet direction vary by model, but the basic system components would be similar.

Interface (Pulse/Analog/CANopen)

1. CN1 is a 50-pin male connector. There are 10 DIs and 4 DOs.
2. CN2 is a DB6 plug.
3. The CN3 and CN4 plugs are forward and backward.
4. The power cable and motor cable are plug-in terminals.

The front side above the driver is CN3-IN, and the rear side is CN4-OUT





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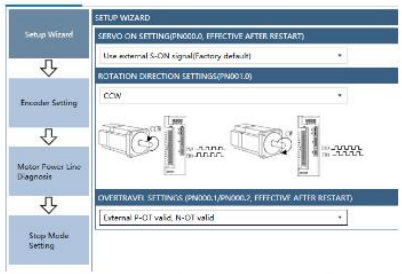
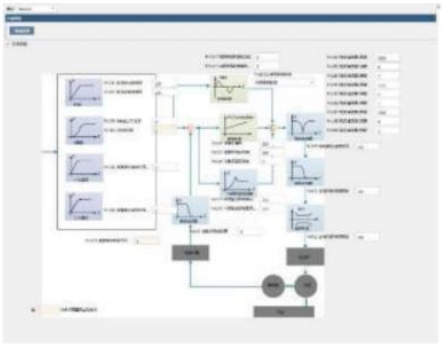
New configuration of ESview V4

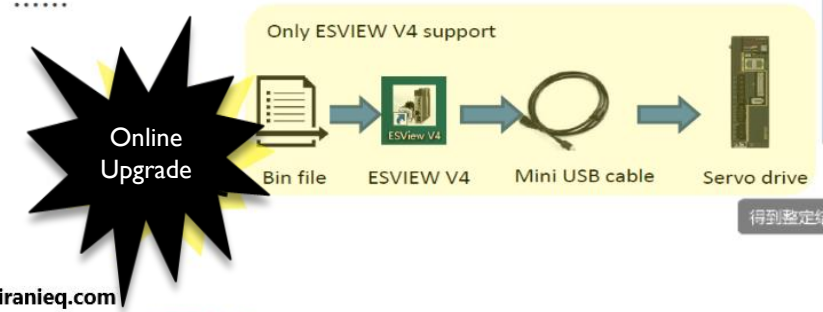
Powerful and rich function support, enabling users to easily debug

Esview V4

- Configuration wizard function
- Parameter editing function
- Easy-to-use tuning function
- Graphical manual parameter adjustment
- .....







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