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Ezi-SERVO®

Closed Loop Stepping System

- Intergrated Controller
- Position Table
- Closed Loop System
- No Gain Tuning / No Hunting
- High Resolution / Fast Response

Plus-R



c UL us CE RoHS COMPLIANT

FASTECH
Fast, Accurate, Smooth Motion

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Features

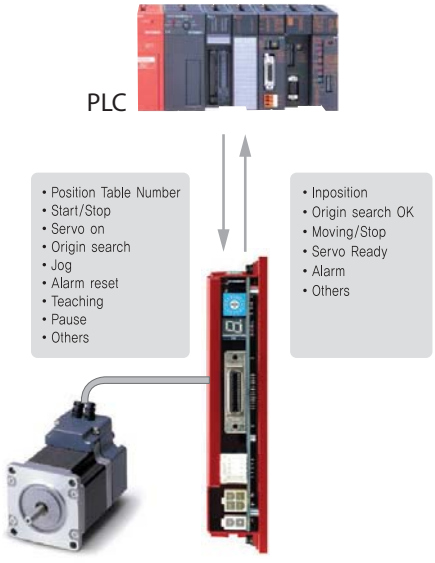
1. Network Based Motion Control

A maximum of 16 axis can be operated from a PC through RS-485 communications. All of the Motion conditions are set through the network and saved in Flash ROM as a parameter. Motion Library(DLL) is provided for programming under Windows 2000 / XP / 7 / 8 / 10 / Vista.



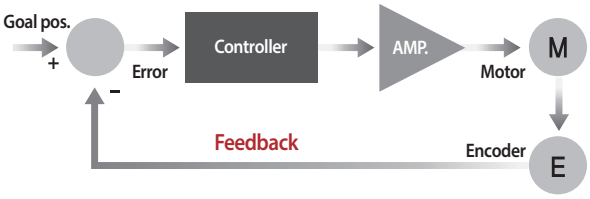
2. Position Table Function

Position Table can be used for motion control by digital input and output signals of host controller. You can operate the motor directly by sending the position table number, start / stop, origin search and other digital input values from a PLC. The PLC can monitor the In-Position, origin search, moving / stop, servo ready and other digital output signals from a drive. A maximum of 256 positioning points can be set from PLC.



3. Closed Loop System

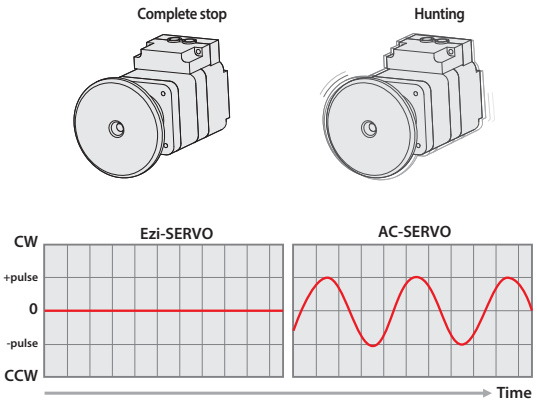
Ezi-SERVO Plus-R is an innovative closed loop stepping motor and controller that utilizes a high-resolution motor mounted encoder to constantly monitor the motor shaft position. The encoder feedback feature allows the Ezi-SERVO Plus-R to update the current motor shaft position information every 25 micro seconds. This allows the Ezi-SERVO Plus-R drive to compensate for the loss of position, ensuring accurate positioning. For example, due to a sudden load change, a conventional stepper motor and drive could lose a step creating a positioning error and a great deal of cost to the end user!



4. No Hunting

Traditional servo motor drives overshoot their position and try to correct by overshooting the opposite direction, especially in high gain applications.This is called null hunt and is especially prevalent in systems that the break away or static friction is significantly higher than the running friction.

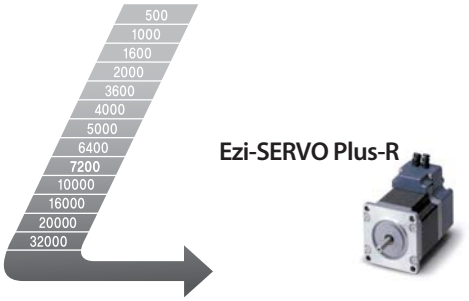
The cure is lowering the gain, which affects accuracy or using Ezi-SERVO Plus-R Motion Control System! Ezi-SERVO Plus-R utilizes the unique characteristics of stepping motors and locks itself into the desired target position, eliminating Null Hunt. This feature is especially useful in applications such as nanotech manufacturing, semiconductor fabrication, vision systems and ink jet printing in which system oscillation and vibration could be a problem.



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5. High Resolution

The unit of the position command can be divided precisely.
(Max. 32,000[ppr])



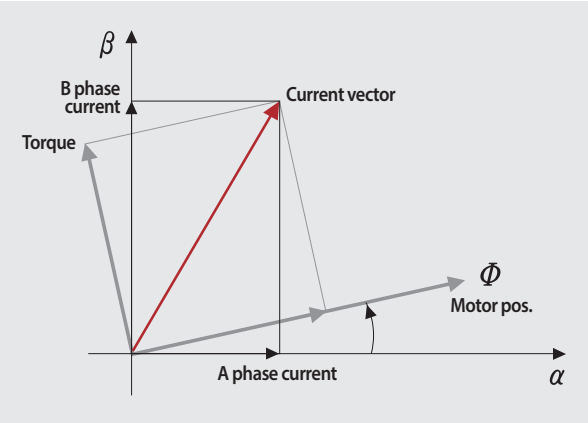
6. Fast Response

Similar to conventional stepping motors, Ezi-SERVO Plus-R instantly synchronizes with command pulses providing fast positional response. Ezi-SERVO Plus-R is the optimum choice when zero-speed stability and rapid motions within a short distance are required. Traditional servo motor systems have a natural delay between the commanding input signals and the resultant motion because of the constant monitoring of the current position, necessitating in a waiting time until it settles, called settling time.



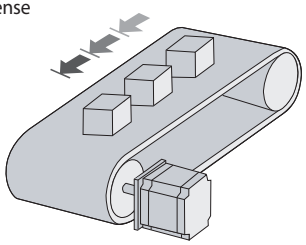
7. Smooth and Accurate

Ezi-SERVO Plus-R is a high-precision servo drive, using a high-resolution encoder with 32,000[ppr].
Unlike a conventional Microstep drive, the on-board high performance DSP(Digital Signal Processor) performs vector control and filtering, producing a smooth rotational control with minimum ripples.



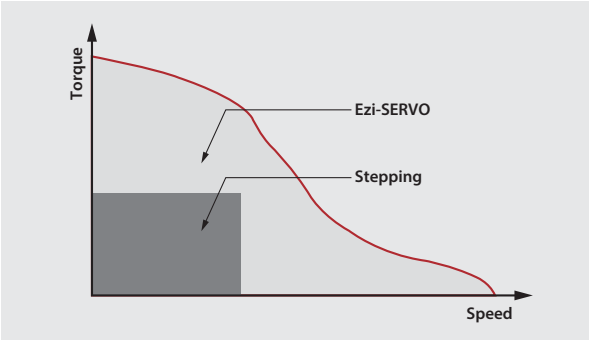
8. No Gain Tuning

Conventional servo systems, to ensure machine performance, smoothness, positional error and low servo noise, require the adjustment of its servo's gains as an initial crucial step. Even systems that employ autotuning require manual tweaking after the system is installed, especially if more that one axis are interdependent.
Ezi-SERVO Plus-R employs the best characteristics of stepper and closed loop motion controls and algorithms to eliminate the need of tedious gain tuning required for conventional closed loop servo systems.
This means that Ezi-SERVO Plus-R is optimized for the application and ready to work right out of the box! The Ezi-SERVO Plus-R system employs the unique characteristics of the closed loop stepping motor control, eliminating these cumbersome steps and giving the engineer a high performance servo system without wasting setup time. Ezi-SERVO Plus-R is especially well suited for low stiffness loads(For example, a belt and pulley system) that sometime require conventional servo systems to inertia match with the added expense and bulk of a gearbox.
Ezi-SERVO Plus-R also performs exceptionally, even under heavy loads and high speeds!



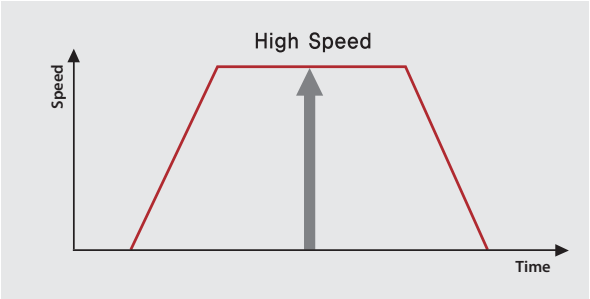
9. High Torque

Compared with common step motors and drives, Ezi-SERVO Plus-R motion control systems can maintain a high torque state over relatively long period of time. This means that Ezi-SERVO continuously operates without loss of position under 100% of the load. Unlike conventional Microstep drives, Ezi-SERVO Plus-R exploits continuous high-torque operation during high-speed motion due to its innovative optimum current phase control.



10. High Speed

The Ezi-SERVO Plus-R functions well at high speed without the loss of Synchronism or positioning error. Ezi-SERVO Plus-R's ability of continuous monitoring of current position enables the stepping motor to generate high-torque, even under a 100% load condition.



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Part Numbering Method

Ezi-SERVO-PR-56L-A-BK-PN05-□

Product Name	Ezi-SERVO

Drive Series Type	**ST** : Stand Alone
	MI : Mini Type
	PR : Plus RS-485
	PR-MI : S-485 Mini Type
	BT : Built In
	ALL : All Type

Motor Flange Size	20mm
	28mm
	35mm
	42mm
	56mm
	60mm
	86mm

Motor Length	**S :** Single
	M : Middle
	L : Large
	XL : Extra Large

Encoder Resolution	A - 10,000[ppr]
	B - 20,000[ppr]
	C - 32,000[ppr]
	D - 16,000[ppr]
	F - 4,000[ppr]

Brake	No Indication : No
	BK-Brake

Reduction Gear Ratio	No Indication : No
	PN03 - 1:3
	PN05 - 1:5
	PN08 - 1:8
	PN10 - 1:10
	PN15 - 1:15
	PN25 - 1:25
	PN40 - 1:40
	PN50 - 1:50

User Code	

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Motor, Drive Combination

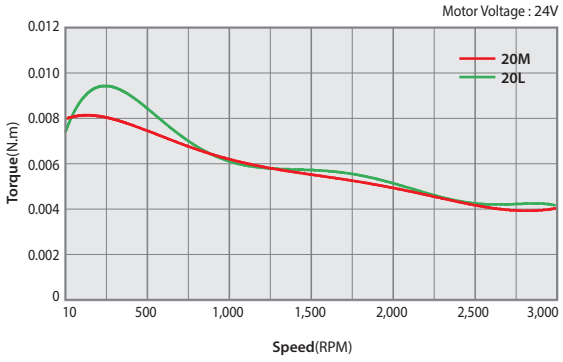
UNIT No.	MOTOR No.	DRIVE No.
Ezi-SERVO-PR-20M-F	EzM-20M-F	EzS-NDR-20M-F
Ezi-SERVO-PR-20L-F	EzM-20L-F	EzS-NDR-20L-F
Ezi-SERVO-PR-28S-D	EzM-28S-D	EzS-NDR-28S-D
Ezi-SERVO-PR-28M-D	EzM-28M-D	EzS-NDR-28M-D
Ezi-SERVO-PR-28L-D	EzM-28L-D	EzS-NDR-28L-D
Ezi-SERVO-PR-35M-D	EzM-35M-D	EzS-NDR-35M-D
Ezi-SERVO-PR-35L-D	EzM-35L-D	EzS-NDR-35L-D
Ezi-SERVO-PR-42S-A	EzM-42S-A	EzS-NDR-42S-A
Ezi-SERVO-PR-42S-B	EzM-42S-B	EzS-NDR-42S-B
Ezi-SERVO-PR-42S-C	EzM-42S-C	EzS-NDR-42S-C
Ezi-SERVO-PR-42M-A	EzM-42M-A	EzS-NDR-42M-A
Ezi-SERVO-PR-42M-B	EzM-42M-B	EzS-NDR-42M-B
Ezi-SERVO-PR-42M-C	EzM-42M-C	EzS-NDR-42M-C
Ezi-SERVO-PR-42L-A	EzM-42L-A	EzS-NDR-42L-A
Ezi-SERVO-PR-42L-B	EzM-42L-B	EzS-NDR-42L-B
Ezi-SERVO-PR-42L-C	EzM-42L-C	EzS-NDR-42L-C
Ezi-SERVO-PR-42XL-A	EzM-42XL-A	EzS-NDR-42XL-A
Ezi-SERVO-PR-42XL-B	EzM-42XL-B	EzS-NDR-42XL-B
Ezi-SERVO-PR-42XL-C	EzM-42XL-C	EzS-NDR-42XL-C
Ezi-SERVO-PR-56S-A	EzM-56S-A	EzS-NDR-56S-A
Ezi-SERVO-PR-56S-B	EzM-56S-B	EzS-NDR-56S-B
Ezi-SERVO-PR-56S-C	EzM-56S-C	EzS-NDR-56S-C
Ezi-SERVO-PR-56M-A	EzM-56M-A	EzS-NDR-56M-A
Ezi-SERVO-PR-56M-B	EzM-56M-B	EzS-NDR-56M-B
Ezi-SERVO-PR-56M-C	EzM-56M-C	EzS-NDR-56M-C
Ezi-SERVO-PR-56L-A	EzM-56L-A	EzS-NDR-56L-A
Ezi-SERVO-PR-56L-B	EzM-56L-B	EzS-NDR-56L-B
Ezi-SERVO-PR-56L-C	EzM-56L-C	EzS-NDR-56L-C
Ezi-SERVO-PR-60S-A	EzM-60S-A	EzS-NDR-60S-A
Ezi-SERVO-PR-60S-B	EzM-60S-B	EzS-NDR-60S-B
Ezi-SERVO-PR-60S-C	EzM-60S-C	EzS-NDR-60S-C
Ezi-SERVO-PR-60M-A	EzM-60M-A	EzS-NDR-60M-A
Ezi-SERVO-PR-60M-B	EzM-60M-B	EzS-NDR-60M-B
Ezi-SERVO-PR-60M-C	EzM-60M-C	EzS-NDR-60M-C
Ezi-SERVO-PR-60L-A	EzM-60L-A	EzS-NDR-60L-A
Ezi-SERVO-PR-60L-B	EzM-60L-B	EzS-NDR-60L-B
Ezi-SERVO-PR-60L-C	EzM-60L-C	EzS-NDR-60L-C
Ezi-SERVO-PR-86M-A	EzM-86M-A	EzS-NDR-86M-A
Ezi-SERVO-PR-86M-B	EzM-86M-B	EzS-NDR-86M-B
Ezi-SERVO-PR-86L-A	EzM-86L-A	EzS-NDR-86L-A
Ezi-SERVO-PR-86L-B	EzM-86L-B	EzS-NDR-86L-B
Ezi-SERVO-PR-86XL-A	EzM-86XL-A	EzS-NDR-86XL-A
Ezi-SERVO-PR-86XL-B	EzM-86XL-B	EzS-NDR-86XL-B

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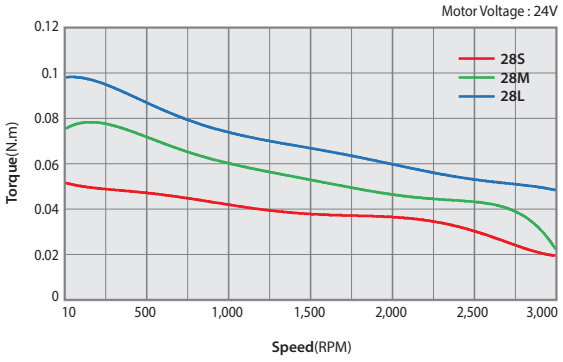
Motor Specification Table

Model		Unit	20		28			35	
			20M	20L	28S	28M	28L	35M	35L
DRIVE METHOD		-	BI-POLAR						
Number OF PHASES		-	2	2	2	2	2	2	2
VOLTAGE		VDC	2.75	3	3	3	3	2.88	4.59
CURRENT per PHASE		A	0.5	0.5	0.95	0.95	0.95	0.6	0.85
RESISTANCE per PHASE		Ohm	5.5	6	3.2	3.2	3.2	4.8	5.4
INDUCTANCE per PHASE		mH	2	2.6	2	2.7	3.2	6.1	6.5
HOLDING TORQUE		N·m	0.016	0.025	0.069	0.098	0.118	0.050	0.176
ROTOR INERTIA		g·cm²	2.5	3.3	9	13	18	8	11
WEIGHTS		g	50	80	110	140	200	180	260
LENGTH(L)		mm	28	38	32	45	50	26	38
ALLOWABLE OVERHUNG LOAD (DISTANCE FROM END OF SHAFT)	3mm	N	18	18	30	30	30	22	22
	8mm		30	30	38	38	38	26	26
	13mm		-	-	53	53	53	33	33
	18mm		-	-	-	-	-	46	46
ALLOWABLE THRUST LOAD		N	Lower than motor weight						
INSULATION RESISTANCE		Mohm	100 MΩ MIN.(at 500VDC)						
INSULATION CLASS		-	CLASS B(130˚C)						
OPERATING TEMPERATURE		℃	0 to 55						

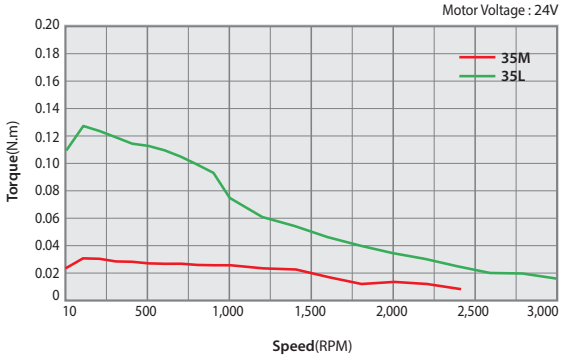
Ezi-SERVO Plus-R_ 20 Series



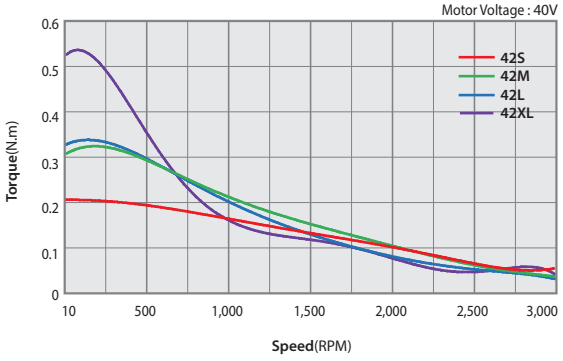
Ezi-SERVO Plus-R_ 28 Series



Ezi-SERVO Plus-R_ 35 Series



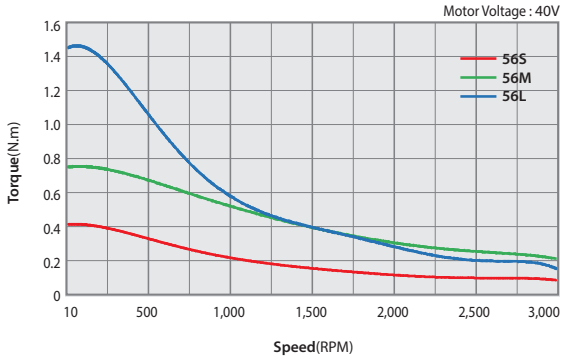
Ezi-SERVO Plus-R_ 42 Series



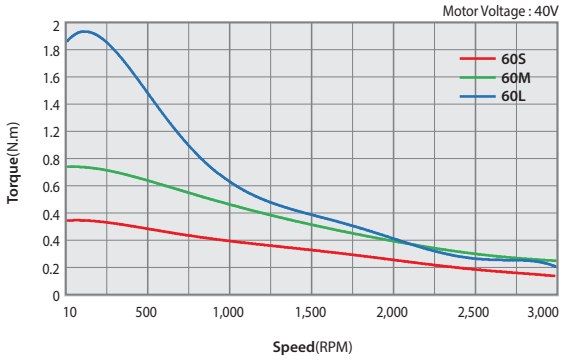
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42				56			60			86		
42S	42M	42L	42XL	56S	56M	56L	60S	60M	60L	86M	86L	86XL
BI-POLAR												
2	2	2	2	2	2	2	2	2	2	2	2	2
3.36	4.32	4.56	7.2	1.56	1.62	2.64	1.32	1.48	2.2	2.34	3.6	4.8
1.2	1.2	1.2	1.2	3	3.0	3.0	4.0	4.0	4.0	6.0	6.0	6.0
2.8	3.6	3.8	6	0.52	0.54	0.88	0.33	0.37	0.55	0.39	0.6	0.8
5.4	7.2	8	15.6	1.2	2	4	0.75	1.1	2.7	3	6.5	8.68
0.32	0.44	0.5	0.65	0.64	1	1.5	0.88	1.28	2.4	4.5	8.5	12
35	54	77	114	180	280	520	240	490	690	1800	3600	5400
250	280	350	500	500	720	1150	600	1000	1300	2.3	3.8	5.3
34	40	48	60	46	55	80	47	56	85	78	117	155
22	22	22	22	52	52	52	70	70	70	270	270	270
26	26	26	26	65	65	65	87	87	87	300	300	300
33	33	33	33	85	85	85	114	114	114	350	350	350
46	46	46	46	123	123	123	165	165	165	400	400	400
Lower than motor weight												
100 MΩ MIN.(at 500VDC)												
CLASS B(130˚C)												
0 to 55												

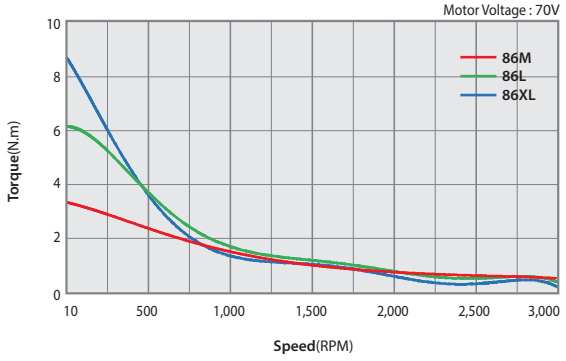
Ezi-SERVO Plus-R_ 56 Series



Ezi-SERVO Plus-R_ 60 Series

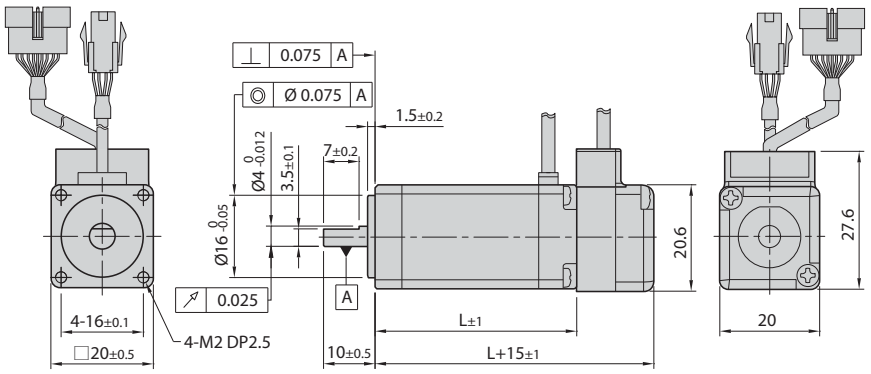


Ezi-SERVO Plus-R_ 86 Series



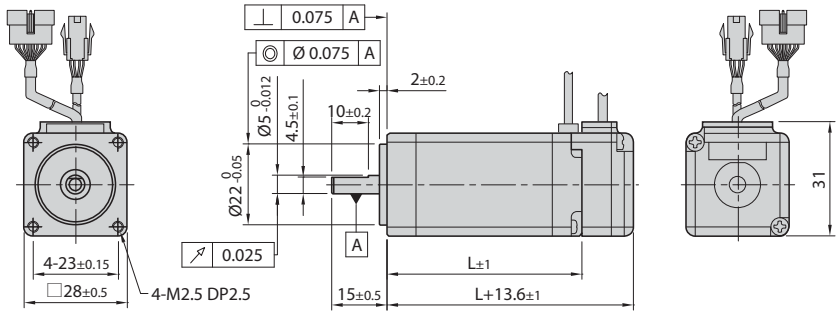
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Motor Drawing



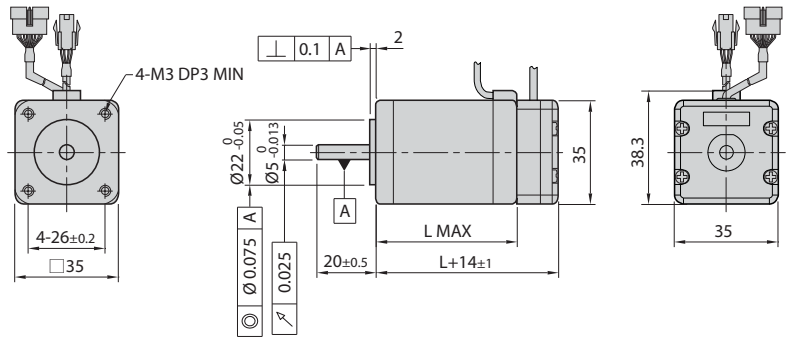
20mm

Model name	Length(L)
EzM-20M	28
EzM-20L	38



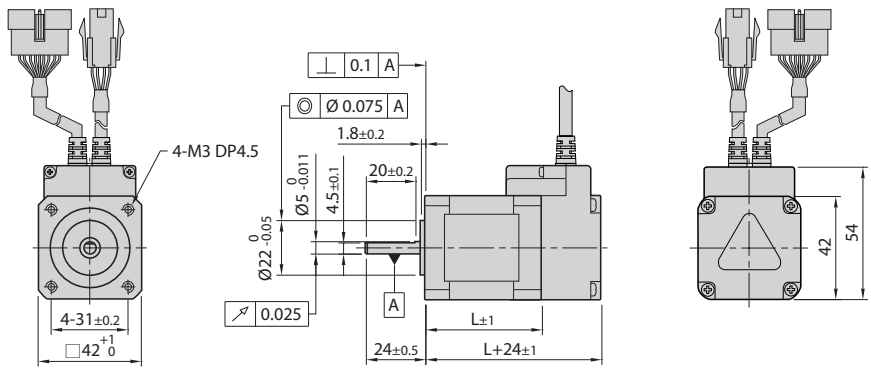
28mm

Model name	Length(L)
EzM-28S	32
EzM-28M	45
EzM-28L	50



35mm

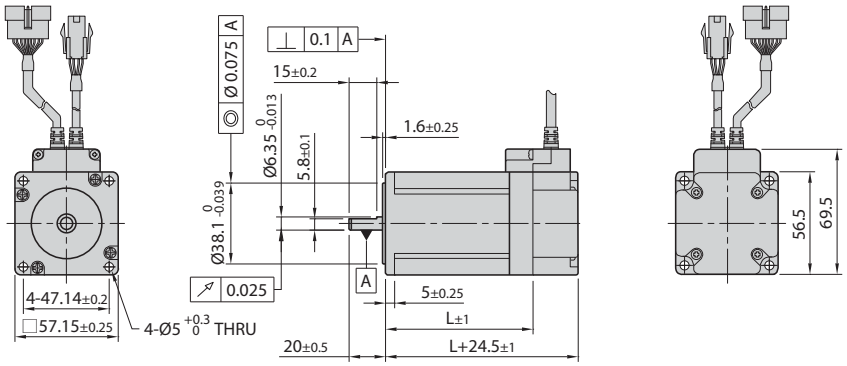
Model name	Length(L)
EzM-35M	26
EzM-35L	38



42mm

Model name	Length(L)
EzM-42S	34
EzM-42M	40
EzM-42L	48
EzM-42XL	60

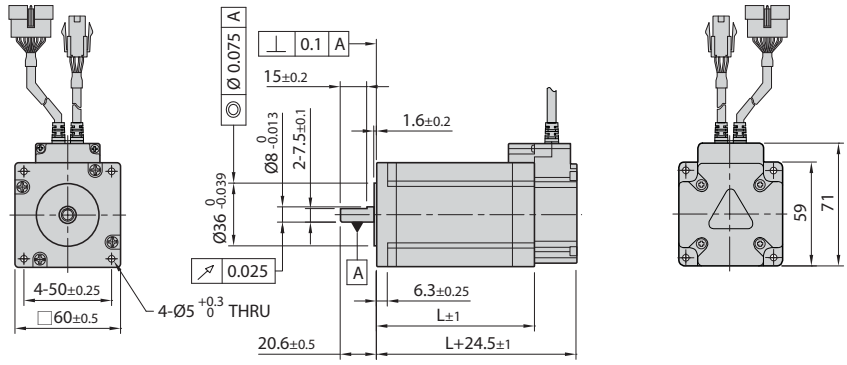
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※ There are 2 kinds size of front shaft diameter for EzM-56 series as Φ6.35 and Φ8.0.

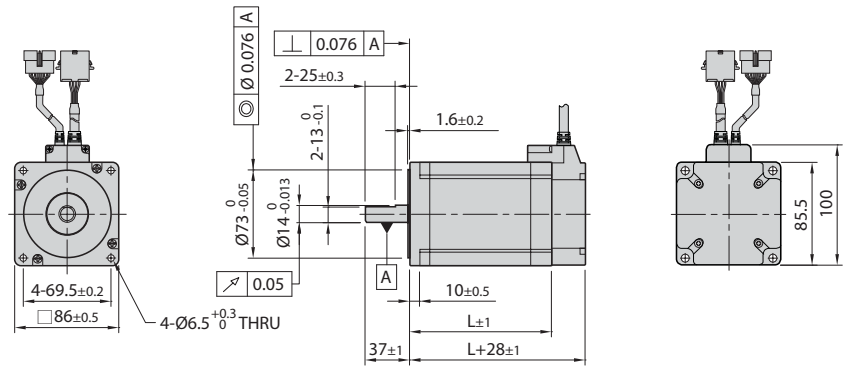
56mm

Model name	Length(L)
EzM-56S	46
EzM-56M	55
EzM-56L	80



60mm

Model name	Length(L)
EzM-60S	47
EzM-60M	56
EzM-60L	85



86mm

Model name	Length(L)
EzM-86M	78
EzM-86L	117
EzM-86XL	155

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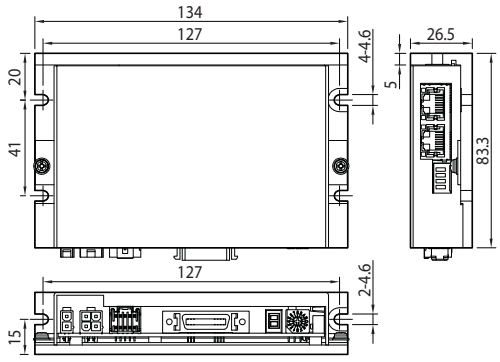
Drive Specification

Specifications

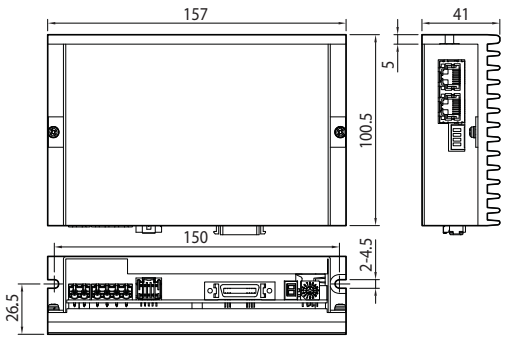
Motor Model		EzM-20 Series	EzM-28 Series	EzM-35 Series	EzM-42 Series	EzM-56 Series	EzM-60 Series	EzM-86 Series
Drive Model		EzS-NDR-20 Series	EzS-NDR-28 Series	EzS-NDR-35 Series	EzS-NDR-42 Series	EzS-NDR-56 Series	EzS-NDR-60 Series	EzS-NDR-86 Series
Input Voltage		24VDC ±10%						40 ~ 70VDC
Control Method		Closed Loop Control with 32bit DSP						
Multi Axes Drive		Maximum 16 axes through Daisy-Chain						
Position Table		256 Motion Command Steps(Speed, External start, Jump, Loop, Wait and PT finish etc.)						
Current Consumption		Max. 500mA(Except Motor Current)						
Operating Condition	Ambient Temperature	· In Use : 0 ~ 50˚C · In Storage : -20 ~ 70˚C						
	Humidity	· In Use : 35 ~ 85% RH(Non-Condensing) · In Storage : 10 ~ 90% RH(Non-Condensing)						
	Vib. Resist.	0.5G						
Function	Rotation Speed	0 ~ 3,000[rpm]						
	Resolution[ppr]	· 4,000[ppr] Encoder model : 500 / 1,000 / 1,600 / 2,000 / 3,600 / 5,000 / 6,400 / 7,200 / 10,000 / 4,000 · 10,000[ppr] Encoder model : 500 / 1,000 / 1,600 / 2,000 / 3,600 / 5,000 / 6,400 / 7,200 / 10,000 · 16,000[ppr] Encoder model : 500 / 1,000 / 1,600 / 2,000 / 3,600 / 5,000 / 6,400 / 7,200 / 10,000 / 16,000 · 20,000[ppr] Encoder model : 500 / 1,000 / 1,600 / 2,000 / 3,600 / 5,000 / 6,400 / 7,200 / 10,000 / 20,000 · 32,000[ppr] Encoder model : 500 / 1,000 / 1,600 / 2,000 / 3,600 / 5,000 / 6,400 / 7,200 / 10,000 / 32,000 (Selectable by Parameter)						
	Protection	Over Current Error, Over Speed Error, Position Tracking Error, Over Load Error, Over Temperature Error, Over Regenerated Voltage Error, Motor Connect Error, Encoder Connect Error, Motor Voltage Error, In-Position Error, System Error, ROM Error, Position Overflow Error						
	LED Display	Power status, In-Position status, Servo on status , Alarm status						
	In-Position Selection	0~15(Selectable by Parameter)						
	Position Gain Selection	0~15(Selectable by Parameter)						
	Rotational Direction	CW / CCW(Selectable by Parameter)						
I/O Signal	Input Signal	3 dedicated input(LIMIT+, LIMIT-, ORIGIN), 9 programmable output(Photocoupler Input)						
	Output Signal	1 dedicated output(Compare Out), 9 programmable output(Photocoupler Output), Brake signal						
Communication Interface		The RS-485 serial communication with PC Transmission speed : 9,600 ~ 921,600bps						
Position Control		Incremental mode / Absolute mode (Data Range : -134,217,727 to +134,217,727pulse, Operating speed : Max. 3,000[rpm])						
Return to Origin		Origin Sensor, Z phase, ±Limit sensor, Torque						
GUI		User Interface Program within Windows						
Software		Motion Library(DLL) for windows 2000 / XP / 7 / 8 / 10 / Vista						

Drive Dimension(mm)

1. Drive



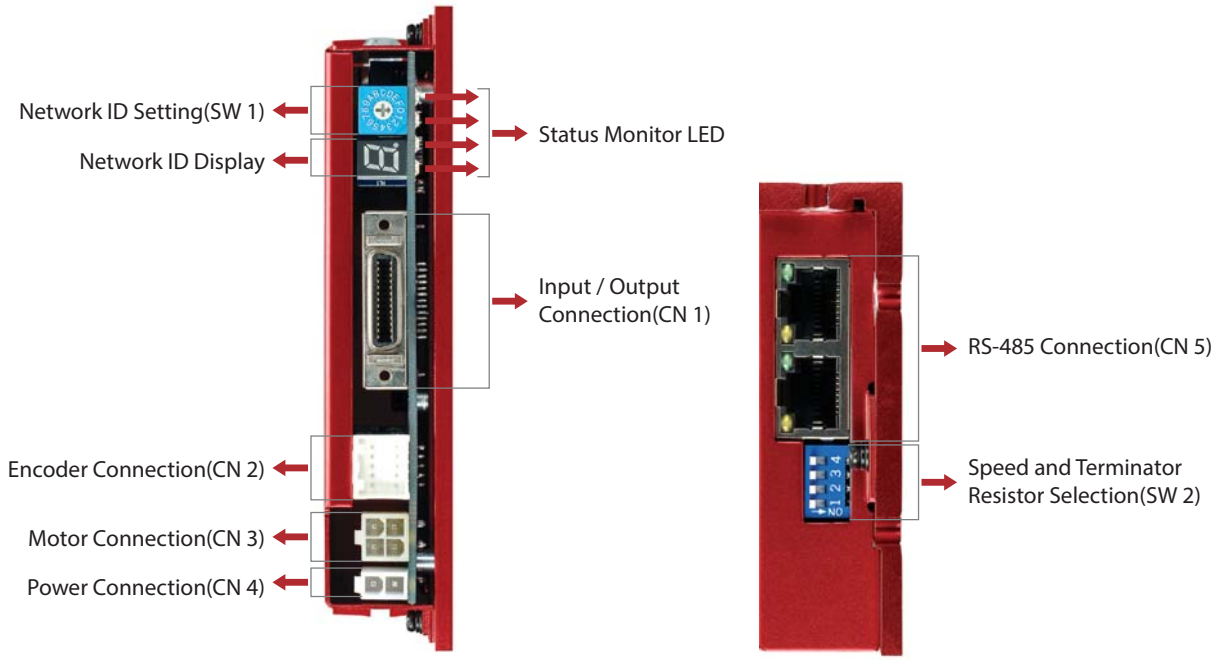
2. 86mm Motor Drive(EzS-NDR-86 Series)



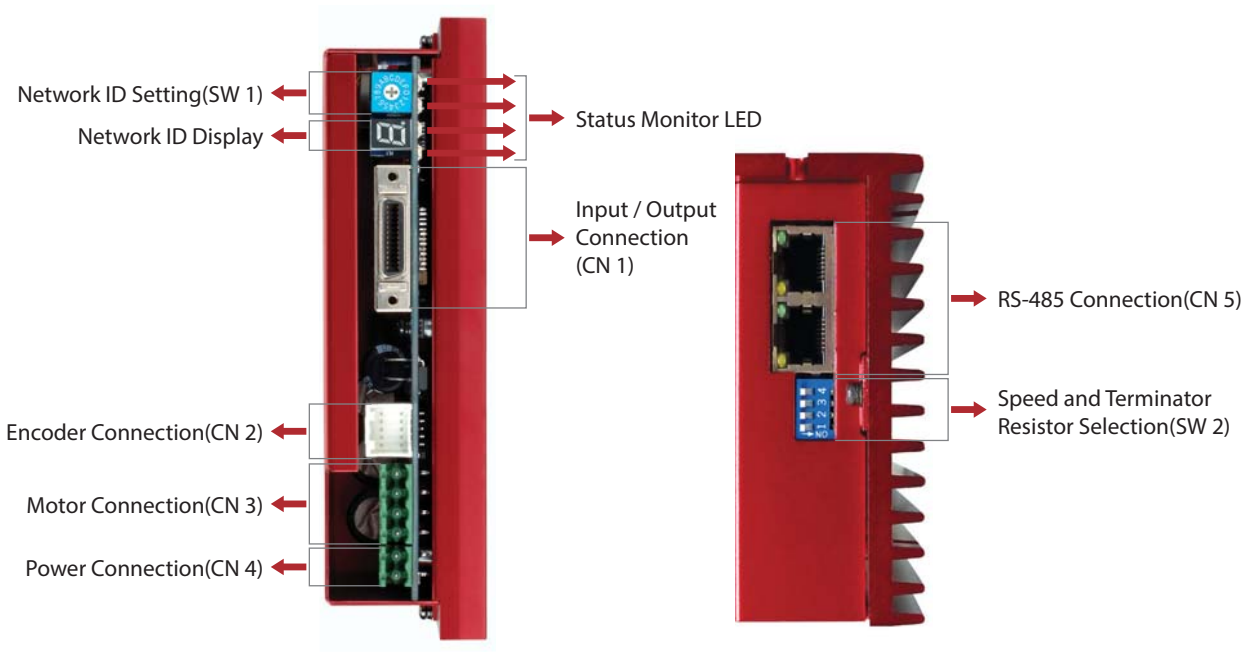
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Setting and Operation

1. Drive



2. 86mm Motor Drive(EzS-NDR-86 Series)



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Status Monitor LED

1. Status Monitor LED

Indication	Color	Function	ON / OFF Condition
PWR	Green	Power input indication	LED is turned ON when power is applied
INP	Yellow	Complete Positioning Motion	Lights On when Positioning error reaches within the preset pulse selected by rotary switch
SON	Orange	Servo On / Off Indication	· Servo On : Lights On · Servo Off : Lights Off
ALM	Red	Alarm indication	Flash when protection function is activated(Identifiable which protection mode is activated by counting the blinking times)

2. Protection functions and LED flash times

Times	Protection	Conditions
1	Over Current Error	The current through power devices in inverter exceeds the limit value
2	Over Speed Error	Motor speed exceed 3,000[rpm]
3	Position Tracking Error	Position error value is higher than 90° in motor run state *1
4	Over Load Error	The motor is continuously operated more than 5 second under a load exceeding the Max. torque
5	Over Temperature Error	Inside temperature of drive exceeds 85℃
6	Over Regenerativted Voltage Error	Back-EMF more high limit value *2
7	Motor Connect Error	The power is ON without connection of the motor cable to drive
8	Encoder Connect Error	Cable connection error with Encoder Connector in drive
10	In-Position Error	After operation is finished, a position error occurs
11	System Error	Error occurs in drive system
12	ROM Error	Error occurs in parameter storage device(ROM)
15	Position Overflow Error	Position error value is higher than 90° in motor stop state*1

*1 : The given value can be changed by parameter.
*2 : Voltage limit of Back-EMF depends on motor model.
※Please refer to the manual

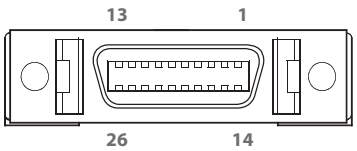
Alarm LED Flash(ex : Position Tracking Error)



Connector

1. Input / Output Signal(CN 1)

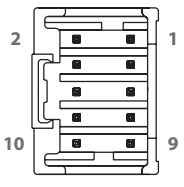
No.	Function	I/O
1	LIMIT+	Input
2	LIMIT-	Input
3	ORIGIN	Input
4	Digital IN 1	Input
5	Digital IN 6	Input
6	Digital IN 7	Input
7	Compare Out 1	Output
8	Digital OUT 1	Output
9	Digital OUT 2	Output
10	Digital OUT 3	Output
11	Digital OUT 4	Output
12	Digital OUT 5	Output
13	Digital OUT 6	Input
14	Digital IN 2	Input
15	Digital IN 3	Input
16	Digital IN 4	Input
17	Digital IN 5	Input
18	Digital IN 8	Input
19	Digital IN 9	Input
20	Digital OUT 7	Output
21	Digital OUT 8	Output
22	Digital OUT 9	Output
23	BRAKE+	Output
24	BRAKE-	Output
25	24VDC GND	Input
26	24VDC	Input



※There is no BRAKE function for 86mm motor drive.

2. Encoder Connector(CN 2)

No.	Function	I/O
1	A+	Input
2	A-	Input
3	B+	Input
4	B-	Input
5	Z+	Input
6	Z-	Input
7	5VDC	Output
8	5VDC GND	Output
9	F. GND	----
10	F. GND	----



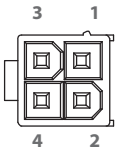
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Switch

3. Motor Connection(CN 3)

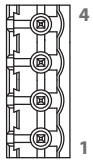
· Drive

No.	Function
1	A Phase
2	B Phase
3	/ A Phase
4	/ B Phase



· 86mm Motor Drive

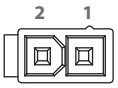
No.	Function
1	/ B Phase
2	B Phase
3	/ A Phase
4	A Phase



4. Power Connection(CN 4)

· Drive

No.	Function
1	24VDC ±10%
2	GND



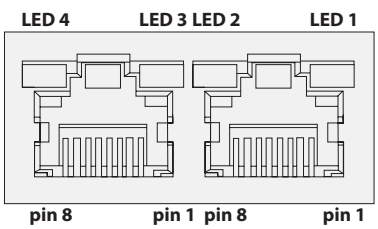
· 86mm Motor Drive

No.	Function
1	GND
2	40 ~ 70VDC



5. RS-485 Communication Connector(CN 5)

No.	Function
1	GND
2	GND
3	Data+
4	GND
5	GND
6	Data-
7	GND
8	GND
LED 1, 3	Drive status
LED 2, 4	Communication status



1. Network ID Selection Switch(SW 1)

Position	ID number	Position	ID number
0	0	8	8
1	1	9	9
2	2	A	10
3	3	B	11
4	4	C	12
5	5	D	13
6	6	E	14
7	7	F	15



※ Maximum 16 axis can be connected in one network.

2. Speed and Terminator Resistor Selection Switch(SW 2)

The purpose of this is to setting the communication speed and connect a terminator resistor if drive is installed at the end of network.

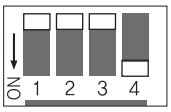
SW 2.1 used for connecting the terminator resistor.
SW 2.2~SW 2.4 used for setting speed as follows.

SW 2.1	SW 2.2	SW 2.3	SW 2.4	Baud Rate[bps]
-	OFF	OFF	OFF	9,600
-	ON	OFF	OFF	19,200
-	OFF	ON	OFF	38,400
-	ON	ON	OFF	57,600
-	OFF	OFF	ON	115,200*1
-	ON	OFF	ON	230,400
-	OFF	ON	ON	460,800
-	ON	ON	ON	921,600

※ Possible to use common PCI Bus type RS-485 communication board for High speed communication.
(Please contact with Distributor)

*1 : Default setting value

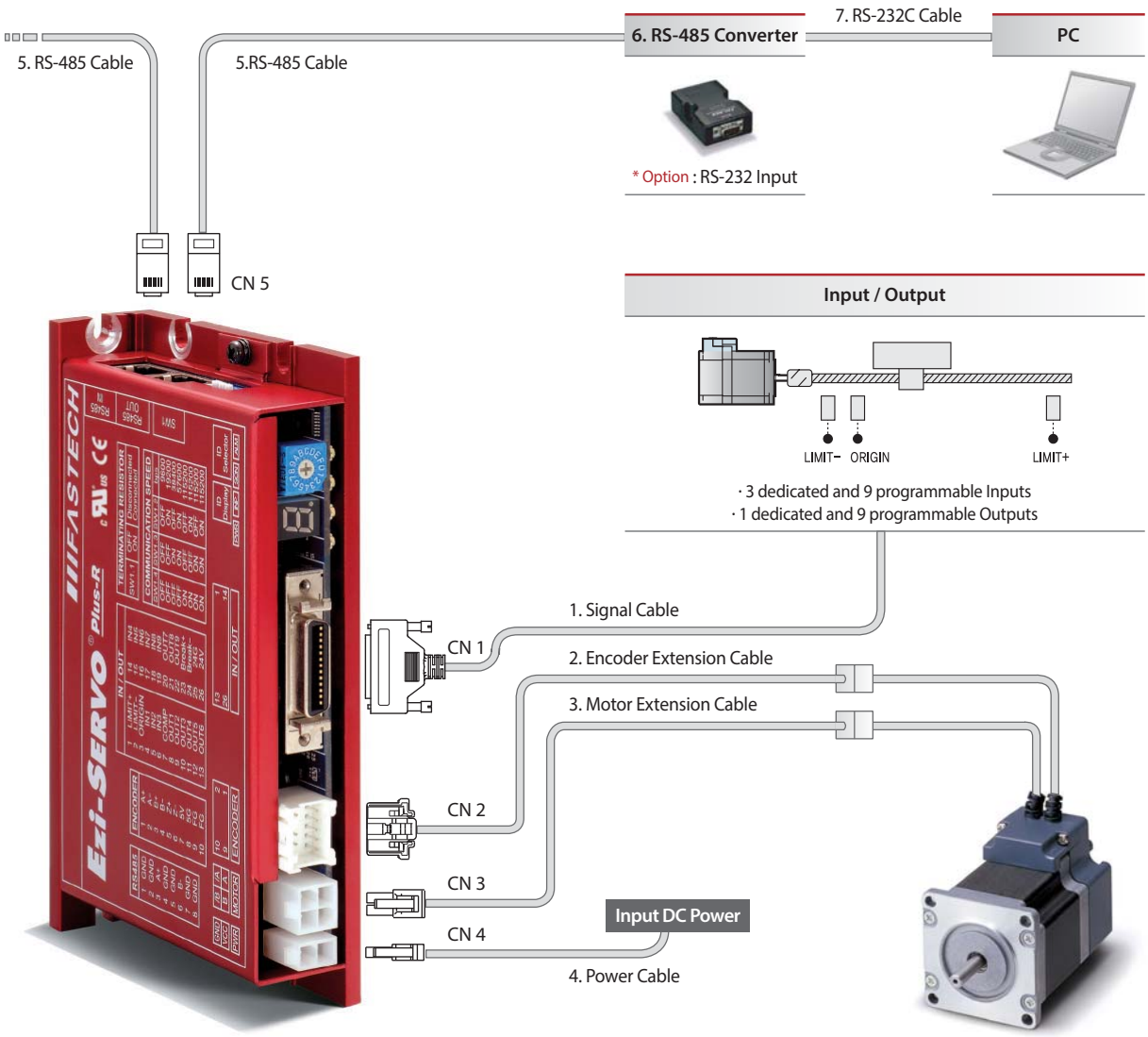
If SW 2.1 is OFF, terminator resistor is disconnected.
If SW 2.2 is ON, terminator resistor is connected.



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System Configuration

Drive



Type	Signal Cable	Encoder Cable	Motor Cable	Power Cable	RS-485 Cable
Standard Length	-	30cm	30cm	-	-
Max. Length	20m	20m	20m	2m	30m

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Option

1. Signal Cable

Available to connect between Control System and Ezi-SERVO Plus-R.

Model Name	Length[m]	Remark
CSVR-S-□□□F	□□□	Normal Cable
CSVR-S-□□□M	□□□	Robot Cable

※ □□□ is for Cable Length. The unit is 1m and Max. 20m length.

2. Encoder Extension Cable

Available to extended connection between Encoder and Ezi-SERVO

Model Name	Length[m]	Remark
CSVO-E-□□□F	□□□	Normal Cable
CSVO-E-□□□M	□□□	Robot Cable

※ □□□ is for Cable Length. The unit is 1m and Max. 20m length.

3. Motor Extension Cable

Available to extended connection between motor and Ezi-SERVO Plus-R.

Model Name	Length[m]	Remark
CSVO-M-□□□F	□□□	Normal Cable
CSVO-M-□□□M	□□□	Robot Cable

※ □□□ is for Cable Length. The unit is 1m and Max. 20m length.

4. Power Cable

Available to connect between Power and Ezi-SERVO Plus-R.

Model Name	Length[m]	Remark
CSVO-P-□□□F	□□□	Normal Cable
CSVO-P-□□□M	□□□	Robot Cable

※ □□□ is for Cable Length. The unit is 1m and Max. 2m length.

5. RS-485 Cable

Model Name	Length[m]	Remark
CGNR-R-0R6F	0.6	Normal Cable
CGNR-R-001F	1	
CGNR-R-1R5F	1.5	
CGNR-R-002F	2	
CGNR-R-003F	3	
CGNR-R-005F	5	

6. FAS-RCR(RS-232C to RS-485 Converter)

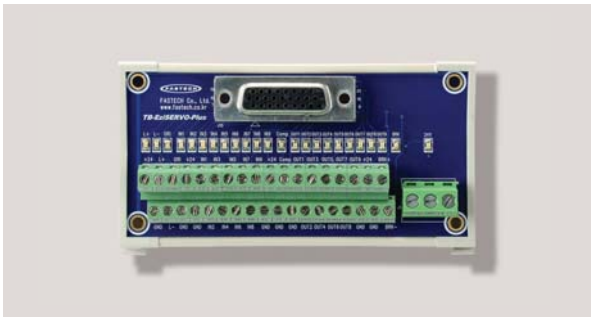
Item	Specification
Transmission speed	Max. 115.2Kbps
Comm. Distance	RS-232C : Max. 15m RS-485 : Max. 1.2km
Connector	RS-232C : DB9 Female RS-485 : RJ-45
Dimension	50×75×23mm
Weight	38g
Power	Powered from PC (Usable for external DC5~24V)

7. RS-232C Cable

Model Name	Length[m]	Remark
CGNR-C-002F	2	Normal Cable
CGNR-C-003F	3	
CGNR-C-005F	5	

8. TB-Plus(Interface Board)

Available to connect more conveniently between Input / Output signal and Ezi-SERVO Plus-R.



Interface Cable

Available to Connect between TB-Plus Interface Board and Ezi-SERVO Plus-R.

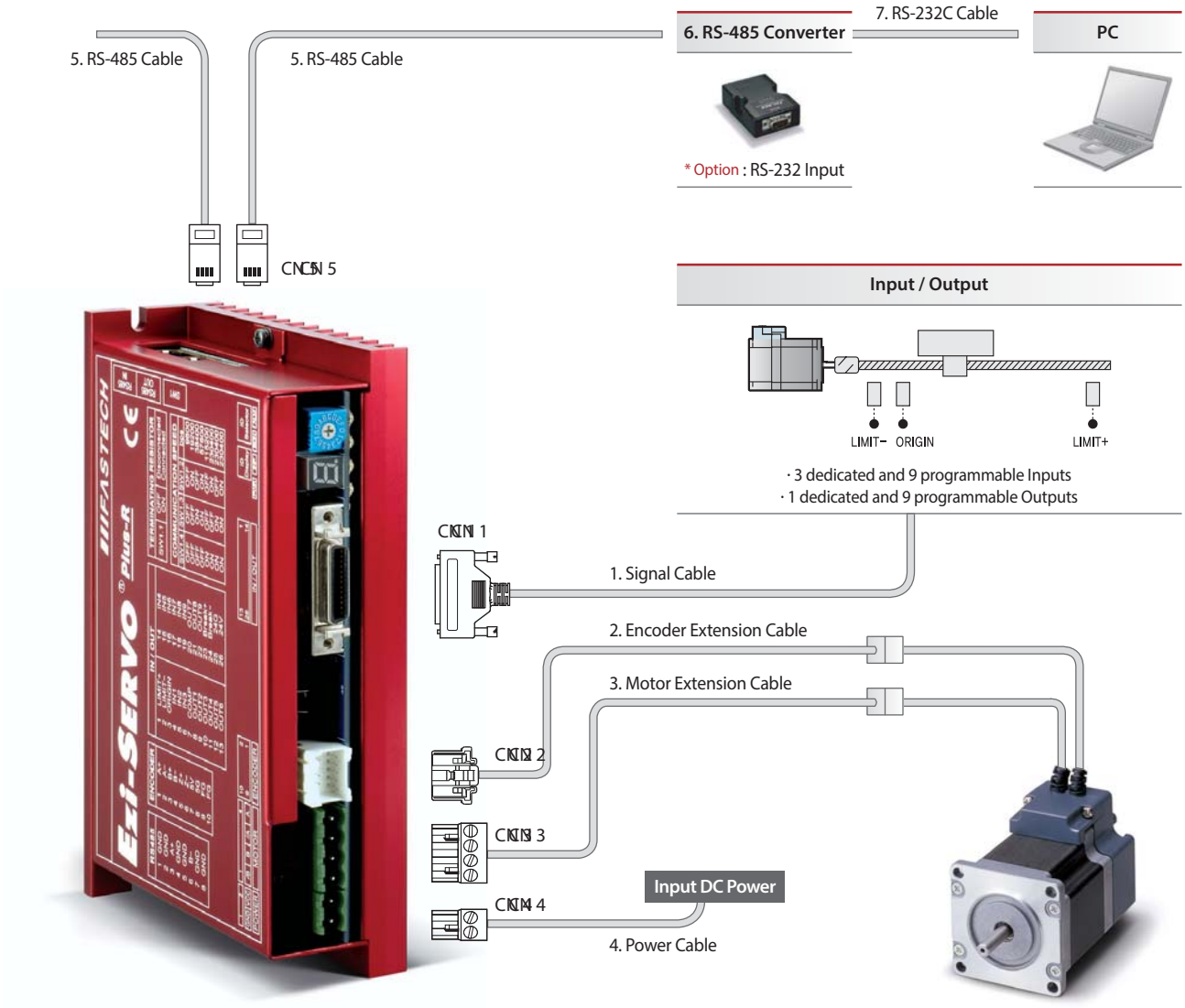
Model Name	Length[m]	Remark
CIFD-S-□□□F	□□□	Normal Cable
CIFD-S-□□□M	□□□	Robot Cable

※ □□□ is for Cable Length. The unit is 1m and Max. 2m length.

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System Configuration

86mm Motor Drive(EzS-NDR-86 Series)



Type	Signal Cable	Encoder Cable	Motor Cable	Power Cable	RS-485 Cable
Standard Length	-	30cm	30cm	-	-
Max. Length	20m	20m	20m	2m	30m

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Option

1. Signal Cable

Available to connect between Control System and Ezi-SERVO Plus-R.

Model Name	Length[m]	Remark
CSVR-S-□□□F	□□□	Normal Cable
CSVR-S-□□□M	□□□	Robot Cable

※ □□□ is for Cable Length. The unit is 1m and Max. 20m length.

2. Encoder Extension Cable

Available to extended connection between Encoder and Ezi-SERVO

Model Name	Length[m]	Remark
CSVO-E-□□□F	□□□	Normal Cable
CSVO-E-□□□M	□□□	Robot Cable

※ □□□ is for Cable Length. The unit is 1m and Max. 20m length.

3. Motor Extension Cable

Available to extended connection between motor and Ezi-SERVO Plus-R.

Model Name	Length[m]	Remark
CSVP-M-□□□F	□□□	Normal Cable
CSVP-M-□□□M	□□□	Robot Cable

※ □□□ is for Cable Length. The unit is 1m and Max. 20m length.

4. Power Cable

Available to connect between Power and Ezi-SERVO Plus-R.

Model Name	Length[m]	Remark
CSVP-P-□□□F	□□□	Normal Cable
CSVP-P-□□□M	□□□	Robot Cable

※ □□□ is for Cable Length. The unit is 1m and Max. 2m length.

5. RS-485 Cable

Model Name	Length[m]	Remark
CGNR-R-0R6F	0.6	Normal Cable
CGNR-R-001F	1	
CGNR-R-1R5F	1.5	
CGNR-R-002F	2	
CGNR-R-003F	3	
CGNR-R-005F	5	

6. FAS-RCR(RS-232C to RS-485 Converter)

Item	Specification
Transmission speed	Max. 115.2Kbps
Comm. Distance	RS-232C : Max. 15m RS-485 : Max. 1.2km
Connector	RS-232C : DB9 Female RS-485 : RJ-45
Dimension	50×75×23mm
Weight	38g
Power	Powered from PC (Usable for external DC5~24V)

7. RS-232C Cable

Model Name	Length[m]	Remark
CGNR-C-002F	2	Normal Cable
CGNR-C-003F	3	
CGNR-C-005F	5	

8. TB-Plus(Interface Board)

Available to connect more conveniently between Input / Output signal and Ezi-SERVO Plus-R.



Interface Cable

Available to Connect between TB-Plus Interface Board and Ezi-SERVO Plus-R.

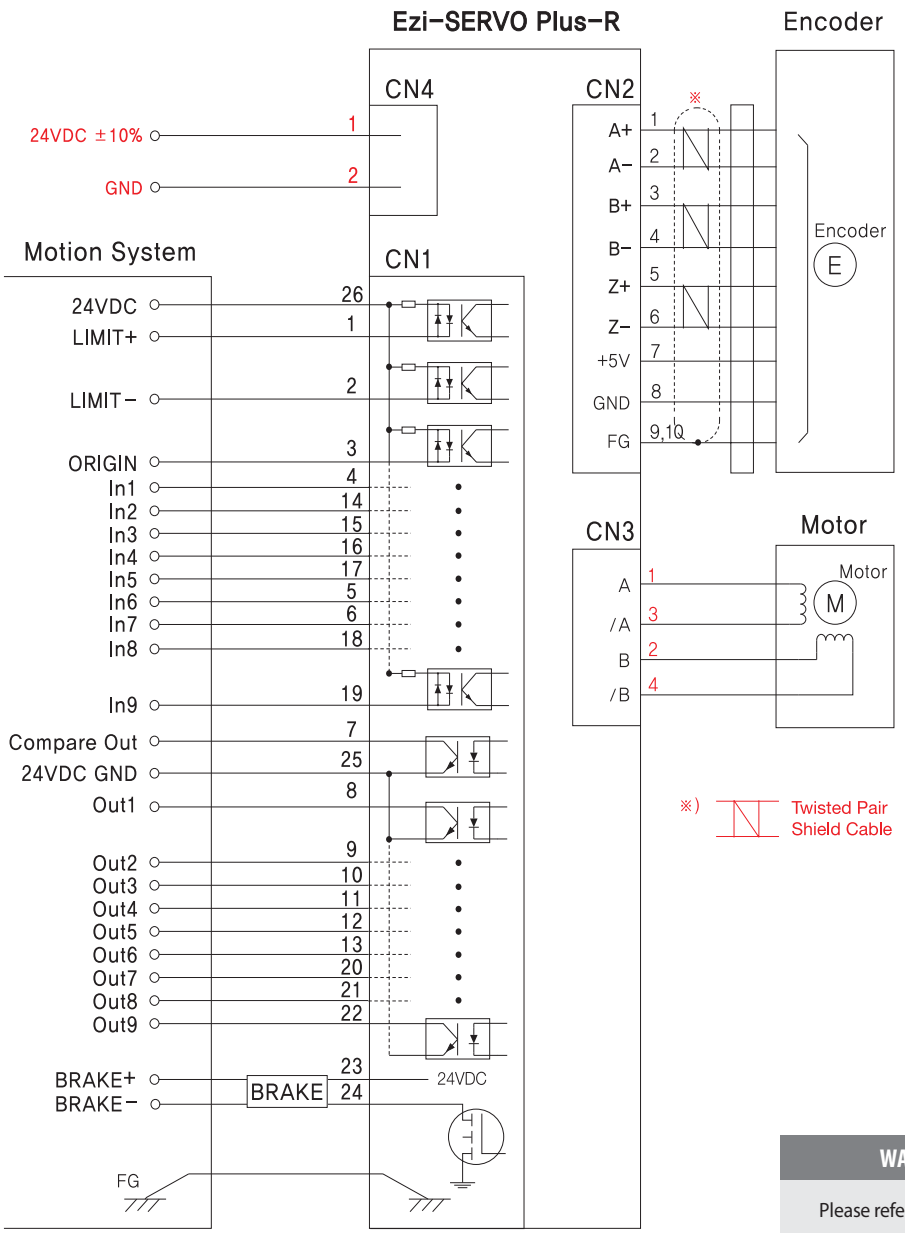
Model Name	Length[m]	Remark
CIFD-S-□□□F	□□□	Normal Cable
CIFD-S-□□□M	□□□	Robot Cable

※ □□□ is for Cable Length. The unit is 1m and Max. 2m length.

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External Wiring Diagram

Ezi-SERVO Plus-R

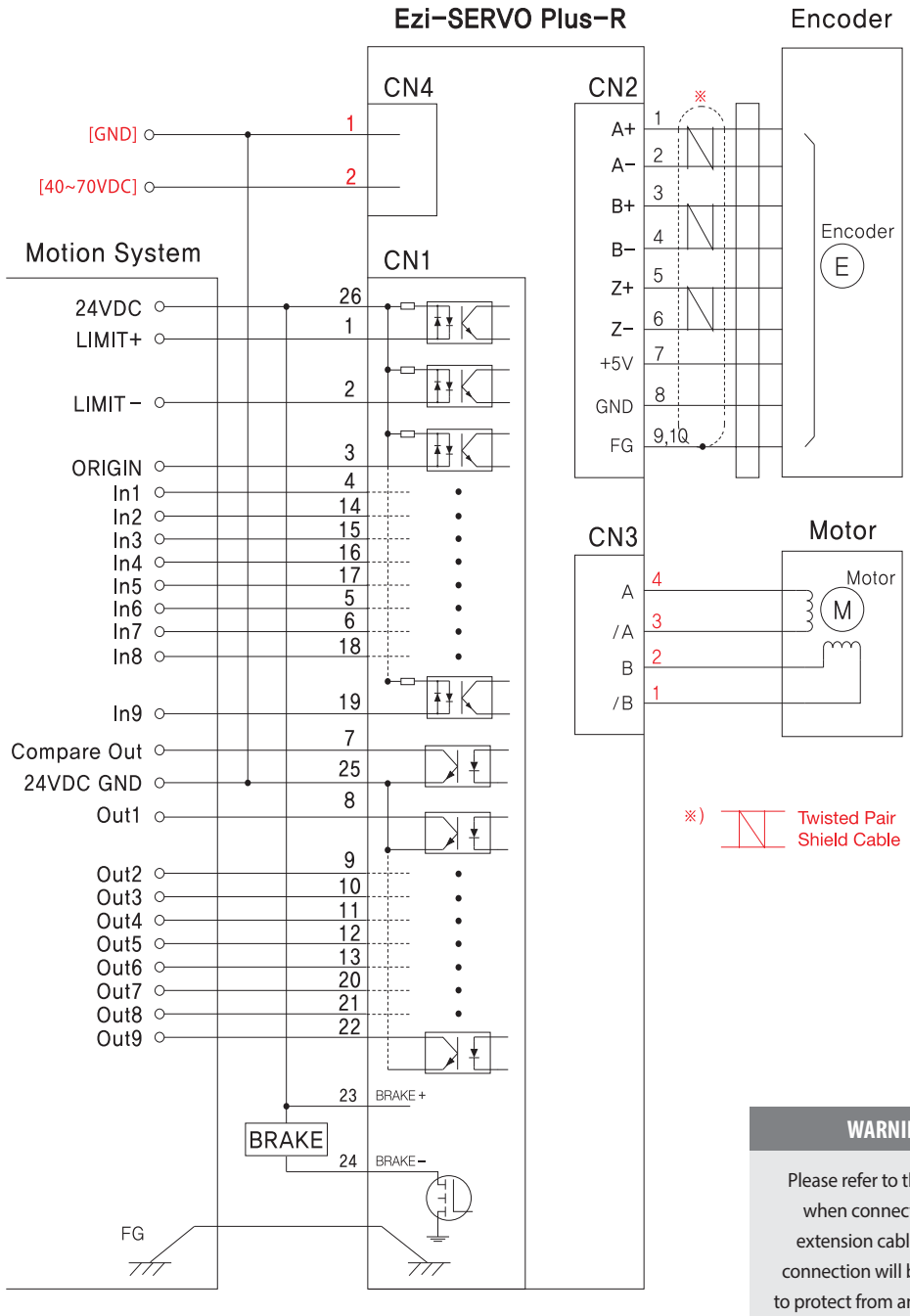


WARNING

Please refer to the Manual when connects motor extension cable. Careful connection will be required to protect from any damages.

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Ezi-SERVO Plus-R_ 86mm



WARNING

Please refer to the Manual when connects motor extension cable. Careful connection will be required to protect from any damages.

※ It is the wiring diagram of exclusive 86mm the motor drive(EzS-NDR-86 Series). Please note that each marked parts in red are different

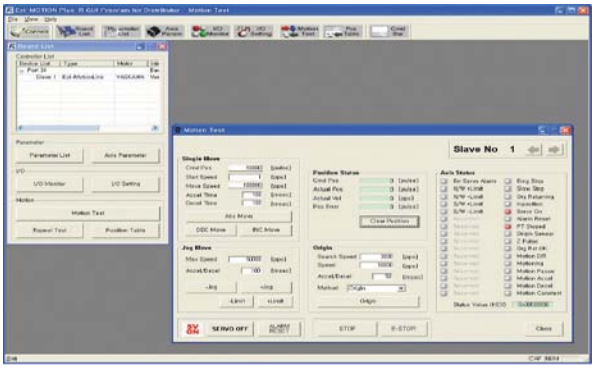
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Graphic User Interface(GUI)

Screen Configuration

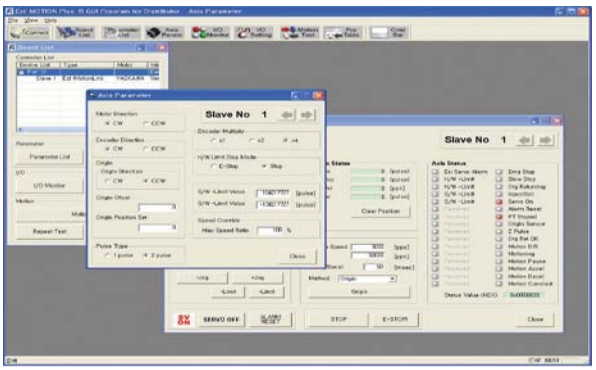
1. Controller Lists and Motion Test

This screen display the controller list that connected to system.
You can make a single move, jog and origin command and also the motor status is displayed.



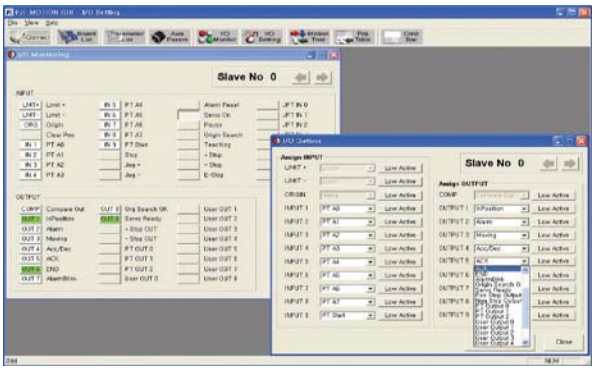
2. Axis Parameter Setup

You can select various parameters that frequently used.
(ex : sensor input logic)



3. I/O Monitoring and Setting

You can select various digital input and output signals of controller.



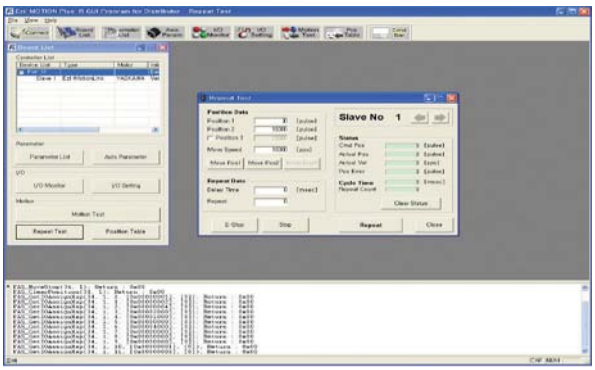
4. Parameter List

All of the parameters are displayed and modified on this screen.



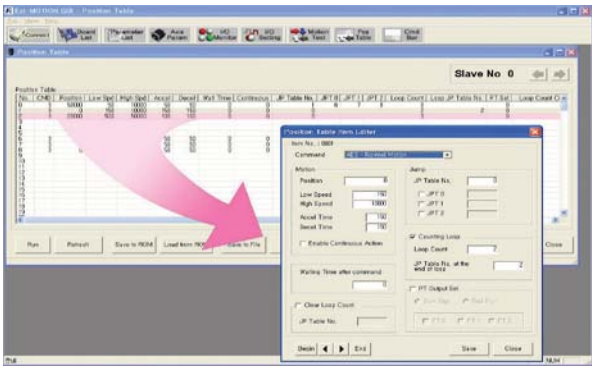
5. Motion Repeat and Monitor Status

Target position, speed, delay time and repeat count are selected for repeat motion test. Motion library(DLL) is also displayed on screen.



6. Position Table

You can edit the position table and execute it. The position table data can be saved and loaded from Flash ROM and Windows file.



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