Ezi-STEP®

Micro Stepping System

- Integrated Controller
- Position Table
- Micro Stepping
- Sensorless Stall Detection
- Software Damping
- Run/Stop Signal Output

Plus-R

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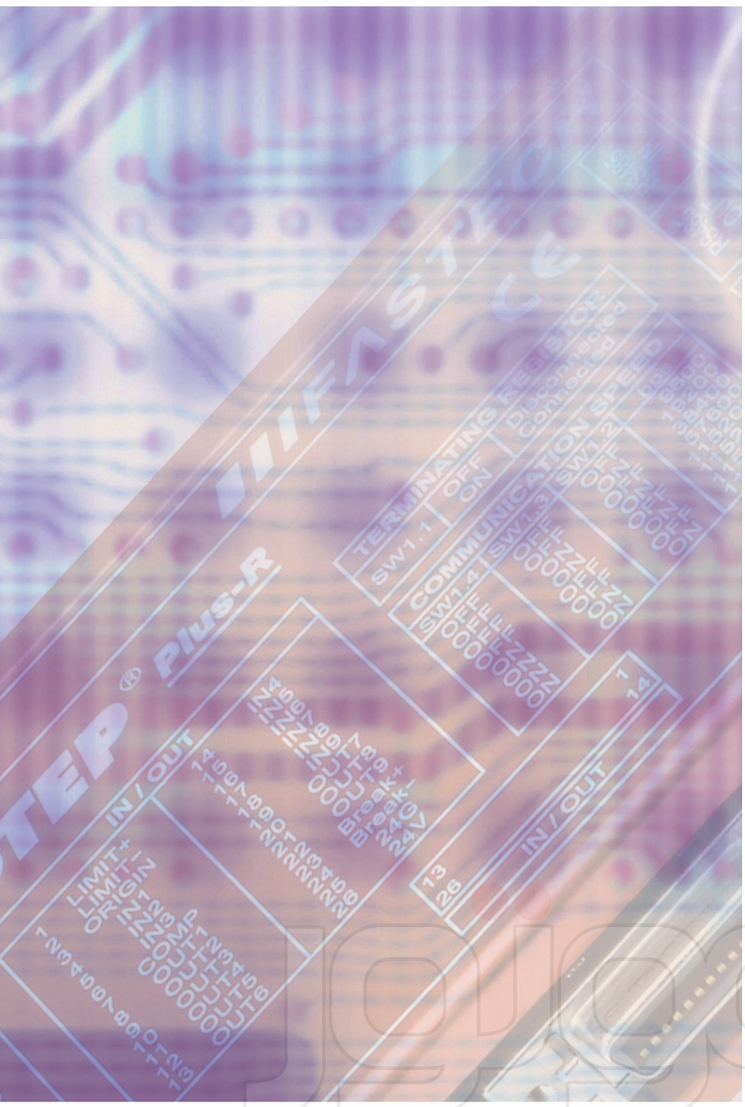
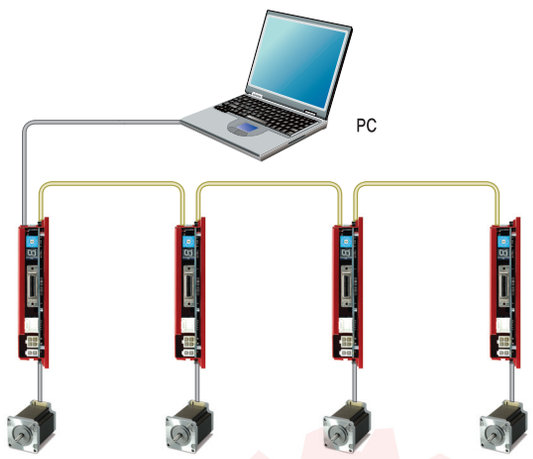
Ezi-STEP® Plus-R

Micro Stepping System
with Network based Motion Controller



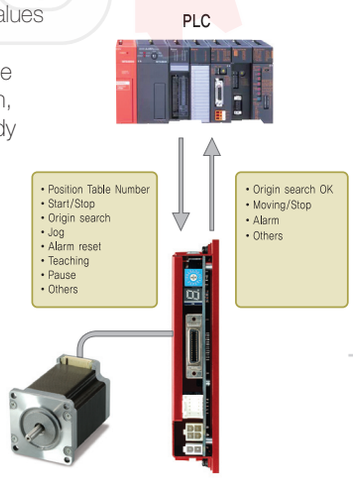
1 Network based Motion Control

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



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.

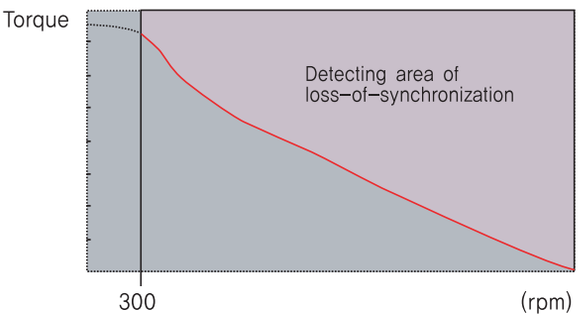


3 Microstep and Filtering

Ezi-STEP® Plus-R features a High Precision Microstep function and Filtering (Patent pending) The high-performance Digital Signal Processor (DSP) and proprietary algorithms improves the basic motor resolution of 1.8°up to maximum 0.0072° (1/250 steps). Ezi-STEP® adjusts the PWM control signal in every 25 μsec, unlike conventional drivers, which makes it possible for more precise current control and provides high-precision microstep operation.

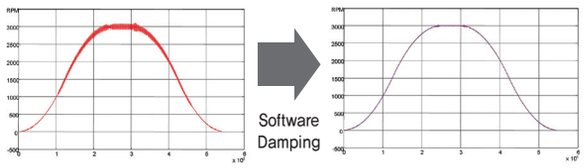
4 Step-Out Detection (Patent pending)

Ezi-STEP® Plus-R can detect step loss of the stepping motor without the addition of an external sensor. This is achieved by the DSP in conjunction with proprietary estimation algorithm constantly monitoring and comparing the voltage, current, and the back-emf. This enables the drive to detect the loss-of-synchronization of the motor rotor (an impossible task for conventional stepping motor drives) and increase voltage to the motor to prevent the step loss. This feature provides higher torque in high speed applications without the loss-of-synchronization*.
* effective only over 300 rpm



6 Software Damping

Vibration suppression and High-speed operation (Patent pending) Motor vibration is created by magnetic flux variations of the motor, lower current from the drive due to back-emf from the motor at high speeds, and lowering of phase voltages from the drive.
Ezi-STEP® Plus-R drive detects these problems and the DSP adjusts the phase of the current according to the pole position of the motor, drastically suppressing vibration. This allows the smooth operation of the motor at high speeds.



Software Damping OFF Software Damping ON

*This is real measured speed that using 100000[pulse/rev]encoder.

5 Diverse Output Signal Monitoring

Ezi-Step® provides loss of step, run/stop, over-current, over-heat, over-voltage, power, and motor connection alarms that can be monitored by the controller and visible by a motor-mounted lashing led indicator.

7 Improve of High-Speed Driving

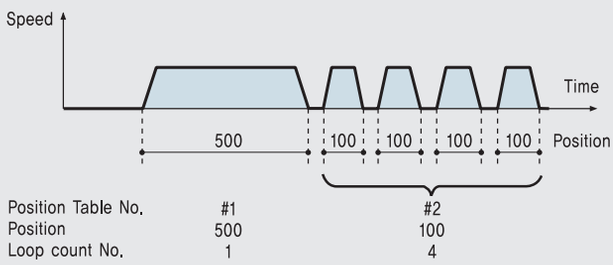
Depending on the speed of the stepping motor, Ezi-STEP® Plus-R automatically increases the supply voltage and prevents torque lowering due to low operating voltage to the motor caused by back-emf voltage, this enables high-speed operation. Additionally, the software damping algorithm minimizes the vibration and prevents the loss-of-synchronization at high-speed.

Applicable model : Ezi-STEP-PR-20 Series, Ezi-STEP-PR-28 Series
Ezi-STEP-PR-42 Series, Ezi-STEP-PR-56 Series
Ezi-STEP-PR-60 Series

● Features of Motion Controller

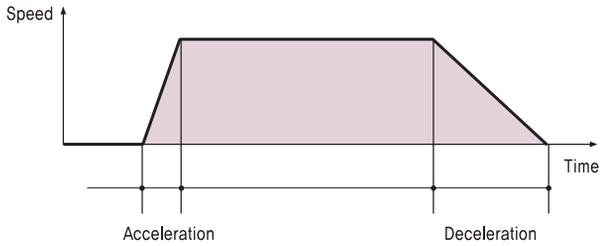
1. Loop Count

This function allows positioning repeatedly according to the loop count number.



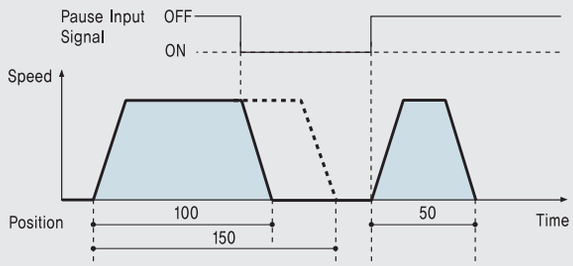
2. Acceleration/Deceleration

For quick acceleration and gradual deceleration, you can set each non symmetrical acceleration and deceleration time separately.



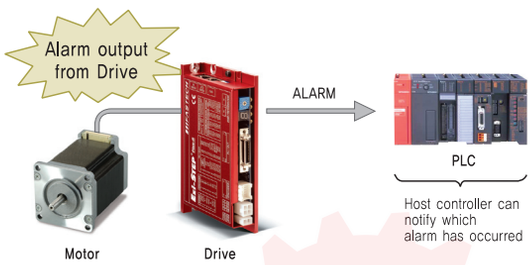
3. Pause

You can pause the motion with the input of an external signal. When Pause Signal change to OFF, the motor will restart to original target position.



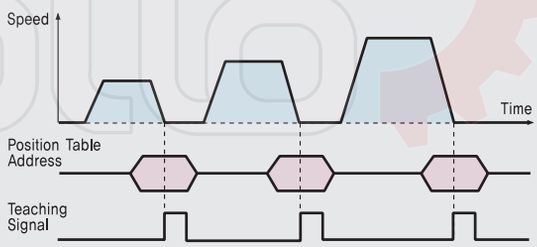
4. Alarm

The number of LED flashing times indicates which alarm has occurred.



5. Teaching

Teaching signal is used to memorize current position data into the selected position table item.

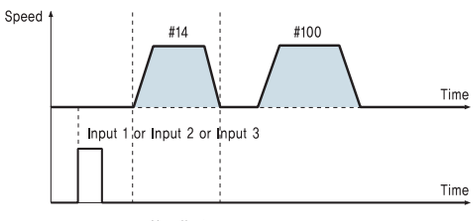


6. Jump

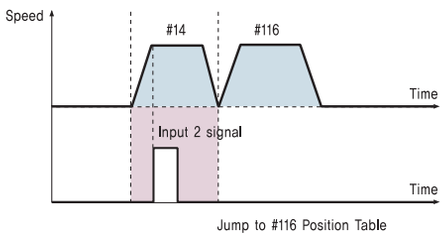
Within one position table, you can select various position table numbers that you want to jump.
With three external input signals during movement, the next jump position table number can be selected.

◆Position Table #14

Position	- - -	Next	- - -	Input 1	Input 2	Input 3	- - -
10000		100		115	116	117	



No effect

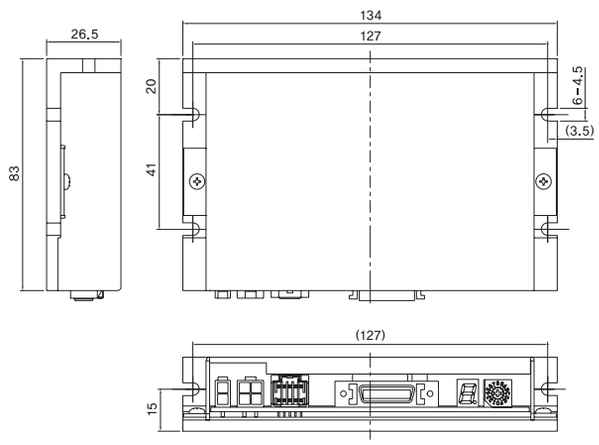


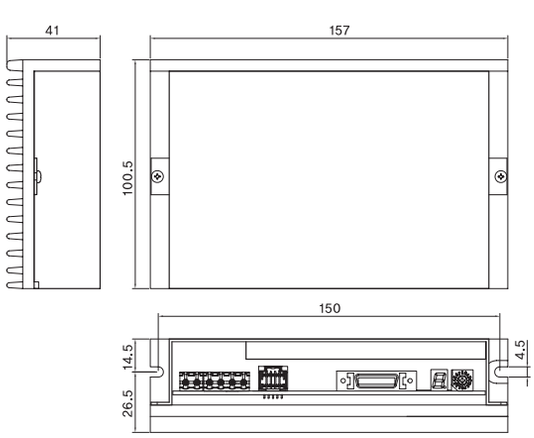
Jump to #116 Position Table

● Specifications

Motor Model		BM-20 series	BM-28 series	BM-42 series	BM-56 series	BM-60 series	BM-86 series
Driver Model		EzT-NDR-20 series	EzT-NDR-28 series	EzT-NDR-42 series	EzT-NDR-56 series	EzT-NDR-60 series	EzT-NDR-86 series
Input Voltage		24VDC ±10%	24VDC ±10%	24VDC ±10%	24VDC ±10%	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(Continuous, Wait, Loop, Jump and External start etc.)					
Current Consumption		Max 500mA (Except motor current)					
Operating Condition	Ambient Temperature	In Use : 0~55℃ In Storage : -20~70℃					
	Humidity	In Use : 35~85% (Non-condensing) In Storage : 10~90% (Non-condensing)					
	Vib. Resist.	0.5G					
Function	Rotation Speed	0~3000rpm					
	Resolution(P/R)	500~5000 (Selectable by parameter)					
	Protection Functions	Over current, Over speed, Step out, Over tempertature, Over regenerated voltage, Motor connet error, Low input voltage, System error, ROM error, High input voltage					
	LED Display	Power status(Green), Alarm status(Red), CW Rotation(Yellow), CCW Rotation(Orange)					
	STOP Current	10%~100%. Be setted to set value of STOP current after 0.1second after motor stop. *Default : 50% (Selectable by parameter)					
	Rotational Direction	CW / CCW (Selectable by parameter)					
I/O Signal	Input Signal	3 dedicated input (LIMIT+, LIMIT-, ORIGIN), 9 programmable input (photocoupler)					
	Output Signal	1 dedicated output (Compare Out), 9 programmable output (photocoupler), Brake signal					
Communication Interface		The RS-485 serial communication with PC Transmission speed : 9,6ll~921,600[bps]					
Position Control		Incremental mode/Absolute mode Data Range : -134,217,727 to +134,217,727[pulse], Operating speed : Max. 500[kpps]					
Return to Origin		Origin Sensor, Z phase, ±Limit sensor (By external encoder)					
GUI		User Interface Program within Windows					
Software		Motion Library (DLL) for windows 2000/XP					

● Drive dimension [mm]



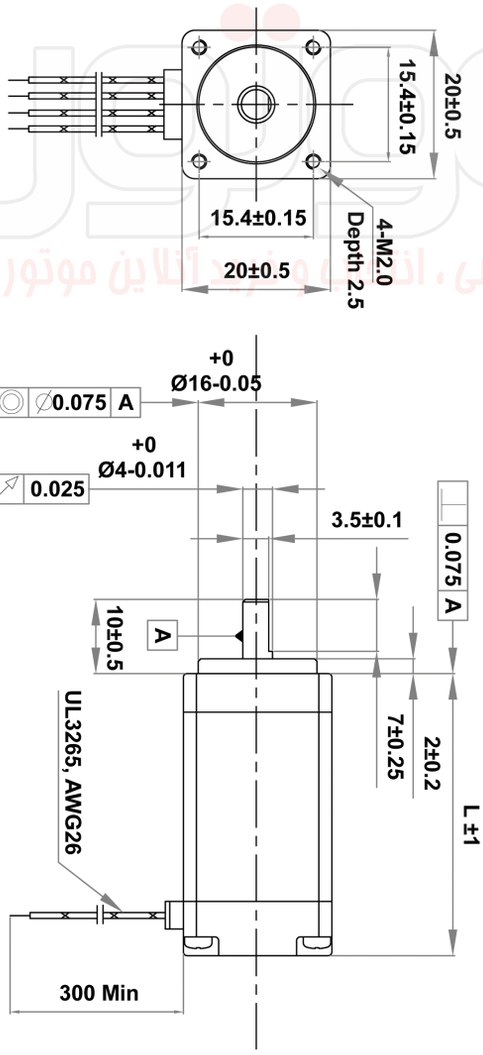


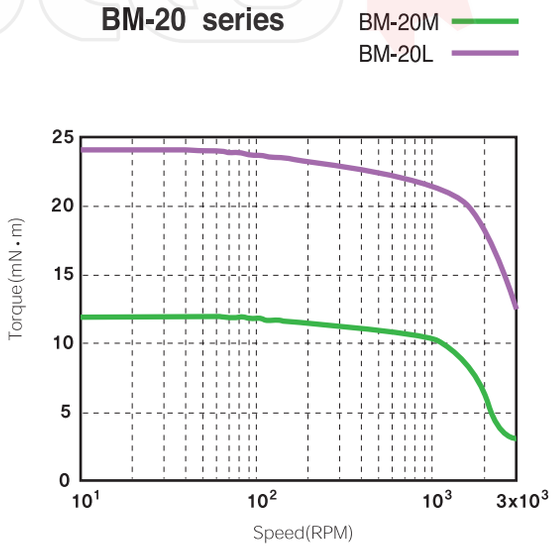
※Only for 86mm motor drive (EzT-NDR-86 series)

● Motor Specifications

M O D E L	UNIT	BM-20M	BM-20L
DRIVE METHOD	----	BI-POLAR	BI-POLAR
NUMBER OF PHASES	----	2	2
VOLTAGE	VDC	2.9	2.25
CURRENT per PHASE	A	0.5	0.5
RESISTANCE per PHASE	Ohm	5.8	5.5
INDUCTANCE per PHASE	mH	2.5	5
HOLDING TORQUE	Nm	0.018	0.03
ROTOR INTERIA	g · ㎠	2.5	3.3
WEIGHTS	g	50	80
LENGTH(L)	mm	28	38
ALLOWABLE THRUST LOAD	N	Lower than motor weight	
INSULATION RESISTANCE	MOhm	100min. (at 500VDC)	
INSULATION CLASS	----	CLASS B (130℃)	
OPERATING TEMPERATURE	℃	0 to 55	

● Motor Dimension [mm] and Torque Characteristics



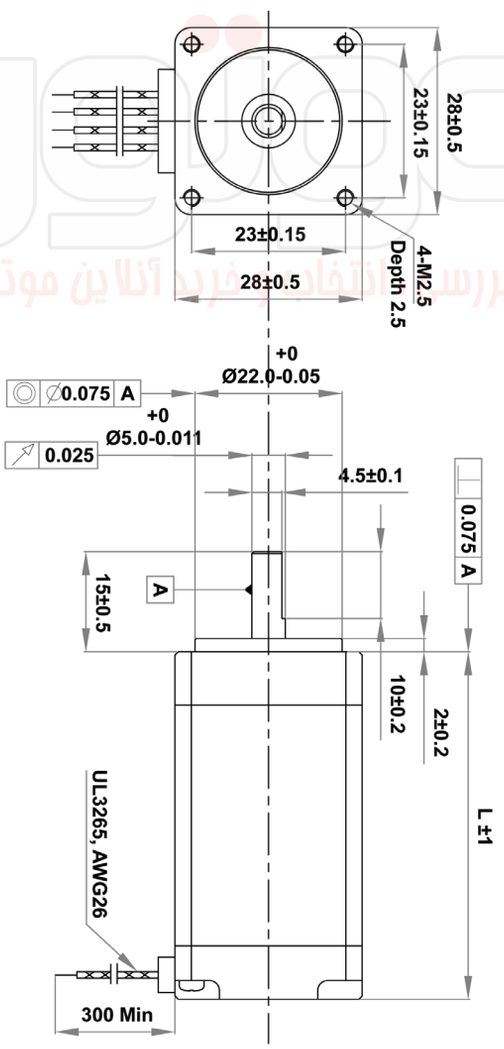


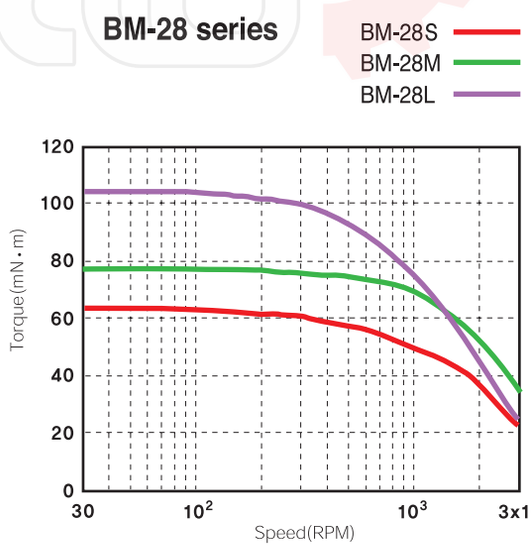
※Measured Condition
Input Voltage = 24VDC
Motor Current = Rated Current
(Refer to Motor Specification)
Drive = Ezi-STEP Plus-R

● Motor Specifications

M O D E L	UNIT	BM-28S	BM-28M	BM-28L
DRIVE METHOD	----	BI-POLAR	BI-POLAR	BI-POLAR
NUMBER OF PHASES	----	2	2	2
VOLTAGE	VDC	3.04	3.04	3.04
CURRENT per PHASE	A	0.95	0.95	0.95
RESISTANCE per PHASE	Ohm	3.2	3.2	3.2
INDUCTANCE per PHASE	mH	2	5	5.8
HOLDING TORQUE	Nm	0.07	0.12	0.14
ROTOR INTERIA	g · ㎠	9	13	18
WEIGHTS	g	110	140	200
LENGTH(L)	mm	32	45	52
ALLOWABLE THRUST LOAD	N	Lower than motor weight		
INSULATION RESISTANCE	MOhm	100min. (at 500VDC)		
INSULATION CLASS	----	CLASS B (130℃)		
OPERATING TEMPERATURE	℃	0 to 55		

● Motor Dimension [mm] and Torque Characteristics



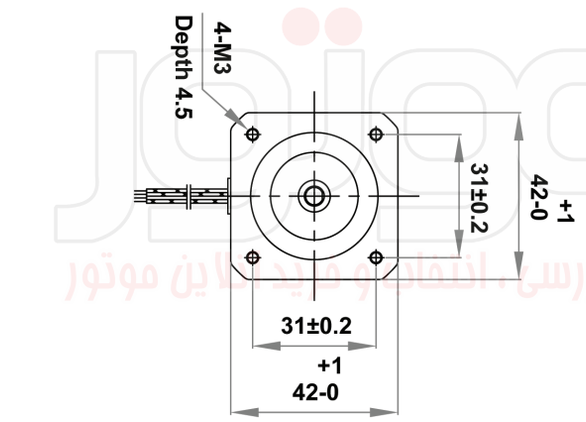


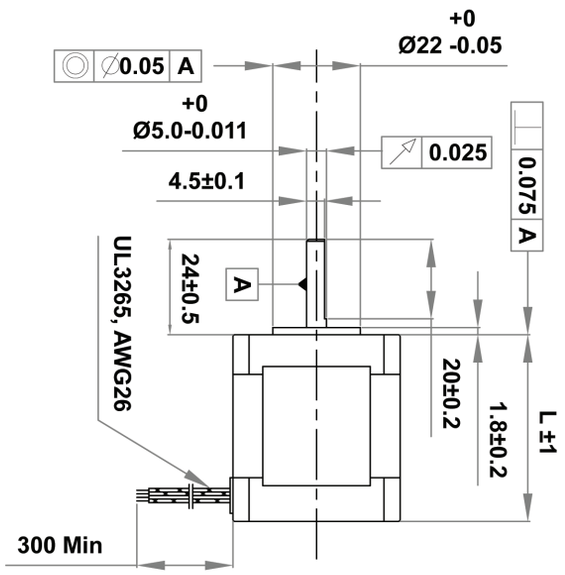
※Measured Condition
Input Voltage = 24VDC
Motor Current = Rated Current
(Refer to Motor Specification)
Drive = Ezi-STEP Plus-R

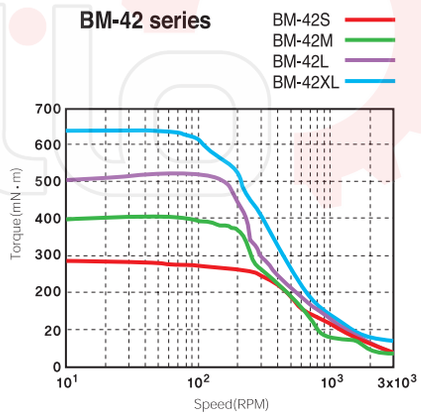
● Motor Specifications

M O D E L	UNIT	BM-42S	BM-42M	BM-42L	BM-42XL
DRIVE METHOD	----	BI-POLAR	BI-POLAR	BI-POLAR	BI-POLAR
NUMBER OF PHASES	----	2	2	2	2
VOLTAGE	VDC	3.36	4.32	4.56	7.2
CURRENT per PHASE	A	1.2	1.2	1.2	1.2
RESISTANCE per PHASE	Ohm	2.8	3.6	3.8	6
INDUCTANCE per PHASE	mH	2.5	7.2	8	15.6
HOLDING TORQUE	Nm	0.32	0.44	0.54	0.8
ROTOR INTERIA	g · ㎠	35	54	77	114
WEIGHTS	g	220	280	350	500
LENGTH(L)	mm	33	39	47	59
ALLOWABLE THRUST LOAD	N	Lower than motor weight			
INSULATION RESISTANCE	MOhm	100min. (at 500VDC)			
INSULATION CLASS	----	CLASS B (130℃)			
OPERATING TEMPERATURE	℃	0 to 55			

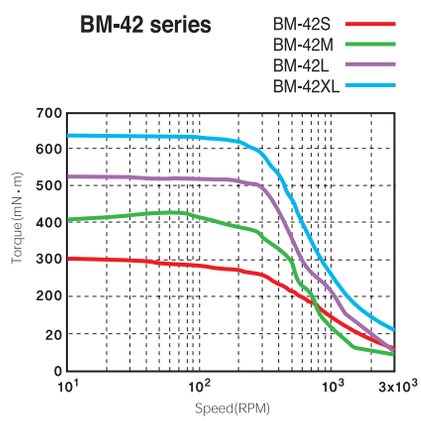
● Motor Dimension [mm] and Torque Characteristics







※Measured Condition
Input Voltage = 24VDC
Motor Current = Rated Current (Refer to Motor Specification)
Drive = Ezi-STEP Plus-R

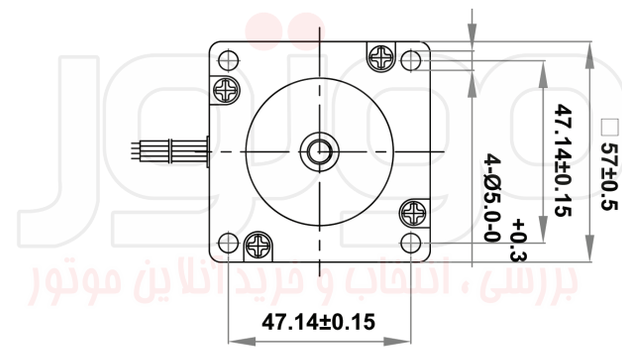


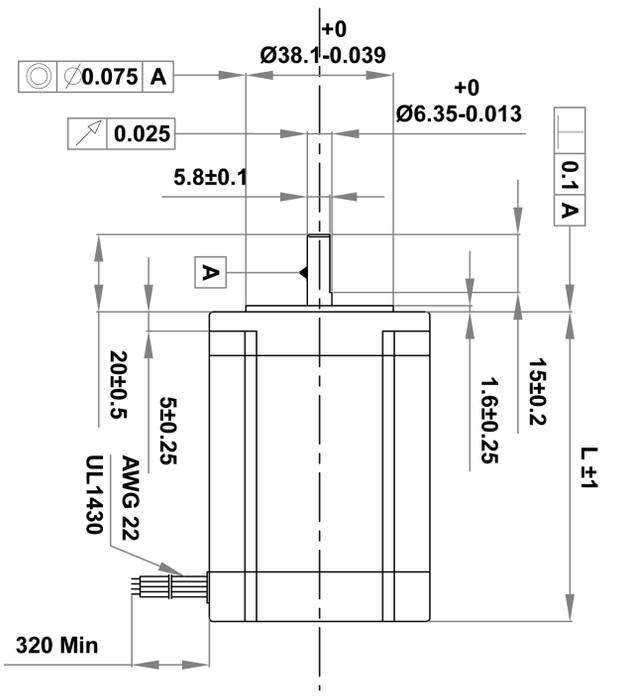
※Measured Condition
Input Voltage = 40VDC
Motor Current = Rated Current (Refer to Motor Specification)
Drive = Ezi-STEP Plus-R

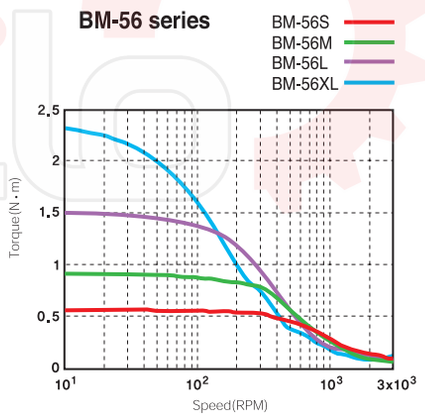
● Motor Specifications

M O D E L	UNIT	BM-56S	BM-56M	BM-56L	BM-56XL
DRIVE METHOD	----	BI-POLAR	BI-POLAR	BI-POLAR	BI-POLAR
NUMBER OF PHASES	----	2	2	2	2
VOLTAGE	VDC	1.56	2.1	2.7	3.57
CURRENT per PHASE	A	3	3	3	3
RESISTANCE per PHASE	Ohm	0.52	0.7	0.9	1.19
INDUCTANCE per PHASE	mH	1	2	3.8	7.97
HOLDING TORQUE	Nm	0.64	1	1.5	3.5
ROTOR INTERIA	g · ㎠	120	200	480	737
WEIGHTS	g	500	700	1150	1580
LENGTH(L)	mm	46	54	80	138.5
ALLOWABLE THRUST LOAD	N	Lower than motor weight			
INSULATION RESISTANCE	MOhm	100min. (at 500VDC)			
INSULATION CLASS	----	CLASS B (130℃)			
OPERATING TEMPERATURE	℃	0 to 55			

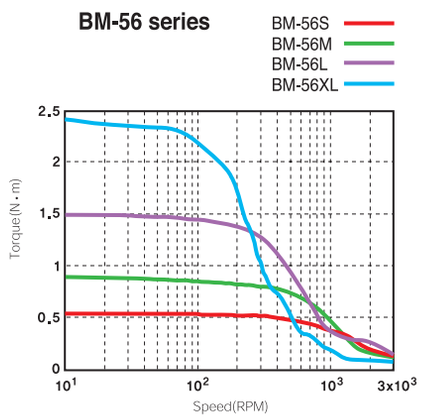
● Motor Dimension [mm] and Torque Characteristics







※Measured Condition
Input Voltage = 24VDC
Motor Current = Rated Current (Refer to Motor Specification)
Drive = Ezi-STEP Plus-R

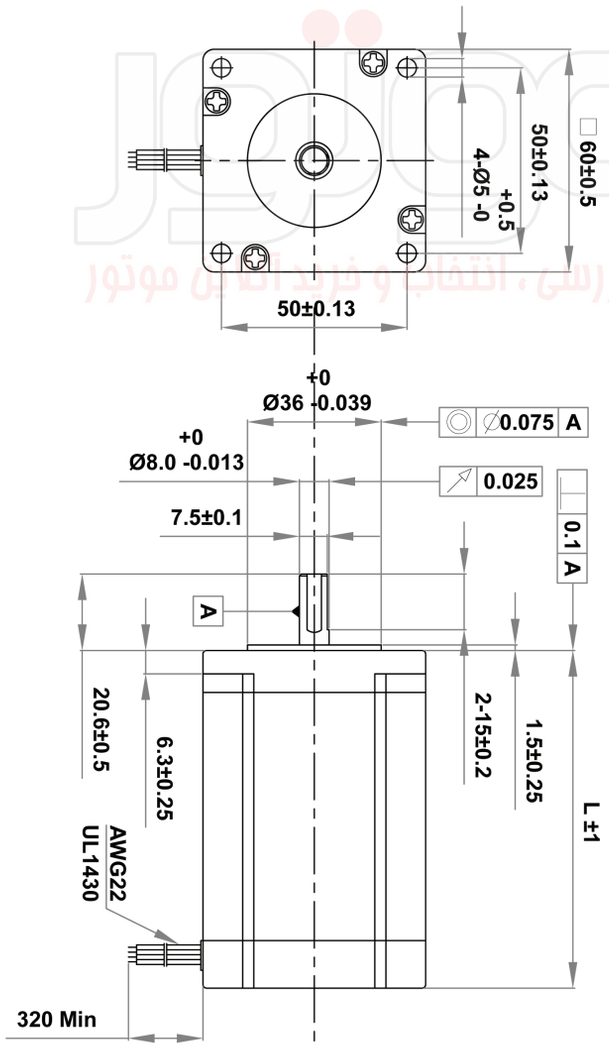


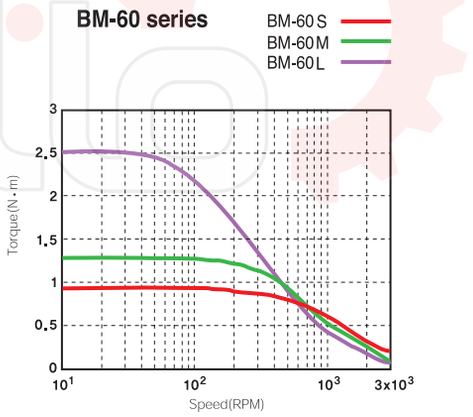
※Measured Condition
Input Voltage = 40VDC
Motor Current = Rated Current (Refer to Motor Specification)
Drive = Ezi-STEP Plus-R

● Motor Specifications

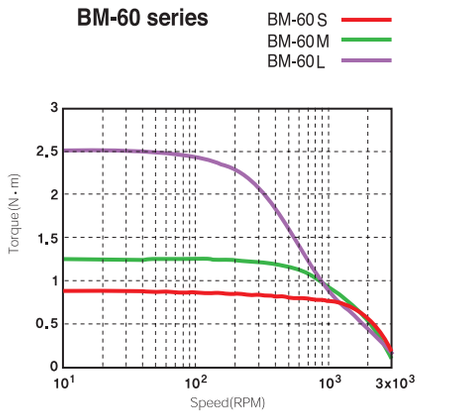
M O D E L	UNIT	BM-60S	BM-60M	BM-60L
DRIVE METHOD	----	BI-POLAR	BI-POLAR	BI-POLAR
NUMBER OF PHASES	----	2	2	2
VOLTAGE	VDC	1.52	1.56	2.6
CURRENT per PHASE	A	4	4	4
RESISTANCE per PHASE	Ohm	0.38	0.39	0.65
INDUCTANCE per PHASE	mH	064	1.2	2.4
HOLDING TORQUE	Nm	0.88	1.28	2.4
ROTOR INTERIA	g · ㎠	140	320	800
WEIGHTS	g	600	900	1600
LENGTH(L)	mm	46	56	90
ALLOWABLE THRUST LOAD	N	Lower than motor weight		
INSULATION RESISTANCE	MOhm	100min. (at 500VDC)		
INSULATION CLASS	----	CLASS B (130℃)		
OPERATING TEMPERATURE	℃	0 to 55		

● Motor Dimension [mm] and Torque Characteristics





※Measured Condition
Input Voltage = 24VDC
Motor Current = Rated Current (Refer to Motor Specification)
Drive = Ezi-STEP Plus-R

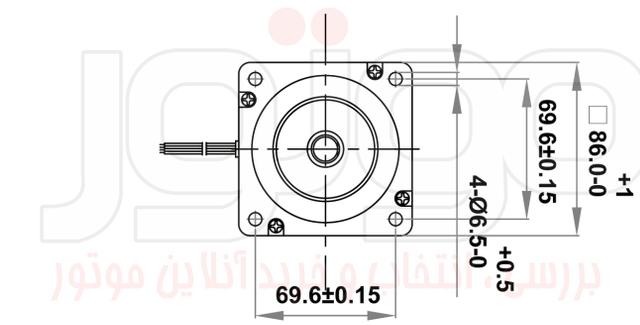


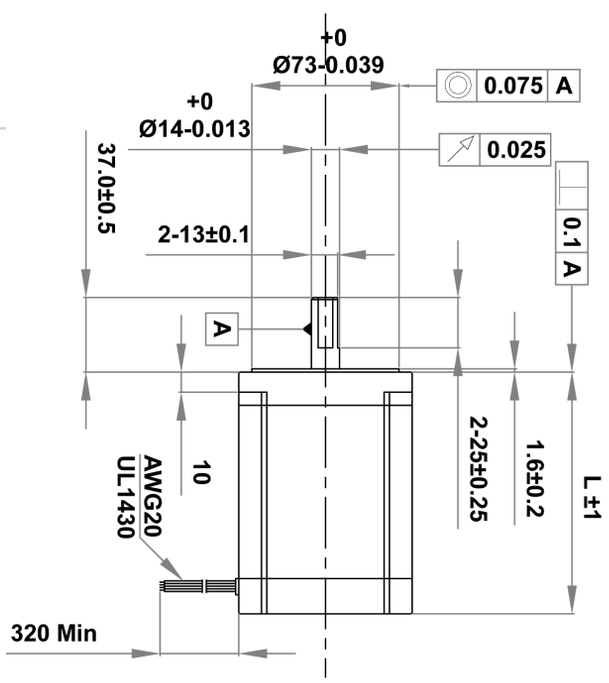
※Measured Condition
Input Voltage = 40VDC
Motor Current = Rated Current (Refer to Motor Specification)
Drive = Ezi-STEP Plus-R

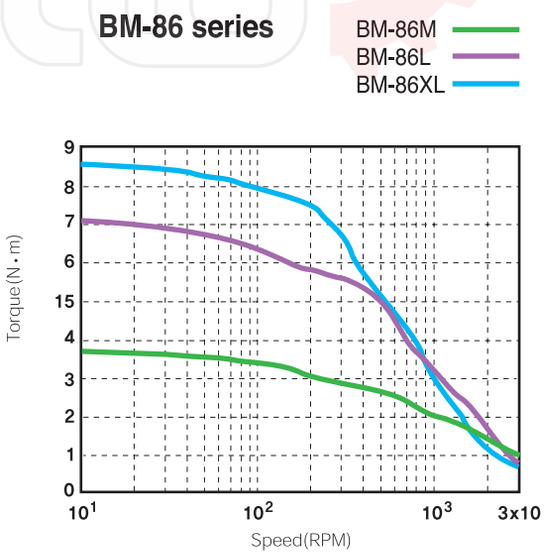
● Motor Specifications

M O D E L	UNIT	BM-86M	BM-86L	BM-86XL-A
DRIVE METHOD	----	BI-POLAR	BI-POLAR	BI-POLAR
NUMBER OF PHASES	----	2	2	2
VOLTAGE	VDC	2.4	3.6	4.38
CURRENT per PHASE	A	6.0	6.0	6.0
RESISTANCE per PHASE	Ohm	0.4	0.6	0.73
INDUCTANCE per PHASE	mH	3.5	6.5	8.68
HOLDING TORQUE	Nm	4.5	8.5	12
ROTOR INTERIA	g · ㎠	1400	2700	4000
WEIGHTS	g	2.4	3.9	5.4
LENGTH(L)	mm	79	119	159
ALLOWABLE THRUST LOAD	N	Lower than motor weight		
INSULATION RESISTANCE	MOhm	100min. (at 500VDC)		
INSULATION CLASS	----	CLASS B (130℃)		
OPERATING TEMPERATURE	℃	0 to 55		

● Motor Dimension [mm] and Torque Characteristics

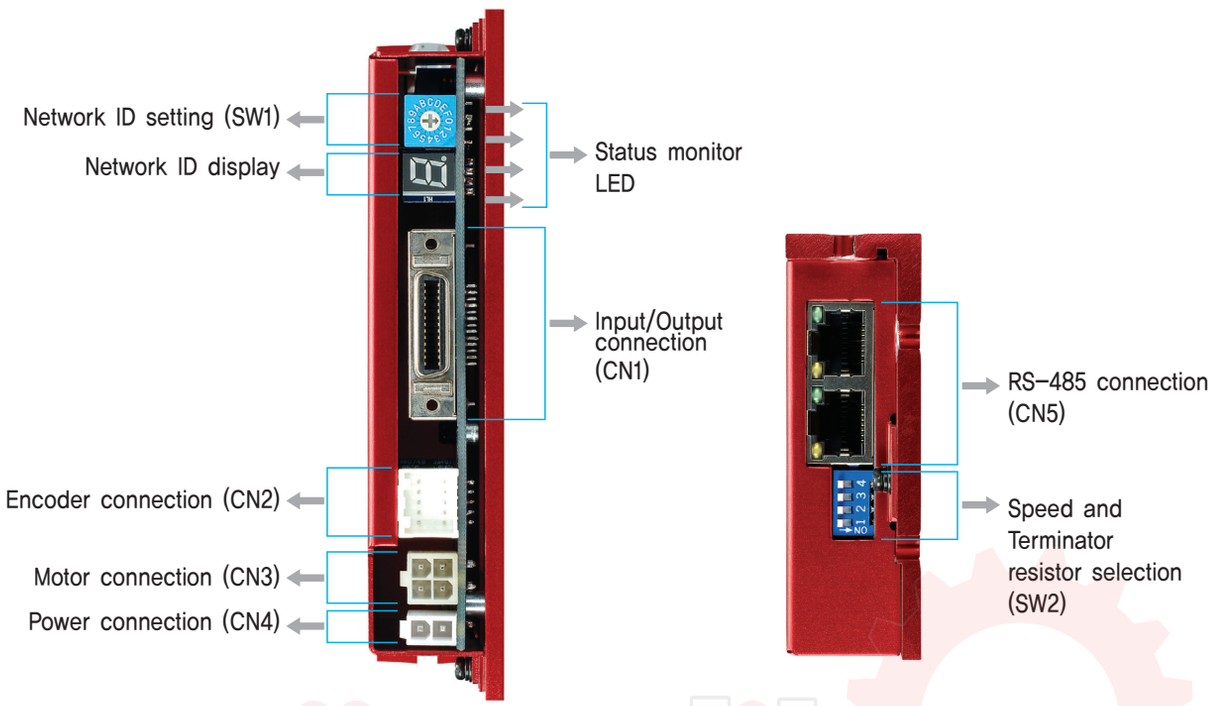




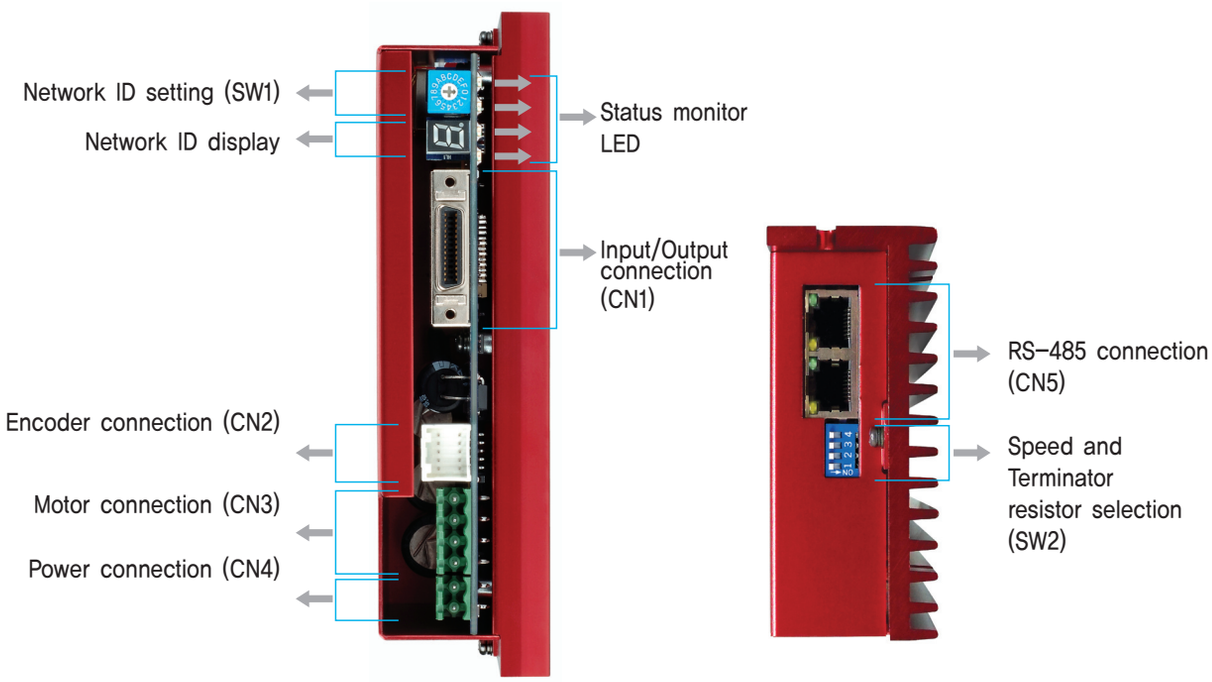


※Measured Condition
Input Voltage = 70VDC
Motor Current = Rated Current
(Refer to Motor Specification)
Drive = Ezi-STEP Plus-R(86mm motor drive only)

● Setting and Operating



◆ 86mm motor drive only(EzT-NDR-86 Series)

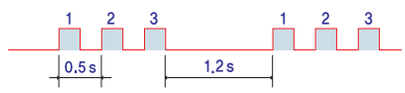


1. Status Monitor LED

Indication	Color	Function	ON/OFF Condition
PWR	Green	Power input indication	Lights when power is ON Flashs when motor is Free status
CW	Yellow	Motor Rotation Direction	Lights when motor rotate CW direction
CCW	Orange	Motor Rotation Direction	Lights when motor rotate CCW direction
ALM	Red	Alarm indication	Flash when protection function is activated (Identifiable which protection mode is activated by counting the flash times)

◆ Protection function and LED flash times

Times	Protection	Conditions
1	Over current	Excessive current flowed into a motor
2	Over speed	Motor speed exceed 3000rpm
3	Step out	Abnormally, motor did not followed pulsed inputs
5	Over teperature	Internal temperature of a motor drive exceeded 55℃
6	Over regenerative Voltage	Back-EMF more than limited value*1
7	Motor Connect error	Power is ON without connection of motor cable to drive
9	Low input voltage	Power source voltage is below limited value*2
11	System error	Damaged condition in drive
12	ROM error	Damaged condition in parameter save device(ROM)
14	High input voltage	Power source voltage is higher than limited value*3



Alarm LED flash (ex : Stall)

*1 : Voltage limit of Back-EMF depends on motor model (Refer to the Manual)
*2 : Low limit voltage value depends on motor model (Refer to the Manual)
*3 : Limit value provided to drives depends on driver model (Refer to the Manual)

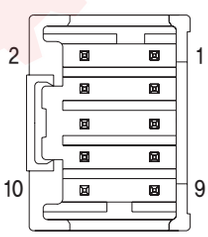
2. Network ID selection switch(SW1)

Position	Slave ID number	Position	Slave 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.

3. Encoder connector(CN2)

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	Frame GND	----
10	Frame GND	----



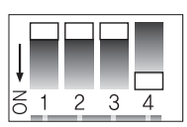
※Used for monitoring the external encoder signal

4. Speed and Terminator resistor selection switch(SW2)

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

SW2.1 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	9600
-	ON	OFF	OFF	19200
-	OFF	ON	OFF	38400
-	ON	ON	OFF	57600
-	OFF	OFF	ON	115200*1
-	ON	OFF	ON	230400
-	OFF	ON	ON	460800
-	ON	ON	ON	921600

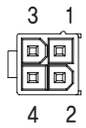


*1 : Default setting value

If SW2.1 is OFF, terminator resistor is disconnected.
If SW2.2 is ON, terminator resistor is connected.

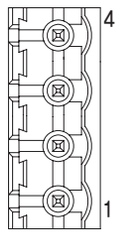
5. Motor Connector(CN3)

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



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

※Only for 86mm motor drive.

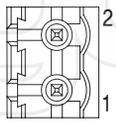


6. Power connector(CN4)

NO.	Function
1	24VDC ±10%
2	GND

NO.	Function
1	GND
2	40~70VDC

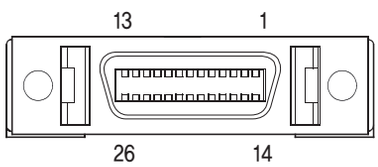
※Only for 86mm motor drive.



7. Input/Output signal(CN1)

NO.	Function	I/O
1	LIMIT+	Input
2	LIMIT−	Input
3	ORIGIN	Input
4	Digital In1	Input
5	Digital In6	Input
6	Digital In7	Input
7	Compare Out1	Output
8	Digital Out1	Output
9	Digital Out2	Output
10	Digital Out3	Output
11	Digital Out4	Output
12	Digital Out5	Output
13	Digital Out6	Output
14	Digital In2	Input
15	Digital In3	Input
16	Digital In4	Input
17	Digital In5	Input
18	Digital In8	Input
19	Digital In9	Input
20	Digital Out7	Output
21	Digital Out8	Output
22	Digital Out9	Output
23	BRAKE+	Output
24	BRAKE−	Output
25	24VDC GND	Input
26	24VDC	Input

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

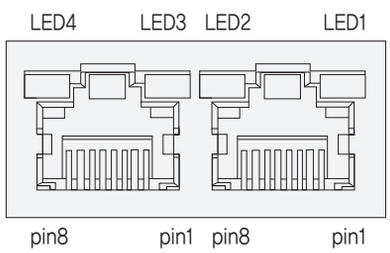


8. RS-485 Communication Connector(CN5)

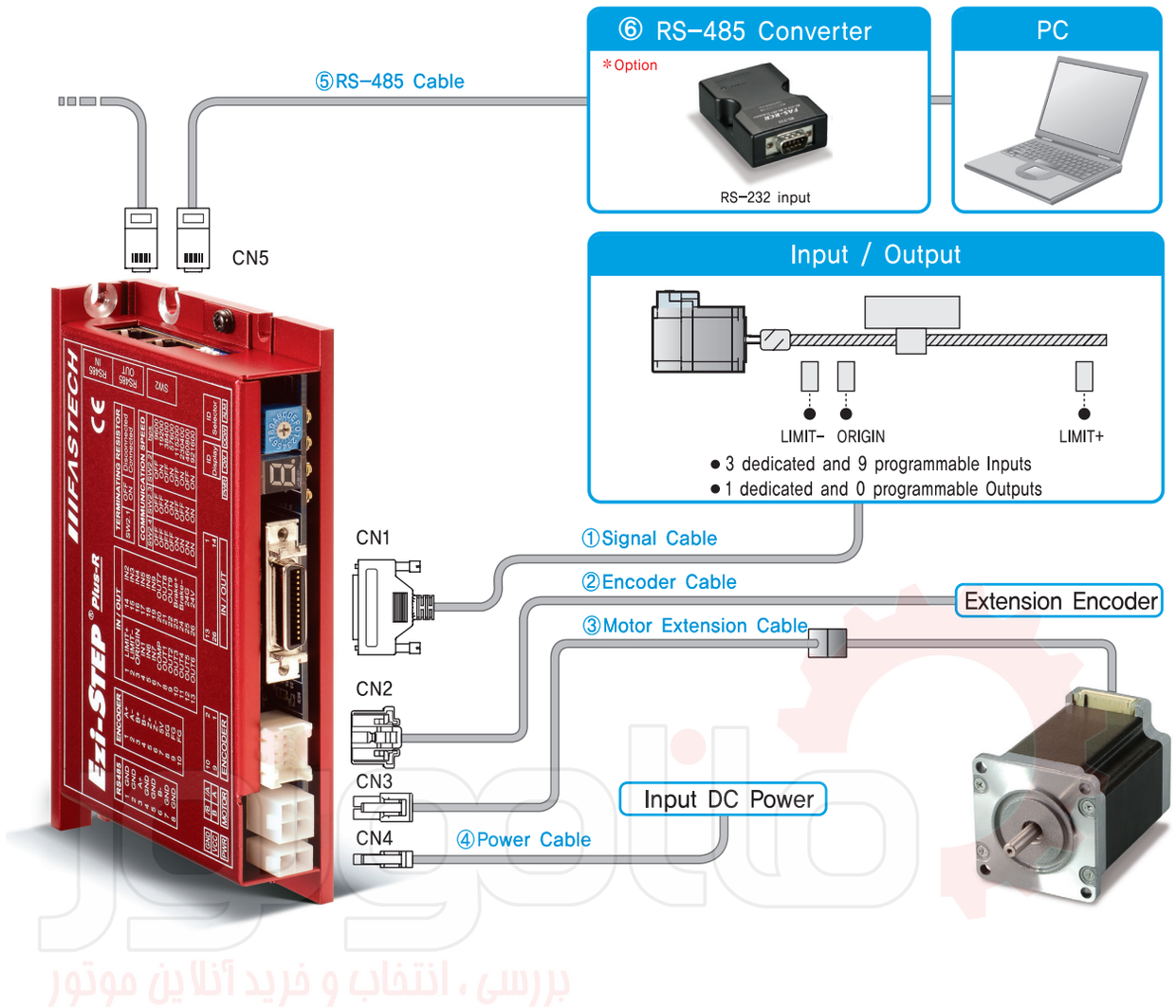
There is a converter for connecting PC.

1)RS-232 to RS-485

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



● System Configuration



Type	Signal Cable	Encoder Cable	Motor Cable	Power Cable
Standard Length	–	–	30cm	–
Max. Length	20m	20m	20m	2m

1. Cable Option

①Signal Cable

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

Item	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.

②Encoder Extension Cable

Available to extended connection between Encoder and Ezi-STEP Plus-R.

Item	Length[m]	Remark
CTPR-E-□□□F	□□□	Normal Cable
CTPR-E-□□□M	□□□	Robot Cable

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

③Motor Extension Cable

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

Item	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.

④Power Cable

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

Item	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.

⑤RS-485 Cable

Item	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	

2. Option

⑥FAS-RCR(RS-232C to RS-485 Converter)

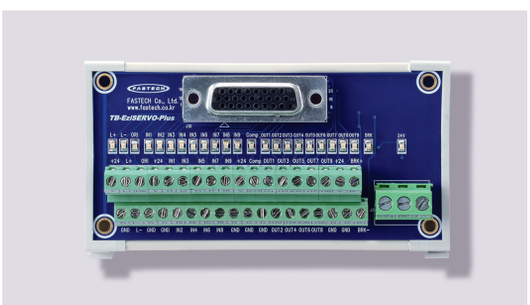
Item	Specification
Comm. Speed	Max. 115.2Kbps
Comm. Distance	RS-232C : Max. 15m RS-485 : Max. 1.2km
Connector Type	RS-232C : DB9 Female RS-485 : RJ-45
Operating System	Windows 98/2000/XP/Vista
Dimension	50X75X23mm
Weight	38g
Power	Powered from RS-232C (Usable for external DC5~24V)

RS-232C Cable

Item	Length[m]	Remark
CGNR-R-1R8F	1.8	Normal Cable
CGNR-R-003F	3	
CGNR-R-005F	5	

⑦TB-Plus(Interface Board)

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



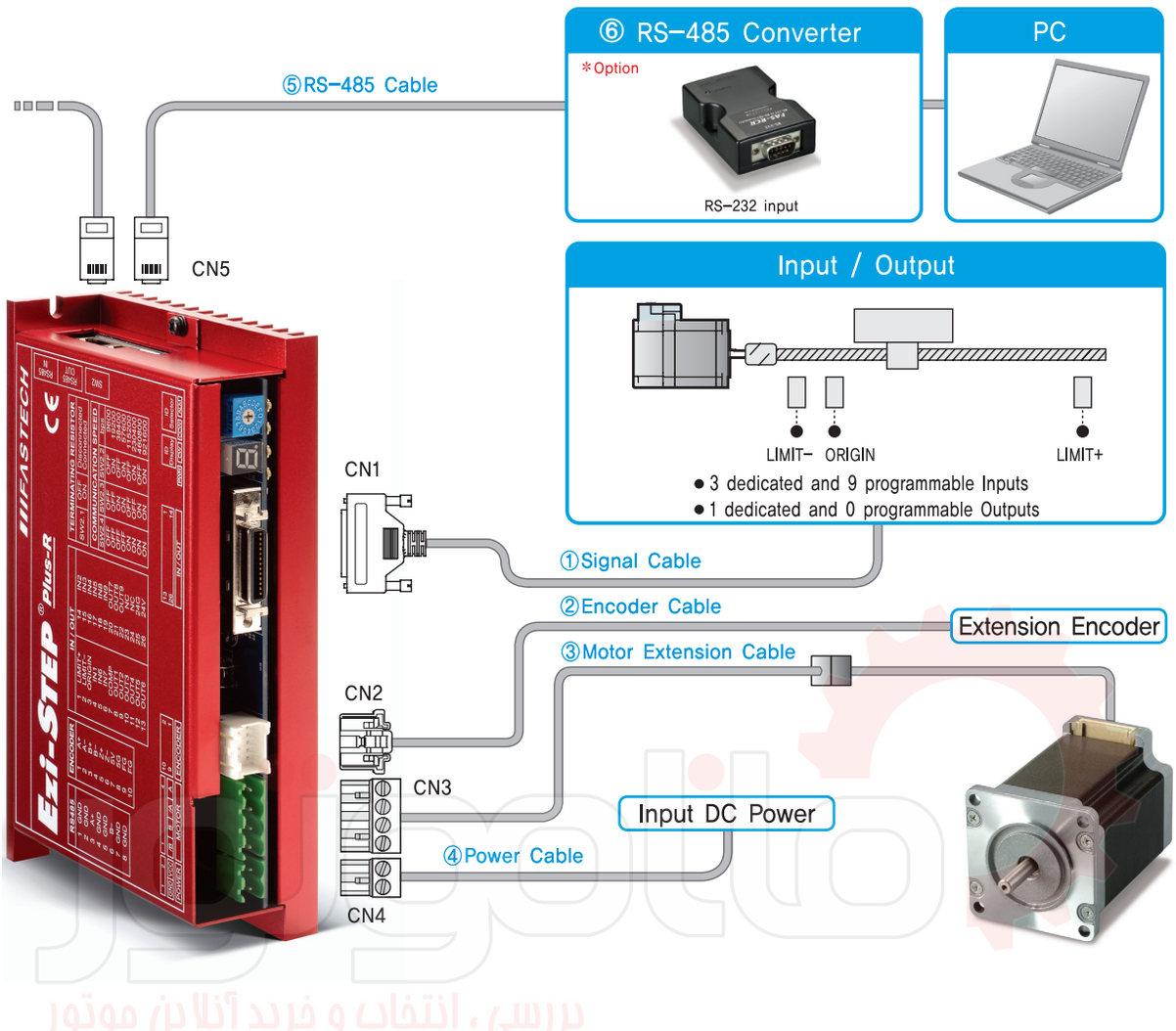
Interface Cable

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

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

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

● System Configuration [Only for 86mm motor drive (EzT-NDR-86 series)



Type	Signal Cable	Encoder Cable	Motor Cable	Power Cable
Standard Length	–	–	30cm	–
Max. Length	20m	20m	20m	2m

1. Cable Option

①Signal Cable

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

Item	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.

②Encoder Extension Cable

Available to extended connection between Encoder and Ezi-STEP Plus-R.

Item	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.

③Motor Extension Cable

Available to Extended connection between motor and Ezi-STEP Plus-R.

Item	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.

④Power Cable

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

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

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

⑤RS-485 Cable

Item	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	

2. Option

⑥FAS-RCR(RS-232C to RS-485 Converter)

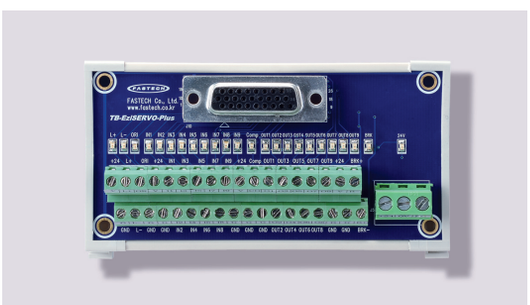
Item	Specification
Comm. Speed	Max. 115.2Kbps
Comm. Distance	RS-232C : Max. 15m RS-485 : Max. 1.2km
Connector Type	RS-232C : DB9 Female RS-485 : RJ-45
Operating System	Windows 98/2000/XP/Vista
Dimension	50X75X23mm
Weight	38g
Power	Powered from RS-232C (Usable for external DC5~24V)

RS-232C Cable

Item	Length[m]	Remark
CGNR-R-1R8F	1.8	Normal Cable
CGNR-R-003F	3	
CGNR-R-005F	5	

⑦TB-Plus(Interface Board)

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



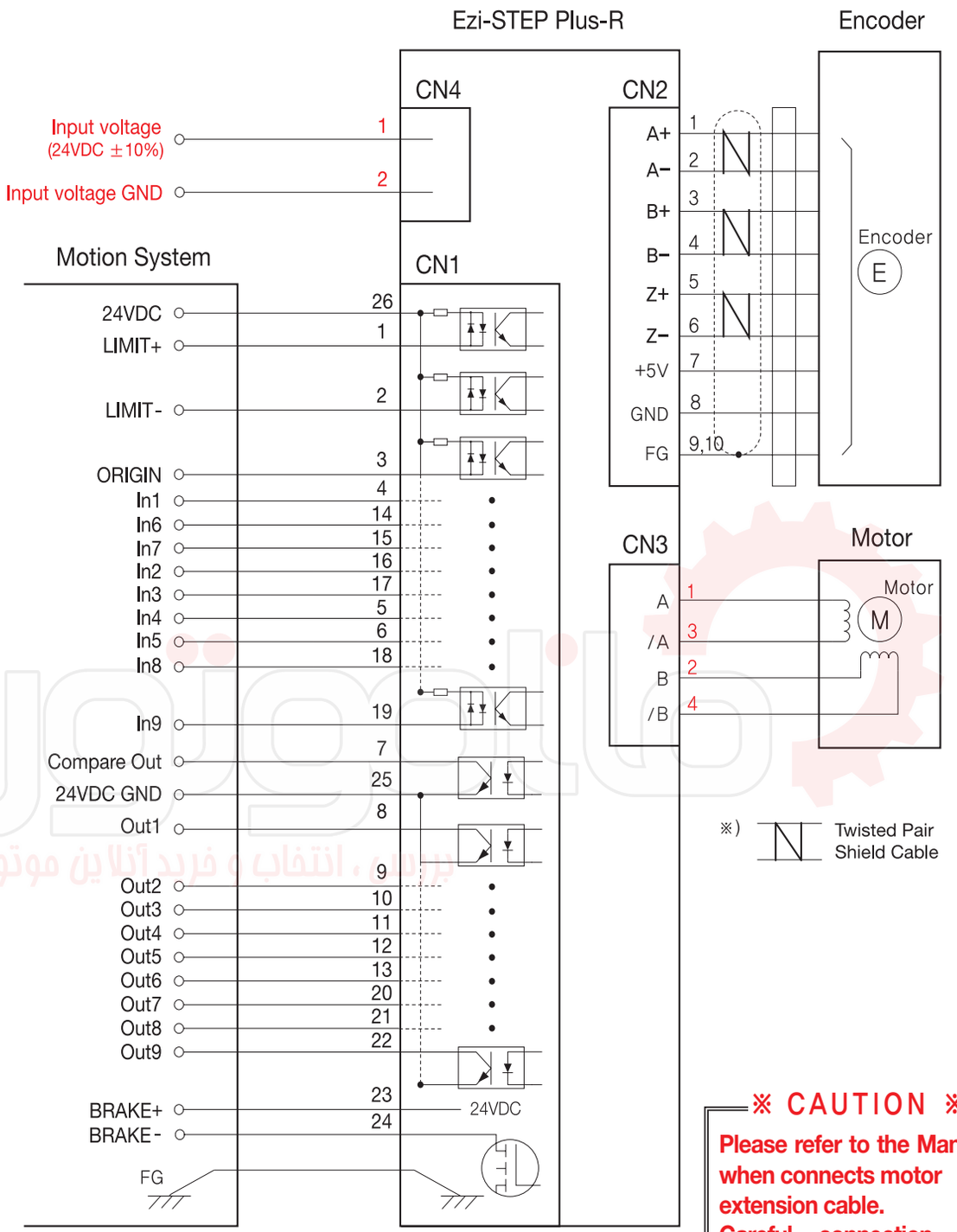
Interface Cable

Available to connect between TB-Plus Interface Board and Ezi-STEP Plus-R.

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

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

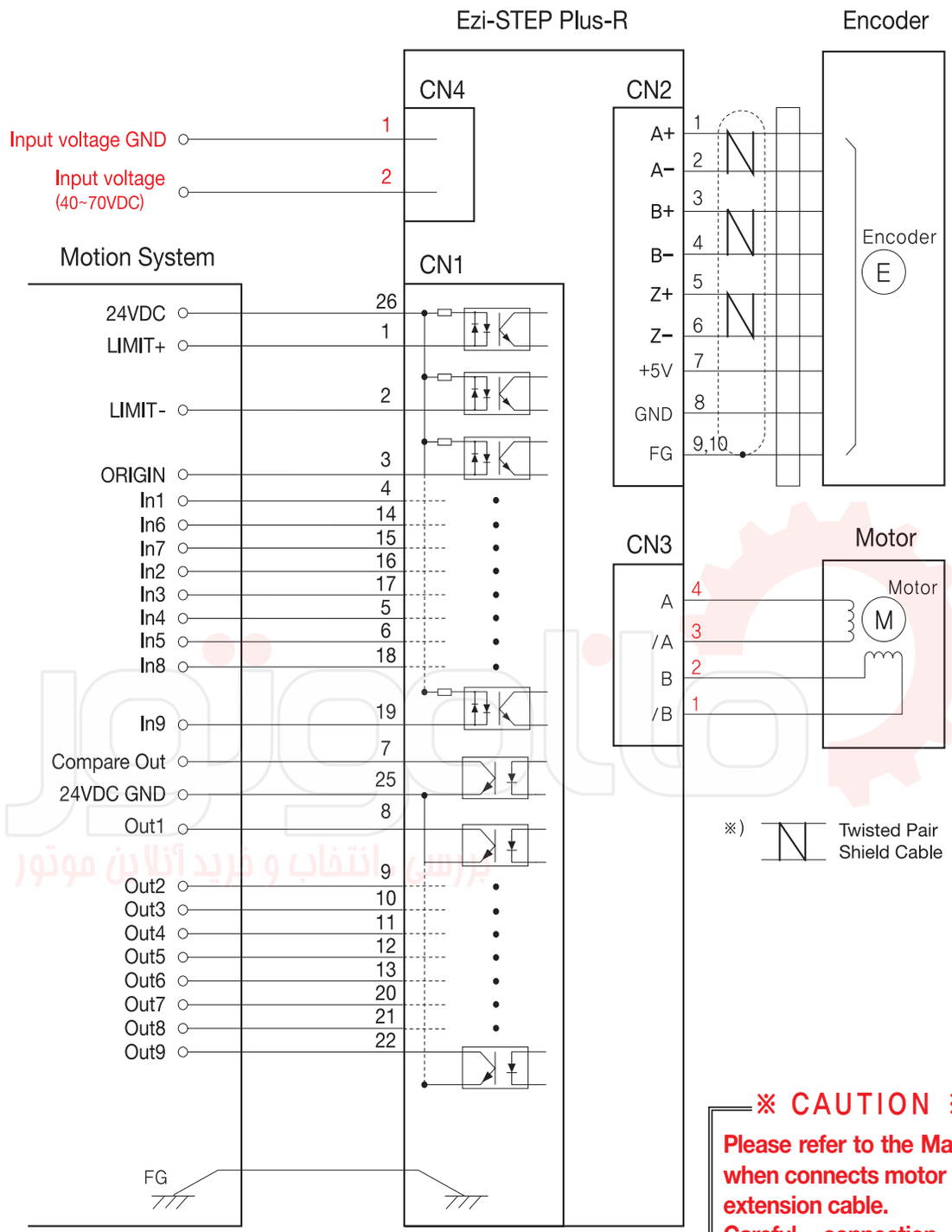
● External Wiring Diagram



※ CAUTION ※

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

● External Wiring Diagram [Only for 86mm motor drive (EzT-NDR-86 series)]

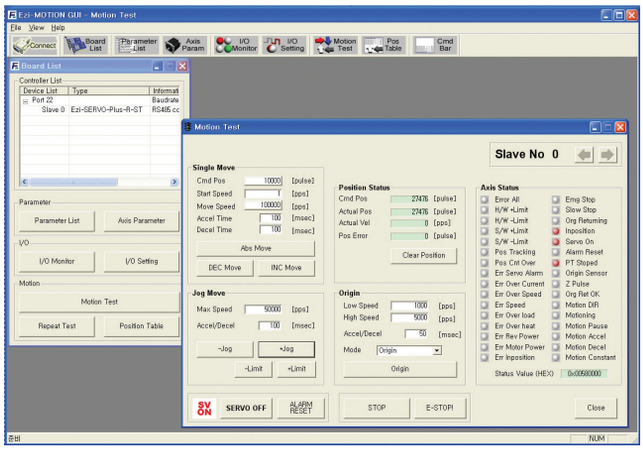


※ CAUTION ※

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

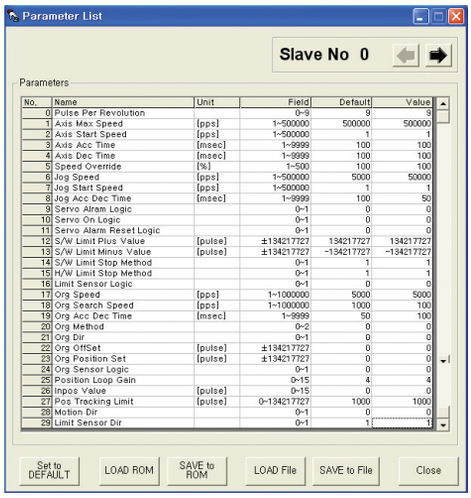
※This Wiring Diagram is only for 86mm motor drive(EzT-NDR-86 series).
※Pay attention to red color that describe the difference.

● GUI(Graphic User Interface) Screenshot



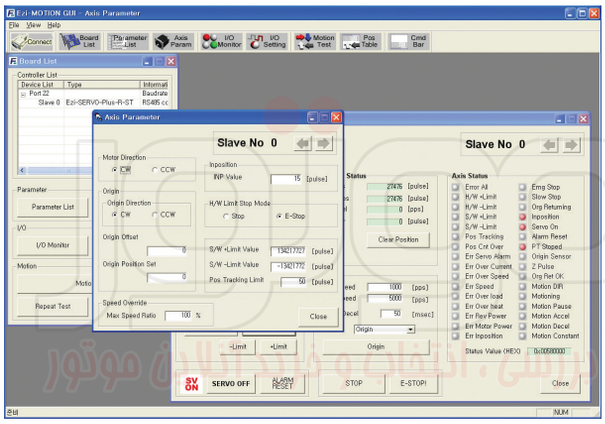
◆Controller Lists and Motion Test

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.



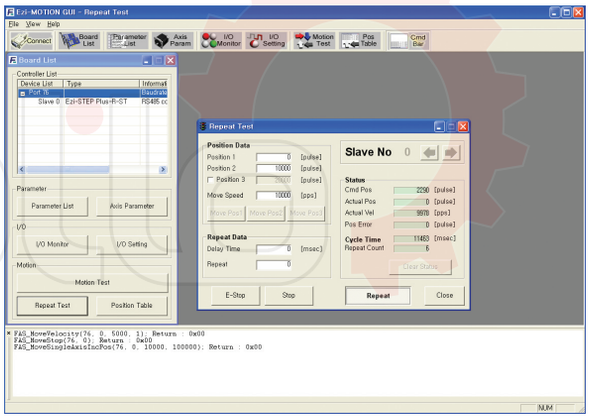
◆Parameter List

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



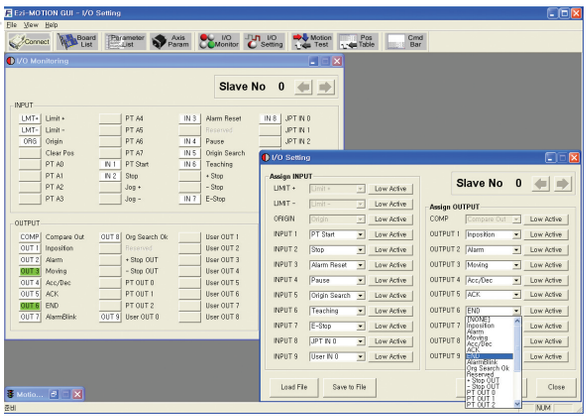
◆Axis Parameter Setup

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



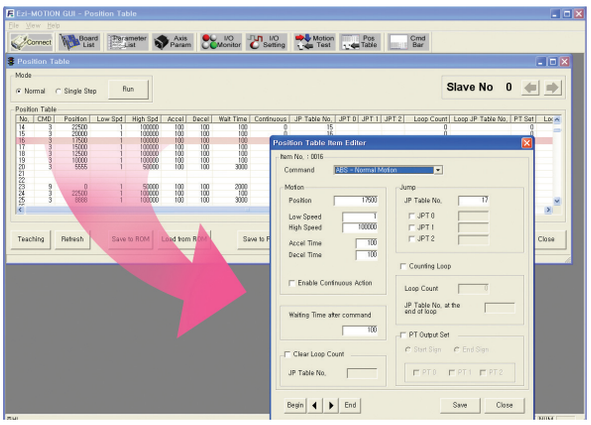
◆Motion Repeat and Monitor Status

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



◆I/O Monitoring and Setting

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



◆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.

● Part Numbering

Ezi-STEP-PR-42S-□

Drive Series Type

Communication Type

PR : RS-485

Motor Flange Size

20 : 20mm
28 : 28mm
42 : 42mm
56 : 56mm
60 : 60mm
86 : 86mm

Motor Length

S : Single
M : Middle
L : Large
XL : Extra Large

User Code

● Combination list of Ezi-STEP Plus-R

Unit Part Number	Motor Model No.	Drive Model No.
Ezi-STEP-PR-20M-□	BM-20M	EzT-NDR-20M
Ezi-STEP-PR-20L-□	BM-20L	EzT-NDR-20L
Ezi-STEP-PR-28M-□	BM-28M	EzT-NDR-28M
Ezi-STEP-PR-28L-□	BM-28L	EzT-NDR-28L
Ezi-STEP-PR-42S-□	BM-42S	EzT-NDR-42S
Ezi-STEP-PR-42M-□	BM-42M	EzT-NDR-42M
Ezi-STEP-PR-42L-□	BM-42L	EzT-NDR-42L
Ezi-STEP-PR-42XL-□	BM-42XL	EzT-NDR-42XL
Ezi-STEP-PR-56S-□	BM-56S	EzT-NDR-56S
Ezi-STEP-PR-56M-□	BM-56M	EzT-NDR-56M
Ezi-STEP-PR-56L-□	BM-56L	EzT-NDR-56L
Ezi-STEP-PR-56XL-□	BM-56XL	EzT-NDR-56XL
Ezi-STEP-PR-60S-□	BM-60S	EzT-NDR-60S
EzI-STEP-PR-60M-□	BM-60M	EzT-NDR-60M
Ezi-STEP-PR-60L-□	BM-60L	EzT-NDR-60L
Ezi-STEP-PR-86M-□	BM-86M	EzT-NDR-86M
Ezi-STEP-PR-86L-□	BM-86L	EzT-NDR-86L
Ezi-STEP-PR-86XL-□	BM-86XL	EzT-NDR-86XL

◆Connector for Cabling

These connectors are serviced together with Ezi-STEP Plus-R except when purchasing option cables.

CN1 : Input/Output Connector

Item	Specification	Maker
Connector	10126-3000PE	3M
Shell	10326-52F0-008	3M

CN2 : Encoder Connector

Item	Specification	Maker
Housing	51353-1000	MOLEX
Terminal	56134-9000	MOLEX

CN3 : Motor Connector

Item	Specification	Maker
Housing	5557-04R	MOLEX
Terminal	5556T	MOLEX

CN4 : Power Connector

Item	Specification	Maker
Housing	5557-02R	MOLEX
Terminal	5556T	MOLEX

CN3 : Motor Connector(86mm motor drive only)

Item	Specification	Maker
Terminal Block	AK950-4	PTR
Housing	3191-4RI	MOLEX
Terminal	138IT	MOLEX

CN4 : Power Connector(86mm motor drive only)

Item	Specification	Maker
Terminal Block	AK950-2	PTR

FASTECH

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