

Ezi-STEP[®] II

Micro Stepping System

- Embedded Motion Controller
- Ethernet Interface
- Position Table
- Microstepping
- Software Damping
- High Torque

Plus-E



CE



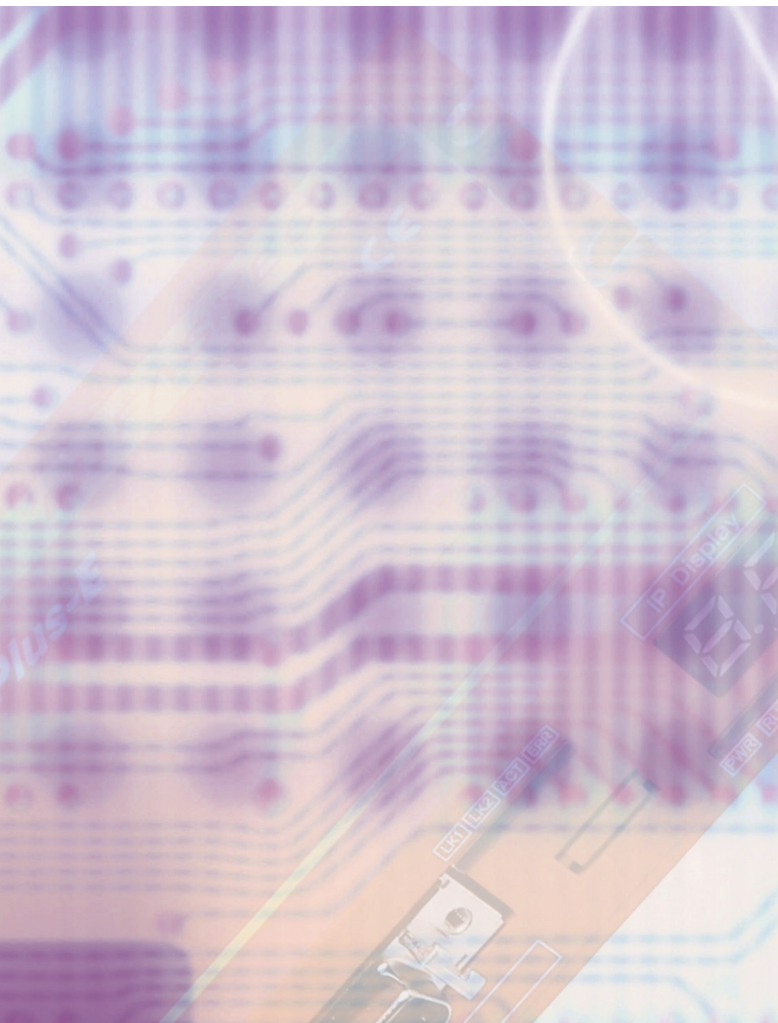
Fast, Accurate, Smooth Motion



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Ezi-STEP[®] II Plus-E

Micro Stepping System



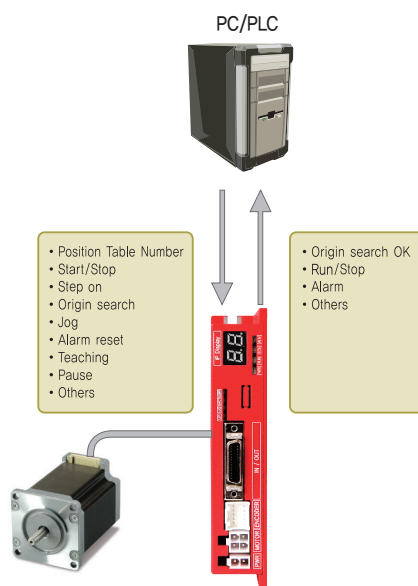
2

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 PC.

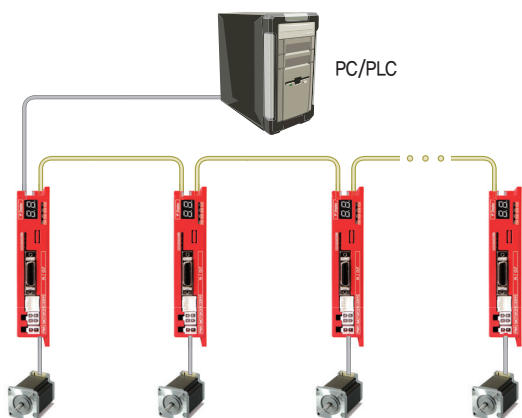
The PC can monitor the In-Position, origin search, moving/stop, servo ready and other digital output signals from a drive. A maximum of 256 positioning points can be set from PC.



1

Network Based Motion Control

A maximum of 254 axis can be operated from a PC through Ethernet communications. And daisy-chain connection is available thru internally equipped Ethernet HUB. All of the Motion conditions are set through the network and saved in Flash ROM as a parameter. Motion Library(API) is provided for programming under Windows 7/8/10.



3

Microstep and Filtering

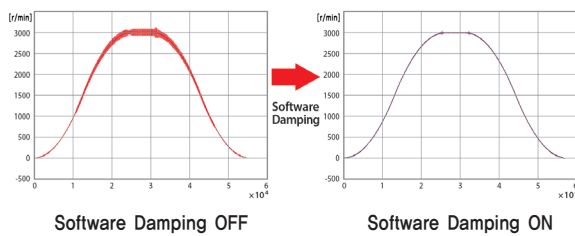
The high-performance MCU operates at step resolutions of 1.8° up to maximum 0.0072° (1/250 steps) and Ezi-STEP II adjusts PWM control signal in every $50\mu\text{sec}$, which makes it possible for more precise current control, resulting in high-precision Microstep operation. In addition, Ezi-STEP II applies filtering control to enable smooth operation even at very low-speed.

4

Software Damping

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|| drive detects these problems and the MCU 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.



※ This is real measured speed that using 100,000 P/R encoder.

5

Improved high-speed operation performance

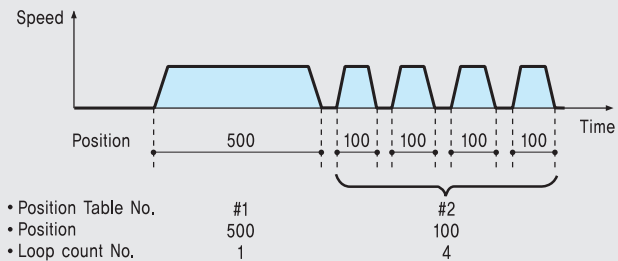
Depending on the speed of a stepping motor, Ezi-STEP|| automatically increases the supply voltage and prevents the torque lowering due to the low operating voltage to the motor caused by back-emf voltage, this enables high-speed operation. Additionally, the software damping algorithm minimizes the vibration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

※ Applicable model : Ezi-STEP||-PE-42 Series
Ezi-STEP||-PE-56 Series
Ezi-STEP||-PE-60 Series

● Motion Controller Features of Ezi-STEP II

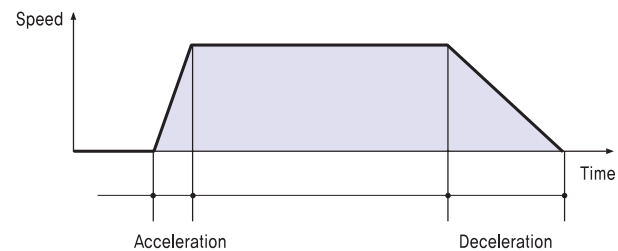
1. Loop Count

This function allows positioning repeatedly according to the Loop Count Number.



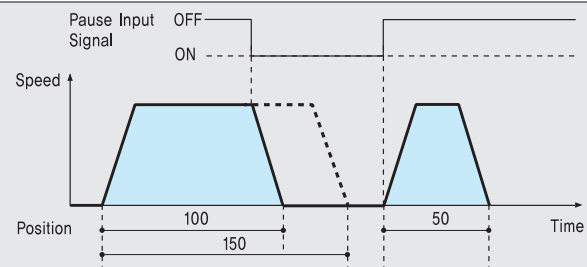
2. Acceleration/Deceleration

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



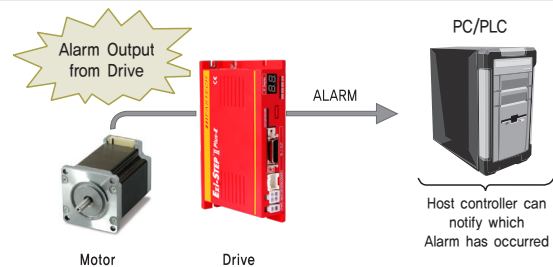
3. Pause

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



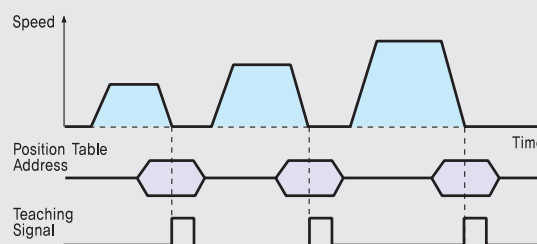
4. Alarm

The number of LED flashing time and information displayed on the 7-segment LED display indicates which Alarm has occurred.



5. Teaching

Teaching signal is used to memorize current Position data into the selected Position Table item.

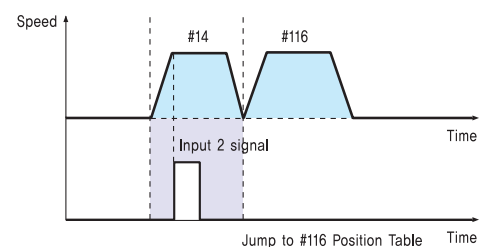
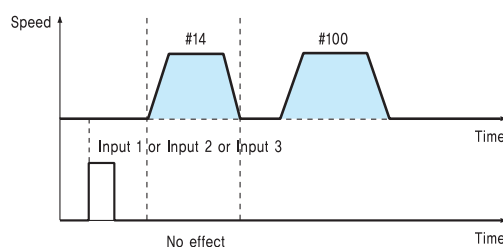


6. Jump

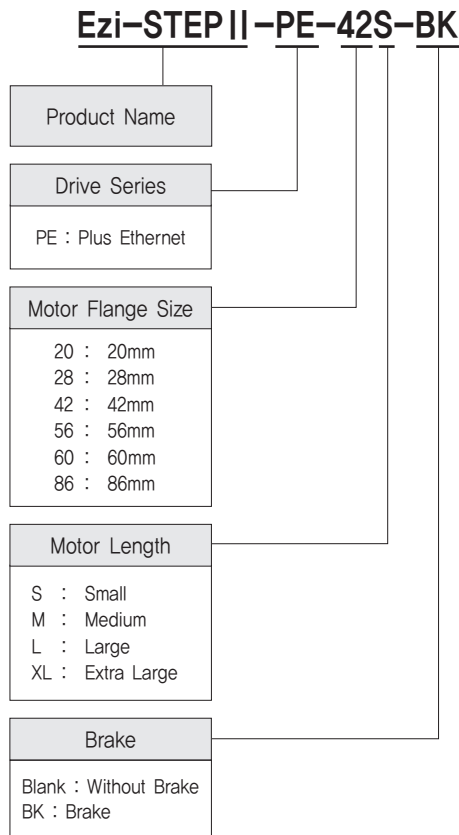
Within one Position Table, you can select various Position Table numbers that you want to jump. With three external input signal during movement, the next jump Position Table number can be select.

◆ Position Table #14

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



● Ezi-STEP II Plus-E Part Numbering



● Standard Combination

Unit Part Number	Motor Model Number	Drive Model Number
Ezi-STEP II -PE-20M	BM-20M	EzT2-PE-20M
Ezi-STEP II -PE-20L	BM-20L	EzT2-PE-20L
Ezi-STEP II -PE-28S	BM-28S	EzT2-PE-28S
Ezi-STEP II -PE-28M	BM-28M	EzT2-PE-28M
Ezi-STEP II -PE-28L	BM-28L	EzT2-PE-28L
Ezi-STEP II -PE-42S	BM-42S	EzT2-PE-42S
Ezi-STEP II -PE-42M	BM-42M	EzT2-PE-42M
Ezi-STEP II -PE-42L	BM-42L	EzT2-PE-42L
Ezi-STEP II -PE-42XL	BM-42XL	EzT2-PE-42XL
Ezi-STEP II -PE-56S	BM-56S	EzT2-PE-56S
Ezi-STEP II -PE-56M	BM-56M	EzT2-PE-56M
Ezi-STEP II -PE-56L	BM-56L	EzT2-PE-56L
Ezi-STEP II -PE-60S	BM-60S	EzT2-PE-60S
Ezi-STEP II -PE-60M	BM-60M	EzT2-PE-60M
Ezi-STEP II -PE-60L	BM-60L	EzT2-PE-60L
Ezi-STEP II -PE-86M	BM-86M	EzT2-PE-86M
Ezi-STEP II -PE-86L	BM-86L	EzT2-PE-86L
Ezi-STEP II -PE-86XL	BM-86XL	EzT2-PE-86XL

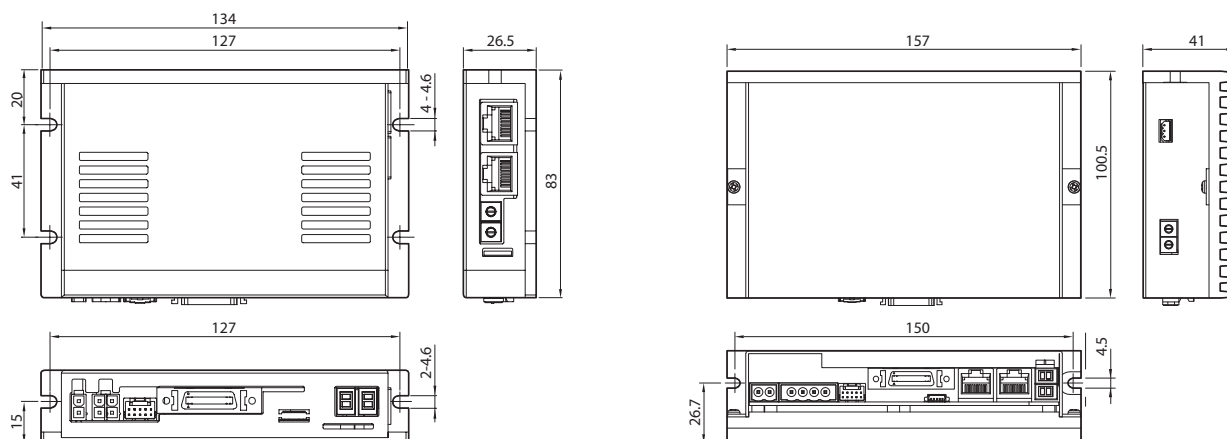
● Combination with Brake

Unit Part Number	Motor Model Number	Drive Model Number
Ezi-STEP II -PE-42S-BK	BM-42S-BK	EzT2-PE-42S
Ezi-STEP II -PE-42M-BK	BM-42M-BK	EzT2-PE-42M
Ezi-STEP II -PE-42L-BK	BM-42L-BK	EzT2-PE-42L
Ezi-STEP II -PE-42XL-BK	BM-42XL-BK	EzT2-PE-42XL
Ezi-STEP II -PE-56S-BK	BM-56S-BK	EzT2-PE-56S
Ezi-STEP II -PE-56M-BK	BM-56M-BK	EzT2-PE-56M
Ezi-STEP II -PE-56L-BK	BM-56L-BK	EzT2-PE-56L
Ezi-STEP II -PE-60S-BK	BM-60S-BK	EzT2-PE-60S
Ezi-STEP II -PE-60M-BK	BM-60M-BK	EzT2-PE-60M
Ezi-STEP II -PE-60L-BK	BM-60L-BK	EzT2-PE-60L
Ezi-STEP II -PE-86M-BK	BM-86M-BK	EzT2-PE-86M
Ezi-STEP II -PE-86L-BK	BM-86L-BK	EzT2-PE-86L
Ezi-STEP II -PE-86XL-BK	BM-86XL-BK	EzT2-PE-86XL

● Specifications of Drive

Motor Model		BM-20 series	BM-28 series	BM-42 series	BM-56 series	BM-60 series	BM-86 series
Driver Model		EzT2-PE-20 series	EzT2-PE-28 series	EzT2-PE-42 series	EzT2-PE-56 series	EzT2-PE-60 series	EzT2-PE-86 series
Input Voltage		DC24V±10%					DC40~70V
Control Method		Bipolar PWM drive with 32bit MCU					
Multi Axis Drive		Maximum 254 axis operating (Selectable IP: 1~254)					
Position Table		256 motion command steps					
Current Consumption		Max. 500mA (Except motor current)					
Operating Condition	Ambient Temperature	· In Use: 0~50℃ · In Storage: -20~70℃					
	Humidity	· In Use: 35~85% RH (Non-Condensing) · In Storage: 10~90% RH (Non-Condensing)					
	Vib. Resist.	0.5g					
Function	Rotation Speed	0~3,000r/min					
	Resolution	Configurable Resolution [P/R] 500 1,000 1,600 2,000 3,200 3,600 4,000 5,000 6,400 8,000 10,000 20,000 25,000 36,000 40,000 50,000 (Selectable by parameter)					
	Error Types	Over Current Error, Over Speed Error, Over Temperature Error, Over Regenerated Voltage Error, Motor Connect Error, ROM Error					
	LED Display	Power Status, Alarm Status, Run Status, STEP ON Status					
	Rotational Direction	CW/CCW (Set by parameter)					
Signal I/O	Input Signals	3 dedicated inputs (LIMIT+, LIMIT-, ORIGIN), 9 programmable inputs (Photocoupler Input)					
	Output Signals	1 dedicated output (Compare Out), 9 programmable outputs (Photocoupler Output), 1 Brake output					
Communication Interface		· Ethernet standard: 10BASE-T, 100BASE-TX · Full-Duplex · Dual port Ethernet switch embedded					
Position Control		· Incremental mode / Absolute mode Data Range: -134,217,728 to +134,217,727 [pulse] · Operating speed: Max. 3,000 r/min					
Return to Origin		Origin Sensor, ±Limit sensor, Z phase(with external encoder)					
GUI		User Interface Program within Windows					
Library		Motion Library (API) for windows 7/8/10					

● Dimensions of Drive [mm]



※ 86mm motor drive (EzT2-PE-86 series)

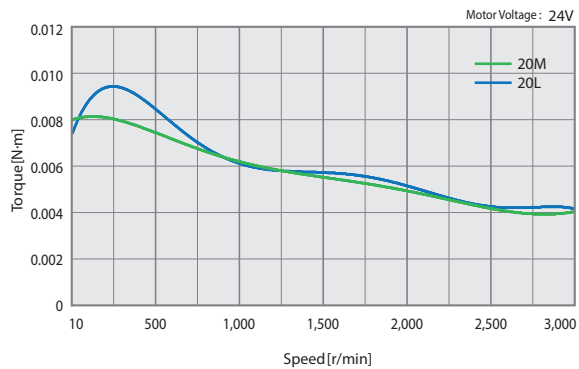
● Specifications of Motor

MODEL			BM-20 series		BM-28 series			BM-42 series				
			UNIT	20M	20L	28S	28M	28L	42S	42M	42L	42XL
DRIVE METHOD			—	Bipolar								
NUMBER OF PHASES			—	2 Phase								
CURRENT per PHASE			A/Phase	0,5	0,5	0,95	0,95	0,95	1,2	1,2	1,2	1,2
MAXIMUM HOLDING TORQUE			N・m	0,016	0,025	0,069	0,098	0,118	0,32	0,44	0,5	0,65
ROTOR INERTIA			g・cm ²	2,5	3,3	9,0	13	18	35	54	77	114
WEIGHTS			kg	0,053	0,078	0,115	0,174	0,202	0,238	0,303	0,374	0,508
LENGTH(L)			mm	28	38	32	45	50	34	40	48	60
PERMISSIBLE RADIAL LOAD	DIS-TANCE FROM END OF SHAFT	3mm	N	18	18	30	30	30	22	22	22	22
		8mm		30	30	38	38	38	26	26	26	26
		13mm		—	—	53	53	53	33	33	33	33
		18mm		—	—	—	—	—	46	46	46	46
PERMISSIBLE AXIAL LOAD			N	Lower then Motor Unit's Weight								
INSULATION RESISTANCE			MΩ	Min. 100(When measured with a DC500V insulation resistance meter)								
INSULATION CLASS			—	CLASS B(130℃)								
OPERATING TEMPERATURE			℃	0 ~ 55								

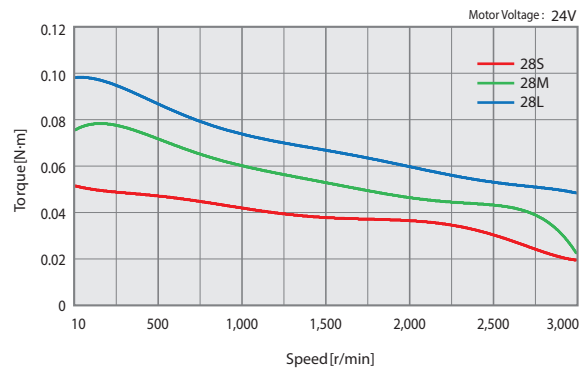
MODEL			BM-56 series			BM-60 series			BM-86 series			
			UNIT	56S	56M	56L	60S	60M	60L	86M	86L	86XL
DRIVE METHOD			—	Bipolar								
NUMBER OF PHASES			—	2 Phase								
CURRENT per PHASE			A/Phase	3.0	3.0	3.0	4.0	4.0	4.0	6.0	6.0	6.0
MAXIMUM HOLDING TORQUE			N・m	0.64	1.0	1.5	0.88	1.28	2.4	4.5	8.5	12
ROTOR INERTIA			g・cm ²	180	280	520	240	490	690	1800	3600	5400
WEIGHTS			kg	0.548	0.726	1.159	0.616	0.793	1.349	2.275	3.808	5.330
LENGTH(L)			mm	46	55	80	47	56	85	78	117	155
PERMISSIBLE RADIAL LOAD	DIS-TANCE FROM END OF SHAFT	3mm	N	52	52	52	70	70	70	270	270	270
		8mm		65	65	65	87	87	87	300	300	300
		13mm		85	85	85	114	114	114	350	350	350
		18mm		123	123	123	165	165	165	400	400	400
PERMISSIBLE AXIAL LOAD			N	Lower then Motor Unit's Weight								
INSULATION RESISTANCE			MΩ	Min. 100(When measured with a DC500V insulation resistance meter)								
INSULATION CLASS			—	CLASS B(130℃)								
OPERATING TEMPERATURE			℃	0 ~ 55								

● Torque Characteristics of Motor

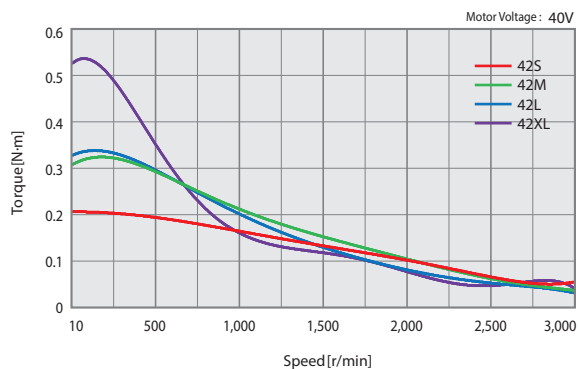
Ezi-STEP II-PE-20 series



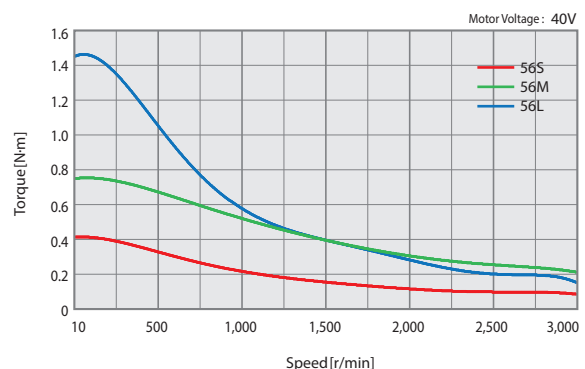
Ezi-STEP II-PE-28 series



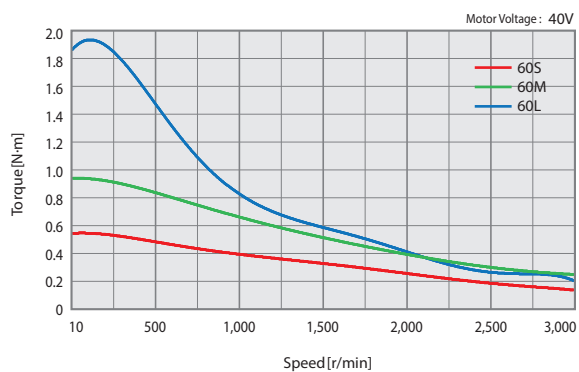
Ezi-STEP II-PE-42 series



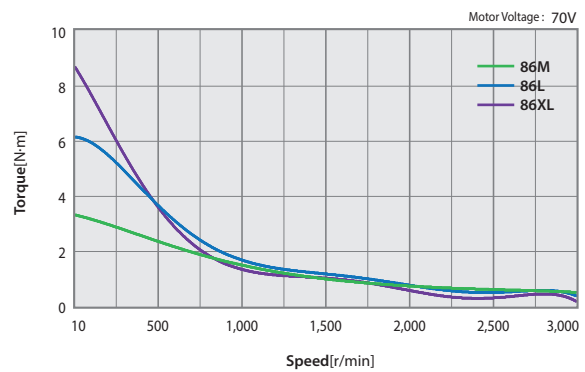
Ezi-STEP II-PE-56 series



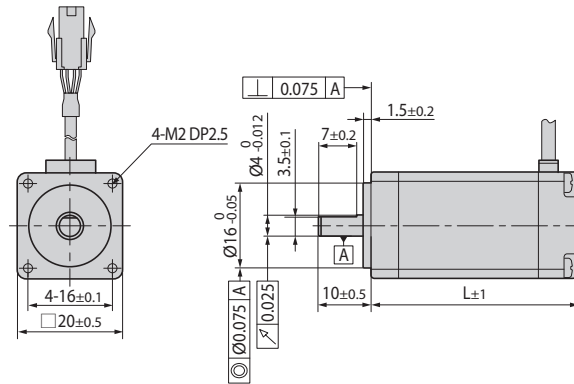
Ezi-STEP II-PE-60 series



Ezi-STEP II-PE-86 series

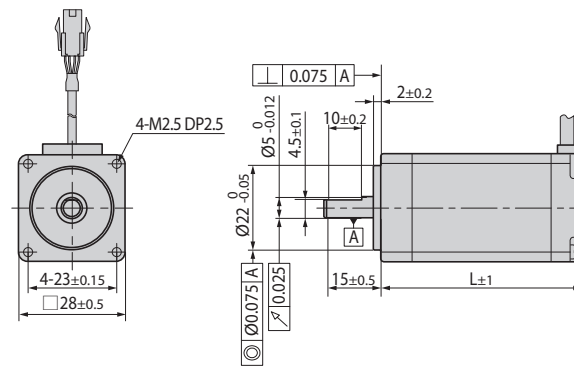


● Dimensions of Motor [mm]



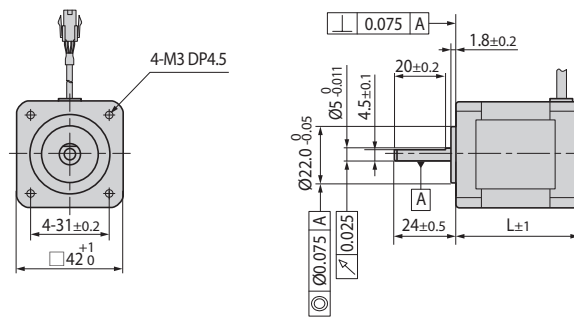
20mm

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



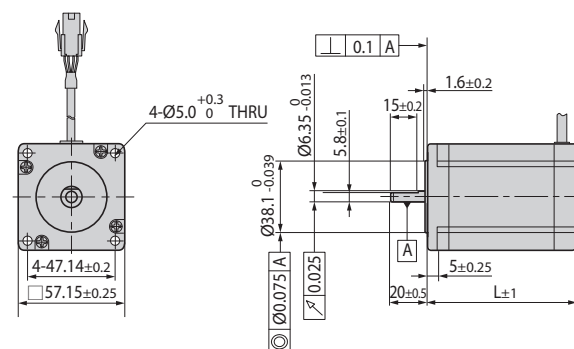
28mm

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



42mm

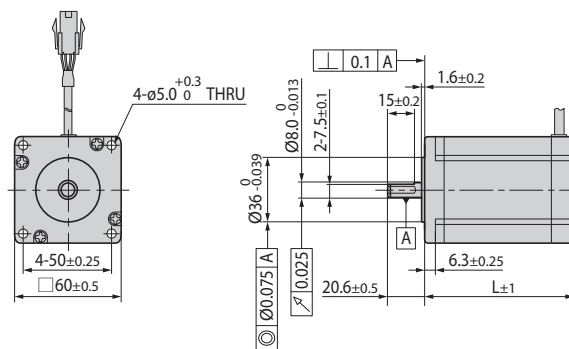
Model name	Length(L)
BM-42S	34
BM-42M	40
BM-42L	48
BM-42XL	60



56mm

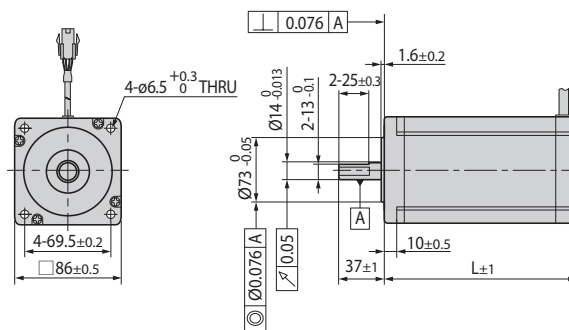
Model name	Length(L)
BM-56S	46
BM-56M	55
BM-56L	80

● Dimensions of Motor [mm]



60mm

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



86mm

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

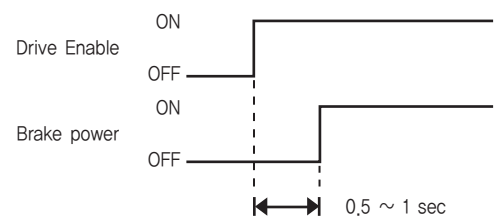
● Specifications of Motor with Brake

Unit Part Number	Motor Model Number	Electromagnetic Brake					Motor Unit Weight [kg]	Permissible Radial Load [N]				Permissible Axial Load [N]
		Type	Voltage Input [V]	Rated Current [A]	Power Consumption [W]	Static Friction Torque [N·m]		Distance from End of Shaft [mm]				
								3	8	13	18	
Ezi-STEP II -PE-42S-BK	BM-42S-BK	Non-excitation run Type	DC24V ±10%	0,2	5	0,2	0,500	22	26	33	46	Must be Lower than Motor Unit Weight
Ezi-STEP II -PE-42M-BK	BM-42M-BK						0,560					
Ezi-STEP II -PE-42L-BK	BM-42L-BK						0,630					
Ezi-STEP II -PE-42XL-BK	BM-42XL-BK						0,770					
Ezi-STEP II -PE-56S-BK	BM-56S-BK			0,27	6,6	0,7	0,970	52	65	85	123	
Ezi-STEP II -PE-56M-BK	BM-56M-BK						1,150					
Ezi-STEP II -PE-56L-BK	BM-56L-BK						1,580					
Ezi-STEP II -PE-60S-BK	BM-60S-BK						1,060	70	87	114	165	
Ezi-STEP II -PE-60M-BK	BM-60M-BK						1,230					
Ezi-STEP II -PE-60L-BK	BM-60L-BK						1,790					
Ezi-STEP II -PE-86M-BK	BM-86M-BK			0,54	13	4	3,580	270	300	350	400	
Ezi-STEP II -PE-86L-BK	BM-86L-BK						5,110					
Ezi-STEP II -PE-86XL-BK	BM-86XL-BK						6,630					

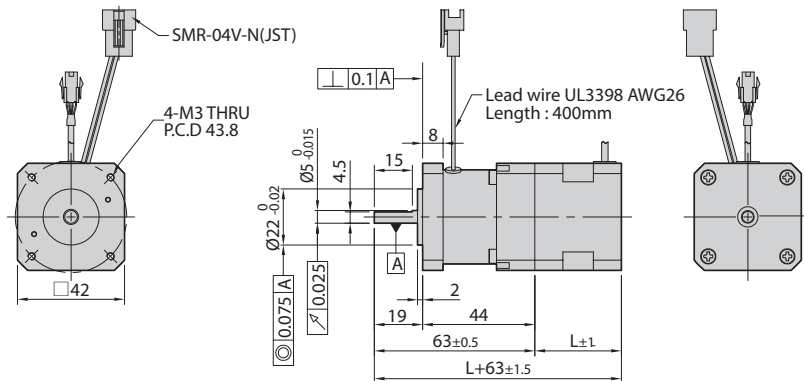
- * Electronic Brake cannot be used for braking. Position hold purpose only when power OFF.
- * The weight means Motor Unit Weight including Motor and Electronic Brake.
- * Motor Model Number is combined model name of Motor and Brake.
- * Motor specification and torque characteristic are same as Standard Motor.
- * An external power supply (DC24V) is not required when installing the Electric Brake on the 86mm motor drive.

* Brake Operation Timing Chart

Ezi-STEP II Plus-E controls Brake by Drive automatically.
Please refer to below Timing Chart when Brake is controlled by the upper controller other than using Ezi-STEP II Plus-E Brake control.
Otherwise, Drive might malfunction and loads might fall down.
Also, please do not operate Brake during motor operation to prevent damage.

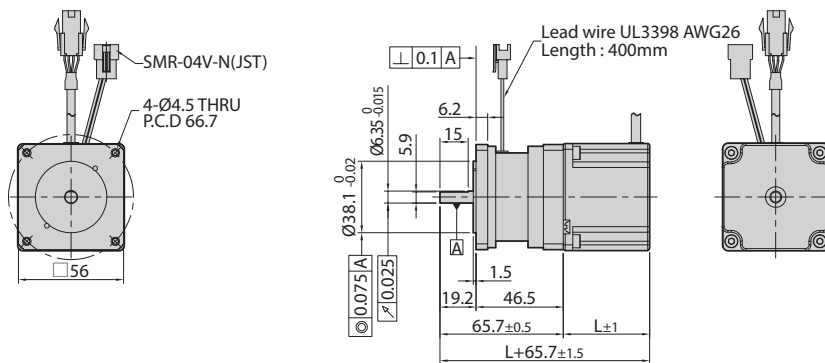


● Dimensions of Motor with Brake [mm]



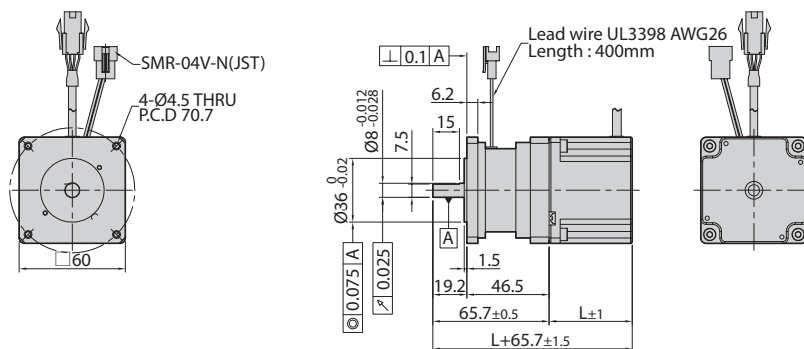
42mm

Model Name	Length(L)
BM-42S	34
BM-42M	40
BM-42L	48
BM-42XL	60



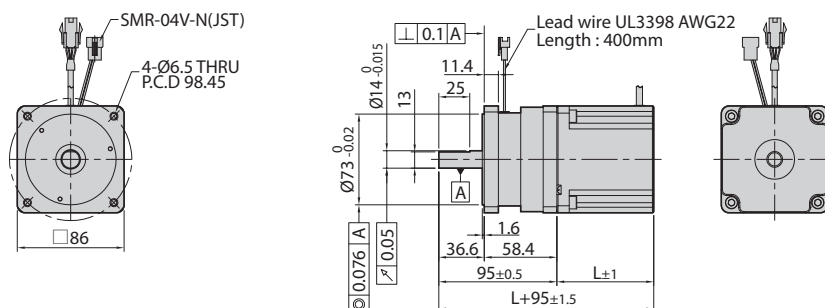
56mm

Model Name	Length(L)
BM-56S	46
BM-56M	55
BM-56L	80



60mm

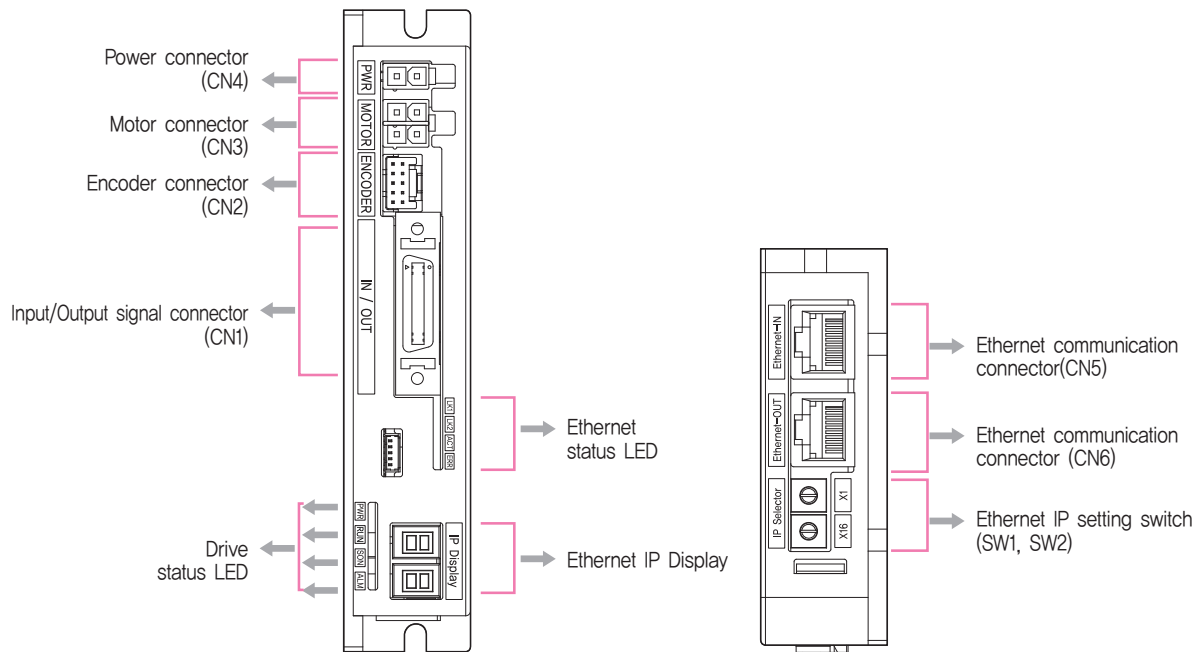
Model Name	Length(L)
BM-60S	47
BM-60M	56
BM-60L	85



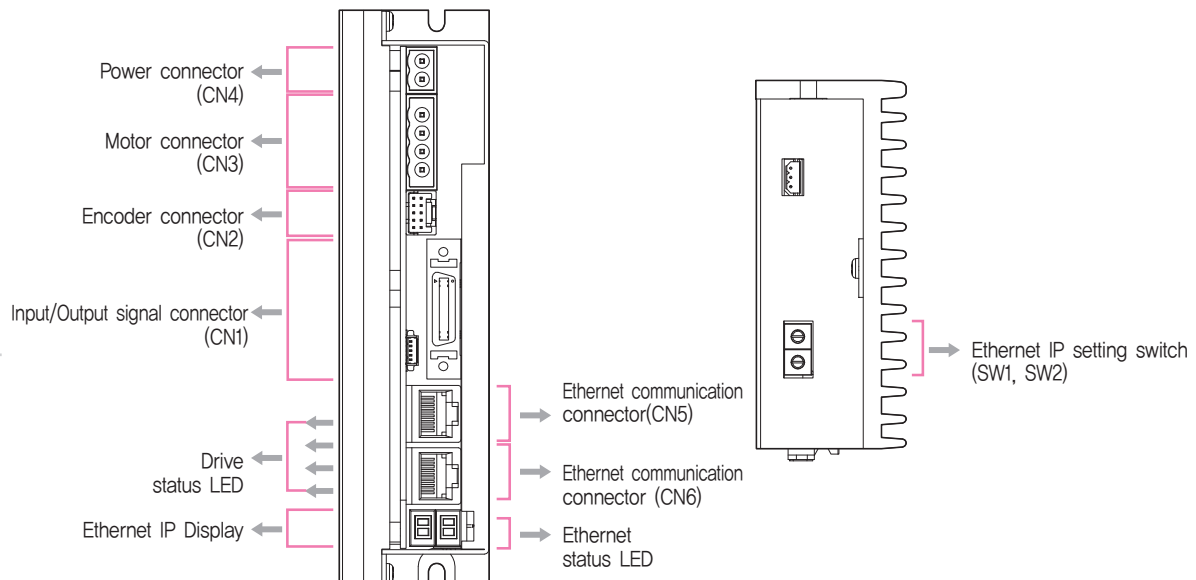
86mm

Model Name	Length(L)
BM-86M	78
BM-86L	117
BM-86XL	155

● Settings and Operation

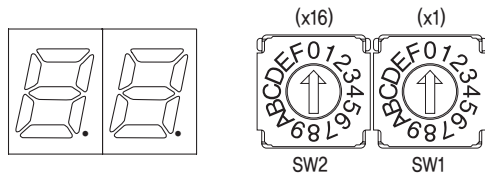


◆ 86mm motor drive (EzT2-PE-86 series)



1. Ethernet IP Display and Setting Switch(SW1, SW2)

These switches set the 4th octet of Ethernet IP, and the value is shown in 7-segment LED display. The 1st octet, the 2nd octet, and the 3rd octet are set by GUI. If the switches are set to 255(FF), DHCP function is activated, and IP is automatically set, ignoring the set value. (Please refer to the manual for details.)

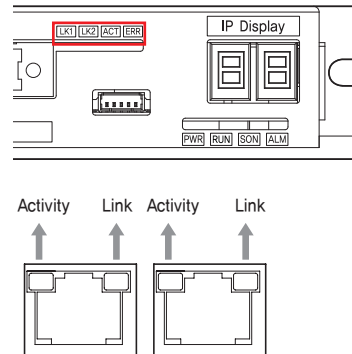


e.g.,) In case of SW2 : 5 and SW1 : 7
 $(5 \times 16) + (7 \times 1) = 87$
 IP is to be set as 192.168.0.87

2. Ethernet Status LED

LED indicates communication status of Ethernet. Link/Activity LED exists on each port of Ethernet.

Name	Color	Status	Description
Error	Red	OFF	No Error
		ON	Local Error
Name	Color	Status	Description
LK1/ LK2	Green	OFF	Link not Established
		ON	Link Established
Name	Color	Status	Description
Activity	Yellow	OFF	Stand-by
		Flickering	In operation



3. Drive Status LED

Name	Color	Function	Description
PWR	Green	Power Input Indication	LED is turned ON when power is applied
RUN	Yellow	Motor Running Indication	LED is turned ON while motor is rotating
SON	Orange	STEP ON / OFF Indication	STEP ON: Lights ON, STEP OFF: Lights OFF
ALM	Red	Alarm Indication	LED blinks when an error occurs.

◆ List of error types by the number of LED blinking

No.	Error Code ^{*3}	Error Type	Causes
1	E-001	Over Current Error	The current through power devices in drive exceeds the limit. ^{*1}
2	E-002	Over Speed Error	The motor speed exceeds 3,000r/min
5	E-005	Over Temperature Error	Internal temperature of the drive exceeds 85°C
6	E-006	Over Regenerative Voltage Error	Back-EMF is higher than limit value ^{*2}
7	E-007	Motor Power Error	There is a problem with the connection between the drive and the motor
12	E-012	ROM Error	Error occurs in parameter storage device(ROM)

^{*1} : Limit value depends on motor model. (Refer to the Manual)

^{*2} : Voltage limit of Back-EMF depends on motor model. (Refer to the Manual)

^{*3} : When an alarm occurs, error code is displayed on the 7-segment LED display instead of Ethernet IP.

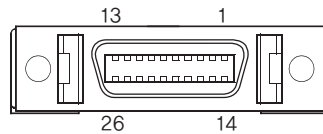
※ Please refer to user Manual for the details of protection functions.



Alarm LED flash
 (e.g., Over Speed Error)

4. Input/Output Signal Connector(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	EXT_GND	Input
26	EXT_DC24V	Input

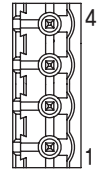


6. Motor Connector(CN3)

No.	Function	I/O
1	A Phase	Output
2	B Phase	Output
3	$\bar{A}$ Phase	Output
4	$\bar{B}$ Phase	Output

No.	Function	I/O
1	$\bar{B}$ Phase	Output
2	B Phase	Output
3	$\bar{A}$ Phase	Output
4	A Phase	Output

※ 86mm motor drive



7. Power Connector(CN4)

No.	Function	I/O
1	DC24V	Input
2	GND	Input

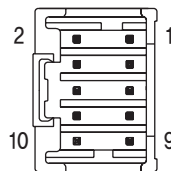
No.	Function	I/O
1	GND	Input
2	DC40~70V	Input

※ 86mm motor drive



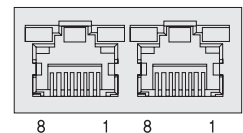
5. Encoder Connector(CN2)

No.	Function	I/O
1	A+	Input
2	A-	Input
3	B+	Input
4	B-	Input
5	Z+	Input
6	Z-	Input
7	DC5V	Output
8	GND	Output
9	F_GND	----
10	F_GND	----

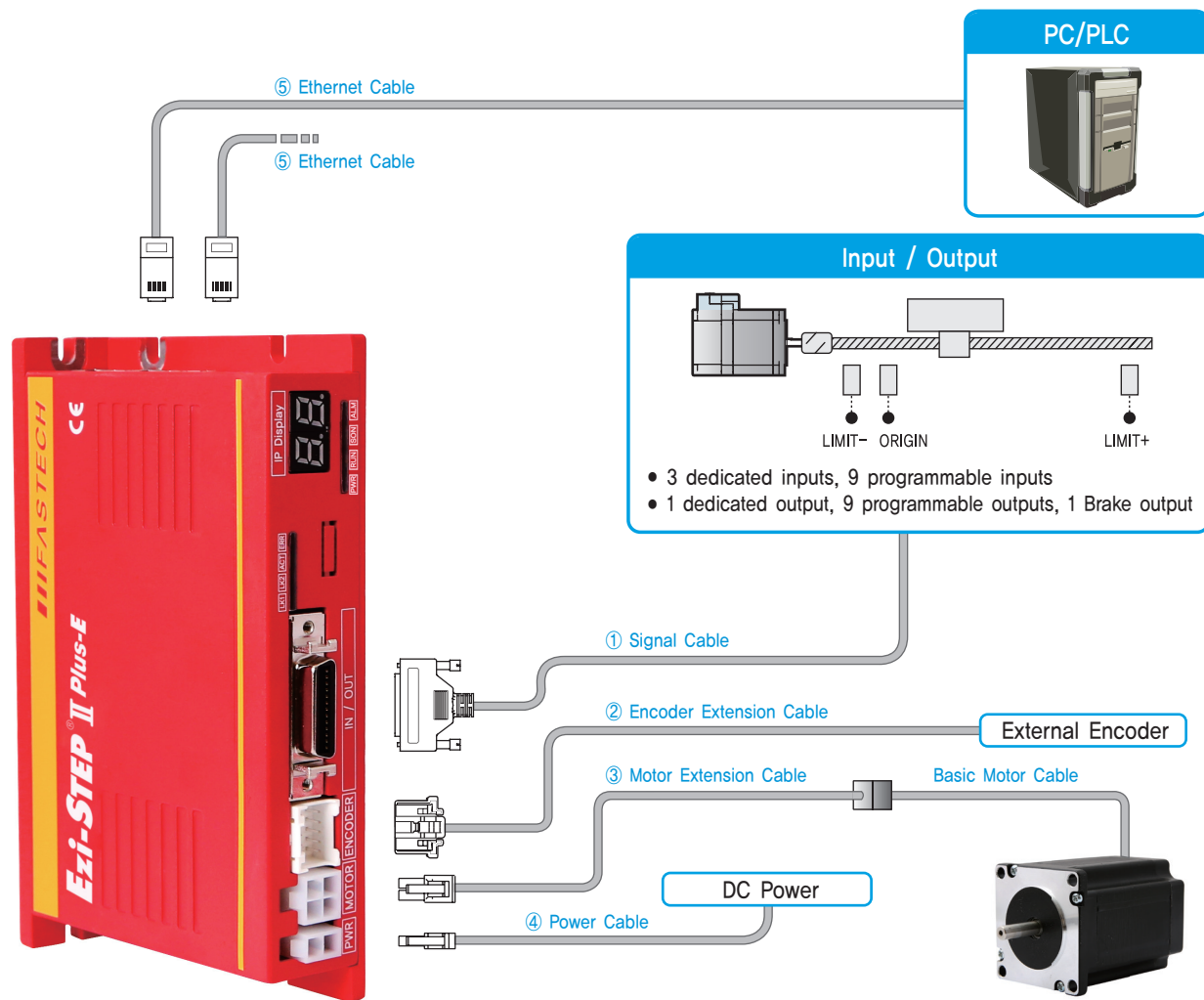


8. Ethernet Communication Connector(CN5, CN6)

No.	Function	No.	Function
1	TD+	6	RD-
2	TD-	7	-----
3	RD+	8	-----
4	-----	Connector hood	F_GND
5	-----		



● System Configuration



Cable Type	Max. Length	Remarks
① Signal Cable	20m	Options (Sold separately)
② Encoder Extension Cable	20m	
③ Motor Extension Cable	20m	
④ Power Cable	2m	
⑤ Ethernet Cable	100m	Basic cables are attached to motors.
Basic Motor Cable	0.3m (Basic length)	

1. Accessories

Connectors

These are connector specifications for drive cabling.

Purpose		Item	Part Number	Manufacturer
Power (CN4)		Housing	5557-02R	MOLEX
		Terminal	5556T	
Motor	Drive Side (CN3)	Housing	5557-04R	MOLEX
		Terminal	5556T	
	Motor Side	Housing	5557-04R	MOLEX
		Terminal	5556T	
Encoder	Drive Side (CN2)	Housing	51353-1000	MOLEX
		Terminal	56134-9000	
Signal (CN1)		Connector	10126-3000PE	3M
		Connector Cover	10326-52F0-008	

※ The connectors above are supplied with the product. If you are using other parts, please make sure they meet the specifications.

2. Options

① Signal Cable

These are the cables to connect Ezi-STEP II Plus-E drive and other input/output devices.

Purpose	Part Number	Length [m]	Cable Type	Remarks
Drive – I/O Device Connection	CSV-R-S-001F	1	Normal Cable	Maximum Length: 20m
	CSV-R-S-002F	2		
	CSV-R-S-003F	3		
	CSV-R-S-005F	5		
	CSV-R-S-001M	1	Robot Cable	
	CSV-R-S-002M	2		
	CSV-R-S-003M	3		
	CSV-R-S-005M	5		

* If you need cables with length(in units of 1m) not listed on the table or robot cables, please contact FASTECH for more information.

② Encoder Extension Cable

These are the cables to connect Ezi-STEP II Plus-E drive and the encoder.

Purpose	Part Number	Length [m]	Cable Type	Remarks
Drive – External Encoder Connection	CTPR-E-001F	1	Normal Cable	Maximum Length: 20m
	CTPR-E-002F	2		
	CTPR-E-003F	3		
	CTPR-E-005F	5		
	CTPR-E-001M	1	Robot Cable	
	CTPR-E-002M	2		
	CTPR-E-003M	3		
	CTPR-E-005M	5		

* If you need cables with length(in units of 1m) not listed on the table or robot cables, please contact FASTECH for more information.

③ Motor Extension Cable

These are the cables to connect Ezi-STEP II Plus-E drive and the motor.

Purpose	Part Number	Length [m]	Cable Type	Remarks
Drive – Basic Motor Cable Connection	CSVO-M-001F	1	Normal Cable	Maximum Length: 20m
	CSVO-M-002F	2		
	CSVO-M-003F	3		
	CSVO-M-005F	5		
	CSVO-M-001M	1	Robot Cable	
	CSVO-M-002M	2		
	CSVO-M-003M	3		
	CSVO-M-005M	5		

* If you need cables with length(in units of 1m) not listed on the table or robot cables, please contact FASTECH for more information.

④ Drive Power Cable

These are the cables to connect Ezi-STEP II Plus-E drive and the power.

Purpose	Part Number	Length [m]	Cable Type	Remarks
Drive – Power Connection	CSVO-P-001F	1	Normal Cable	Maximum Length: 2m
	CSVO-P-002F	2		
	CSVO-P-001M	1	Robot Cable	
	CSVO-P-002M	2		

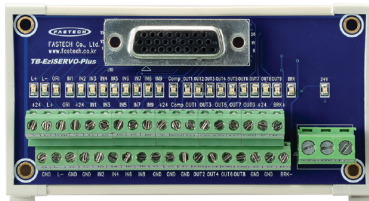
⑤ Ethernet Cable

Purpose	Part Number	Length [m]	Remarks
Ethernet Connection	CGNR-EC-001F	1	- STP(Shielded Twisted Pair) Cable - Category 5e or higher - Maximum Length: 100m - Normal Cable
	CGNR-EC-002F	2	
	CGNR-EC-003F	3	
	CGNR-EC-005F	5	

* If you need cables with length(in units of 1m) not listed on the table or robot cables, please contact FASTECH for more information.

[Option] TB-Plus Interface Board

This is an interface board to connect Ezi-STEP II Plus-E drive and I/O signals more conveniently.

Purpose	Part Number	Product Image
Drive – I/O signal Connection Board	TB-Plus	

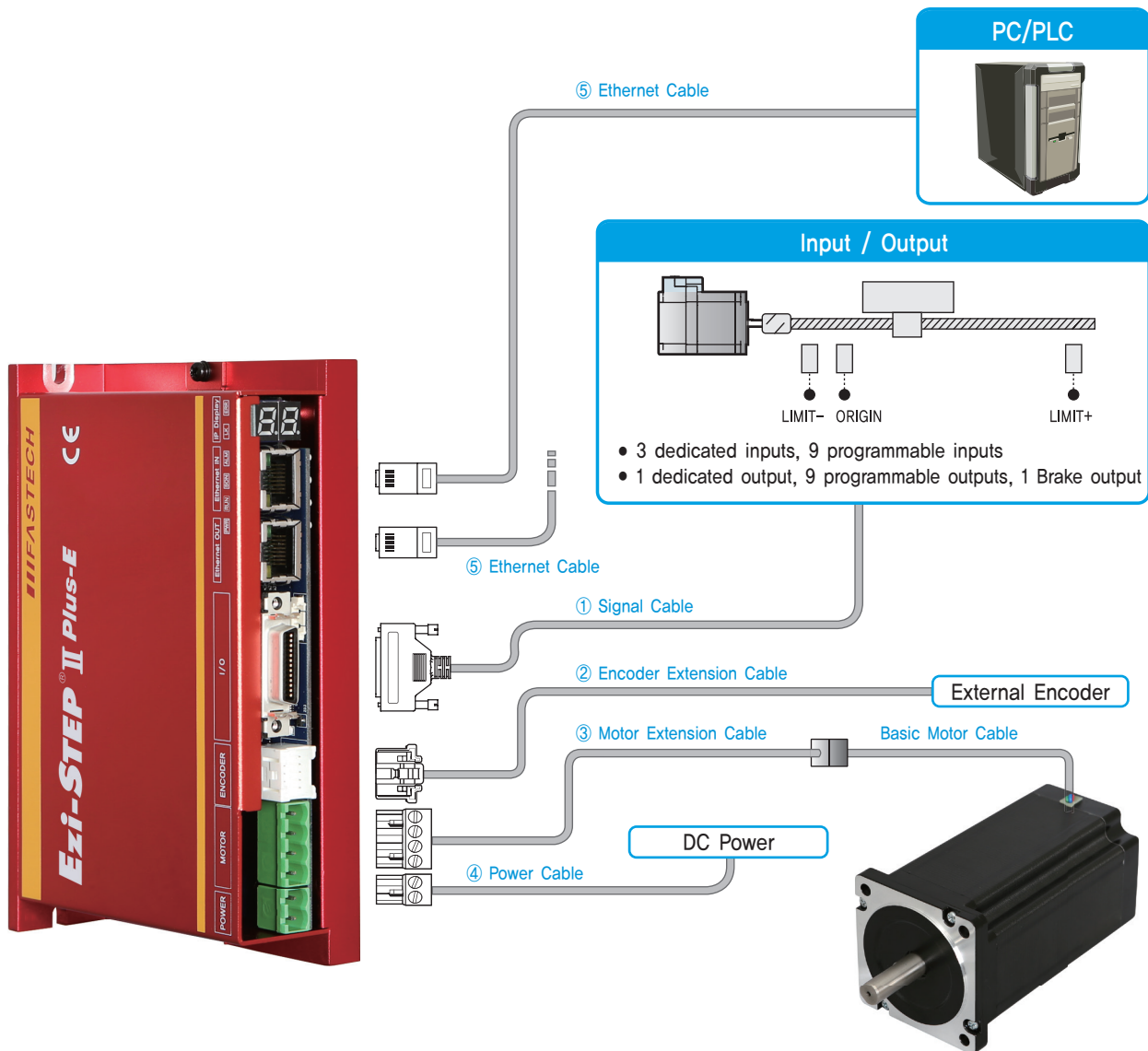
[Option] TB-Plus Interface Cable

These are the cables to connect Ezi-STEP|| Plus-E and TB-Plus interface board.

Purpose	Part Number	Part Number	Part Number	Remarks
Drive – Interface(TB-Plus) Connection	CIFD-S-001F	1	Normal Cable	Maximum Length: 20m
	CIFD-S-002F	2		
	CIFD-S-003F	3		
	CIFD-S-005F	5		
	CIFD-S-001M	1	Robot Cable	
	CIFD-S-002M	2		
	CIFD-S-003M	3		
	CIFD-S-005M	5		

* If you need cables with length(in units of 1m) not listed on the table, please contact FASTECH for more information.

● System Configuration [86mm Motor Drive]



Cable Type	Max. Length	Remarks
① Signal Cable	20m	Options (Sold separately)
② Encoder Extension Cable	20m	
③ Motor Extension Cable	20m	
④ Power Cable	2m	
⑤ Ethernet Cable	100m	Basic cables are attached to motors.
Ethernet Cable	0,3m (Basic length)	

1. Accessories

Connectors

These are connector specifications for drive cabling.

Purpose		Item	Part Number	Manufacturer
Power (CN4)		Terminal Block	AK950-2	PTR
Motor	Drive Side (CN3)	Terminal Block	AK950-4	PTR
	Motor Side	Housing	3191-4R1	MOLEX
		Terminal	1381T	
Encoder	Drive Side (CN2)	Housing	51353-1000	MOLEX
		Terminal	56134-9000	
Signal (CN1)		Connector	10126-3000PE	3M
		Connector Cover	10326-52F0-008	

※ The connectors above are supplied with the product. If you are using other parts, please make sure they meet the specifications.

2. Options

① Signal Cable

These are the cables to connect Ezi-STEP|| Plus-E drive and other input/output devices.

Purpose	Part Number	Length [m]	Cable Type	Remarks
Drive – I/O Device Connection	CSV-R-S-001F	1	Normal Cable	Maximum Length: 20m
	CSV-R-S-002F	2		
	CSV-R-S-003F	3		
	CSV-R-S-005F	5		
	CSV-R-S-001M	1	Robot Cable	
	CSV-R-S-002M	2		
	CSV-R-S-003M	3		
	CSV-R-S-005M	5		

* If you need cables with length(in units of 1m) not listed on the table, please contact FASTECH for more information.

② Encoder Extension Cable

These are the cables to connect Ezi-STEP|| Plus-E drive and the encoder

Purpose	Part Number	Length [m]	Cable Type	Remarks
Drive – External Encoder Connection	CTPR-E-001F	1	Normal Cable	Maximum Length: 20m
	CTPR-E-002F	2		
	CTPR-E-003F	3		
	CTPR-E-005F	5		
	CTPR-E-001M	1	Robot Cable	
	CTPR-E-002M	2		
	CTPR-E-003M	3		
	CTPR-E-005M	5		

* If you need cables with length(in units of 1m) not listed on the table, please contact FASTECH for more information.

③ Motor Extension Cable

These are the cables to connect Ezi-STEP II Plus-E drive and the motor.

Purpose	Part Number	Length [m]	Cable Type	Remarks
Drive – Basic Motor Cable Connection	CSVP-M-001F	1	Normal Cable	Maximum Length: 20m
	CSVP-M-002F	2		
	CSVP-M-003F	3		
	CSVP-M-005F	5		
	CSVP-M-001M	1	Robot Cable	
	CSVP-M-002M	2		
	CSVP-M-003M	3		
	CSVP-M-005M	5		

* If you need cables with length(in units of 1m) not listed on the table, please contact FASTECH for more information.

④ Drive Power Cable

These are the cables to connect Ezi-STEP II Plus-E drive and the control power.

Purpose	Part Number	Length [m]	Cable Type	Remarks
Drive – Control Power Connection	CSVP-P-001F	1	Normal Cable	Maximum Length: 2m
	CSVP-P-002F	2		
	CSVP-P-001M	1	Robot Cable	
	CSVP-P-002M	2		

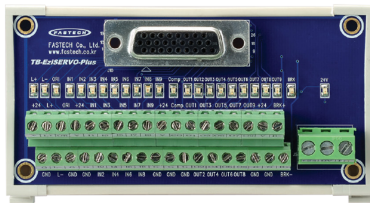
⑤ Ethernet Cable

Purpose	Part Number	Length [m]	Remarks
Ethernet Connection	CGNR-EC-001F	1	- STP(Shielded Twisted Pair) Cable - Category 5e or higher - Maximum Length: 100m - Normal Cable
	CGNR-EC-002F	2	
	CGNR-EC-003F	3	
	CGNR-EC-005F	5	

* If you need cables with length(in units of 1m) not listed on the table or robot cables, please contact FASTECH for more information.

[Option] TB-Plus Interface Board

This is an interface board to connect Ezi-STEP II Plus-E drive and I/O signals more conveniently.

Purpose	Part Number	Product Image
Drive – I/O signal Connection Board	TB-Plus	

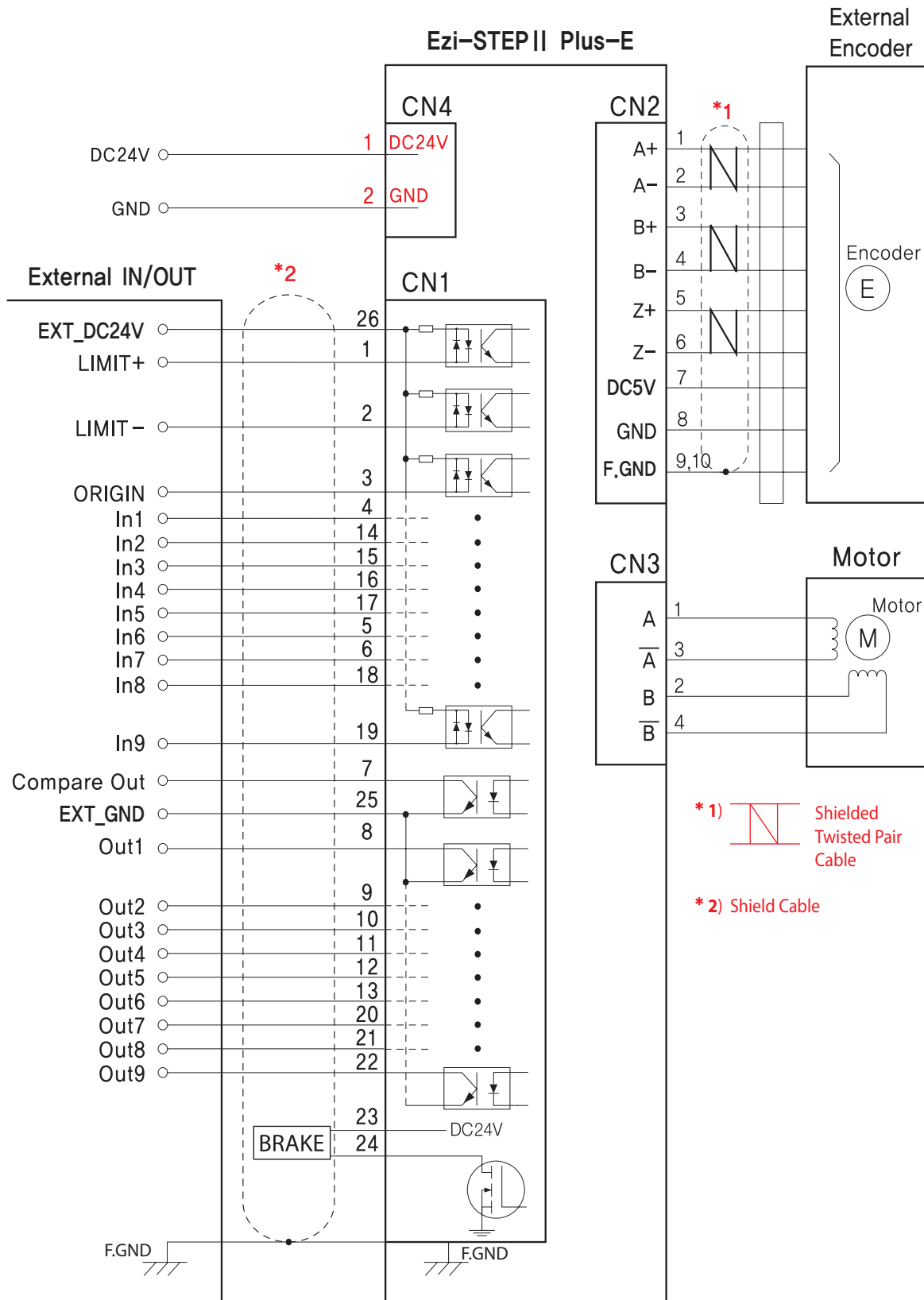
[Option] TB-Plus Interface Board

This is an interface board to connect Ezi-STEP II Plus-E drive and I/O signals more conveniently.

Part Number	Part Number	Length [m]	Cable Type	Remarks
Drive – Interface(TB-Plus) Connection	CIFD-S-001F	1	Normal Cable	Maximum Length: 20m
	CIFD-S-002F	2		
	CIFD-S-003F	3		
	CIFD-S-005F	5		
	CIFD-S-001M	1	Robot Cable	
	CIFD-S-002M	2		
	CIFD-S-003M	3		
	CIFD-S-005M	5		

* If you need cables with length(in units of 1m) not listed on the table, please contact FASTECH for more information.

● External Wiring Diagram

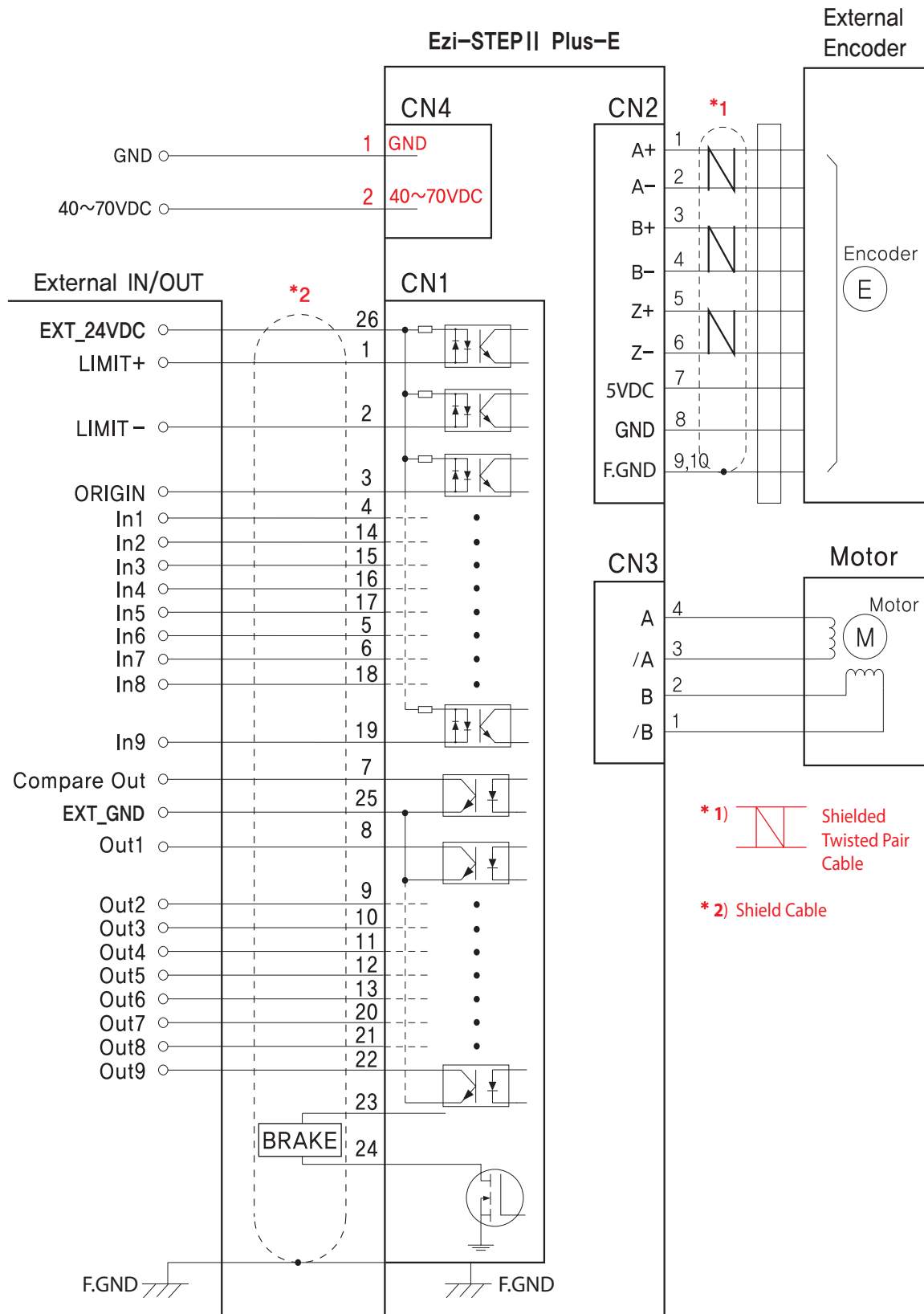


※ When connects I/O cable between controller and drive, please turn of the power of both controller and drive to prevent electric shock or to protect the drive from any damage.

CAUTION

In order to use the products listed in this catalog safely and correctly, be sure to read the instruction manual before using the product.

● External Wiring Diagram [86mm motor drive]



※ When connects I/O cable between controller and drive, please turn of the power of both controller and drive to prevent electric shock or to protect the drive from any damage.

CAUTION

In order to use the products listed in this catalog safely and correctly, be sure to read the instruction manual before using the product.

MEMO



Fast, Accurate, Smooth Motion

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