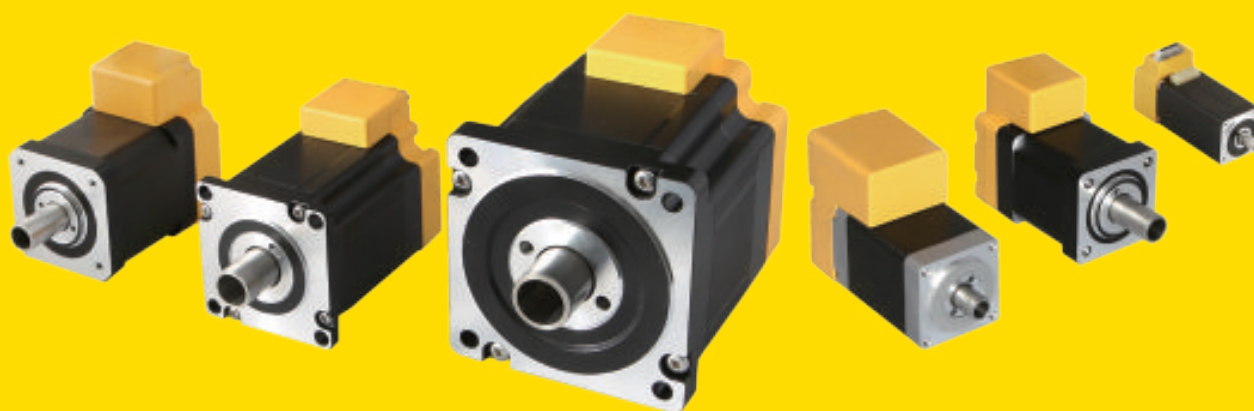


Ezi-SERVO[®]

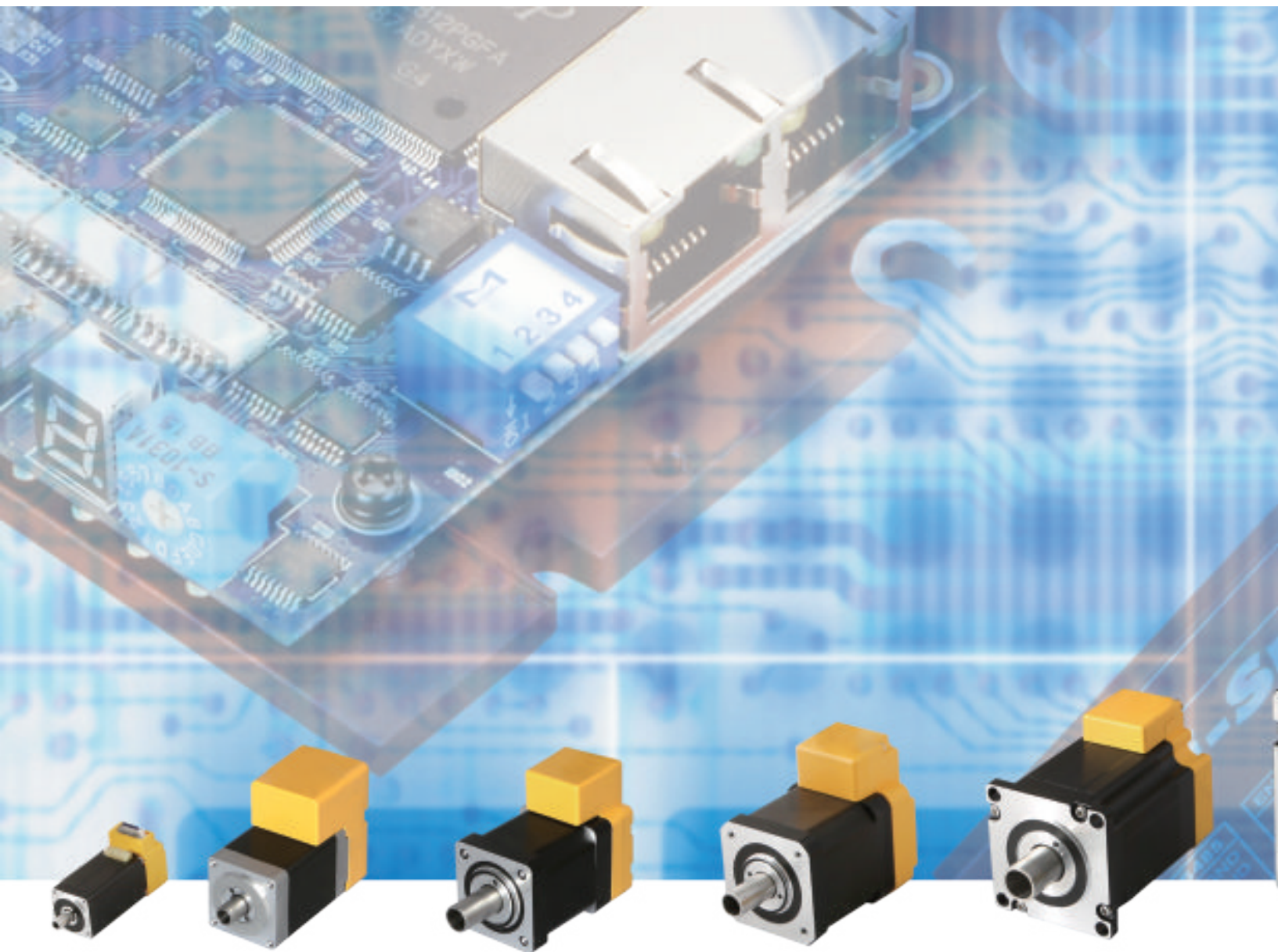
Closed Loop Stepping System

- Hollow Shaft Motor with High Resolution Encoder
- Closed Loop System
- High Precision Position Control
- High Torque, Low Temperature
- EtherCAT, Ethernet, CC-Link Support

HS



Fast, Accurate, Smooth Motion



- Ezi-SERVO HS(Hollow Shaft) is a unit product that combines a Hollow Shaft Motor and Ezi-SERVO, which is a Closed Loop System.



Fast, Accurate, Smooth Motion

Ezi-SERVO[®] HS

Closed Loop Stepping System



1 Hollow Shaft

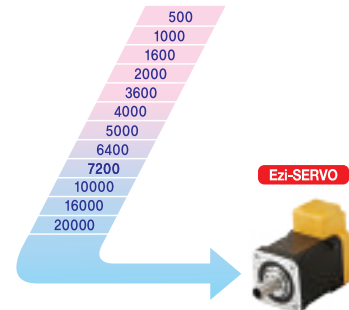
There is a hole in the motor shaft, so it can be used for inserting cable or pipe, which provides design flexibility and convenience.

Motor size	Hollow shaft inner diameter [mm]	Hollow shaft outer diameter [mm]
20mm	Ø3	Ø5
28mm	Ø5	Ø7
35mm	Ø8	Ø10
42mm	Ø8	Ø10
56mm	Ø12	Ø15
86mm	Ø16	Ø20



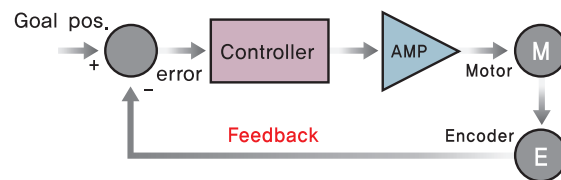
2 High Resolution

The unit of the position command can be divided precisely. (Max. 20,000 pulses/revolution)



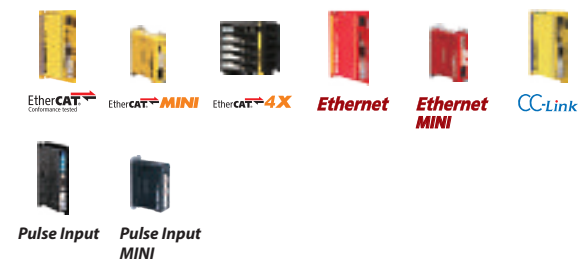
3 Closed Loop System

Ezi-SERVO is an innovative Closed Loop System that utilizes a high-resolution motor mounted encoder to monitor current position constantly. It allows the Ezi-SERVO 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 but Ezi-SERVO automatically correct the position by encoder feedback.



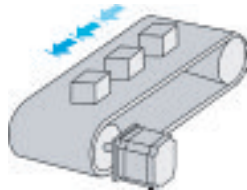
4 Supporting Various Field Network

Ezi-SERVO is a unit product that combines Ezi-SERVO, a high performance closed loop step drive. Ezi-SERVO that support field networks such as EtherCAT, Ethernet and CC-Link can be connected to master controllers such as PC/PLC through corresponding field networks. In case of Ezi-SERVO II Plus-E products, motion library (DLL) for Windows 7/8/10 can be provided.



5 No Gain Tuning

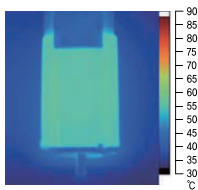
To ensure machine performance, smoothness, positional error and low servo noise, conventional servo systems require the adjustment of its servo's gains as an initial crucial step. Even systems that employ auto-tuning require manual tuning after the system is installed, especially if more than one axis are interdependent. Ezi-SERVO employs the best characteristics of stepper, 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 is optimized for the application and ready to work right out of the box. The Ezi-SERVO 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 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 additional expensive and bulky gearbox. Ezi-SERVO also performs exceptionally, even under heavy loads and high speeds.



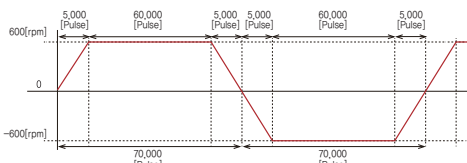
6 Heat Reduction / Energy Saving

(Motor Current Control according to load)

Ezi-SERVO automatically controls motor current according to load. Ezi-SERVO reduces motor current when motor load is low and increases motor current when load is high. By optimizing the motor current, motor heat can be minimized and energy can be saved.



Motor temperature [Measured by Thermal Imaging Camera]



Condition to measure the motor temperature
[4hours operation, Motor surface temperature saturation]



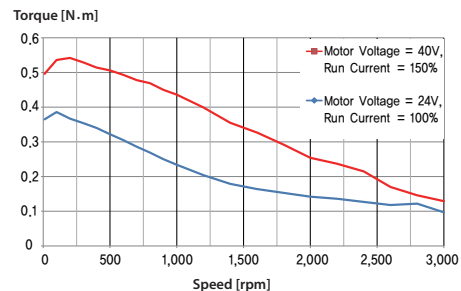
Example of the Motor Current Control according to load

7 Torque Improvement

(Motor Voltage Increasing and Motor Current Setting)

Ezi-SERVO boosts the voltage supplied to the motor by internal DC-DC Converter. The torque at the high speed is increased. In addition, it is possible to set the Run Current up to 150%, whereby the torque at low speed is increased.

Torque can be improved by about 30% over the entire speed range.



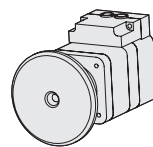
※ The torque at high speed is improved about 30%

Measured Condition : Drive = Ezi-SERVO II-PE-42L
Motor Voltage = 40VDC
Input Voltage = 24VDC

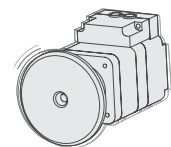
8 No Hunting

Traditional servo motor drives overshoot their position and try to correct overshooting by moving 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 Motion Control System. Ezi-SERVO 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.

Complete stop

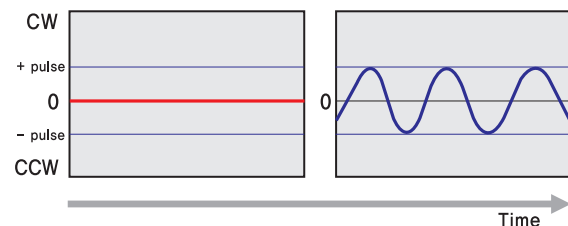


Hunting



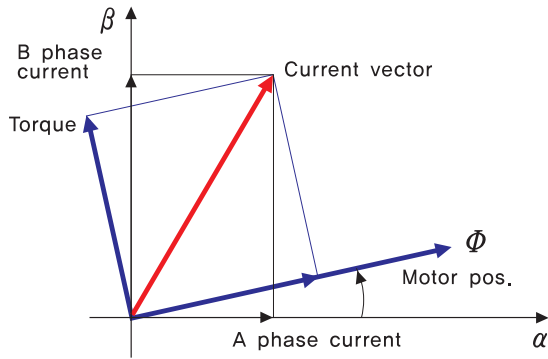
Ezi-SERVO

Servo motor



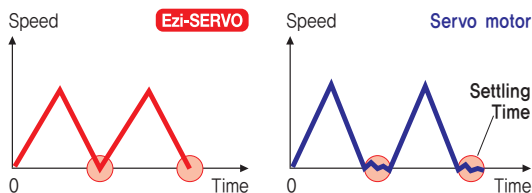
9 Smooth and Accurate

Ezi-SERVO is a high-precision servo drive, using a high-resolution encoder with 20,000 pulses/revolution. Unlike a conventional Microstep drive, the on-board high performance MCU (Micro Controller Unit) performs vector control and filtering, producing a smooth rotational control with minimum ripples.



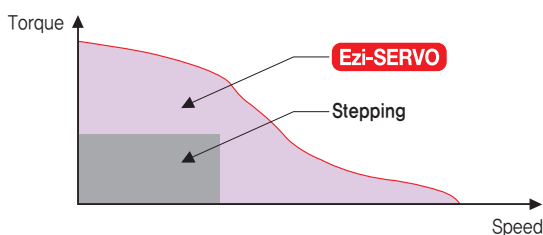
10 Fast Response

Similar to conventional stepping motors, Ezi-SERVO instantly synchronizes with command pulses providing fast positional response. Ezi-SERVO 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 called settling time between the command input signals and the resultant motion because of the constant monitoring of the current position.



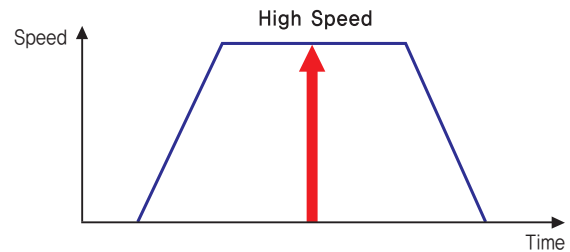
11 High Torque

Compared with common step motors and drives, Ezi-SERVO 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 exploits continuous high torque operation during high speed motion due to its innovative optimum current phase control.



12 High Speed

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

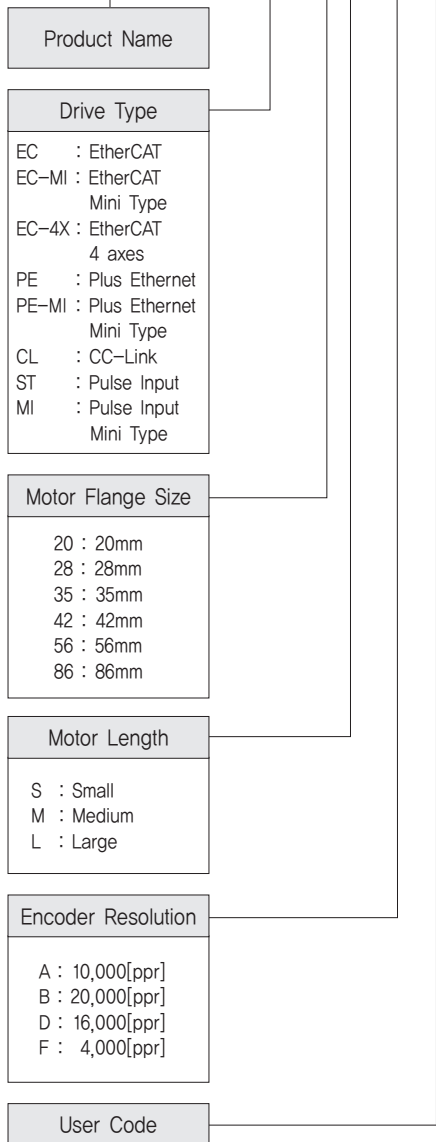


13 Examples of Ezi-SERVO HS Applications



● Ezi-SERVO HS Part Numbering

Ezi-SERVO-HS-ST-56L-A-□



● Applicable Product Line-up

Product	Specification
Ezi-SERVO II EtherCAT	Embedded EtherCAT
Ezi-SERVO II EtherCAT MINI	Embedded EtherCAT Mini Type
Ezi-SERVO II EtherCAT 4X	Embedded EtherCAT 4 axes
Ezi-SERVO II Plus-E	Ethernet based controller integrated product
Ezi-SERVO II Plus-E MINI	Ethernet based controller integrated product Mini Type
Ezi-SERVO II CC-Link	Embedded CC-Link
Ezi-SERVO ST	Pulse Input Type
Ezi-SERVO MINI	Pulse Input Mini Type



Ezi-SERVO II EtherCAT
(EtherCAT)



Ezi-SERVO II EtherCAT MINI
(EtherCAT / Mini Type)



Ezi-SERVO II EtherCAT 4X
(EtherCAT)



Ezi-SERVO II Plus-E
(Ethernet)



Ezi-SERVO II Plus-E MINI
(Ethernet / Mini Type)



Ezi-SERVO II CC-Link
(CC-Link)



Ezi-SERVO ST
(Pulse Input)



Ezi-SERVO MINI
(Pulse Input / Mini Type)

● Motor, Drive Combination

· Ezi-SERVOII EtherCAT

Unit Part Number	Motor Model Number	Drive Model Number
Ezi-SERVO-HS-EC-20M-F	HSE-20M-F	EzS2-EC-HS20M-F
Ezi-SERVO-HS-EC-20L-F	HSE-20L-F	EzS2-EC-HS20L-F
Ezi-SERVO-HS-EC-28SM-D	HSE-28SM-D	EzS2-EC-HS28S-D
Ezi-SERVO-HS-EC-28MM-D	HSE-28MM-D	EzS2-EC-HS28M-D
Ezi-SERVO-HS-EC-35MM-D	HSE-35MM-D	EzS2-EC-HS35M-D
Ezi-SERVO-HS-EC-35LM-D	HSE-35LM-D	EzS2-EC-HS35L-D
Ezi-SERVO-HS-EC-42S-A	HSE-42S-A	EzS2-EC-HS42S-A
Ezi-SERVO-HS-EC-42S-B	HSE-42S-B	EzS2-EC-HS42S-B
Ezi-SERVO-HS-EC-42L-A	HSE-42L-A	EzS2-EC-HS42L-A
Ezi-SERVO-HS-EC-42L-B	HSE-42L-B	EzS2-EC-HS42L-B
Ezi-SERVO-HS-EC-56S-A	HSE-56S-A	EzS2-EC-HS56S-A
Ezi-SERVO-HS-EC-56S-B	HSE-56S-B	EzS2-EC-HS56S-B
Ezi-SERVO-HS-EC-56M-A	HSE-56M-A	EzS2-EC-HS56M-A
Ezi-SERVO-HS-EC-56M-B	HSE-56M-B	EzS2-EC-HS56M-B
Ezi-SERVO-HS-EC-86M-A	HSE-86M-A	EzS2-EC-HS86M-A
Ezi-SERVO-HS-EC-86M-B	HSE-86M-B	EzS2-EC-HS86M-B

· Ezi-SERVOII EtherCAT MINI

Unit Part Number	Motor Model Number	Drive Model Number
Ezi-SERVO-HS-EC-MI-20M-F	HSE-20M-F	EzS2-EC-MI-HS20M-F
Ezi-SERVO-HS-EC-MI-20L-F	HSE-20L-F	EzS2-EC-MI-HS20L-F
Ezi-SERVO-HS-EC-MI-28SM-D	HSE-28SM-D	EzS2-EC-MI-HS28S-D
Ezi-SERVO-HS-EC-MI-28MM-D	HSE-28MM-D	EzS2-EC-MI-HS28M-D
Ezi-SERVO-HS-EC-MI-35MM-D	HSE-35MM-D	EzS2-EC-MI-HS35M-D
Ezi-SERVO-HS-EC-MI-35LM-D	HSE-35LM-D	EzS2-EC-MI-HS35L-D
Ezi-SERVO-HS-EC-MI-42S-A	HSE-42S-A	EzS2-EC-MI-HS42S-A
Ezi-SERVO-HS-EC-MI-42S-B	HSE-42S-B	EzS2-EC-MI-HS42S-B
Ezi-SERVO-HS-EC-MI-42L-A	HSE-42L-A	EzS2-EC-MI-HS42L-A
Ezi-SERVO-HS-EC-MI-42L-B	HSE-42L-B	EzS2-EC-MI-HS42L-B
Ezi-SERVO-HS-EC-MI-56S-A	HSE-56S-A	EzS2-EC-MI-HS56S-A
Ezi-SERVO-HS-EC-MI-56S-B	HSE-56S-B	EzS2-EC-MI-HS56S-B
Ezi-SERVO-HS-EC-MI-56M-A	HSE-56M-A	EzS2-EC-MI-HS56M-A
Ezi-SERVO-HS-EC-MI-56M-B	HSE-56M-B	EzS2-EC-MI-HS56M-B

· Ezi-SERVOII EtherCAT 4X

For motor and drive combinations, please contact local dealer or FASTECH sales department. In case of Ezi-SERVOII EtherCAT 4X products, the drives are basically provided in 4 axes, it can be purchased 2 or 3 axes for user's convenience.

· Ezi-SERVOII Plus-E

Unit Part Number	Motor Model Number	Drive Model Number
Ezi-SERVO-HS-PE-20M-F	HSE-20M-F	EzS2-PE-HS20M-F
Ezi-SERVO-HS-PE-20L-F	HSE-20L-F	EzS2-PE-HS20L-F
Ezi-SERVO-HS-PE-28SM-D	HSE-28SM-D	EzS2-PE-HS28S-D
Ezi-SERVO-HS-PE-28MM-D	HSE-28MM-D	EzS2-PE-HS28M-D
Ezi-SERVO-HS-PE-35MM-D	HSE-35MM-D	EzS2-PE-HS35M-D
Ezi-SERVO-HS-PE-35LM-D	HSE-35LM-D	EzS2-PE-HS35L-D
Ezi-SERVO-HS-PE-42S-A	HSE-42S-A	EzS2-PE-HS42S-A
Ezi-SERVO-HS-PE-42S-B	HSE-42S-B	EzS2-PE-HS42S-B
Ezi-SERVO-HS-PE-42L-A	HSE-42L-A	EzS2-PE-HS42L-A
Ezi-SERVO-HS-PE-42L-B	HSE-42L-B	EzS2-PE-HS42L-B
Ezi-SERVO-HS-PE-56S-A	HSE-56S-A	EzS2-PE-HS56S-A
Ezi-SERVO-HS-PE-56S-B	HSE-56S-B	EzS2-PE-HS56S-B
Ezi-SERVO-HS-PE-56M-A	HSE-56M-A	EzS2-PE-HS56M-A
Ezi-SERVO-HS-PE-56M-B	HSE-56M-B	EzS2-PE-HS56M-B
Ezi-SERVO-HS-PE-86M-A	HSE-86M-A	EzS2-PE-HS86M-A
Ezi-SERVO-HS-PE-86M-B	HSE-86M-B	EzS2-PE-HS86M-B

· Ezi-SERVOII Plus-E MINI

Unit Part Number	Motor Model Number	Drive Model Number
Ezi-SERVO-HS-PE-MI-20M-F	HSE-20M-F	EzS2-PE-MI-HS20M-F
Ezi-SERVO-HS-PE-MI-20L-F	HSE-20L-F	EzS2-PE-MI-HS20L-F
Ezi-SERVO-HS-PE-MI-28SM-D	HSE-28SM-D	EzS2-PE-MI-HS28S-D
Ezi-SERVO-HS-PE-MI-28MM-D	HSE-28MM-D	EzS2-PE-MI-HS28M-D
Ezi-SERVO-HS-PE-MI-35MM-D	HSE-35MM-D	EzS2-PE-MI-HS35M-D
Ezi-SERVO-HS-PE-MI-35LM-D	HSE-35LM-D	EzS2-PE-MI-HS35L-D
Ezi-SERVO-HS-PE-MI-42S-A	HSE-42S-A	EzS2-PE-MI-HS42S-A
Ezi-SERVO-HS-PE-MI-42S-B	HSE-42S-B	EzS2-PE-MI-HS42S-B
Ezi-SERVO-HS-PE-MI-42L-A	HSE-42L-A	EzS2-PE-MI-HS42L-A
Ezi-SERVO-HS-PE-MI-42L-B	HSE-42L-B	EzS2-PE-MI-HS42L-B
Ezi-SERVO-HS-PE-MI-56S-A	HSE-56S-A	EzS2-PE-MI-HS56S-A
Ezi-SERVO-HS-PE-MI-56S-B	HSE-56S-B	EzS2-PE-MI-HS56S-B
Ezi-SERVO-HS-PE-MI-56M-A	HSE-56M-A	EzS2-PE-MI-HS56M-A
Ezi-SERVO-HS-PE-MI-56M-B	HSE-56M-B	EzS2-PE-MI-HS56M-B

· Ezi-SERVOII CC-Link

Unit Part Number	Motor Model Number	Drive Model Number
Ezi-SERVO-HS-CL-20M-F	HSE-20M-F	EzS2-CL-HS20M-F
Ezi-SERVO-HS-CL-20L-F	HSE-20L-F	EzS2-CL-HS20L-F
Ezi-SERVO-HS-CL-28SM-D	HSE-28SM-D	EzS2-CL-HS28S-D
Ezi-SERVO-HS-CL-28MM-D	HSE-28MM-D	EzS2-CL-HS28M-D
Ezi-SERVO-HS-CL-35MM-D	HSE-35MM-D	EzS2-CL-HS35M-D
Ezi-SERVO-HS-CL-35LM-D	HSE-35LM-D	EzS2-CL-HS35L-D
Ezi-SERVO-HS-CL-42S-A	HSE-42S-A	EzS2-CL-HS42S-A
Ezi-SERVO-HS-CL-42S-B	HSE-42S-B	EzS2-CL-HS42S-B
Ezi-SERVO-HS-CL-42L-A	HSE-42L-A	EzS2-CL-HS42L-A
Ezi-SERVO-HS-CL-42L-B	HSE-42L-B	EzS2-CL-HS42L-B
Ezi-SERVO-HS-CL-56S-A	HSE-56S-A	EzS2-CL-HS56S-A
Ezi-SERVO-HS-CL-56S-B	HSE-56S-B	EzS2-CL-HS56S-B
Ezi-SERVO-HS-CL-56M-A	HSE-56M-A	EzS2-CL-HS56M-A
Ezi-SERVO-HS-CL-56M-B	HSE-56M-B	EzS2-CL-HS56M-B
Ezi-SERVO-HS-CL-86M-A	HSE-86M-A	EzS2-CL-HS86M-A
Ezi-SERVO-HS-CL-86M-B	HSE-86M-B	EzS2-CL-HS86M-B

● Motor, Drive Combination

· Ezi-SERVO ST

Unit Part Number	Motor Model Number	Drive Model Number
Ezi-SERVO-HS-ST-20M-F	HSE-20M-F	EzS-PD-HS20M-F
Ezi-SERVO-HS-ST-20L-F	HSE-20L-F	EzS-PD-HS20L-F
Ezi-SERVO-HS-ST-28SM-D	HSE-28SM-D	EzS-PD-HS28S-D
Ezi-SERVO-HS-ST-28MM-D	HSE-28MM-D	EzS-PD-HS28M-D
Ezi-SERVO-HS-ST-35MM-D	HSE-35MM-D	EzS-PD-HS35M-D
Ezi-SERVO-HS-ST-35LM-D	HSE-35LM-D	EzS-PD-HS35L-D
Ezi-SERVO-HS-ST-42S-A	HSE-42S-A	EzS-PD-HS42S-A
Ezi-SERVO-HS-ST-42S-B	HSE-42S-B	EzS-PD-HS42S-B
Ezi-SERVO-HS-ST-42L-A	HSE-42L-A	EzS-PD-HS42L-A
Ezi-SERVO-HS-ST-42L-B	HSE-42L-B	EzS-PD-HS42L-B
Ezi-SERVO-HS-ST-56S-A	HSE-56S-A	EzS-PD-HS56S-A
Ezi-SERVO-HS-ST-56S-B	HSE-56S-B	EzS-PD-HS56S-B
Ezi-SERVO-HS-ST-56M-A	HSE-56M-A	EzS-PD-HS56M-A
Ezi-SERVO-HS-ST-56M-B	HSE-56M-B	EzS-PD-HS56M-B
Ezi-SERVO-HS-ST-86M-A	HSE-86M-A	EzS-PD-HS86M-A
Ezi-SERVO-HS-ST-86M-B	HSE-86M-B	EzS-PD-HS86M-B

· Ezi-SERVO MINI

Unit Part Number	Motor Model Number	Drive Model Number
Ezi-SERVO-HS-MI-20M-F	HSE-20M-F	EzS-PD-MI-HS20M-F
Ezi-SERVO-HS-MI-20L-F	HSE-20L-F	EzS-PD-MI-HS20L-F
Ezi-SERVO-HS-MI-28SM-D	HSE-28SM-D	EzS-PD-MI-HS28S-D
Ezi-SERVO-HS-MI-28MM-D	HSE-28MM-D	EzS-PD-MI-HS28M-D
Ezi-SERVO-HS-MI-35MM-D	HSE-35MM-D	EzS-PD-MI-HS35M-D
Ezi-SERVO-HS-MI-35LM-D	HSE-35LM-D	EzS-PD-MI-HS35L-D
Ezi-SERVO-HS-MI-42S-A	HSE-42S-A	EzS-PD-MI-HS42S-A
Ezi-SERVO-HS-MI-42S-B	HSE-42S-B	EzS-PD-MI-HS42S-B
Ezi-SERVO-HS-MI-42L-A	HSE-42L-A	EzS-PD-MI-HS42L-A
Ezi-SERVO-HS-MI-42L-B	HSE-42L-B	EzS-PD-MI-HS42L-B

● Specifications of Motor

MODEL		HSE-20 series		HSE-28 series		HSE-35 series		
		UNIT	20M	20L	28S	28M	35M	35L
DRIVE METHOD		-	BI-POLAR					
NUMBER OF PHASES		-	2	2	2	2	2	2
CURRENT per PHASE		A	0,5	0,5	1,0	1,0	1,0	1,0
HOLDING TORQUE		N·m	0,014	0,02	0,053	0,117	0,19	0,36
ROTOR INERTIA		g·cm ²	2,45	3,7	6,23	11	17	28
WEIGHTS		g	80	100	159	212	211	289
LENGTH(L)		mm	27,2	38,1	33,35	45	33,6	45,6
PERMISSIBLE OVERHUNG LOAD (DISTANCE FROM END OF SHAFT)	3mm	N	18	18	38	38	22	22
	8mm		30	30	53	53	26	26
	13mm		-	-	-	-	33	33
	18mm		-	-	-	-	46	46
PERMISSIBLE THRUST LOAD		N	Lower than motor weight					
INSULATION RESISTANCE		Mohm	100 MIN.(at 500VDC)					
INSULATION CLASS		-	CLASS B(130°C)					
OPERATING TEMPERATURE		°C	0 to 55					

MODEL		HSE-42 series		HSE-56 series		HSE-86 series	
		UNIT	42S	42L	56S	56M	86M
DRIVE METHOD		-	BI-POLAR				
NUMBER OF PHASES		-	2	2	2	2	2
CURRENT per PHASE		A	1,0	2,5	2,0	2,5	3,0
HOLDING TORQUE		N·m	0,31	0,56	1,2	2,1	4,5
ROTOR INERTIA		g·cm ²	30,3	58,1	147,1	281,2	1265,3
WEIGHTS		g	281	420	566	880	2226
LENGTH(L)		mm	34,1	48,1	45	65	76
PERMISSIBLE OVERHUNG LOAD (DISTANCE FROM END OF SHAFT)	3mm	N	22	22	52	52	270
	8mm		26	26	65	65	300
	13mm		33	33	85	85	350
	18mm		46	46	123	123	400
PERMISSIBLE THRUST LOAD		N	Lower than motor weight				
INSULATION RESISTANCE		Mohm	100 MIN.(at 500VDC)				
INSULATION CLASS		-	CLASS B(130°C)				
OPERATING TEMPERATURE		°C	0 to 55				

Torque Characteristics of Motor

Applicable Model

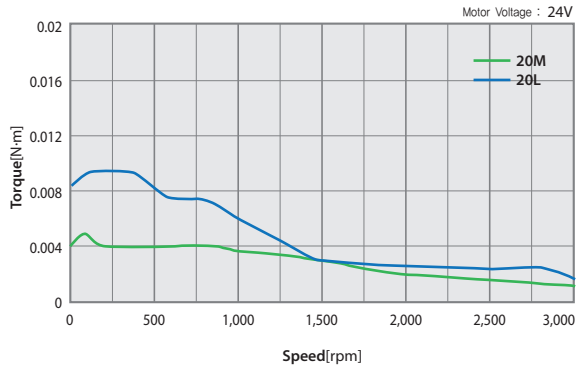
Ezi-SERVO-HS-EC

Ezi-SERVO-HS-PE

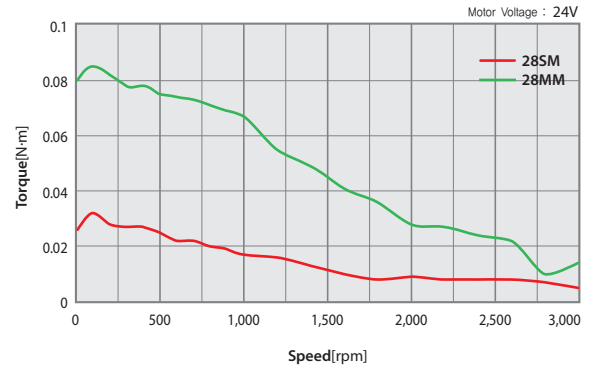
Ezi-SERVO-HS-CL

Ezi-SERVO-HS-ST

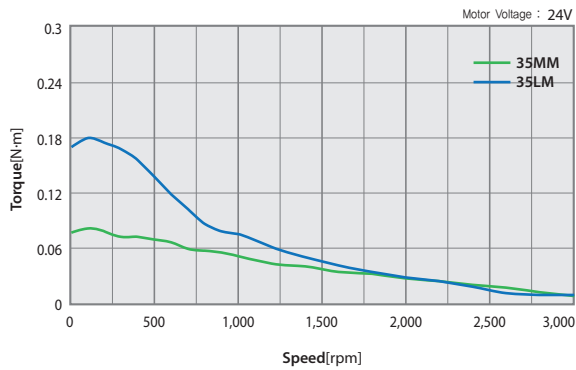
Ezi-SERVO-HS-□-20 series



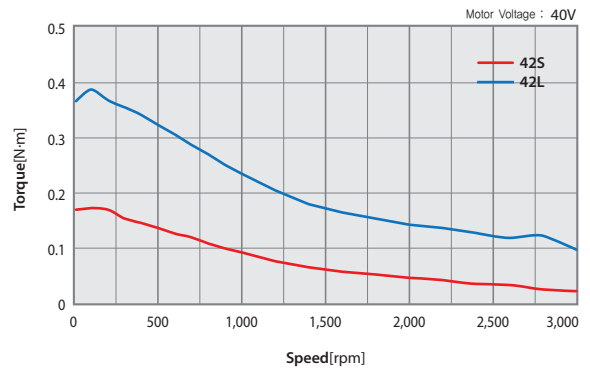
Ezi-SERVO-HS-□-28 series



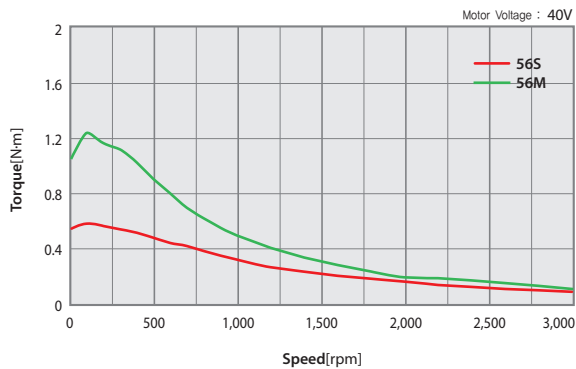
Ezi-SERVO-HS-□-35 series



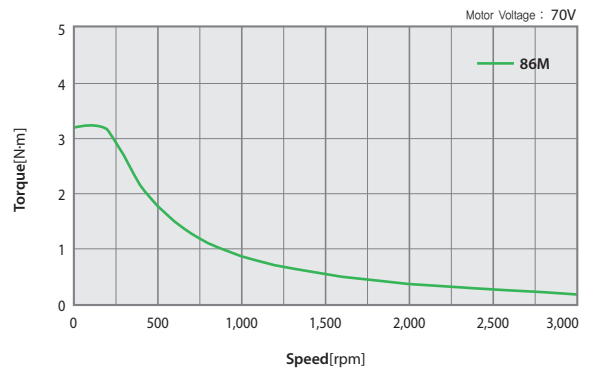
Ezi-SERVO-HS-□-42 series



Ezi-SERVO-HS-□-56 series



Ezi-SERVO-HS-□-86 series



※ □ is the drive type.

Torque Characteristics of Motor

Applicable Model

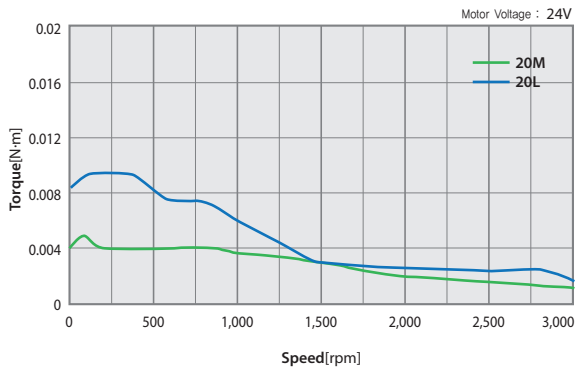
Ezi-SERVO-HS-EC-MI

Ezi-SERVO-HS-EC-4X

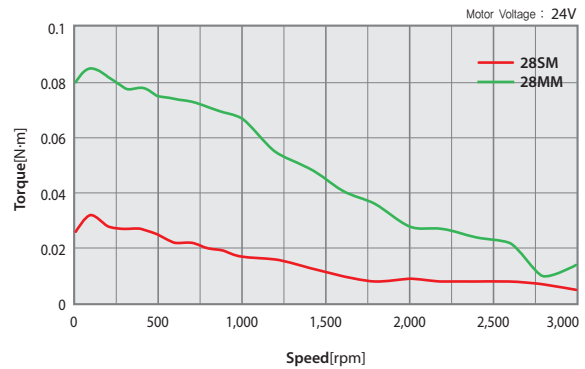
Ezi-SERVO-HS-PE-MI

Ezi-SERVO-HS-MI

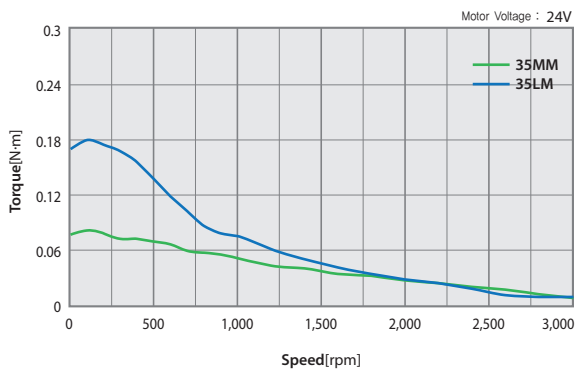
Ezi-SERVO-HS-□-20 series



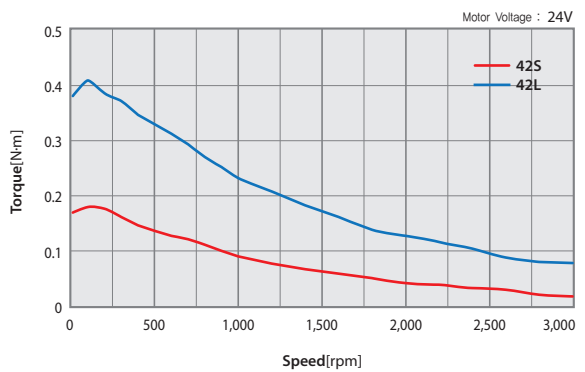
Ezi-SERVO-HS-□-28 series



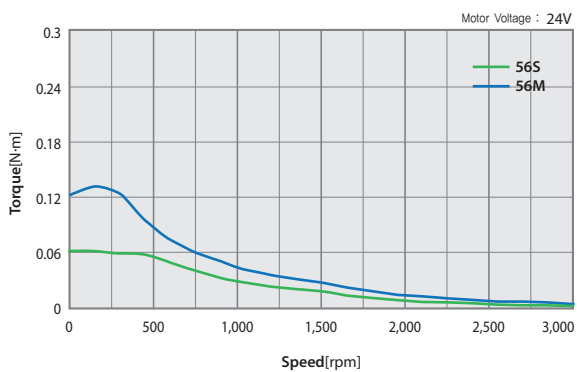
Ezi-SERVO-HS-□-35 series



Ezi-SERVO-HS-□-42 series



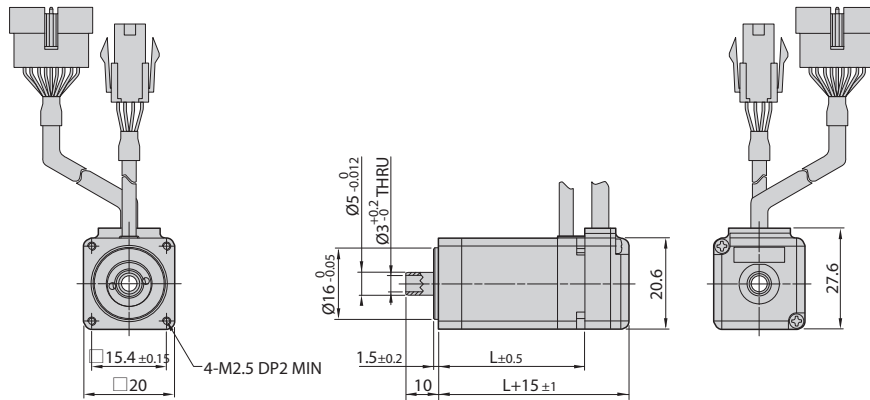
Ezi-SERVO-HS-□-56 series



※ □ is the drive type.

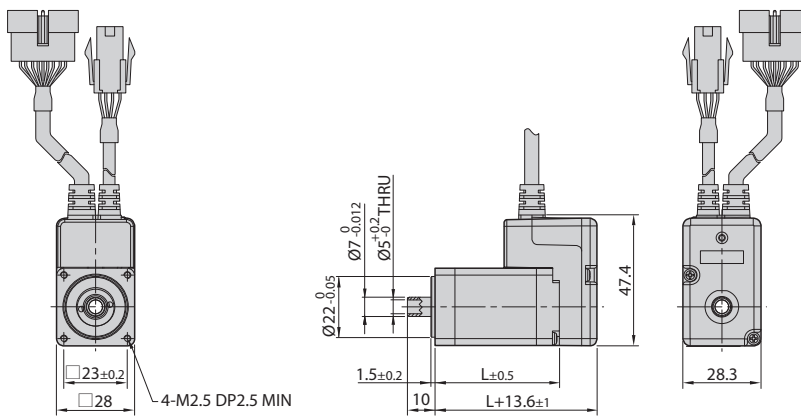
※ The 56 series is applied only to Ezi-SERVO-HS-EC-MI, Ezi-SERVO-HS-EC-4X, Ezi-SERVO-HS-PE-MI.

● Dimensions of Motor [mm]



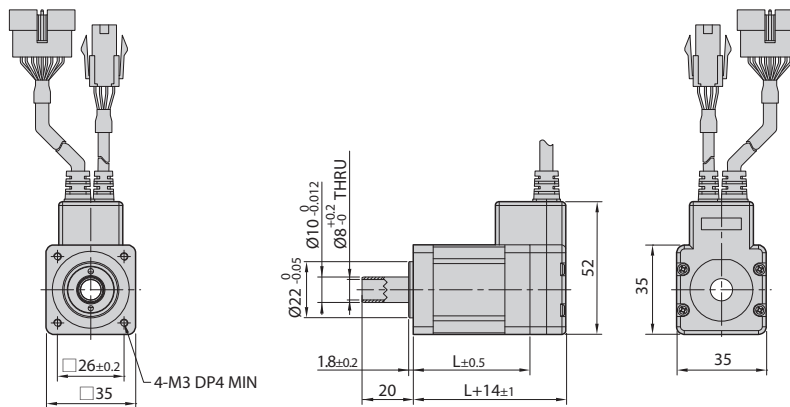
20mm

Model name	Length(L)
HSE-20M	27,2
HSE-20L	38,1



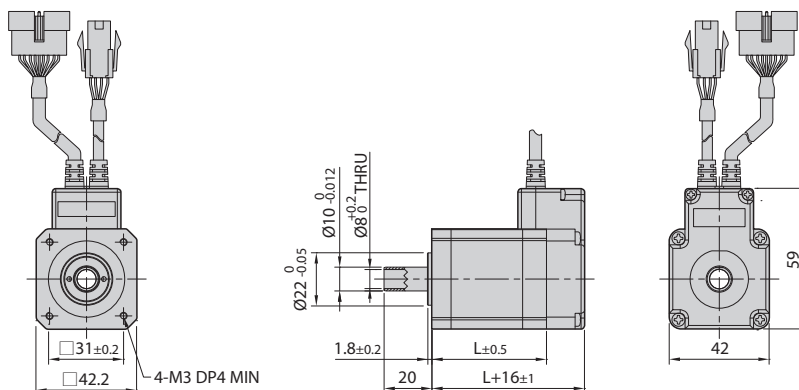
28mm

Model name	Length(L)
HSE-28SM	33,35
HSE-28MM	45



35mm

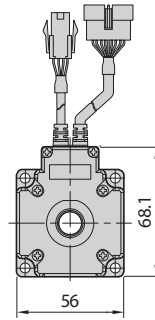
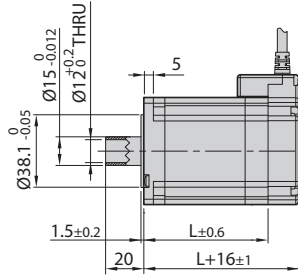
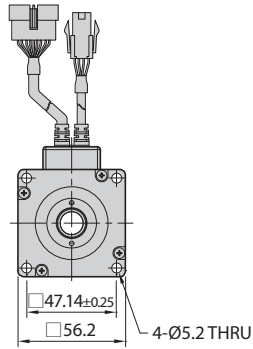
Model name	Length(L)
HSE-35MM	33,6
HSE-35LM	45,6



42mm

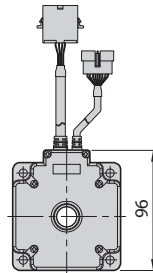
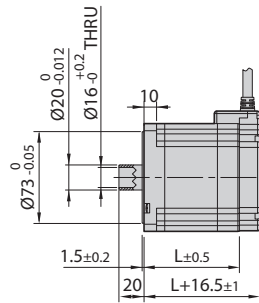
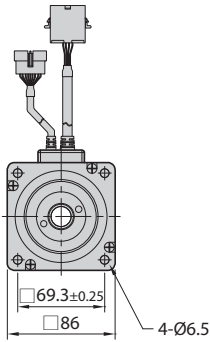
Model name	Length(L)
HSE-42S	34,1
HSE-42L	48,1

● Dimensions of Motor [mm]



56mm

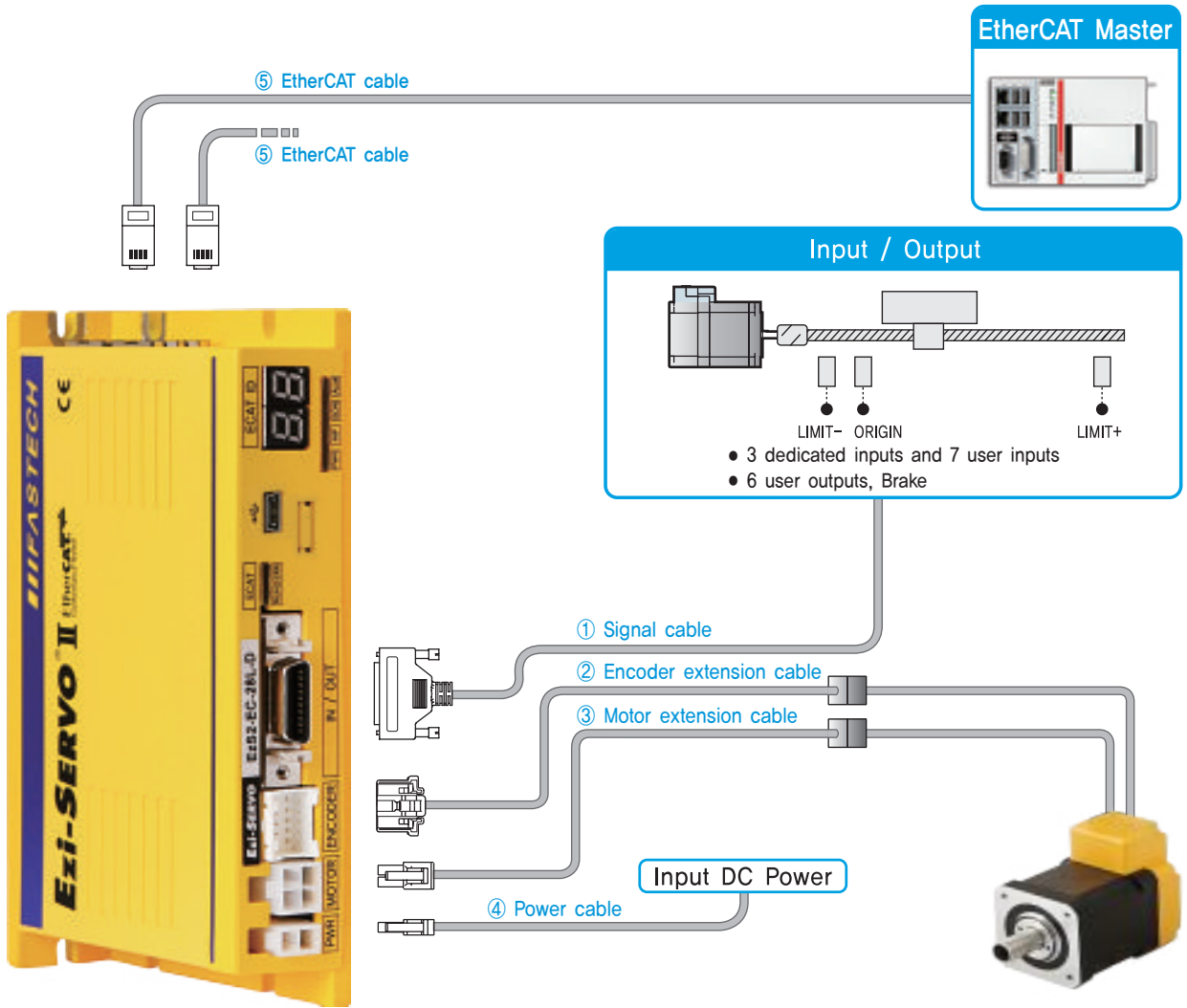
Model name	Length(L)
HSE-56S	45
HSE-56M	65



86mm

Model name	Length(L)
HSE-86M	76

● System Configuration [EtherCAT (Ezi-SERVO II EtherCAT)]

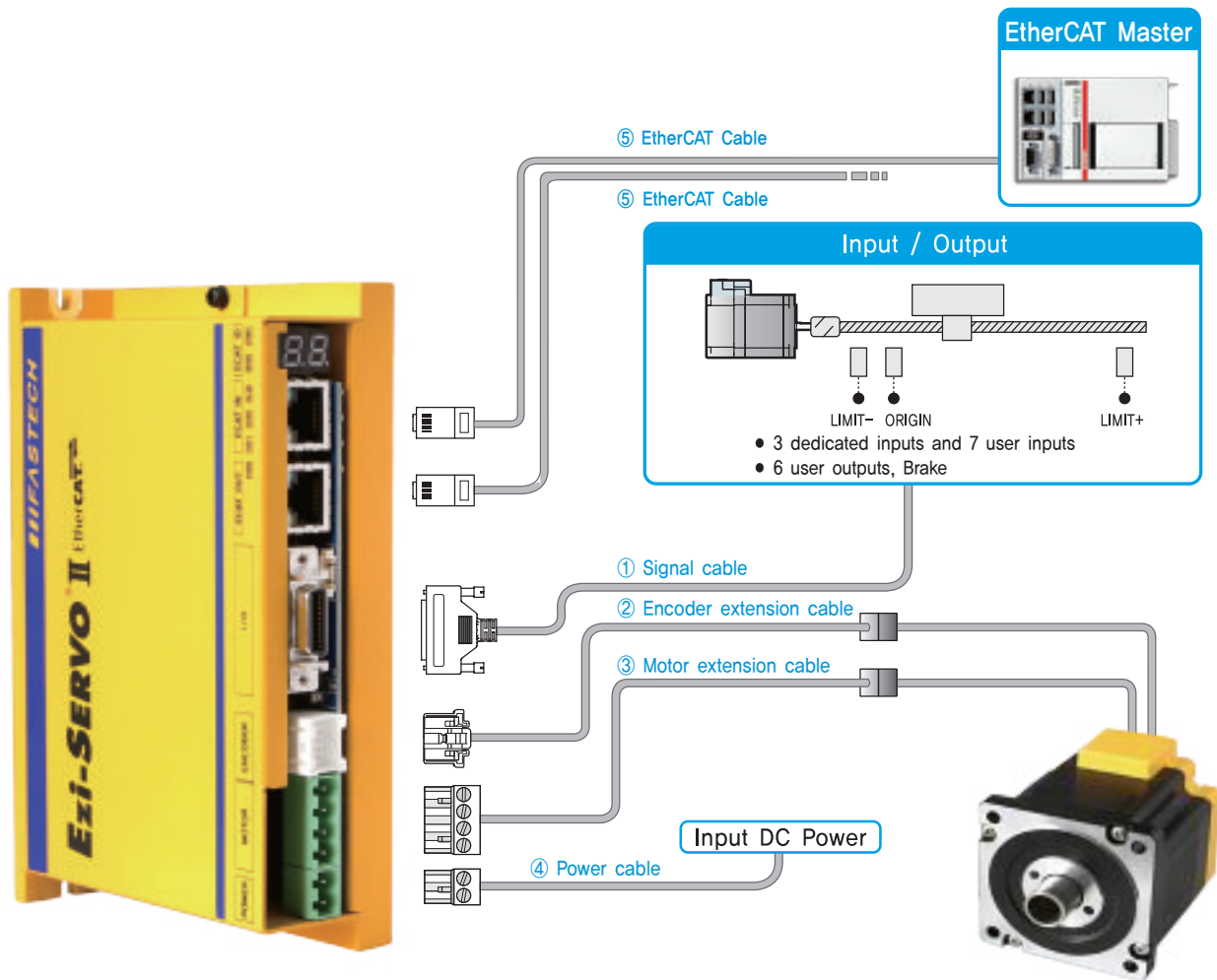


FASTECH Ezi-SERVO HS

Type	Signal Cable	Encoder Cable	Motor Cable	Power Cable	EtherCAT Cable
Length supplied	-	30cm	30cm	-	-
Max. Length	20m	20m	20m	2m	100m

- Ezi-SERVO II EtherCAT is stepping motor control system using EtherCAT, high speed ethernet(100Mbps Full-Duplex) based fieldbus. Ezi-SERVO II EtherCAT is EtherCAT slave module which support CAN application layer over EtherCAT(CoE), CiA 402 Drive profile implemented. Supported modes are Profile Position Mode, Homing Mode, Cyclic Synchronous Position Mode.
- Please refer to the Ezi-SERVO II EtherCAT catalog for optional cables, functions and operation.

● System Configuration [EtherCAT (Ezi-SERVO II EtherCAT 86mm)]



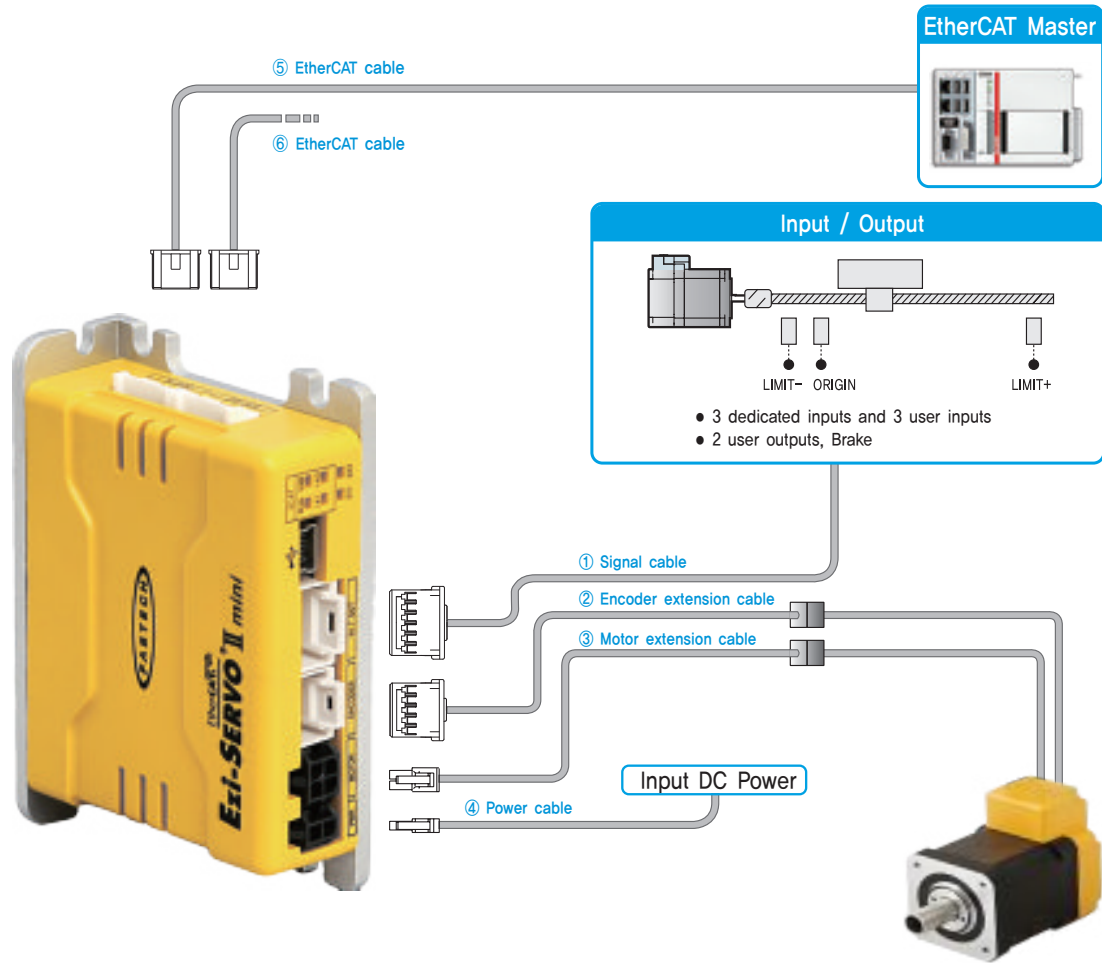
FASTECH Ezi-SERVO HS

Type	Signal Cable	Encoder Cable	Motor Cable	Power Cable	EtherCAT Cable
Length supplied	–	30cm	30cm	–	–
Max. Length	20m	20m	20m	2m	100m

- Ezi-SERVO II EtherCAT is stepping motor control system using EtherCAT, high speed ethernet(100Mbps Full-Duplex) based fieldbus, Ezi-SERVO II EtherCAT is EtherCAT slave module which support CAN application layer over EtherCAT(CoE), CiA 402 Drive profile implemented, Supported modes are Profile Position Mode, Homing Mode, Cyclic Synchronous Position Mode,

- Please refer to the Ezi-SERVO II EtherCAT catalog for optional cables, functions and operation.

● System Configuration [EtherCAT (Ezi-SERVO II EtherCAT MINI)]

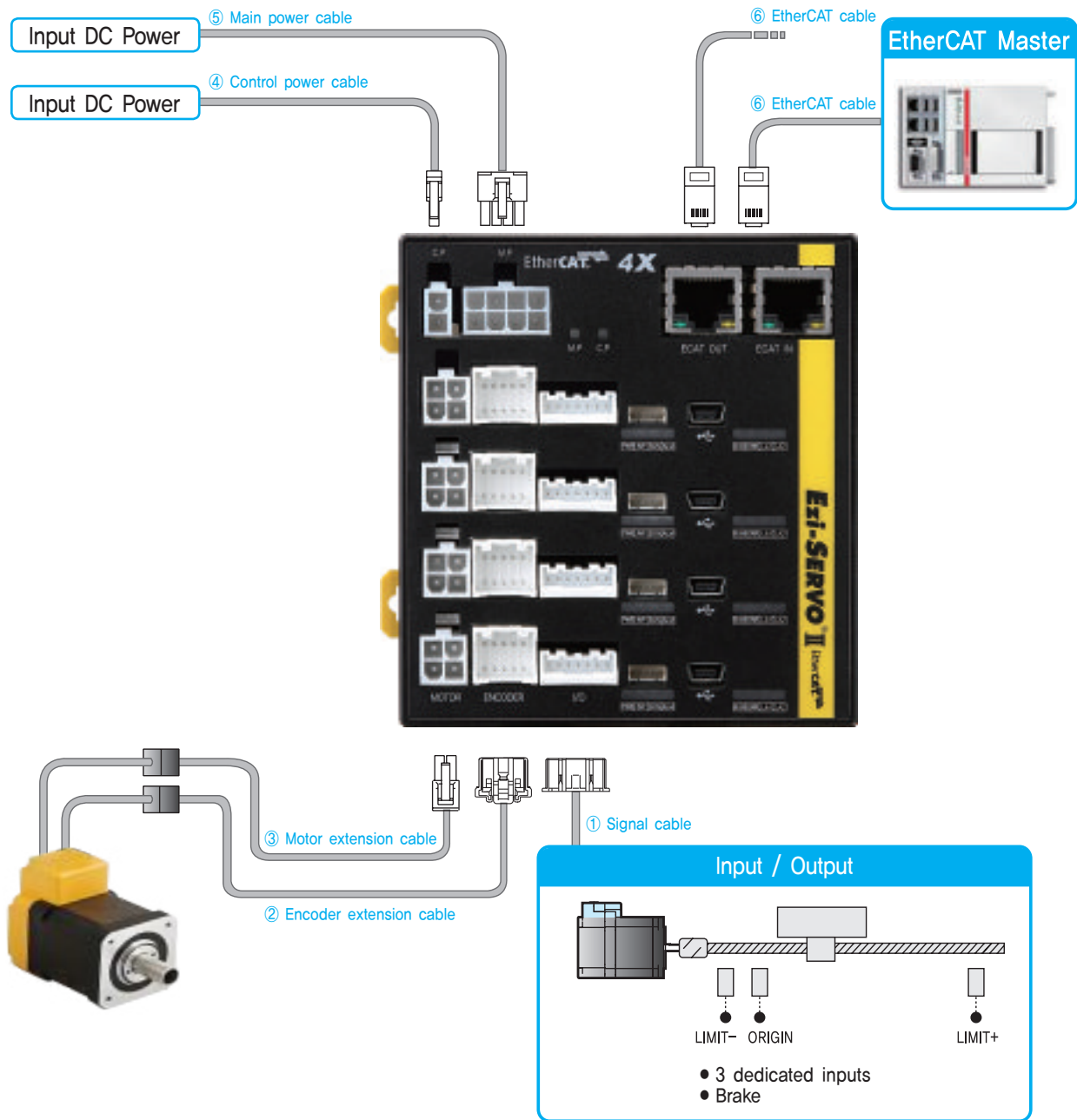


Type	Signal Cable	Encoder Cable	Motor Cable	Power Cable	EtherCAT Cable
Length supplied	–	30cm	30cm	–	–
Max. Length	20m	20m	20m	2m	100m

- Ezi-SERVO II EtherCAT MINI is stepping motor control system using EtherCAT, high speed Ethernet(100Mbps full-duplex) based fieldbus, Ezi-SERVO II EtherCAT MINI is EtherCAT slave module which support CAN application layer over EtherCAT(CoE). CiA 402 Drive profile implemented. Supported modes are Profile Position Mode, Homing Mode, Cyclic Synchronous Position Mode.

- Please refer to the Ezi-SERVO II EtherCAT MINI catalog for optional cables, functions and operation.

● System Configuration [EtherCAT 4X (Ezi-SERVO II EtherCAT 4X)]

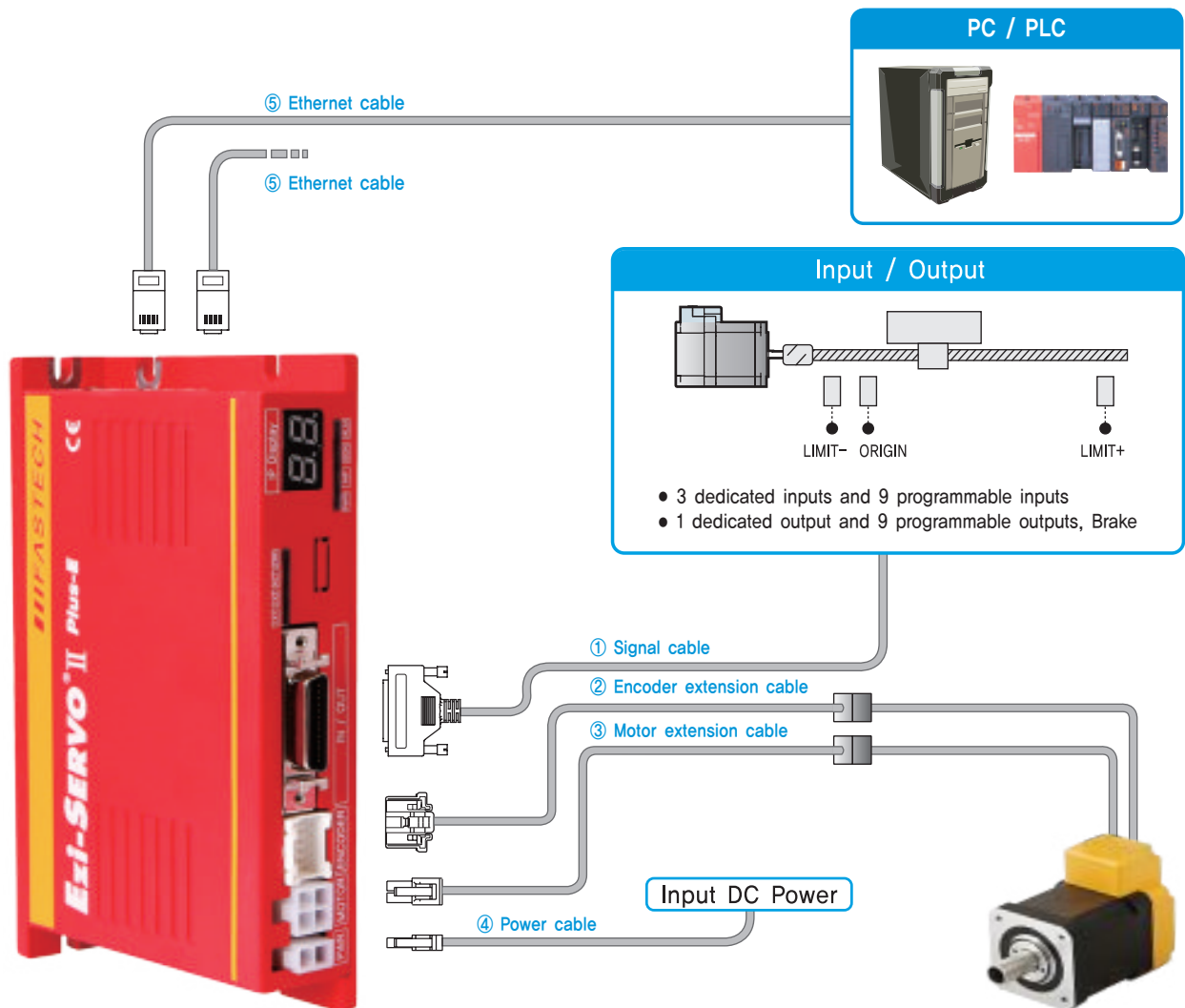


Type	Signal Cable	Encoder Cable	Motor Cable	Control Power Cable	Main Power Cable	EtherCAT Cable
Length supplied	–	30cm	30cm	–	–	–
Max. Length	20m	20m	20m	2m	2m	100m

- Ezi-SERVO II EtherCAT 4X is 4 axes stepping motor control system using EtherCAT, high speed ethernet(100Mbps Full-Duplex) based fieldbus, Ezi-SERVO II EtherCAT 4X is EtherCAT slave module which support CAN application layer over EtherCAT(CoE). CiA 402 Drive profile implemented. Supported modes are Profile Position Mode, Homing Mode, Cyclic Synchronous Position Mode.

- Please refer to the Ezi-SERVO II EtherCAT 4X catalog for optional cables, functions and operation.

● System Configuration [Ethernet (Ezi-SERVO II Plus-E)]

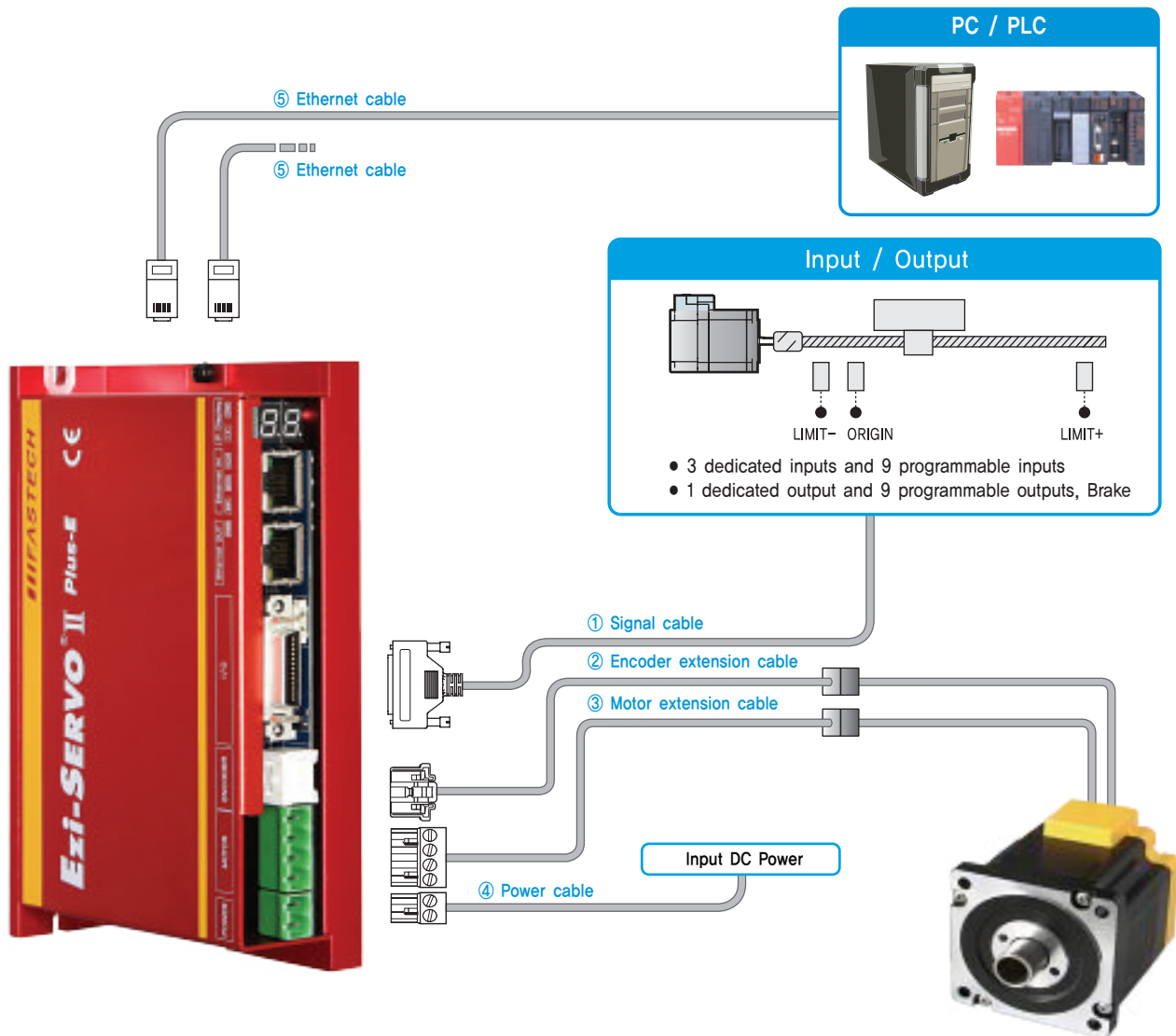


FASTECH Ezi-SERVO HS

Type	Signal Cable	Encoder Cable	Motor Cable	Power Cable	Ethernet Cable
Length supplied	–	30cm	30cm	–	–
Max. Length	20m	20m	20m	2m	100m

- Ezi-SERVO II Plus-E drive can drive up to 254 axes through Ethernet communication with master controller such as PC. Ethernet HUB is built-in and can be connected in Daisy-chain form. All motion control functions can be controlled through network communication and motion related conditions(eg. acceleration/deceleration time, etc.) are stored in the ROM as parameters. A motion library(DLL) is provided for programming under Windows 7/8/10.
- Please refer to the Ezi-SERVO II Plus-E catalog for optional cables, functions and operation.

● System Configuration [Ethernet (Ezi-SERVO II Plus-E 86mm)]

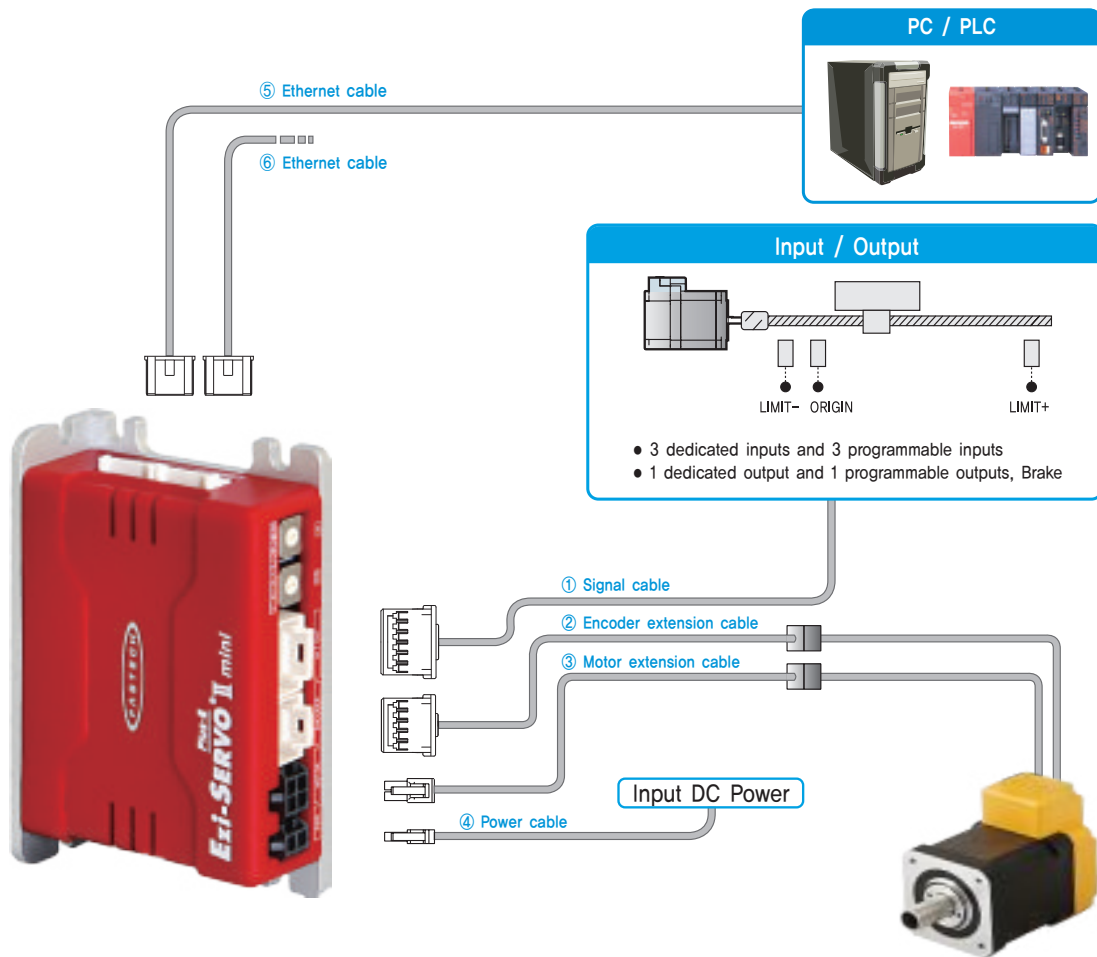


FASTECH Ezi-SERVO HS

Type	Signal Cable	Encoder Cable	Motor Cable	Power Cable	Ethernet Cable
Length supplied	–	30cm	30cm	–	–
Max. Length	20m	20m	20m	2m	100m

- Ezi-SERVO II Plus-E drive can drive up to 254 axes through Ethernet communication with master controller such as PC. Ethernet HUB is built-in and can be connected in Daisy-chain form. All motion control functions can be controlled through network communication and motion related conditions(eg. acceleration/deceleration time, etc.) are stored in the ROM as parameters. A motion library(DLL) is provided for programming under Windows 7/8/10.
- Please refer to the Ezi-SERVO II Plus-E catalog for optional cables, functions and operation.

● System Configuration [Ethernet (Ezi-SERVO II Plus-E MINI)]

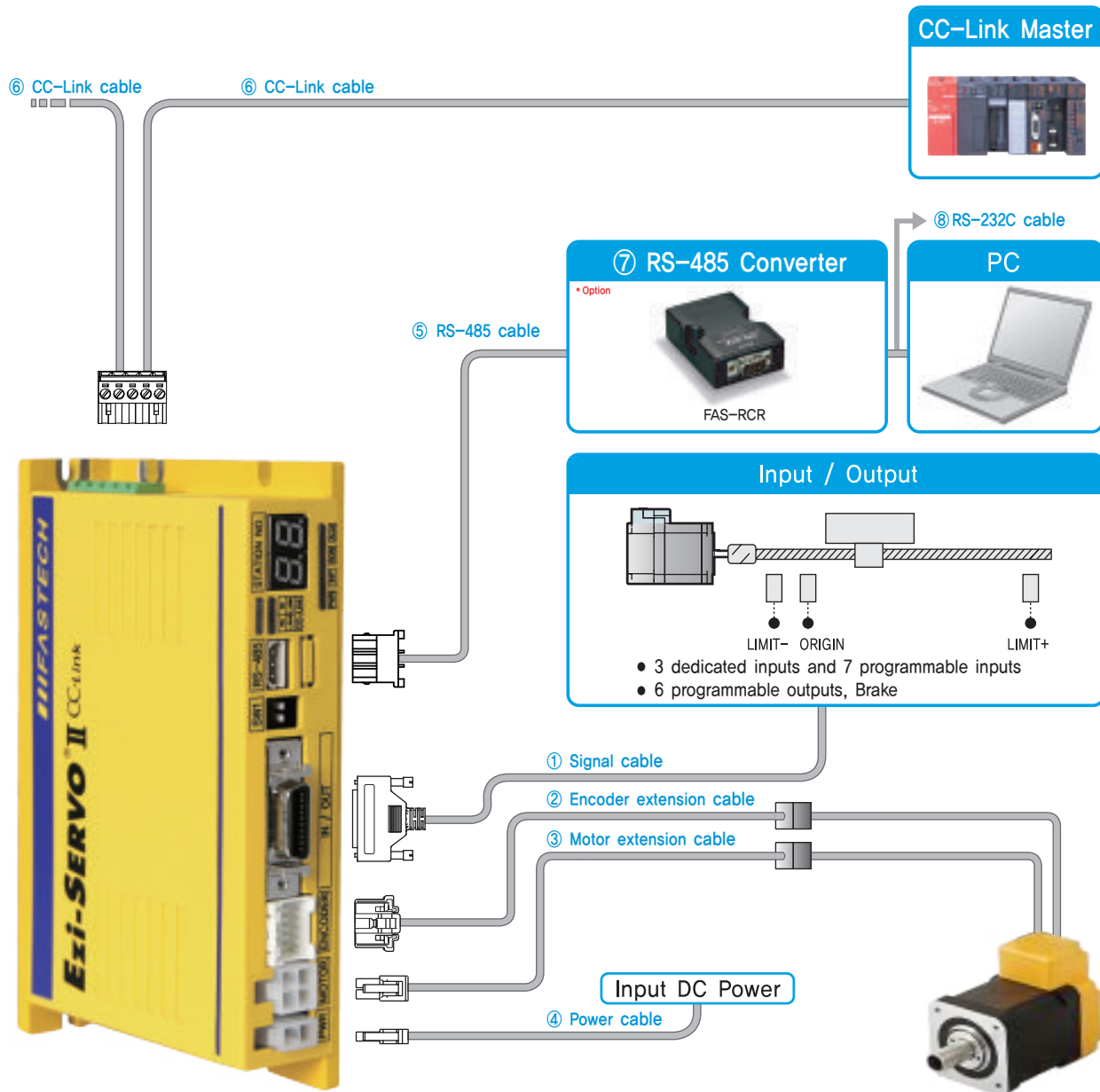


FASTECH Ezi-SERVO HS

Type	Signal Cable	Encoder Cable	Motor Cable	Power Cable	Ethernet Cable
Length supplied	-	30cm	30cm	-	-
Max. Length	20m	20m	20m	2m	100m

- Ezi-SERVO II Plus-E MINI drive can drive up to 254 axes through Ethernet communication with master controller such as PC. Ethernet HUB is built-in and can be connected in Daisy-chain form. All motion control functions can be controlled through network communication, and motion related conditions(eg. acceleration/deceleration time, etc.) are stored in the ROM as parameters. A motion library(DLL) is provided for programming under Windows 7/8/10.
- Please refer to the Ezi-SERVO II Plus-E MINI catalog for optional cables, functions and operation.

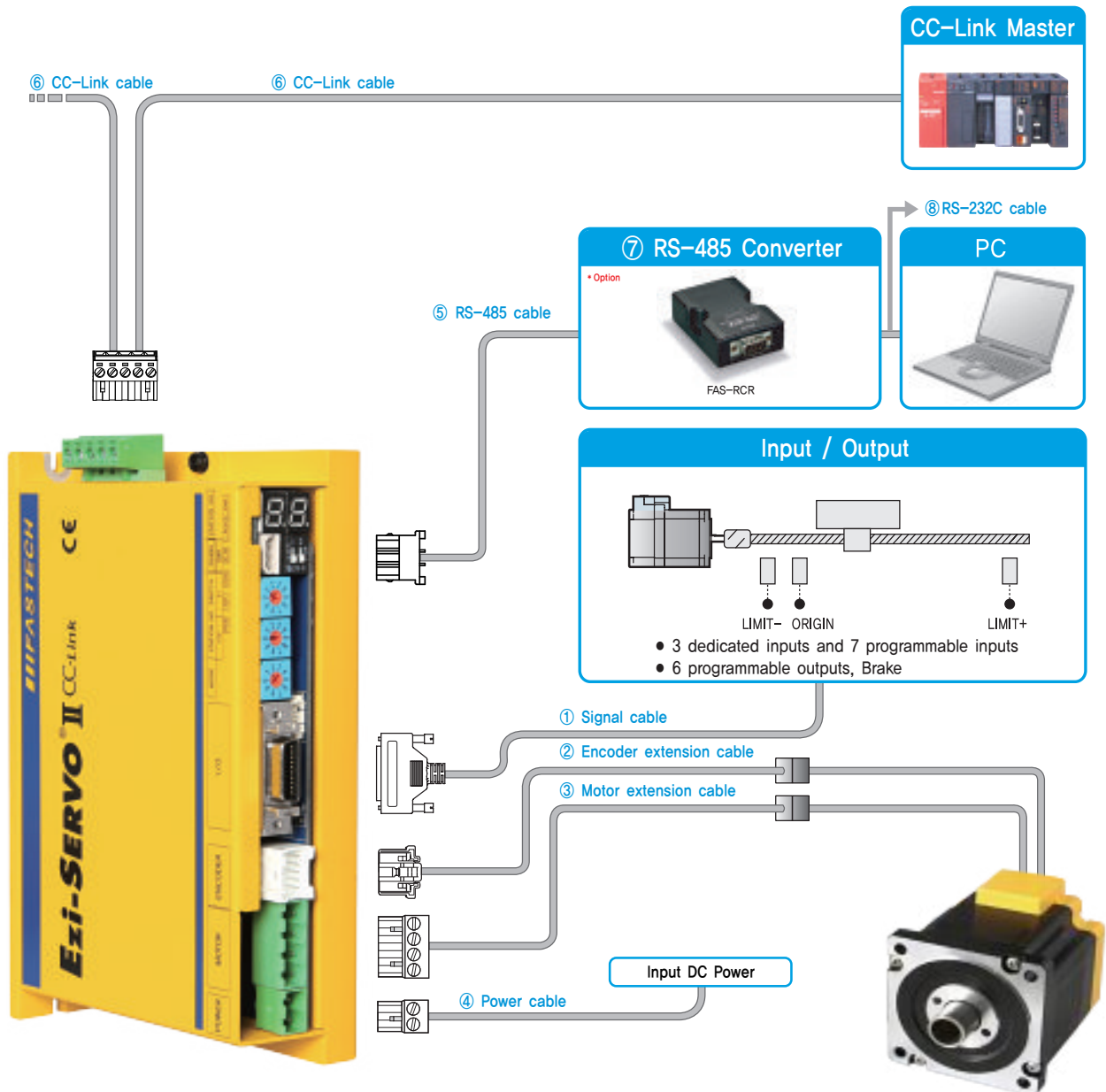
● System Configuration [CC-Link (Ezi-SERVO II CC-Link)]



Type	Signal Cable	Encoder Cable	Motor Cable	Power Cable	CC-Link Cable	RS-485 Cable
Length supplied	—	30cm	30cm	—	—	—
Max. Length	20m	20m	20m	2m	100m	2m

- Ezi-SERVO II CC-Link is a drive supporting CC-Link, a high speed fieldbus(max. 10Mbps). Ezi-SERVO II CC-Link is a Remote Device module supporting CC-Link network. Multi-function control is possible by occupying 1 station and 2 stations in CC-Link, and motion and monitoring functions are processed by device commands.
- Please refer to the Ezi-SERVO II CC-Link catalog for optional cables, functions and operation.

● System Configuration [CC-Link (Ezi-SERVO II CC-Link 86mm)]

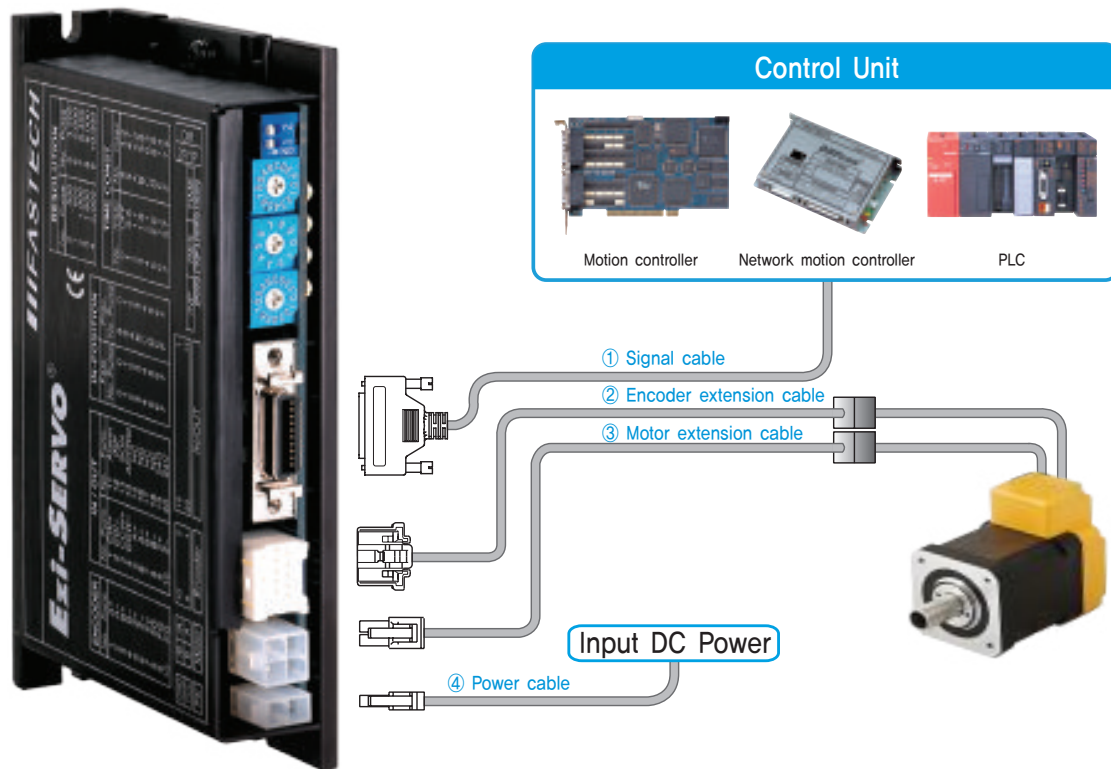


FASTECH Ezi-SERVO HS

Type	Signal Cable	Encoder Cable	Motor Cable	Power Cable	CC-Link Cable	RS-485 Cable
Length supplied	–	30cm	30cm	–	–	–
Max. Length	20m	20m	20m	2m	100m	2m

- Ezi-SERVO II CC-Link is a drive supporting CC-Link, a high speed fieldbus(max. 10Mbps). Ezi-SERVO II CC-Link is a Remote Device module supporting CC-Link network. Multi-function control is possible by occupying 1 station and 2 stations in CC-Link, and motion and monitoring functions are processed by device commands.
- Please refer to the Ezi-SERVO II CC-Link catalog for optional cables, functions and operation.

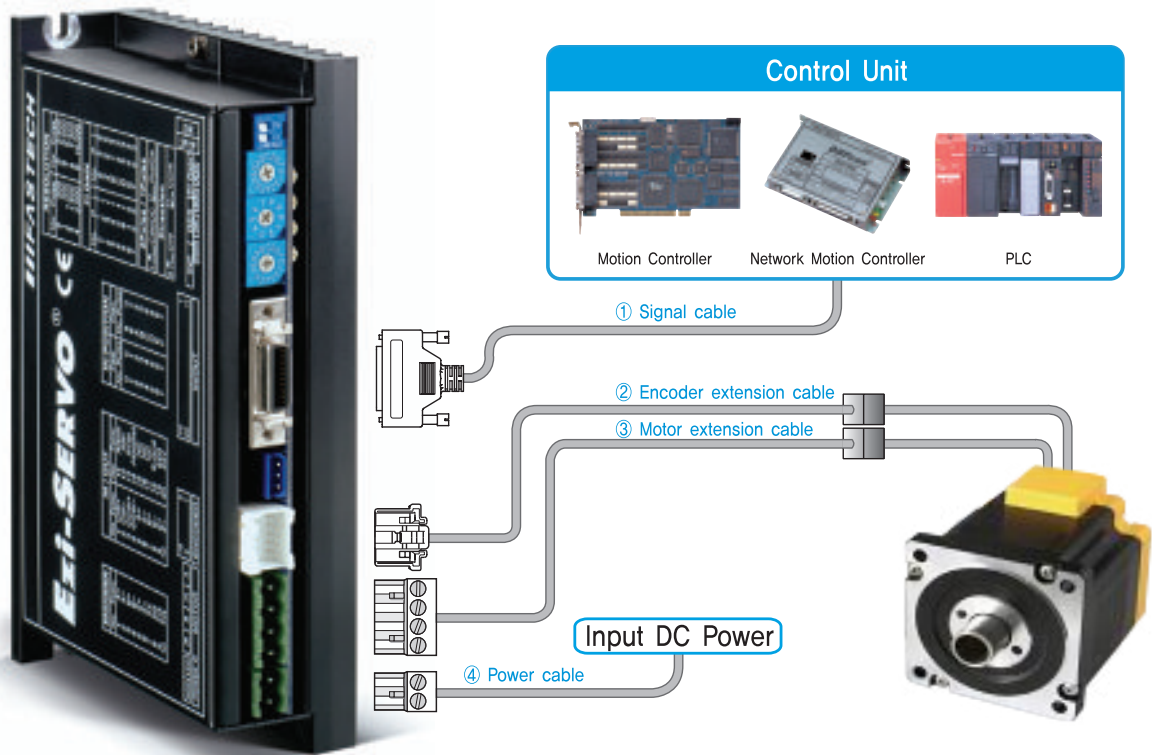
● System Configuration [Pulse Input Drive (Ezi-SERVO ST)]



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

- Ezi-SERVO ST is a pulse input type drive. It is controlled by using of Motion controller, standalone controller or PLC (with positioning module).
- Please refer to the Ezi-SERVO ST catalog for optional cables, functions and operation.

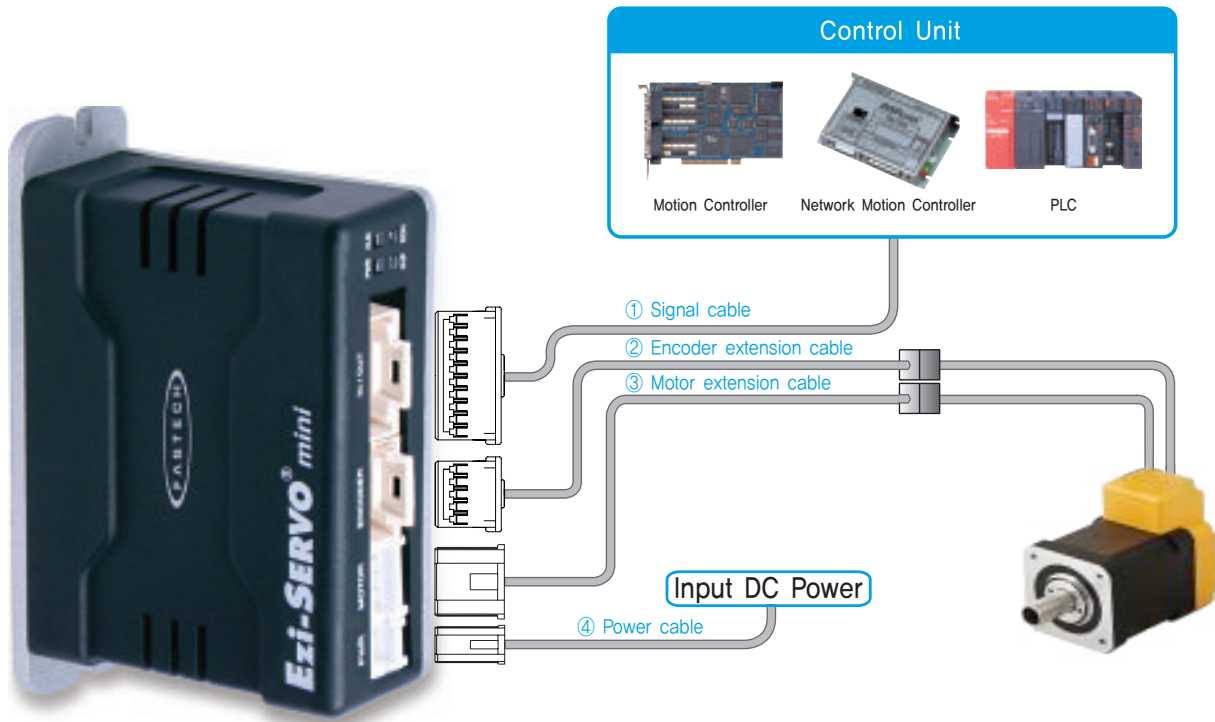
● System Configuration [Pulse Input Drive (Ezi-SERVO ST 86mm)]



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

- Ezi-SERVO ST is a pulse input type drive. It is controlled by using of Motion controller, standalone controller or PLC (with positioning module).
- Please refer to the Ezi-SERVO ST catalog for optional cables, functions and operation.

● System Configuration [Pulse Input Mini Drive (Ezi-SERVO MINI)]



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

- Ezi-SERVO MINI is a pulse input type drive. It is controlled by using of Motion controller, standalone controller or PLC (with positioning module).
- Please refer to the Ezi-SERVO MINI catalog for optional cables, functions and operation.

MEMO

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FASTECH Co., Ltd.

Rm#1202, 401-dong, Bucheon Techno-Park,
655, Pyeongcheon-ro, Bucheon-si Gyeonggi-do,
Republic of Korea (Zip:14502)
TEL : +82-32-234-6300 FAX : +82-32-234-6302
E-mail : sales2@fastech.co.kr
Homepage : www.fastech.co.kr