FASTECH

Fast, Accurate, Smooth Motion

파스텍 신제품 소개

2018. 11. 23

FASTECH

Ezi-SERVO®

Closed Loop Stepping System

목 차

- ❖ Ezi-SERVO + FESTO Actuator
  - Ezi-Robo ELGC
  - Ezi-Robo EGSC
  - Ezi-Robo EXCM
- ❖ Ethernet Type Closed Loop Stepping System
  - Ezi-SERVOII Plus-E
  - Ezi-MOTIONLINK Plus-E
  - Ezi-IO Plus-E
- ❖ EtherCAT Type Closed Loop Stepping System
  - Ezi-SERVOII EtherCAT
  - Ezi-SERVOII EtherCAT ALL
  - Ezi-SERVOII 4 Axes drive
  - Ezi-IO EtherCAT
- ❖ ALL Type Closed Loop Stepping System
  - Ezi-SERVO ALL 28
  - Ezi-SERVOII BT
- ❖ Hollow Shaft Stepper Motor
- ❖ CC-Link Type Closed Loop Stepping System
  - Ezi-SERVOII CC-Link
- ❖ BLDC Motor Speed Control System
  - Ezi-SPEED

EGSC-BS + Ezi-SERVO® II Plus-E

Closed Loop Stepping System

FESTO

FASTECH

Fast, Accurate, Smooth Motion

Ethernet 타입 제어기 내장형
Closed Loop Stepping System

"FESTO Mini Slide 로봇 제어"

Ezi-SERVO®

Closed Loop Stepping System

EGSC-BS + Ezi-SERVO® II Plus-E

Closed Loop Stepping System

Ezi-SERVO® II Plus-E
Closed Loop Stepping System

FASTECH
Fast, Accurate, Smooth Motion

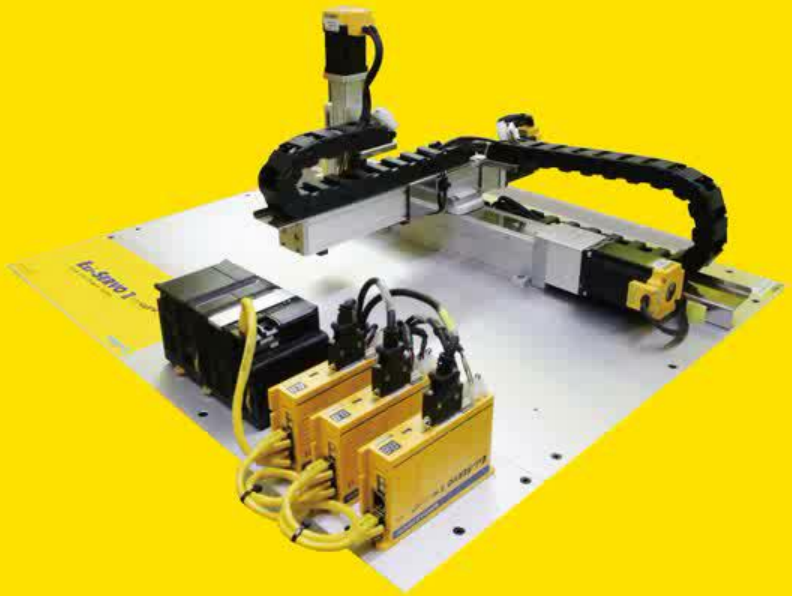
Closed Loop Stepping System
with embedded controller
based on **Ethernet**

"Force control (Push & Pull)"

ELGC, EGSC + Ezi-SERVO® II EtherCAT Conformance tested Closed Loop Stepping System

Ezi-SERVO® II EtherCAT Conformance tested
Closed Loop Stepping System

FASTECH
Fast, Accurate, Smooth Motion



EtherCAT Network 기반
Closed Loop Stepping System

"EtherCAT을 통한 FESTO 직교 로봇 제어"

ELGC-BS + Ezi-SERVO® II EtherCAT Conformance tested
Closed Loop Stepping System

Ezi-SERVO® II EtherCAT Conformance tested
Closed Loop Stepping System

FASTECH
Fast, Accurate, Smooth Motion

EtherCAT Network 기반
Closed Loop Stepping System

"EtherCAT을 통한 FESTO 4축 로봇 제어"

EGSC + Ezi-SERVO® II EtherCAT Conformance tested

Closed Loop Stepping System

Ezi-SERVO®
Closed Loop Stepping System

EXCM + Ezi-SERVO® II CC-Link
Closed Loop Stepping System

FESTO

FASTECH
Fast, Accurate, Smooth Motion

CC-Link Network 기반
Closed Loop Stepping System

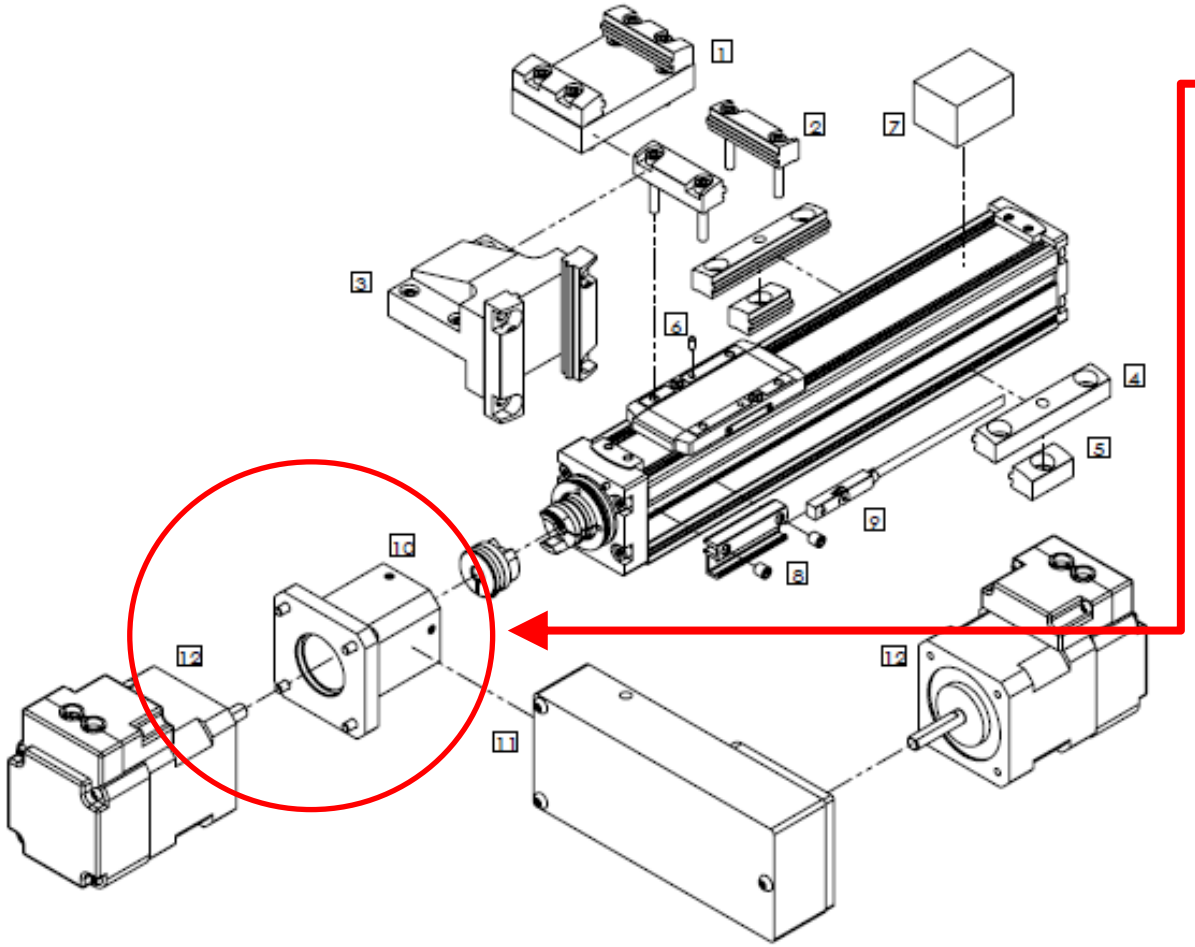
“CC-Link 를 통한
FESTO H-Portal 고속 단핏치 모션”

Ezi-SERVO + FESTO Actuator 특장점

- "One size down" : 한 치수 작은 actuator와 별도의 adapter 없이 간편 조립
- 자석 내장으로 간편 sensor 부착 별도의 sensor dog 불필요
- Ball screw 및 Guide 일체형 초소형 단축 Actuator (EGSC-BS)
- Stainless steel cover 기본 부착 clean room class 1,000 인증 (ELGC BS, ELGC TB)
- 2 축 동시 Belt 구동 : X/Y 2 축 최소 높이 구현 및 최대 Torque 사용 가능 (EXCM)
- 다양한 산업용 network 호환성 (Ethernet, EtherCAT, CC Link 등)

공식 협력 (FESTO KOREA & 파스텍)

❖ Ezi-SERVO Motor + FESTO Actuator 결합

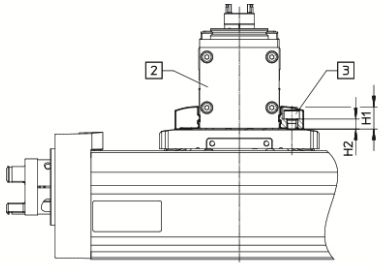


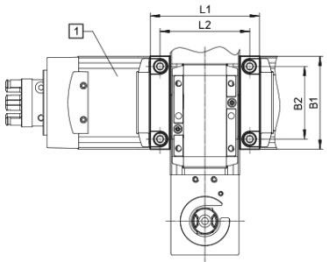
FESTO 공식 Part Number로
등록 예정

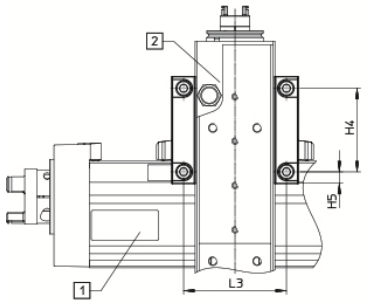
FESTO Actuator 주요 Concept

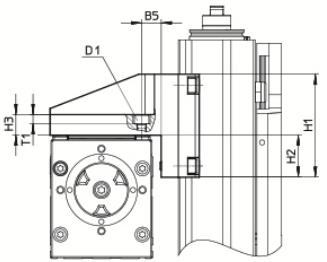
❖ Lego 조립 Concept : 간편 조립, 초소형, 최적 비율 설치 공간

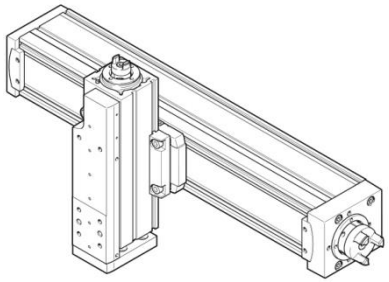
표준 설치 Bracket

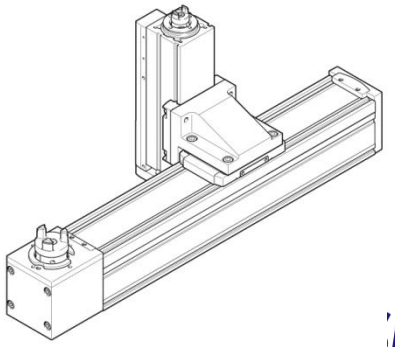






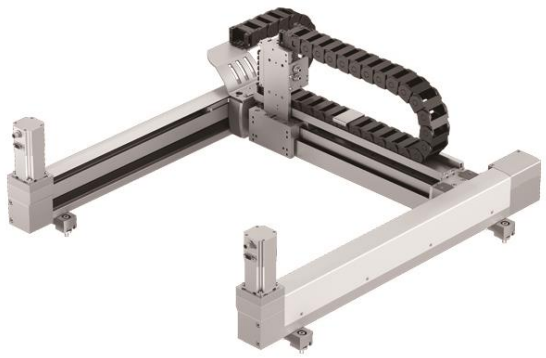


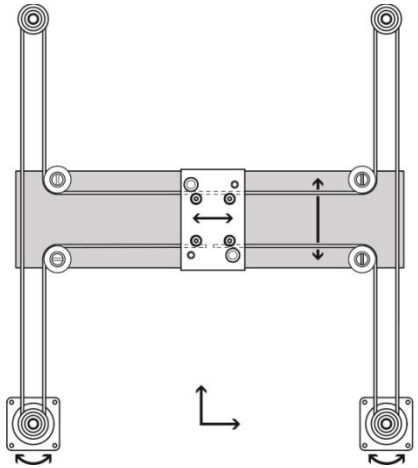


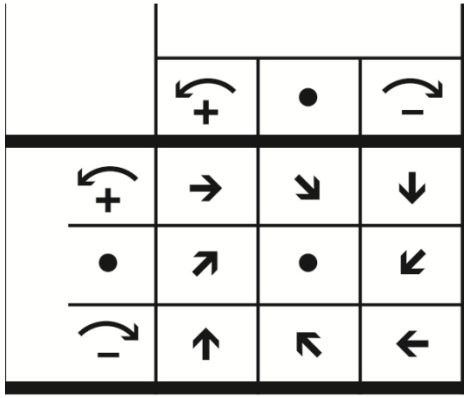


Closed Loop Stepping System

FESTO Actuator 주요 Concept (EXCM)







❖ X/Y 2축 하나의 belt로 연결 X/Y 2축 을 1축 높이로 구성

❖ 2개 모터 동시 구동으로 최대 torque 구동 및 최소 가반 중량

Ezi-Robo-EGSC, ELGC, EXCM 저가형 Actuator

Ezi-Robo®

Actuator series Driven by Ezi-SERVO

- Compact Footprint with built-in Linear Guide & Ball Screw
- "One-size down" : No adapter for assembly
- High Accuracy (up to ±0.02mm) and Strokes up to 200mm
- Various Field Networks such as EtherCAT, Ethernet, CC-Link

EGSC-BS

Ezi-Robo®

Actuator series Driven by Ezi-SERVO

- Compact Footprint with built-in Linear Guide & Ball Screw
- "One-size down" : No adapter for assembly
- High Accuracy (up to ±0.015mm) and Strokes up to 1,000mm
- Various Field Networks such as EtherCAT, Ethernet, CC-Link

ELGC-BS

Ezi-Robo®

Actuator series Driven by Ezi-SERVO

- Flat and compact size & Cleanroom class 1,000
- Flexible motor mounting & modular concept
- High payload up to 3 kg, high Accuracy (up to ±0.05mm) and Strokes up to 700 x 360mm
- Various Field Networks such as EtherCAT, Ethernet, CC-Link

EXCM

Ezi-SERVO®
Closed Loop Stepping System

Ezi-SERVO + Igus cantilever

Ezi-SERVO® II EtherCAT Conformance tested
Closed Loop Stepping System

FASTECH
Fast, Accurate, Smooth Motion

Closed Loop Stepping System
based on EtherCAT

"IGUS 3 Axis Cantilever
Robot Control"

Ezi-SERVO®
Closed Loop Stepping System

Ezi-SERVO + Igus Robolink

Ezi-SERVO® II EtherCAT Conformance tested
Closed Loop Stepping System

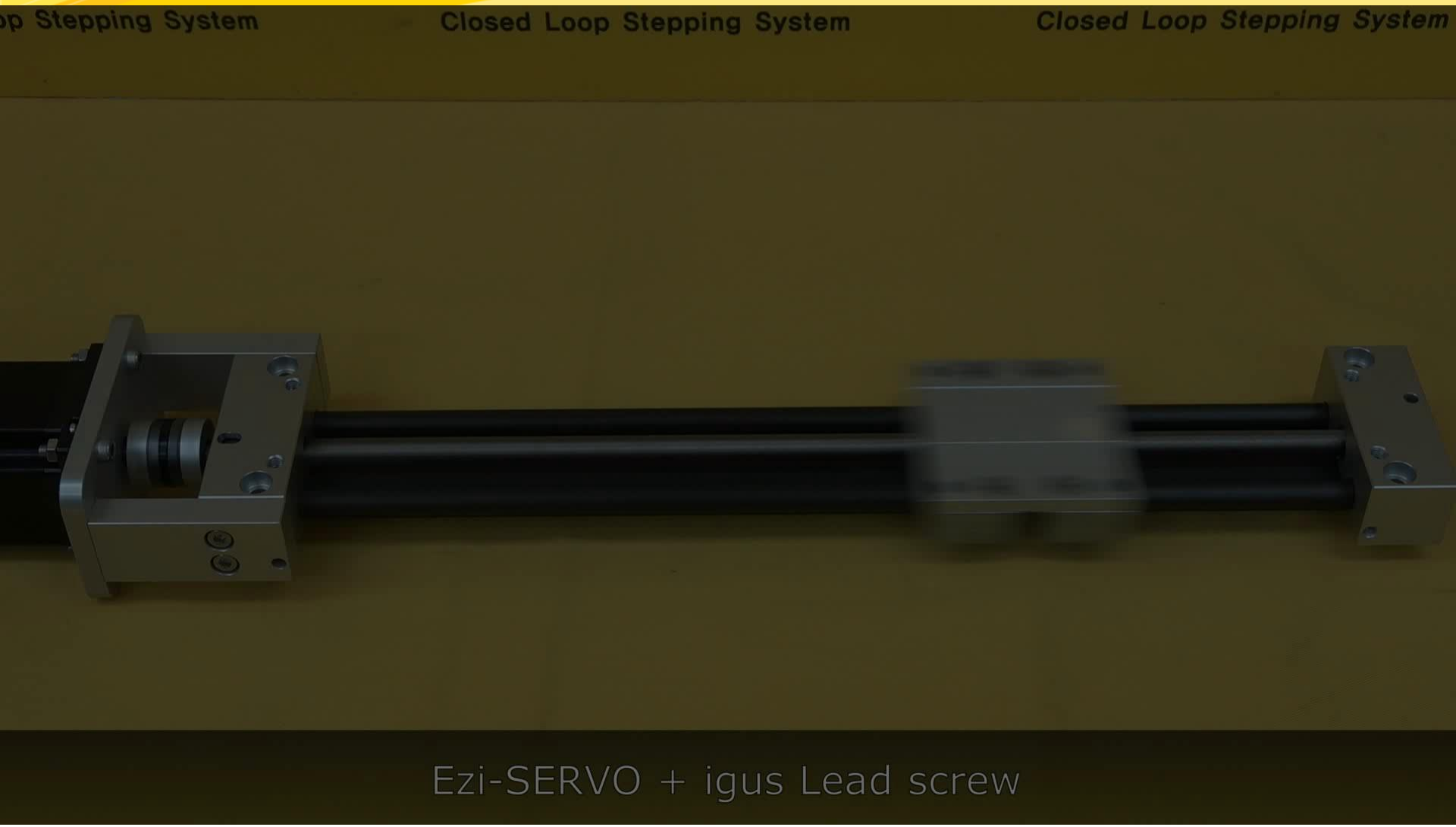
FASTECH
Fast, Accurate, Smooth Motion

Closed Loop Stepping System
based on EtherCAT

"Multi-joint RoboLink"

Ezi-SERVO®
Closed Loop Stepping System

Ezi-SERVO + Igus SLW & ZLW



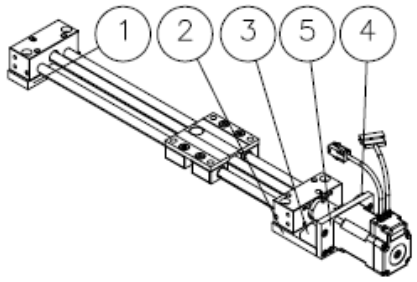
Ezi-SERVO + Igus drylin Actuator

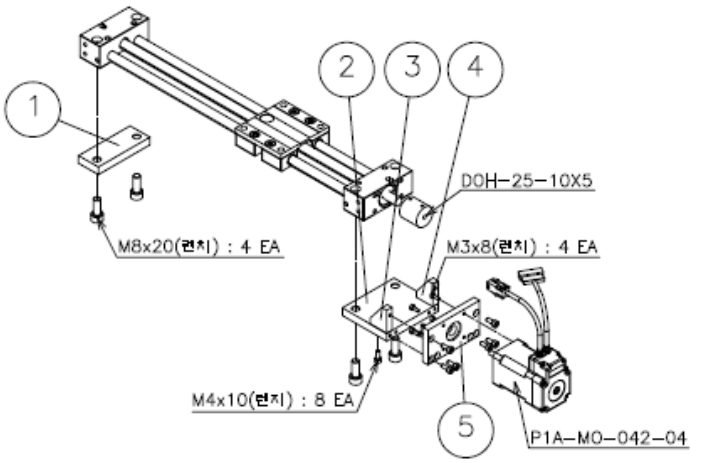
- 고성능 폴리머 Sliding으로 마찰 최소화
- 고기능 플라스틱으로 내 화학성, 내 부식성, 방수성
- 무급유, 유지보수 불 필요
- 금속 대비 경량, 저소음
- 다양한 산업용 network 호환성 (Ethernet, EtherCAT, CC Link 등)

Cooperation Result (Assembly drawing)

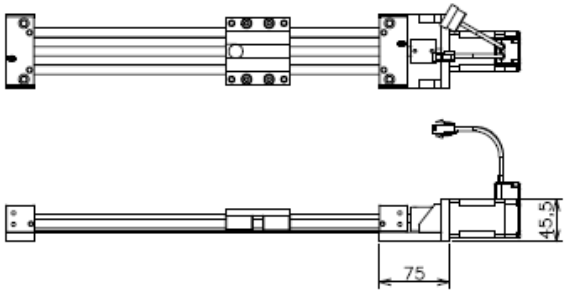
SLW-BB-1040 Jig Assembly

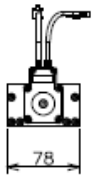
No.	Part No.	Description	Material	After Treatment	Qty
1	-	Jig-1	AL	Black Anodizing	1
2	-	Jig-2	AL	Black Anodizing	1
3	-	Jig-3	AL	Black Anodizing	1
4	-	Jig-4	AL	Black Anodizing	1
5	-	Jig-5	AL	Black Anodizing	1





Bolting Spec.
1. M3x8(렌치) : 4 EA
2. M4x10(렌치) : 8 EA
3. M8x20(렌치) : 4 EA





REV	Date	DETAIL OF REVISION	REV	CHK	APP

SLW-BB-1040 Jig Assembly

igus Korea Co., Ltd.

Material	-	APP'D	
Date	2010.11.15	CHK'D	
Scale	1 / 4	Design	B.S.KIM
DWG No.	-		2010.11.15

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무단복제 또는 도용할 경우 법적인 책임을 질 수 있습니다.

EZI-SERVO®
Closed Loop Stepping System

"Ethernet" Plus E Series

Closed Loop Stepping System

Ezi-SERVO® II Plus-E
Closed Loop Stepping System

Ezi-MOTIONLINK® Plus-E

Ezi-IO® Plus-E

Ezi-SERVO® II Plus-E

Closed Loop Stepping System

FASTECH

Fast, Accurate, Smooth Motion

Closed Loop Stepping System with embedded controller based on Ethernet

"Control stepping motor, AC Servo motor and I/O in the same Ethernet network"

Demo video

Ezi-SERVO® II Plus-E
Closed Loop Stepping System

FASTECH
Fast, Accurate, Smooth Motion

Closed Loop Stepping System
with embedded controller
based on Ethernet

"High speed short pitch motion"

Demo video

Ezi-SERVO® II Plus-E
Closed Loop Stepping System

FASTECH
Fast, Accurate, Smooth Motion

Closed Loop Stepping System
with embedded controller
based on Ethernet

"High speed short pitch motion"

Demo video

Ezi-SERVO® II Plus-E
Closed Loop Stepping System

FASTECH
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"High speed short pitch motion"

Demo video

Ezi-SERVO® II Plus-E
Closed Loop Stepping System

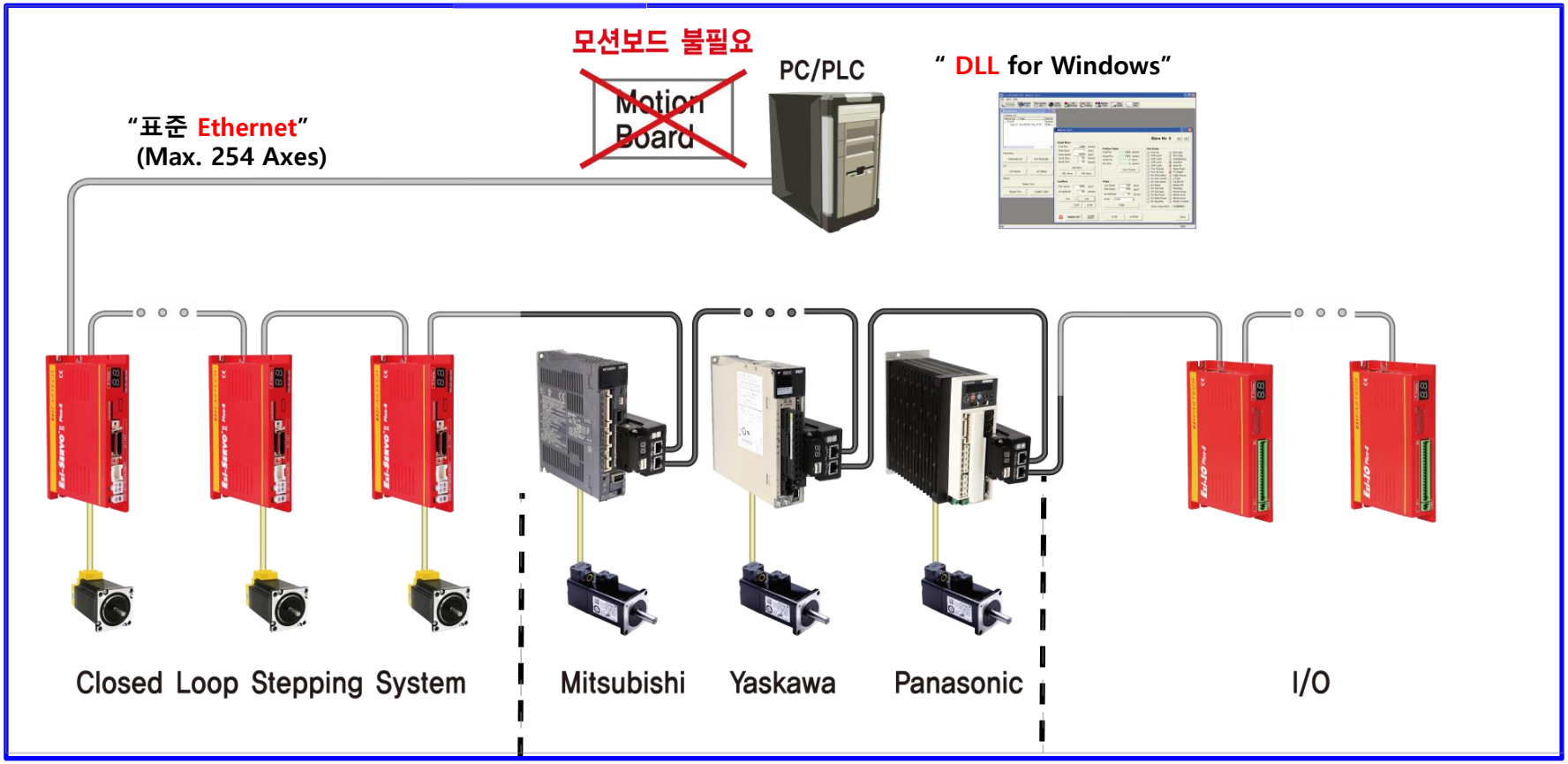
FASTECH
Fast, Accurate, Smooth Motion

Closed Loop Stepping System
with embedded controller
based on Ethernet

"Push Mode (Force control)"

제품 Concept

❖ **Step Motor+Servo Motor+I/O** 를 하나의 "Ethernet" 연결

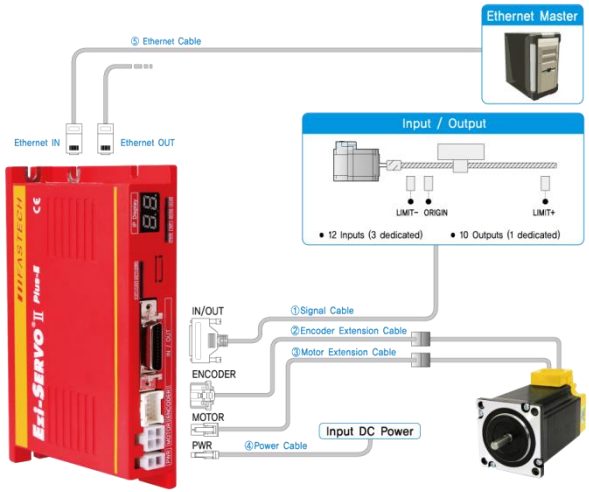


Ezi-SERVO® II Plus-E Ezi-MOTIONLINK® Plus-E Ezi-IO® Plus-E

Ezi-SERVO®
Closed Loop Stepping System

"Ethernet 기반 Closed Loop Stepping System"

- ❖ DLL and GUI Ezi-SERVO PLUS-R 100% 프로그램 호환
- ❖ 사용자 program and FASTECH GUI 동시 접속 (Plus-R 동시 접속 불가능)
- ❖ 2 Port Switching HUB embedded(100Mbps Ethernet Port)
- ❖ Ezi-SERVO, Ezi-MotionLink Plus-E 동일 Network 구성



Ezi-SERVO®
Closed Loop Stepping System

"Ethernet" 기반 1축 제어기

- 각종 AC SERVO Drive 직접 연결 (3M 50pin 커넥터 직접 연결)
- Windows Motion Library (DLL) and GUI 제공
- 사용자 program and FASTECH GUI 동시 접속 (Plus-R 동시 접속 불가능)
- 2 Port Switching HUB embedded (100Mbps Ethernet Port)
- Ezi-SERVO, Ezi-MotionLink Plus-E 동일 Network 구성

AC SERVO 3M 50 Pin
connector 직접연결

Ezi-SERVO®
Closed Loop Stepping System

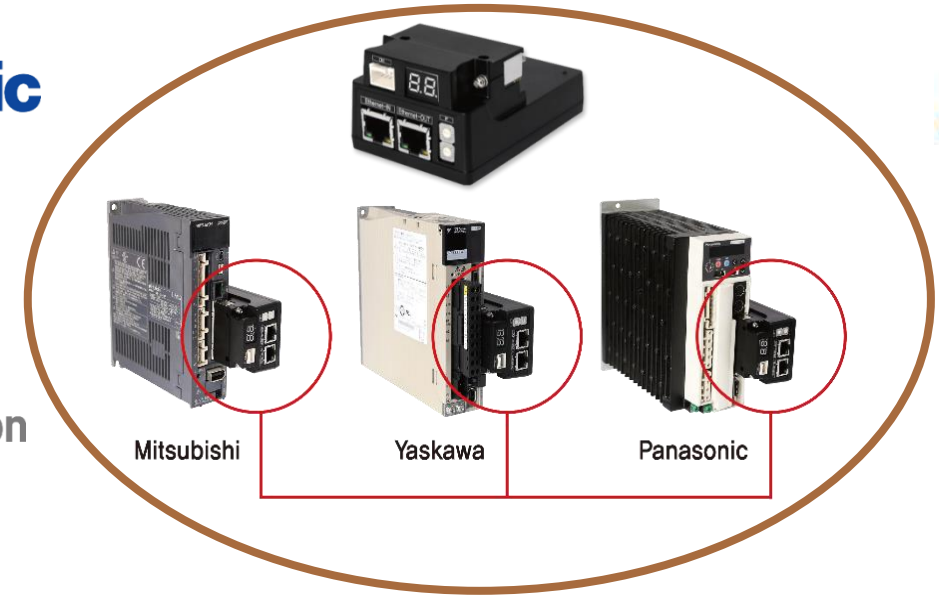
❖ 적용 가능 Servo drives

YASKAWA

MITSUBISHI ELECTRIC

Panasonic

DELTA



RS Reliable & Smart Automation

SANYO DENKI

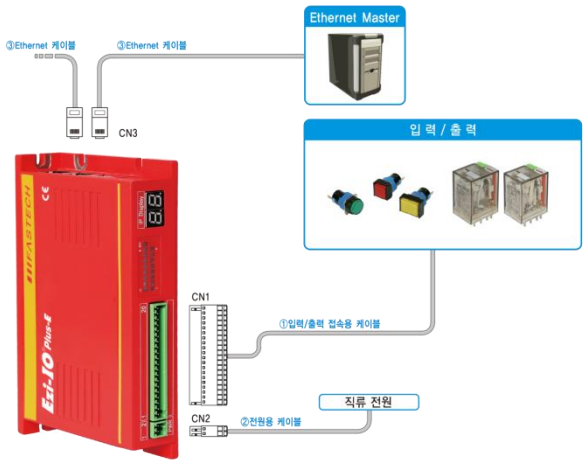
LS 메카피온

A Nidec Group Company Sankyo

Ezi-SERVO®
Closed Loop Stepping System

"Ethernet 기반 Digital Input/Output Module"

- ❖ 16 Input (Photocoupler input, Source/Sink, Latch function)
- ❖ 16 Output(Photocoupler output, FET output, Trigger output function)
- ❖ Windows Motion Library(DLL) and GUI 제공
- ❖ 사용자 program and FASTECH GUI 동시 접속 (Plus-R 동시 접속 불가능)
- ❖ 2 Port Switching HUB embedded (100Mbps Ethernet Port)
- ❖ Ezi-SERVO, Ezi-MotionLink Plus-E 동일 Network 구성



Ezi-SERVO®
Closed Loop Stepping System

Plus-E vs. Plus-E

- 통신 속도 Plus-E : Plus-R 대비 10 times
- 고객 프로그램, 파스텍 GUI 동시 접속 가능

2019 년 파스텍은 Plus E를 주력으로 판매 합니다

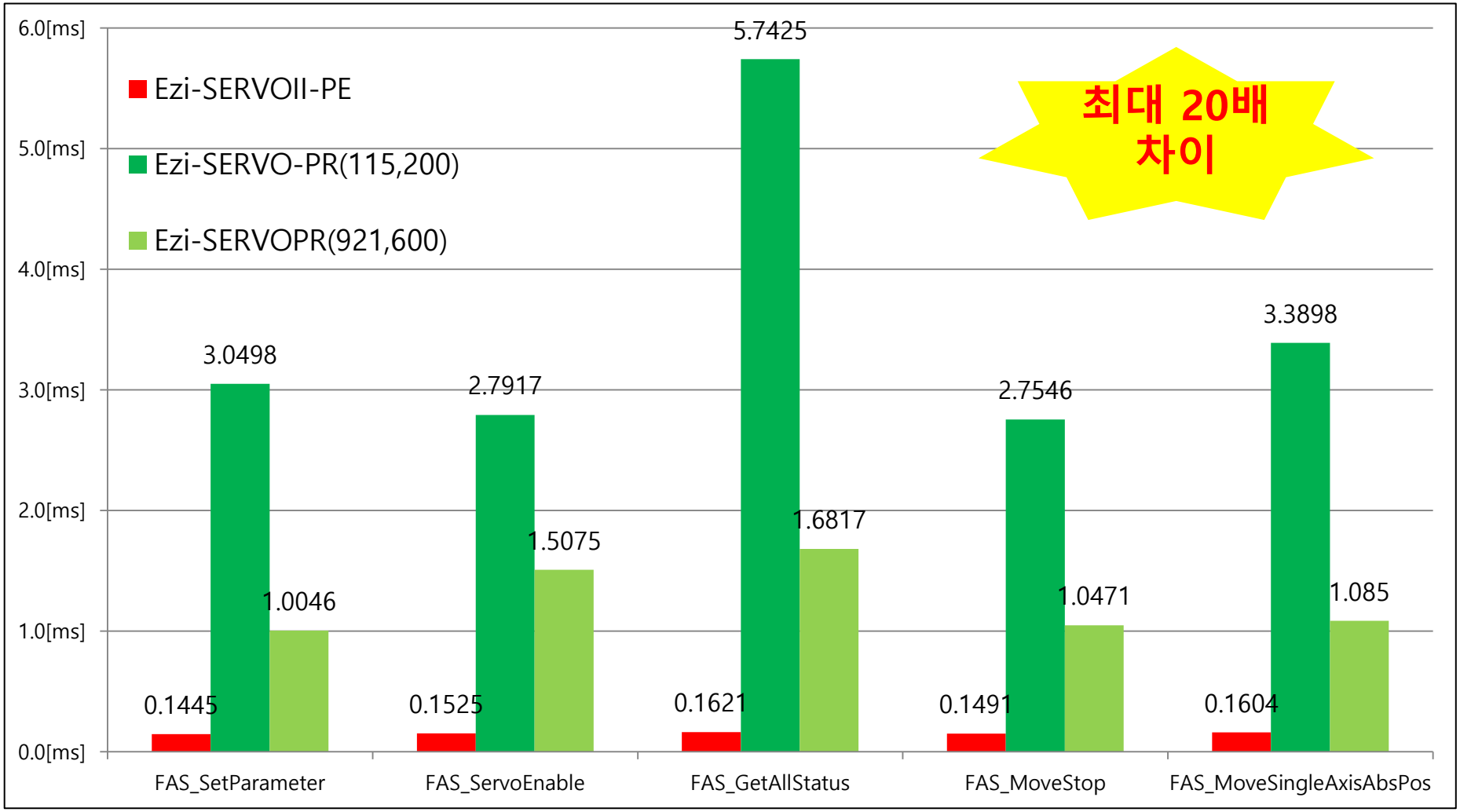
속도 비교(PE vs PR)

1. Ezi-SERVOII PE (평균): 0.156[ms] (156[us])
2. Ezi-SERVO PR
   1) 통신 속도 115,200(Average) : 3.561[ms]
   2) 통신 속도 921,600(Average) : 1.206[ms]

❖ 115,200 : FAS-RCR 사용
❖ 921,600 : PCI-1612 (ADVANTECH PCI RS485 Board) 사용

통신 속도 비교 (PE vs PR)

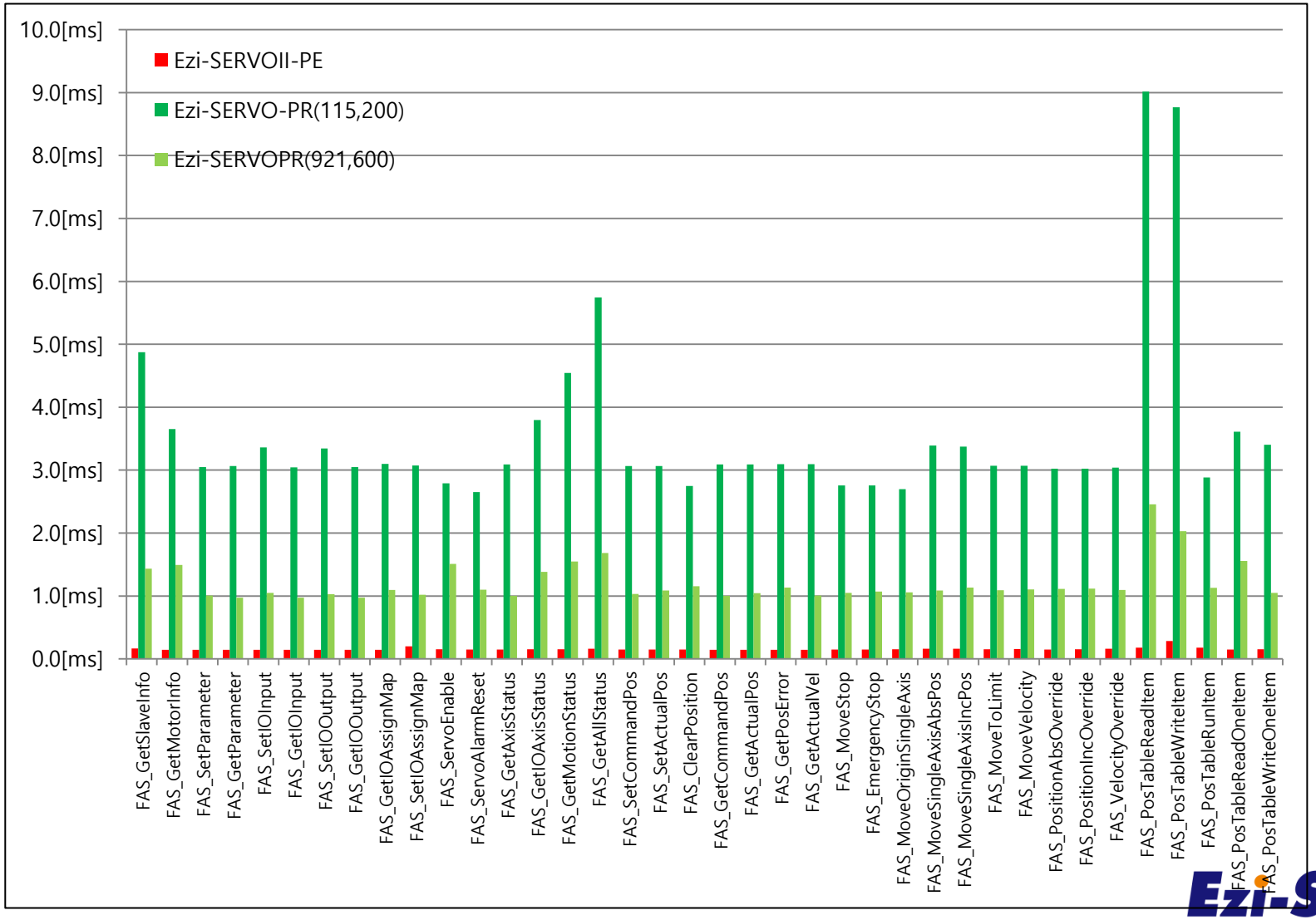
❖ **Communication speed comparison of most used commands (Average)**



Ezi-SERVO®
Closed Loop Stepping System

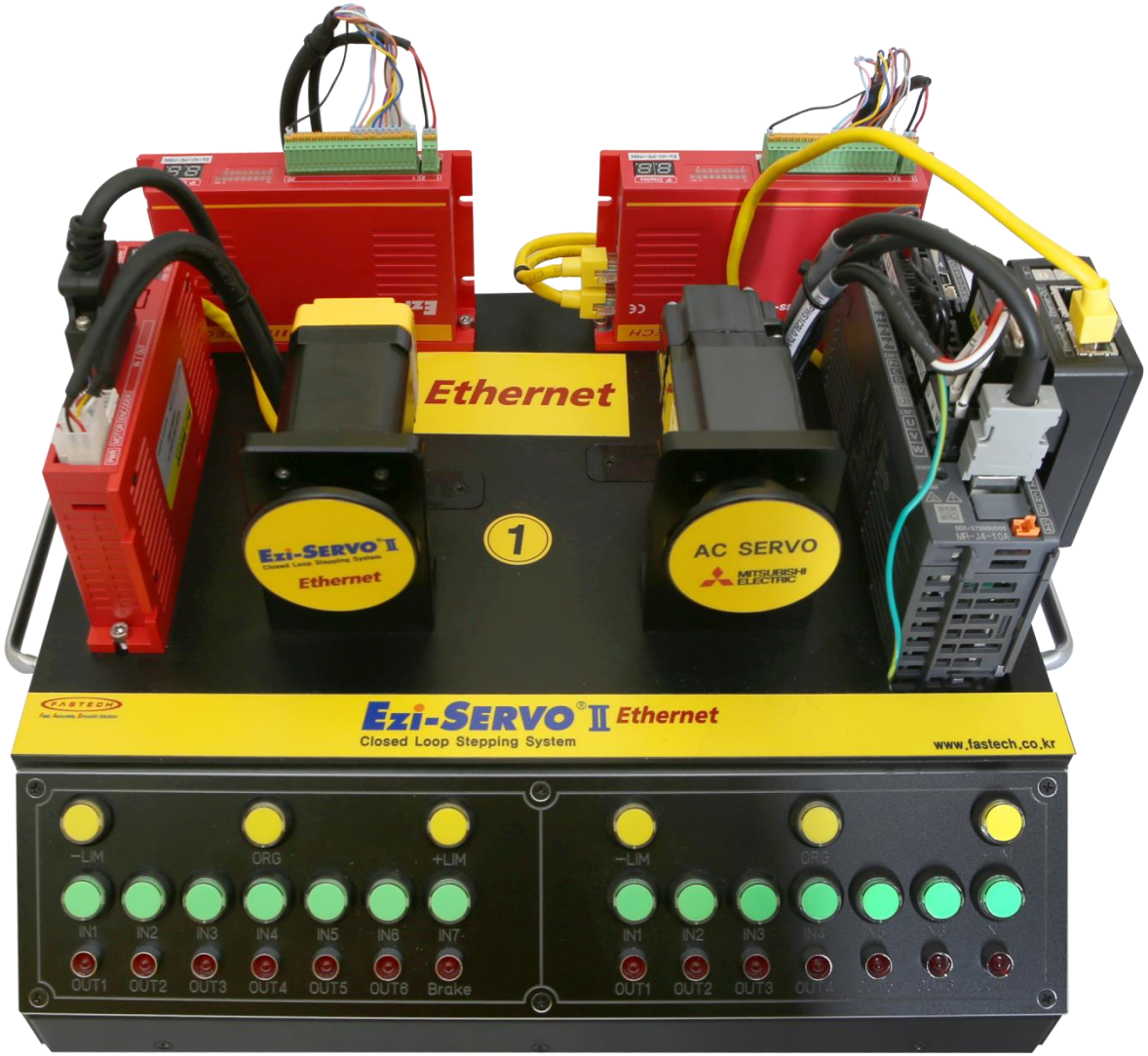
통신 속도 비교 (PE vs PR)

❖ **Communication speed comparison for total command (Average)**



EZI-SERVO®
Closed Loop Stepping System

Plus E Demo Jig



"EtherCAT" 기반
Closed Loop Stepping System

Ezi-SERVO® II
EtherCAT® Conformance tested
Closed Loop Stepping System

BECKHOFF : CX2020 BECKHOFF

Ezi-SERVO® II EtherCAT Conformance tested
Closed Loop Stepping System

FASTECH
Fast, Accurate, Smooth Motion

EtherCAT Network 기반
Closed Loop Stepping System

"EtherCAT 을 통한 32축 동기 제어"

Parker : PAC Controller

Ezi-SERVO® II EtherCAT Conformance tested
Closed Loop Stepping System

FASTECH
Fast, Accurate, Smooth Motion

EtherCAT Network기반
Closed Loop Stepping System

"EtherCAT을 통한 Hexapod 제어"

Parker : PAC Controller

Ezi-SERVO® II EtherCAT. Conformance tested
Closed Loop Stepping System

FASTECH
Fast, Accurate, Smooth Motion

EtherCAT Network기반
Closed Loop Stepping System

"EtherCAT을 통한 Delta robot 제어"

EtherCAT Conformance tested 기반 Closed Loop Stepping System

- ❖ CiA 402 Profile 지원
- ❖ Cyclic Synchronous Position Mode (CSP)
- ❖ Profile Position Mode(PP)
- ❖ Homing Mode
- ❖ Sampling Time : 0.5[msec]
- ❖ Conformance Tested (EtherCAT Technology Group)
- ❖ 주요 EtherCAT master 제품과 호환성 완료 (FASTECH 강점)

호환성 시험 완료 EtherCAT master

BECKHOFF

OMRON Industrial Automation

RS Reliable & Smart Automation

ACS MOTION CONTROL

AJINEXTEK AXT

Elmo Motion Control

COMIZOA

TRIO MOTION TECHNOLOGY

LS Mecapion

NATIONAL INSTRUMENTS

Parker

Soft Servo SYSTEMS,INC

Ezi-SERVO®
Closed Loop Stepping System

ETG 인증 Closed Loop Stepping solutions

https://www.ethercat.org/en/products.html

1 to 19 entries of 19 (filtered from 687 total entries) << < 1 > >>

	Company	Name	Type
	ACS Motion Control	PDIcI	Drive Technology – Stepper
	ACS Motion Control	PDMnt	Drive Technology – Stepper
	ACS Motion Control	SDMnt	Drive Technology – Stepper
	AUTOMATA	SMC3 Stepper Motor Controller	Drive Technology – Stepper
	BECKHOFF Automation	Stepper Motor Terminals	Drive Technology – Stepper
Cert.	Copley Controls	Stepnet Plus 1-Axis Modules	Drive Technology – Stepper
Cert.	Copley Controls	Stepnet Plus 2-Axis Modules	Drive Technology – Stepper
Cert.	Copley Controls	Stepnet Plus 2-Axis Panel Mount	Drive Technology – Stepper
Cert.	COSMOTECHS	CTDR-0514ES-4L	Drive Technology – Stepper
Cert.	FASTECH	Ezi-SERVO2 EtherCAT	Drive Technology – Stepper
Cert.	Hivertec	HES-M400	Drive Technology – Stepper
	IAI	EtherCAT Field Network Controllers PCON-CA/CFA	Drive Technology – Stepper
	Kendrion Kuhnke Automation	Kuhnke FIO Drive Control Stepper / BLDC	Drive Technology – Stepper
	ORIENTAL MOTOR	Rotary Actuator DGII Series	Drive Technology – Stepper
	R.T.A.	CSD ET	Drive Technology – Stepper
	R.T.A.	Plus ET	Drive Technology – Stepper
	R.T.A.	X-Plus ET	Drive Technology – Stepper
	SANYO DENKI	SANMOTION Model No.PB	Drive Technology – Stepper

Oriental Motor
인증 통과 못함

Ezi-SERVO®
Closed Loop Stepping System

EtherCAT Conformance Test Report

Maker	EtherCAT Master	Evaluation Report	Test Manual
BECKHOFF	CX2020	[TRTEC]Ezi-SERVO2 EtherCAT Evaluation Report_ENG.pdf	160421_[Manual]_Ezi-SERVOII_EC TwinCAT_ENG.pdf
ACS MOTION CONTROL	SPiiPlusEC	Fastech Ezi-Servo2 Qualification Report_ACS.pdf	160411_[Manual]_Ezi-SERVOII_EC ACS_ENG.pdf
OMRON Industrial Automation	NJ501-1320	Ezi-SERVO2 EtherCAT Evaluation Repeat_ENG(OBK.pdf	EziServo_A.pdf
TRIO MOTION TECHNOLOGY	MC4N	160115_Ezi-SERVO2 EtherCAT Evaluation Report_TRIO.pdf	160406_[Manual]_Ezi-SERVOII_EC Trio-MC4N_ENG.pdf
Elmo Motion Control	Gold Maestro	[illegible]	160408_[Manual]_Ezi-SERVOII_EC Elmo Maestro_ENG.pdf
Parker	PAC	Ezi-SERVO2 EtherCAT Evaulation Report_Parker PAC.pdf	160421_[Manual]_Ezi-SERVOII-EC Parker PAC_ENG.pdf
Soft Servo SYSTEMS,INC	WMX	160303_Ezi-SERVO2 EtherCAT Evaluation Report_Soft Servo Korea_eng.pdf	160404_[Manual]_Ezi-SERVOII_EC SoftServo_ENG.pdf
NATIONAL INSTRUMENTS	NI CompactRIO-903x	160303_Ezi-SERVO2 EtherCAT Evaulation Report_NI Korea eng.pdf	X
CONTEC	CPS-PC341EC-1	160613_Ezi-SERVO2 EtherCAT Evaulation Report_CONTEC.pdf	[illegible]
ADVANTECH	PCI-1203	160218_Ezi-SERVO2 EtherCAT Evaluation Report_Advantech.pdf	160204_[Manual]_Ezi-SERVOII_EC Advantech_ENG.pdf
ROBOX motion control	µRMC2	160121_Ezi-SERVO2 EtherCAT Evaulation Repeat_Robox.pdf	X
LS Mecapion	MXP V2.0	160219_Ezi-SERVO2 EtherCAT Evaulation Repeat_KOR LS_Mecapion_eng.pdf	160408_[Manual]_Ezi-SERVOII_EC LS Mecapion MXP_ENG.pdf

EtherCAT Demo Jig

- Input Signal Functions
  - 3 dedicated inputs ; Limit+、Limit-、Origin
  - 7 user inputs

- Output Signal Functions
  - 2 dedicated outputs ; Brake+、Brake-
  - 6 user outputs

Limit+,-

Origin

7 user inputs

Brake(no need to test)

6 user outputs

Ezi-SERVO®
Closed Loop Stepping System

Parker : PAC Controller

Parker

Ezi-SERVO® II EtherCAT. Conformance tested
Closed Loop Stepping System

FASTECH
Fast, Accurate, Smooth Motion

Closed Loop Stepping System
based on EtherCAT

"Delta robot control
through EtherCAT!!"

BECKHOFF : CX2020 BECKHOFF

Ezi-SERVO® II EtherCAT Conformance tested
Closed Loop Stepping System

FASTECH
Fast, Accurate, Smooth Motion

Closed Loop Stepping System
based on EtherCAT

"IGUS 3 Axis Cantilever
Robot Control"

ACS Controller + EtherCAT ALL

Ezi-SERVO® II EtherCAT Conformance tested
Closed Loop Stepping System

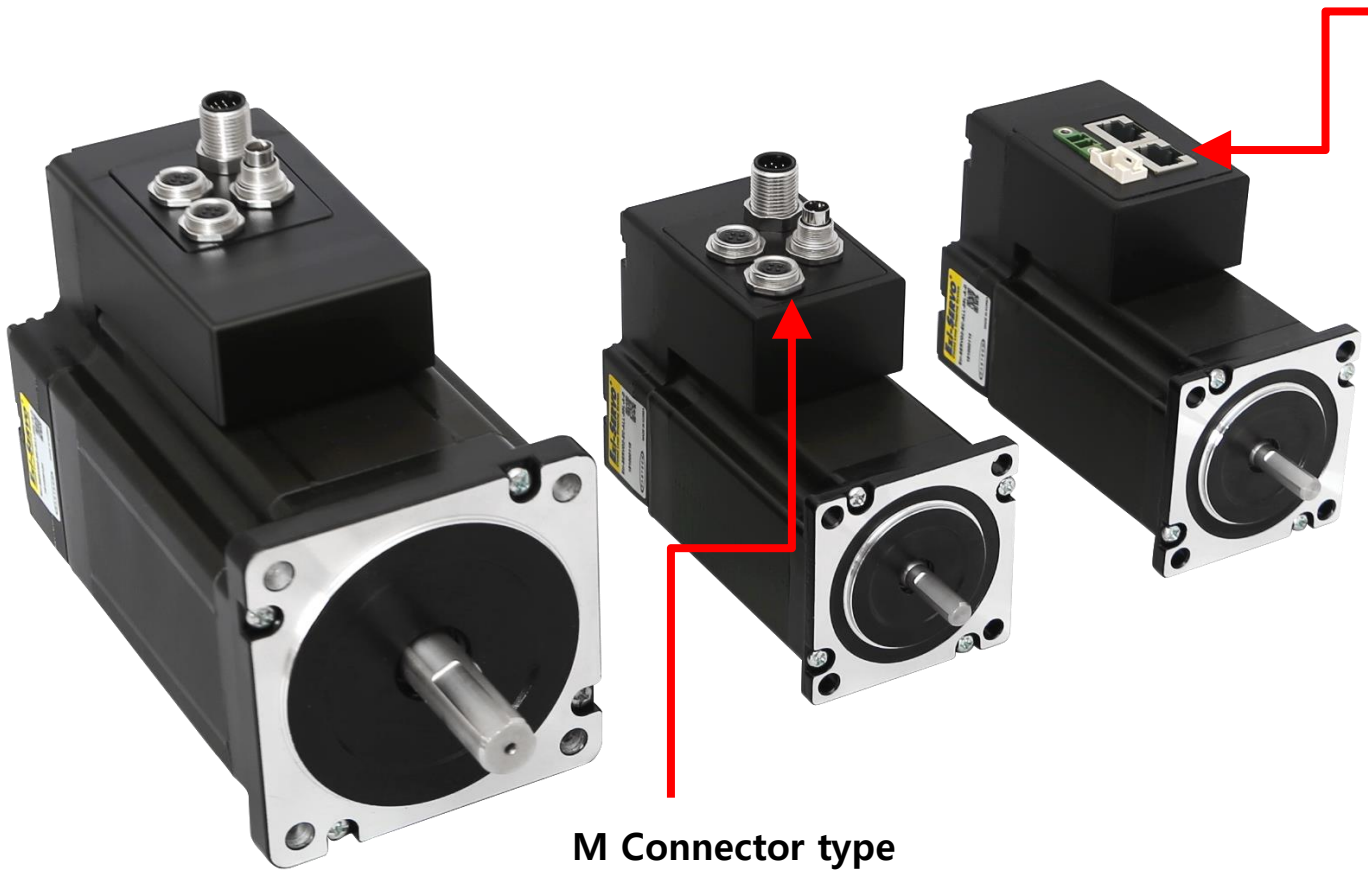
FASTECH
Fast, Accurate, Smooth Motion

Closed Loop Stepping System
based on EtherCAT

"FESTO 4 axes Cantilever Robot
Control based on EtherCAT"

Ezi-SERVOII EtherCAT ALL

- ❖ M Connector type / RJ-45 Connector type
- ❖ Motor + Encoder + Drive + Controller + EtherCAT
- ❖ 42, 56, 60[mm] Motor size



Omron Controller + EtherCAT 4X

Ezi-SERVO® II EtherCAT Conformance tested
Closed Loop Stepping System

FASTECH
Fast, Accurate, Smooth Motion

Closed Loop Stepping System
based on EtherCAT

"Multi-joint RoboLink"

Ezi-SERVOII EtherCAT 4 Axes drive

- ❖ Rail Mount Type
- ❖ 각 drive 고유 ID
- ❖ 20 ~ 60[mm]

Ezi-SERVO®
Closed Loop Stepping System

SSK Controller + EtherCAT IO

Ezi-IO® EtherCAT
Input/Output Module

FASTECH
Fast, Accurate, Smooth Motion

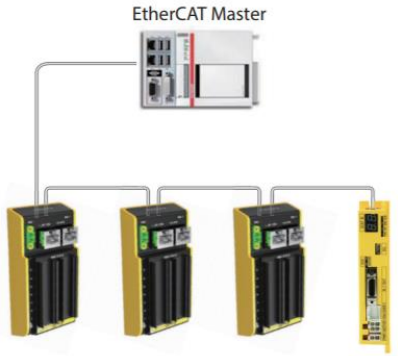
I/O Module based on EtherCAT

"2 axes and I/O Module Control through EtherCAT"

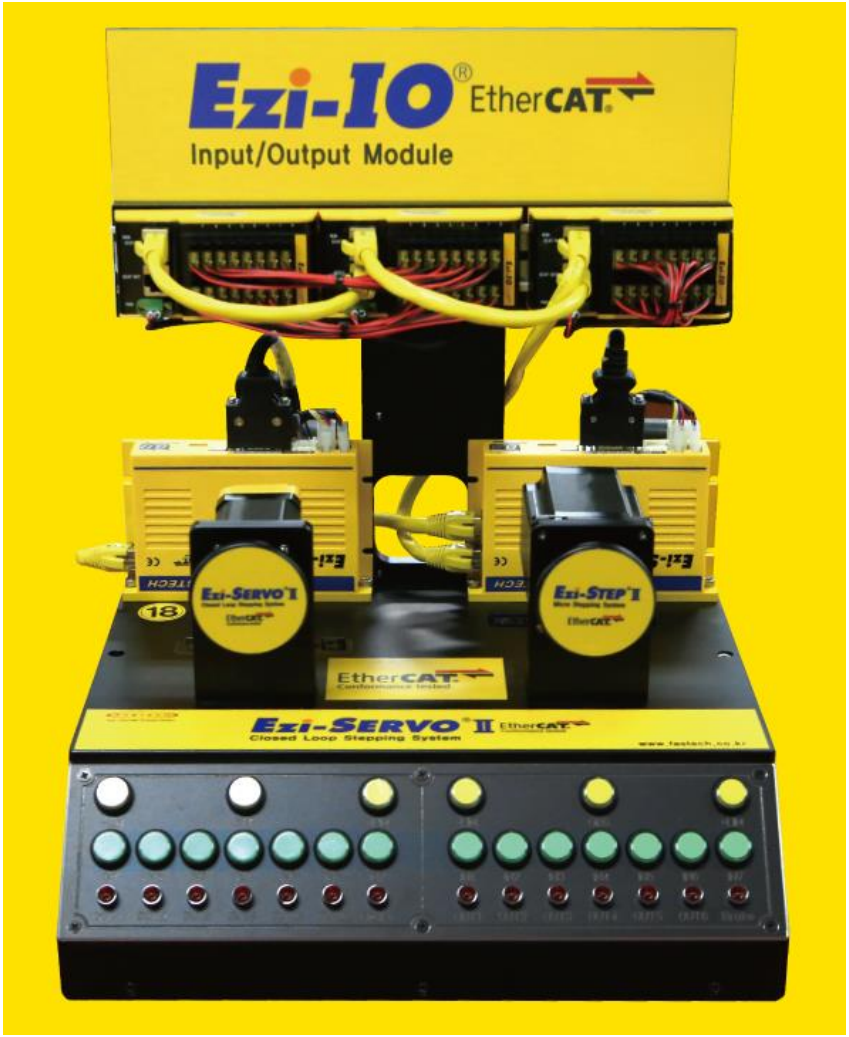
Ezi-SERVO®
Closed Loop Stepping System

Ezi-IO EtherCAT

- ❖ EtherCAT 기반 Digital I/O Module
- ❖ Using Standard e-CON connector
- ❖ 16 Input, 16 Output, 8 Input/8 Output
- ❖ NPN/PNP type



EtherCAT IO Demo Jig



ALL type
Closed Loop Stepping System

Ezi-SERVO® ALL
Closed Loop Stepping System

Ezi-SERVO ALL 28 Demo video

Ezi-SERVO® ALL
Closed Loop Stepping System

FASTECH
Fast, Accurate, Smooth Motion

RS-485 타입 제어기 내장형
Closed Loop Stepping System

"3축 초소형 고속 단핏치 모션"

Ezi-SERVO ALL 28

- 28[mm]
- Motor + Encoder + Drive + Controller + RS-485
- 16,000 [ppr] Encoder resolution

Integrated motor and drive
Closed Loop Stepping System

Ezi-SERVO® II BT
Closed Loop Stepping System

Ezi-SERVOII BT Demo video

Ezi-SERVO® II BT
Closed Loop Stepping System

FASTECH
Fast, Accurate, Smooth Motion

펄스 입력 타입 모터 +
엔코더 + 드라이브 일체형

Closed Loop Stepping System

"고속 단핏치 모션"

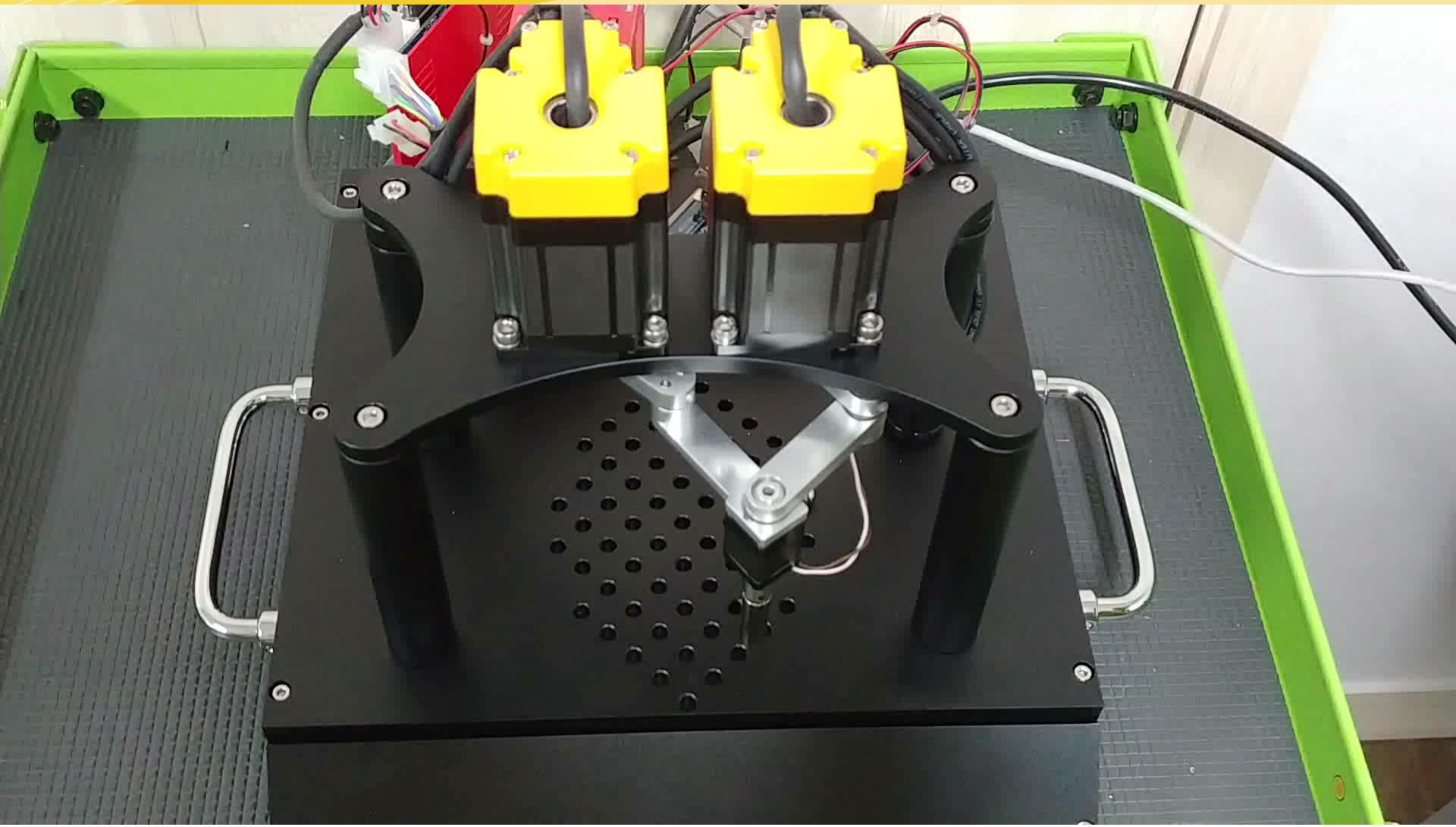
Ezi-SERVOII BT

- 42, 56, 60[mm]
- Motor + Encoder + Drive
- Pulse/Direction type
- 10,000, 20,000 [ppr] Encoder resolution

Ezi-SERVO®
Closed Loop Stepping System

Hollow Shaft Motor
Closed Loop Stepping System

Ezi-SERVO Hollow Motor



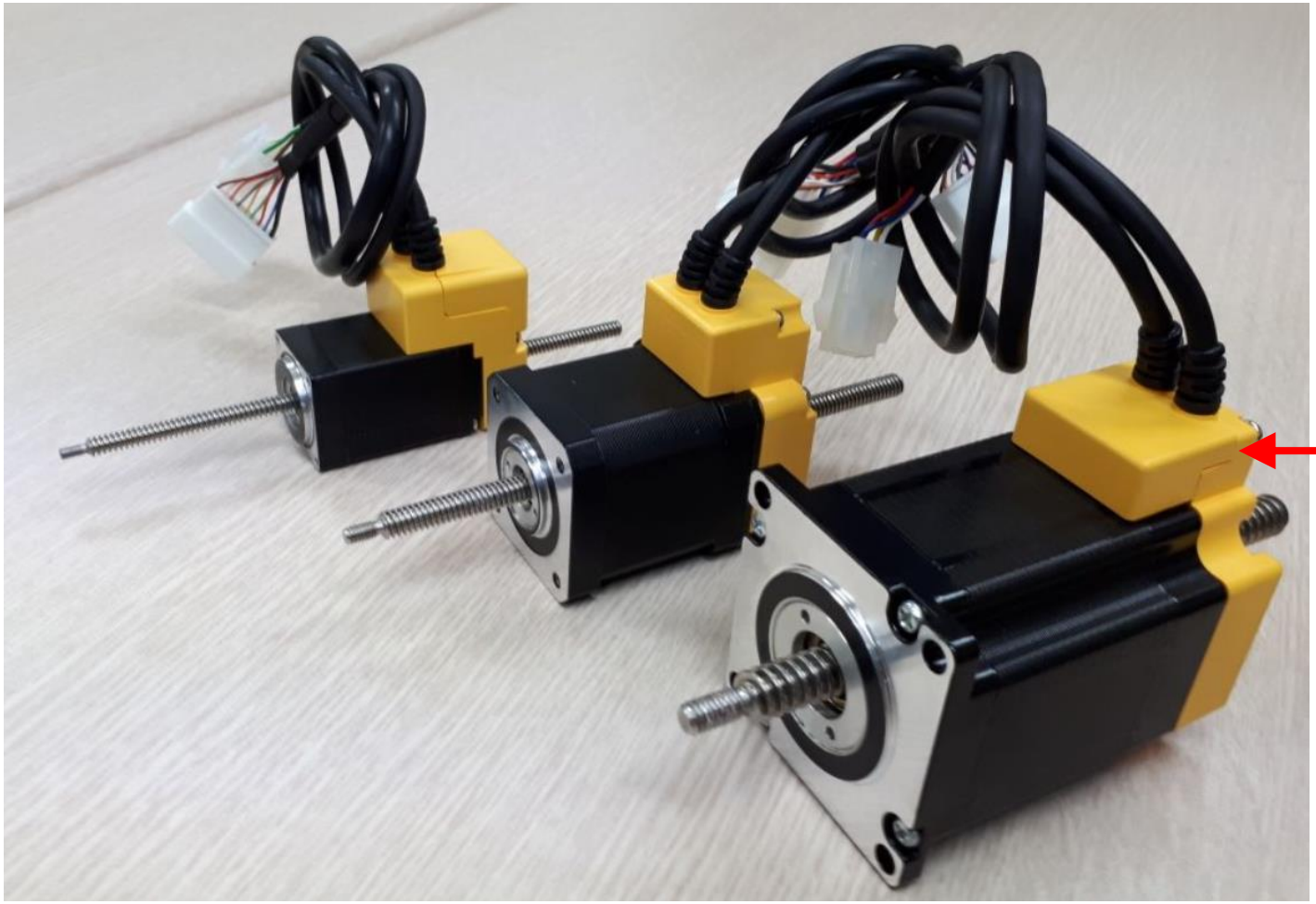
Hollow Shaft Stepper Motor

- ❖ 20~86[mm] Motor size
- ❖ S, M(1 stack, 2 stack)

Encoder type
28~86[mm]

Encoder Mounted Non-Captive Linearstep

- 28, 42, 56[mm] Motor size
- 10,000[ppr]



Encoder Mounted Kaptive Linearstep

- ❖ 28~86[mm] Motor size
- ❖ 10,000[ppr]

"CC-Link" based
Closed Loop Stepping System

Ezi-SERVO® II CC-Link
Closed Loop Stepping System

Demo video

FESTO

FASTECH
Fast, Accurate, Smooth Motion

CC-Link Network 기반
Closed Loop Stepping System

"CC-Link 를 통한
FESTO H-Portal 고속 단핏치 모션"

Demo video

Ezi-SERVO® II CC-Link
Closed Loop Stepping System

FASTECH
Fast, Accurate, Smooth Motion

CC-Link 타입 제어기 내장형
Closed Loop Stepping System

"8축 고속 단핏치 모션"

"CC-Link 기반 Closed Loop Stepping System"

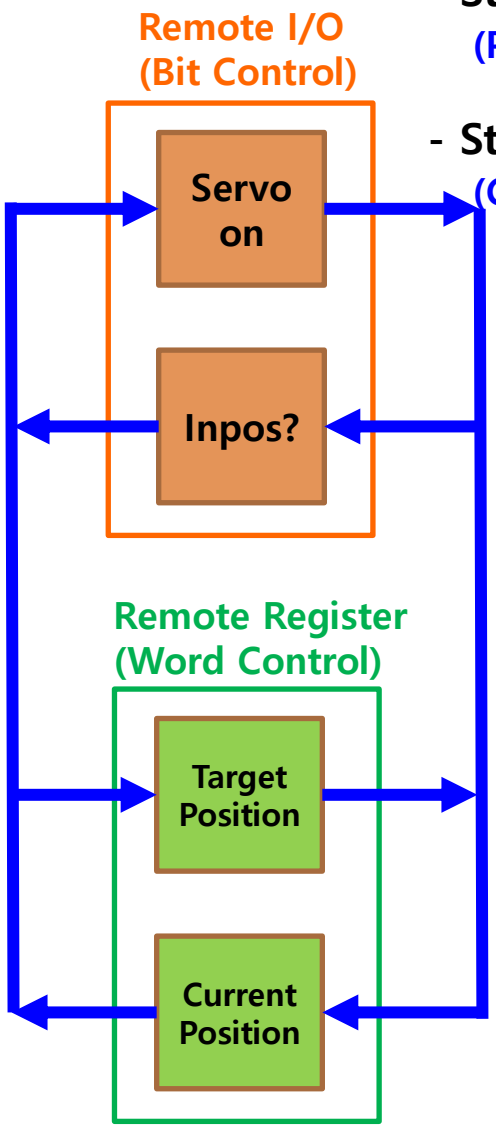
- ❖ 100% Mitsubishi PLC 호환 (CC-Link 1.0 support)
- ❖ 원격 Device station (Station #1~#2 점유)
- ❖ CC-Link network 로 Operation command setting and 데이터 읽기/쓰기
- ❖ 정밀 위치 제어 (고정도 encoder)
- ❖ Boost current control(Max 150%) Torque 증대
- ❖ 간편 배선

Remote Device

- 원격 Device (Bit,Word)
- Station #1 or #2 점유 (Memory allocation)

- Station #1 : 32bit I/O[0 ~ 1F] 4 word
  (Position Table 에 의한 동작)
- Station #2 : 64bit I/O[0 ~ 3F] 8word
  (Communication command에 의한 동작)

CC-Link Controller



Ezi-SERVO II CC-Link
Closed Loop Stepping System

Station #1 : 42 axis
Station #2 : 32 axis

Ezi-SERVO®
Closed Loop Stepping System

Remote Device MAP

1 국 점유 I/O Device Map

RY	Output Device Name	RX	Input Device Name
RY00	Servo Enable	RX00	Servo Enabled
RY01	/Emergency Stop	RX01	Emergency Stopped
RY02	ALARM RESET	RX02	ALARM Status
RY03	Homing Start	RX03	Homing
RY04	JOG +	RX04	Homing OK
RY05	JOG -	RX05	Jog Response
RY06	Step + Move	RX06	Step Move Response
RY07	Step - Move	RX07	In-Position
RY08	STOP	RX08	MOTIONING
RY09	HOLD	RX09	Hold status
RY0A	Go Zero Position	RX0A	Go Zero Position Resp.
RY0B	PT Start	RX0B	PT Running
RY0C	Single PT Select	RX0C	Single PT Select Resp.
RY0D	-	RX0D	Command Set Resp.
RY0E	Command Set	RX0E	Warning
RY0F	Motion / Setting	RX0F	Motion / Setting Resp.
RY10 ~ RY13	Step Move Position (1~10) BCD data (Parameter : Multiple of Pn#B030)	RX10 ~ RX13	Step Move Position Resp. (1~10) BCD data The square of X 10(Parameter value)
RY14 ~ RY17	Monitor code(Motion) PT Command (Teaching)	RX14 ~ RX17	Monitor code(Motion Mode) Data Code (Setting Mode) Response
RY18 ~ RY1B	Command Code	RX18 ~ RX1B	Command Code Resp.
RY1C	Cyclic Transmission Signals	RX1C	Cyclic Transmission Signals
RY1D		RX1D	CC-Link Scanning
RY1E	RS-485 Port Connect	RX1E	RS-485 Port Connect Resp.
RY1F		RX1F	RS-485 Port Connection State
RWw		RWw	
RWw0 RWw1	Operation speed (Position Move, JOG Move)	RWw0 RWw1	Monitor response data(Motion) Response data(Setting)
RWw2	PT No. / Parameter Code	RWw2	PT No. / Parameter Code Resp.
RWw3		RWw3	Warning Code

2 국 점유 I/O Device Map

RY	Output Device Name	RX	Input Device Name
RX20		RX20	H/W Limit +
RX21		RX21	H/W Limit -
RX22		RX22	Org Sensor
RX23		RX23	Input Pin 1
RX24		RX24	Input Pin 2
RX25		RX25	Input Pin 3
RX26		RX26	Input Pin 4
RX27		RX27	Input Pin 5
RX28		RX28	Input Pin 6
RX29		RX29	Input Pin 7
RX2A	User Output 1	RX2A	Output Pin 1
RX2B	User Output 2	RX2B	Output Pin 2
RX2C	User Output 3	RX2C	Output Pin 3
RX2D	User Output 4	RX2D	Output Pin 4
RX2E	User Output 5	RX2E	Output Pin 5
RX2F	User Output 6	RX2F	Output Pin 6
RX30	ABS Position Move	RX30	ABS Position Move Resp.
RX31	INC Position Move	RX31	INC Position Move Resp.
RX32		RX32	
RX33		RX33	Motion Accel
RX34	Position Override	RX34	Motion Decel
RX35		RX35	Z Phase
RX36	Position Move Speed Override	RX36	S/W Limit +
RX37		RX37	S/W Limit -
RX38 ~ RX3B	Monitor code(2)	RX38 ~ RX3B	Monitor code (2) Response
RX3C ~ RX3F	Monitor code(3)	RX3C ~ RX3F	Monitor code (3) Response
RWw		RWw	
RWw0 RWw1	Position value (ABS Move, INC Move Pos)	RWw0 RWw1	Monitor response data(2)
RWw2	Accel Time (ABS Move, INC Move Pos)	RWw2 RWw3	Monitor response data(3)
RWw3	Decel Time (ABS Move, INC Move Pos)		

CC-Link Demo Jig

FASTECH

Fast, Accurate, Smooth Motion Control

"AC input BLDC motor speed control system"

Ezi-SPEED®

BLDC Motor Speed Control System

Ezi-SERVO®

Closed Loop Stepping System

Ezi-SPEED®
BLDC Motor Speed Control System

Ezi-SPEED®
BLDC Motor Speed Control System

FASTECH
Fast, Accurate, Smooth Motion

BLDC Motor Speed Control System

"Ezi-SPEED와 AC 인덕션 모터 비교"

Ezi-SERVO®
Closed Loop Stepping System

Ezi-SPEED®
BLDC Motor Speed Control System

FASTECH
Fast, Accurate, Smooth Motion

BLDC Motor Speed Control System

"Ezi-SPEED 를 이용한 2단 변속 검사 라인 컨베이어"

Ezi-SPEED®
BLDC Motor Speed Control System

FASTECH
Fast, Accurate, Smooth Motion

BLDC Motor Speed Control System

"Agitator DEMO with Ezi-SPEED"

Ezi-SPEED®
BLDC Motor Speed Control System

FASTECH
Fast, Accurate, Smooth Motion

BLDC Motor Speed Control System

"Ezi-SPEED DATA 모드를 이용한 8속 운전"

Ezi-SERVO®
Closed Loop Stepping System

Ezi-SPEED®
BLDC Motor Speed Control System

FASTECH에서 새로이 선보이는 속도제어 시스템!!

- 드라이브 + BLDC motor + Gearhead (option)

❖ AC input BLDC motor speed control system (Full Digital)

❖ 간단 속도 제어, 간단 접속 가능

❖ 최고 속도 : 4,000rpm

❖ 안정된 속도 제어 : 속도 변동률 0.2% 이하

❖ 높은 속도비 : 1:80 (50~4,000rpm)

❖ 8단 속도 변경 가능

❖ 30W, 60W, 120W, 200W, 400W line-up

❖ 원가 절감 : 경쟁사 대비 약 30% 절감 가능

Ezi-SERVO®
Closed Loop Stepping System

Ezi-SPEED Demo Jig

Ezi-SERVO®
Closed Loop Stepping System

우리는 40년 Stepping Motor의 역사를 바꾸는 주인공입니다!!

Ezi-SERVO®
Closed Loop Stepping System