

Accelerating the construction of smart factories with

# CC-Link*IE* TSN

## Supported Products Lineup



**Ezi-STEP** CC-LinkIE TSN  
Micro Stepping System



**Ezi-SERVO** CC-LinkIE TSN  
Closed Loop Stepping System



**Ezi-SERVO** CC-LinkIE TSN  
Closed Loop Stepping System **ALL**



**Ezi-SPEED** CC-LinkIE TSN  
BLDC Motor Speed Control System



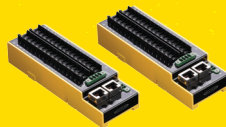
**Ezi-SERVO** CC-LinkIE TSN  
Closed Loop Stepping System **4X**



**Ezi-Pos** CC-LinkIE TSN  
Servo Control System



**Ezi-ROBO** CC-LinkIE TSN  
Precise Actuator System **IGH**



**Ezi-IO** CC-LinkIE TSN  
Network Input/Output **DIO**



**Ezi-ROBO** CC-LinkIE TSN  
Precise Actuator System **VZR**

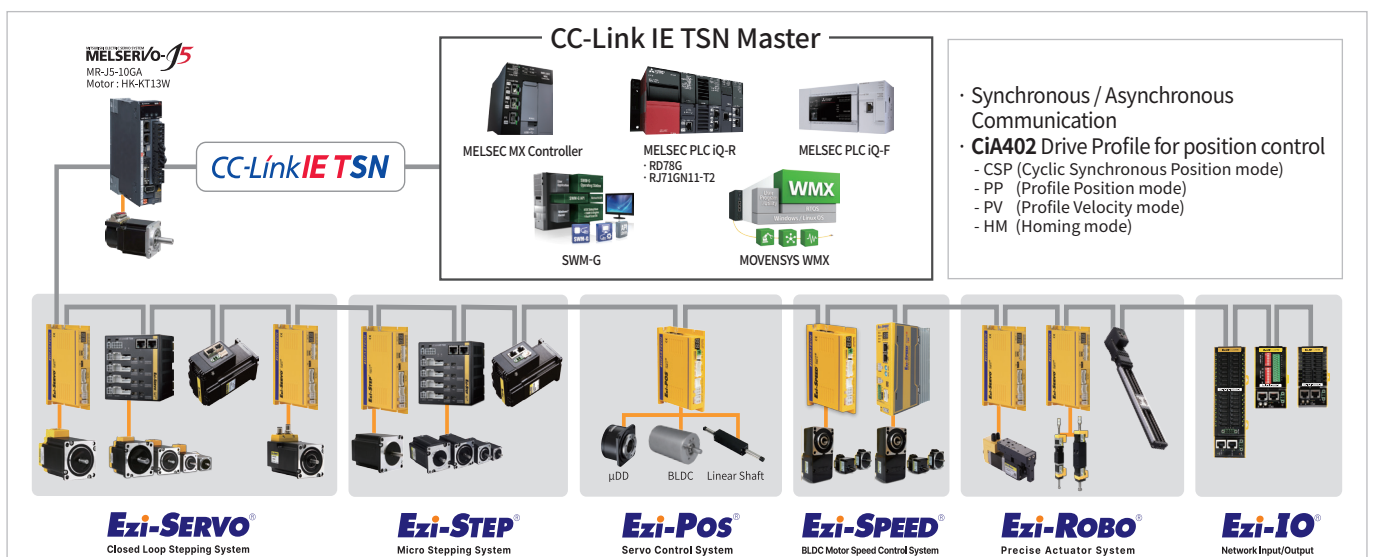


Fast Accurate Smooth Motion

## FASTTECH Brand Introduction

Series	Feature
 <b>Ezi-SERVO®</b> Closed Loop Stepping System	<ul style="list-style-type: none"> <li>• Closed Loop Stepping System</li> <li>• Compatible with Field Networks (EtherCAT, CC-Link IE TSN, Ethernet, PROFINET)</li> <li>• Tuning Not Required, No Hunting</li> <li>• High Resolution Encoder(4,000 ~ 20,000 P/R), Fast Response</li> <li>• Low Heat Generation, High Torque</li> <li>• Drive Line-up (Field Network &amp; Pulse Input Drive, Standard, Mini, Multi-axes &amp; Motor+Drive Integrated type)</li> <li>• Motor Line-up (□20 mm ~ □86 mm, Incremental &amp; Batteryless Absolute Encoder)</li> <li>• Options (Brake, Gearbox)</li> </ul>
 <b>Ezi-STEP®</b> Micro Stepping System	<ul style="list-style-type: none"> <li>• Microstepping System</li> <li>• Compatible with Field Networks (EtherCAT, CC-Link IE TSN, Ethernet, PROFINET)</li> <li>• Software Damping (Resonance &amp; Vibration Suppression)</li> <li>• High Torque</li> <li>• Drive Line-up (Field Network &amp; Pulse Input Drive, Standard, Mini, Multi-axes &amp; Motor+Drive Integrated type)</li> <li>• Motor Line-up (□20 mm ~ □86 mm)</li> <li>• Options (Brake)</li> </ul>
 <b>Ezi-Pos®</b> Servo Control System	<ul style="list-style-type: none"> <li>• Low-Voltage Servo Control System</li> <li>• Compatible with Field Networks (EtherCAT, CC-Link IE TSN, Ethernet, PROFINET)</li> <li>• DC Power Supply Input (12 ~ 48 V DC)</li> <li>• Auto-tuning</li> <li>• Torque-Off Function</li> <li>• Various Motor Options (BLDC Motor, Servo Motor, Linear Motor, VCM, etc)</li> <li>• Various Position Sensor Options (Incremental/Absolute Encoders)</li> </ul>
 <b>Ezi-SPEED®</b> BLDC Motor Speed Control System	<ul style="list-style-type: none"> <li>• BLDC Motor Speed Control System</li> <li>• Compatible with Field Networks (EtherCAT, CC-Link IE TSN, Ethernet, PROFINET, Modbus-RTU, Modbus-TCP)</li> <li>• Power supply input (200 ~ 240 V AC, 12 ~ 48 V DC)</li> <li>• Compact · Light Weight · High Power · High Efficiency Brushless Motor</li> <li>• Wide Speed Range (50 ~ 4,000 r/min)</li> <li>• Stable Speed Regulation (±0.2 %)</li> <li>• BLDC Motor Line-up (30, 60, 120, 200, 400 W)</li> </ul>
 <b>Ezi-ROBO®</b> Precise Actuator System	<ul style="list-style-type: none"> <li>• Precise Positioning Actuator System</li> <li>• Unit Solution Combining Ezi-SERVO + Actuator</li> <li>• Actuator Line-up (Compact Linear Actuator, Integrated guide-rail actuator, Vacuum Linear Rotary actuator, Hollow Rotary Table)</li> <li>• Compatible with Field Networks (EtherCAT, CC-Link IE TSN, Ethernet, PROFINET, Pulse Input)</li> </ul>
 <b>Ezi-IO®</b> Network Input/Output	<ul style="list-style-type: none"> <li>• Remote Input/Output Modules               <ul style="list-style-type: none"> <li>- DIO(Digital Input/Output) Series</li> <li>- AD(Analog-to-Digital Converter) Series</li> <li>- DA(Digital-to-Analog Converter) Series</li> <li>- CNT(High Speed Pulse Counter) Series</li> </ul> </li> <li>• Compatible with Field Networks (EtherCAT, CC-Link IE TSN, Ethernet, PROFINET)</li> <li>• Simple and Easy Wiring</li> <li>• DIN Rail Mounting</li> </ul>

## CC-Link IE TSN Supported Products Lineup



## ■ CC-Link IE TSN Compatible Products Lineup

Series	Product	Feature	Image
 Closed Loop Stepping System	<b>Ezi-SERVO CC-Link IE TSN</b> (Closed Loop Stepping System)	<ul style="list-style-type: none"> <li>• CC-Link IE TSN-compatible Closed Loop Stepping System</li> <li>• CiA402 Drive Profile</li> <li>• Torque-Off Function</li> <li>• Tuning Not Required, No Hunting</li> <li>• High Resolution Encoder, Fast Response</li> <li>• Low Heat Generation, High Torque</li> </ul>	 P.4
	<b>Ezi-SERVO CC-Link IE TSN ABS</b> (Closed Loop Stepping System + Batteryless Absolute Encoder)	<ul style="list-style-type: none"> <li>• CC-Link IE TSN-compatible Closed Loop Stepping System</li> <li>• CiA402 Drive Profile</li> <li>• Long Life Cycle with Electronic Battery-less Multi-turn Absolute Encoder (Multi-turn : 16 bits, Single-turn : Max. 20,000 P/R)</li> <li>• No External Sensors Required, Simple Wiring</li> <li>• No Battery Replacement Required, Easy Maintenance</li> <li>• Torque-Off Function</li> </ul>	 P.6
	<b>Ezi-SERVO CC-Link IE TSN ALL</b> (Motor + Drive Integrated Type)	<ul style="list-style-type: none"> <li>• CC-Link IE TSN-compatible Closed Loop Stepping System</li> <li>• CiA402 Drive Profile</li> <li>• Motor + Drive Integrated</li> <li>• Space Saving, Reduced Wiring</li> <li>• Tuning Not Required, No Hunting</li> <li>• High Resolution Encoder, Fast Response</li> <li>• Low Heat Generation, High Torque</li> </ul>	 P.8
	<b>Ezi-SERVO CC-Link IE TSN 4X</b> (Compact Multi Axis Drive)	<ul style="list-style-type: none"> <li>• CC-Link IE TSN-compatible Closed Loop Stepping System</li> <li>• CiA402 Drive Profile</li> <li>• Compact Multi-Axis Drive (Max. 4-Axis)</li> <li>• Space Saving, Reduced Wiring</li> <li>• Tuning Not Required, No Hunting</li> <li>• High Resolution Encoder, Fast Response</li> <li>• Low Heat Generation, High Torque</li> </ul>	 P.10
	<b>Ezi-SERVO CC-Link IE TSN 4X ABS</b> (Compact Multi Axis Drive + Batteryless Absolute Encoder)	<ul style="list-style-type: none"> <li>• CC-Link IE TSN-compatible Closed Loop Stepping System</li> <li>• CiA402 Drive Profile</li> <li>• Compact Multi-Axis Drive (Max. 4-Axis)</li> <li>• Long Life Cycle with Electronic Battery-less Multi-turn Absolute Encoder (Multi-turn : 16 bits, Single-turn : Max. 20,000 P/R)</li> <li>• No Battery Replacement Required, Easy Maintenance</li> <li>• No External Sensors Required, Simple Wiring</li> </ul>	 P.12
 Micro Stepping System	<b>Ezi-STEP CC-Link IE TSN</b> (Micro Stepping System)	<ul style="list-style-type: none"> <li>• CC-Link IE TSN-compatible Microstepping System</li> <li>• CiA402 Drive Profile</li> <li>• Torque-Off Function</li> <li>• Software Damping (Resonance &amp; Vibration Suppression)</li> <li>• High Torque</li> </ul>	 P.14
	<b>Ezi-STEP CC-Link IE TSN ALL</b> (Motor + Drive Integrated Type)	<ul style="list-style-type: none"> <li>• CC-Link IE TSN-compatible Microstepping System</li> <li>• CiA402 Drive Profile</li> <li>• Software Damping (Resonance &amp; Vibration Suppression)</li> <li>• Motor + Drive Integrated</li> <li>• Space Saving, Reduced Wiring</li> </ul>	 P.16
	<b>Ezi-STEP CC-Link IE TSN 4X</b> (Compact Multi Axis Drive)	<ul style="list-style-type: none"> <li>• CC-Link IE TSN-compatible Microstepping System</li> <li>• CiA402 Drive Profile</li> <li>• Software Damping (Resonance &amp; Vibration Suppression)</li> <li>• Compact Multi-Axis Drive (Max. 4-Axis)</li> <li>• Space Saving, Reduced Wiring</li> </ul>	 P.18
 Servo Control System	<b>Ezi-POS CC-Link IE TSN</b> (Low-Voltage Servo Control System)	<ul style="list-style-type: none"> <li>• CC-Link IE TSN-compatible Low-Voltage Servo Control System</li> <li>• CiA402 Drive Profile</li> <li>• DC Power Supply Input (12 ~ 48 V DC)</li> <li>• Auto-tuning</li> <li>• Torque-Off Function</li> <li>• Various Motor Options (BLDC Motor, Servo Motor, Linear Motor, VCM, etc)</li> <li>• Various Position Sensor Options (Incremental/Absolute Encoders)</li> </ul>	 P.20

## CC-Link IE TSN Compatible Products Lineup

Series	Product	Feature	Image
<b>Ezi-SPEED</b> BLDC Motor Speed Control System	<b>Ezi-SPEED CC-Link IE TSN DC</b> (BLDC Motor Speed Control System)	<ul style="list-style-type: none"> <li>• CC-Link IE TSN-compatible Low Voltage BLDC Motor Speed Control System</li> <li>• DC Power Input (12 ~ 48 V DC)</li> <li>• Auto-tuning</li> <li>• Wide Speed Range (50 ~ 4,000 r/min)</li> <li>• Stable Speed Regulation (<math>\pm 0.2\%</math>)</li> </ul>	 <p>P.22</p>
	<b>Ezi-SPEED CC-Link IE TSN AC</b> (BLDC Motor Speed Control System)	<ul style="list-style-type: none"> <li>• CC-Link IE TSN-compatible BLDC Motor Speed Control System</li> <li>• AC Power Supply Input (200 ~ 240 V AC)</li> <li>• Compact · Light Weight · High Power · High Efficiency Brushless Motor</li> <li>• Wide Speed Range (50 ~ 4,000 r/min)</li> <li>• Stable Speed Regulation (<math>\pm 0.2\%</math>)</li> <li>• BLDC Motor Line-up (30, 60, 120, 200, 400 W)</li> </ul>	 <p>P.24</p>
<b>Ezi-ROBO</b> Precise Actuator System	<b>Ezi-ROBO IGH</b> (Integrated Guide-rail High-rigidity Actuator)	<ul style="list-style-type: none"> <li>• Slider Type Electric Actuator with Stepping Motor &amp; Ball Screw</li> <li>• High Strength Steel Frame</li> <li>• Repeatability (<math>\pm 0.005</math> mm)</li> <li>• High Resolution Encoder (Max. 20,000 P/R)</li> <li>• Size Line-up (IGH15: 30 x 15 mm, IGH23: 50.5 x 23 mm, IGH30: 60.5 x 30 mm)</li> </ul>	 <p>P.26</p>
	<b>Ezi-ROBO IGS</b> (Integrated Guide-rail Actuator)	<ul style="list-style-type: none"> <li>• Slider Type Electric Actuator with Stepping Motor &amp; Ball Screw</li> <li>• Repeatability (<math>\pm 0.005</math> mm)</li> <li>• High Resolution Encoder (Max. 20,000 P/R)</li> <li>• Size Line-up (IGS30: 37 x 29 mm, IGS40: 42 x 38 mm, IGS50: 52 x 45 mm, IGS60: 60 x 45 mm)</li> </ul>	 <p>P.28</p>
	<b>Ezi-ROBO VZR</b> (Vacuum + Linear + Rotary Actuator)	<ul style="list-style-type: none"> <li>• Slim Actuator with Hollow Shaft Motor &amp; Ball Screw Spline</li> <li>• Vacuum(V) + Linear(Z) + Rotary(R), 3-in-1 Actuator</li> <li>• Repeatability (Z Axis: <math>\pm 0.01</math> mm / R Axis: <math>\pm 0.1^\circ</math>)</li> <li>• High Resolution Encoder (Max. 20,000 P/R)</li> <li>• Size Line-up (28 mm, 42 mm)</li> </ul>	 <p>P.30</p>
	<b>Ezi-ROBO CLA</b> (Compact Linear Actuator)	<ul style="list-style-type: none"> <li>• Compact Linear Actuator with Hollow Shaft Motor &amp; Ball Screw</li> <li>• Repeatability (<math>\pm 0.01</math> mm), Lost Motion (<math>\leq 0.05</math> mm)</li> <li>• High Resolution Encoder (Max. 20,000 P/R)</li> <li>• Size Line-up (20 mm, 28 mm, 42 mm, 56 mm)</li> </ul>	 <p>P.32</p>
	<b>Ezi-ROBO HG</b> (Hollow Rotary Index Table)	<ul style="list-style-type: none"> <li>• Hollow Rotary Index Table with Stepping Motor</li> <li>• Repeatability (<math>\pm 10</math> arcsec)</li> <li>• Hollow Diameter (Max. <math>\varnothing 85</math> mm)</li> <li>• Permissible Torque (Max. 170 N · m)</li> <li>• Axial Load (Max. 4000 N)</li> <li>• High Resolution Encoder (Max. 20,000 P/R)</li> <li>• Size Line-up (<math>\square 60</math> mm, <math>\square 100</math> mm, <math>\square 130</math> mm, <math>\square 170</math> mm)</li> </ul>	 <p>P.34</p>
<b>Ezi-IO</b> Network Input/Output	<b>Ezi-IO CC-Link IE TSN DIO</b> (Digital Input/Output Module)	<ul style="list-style-type: none"> <li>• CC-Link IE TSN-compatible Digital I/O Module</li> <li>• Input Filter Function</li> <li>• Simple and Easy Wiring</li> <li>• DIN Rail Mounting</li> </ul>	 <p>P.36</p>
	<b>Ezi-IO CC-Link IE TSN AD</b> (Analog Input Module)	<ul style="list-style-type: none"> <li>• CC-Link IE TSN-compatible Analog Input Module</li> <li>• Configurable Input Mode and Input Range</li> <li>• Moving Average Filtering</li> <li>• Simple and Easy Wiring</li> <li>• DIN Rail Mounting</li> </ul>	 <p>P.38</p>
	<b>Ezi-IO CC-Link IE TSN DA</b> (Analog Output Module)	<ul style="list-style-type: none"> <li>• CC-Link IE TSN-compatible Analog Output Module</li> <li>• Configurable Output Range</li> <li>• Calibration for Output Deviation</li> <li>• Simple and Easy Wiring</li> <li>• DIN Rail Mounting</li> </ul>	 <p>P.40</p>
	<b>Ezi-IO CC-Link IE TSN CNT</b> (High Speed Counter Module)	<ul style="list-style-type: none"> <li>• CC-Link IE TSN-compatible High Speed Counter Module</li> <li>• Line Receiver and DC Input Type Provided</li> <li>• Comparison Output Function</li> <li>• Simple and Easy Wiring</li> <li>• DIN Rail Mounting</li> </ul>	 <p>P.42</p>

# Ezi-SERVO<sup>®</sup> CC-Link IE TSN

## Closed Loop Stepping System

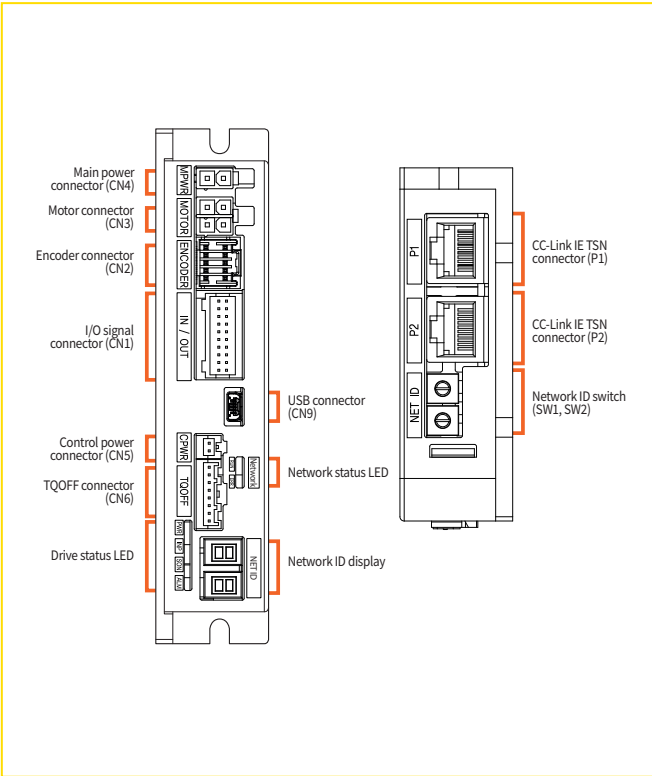
- CC-Link IE TSN-compatible Closed Loop Stepping System
- CiA402 Drive Profile
- Torque-Off Function
- Tuning Not Required, No Hunting
- High Resolution Encoder, Fast Response
- Low Heat Generation, High Torque



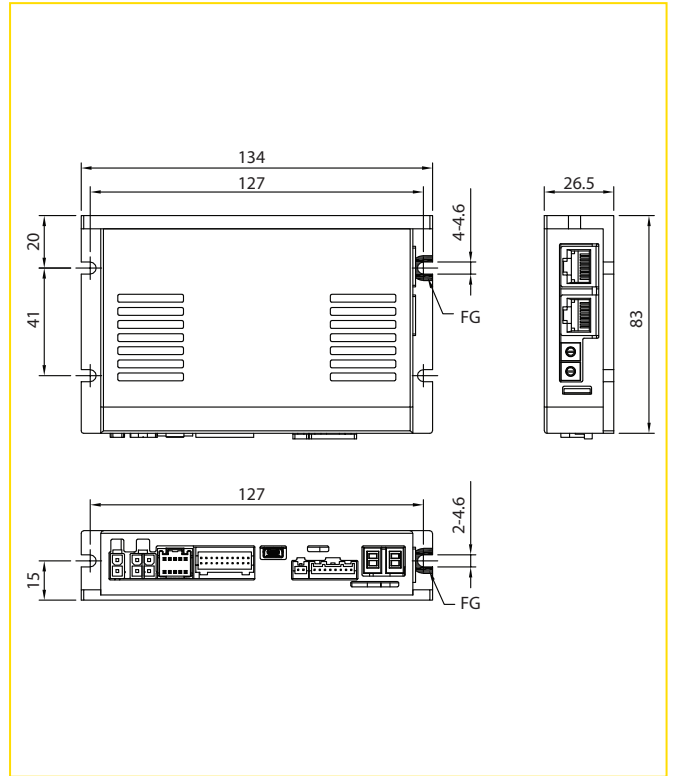
### ■ Specifications

Model		Ezi-SERVO-CT
Main Power Supply		24 V DC $\pm$ 10 %
Control Power Supply		24 V DC $\pm$ 10 %
Speed Control Range		0 ~ 3,000 r/min
Encoder Resolution [P/R]		4,000 / 10,000 / 16,000 / 20,000
Digital Input		3 dedicated inputs (LIMIT+, LIMIT-, ORIGIN) and 6 user inputs
Digital Output		5 user outputs and 1 brake signal output
Torque-Off Function		2 inputs (TQOFF1, TQOFF2), 1 output (TQMON)
CC-Link IE TSN	Communication Protocol	CC-Link IE TSN Class B
	Operation Mode	CiA402 Drive Profile : Cyclic Synchronous Position Mode (CSP) Profile Position Mode (PP) Homing Mode (HM)
	Synchronization	Minimum Cycle Time: 250 $\mu$ s / Synchronous Comm. (CSP, PP, HM) / Asynchronous Comm. (PP, HM)
Status Display	7-SEG	IP Address or Error Code
	LED	Network status: Run, Error, LINK1/LINK2 Drive status: Power, In-Position, Servo On, Alarm

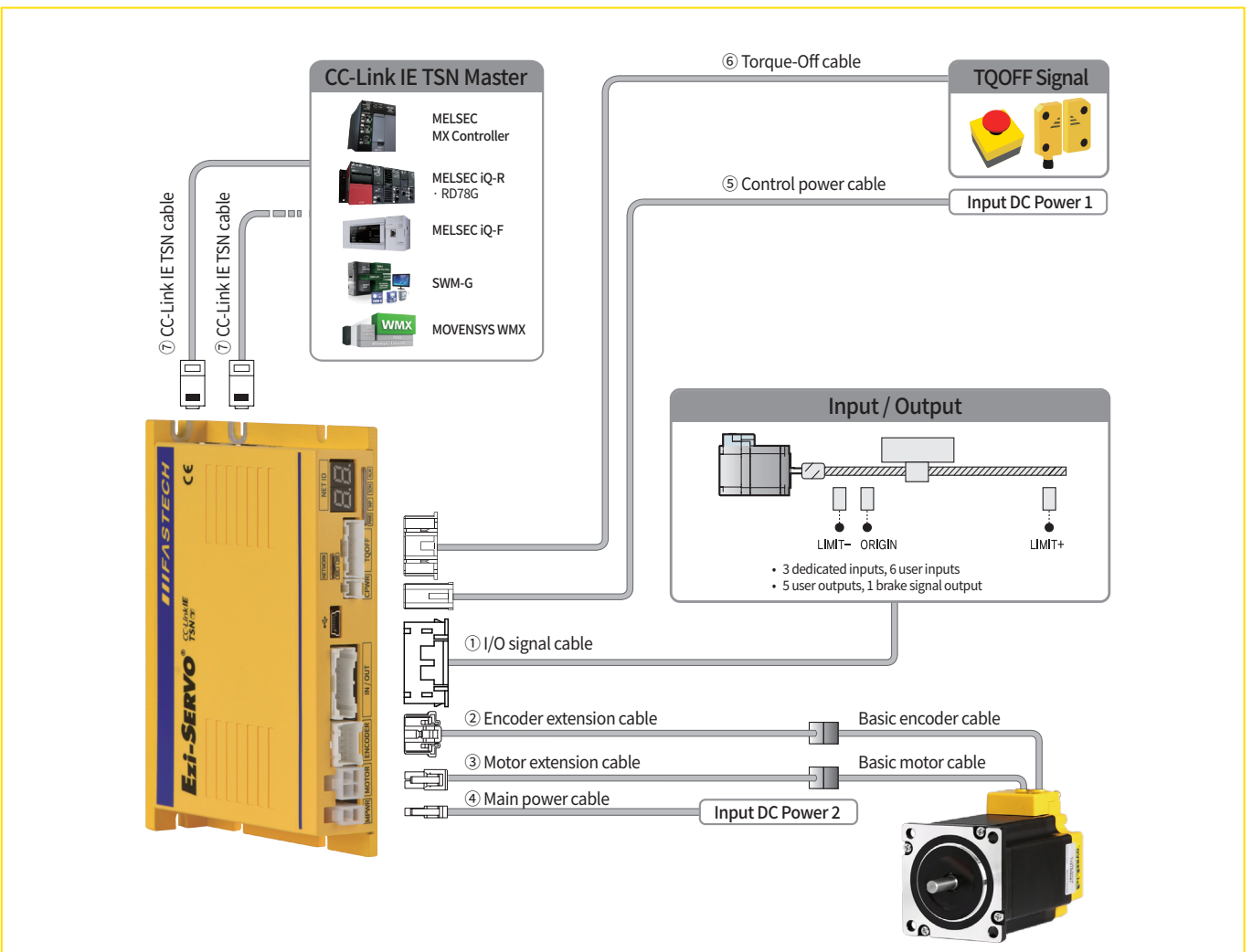
## Module Overview



## Dimension



## System Configuration



# Ezi-SERVO<sup>®</sup> CC-Link IE TSN

## Closed Loop Stepping System **ABS**

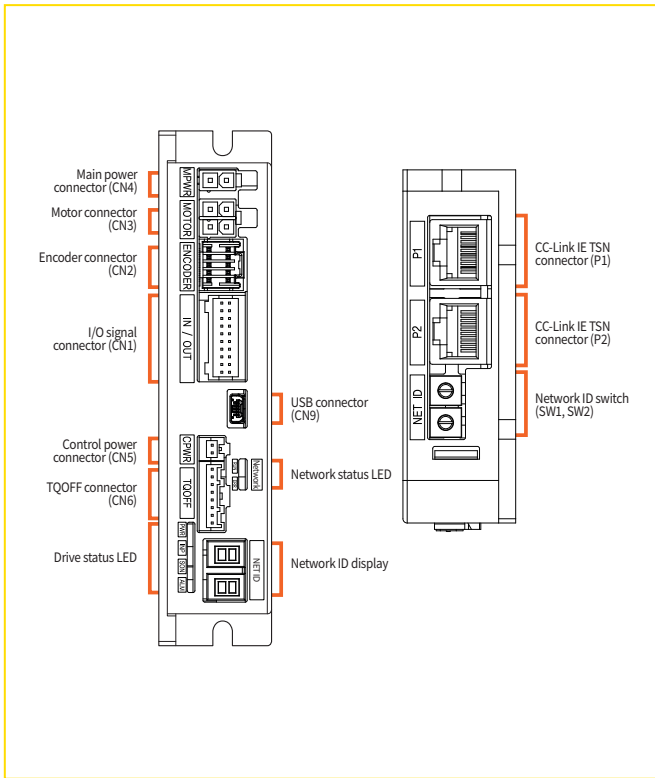
- CC-Link IE TSN-compatible Closed Loop Stepping System
- CiA402 Drive Profile
- Long Life Cycle with Electronic Battery-less Multi-turn Absolute Encoder (Multi-turn : 16 bits, Single-turn : Max. 20,000 P/R)
- No External Sensors Required, Simple Wiring
- No Battery Replacement Required, Easy Maintenance
- Torque-Off Function



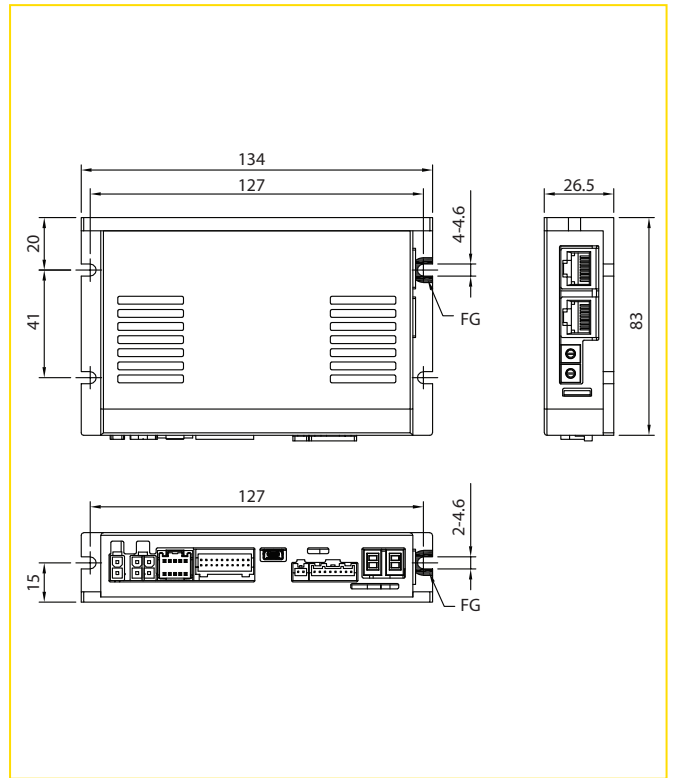
## Specifications

Model		Ezi-SERVO-CT-ABS
Main Power Supply		24 V DC $\pm$ 10 %
Control Power Supply		24 V DC $\pm$ 10 %
Speed Control Range		0 ~ 3,000 r/min
Encoder Resolution [P/R]		Multi-turn : 16 bits, Single-turn : Max. 20,000 P/R
Digital Input		3 dedicated inputs (LIMIT+, LIMIT-, ORIGIN) and 6 user inputs
Digital Output		5 user outputs and 1 brake signal output
Torque-Off Function		2 inputs (TQOFF1, TQOFF2), 1 output (TQMON)
CC-Link IE TSN	Communication Protocol	CC-Link IE TSN Class B
	Operation Mode	CiA402 Drive Profile : Cyclic Synchronous Position Mode (CSP) Profile Position Mode (PP) Homing Mode (HM)
	Synchronization	Minimum Cycle Time: 250 $\mu$ s / Synchronous Comm. (CSP, PP, HM) / Asynchronous Comm. (PP, HM)
Status Display	7-SEG	IP Address or Error Code
	LED	Network status: Run, Error, LINK1/LINK2 Drive status: Power, In-Position, Servo On, Alarm

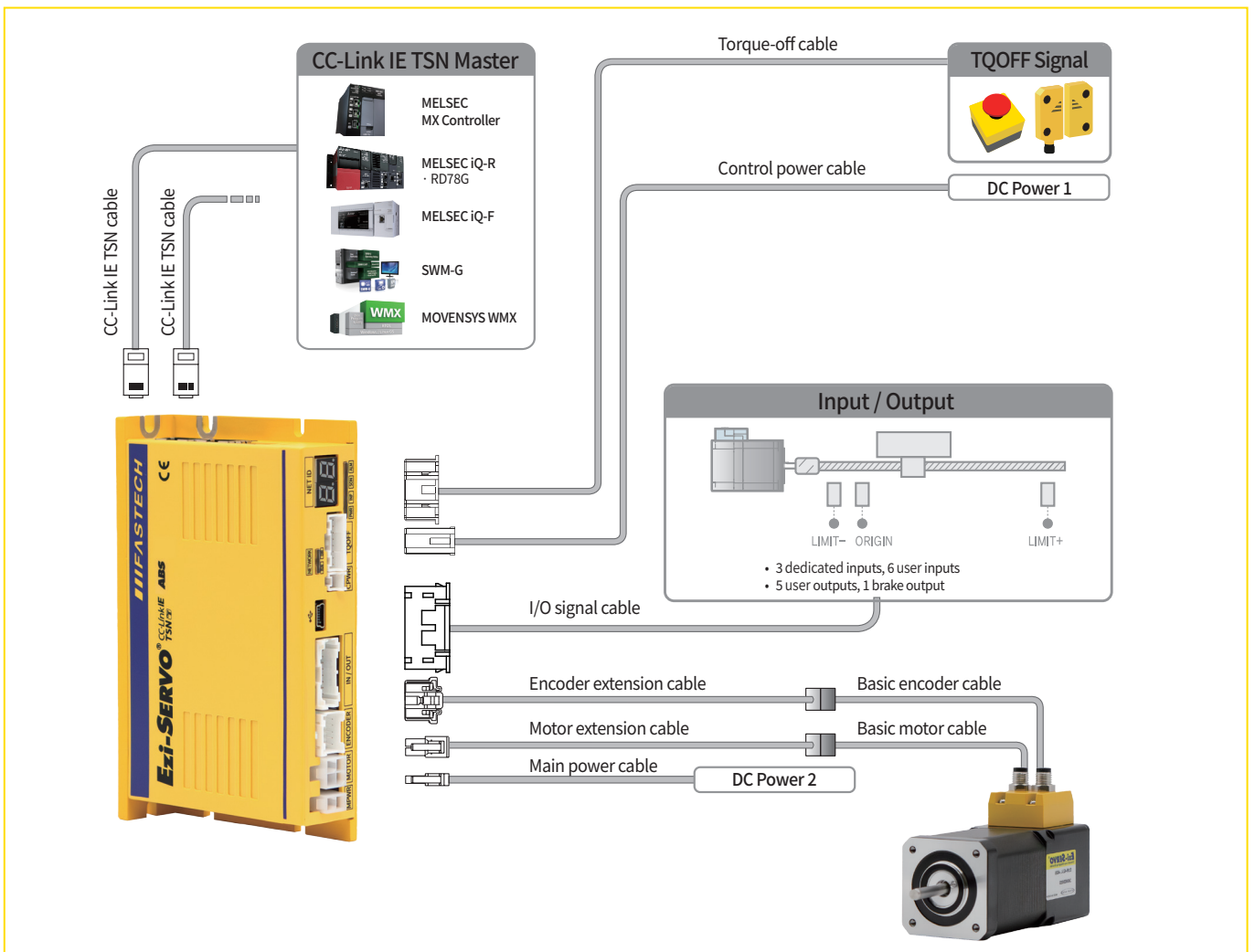
## Module Overview



## Dimension



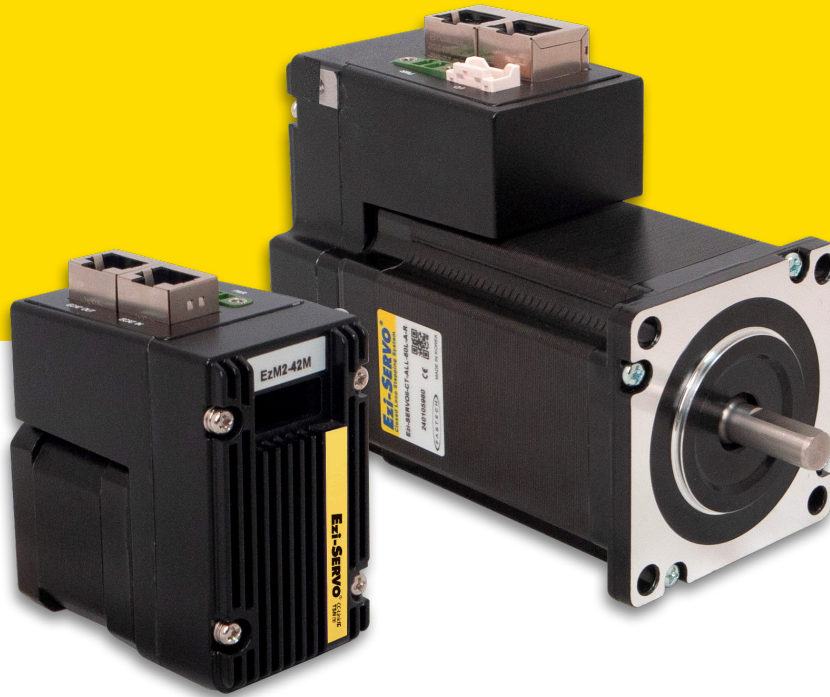
## System Configuration



# Ezi-SERVO<sup>®</sup> CC-Link IE TSN

## Closed Loop Stepping System **ALL**

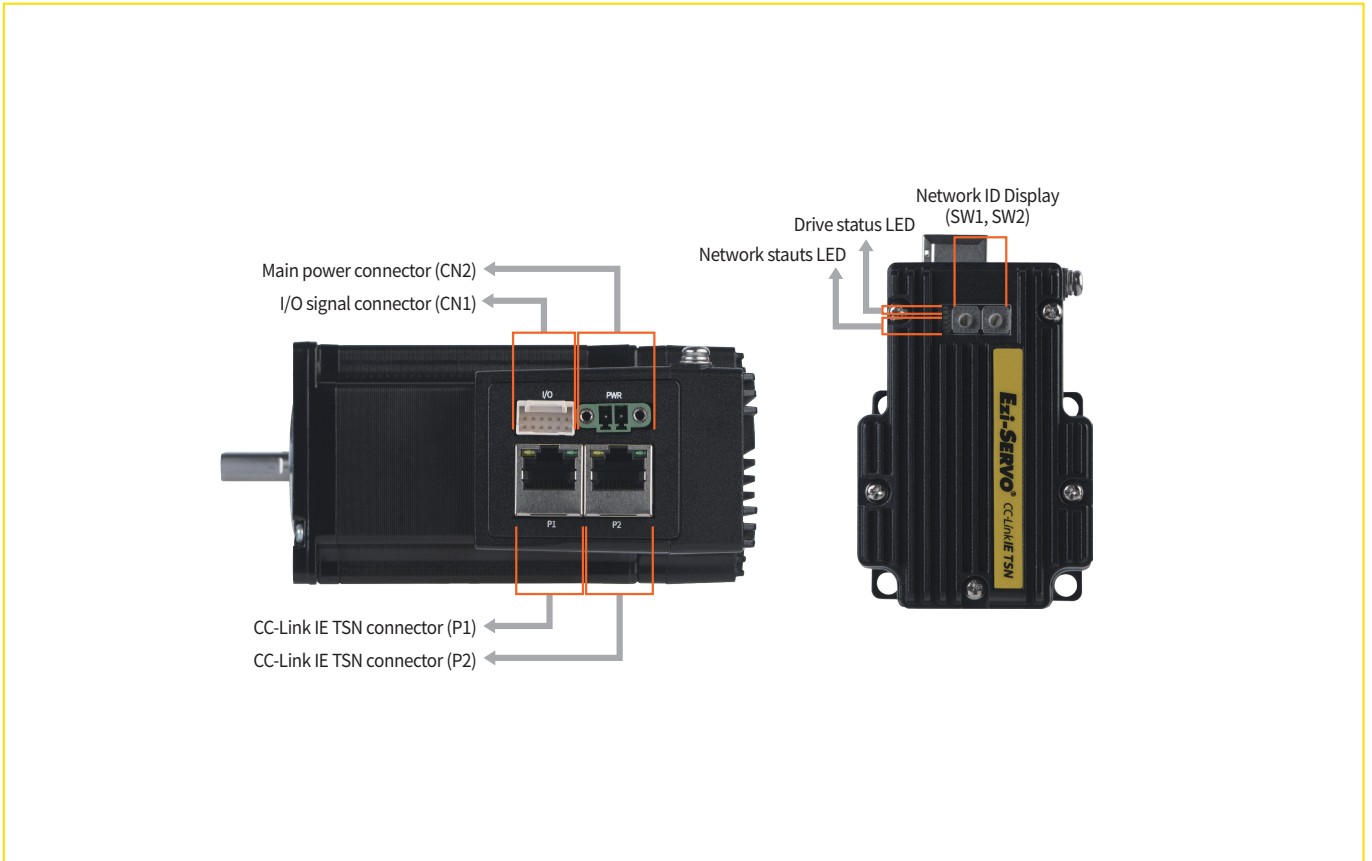
- CC-Link IE TSN-compatible Closed Loop Stepping System
- CiA402 Drive Profile
- Motor + Drive Integrated
- Space Saving, Reduced Wiring
- Tuning Not Required, No Hunting
- High Resolution Encoder, Fast Response
- Low Heat Generation, High Torque



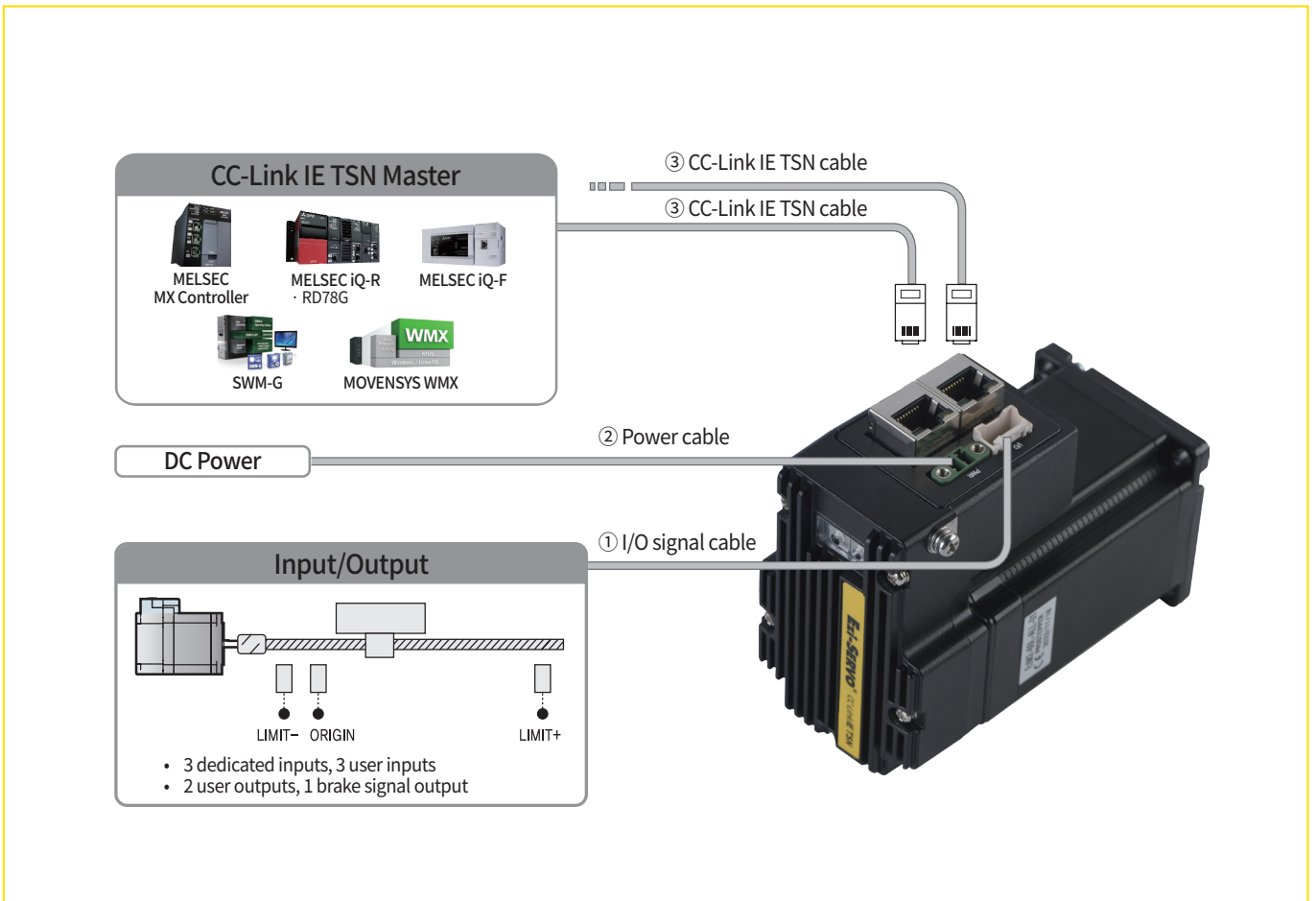
### ■ Specifications

Model		Ezi-SERVO-CT-ALL
Main Power Supply		24 V DC $\pm$ 10 %
Speed Control Range		0 ~ 3,000 r/min
Encoder Resolution [P/R]		10,000 / 20,000
Digital Input		3 dedicated inputs (LIMIT+, LIMIT-, ORIGIN) and 3 user inputs
Digital Output		2 user outputs and 1 brake signal output
CC-Link IE TSN	Communication Protocol	CC-Link IE TSN Class B
	Operation Mode	CiA402 Drive Profile : Cyclic Synchronous Position Mode (CSP) Profile Position Mode (PP) Homing Mode (HM)
	Synchronization	Minimum Cycle Time: 250 $\mu$ s / Synchronous Comm. (CSP, PP, HM) / Asynchronous Comm. (PP, HM)
Status Display	LED	Network status: Run, Error, LINK1/LINK2 Drive status: ST1, ST2

## Module Overview



## System Configuration



# Ezi-SERVO<sup>®</sup> CC-Link IE TSN

## Closed Loop Stepping System 4X

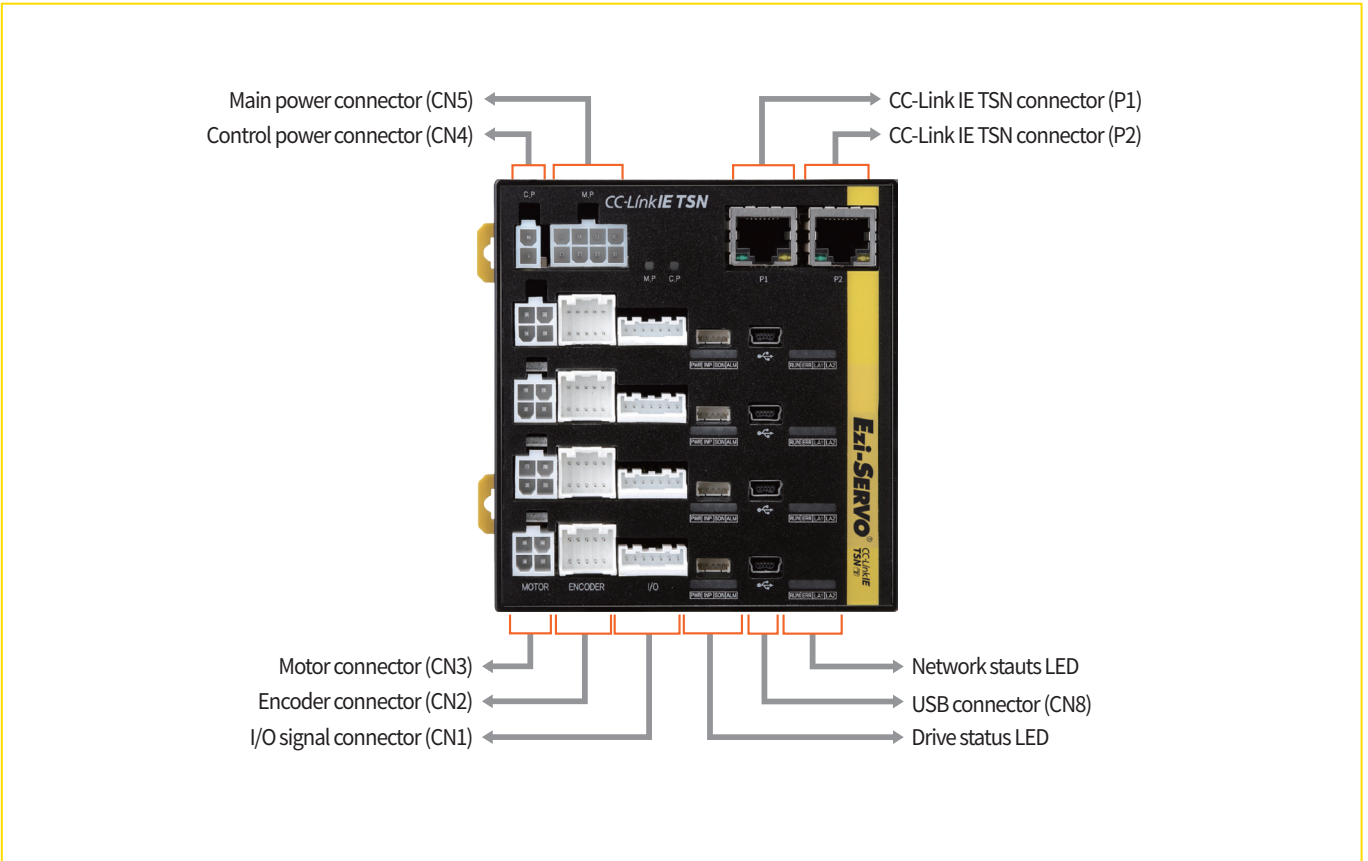
- CC-Link IE TSN-compatible Closed Loop Stepping System
- CiA402 Drive Profile
- Compact Multi-Axis Drive (Max. 4-Axis)
- Space Saving, Reduced Wiring
- Tuning Not Required, No Hunting
- High Resolution Encoder, Fast Response
- Low Heat Generation, High Torque



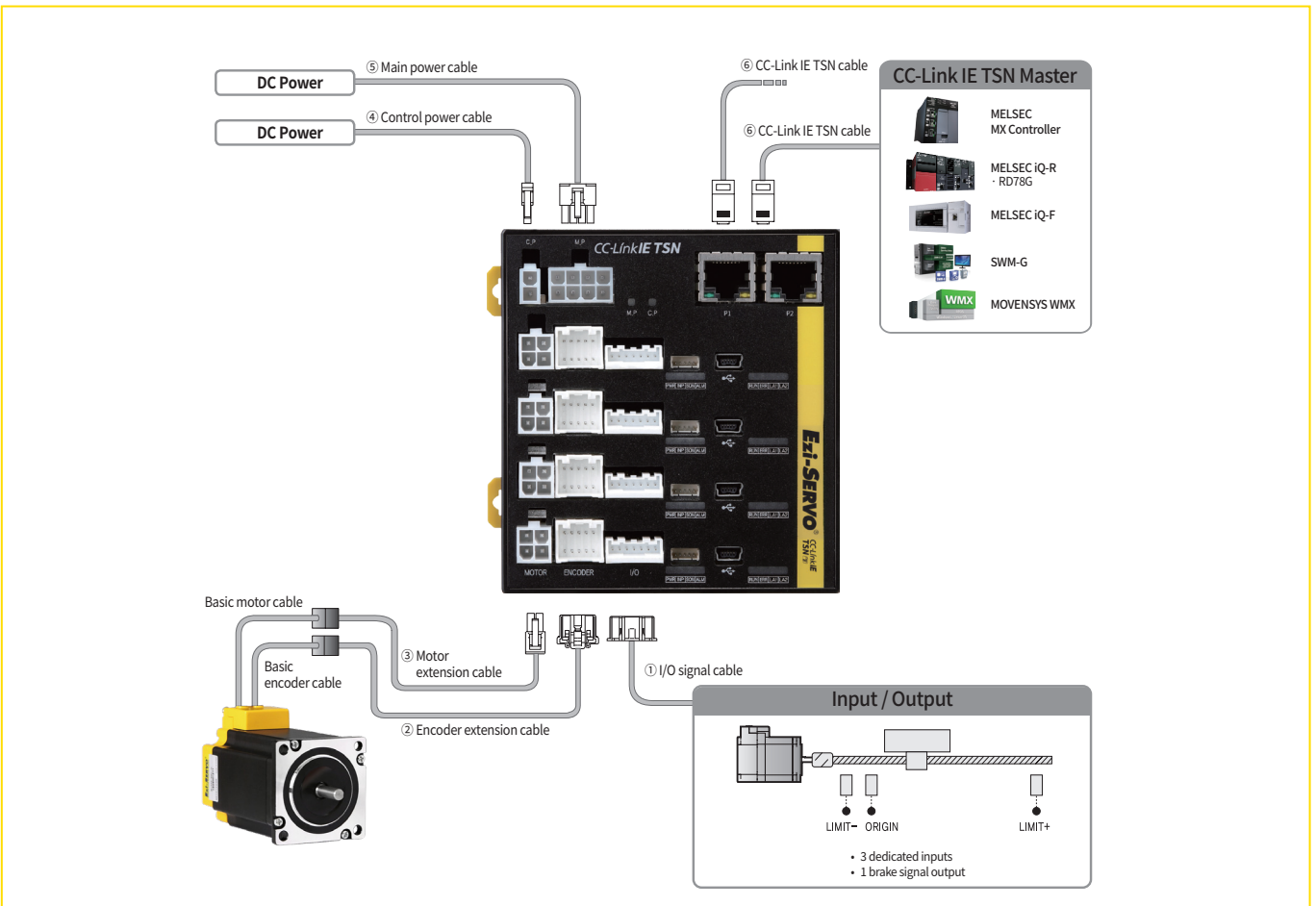
## Specifications

Model	Ezi-SERVO-CT-4X Ezi-SERVO-CT-3X	
Main Power Supply	24 V DC $\pm$ 10 %	
Control Power Supply	24 V DC $\pm$ 10 %	
Speed Control Range	0 ~ 3,000 r/min	
Encoder Resolution [P/R]	4,000 / 10,000 / 16,000 / 20,000	
Digital Input	3 dedicated inputs (LIMIT+, LIMIT-, ORIGIN) for each axis	
Digital Output	1 brake signal for each axis	
CC-Link IE TSN	Communication Protocol	CC-Link IE TSN Class B
	Operation Mode	CiA402 Drive Profile : Cyclic Synchronous Position Mode (CSP) Profile Position Mode (PP) Homing Mode (HM)
	Synchronization	Minimum Cycle Time: 250 $\mu$ s / Synchronous Comm. (CSP, PP, HM) / Asynchronous Comm. (PP, HM)
Status Display	LED	Network status: Run, Error, LINK1/LINK2 Drive status: Power, In-Position, Servo On, Alarm
Dimension [mm]	100.4(W) x 100 (D) x 84(H)	

## Module Overview



## System Configuration



# Ezi-SERVO<sup>®</sup> CC-Link IE TSN

## Closed Loop Stepping System **4X ABS**

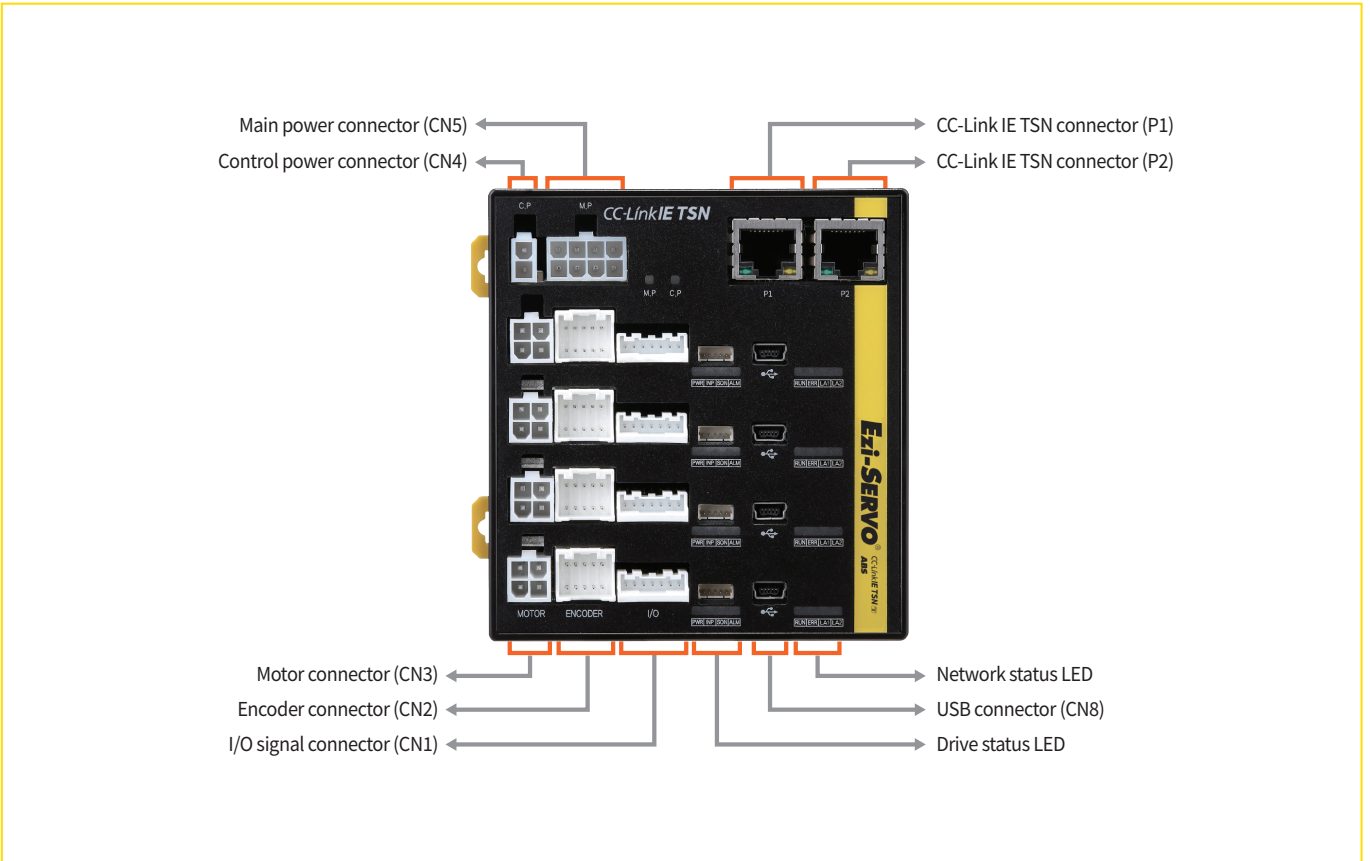
- CC-Link IE TSN-compatible Closed Loop Stepping System
- CiA402 Drive Profile
- Compact Multi-Axis Drive (Max. 4-Axis)
- Long Life Cycle with Electronic Battery-less Multi-turn Absolute Encoder (Multi-turn : 16 bits, Single-turn : Max. 20,000 P/R)
- No Battery Replacement Required, Easy Maintenance
- No External Sensors Required, Simple Wiring



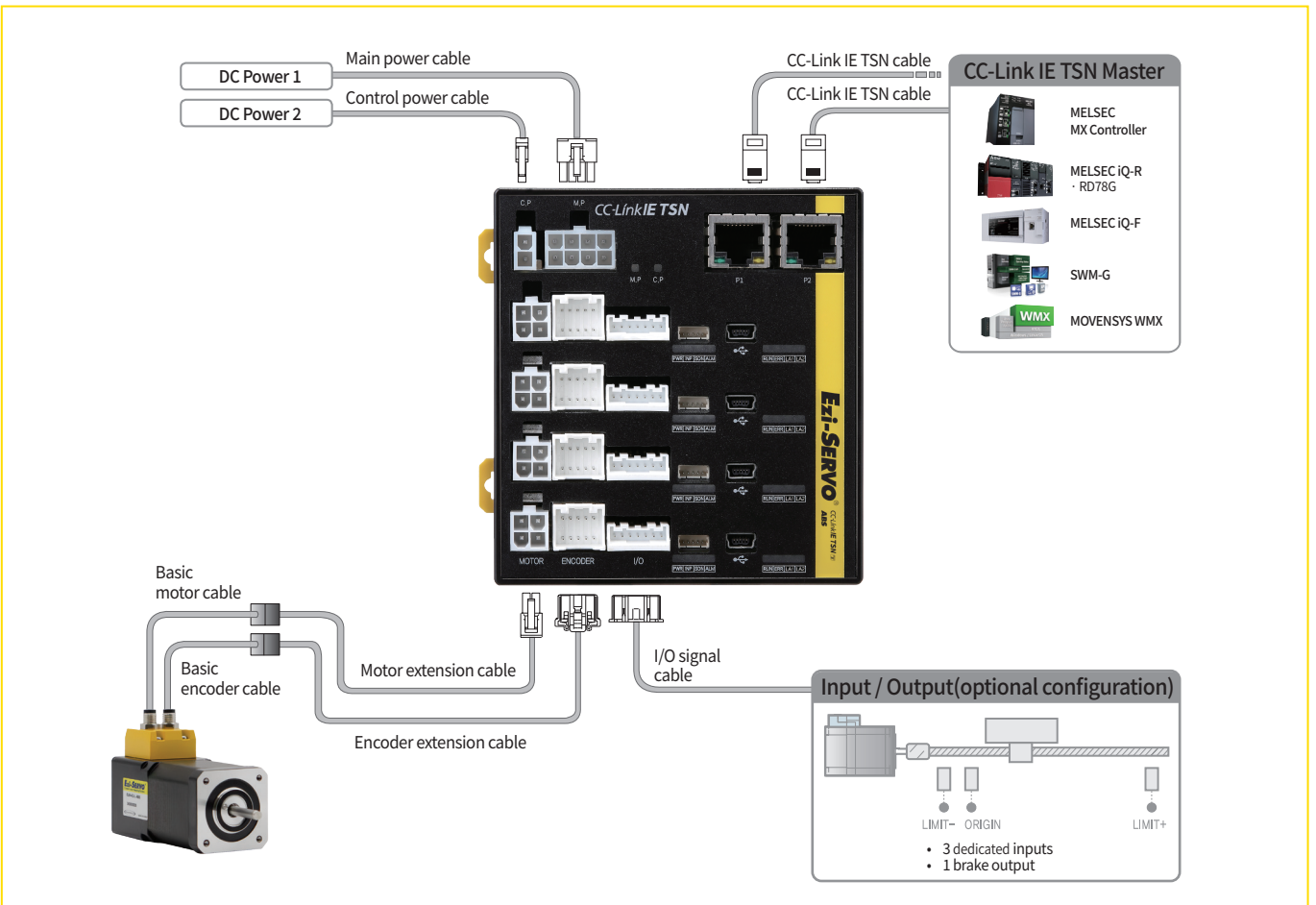
## Specifications

Model	Ezi-SERVO-CT-4X-ABS Ezi-SERVO-CT-3X-ABS	
Main Power Supply	24 V DC $\pm$ 10 %	
Control Power Supply	24 V DC $\pm$ 10 %	
Speed Control Range	0 ~ 3,000 r/min	
Encoder Resolution [P/R]	Multi-turn : 16 bits, Single-turn : Max. 20,000 P/R	
Digital Input	3 dedicated inputs (LIMIT+, LIMIT-, ORIGIN) for each axis	
Digital Output	1 brake signal for each axis	
CC-Link IE TSN	Communication Protocol	CC-Link IE TSN Class B
	Operation Mode	CiA402 Drive Profile : Cyclic Synchronous Position Mode (CSP) Profile Position Mode (PP) Homing Mode (HM)
	Synchronization	Minimum Cycle Time: 250 $\mu$ s / Synchronous Comm. (CSP, PP, HM) / Asynchronous Comm. (PP, HM)
Status Display	LED	Network status: Run, Error, LINK1/LINK2 Drive status: Power, In-Position, Servo On, Alarm
Dimension [mm]	100.4(W) x 100 (D) x 84(H)	

## Module Overview



## System Configuration



# Ezi-STEP<sup>®</sup> CC-Link IE TSN

## Micro Stepping System

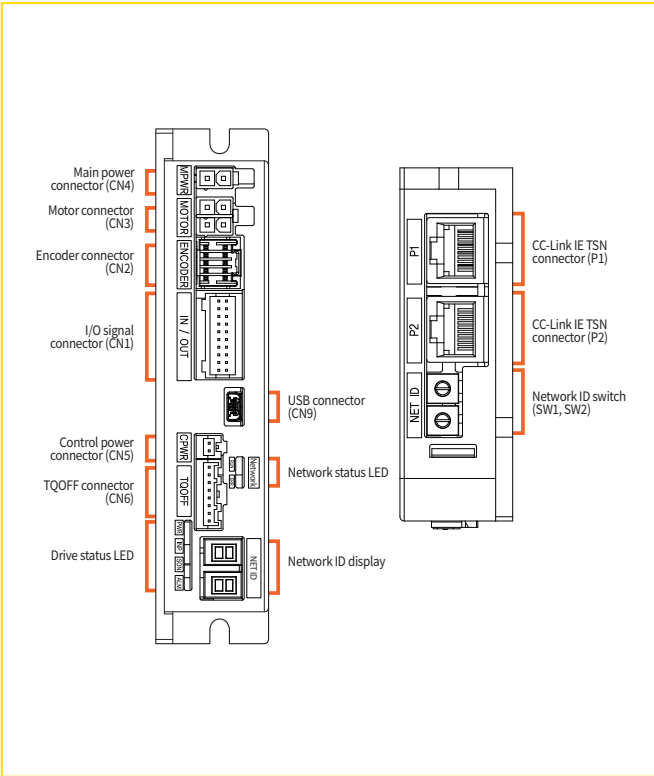
- CC-Link IE TSN-compatible Microstepping System
- CiA402 Drive Profile
- Torque-Off Function
- Software Damping (Resonance & Vibration Suppression)
- High Torque



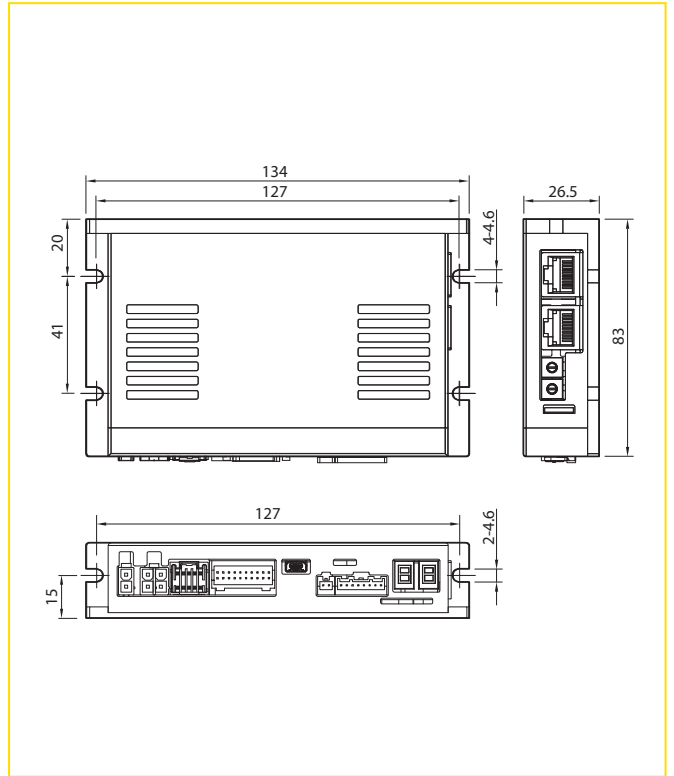
### Specifications

Model	Ezi-STEP-CT	
Main Power Supply	24 V DC $\pm$ 10 %	
Control Power Supply	24 V DC $\pm$ 10 %	
Motor Model	BM-20, 28, 42, 56, 60 Series	
Speed Control Range	0 ~ 3,000 r/min	
Reference 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	
Digital Input	3 dedicated inputs (LIMIT+, LIMIT-, ORIGIN) and 6 user inputs	
Digital Output	5 user outputs and 1 brake signal output	
Torque-Off Function	2 inputs (TQOFF1, TQOFF2), 1 output (TQMON)	
CC-Link IE TSN	Communication Protocol	CC-Link IE TSN Class B
	Operation Mode	CiA402 Drive Profile : Cyclic Synchronous Position Mode (CSP) Profile Position Mode (PP) Homing Mode (HM)
	Synchronization	Minimum Cycle Time: 250 $\mu$ s / Synchronous Comm. (CSP, PP, HM) / Asynchronous Comm. (PP, HM)
Status Display	7-SEG	IP Address or Error Code
	LED	Network status: Run, Error, LINK1/LINK2 Drive status: Power, Run, Step On, Alarm

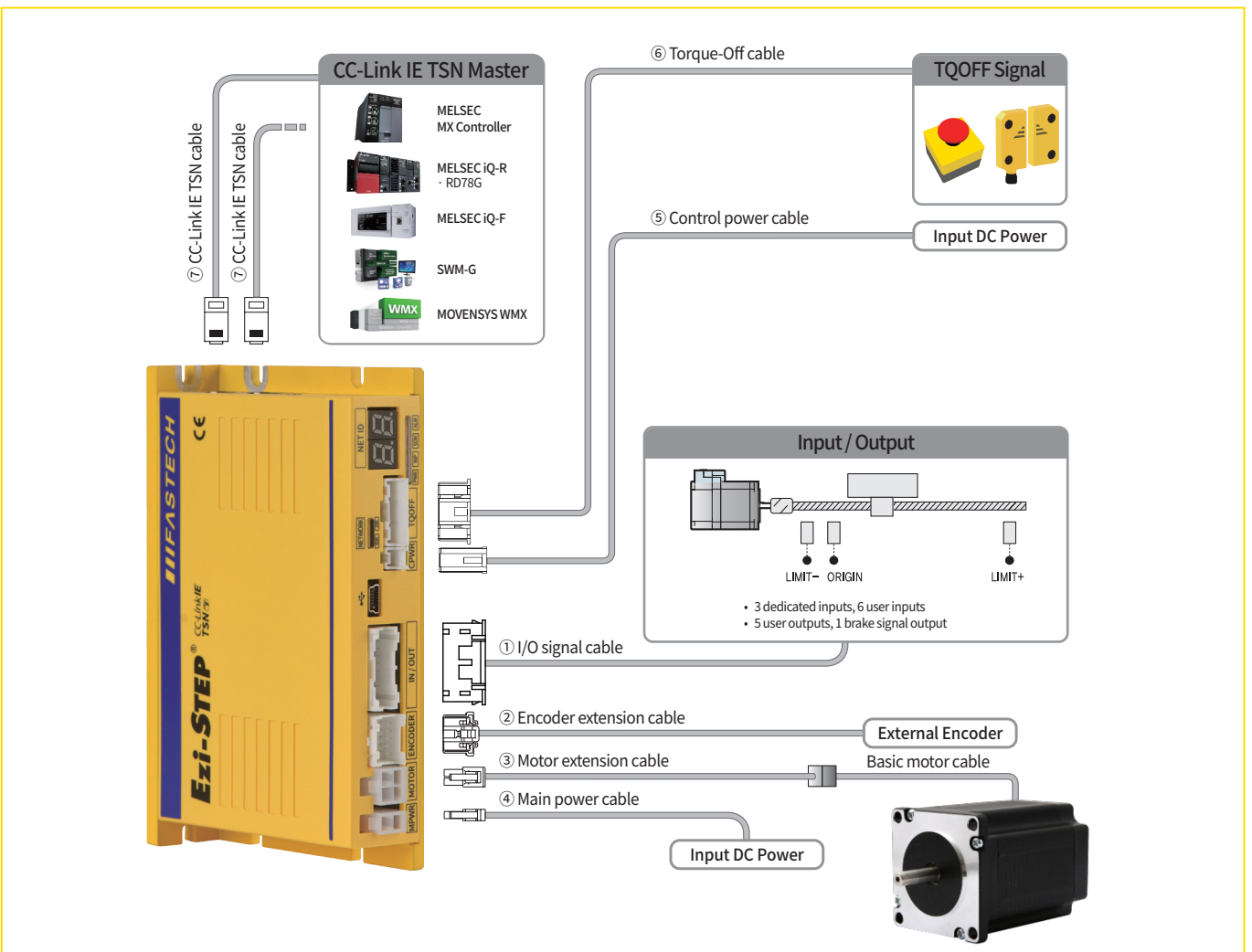
## Module Overview



## Dimension



## System Configuration



# Ezi-STEP<sup>®</sup> CC-Link IE TSN

## Micro Stepping System ALL

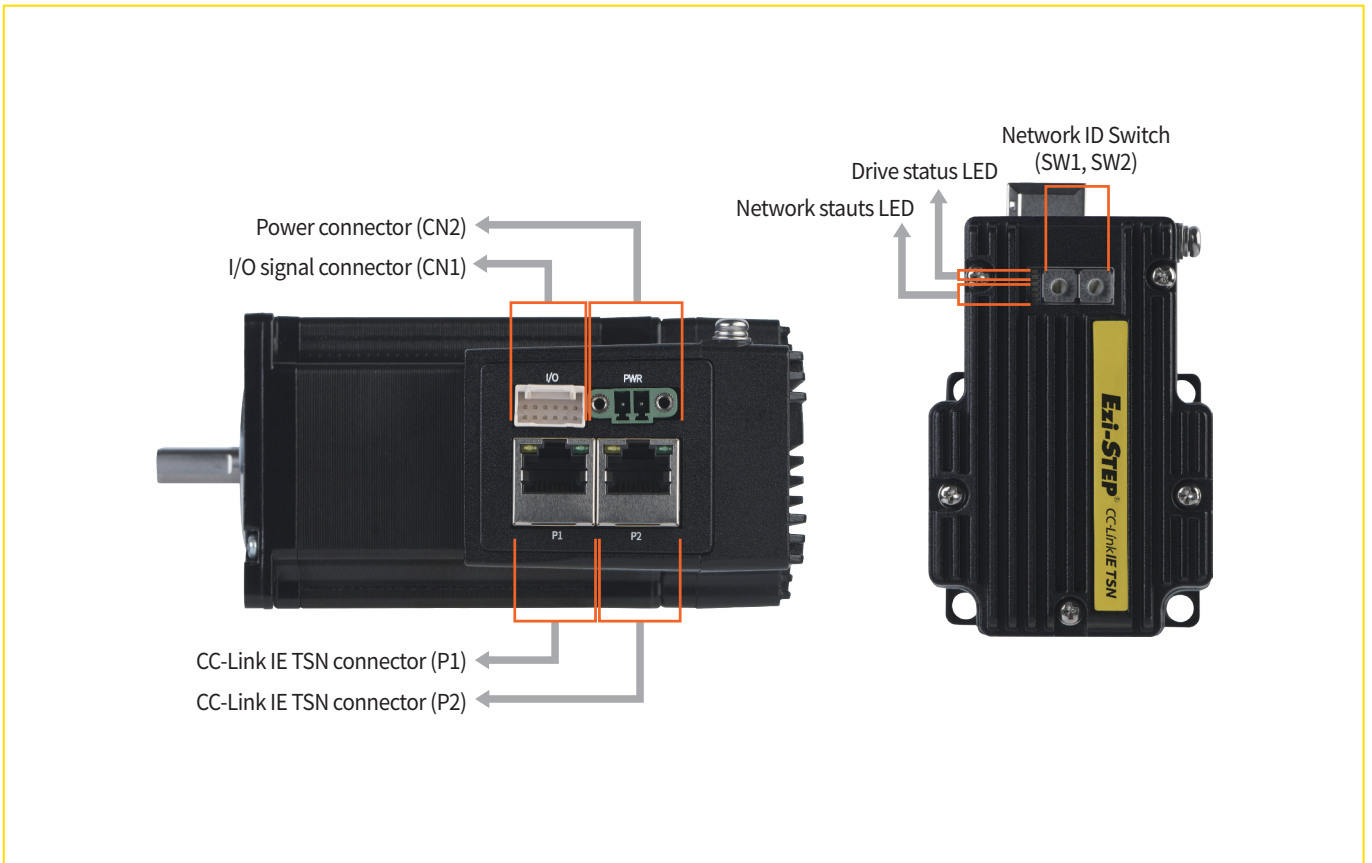
- CC-Link IE TSN-compatible Microstepping System
- CiA402 Drive Profile Support
- Software Damping (Resonance & Vibration Suppression)
- Motor + Drive Integrated
- Space Saving, Reduced Wiring



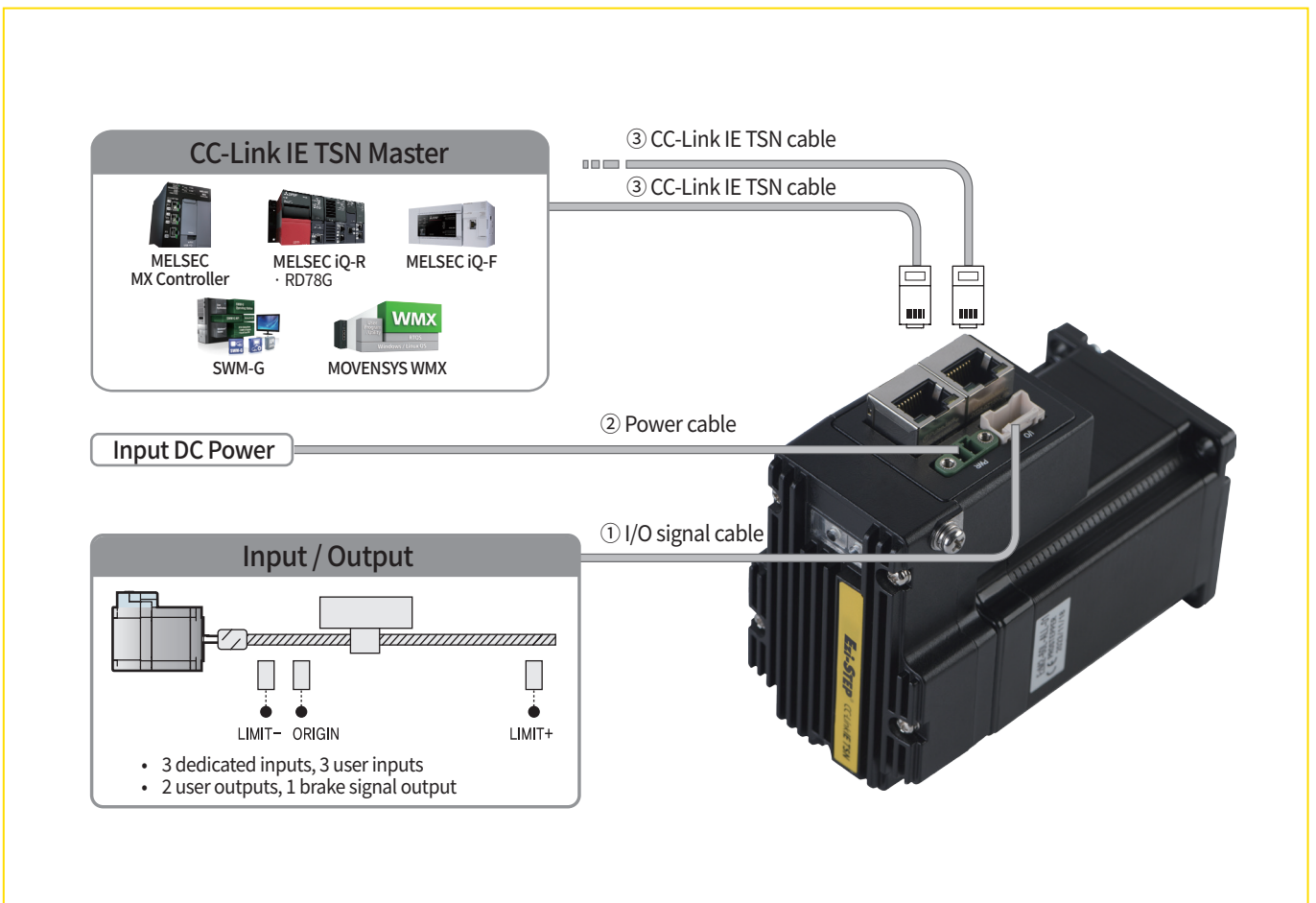
### Specifications

Model	Ezi-STEP-CT-ALL-42	Ezi-STEP-CT-ALL-56	Ezi-STEP-CT-ALL-60
Main Power Supply	24 V DC $\pm$ 10 %		
Speed Control Range	0 ~ 3,000 r/min		
Reference 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		
Digital Input	3 dedicated inputs (LIMIT+, LIMIT-, ORIGIN) and 3 user inputs		
Digital Output	2 user outputs and 1 Brake signal output		
CC-Link IE TSN	Communication Protocol	CC-Link IE TSN Class B	
	Operation Mode	CiA402 Drive Profile : Cyclic Synchronous Position Mode (CSP) Profile Position Mode (PP) Homing Mode (HM)	
	Synchronization	Minimum Cycle Time: 250 $\mu$ s / Synchronous Comm. (CSP, PP, HM) / Asynchronous Comm. (PP, HM)	
Status Display	LED	Network status: Run, Error, LINK1/LINK2 Drive status: ST1, ST2	

## Module Overview



## System Configuration



# Ezi-STEP<sup>®</sup> CC-Link IE TSN

## Micro Stepping System 4X

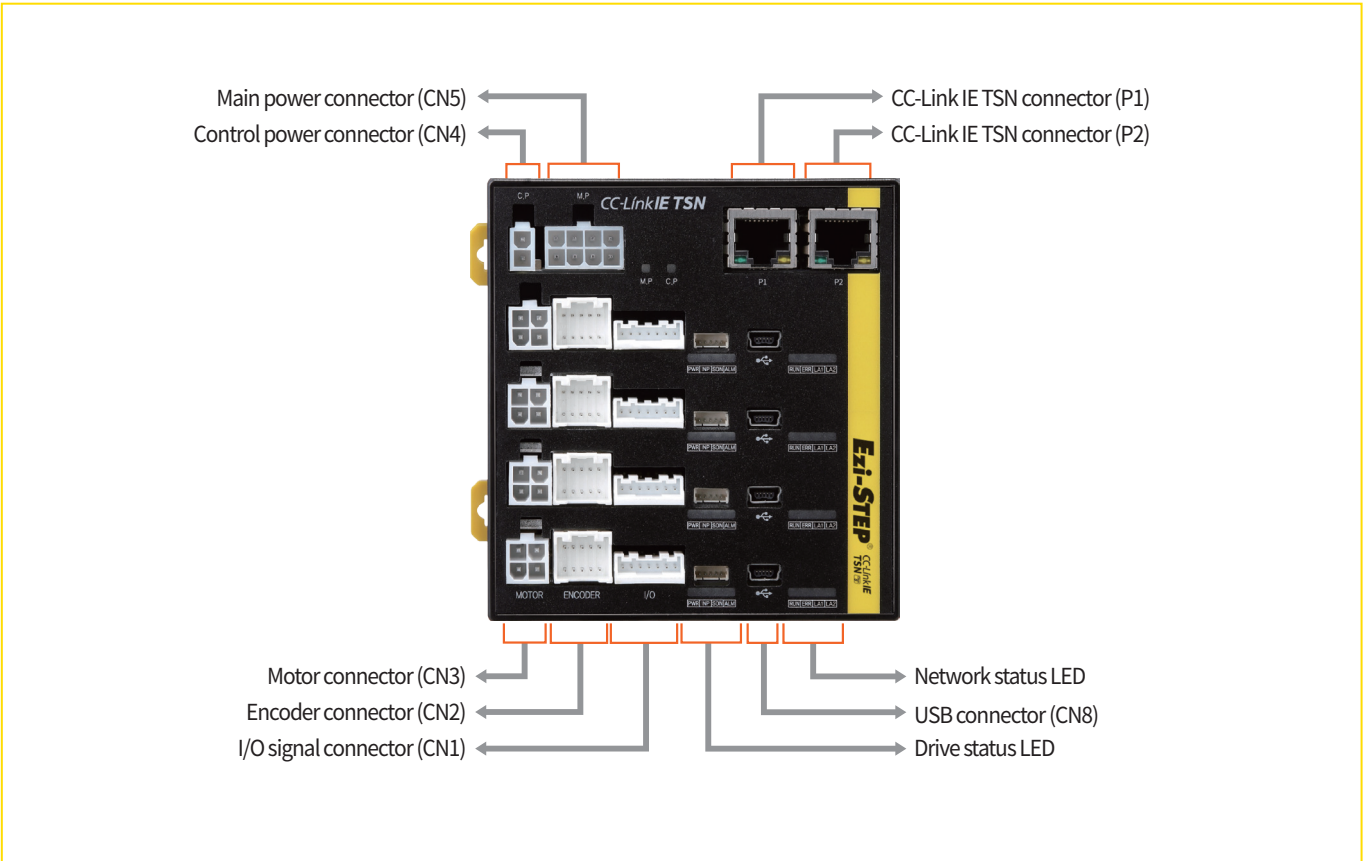
- CC-Link IE TSN-compatible Microstepping System
- CiA402 Drive Profile
- Software Damping (Resonance & Vibration Suppression)
- Compact Multi-Axis Drive (Max. 4-Axis)
- Space Saving, Reduced Wiring



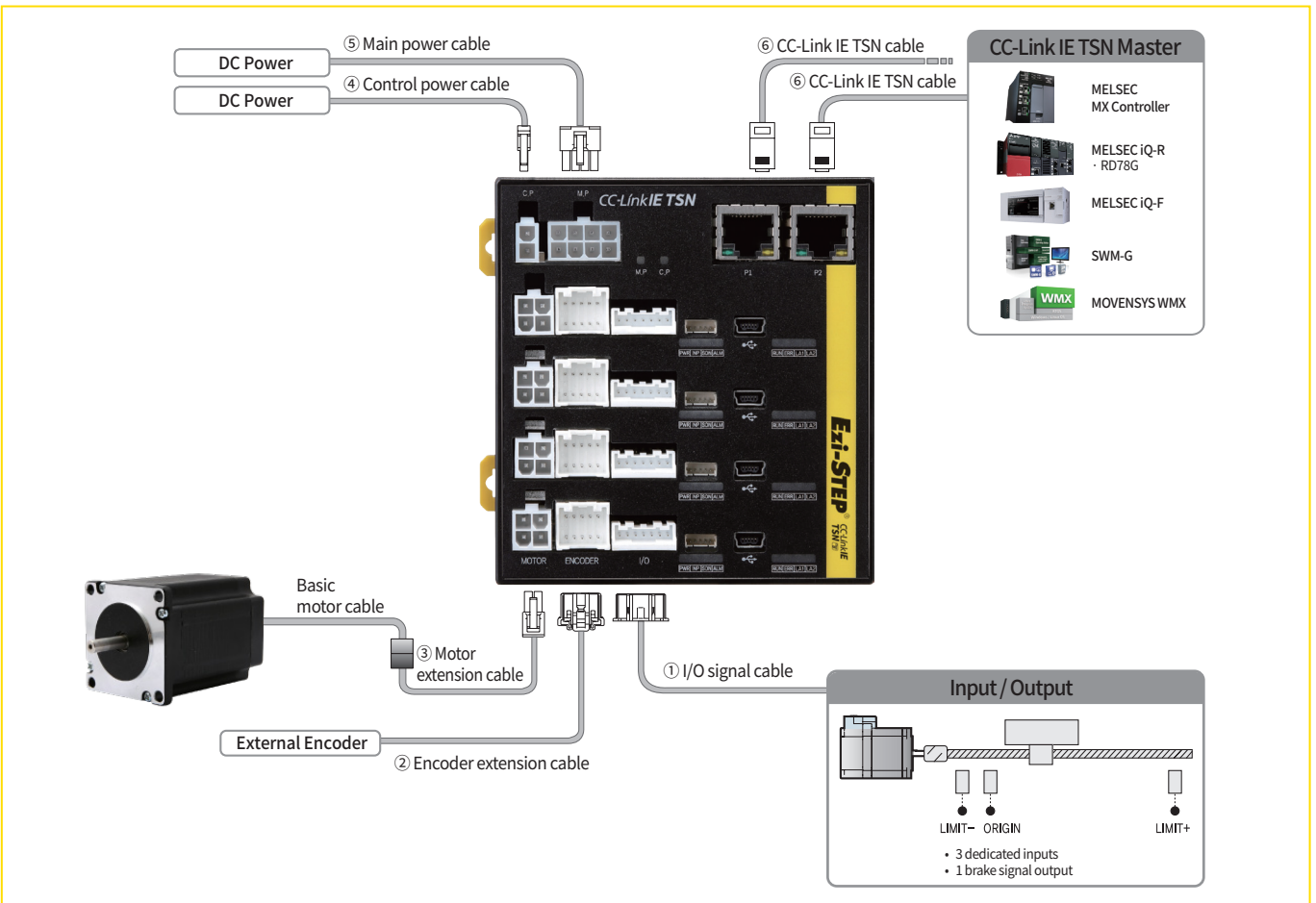
## Specifications

Model	Ezi-STEP-CT-4X Ezi-STEP-CT-3X	
Main Power Supply	24 V DC $\pm$ 10 %	
Control Power Supply	24 V DC $\pm$ 10 %	
Motor Model	BM-20, 28, 42, 56, 60 Series	
Speed Control Range	0 ~ 3,000 r/min	
Reference 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	
Digital Input	3 dedicated inputs (LIMIT+, LIMIT-, ORIGIN) for each axis	
Digital Output	1 brake signal for each axis	
CC-Link IE TSN	Communication Protocol	CC-Link IE TSN Class B
	Operation Mode	CiA402 Drive Profile : Cyclic Synchronous Position Mode (CSP) Profile Position Mode (PP) Homing Mode (HM)
	Synchronization	Minimum Cycle Time: 250 $\mu$ s / Synchronous Comm. (CSP, PP, HM) / Asynchronous Comm. (PP, HM)
Status Display	LED	Network status: Run, Error, LINK1/LINK2 Drive status: Power, In-Position, Step On, Alarm
Dimension [mm]	100.4(W) x 100 (D) x 84(H)	

## Module Overview



## System Configuration



# Ezi-Pos<sup>®</sup> CC-Link IE TSN

## Servo Control System

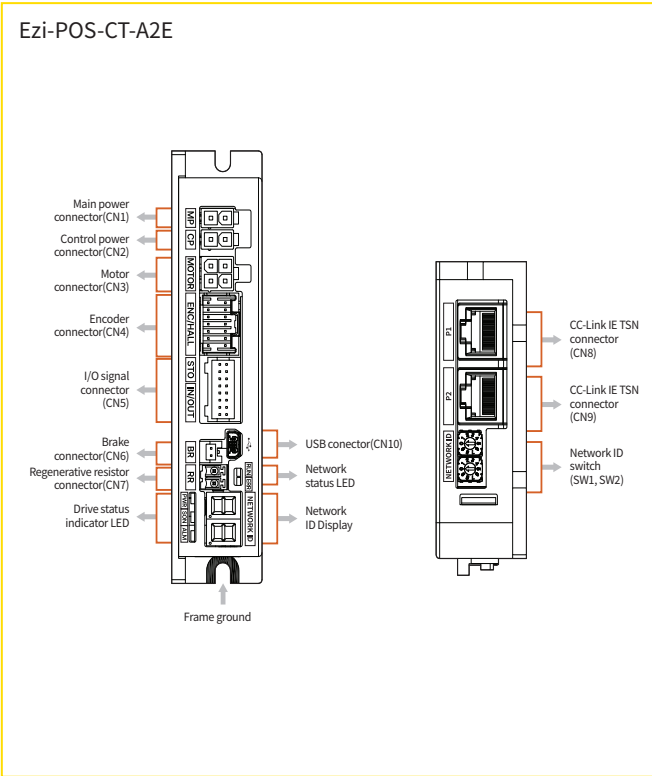
- CC-Link IE TSN-compatible Low-Voltage Servo Control System
- CiA402 Drive Profile
- DC Power Supply Input (12 ~ 48 V DC)
- Auto-tuning
- Torque-Off Function
- Various Motor Options (BLDC Motor, Servo Motor, Linear Motor, VCM, etc)
- Various Position Sensor Options (Incremental/Absolute Encoders)



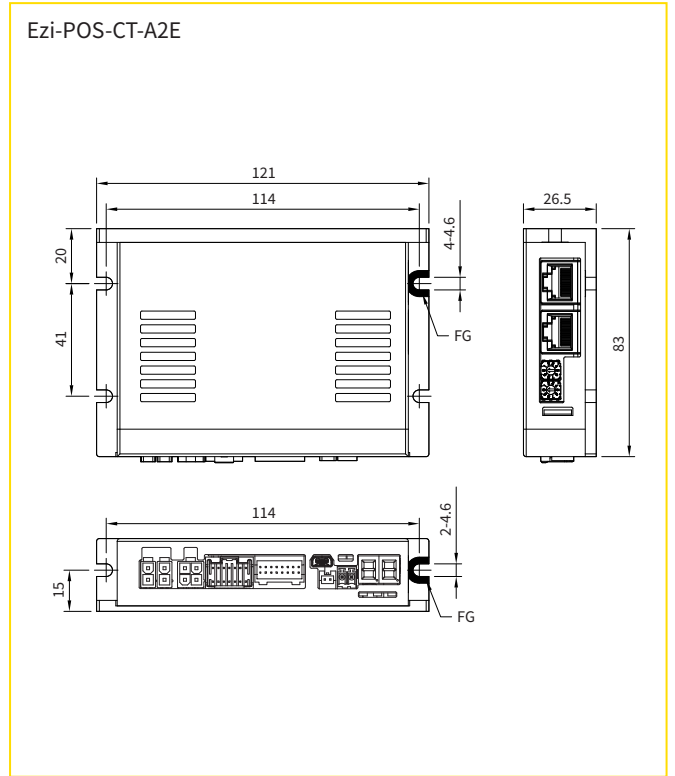
## Specifications

Model	Ezi-POS-CT-A2A	Ezi-POS-CT-A2E
Power Supply	12 ~ 48 V DC $\pm$ 10 %	
Input Current (continuous / max)	~7 A / 10 A (< 60 s)	
Output Power (continuous / max)	~200 W / 350 W (< 60 s)	
PWM Frequency	25 kHz or 50 kHz	
Current Control Sampling Rate	25 kHz (40 $\mu$ s)	
Position/Speed Control Sampling Rate	2.5 kHz (400 $\mu$ s)	
Speed Control Range	0 ~ 12,000 r/min	
Position Sensor	Absolute Encoder: BiSS-C, RS-485	Incremental Encoder: A, /A, B, /B, Z, /Z
Digital Input	3 dedicated inputs (LIMIT+, LIMIT-, ORIGIN), 2 user inputs	
Digital Output	3 user outputs	
Torque-Off Function	2 inputs (TQOFF1, TQOFF2)	
Additional I/O	Brake	Fixed connector for external brake
	Regeneration Resistor	Fixed connector for external regenerative resistor
CC-Link IE TSN	Communication Protocol	CC-Link IE TSN Class B
	Operation Mode	CiA402 Drive Profile : Cyclic Synchronous Position Mode (CSP) Profile Position Mode (PP) Homing Mode (HM)
	Synchronization	Minimum Cycle Time: 250 $\mu$ s / Synchronous Comm. (CSP, PP, HM) / Asynchronous Comm. (PP, HM)

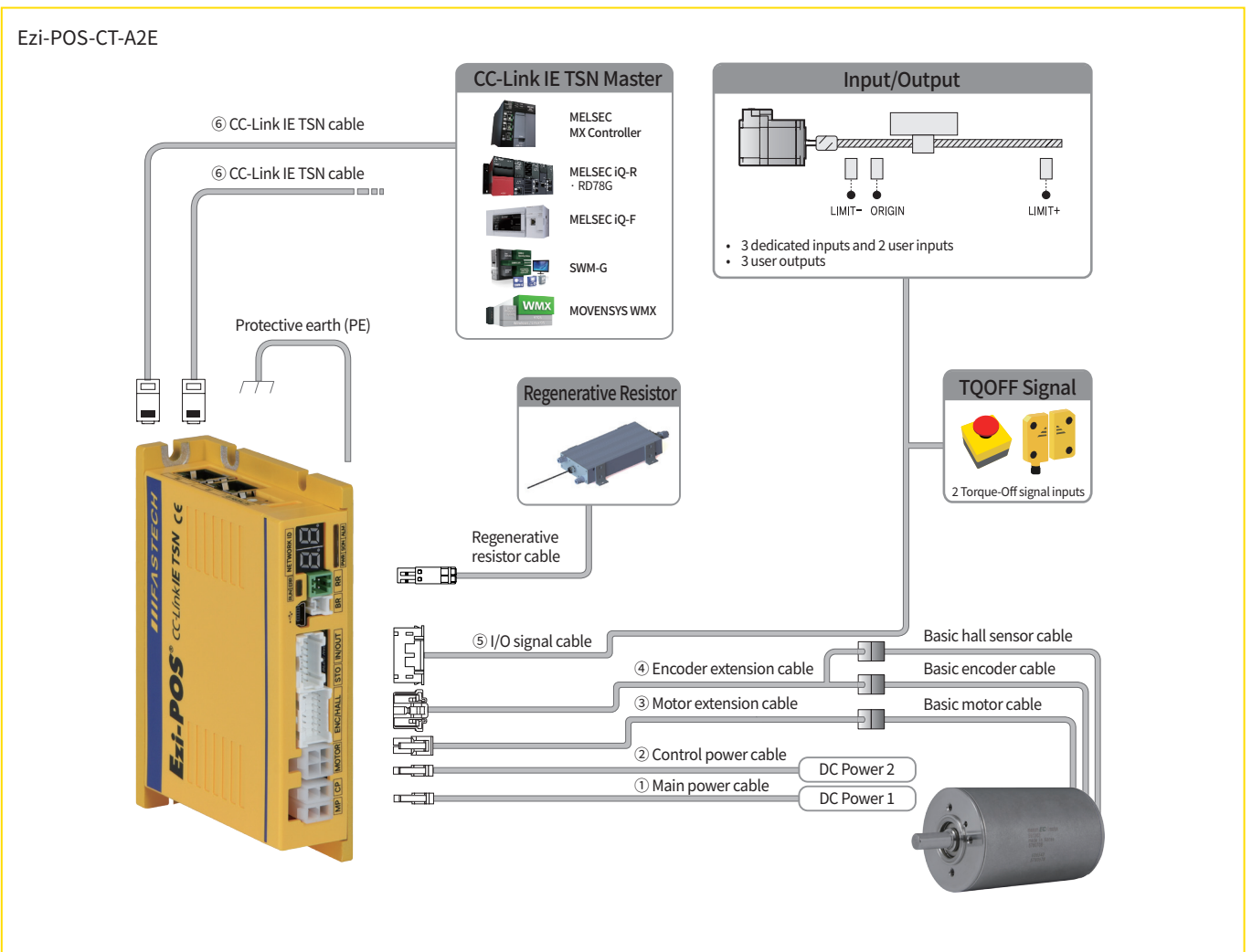
## Module Overview



## Dimension



## System Configuration



# Ezi-SPEED<sup>®</sup> CC-Link IE TSN

## BLDC Motor Speed Control System DC

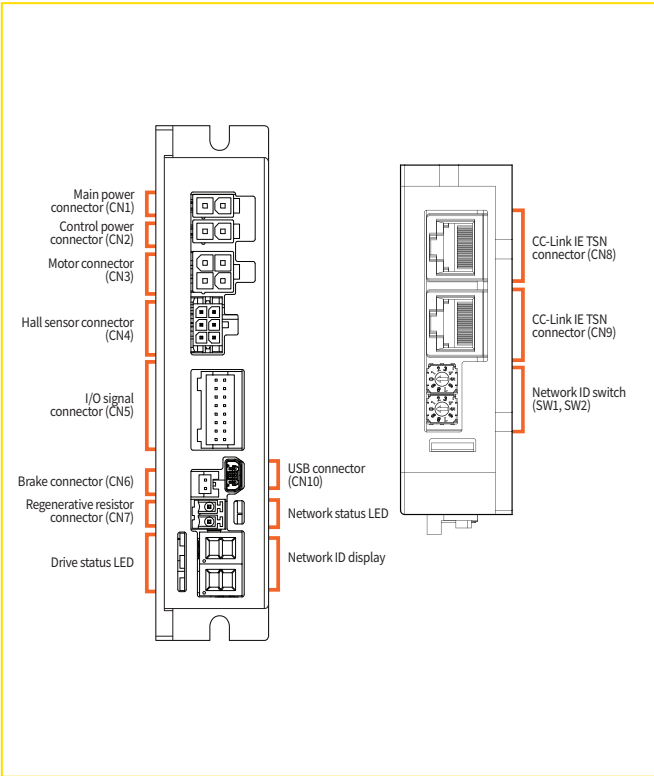
- CC-Link IE TSN-compatible Low Voltage BLDC Motor Speed Control System
- DC Power Input (12 ~ 48 V DC)
- Auto-tuning
- Wide Speed Range (50 ~ 4,000 r/min)
- Stable Speed Regulation ( $\pm 0.2\%$ )



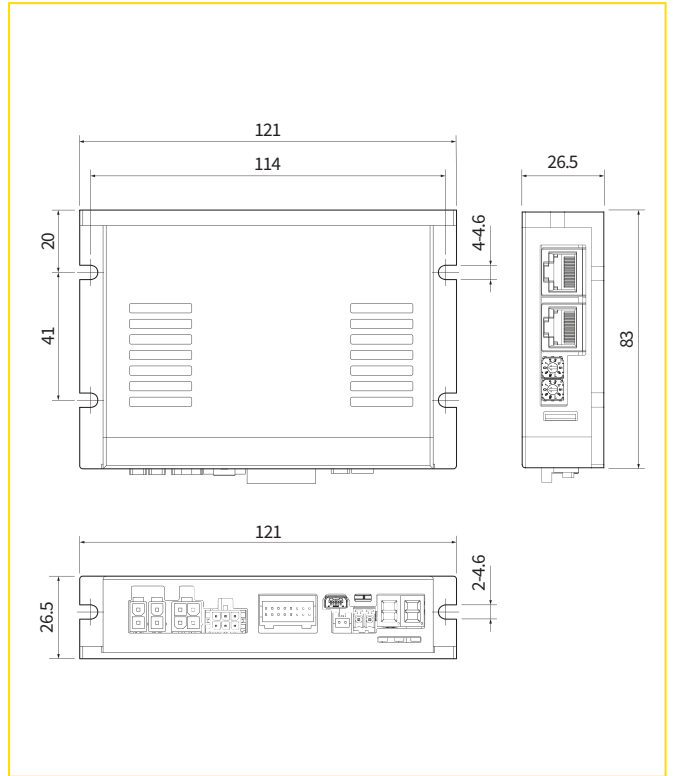
## Specifications

Model		Ezi-SPEED-CT-A2H
Power Supply		12 ~ 48 V DC $\pm 10\%$
Input Current (continuous / max)		~7 A / 10 A (< 60 s)
Output Power (continuous / max)		~200 W / 350 W (< 60 s)
PWM Frequency		25 kHz or 50 kHz
Current Control Sampling Rate		25 kHz (40 $\mu$ s)
Speed Control Sampling Rate		2.5 kHz (400 $\mu$ s)
Speed Control Range		50 ~ 4,000 r/min
Position Sensor		Hall Sensor: H1, H2, H3
Digital Input		5 programmable inputs
Digital Output		3 programmable outputs
Torque-OFF Function		2 inputs (TQOFF1, TQOFF2)
Additional I/O	Brake	Fixed connector for external brake
	Regeneration Resistor	Fixed connector for external regenerative resistor
CC-Link IE TSN	Communication Protocol	CC-Link IE TSN Class B
	Operation Mode	IO-Map Command Mode(Manufacturer-specific), Velocity Mode(VL)
	Synchronization	Minimum Cycle Time: 250 $\mu$ s / Synchronous Communication(VL) / Asynchronous Communication(VL)

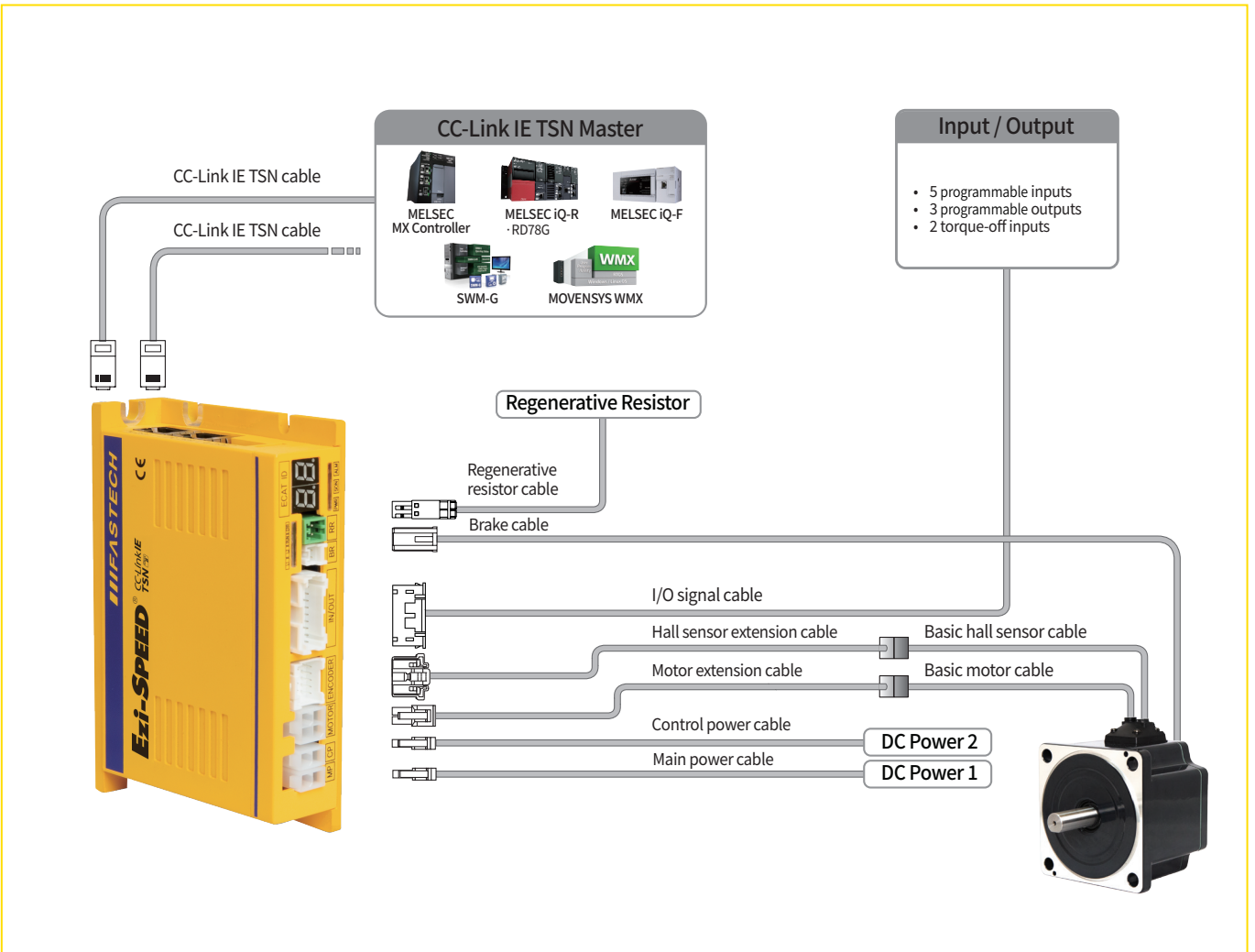
## Module Overview



## Dimension



## System Configuration



# Ezi-SPEED<sup>®</sup> CC-Link IE TSN

## BLDC Motor Speed Control System

- CC-Link IE TSN-compatible BLDC Motor Speed Control System
- AC Power Supply Input (200 ~ 240 V AC)
- Compact · Light Weight · High Power · High Efficiency Brushless Motor
- Wide Speed Range (50 ~ 4,000 r/min)
- Stable Speed Regulation ( $\pm 0.2\%$ )
- BLDC Motor Line-up (30, 60, 120, 200, 400 W)

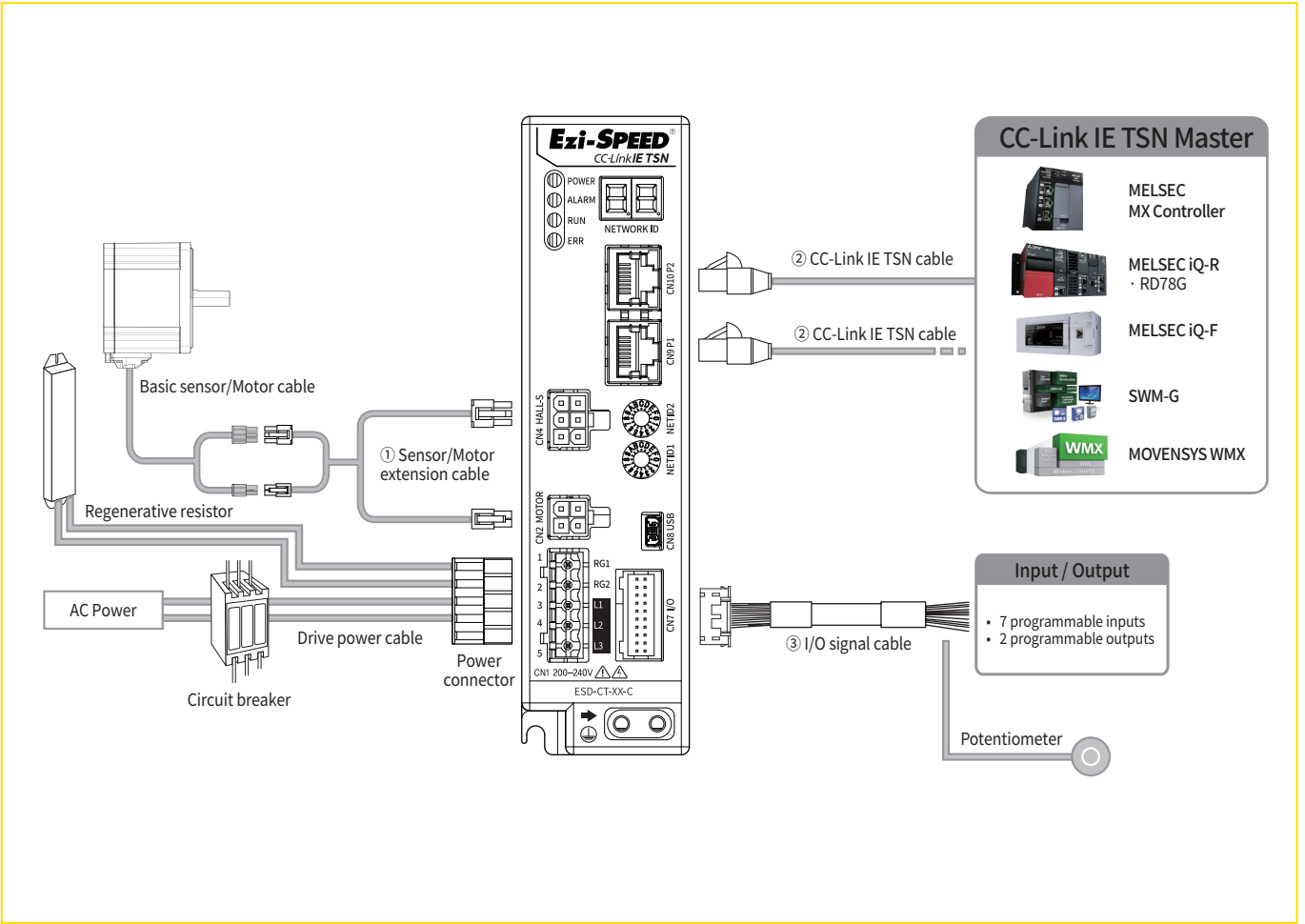


### Specifications

□: Motor flange size  
■: Shaft figuration

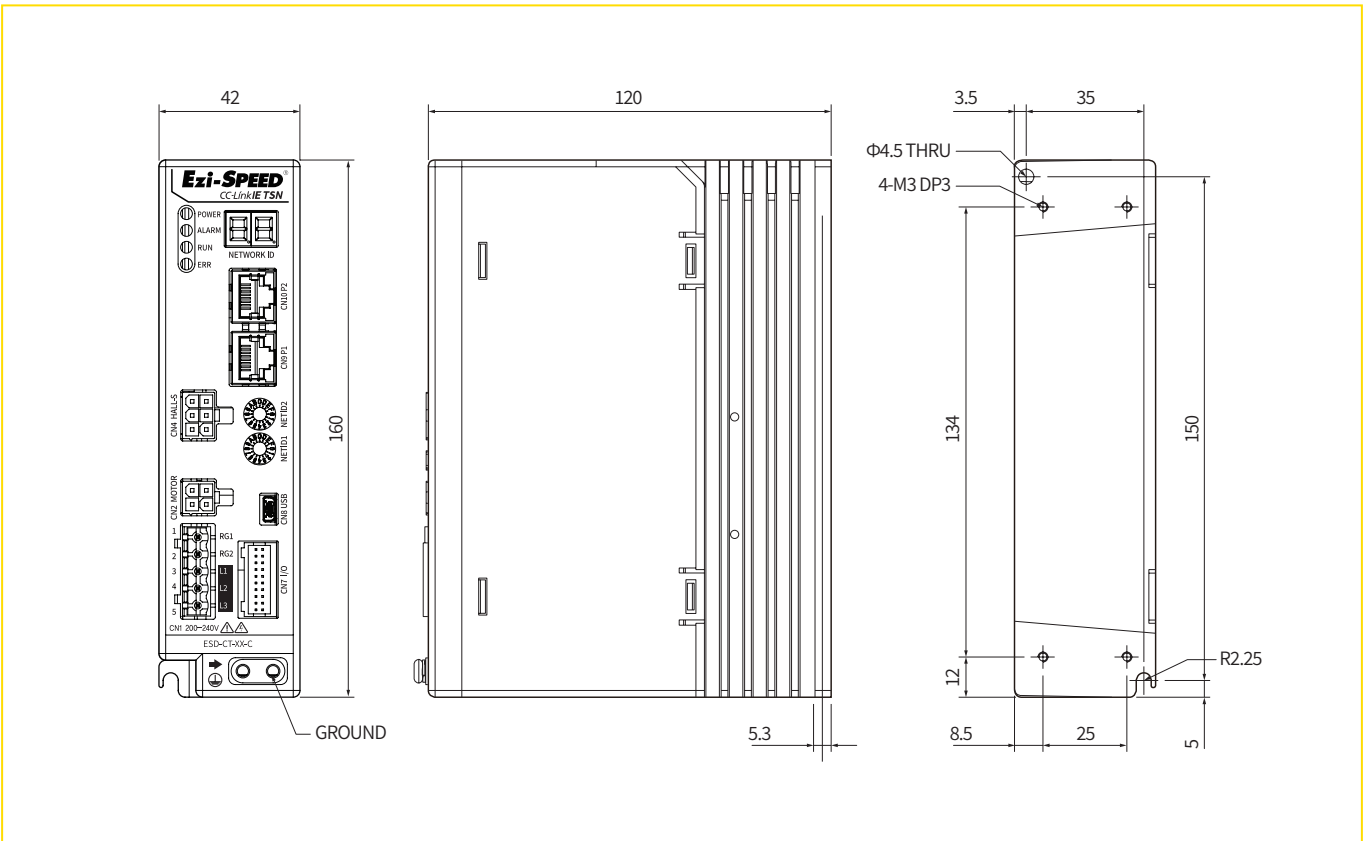
Model	Ezi-SPEED-CT-□-■-30	Ezi-SPEED-CT-□-■-60	Ezi-SPEED-CT-□-■-120	Ezi-SPEED-CT-□-■-200	Ezi-SPEED-CT-□-■-400
Rated Output Power (Continuous)	30 W	60 W	120 W	200 W	400 W
Power Supply	Rated Voltage				
	Single-phase 200 ~ 240 V / Three-phase 200 ~ 240 V				
	Rated Frequency				
	50/60 Hz $\pm 5\%$				
Rated Input Current	Single-Phase : 0.88 A Three-Phase : 0.51 A	Single-Phase : 1.55 A Three-Phase : 0.90 A	Single-Phase : 2.43 A Three-Phase : 1.41 A	Single-Phase : 3.42 A Three-Phase : 1.97 A	Single-Phase : 5.64 A Three-Phase : 3.26 A
	Single-Phase : 1.9 A Three-Phase : 1.1 A	Single-Phase : 2.8 A Three-Phase : 1.7 A	Single-Phase : 4.5 A Three-Phase : 2.6 A	Single-Phase : 5.47 A Three-Phase : 3.16 A	Single-Phase : 7.85 A Three-Phase : 4.53 A
Maximum Input Current	Single-Phase : 1.9 A Three-Phase : 1.1 A	Single-Phase : 2.8 A Three-Phase : 1.7 A	Single-Phase : 4.5 A Three-Phase : 2.6 A	Single-Phase : 5.47 A Three-Phase : 3.16 A	Single-Phase : 7.85 A Three-Phase : 4.53 A
Rated Phase Current	0.21 A	0.36 A	0.85 A	1.65 A	2.37 A
Rated Torque	0.096 N·m	0.191 N·m	0.382 N·m	0.637 N·m	1.27 N·m
Maximum Instantaneous Torque	0.144 N·m	0.287 N·m	0.573 N·m	1.15 N·m	1.91 N·m
Rated Speed	3,000 r/min				
Speed Control Range	50 ~ 4,000 r/min				
Speed Regulation	$\pm 0.2\%$ or less / Conditions : 0~Rated Torque, Rated Speed, Rated Voltage, Normal Temperature				
Digital Input	7 programmable inputs				
Digital Output	2 programmable outputs				
CC-Link IE TSN	Communication Protocol				
	CC-Link IE TSN Class B				
	Operation Mode				
IO-Map Command Mode(Manufacturer-specific), Velocity Mode(VL)					
Synchronization					
Minimum Cycle Time: 250 $\mu$ s / Synchronous Communication(VL) / Asynchronous Communication(VL)					

## System Configuration



## Dimension

Unit [mm]



# Ezi-ROBO<sup>®</sup> CC-Link IE TSN

## Precise Actuator System IGH

- Slider Type Electric Actuator with Stepping Motor & Ball Screw
- High Strength Steel Frame
- Repeatability ( $\pm 0.005$  mm)
- High Resolution Encoder (Max. 20,000 P/R)
- Size Line-up (IGH15: 30 x 15 mm, IGH23: 50.5 x 23 mm, IGH30: 60.5 x 30 mm)
- Compatible with Field Networks (EtherCAT, CC-Link IE TSN, Ethernet, PROFINET, Pulse Input, RS-485)



### IGH-15/23

Model		Ezi-ROBO-IGH-15-□ Ezi-ROBO-IGH-15S-□	Ezi-ROBO-IGH-23-□ Ezi-ROBO-IGH-23S-□	Ezi-ROBO-IGH-23C-□
Actuator Type	[mm]	Open / Cover	Open / Cover	Anti-dust
Lead	[mm]	1, 2	2, 5	2, 5
Guide Rail Length	[mm]	100 ~ 200	150 ~ 300	150 ~ 300
Stroke	[mm]	60 ~ 160	76 ~ 226	76 ~ 226
Repeatability	[mm]	$\pm 0.005$ ( $\pm 0.003$ )	$\pm 0.005$ ( $\pm 0.003$ )	$\pm 0.005$ ( $\pm 0.003$ )
Maximum Speed	[mm/s]	Lead 1: 40, Lead 2: 80	Lead 2: 80, Lead 5: 200	Lead 2: 80, Lead 5: 200
Permissible load	Horizontal	[kg]	1.5	7.5
	Vertical	[kg]	1	5
Permissible Moment	[N·m]	M <sub>p</sub> : 10 M <sub>v</sub> : 11 M <sub>R</sub> : 28	M <sub>p</sub> : 46 M <sub>v</sub> : 51 M <sub>R</sub> : 134	M <sub>p</sub> : 29 M <sub>v</sub> : 51 M <sub>R</sub> : 61

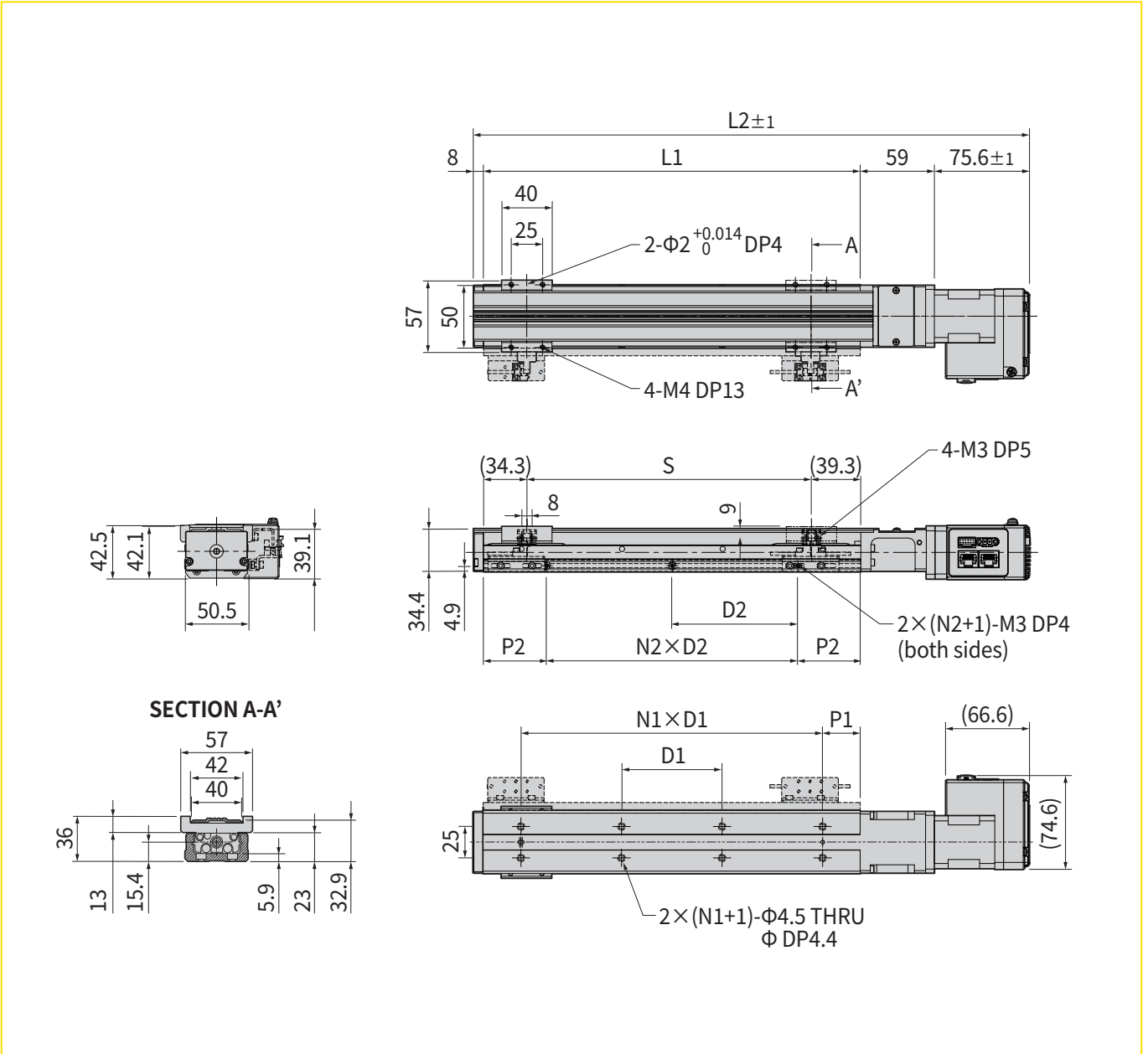
### IGH-30

Model		Ezi-ROBO-IGH-30-□ Ezi-ROBO-IGH-30S-□	Ezi-ROBO-IGH-30C-□
Actuator Type	[mm]	Open / Cover	Anti-dust
Lead	[mm]	5, 10	5, 10
Guide Rail Length	[mm]	150 ~ 500	150 ~ 500
Stroke	[mm]	60 ~ 410	50 ~ 400
Repeatability	[mm]	$\pm 0.005$	$\pm 0.005$
Maximum Speed	[mm/s]	Lead 5: 200, Lead 10: 400	Lead 5: 200, Lead 10: 400
Permissible load	Horizontal	[kg]	15
	Vertical	[kg]	12
Permissible Moment	[N·m]	M <sub>p</sub> : 101 M <sub>v</sub> : 120 M <sub>R</sub> : 260	M <sub>p</sub> : 43 M <sub>v</sub> : 107 M <sub>R</sub> : 84

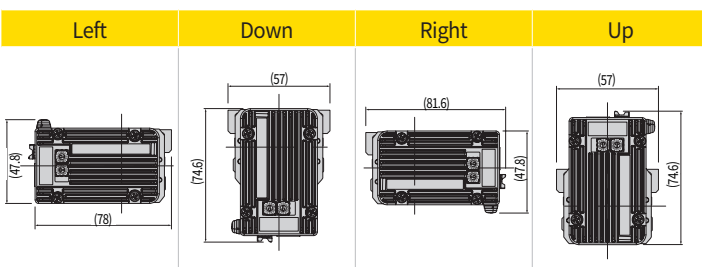
**Dimension (IGH-23)**

Unit [mm]

Guide Rail Length, L1	Overall Length, L2		Stroke, S	P1	N1 X D1	P2	N2 X D2
	ALL Motor	BT Motor					
150	292.6	298	76	35	1 X 80	25	1 X 100
200	342.6	348	126	20	2 X 80	50	
250	392.6	398	176	45	3 X 80	25	2 X 100
300	442.6	448	226	30		50	



**Motor Direction**



# Ezi-ROBO<sup>®</sup> CC-Link IE TSN

## Precise Actuator System IGS

- Slider Type Electric Actuator with Stepping Motor & Ball Screw
- Repeatability ( $\pm 0.005$  mm)
- High Resolution Encoder (Max. 20,000 P/R)
- Size Line-up (IGS30: 37 x 29 mm, IGS40: 42 x 38 mm, IGS50: 52 x 45 mm, IGS60: 60 x 45 mm)
- Compatible with Field Networks (EtherCAT, CC-Link IE TSN, Ethernet, PROFINET, Pulse Input, RS-485)



### IGS-30/40

Model		Ezi-ROBO-IGS-30S-□		Ezi-ROBO-IGS-40S-□ Ezi-ROBO-IGS-40PL-□				
Lead	[mm]	2		2, 5				
Stroke	[mm]	50	100	50	100	150	200	250
Repeatability	[mm]	$\pm 0.005$		$\pm 0.005$				
Maximum Speed	[mm/s]	80		Lead 2: 80, Lead 5: 200				
Permissible load	Horizontal	[kg]	2.5	4				
	Vertical	[kg]	2	3				
Permissible Moment	[N·m]	$M_p: 23.2$ $M_y: 23.2$ $M_R: 43.7$		$M_p: 34.7$ $M_y: 34.7$ $M_R: 64.8$				

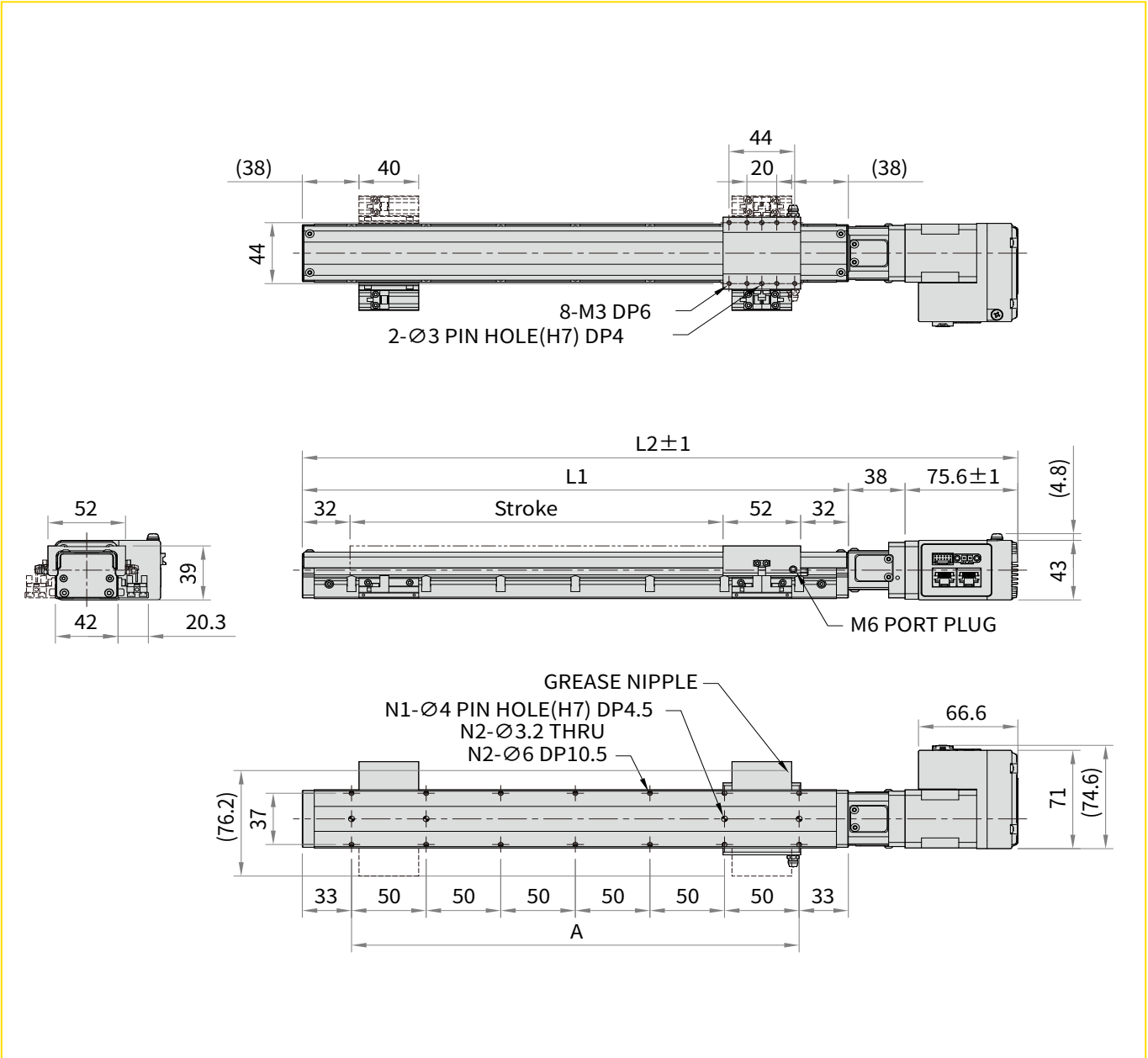
### IGS-50/60

Model		Ezi-ROBO-IGS-50S-□ Ezi-ROBO-IGS-50PL-□		Ezi-ROBO-IGS-60S-□ Ezi-ROBO-IGS-60PL-□	
Lead	[mm]	5, 10		5, 10	
Stroke	[mm]	50 ~ 500		50 ~ 600	
Repeatability	[mm]	$\pm 0.005$		$\pm 0.005$	
Maximum Speed	[mm/s]	Lead 5: 200, Lead 10: 400		Lead 5: 200, Lead 10: 400	
Permissible load	Horizontal	[kg]	10	13	
	Vertical	[kg]	Lead 5: 9.5, Lead 10: 7.5	Lead 5: 10, Lead 10: 12.5	
Permissible Moment	[N·m]	$M_p: 131.4$ $M_y: 131.4$ $M_R: 164$		$M_p: 172.1$ $M_y: 172.1$ $M_R: 224.9$	

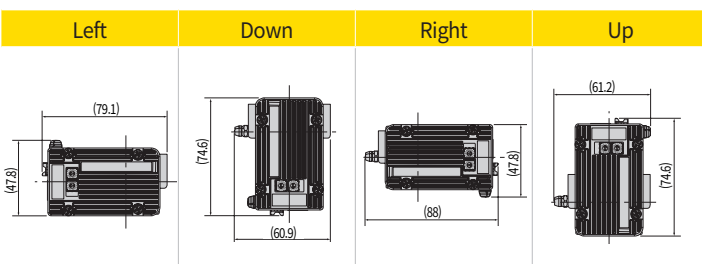
Dimension (IGS-40S)

Unit [mm]

Stroke, S	L1	Overall Length, L2		Number of Pin Holes for Positioning, N1	Number of Holes for Product Fastening, N2	Distance Between Holes for Product Fastening(Min.), A
		ALL Motor	BT Motor			
50	166	279.6	285	3	6	100
100	216	329.6	335	4	8	150
150	266	379.6	385	4	10	200
200	316	429.6	435	4	12	250
250	366	479.6	485	4	14	300



Motor Direction



# Ezi-ROBO<sup>®</sup> CC-Link IE TSN

## Precise Actuator System VZR

- Slim Actuator with Hollow Shaft Motor & Ball Screw Spline
- Vacuum(V) + Linear(Z) + Rotary(R), 3-in-1 Actuator
- Repeatability (Z Axis:  $\pm 0.01$  mm / R Axis:  $\pm 0.1^\circ$ )
- High Resolution Encoder (Max. 20,000 P/R)
- Size Line-up (28 mm, 42 mm)
- Compatible with Field Networks (EtherCAT, CC-Link IE TSN, Ethernet, PROFINET, Pulse Input)

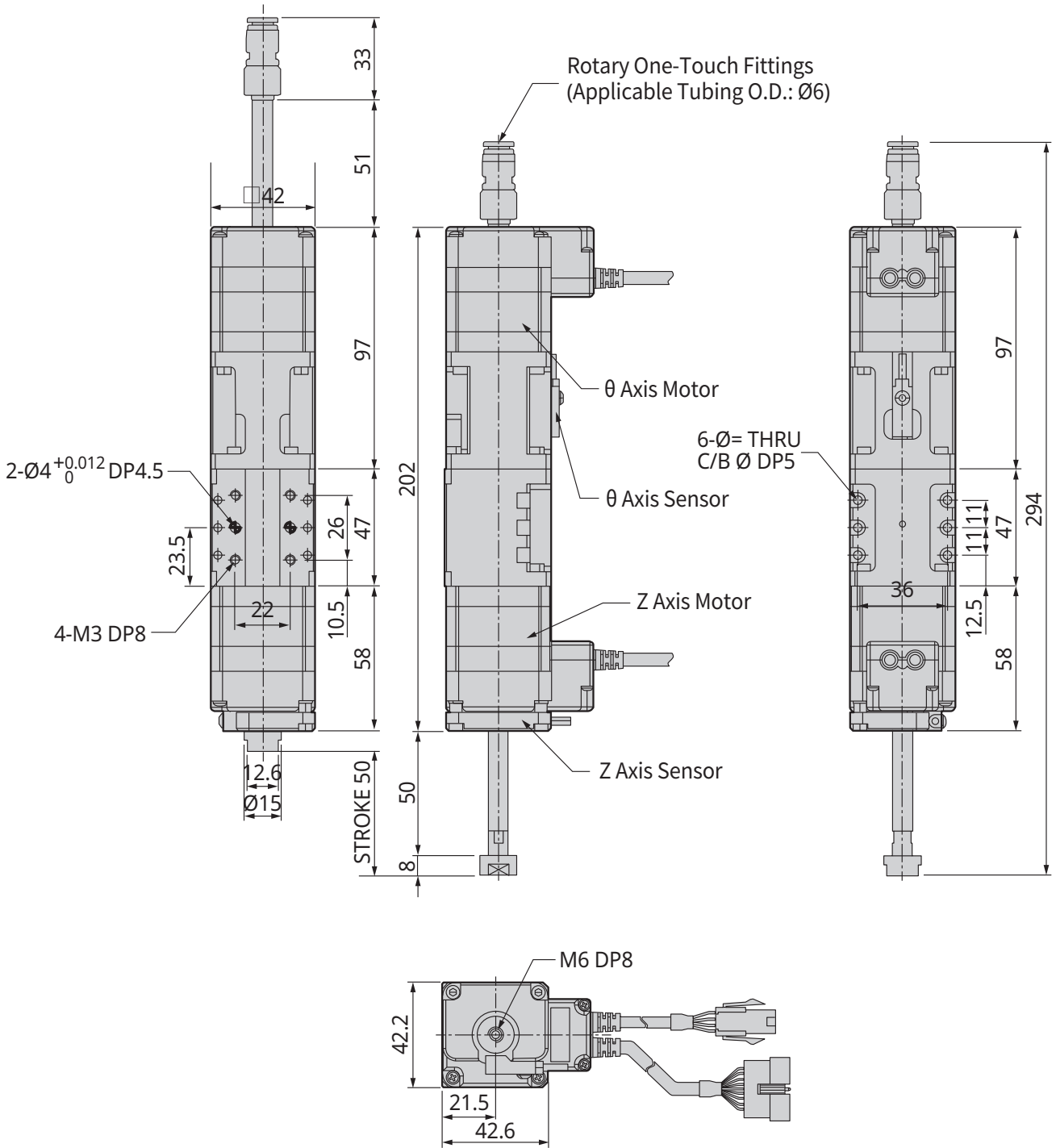


### Specifications

Model	Ezi-ROBO-VZR-28-50-P6-28-D-N-□ Ezi-ROBO-VZR-28-50-P6-28-D-P-□		Ezi-ROBO-VZR-42-50-P10-42-B-N-□ Ezi-ROBO-VZR-42-50-P10-42-B-P-□	
Lead		[mm]	6	10
Repeatability	Z Axis	[mm]	$\pm 0.01$	$\pm 0.01$
	$\theta$ Axis	[deg]	$\pm 0.1$	$\pm 0.1$
Maximum Speed	Z Axis	[mm/s]	72	200
	$\theta$ Axis	[rev/s]	3	3
Maximum Acceleration	Z Axis	[mm/s <sup>2</sup> ]	0.6	1
	$\theta$ Axis	[rad/s <sup>2</sup> ]	$120\pi$	$120\pi$
Permissible Load		[kg]	0.5	1.5
Reference Thrust Force		[N]	7	15
Permissible Moment		[kg·m <sup>2</sup> ]	$0.15 \times 10^{-4}$	$0.35 \times 10^{-4}$
Stroke		[mm]	50	50

■ Dimension (VZR-42)

Unit [mm]



# Ezi-ROBO<sup>®</sup> CC-Link IE TSN

## Precise Actuator System **CLA**

- Compact Linear Actuator with Hollow Shaft Motor & Ball Screw
- Repeatability ( $\pm 0.01$  mm), Lost Motion ( $\leq 0.05$  mm)
- High Resolution Encoder (Max. 20,000 P/R)
- Size Line-up (20 mm, 28 mm, 42 mm, 56 mm)
- Compatible with Field Networks (EtherCAT, CC-Link IE TSN, Ethernet, PROFINET, Pulse Input, RS-485)



### ■ CLAT (Table Type)

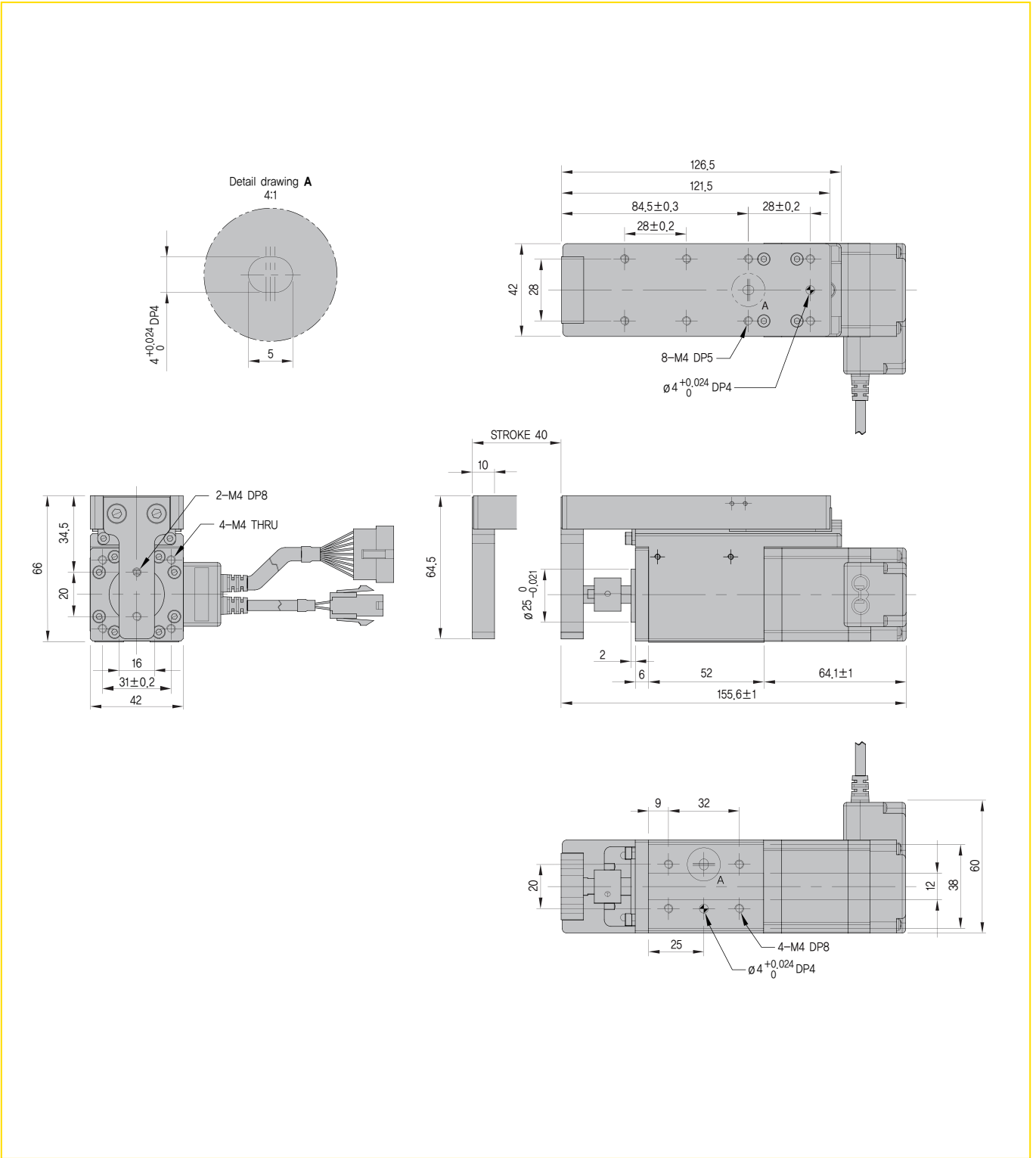
Model		Ezi-ROBO-CLAT-20-25R1	Ezi-ROBO-CLAT-28-30R1	Ezi-ROBO-CLAT-42-40R2 Ezi-ROBO-CLAT-42-40R8		Ezi-ROBO-CLAT-56-50R4
Lead	[mm]	1	1	2	8	4
Repeatability	[mm]	$\pm 0.01$	$\pm 0.01$	$\pm 0.01$	$\pm 0.01$	$\pm 0.01$
Lost Motion	[mm]	$\leq 0.05$	$\leq 0.05$	$\leq 0.05$	$\leq 0.05$	$\leq 0.05$
Permissible Moment	Static [N·m]	$M_p: 0.10$ $M_y: 0.05$ $M_R: 0.15$	$M_p: 0.3$ $M_y: 0.24$ $M_R: 1.5$	$M_p: 1.3$ $M_y: 1.0$ $M_R: 2.5$		$M_p: 2.5$ $M_y: 2.0$ $M_R: 5.0$
	Dynamic [N·m]					
Permissible Load	Horizontal [kg]	1	4	8	5	10
	Vertical [kg]	0.5	2	4	3	5
Stroke	[mm]	25	30	40	40	50
Maximum Speed	[mm/s]	20	20	50	150	50

### ■ CLAR (Rod Type)

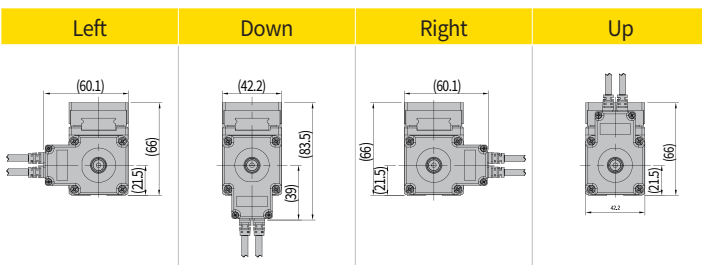
Model		Ezi-ROBO-CLAR-20-25R1	Ezi-ROBO-CLAR-28-30R1	Ezi-ROBO-CLAR-42-40R2 Ezi-ROBO-CLAR-42-40R8		Ezi-ROBO-CLAR-56-50R4
Lead	[mm]	1	1	2	8	4
Repeatability	[mm]	$\pm 0.01$	$\pm 0.01$	$\pm 0.01$	$\pm 0.01$	$\pm 0.01$
Lost Motion	[mm]	$\leq 0.05$	$\leq 0.05$	$\leq 0.05$	$\leq 0.05$	$\leq 0.05$
Permissible Load	Horizontal [kg]	1	4	8	5	10
	Vertical [kg]	0.5	2	4	3	5
Stroke	[mm]	25	30	40	40	50
Maximum Speed	[mm/s]	20	20	50	150	50

Dimension (CLAT-42)

Unit [mm]



Cable Direction



# Ezi-ROBO<sup>®</sup> CC-Link IE TSN

## Precise Actuator System **HG**

- Hollow Rotary Index Table with Stepping Motor
- Repeatability ( $\pm 10$  arcsec)
- Hollow Diameter (Max.  $\varnothing 85$  mm)
- Permissible Torque (Max. 170 N·m)
- Axial Load (Max. 4000 N)
- High Resolution Encoder (Max. 20,000 P/R)
- Size Line-up ( $\square 60$  mm,  $\square 100$  mm,  $\square 130$  mm,  $\square 170$  mm)
- Compatible with Field Networks (EtherCAT, CC-Link IE TSN, Ethernet, PROFINET, Pulse Input)



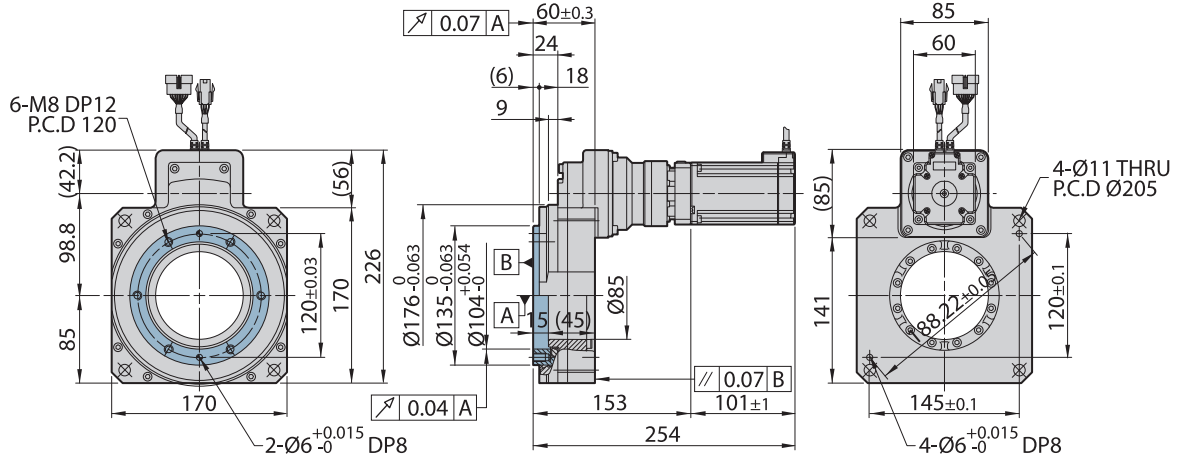
### ■ Specifications

Model	Ezi-ROBO-HG60-05-42XL-□	Ezi-ROBO-HG100-08-60L-□	Ezi-ROBO-HG130S-18-60L-□	Ezi-ROBO-HG170S-20-60L-□	Ezi-ROBO-HG170S-36-60L-□	Ezi-ROBO-HG170S-20-86L-□	Ezi-ROBO-HG170S-36-86L-□
Motor	42XL	60L	60L	60L		86L	
Output Table Supporting Bearing	Ball Bearing	Tapered Roller + Ball bearing	Cross Roller Bearing				
Permissible Torque [N·m]	4.5	12	34	170	107	170	107
Inertia Moment [kg·m <sup>2</sup> ]	$2,330 \times 10^{-7}$	$3,898 \times 10^{-6}$	$3,127 \times 10^{-5}$	$4,752 \times 10^{-5}$	$12,351 \times 10^{-5}$	$7,484 \times 10^{-5}$	$21,203 \times 10^{-5}$
1:8 Permissible Speed [r/min]	300	200	200	150	150	150	150
Gear Ratio	1:5	1:8	1:18	1:20	1:36	1:20	1:36
Holding Torque [N·m]	2.2	12	25.1	27.8	50.2	96.1	107
Repeatability [arcsec]	$\pm 10 (\pm 0.0028^\circ)$						
Lost Motion [arcmin]	$2 (\pm 0.033^\circ)$						
Angular Transmission Accuracy [arcmin]	$4 (0.067^\circ)$						
Permissible Axial Load [N]	100	500	2,000	3,900	4,000	3,900	4,000
Permissible Moment Load [N·m]	2	10	50	152	200	152	200
Runout of Output Table Surface [mm]	0.03	0.015	0.07	0.07	0.07	0.07	0.07
Runout of Output Table Inner (Outer) Dia. [mm]	0.03	0.015	0.04	0.04	0.04	0.04	0.04
Parallelism of Output Table [mm]	0.05	0.03	0.07	0.07	0.07	0.07	0.07
Degree of Protection	IP40						
Mass of Actuator Unit [kg]	1.6	4.0	6.3	8.7	8.7	11.9	11.9

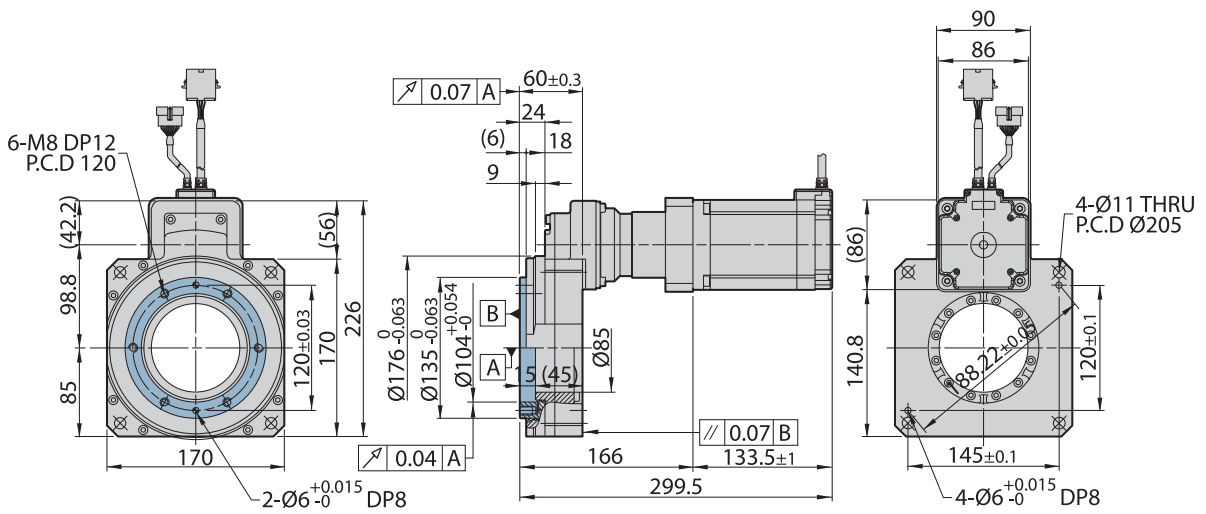
Dimension (HG170S)

Unit [mm]

Ezi-ROBO-HG170S-20-60L-□  
 Ezi-ROBO-HG170S-36-60L-□



Ezi-ROBO-HG170S-20-86L-□  
 Ezi-ROBO-HG170S-36-86L-□

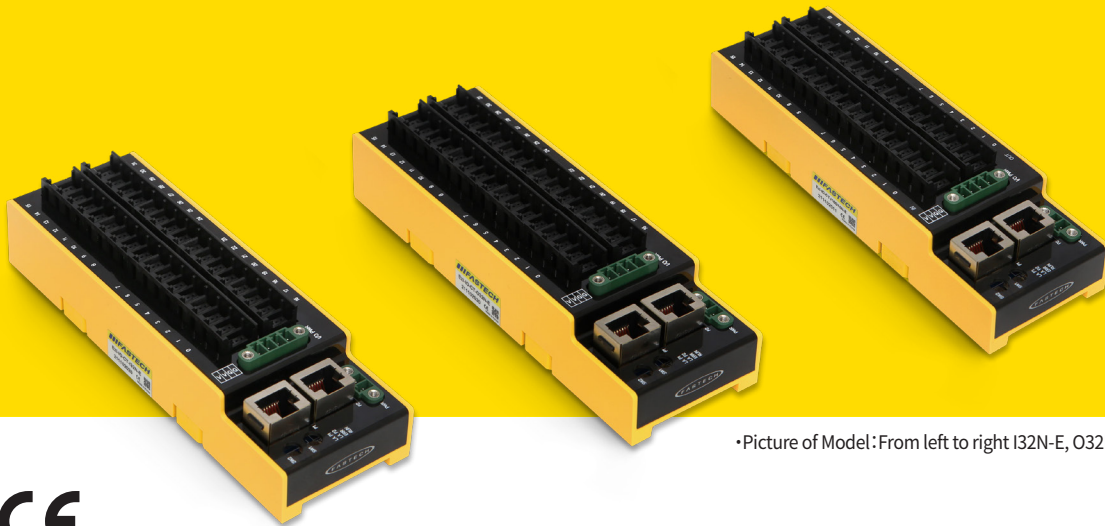


※ □ is a drive type.

# Ezi-IO<sup>®</sup> CC-Link IE TSN

## Network Input/Output DIO

- CC-Link IE TSN-compatible Digital I/O Module
- Input Filter Function
- Simple and Easy Wiring
- DIN Rail Mounting



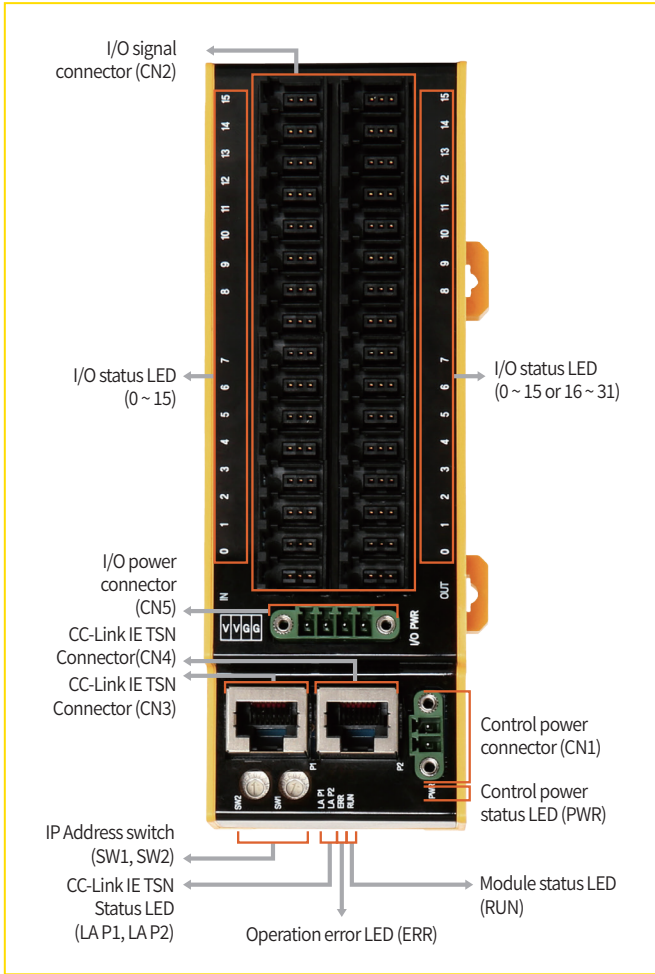
•Picture of Model:From left to right I32N-E, O32N-E, I16O16N-E



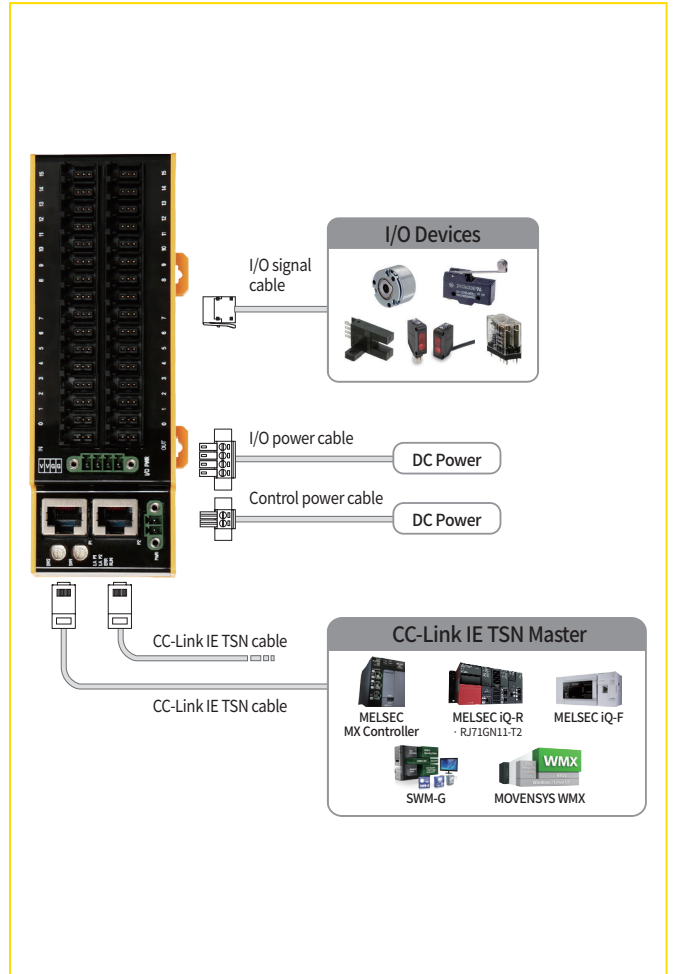
### Specifications

Model		Ezi-IO-CT-I32N-E	Ezi-IO-CT-O32N-E	Ezi-IO-CT-I16O16N-E	
Control Power Supply		24 V DC $\pm$ 10 %			
Function	Input	Number of Input Channels	32 CH	16 CH	
		Rated Input Voltage	24 V DC	24 V DC	
		Rated Input Current	5 mA/CH	5 mA/CH	
		Isolation Method	Photocoupler Isolation	Photocoupler Isolation	
		Common Method	16 CH/COM	16 CH/COM	
		Input Filter	Max. 40 ms(Filter Resolution: 200 $\mu$ s)	Max. 40 ms(Filter Resolution: 200 $\mu$ s)	
		Off→On Response Time	10 $\mu$ s or lower	10 $\mu$ s or lower	
		On→Off Response Time	70 $\mu$ s or lower	70 $\mu$ s or lower	
	Output	Number of Output Channels	-	32 CH	16 CH
		Rated Output Voltage	-	24 V DC	24 V DC
		Rated Output Current	-	0.5 A/CH (3 A/COM)	0.5 A/CH (3 A/COM)
		Isolation Method	-	Photocoupler Isolation	Photocoupler Isolation
		Common Method	-	16 CH / COM	16 CH/COM
		Off→On Response Time	-	4 $\mu$ s or lower	4 $\mu$ s or lower
On→Off Response Time	-	190 $\mu$ s or lower	190 $\mu$ s or lower		
LED Display		<ul style="list-style-type: none"> <li>• PWR : Power Status</li> <li>• RUN : Module Status</li> </ul> Input 0~31 Status	<ul style="list-style-type: none"> <li>• ERR : Operation Error</li> <li>• LA P1, LA P2 : CC-Link IE TSN Status</li> </ul> Output 0~31 Status	Input 0~15 / Output 0~15 Status	
CC-Link IE TSN	Communication Protocol	CC-Link IE TSN Class B			
	Synchronization	Asynchronous Mode, Synchronous Mode			

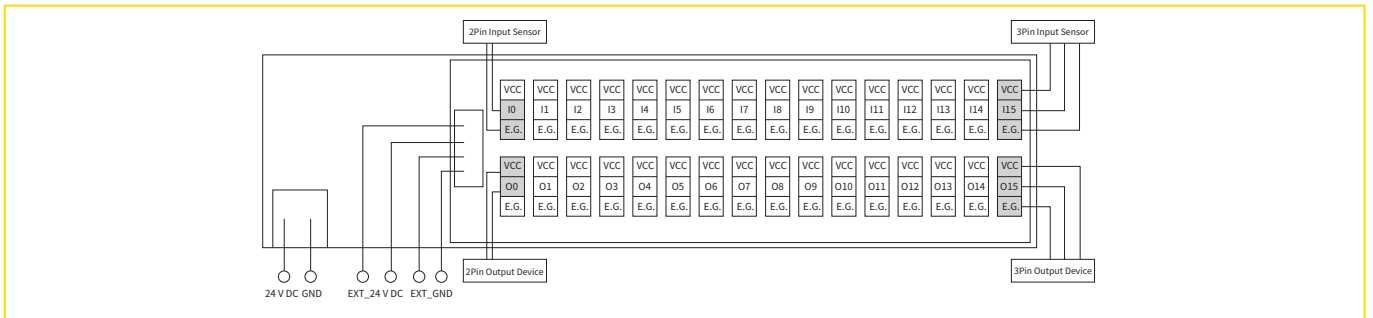
## Module Overview



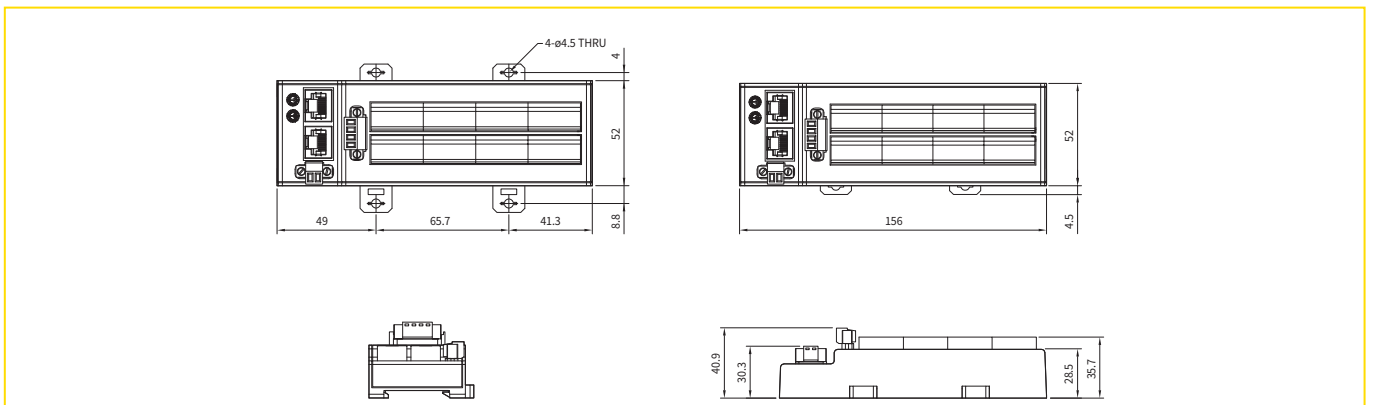
## System Configuration



## Wiring Example (Ezi-IO-CT-I16O16N-E)



## Dimension



# Ezi-IO<sup>®</sup> CC-Link IE TSN

## Network Input/Output AD

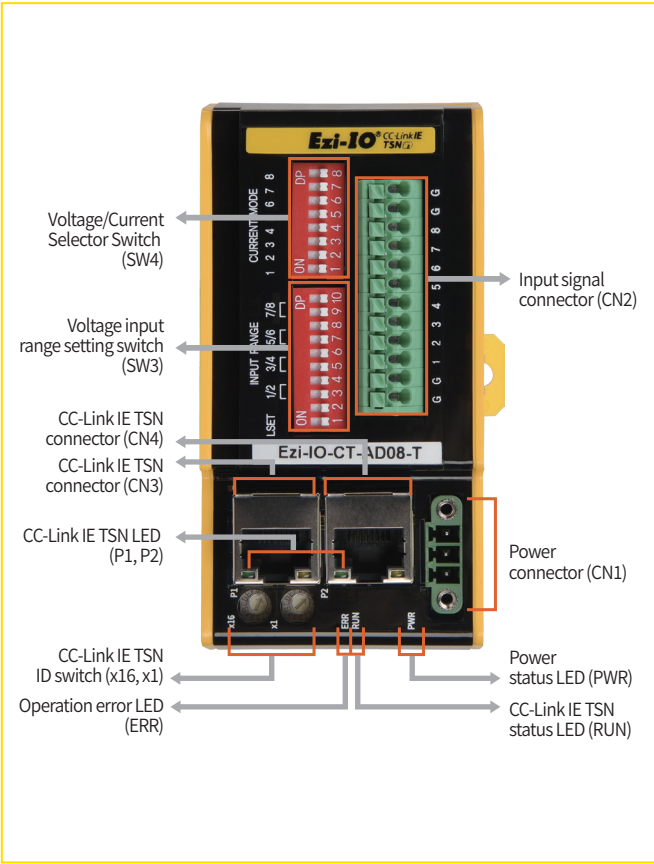
- CC-Link IE TSN-compatible Analog Input Module
- Configurable Input Mode and Input Range
- Moving Average Filtering
- Simple and Easy Wiring
- DIN Rail Mounting



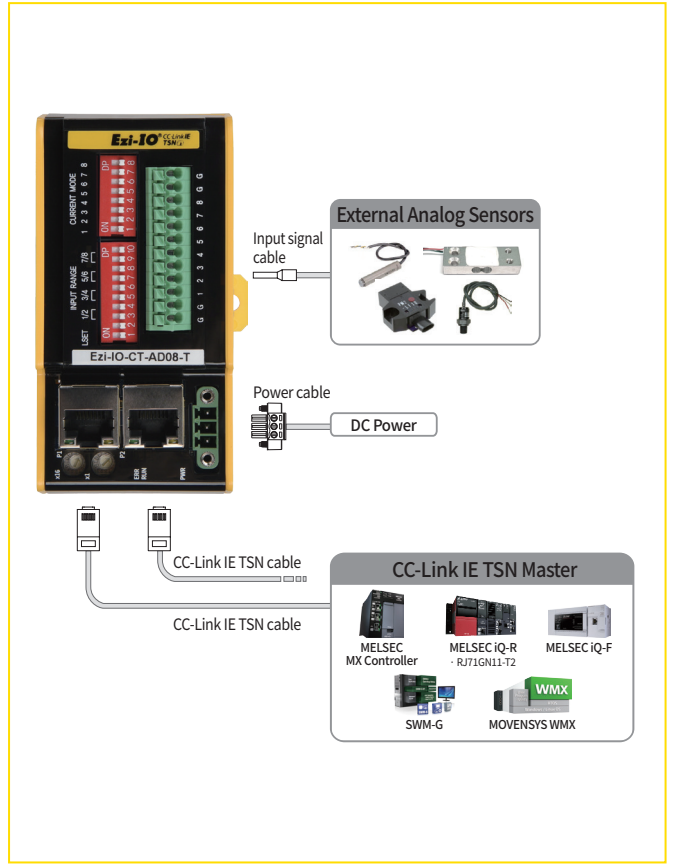
## Specifications

Model		Ezi-IO-CT-AD08-T		
Input Mode		Voltage Input	Current Input	
Power Supply		24 V DC $\pm$ 10 %		
Function	Number of Input Channels	8 CH		
	Max. Signal Input	$\pm$ 15 V	$\pm$ 30 mA	
	Input Range	$\cdot$ -10 ~ 10 V / -5 ~ 5 V / -2.5 ~ 2.5 V / 0 ~ 10 V	$\cdot$ 0 ~ 20 mA	
	Input Range Setting Method	$\cdot$ Parameter Setting Window (Separate settings for CH1 ~ CH8) $\cdot$ DIP Switch (Separate settings for CH1/CH2, CH3/CH4, CH5/CH6, CH7/CH8)		
	Input Impedance	1 M $\Omega$	249 $\Omega$	
	Max. Resolution	1/8,191 (Full Scale)		
	Accuracy	25 $^{\circ}$ C	$\pm$ 0.3 % (Full Scale)	$\pm$ 0.3 % (Full Scale)
		0 ~ 50 $^{\circ}$ C	$\pm$ 0.4 % (Full Scale)	$\pm$ 0.6 % (Full Scale)
	Conversion Cycle	200 $\mu$ s/8 CH		
A/D Converted Data	$\cdot$ -10 ~ 10 V : -4,096 ~ 4,095 $\cdot$ -5 ~ 5 V : -4,096 ~ 4,095	$\cdot$ -2.5 ~ 2.5 V : -4,096 ~ 4,095 $\cdot$ 0 ~ 10 V : 0 ~ 8,191	$\cdot$ 0 ~ 20 mA : 0 ~ 8,191	
Isolation Method	Between analog input and communication connections : Digital isolation (Between channels : Non-isolated)			
LED Display	PWR : Power Status , RUN : Module Status ERR : Operation Error, LA P1, LA P2 : CC-Link IE TSN Status			
CC-Link IE TSN	Communication Protocol	CC-Link IE TSN Class B		
	Synchronization	Asynchronous Mode, Synchronous Mode		

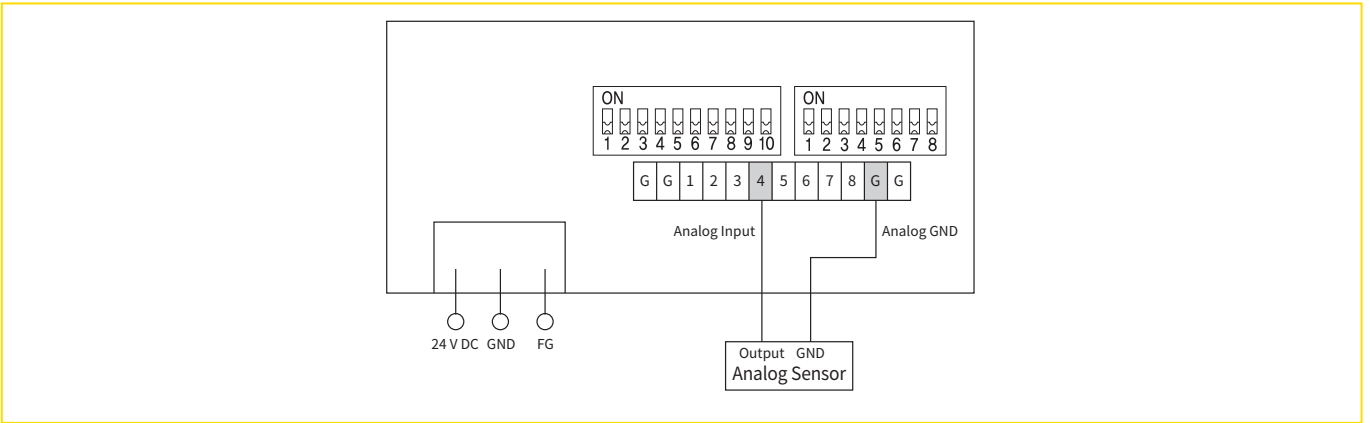
## Module Overview



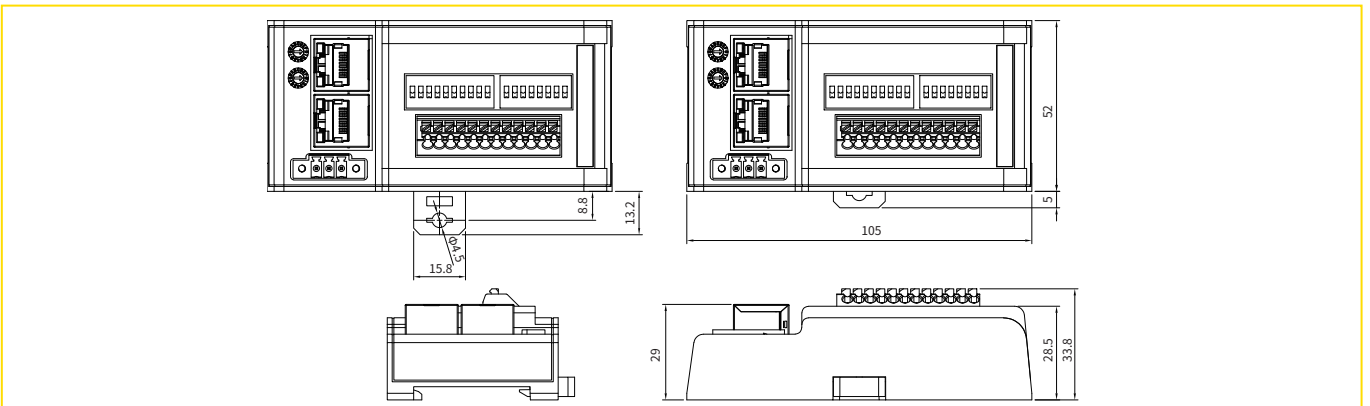
## System Configuration



## Wiring Example (Ezi-IO-CT-AD08-T)



## Dimension



# Ezi-IO<sup>®</sup> CC-Link IE TSN

## Network Input/Output DA

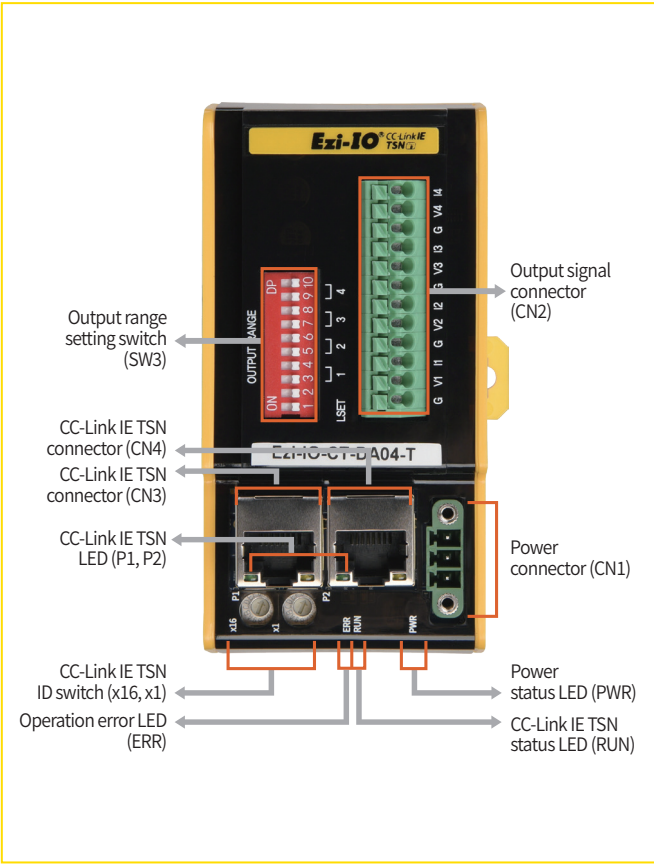
- CC-Link IE TSN-compatible Analog Output Module
- Configurable Output Range
- Calibration for Output Deviation
- Simple and Easy Wiring
- DIN Rail Mounting



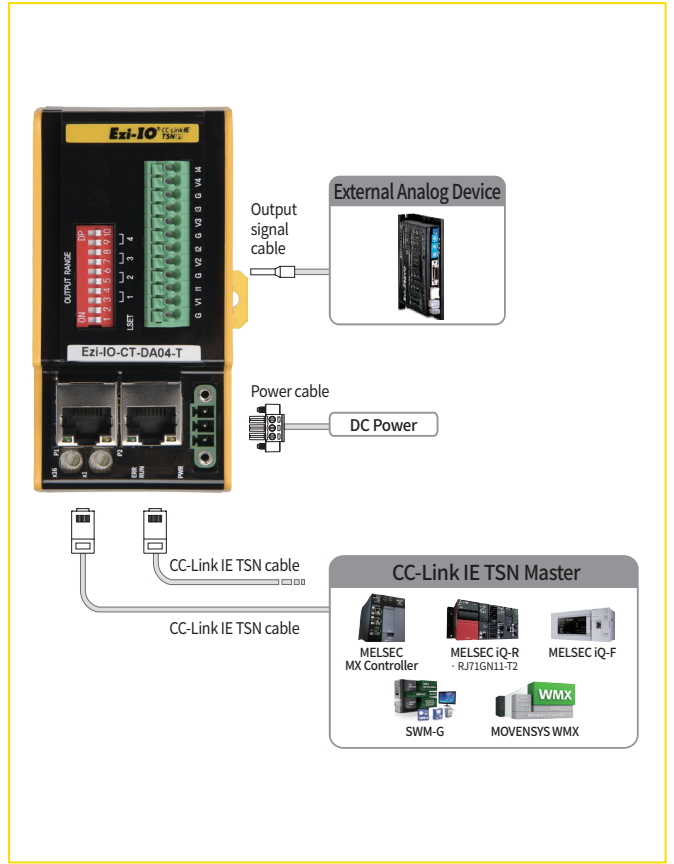
## Specifications

Model		Ezi-IO-CT-DA04-T		
Output Mode		Voltage Output	Current Output	
Power Supply		24 V DC $\pm$ 10 %		
Function	Number of Output Channels	4 CH		
	Output Range	· 0 ~ 5 V / 1 ~ 5 V / 0 ~ 10 V / -10 ~ 10 V	· 0 ~ 20 mA / 4 ~ 20 mA	
	Output Range Setting Method	· Parameter Setting Window (Separate settings for CH1 ~ CH4) · DIP Switch (Separate settings for CH1 ~ CH4)		
	External Load Resistance	1 M $\Omega$ or higher	400 $\Omega$ or lower	
	Max. Resolution	1/50,000 (Full Scale)		
	Accuracy	25 °C	$\pm$ 0.3 % (Full Scale)	
		0 ~ 50 °C	$\pm$ 0.4 % (Full Scale)	
	Conversion Cycle	500 $\mu$ s / 4CH		
	D/A Converted Data	· -25,000 ~ 25,000 (-10 ~ 10 V output range) · 0 ~ 25,000 (Other output ranges except -10 ~ 10 V)	· 0 ~ 25,000	
Isolation Method	Between analog output and communication connections : Digital isolation (Between channels : Non-isolated)			
LED Display		PWR : Power Status , RUN : Module Status ERR : Operation Error, LA P1, LA P2 : CC-Link IE TSN Status		
CC-Link IE TSN	Communication Protocol	CC-Link IE TSN Class B		
	Synchronization	Asynchronous Mode, Synchronous Mode		

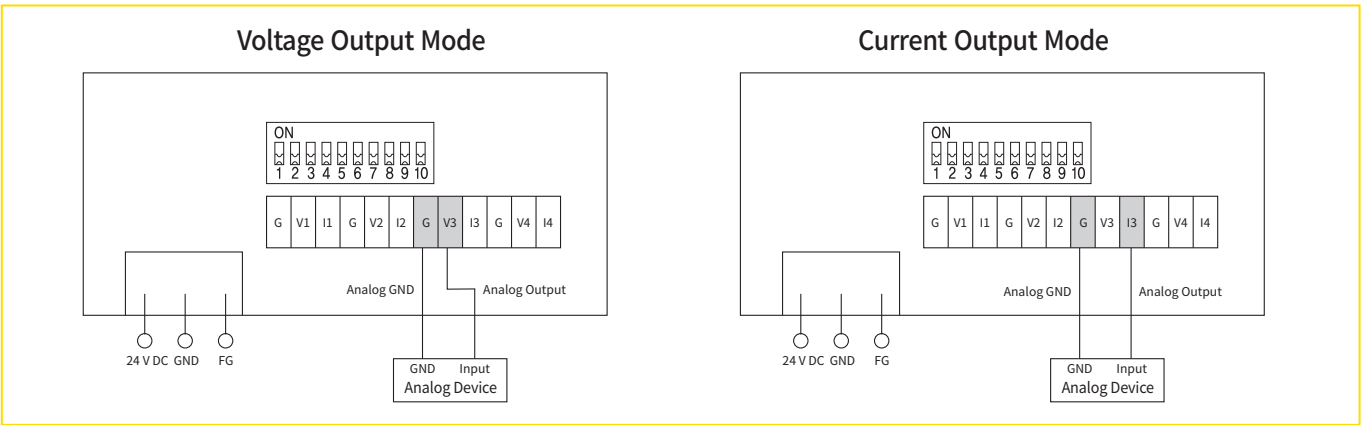
## Module Overview



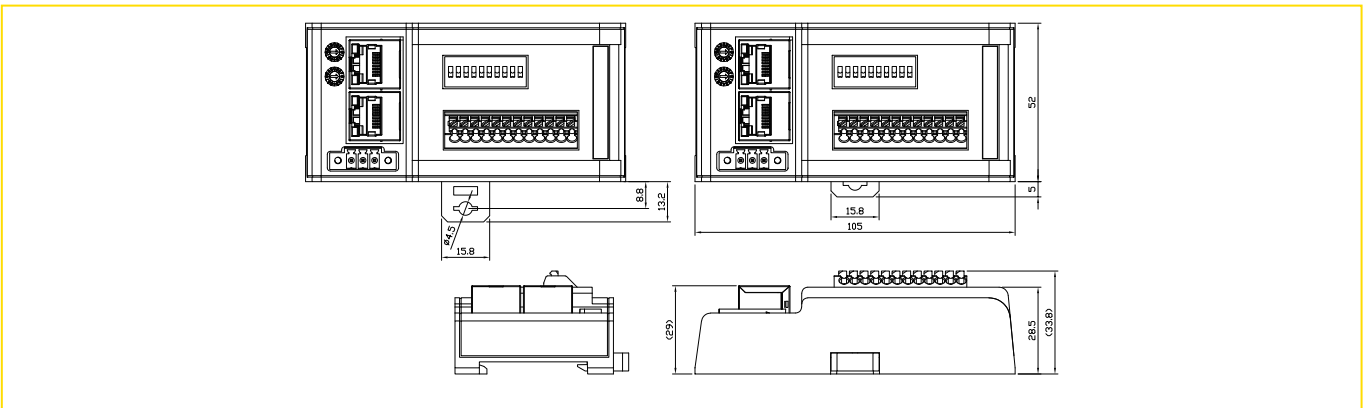
## System Configuration



## Wiring Example (Ezi-IO-CT-DA04-T)



## Dimension



# Ezi-IO<sup>®</sup> CC-Link IE TSN

## Network Input/Output CNT

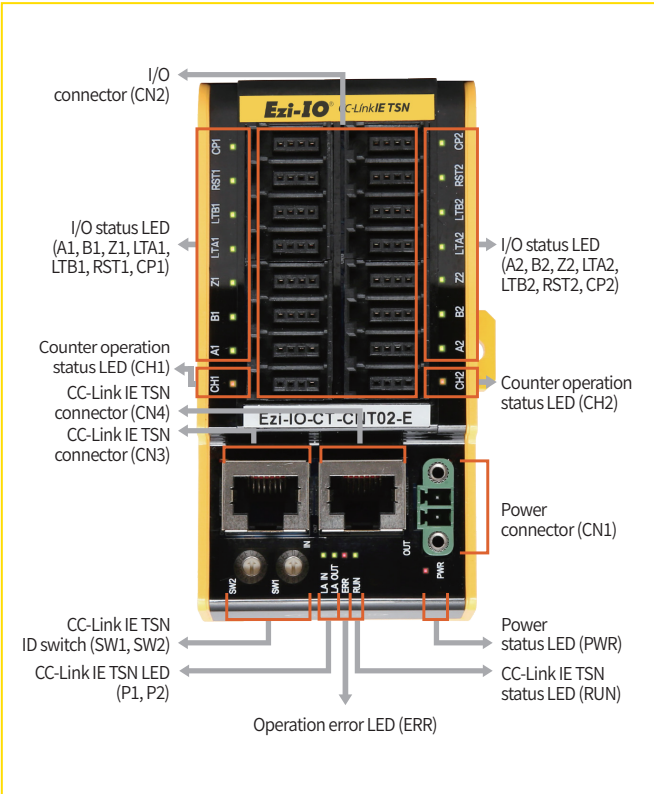
- CC-Link IE TSN-Compatible High Speed Counter Module
- Line Receiver and DC Input Type Provided
- Comparison Output Function
- Simple and Easy Wiring
- DIN Rail Mounting



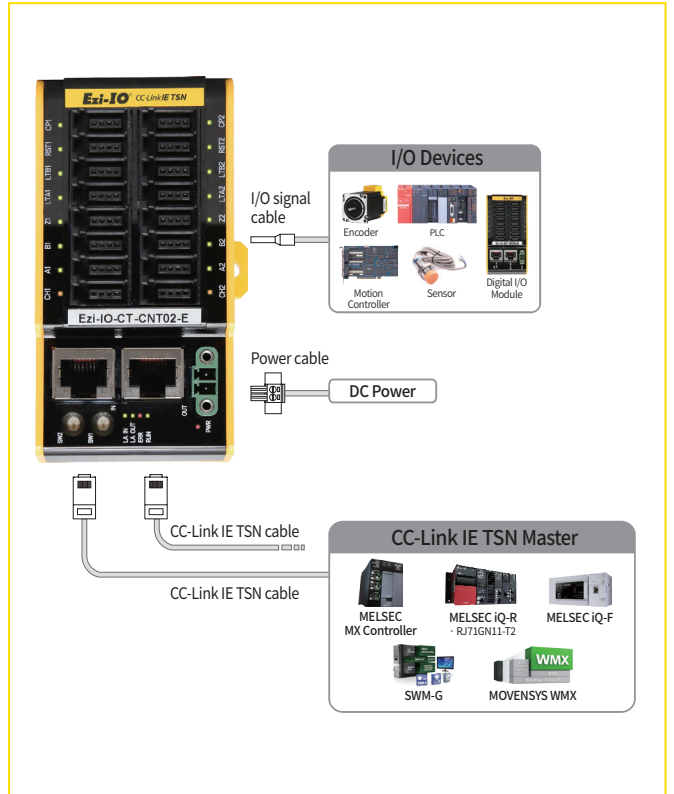
## Specifications

Model		Ezi-IO-CT-CNT02-E		
Power Supply		24 V DC $\pm$ 10 %		
Function	Number of Channels	2 CH		
	Count Range	0 ~ 4, 294, 967, 295 (32 bit)		
	Counter Function	· Counter Value Latch · Counter Value Reset · Counter Value Preset	· Pulse Rate Measurement · Comparison Output	
	Pulse Input	Input Signal	3 dedicated Inputs (A phase, B phase, Z phase) for each channel	
		Input Type	Line Receiver Input (Line Driver Output Support)	DC Input (NPN/PNP Open Collector Output Supported)
		Rated Input Voltage	5 V DC	24 V DC, 5 V DC
		Rated Input Current	6.3 mA	
		Pulse Input Method	· Phase Differential Pulse Input (Multiplication X2, X4) · 1 Pulse Input (Pulse/Direction Input)	· 2 Pulse (CW/CCW Input)
		Max Input Frequency	· A Phase, B Phase: Phase Differential Pulse Input: 1 MHz (When multiplied by 4, 4 MHz), 1 Pulse / 2 Pulse Input: 4 MHz · Z Phase: 100 kHz	
	Isolation Method	Photocoupler Isolation		
	Control Input	Input Signal	3 dedicated Inputs (Latch A, Latch B, Reset) for each channel	
		Input Type	DC Input (NPN/PNP Open Collector Output Supported)	
		Rated Input Voltage	24 V DC	5 V DC
		Rated Input Current	4.4 mA	4.6 mA
Comparison Output	Output Signal	1 dedicated Input (Comparison Output) for each channel		
	Output Type	TTL Output		
	Rated Output Voltage	5 V DC	Open Collector Output (Transistor Output) 30 V DC or lower	
	Rated Phase Current	Max. 20 mA	Max. 20 mA	
LED Display	PWR : Power Status , RUN : Module Status ERR : Operation Error, LA P1, LA P2 : CC-Link IE TSN Status			
CC-Link IE TSN	Communication Protocol	CC-Link IE TSN Class B		
	Synchronization	Asynchronous Mode, Synchronous Mode		

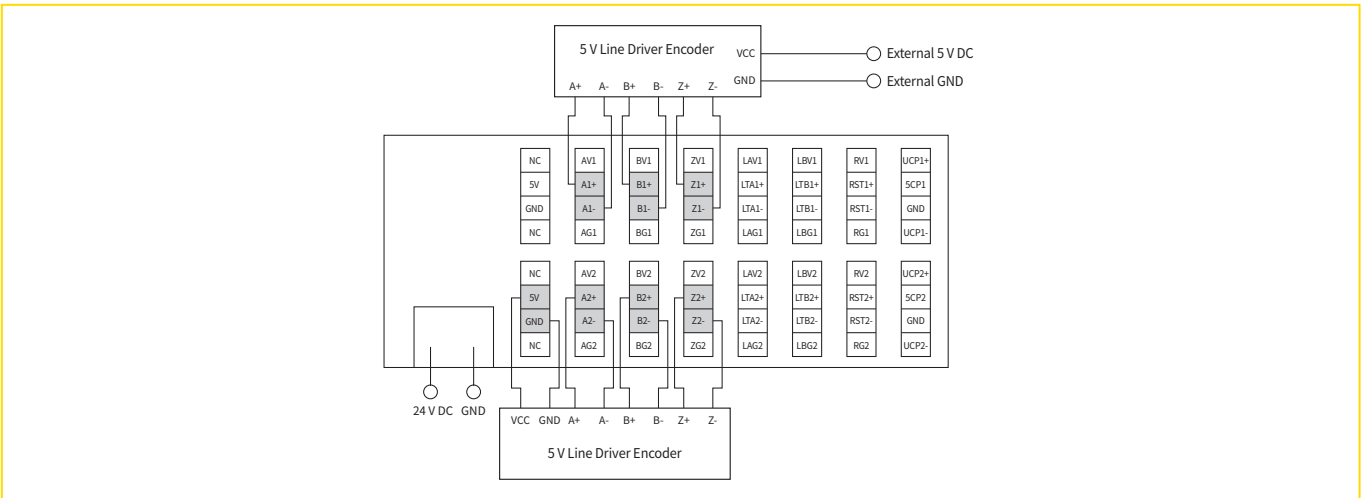
## Module Overview



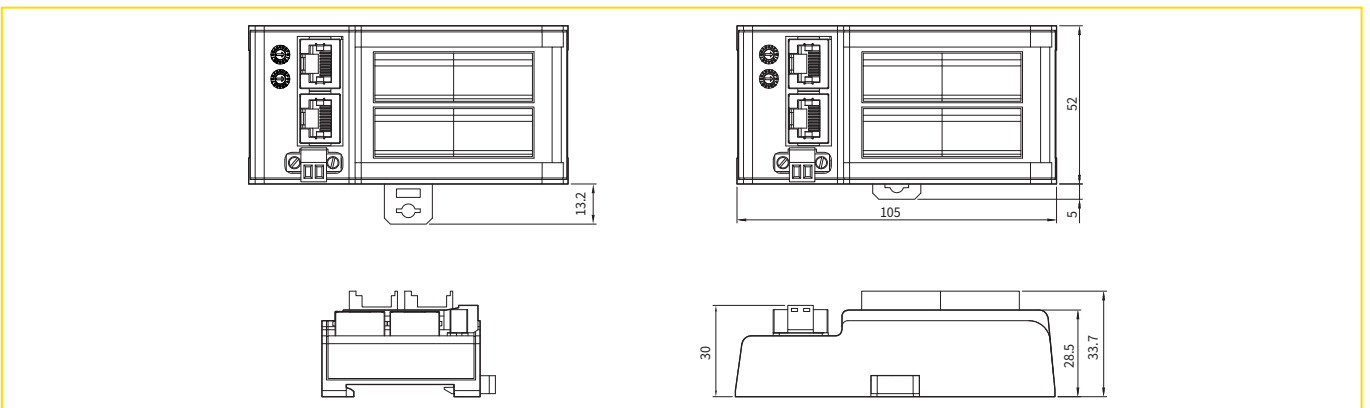
## System Configuration



## Wiring Example (Ezi-IO-CT-CNT02-E)



## Dimension

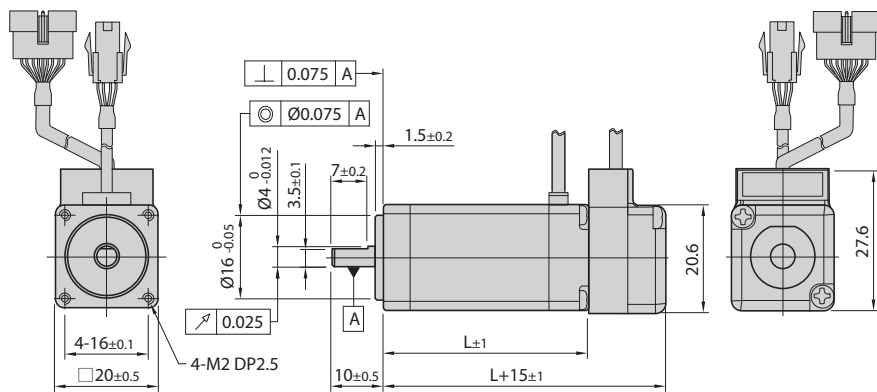


# Motors for **Ezi-SERVO®** Series

Closed Loop Stepping System

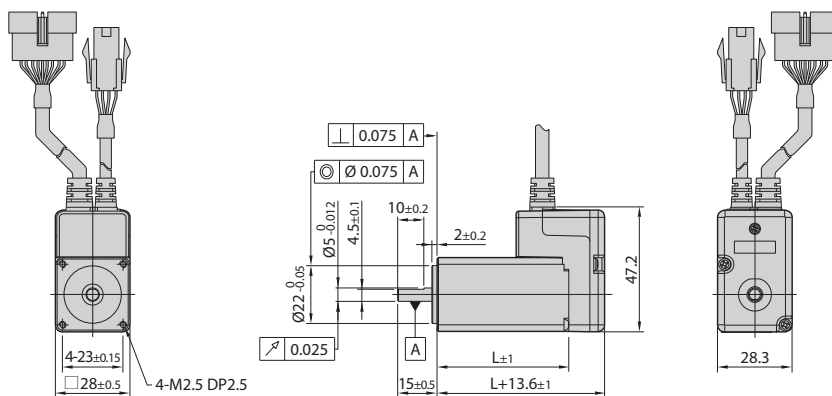


## Dimensions of Motor [mm]



## 20 mm

Model name	Length(L)
EzM2-20M	28
EzM2-20L	38

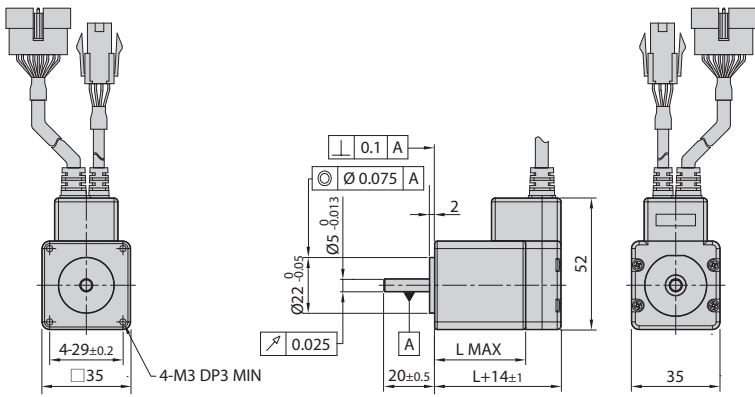


## 28 mm

(Stopper type)

Model name	Length(L)
EzM2-28SM	32
EzM2-28 mm	45
EzM2-28LM	50

※ When ordering 28 mm Stopper type of motor, please add "M" after standard motor model number.

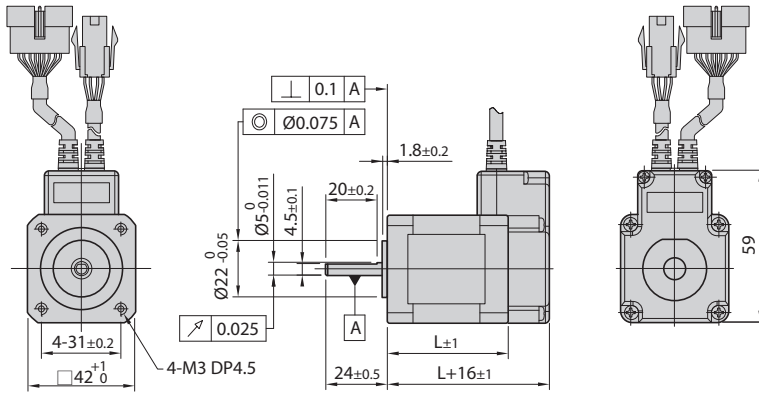


## 35 mm

(Stopper type)

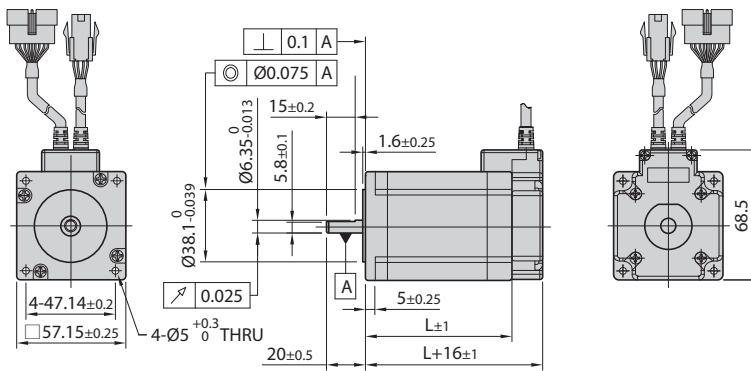
Model name	Length(L)
EzM2-35 mm	32
EzM2-35LM	36

※ When ordering 35 mm Stopper type of motor, please add “M” after standard motor model number.



## 42 mm

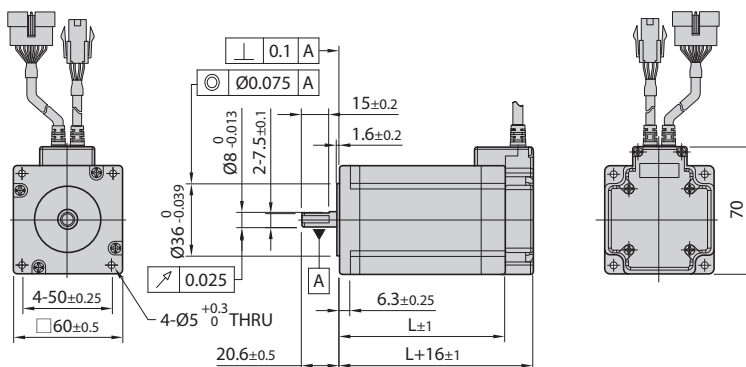
Model name	Length(L)
EzM2-42S	34
EzM2-42M	40
EzM2-42L	48
EzM2-42XL	60



## 56 mm

Model name	Length(L)
EzM2-56S	46
EzM2-56M	55
EzM2-56L	80

※ There are 2 kinds size of the front shaft diameter for EzM2-56 series as Ø6.35 and Ø8.0.



## 60 mm

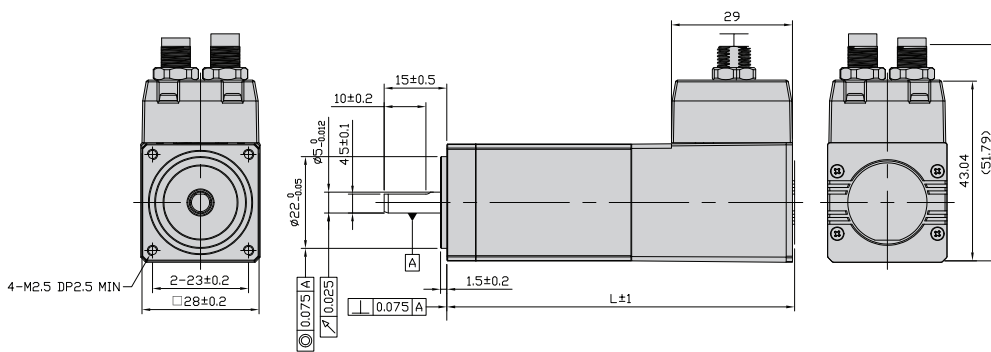
Model name	Length(L)
EzM2-60S	47
EzM2-60M	56
EzM2-60L	85

# Motors for **Ezi-SERVO<sup>®</sup> ABS** Series

Closed Loop Stepping System

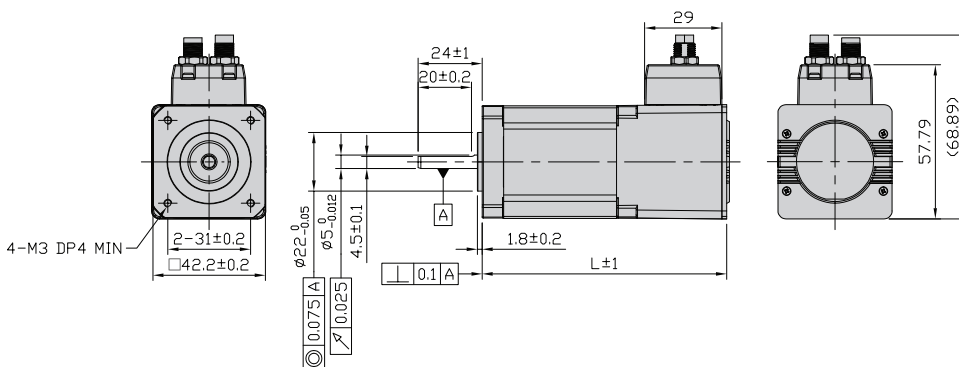


## Dimensions of Motor [mm]



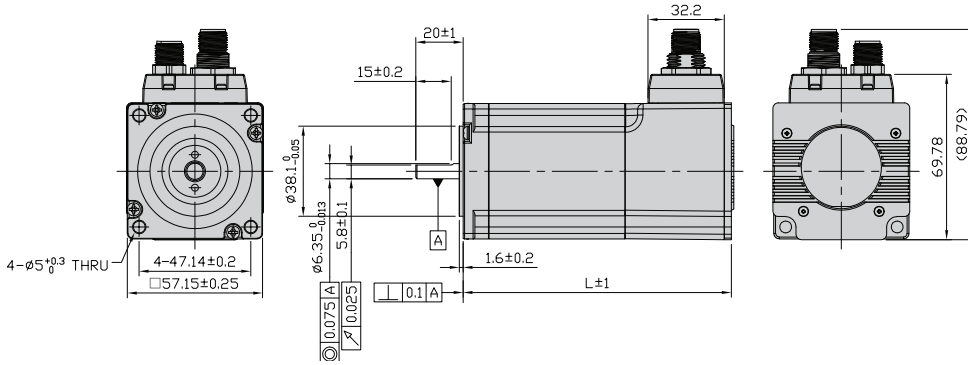
### 28 mm

Model name	Length(L)
EzM2-28S-AB	63.7
EzM2-28M-AB	76.7
EzM2-28L-AB	83.3



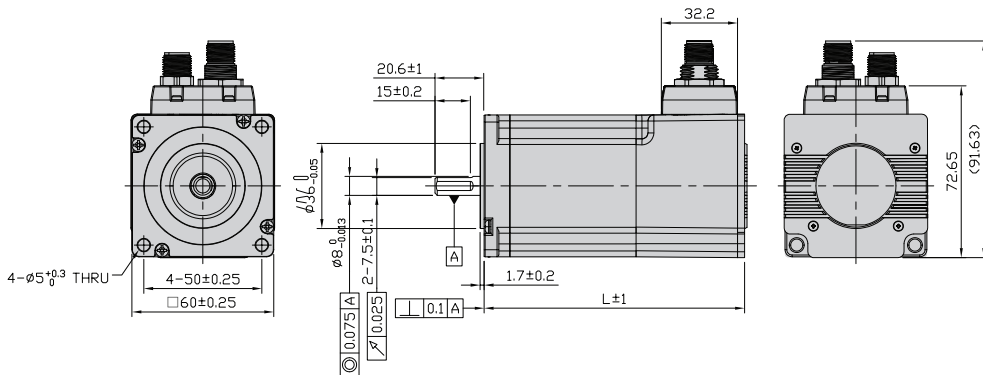
### 42 mm

Model name	Length(L)
EzM2-42S-AB	65.7
EzM2-42M-AB	71.7
EzM2-42L-AB	79.7
EzM2-42XL-AB	91.7



# 56 mm

Model name	Length(L)
EzM2-56S-AB	78.3
EzM2-56M-AB	88.3
EzM2-56L-AB	113.3



# 60 mm

Model name	Length(L)
EzM2-60S-AB	80.7
EzM2-60M-AB	89.2
EzM2-60L-AB	110.2

# Motors & Gearboxes for **Ezi-SPEED®** Series

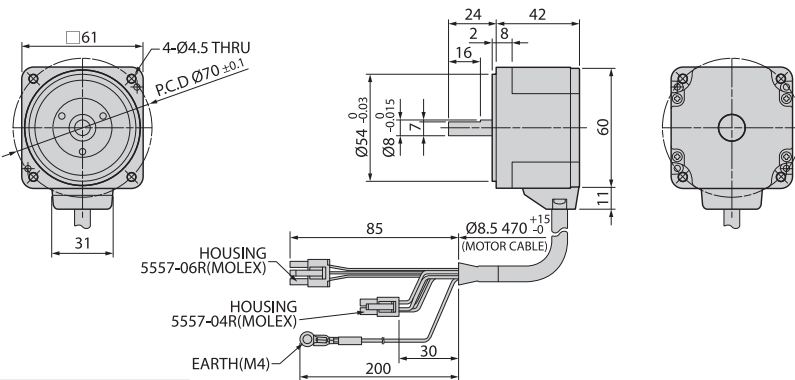
BLDC Motor Speed Control System



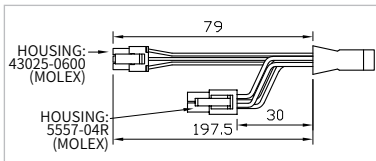
## Dimensions of Motors [mm]

### 30 w

ESM-60-S-30(AC)  
ESMD-60-S-30(DC)

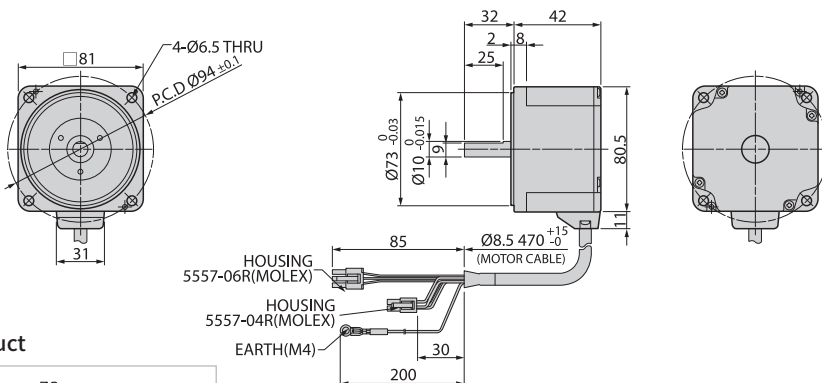


DC power product

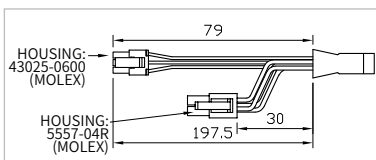


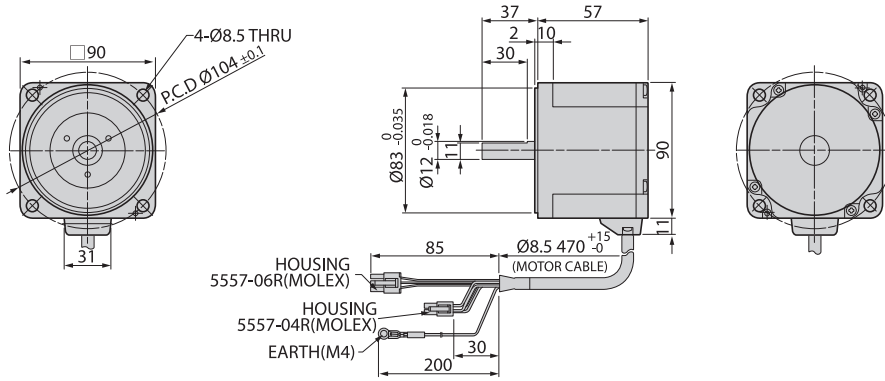
### 60 w

ESM-80-S-60(AC)  
ESMD-80-S-60(DC)



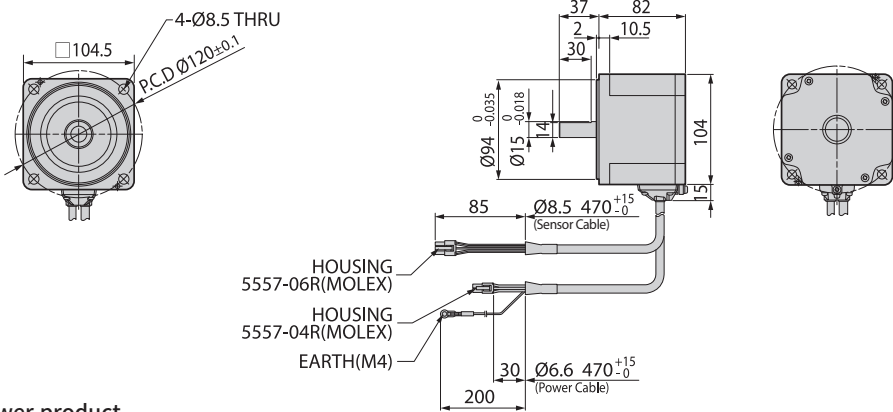
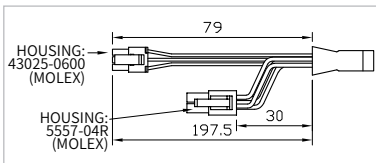
DC power product





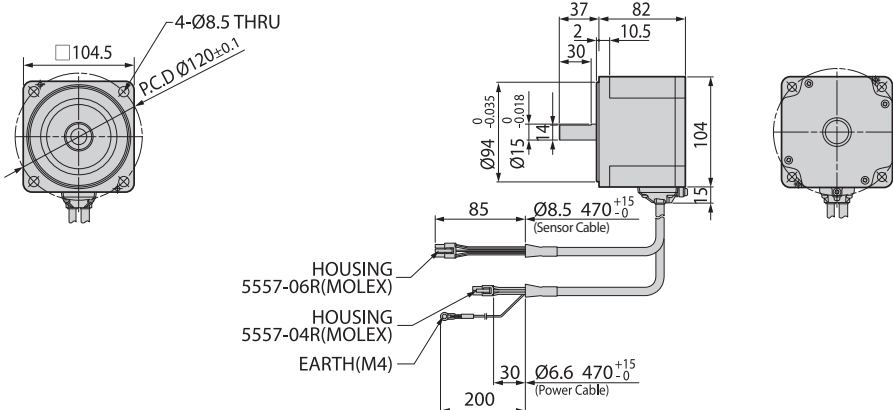
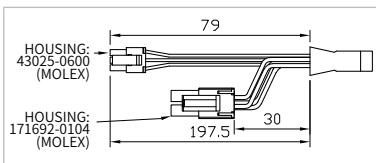
**120 W**  
 ESM-90-S-120(AC)  
 ESMD-90-S-120(DC)

DC power product



**200 W**  
 ESM-104-S-200(AC)  
 ESMD-104-S-200(DC)

DC power product

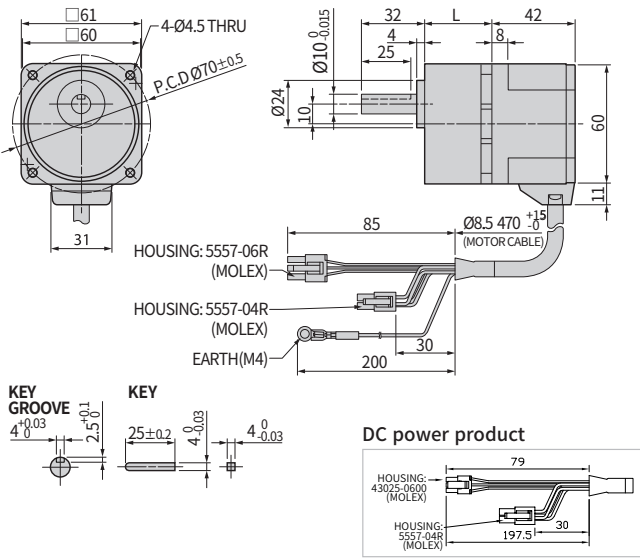


**400 W**  
 ESM-104-S-400(AC)

## Dimensions of Motors & Parallel Gearboxes [mm]

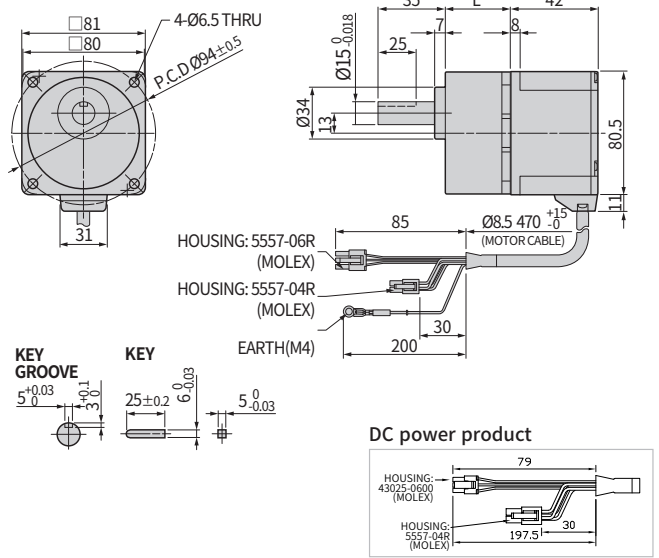
### 30 W

Gearbox Part Number	□ Gear Ratio	Mounting Bolt	L [mm]
ESG-60-H-R□-P	5, 10, 15, 20	M4×50	34
	30, 50, 100	M4×55	38
	200	M4×60	43



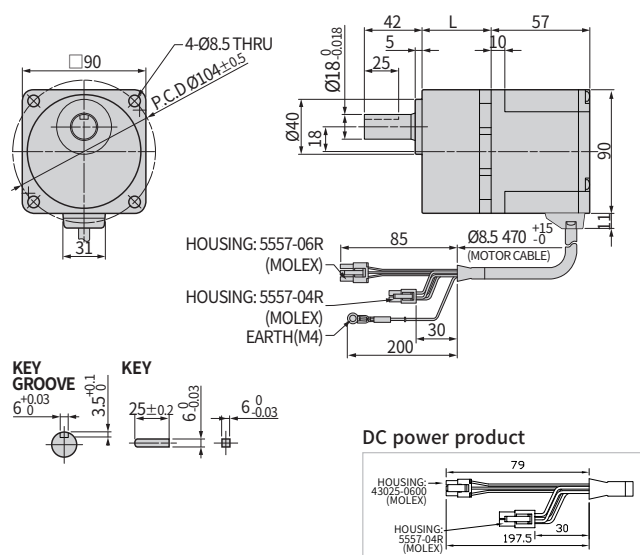
### 60 W

Gearbox Part Number	□ Gear Ratio	Mounting Bolt	L [mm]
ESG-80-H-R□-P	5, 10, 15, 20	M4×65	41
	30, 50, 100	M4×70	46
	200	M4×75	51



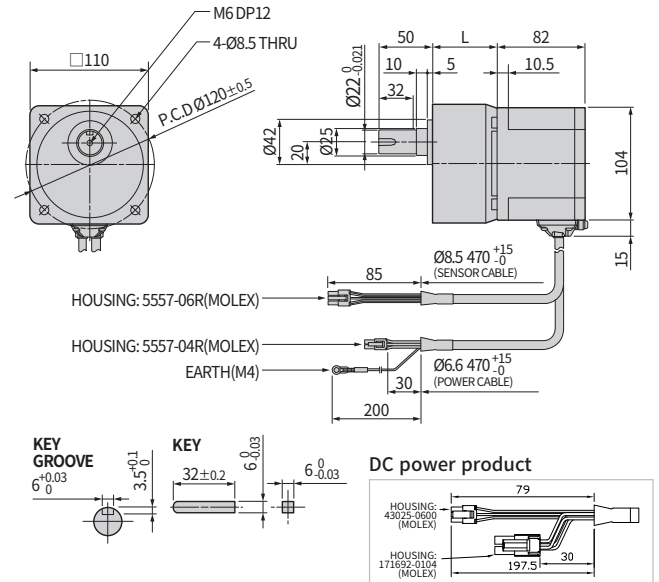
### 120 W

Gearbox Part Number	□ Gear Ratio	Mounting Bolt	L [mm]
ESG-90-H-R□-P	5, 10, 15, 20	M8×75	45
	30, 50, 100	M8×90	58
	200	M8×95	64



### 200 W 400 W

Gearbox Part Number	□ Gear Ratio	Mounting Bolt	L [mm]
ESG-104-H-R□-P	5, 10, 15, 20	M8×95	60
	30, 50	M8×110	72
	100, 200	M8×120	86

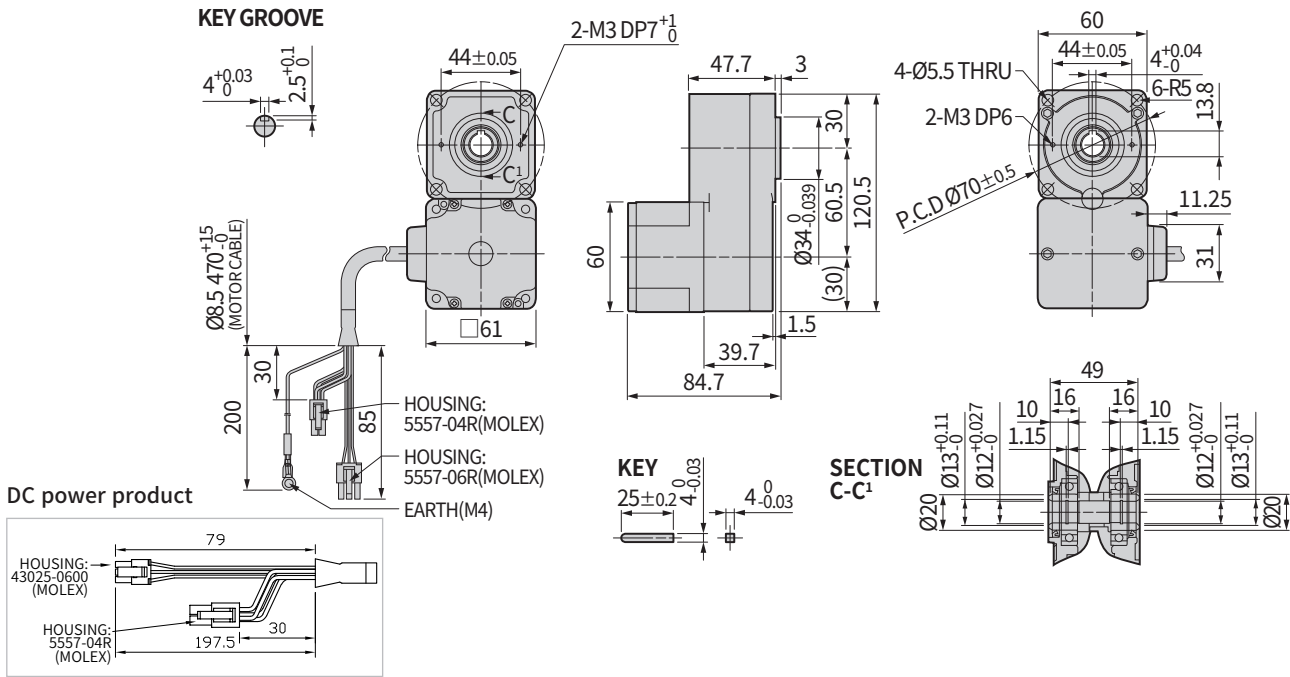


\* DC power product : 200 W only

## Dimensions of Motors & Hollow Flat Gearboxes [mm]

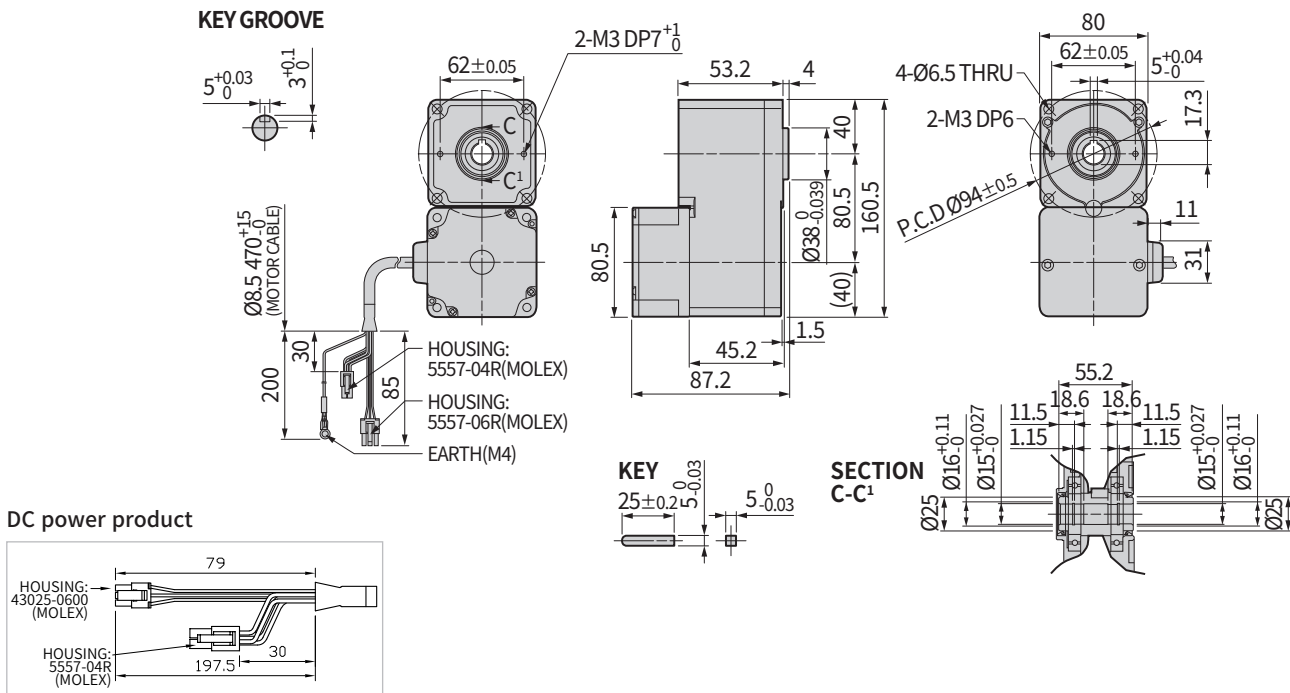
### 30 W

Gearbox Part Number	□ Gear Ratio	Mounting Bolt
ESG-60-H-R□-H	5, 10, 15, 20, 30, 50, 100, 200	M5×65



### 60 W

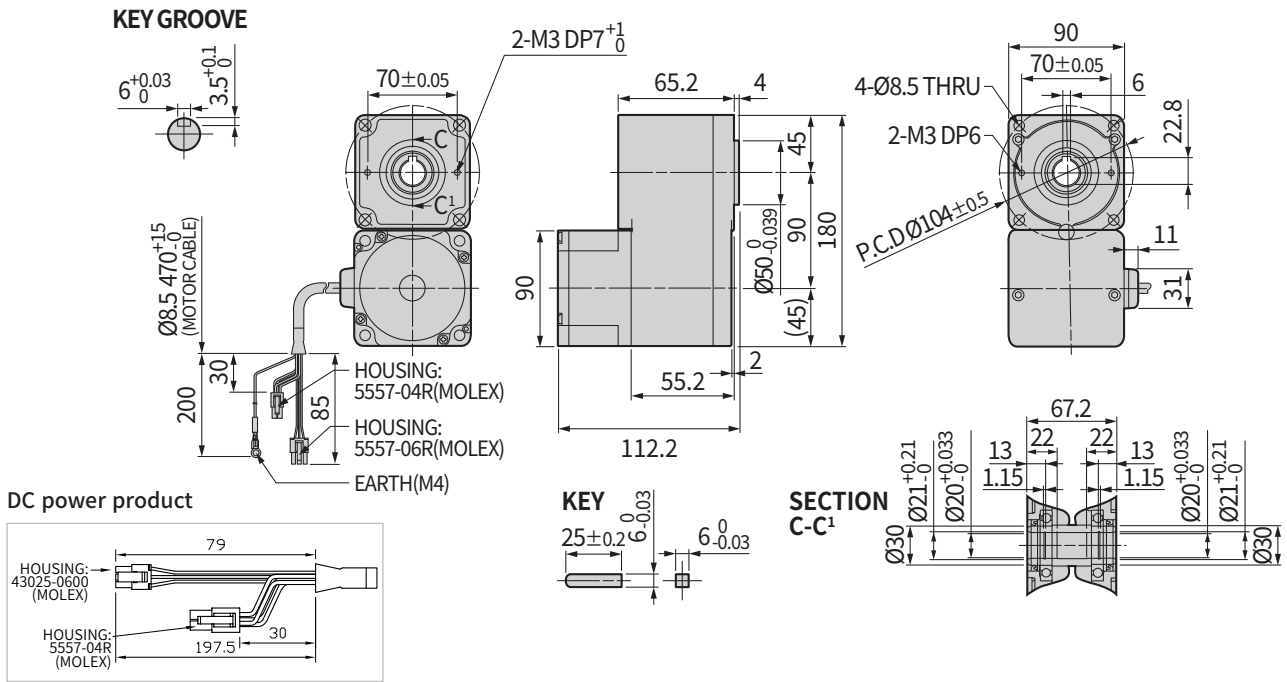
Gearbox Part Number	□ Gear Ratio	Mounting Bolt
ESG-80-H-R□-H	5, 10, 15, 20, 30, 50, 100, 200	M6×70



## Dimensions of Motors & Hollow Flat Gearboxes [mm]

### 120 w

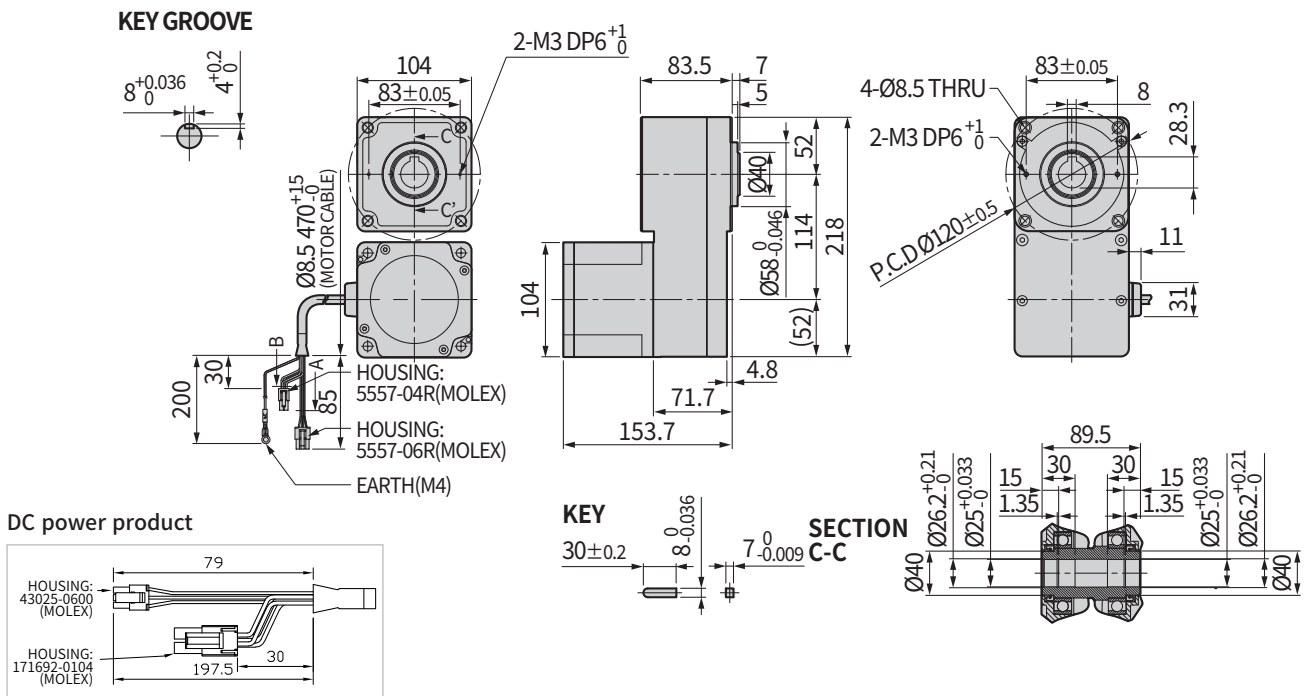
Gearbox Part Number	Gear Ratio	Mounting Bolt
ESG-80-H-R□-H	5, 10, 15, 20, 30, 50, 100, 200	M6×70



### 200 w 400 w

Gearbox Part Number	Gear Ratio	Mounting Bolt
ESG-80-H-R□-H	5, 10, 15, 20, 30, 50, 100, 200	M6×70

\* DC power product : 200 W only



## OPTION Brake



**Ezi-SERVO Series**  
**Ezi-STEP Series**

Model	Motor / brake Size		
	42 mm	56 mm	60 mm
Ezi-SERVO CC-Link IE TSN	0	0	0
Ezi-SERVO CC-Link IE TSN 4X	0	0	0
Ezi-SERVO CC-Link IE TSN ALL	0	0	0
Ezi-STEP CC-Link IE TSN	0	0	0

## OPTION Gearbox



**Ezi-SERVO Series**

Model	Gearbox Size		
	42 mm	60 mm	
	Motor Size		
	42 mm	56 mm	60 mm
Ezi-SERVO CC-Link IE TSN	0	0	0
Ezi-SERVO CC-Link IE TSN 4X	0	0	0
Ezi-SERVO CC-Link IE TSN ALL	0	0	0

※ Gear Ratio: 3, 5, 8, 10, 15, 25, 40, 50



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