

Accelerating the construction of smart factories with

EtherCAT[®]

Supported Product Line-up

EtherCAT[®]

Ezi-SPEED EtherCAT[®]
BLDC Motor Speed Control System

Ezi-SERVO II EtherCAT[®]
Closed Loop Stepping System

Ezi-SERVO II EtherCAT[®]
Closed Loop Stepping System **ALL**

Ezi-POS EtherCAT[®]
Servo Control System

Ezi-SERVO II EtherCAT[®]
Closed Loop Stepping System **4X**

Ezi-IO EtherCAT[®]
Network Input/Output **DIO**

Ezi-Robo EtherCAT[®]
Precise Actuator System **VZR**

Ezi-Robo EtherCAT[®]
Precise Actuator System **IGH**



Fast Accurate Smooth Motion


FASTTECH Brand Introduction

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

EtherCAT[®] Supported Product Line-up



EtherCAT[®] compatible Product Line-up

| Series | Product | Feature | Image |
|---|--|--|---|
| Ezi-SERVO[®] Closed Loop Stepping System | Ezi-SERVOII EtherCAT (Closed Loop Stepping System) | <ul style="list-style-type: none"> • EtherCAT-compatible Closed Loop Stepping System • CiA402 Drive Profile • Tuning Not Required, No Hunting • High Resolution Encoder, Fast Response • Low Heat Generation, High Torque |  <p>P.4</p> |
| | Ezi-SERVOII EtherCAT TO (Torque-Off Function) | <ul style="list-style-type: none"> • EtherCAT-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 |  <p>P.6</p> |
| | Ezi-SERVOII EtherCAT MINI (Compact Size) | <ul style="list-style-type: none"> • EtherCAT-compatible Closed Loop Stepping System • CiA402 Drive Profile • Compact & Light-Weight Drive • Space Saving, Reduced Wiring • Tuning Not Required, No Hunting • High Resolution Encoder, Fast Response • Low Heat Generation, High Torque |  <p>P.8</p> |
| | Ezi-SERVOII EtherCAT ALL (Motor + Drive Integrated Type) | <ul style="list-style-type: none"> • EtherCAT-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 |  <p>P.10</p> |
| | Ezi-SERVOII EtherCAT 4X (Compact Multi Axis Drive) | <ul style="list-style-type: none"> • EtherCAT-compatible Closed Loop Stepping System • CiA402 Drive Profile • Compact Multi-Axis Drive (up to 4 axes) • Space Saving, Reduced Wiring • Tuning Not Required, No Hunting • High Resolution Encoder, Fast Response • Low Heat Generation, High Torque |  <p>P.12</p> |
| Ezi-STEP[®] Micro Stepping System | Ezi-STEP II EtherCAT (Micro Stepping System) | <ul style="list-style-type: none"> • EtherCAT-compatible Microstepping System • CiA402 Drive Profile • Software Damping (Resonance & Vibration Suppression) • High Torque |  <p>P.14</p> |
| | Ezi-STEP II EtherCAT TO (Torque-Off Function) | <ul style="list-style-type: none"> • EtherCAT-compatible Microstepping System • CiA402 Drive Profile • Torque-Off Function • Software Damping (Resonance & Vibration Suppression) • High Torque |  <p>P.16</p> |
| | Ezi-STEP II EtherCAT MINI (Compact Size) | <ul style="list-style-type: none"> • EtherCAT-compatible Microstepping System • CiA402 Drive Profile • Compact & Light-Weight Drive • Space Saving, Reduced Wiring • Software Damping (Resonance & Vibration Suppression) • High Torque |  <p>P.18</p> |
| | Ezi-STEP II EtherCAT ALL (Motor + Drive Integrated Type) | <ul style="list-style-type: none"> • EtherCAT-compatible Microstepping System • CiA402 Drive Profile • Motor + Drive Integrated • Space Saving, Reduced Wiring • Software Damping (Resonance & Vibration Suppression) • High Torque |  <p>P.20</p> |
| | Ezi-STEP II EtherCAT 4X (Compact Multi Axis Drive) | <ul style="list-style-type: none"> • EtherCAT-compatible Microstepping System • CiA402 Drive Profile • Compact Multi-Axis Drive (up to 4 axes) • Space Saving, Reduced Wiring • Software Damping (Resonance & Vibration Suppression) • High Torque |  <p>P.22</p> |
| Ezi-POS[®] Servo Control System | Ezi-POS EtherCAT (Low-Voltage Servo Control System) | <ul style="list-style-type: none"> • EtherCAT-compatible Low-Voltage Servo Control System • CiA402 Drive Profile • DC Power Supply Input (DC 12 ~ 48 V) • Auto-tuning • Torque-Off Function • Various Motor Options (BLDC Motor, Servo Motor, Linear Motor, VCM, etc) • Various Position Sensor Options (Incremental/Absolute Encoders) |  <p>P.24</p> |

EtherCAT[®] compatible Product Line-up

| Series | Product | Feature | Image |
|---|---|--|---|
| Ezi-SPEED[®] BLDC Motor Speed Control System | Ezi-SPEED EtherCAT DC (BLDC Motor Speed Control System) | <ul style="list-style-type: none"> EtherCAT-compatible Low Voltage BLDC Motor Speed Control System CiA402 Drive Profile DC Power Input (DC 12 ~ 48 V) Auto-tuning Wide Speed Range (50 ~ 4,000 r/min) Stable Speed Regulation ($\pm 0.2\%$) |  <p>P.26</p> |
| | Ezi-SPEED EtherCAT AC (BLDC Motor Speed Control System) | <ul style="list-style-type: none"> EtherCAT-compatible BLDC Motor Speed Control System CiA402 Drive Profile AC Power Supply Input (AC 200 ~ 240 V) Compact · Light Weight · High Power · High Efficiency Brushless Motor BLDC Motor Line-up (30, 60, 120, 200, 400 W) Wide Speed Range (50 ~ 4,000 r/min) Stable Speed Regulation ($\pm 0.2\%$) |  <p>P.28</p> |
| Ezi-IO[®] Network Input/Output | Ezi-IO EtherCAT DIO (Digital Input/Output Module) | <ul style="list-style-type: none"> EtherCAT-compatible Digital I/O Module CiA401 I/O Profile Simple and Easy Wiring DIN Rail Mounting |  <p>P.30</p> |
| | Ezi-IO EtherCAT AD (Analog Input Module) | <ul style="list-style-type: none"> EtherCAT-compatible Analog Input Module CiA401 I/O Profile Configurable Input Mode and Input Range Moving Average Filtering Simple and Easy Wiring DIN Rail Mounting |  <p>P.32</p> |
| | Ezi-IO EtherCAT DA (Analog Output Module) | <ul style="list-style-type: none"> EtherCAT-compatible Analog Output Module CiA401 I/O Profile Configurable Output Range Calibration for Output Deviation Simple and Easy Wiring DIN Rail Mounting |  <p>P.34</p> |
| | Ezi-IO EtherCAT CNT (High Speed Counter Module) | <ul style="list-style-type: none"> EtherCAT-compatible Analog Output Module Line Receiver and DC Input Type Provided Comparison Output Function Simple and Easy Wiring DIN Rail Mounting |  <p>P.36</p> |
| Ezi-Robo[®] Precise Actuator System | Ezi-Robo IGH (Integrated Guide-rail High-rigidity Actuator) | <ul style="list-style-type: none"> Slider Type Electric Actuator with Stepping Motor & Ball Screw High Strength Steel Frame Repeatability (± 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) |  <p>P.38</p> |
| | Ezi-Robo IGS (Integrated Guide-rail Actuator) | <ul style="list-style-type: none"> Slider Type Electric Actuator with Stepping Motor & Ball Screw Repeatability (± 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) |  <p>P.40</p> |
| | Ezi-Robo VZR (Vacuum + Linear + Rotary Actuator) | <ul style="list-style-type: none"> Slim Actuator with Hollow Shaft Motor & Ball Screw Spline Vacuum(V) + Linear(Z) + Rotary(R), 3-in-1 Actuator Repeatability (Z Axis: ± 0.01 mm / R Axis: ± 0.1) High Resolution Encoder (Max. 20,000 P/R) Size Line-up (28 mm, 42 mm) |  <p>P.42</p> |
| | Ezi-Robo CLA (Compact Linear Actuator) | <ul style="list-style-type: none"> Compact Linear Actuator with Hollow Shaft Motor & Ball Screw Repeatability (± 0.01 mm), Lost Motion (≤ 0.05 mm) High Resolution Encoder (Max. 20,000 P/R) Size Line-up (20 mm, 28 mm, 42 mm, 56 mm) |  <p>P.44</p> |
| | Ezi-Robo HG (Hollow Rotary Index Table) | <ul style="list-style-type: none"> Hollow Rotary Index Table with Stepping Motor Hollow Diameter (Max. $\varnothing 85$ mm) Permissible Torque (Max. 170 N · m) Axial Load (Max. 4000 N) Repeatability (± 10 arcsec) High Resolution Encoder (Max. 20,000 P/R) Size Line-up ($\square 60$ mm, $\square 100$ mm, $\square 130$ mm, $\square 170$ mm) |  <p>P.46</p> |

Ezi-SERVO[®] II EtherCAT[®]

Conformance tested

Closed Loop Stepping System

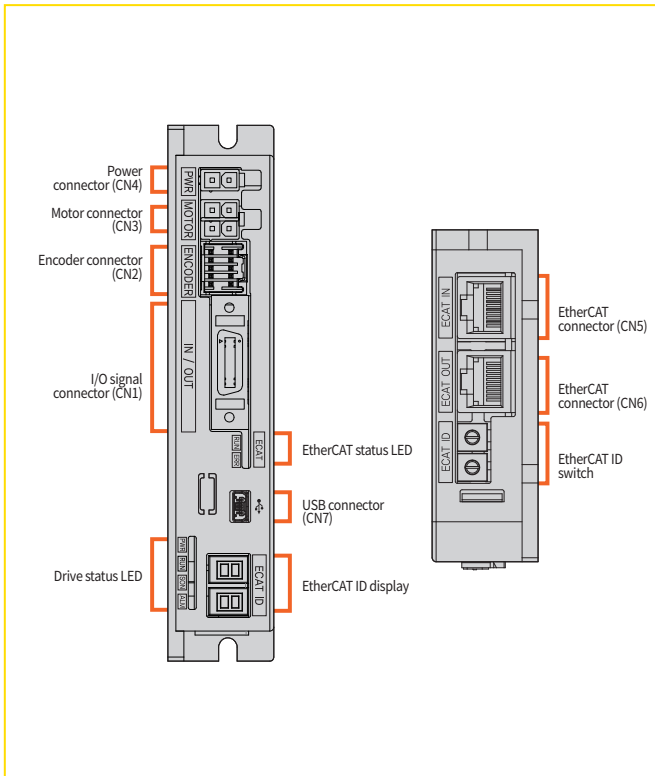
- EtherCAT-compatible Closed Loop Stepping System
- CiA402 Drive Profile
- Tuning Not Required, No Hunting
- High Resolution Encoder, Fast Response
- Low Heat Generation, High Torque



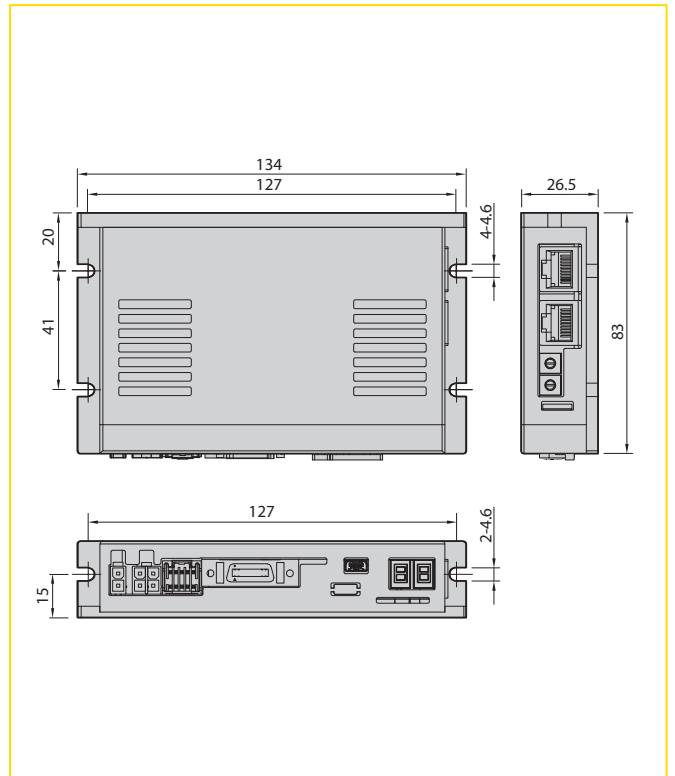
Specifications

| Model | Ezi-SERVOII-EC | Ezi-SERVOII-EC-86 |
|--------------------------|---|---|
| Power Supply | DC 24 V ± 10 % | DC 40 ~ 70 V |
| Speed Control Range | 0 ~ 3,000 r/min | 0 ~ 2,000 r/min |
| Encoder Resolution [P/R] | 4,000 / 10,000 / 16,000 / 20,000 | |
| Digital Input | 3 dedicated inputs (LIMIT+, LIMIT-, ORIGIN) and 7 user inputs | |
| Digital Output | 6 user outputs and 1 Brake signal output | |
| EtherCAT | Communication Protocol | CoE (CiA402 Drive Profile), FoE (Firmware Download) |
| | Operation Mode | CiA402 Drive Profile : Cyclic Synchronous Position Mode (CSP) Profile Position Mode (PP) Homing Mode (HM) |
| | Synchronization | Free Run, SM Event, DC SYNC Event |
| Status Display | 7-SEG | 2 digits: EtherCAT ID or Error Code |
| | LED | EtherCAT status: Run, Error, Link/Activity Drive status : Power, In-Position, Servo On, Alarm |

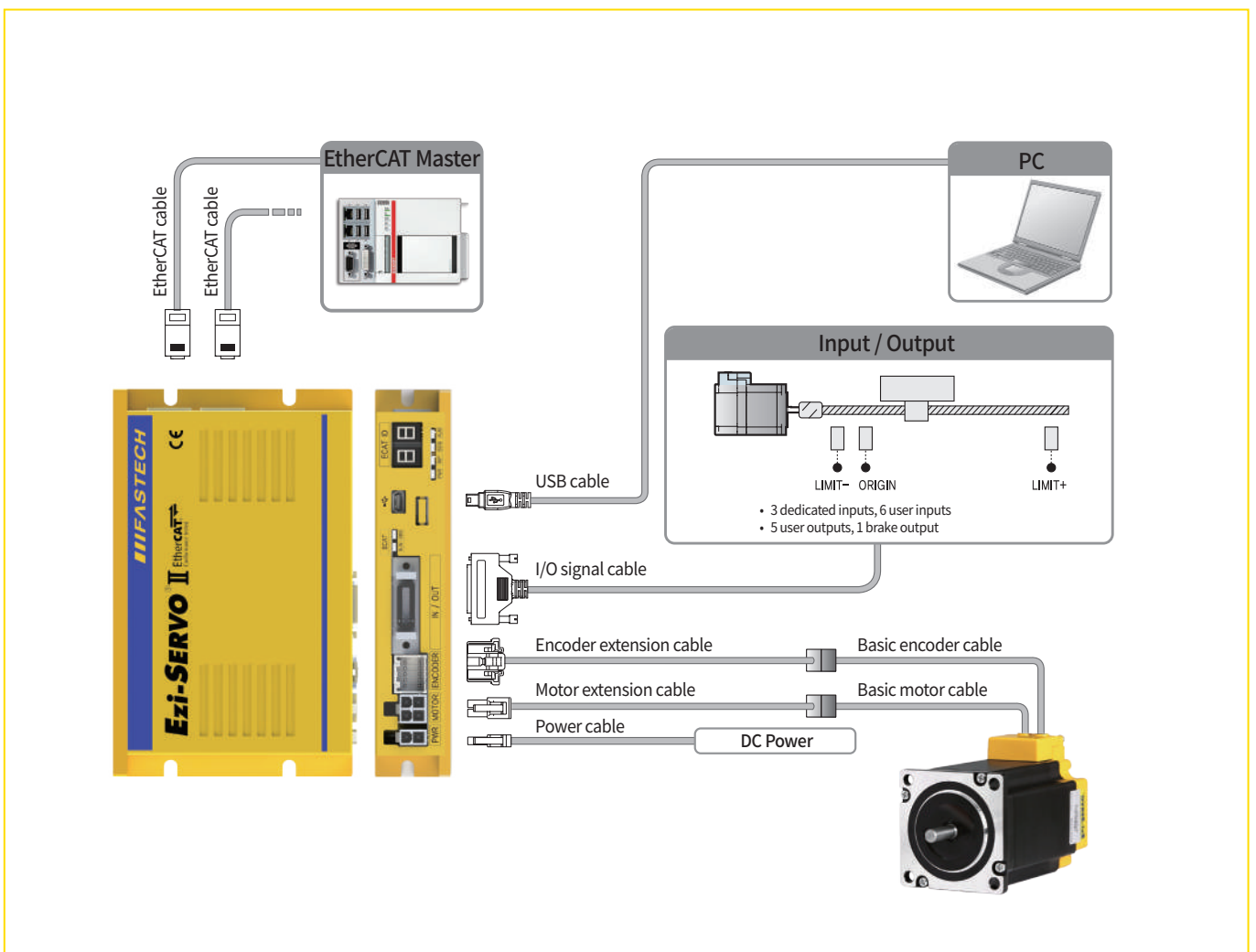
Module Overview



Dimension



System Configuration



Ezi-SERVO[®] II EtherCAT[®] TO

Closed Loop Stepping System

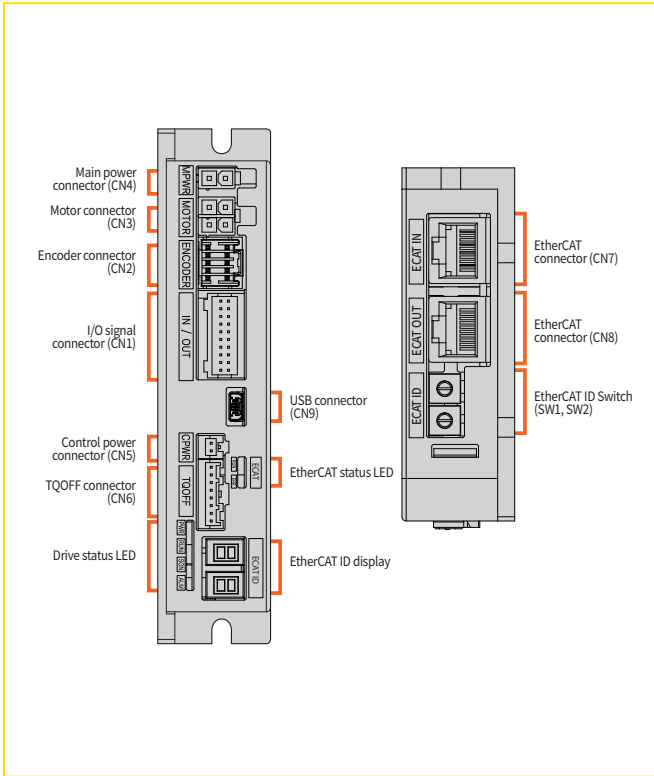
- EtherCAT-compatible Closed Loop Stepping System
- CiA402 Drive Profile
- Torque-Off Function
- Tuning Not Required, No Hunting
- High Resolution Encoder, Fast Response
- Low Heat Generation, High Torque



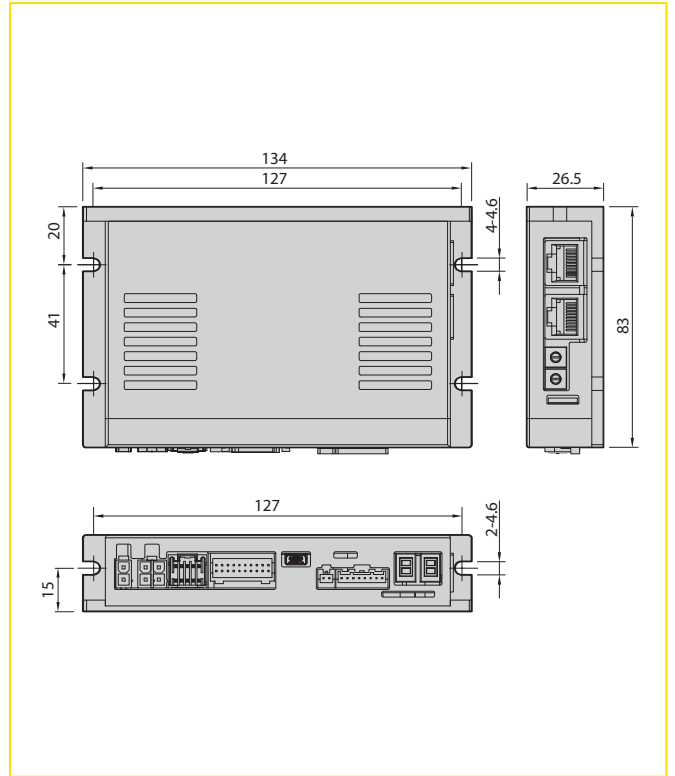
Specifications

| Model | Ezi-SERVOII-EC-TO | |
|--------------------------|---|---|
| Main Power Supply | DC 24 V ± 10 % | |
| Control Power Supply | DC 24 V ± 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) | |
| EtherCAT | Communication Protocol | CoE (CiA402 Drive Profile), FoE (Firmware Download) |
| | Operation Mode | CiA402 Drive Profile : Cyclic Synchronous Position Mode (CSP) Profile Position Mode (PP) Homing Mode (HM) |
| | Synchronization | Free Run, SM Event, DC SYNC Event |
| Status Display | 7-SEG | 2 digits: EtherCAT ID or Error Code |
| | LED | EtherCAT status: Run, Error, Link/Activity Drive status : Power, In-Position, Servo On, Alarm |

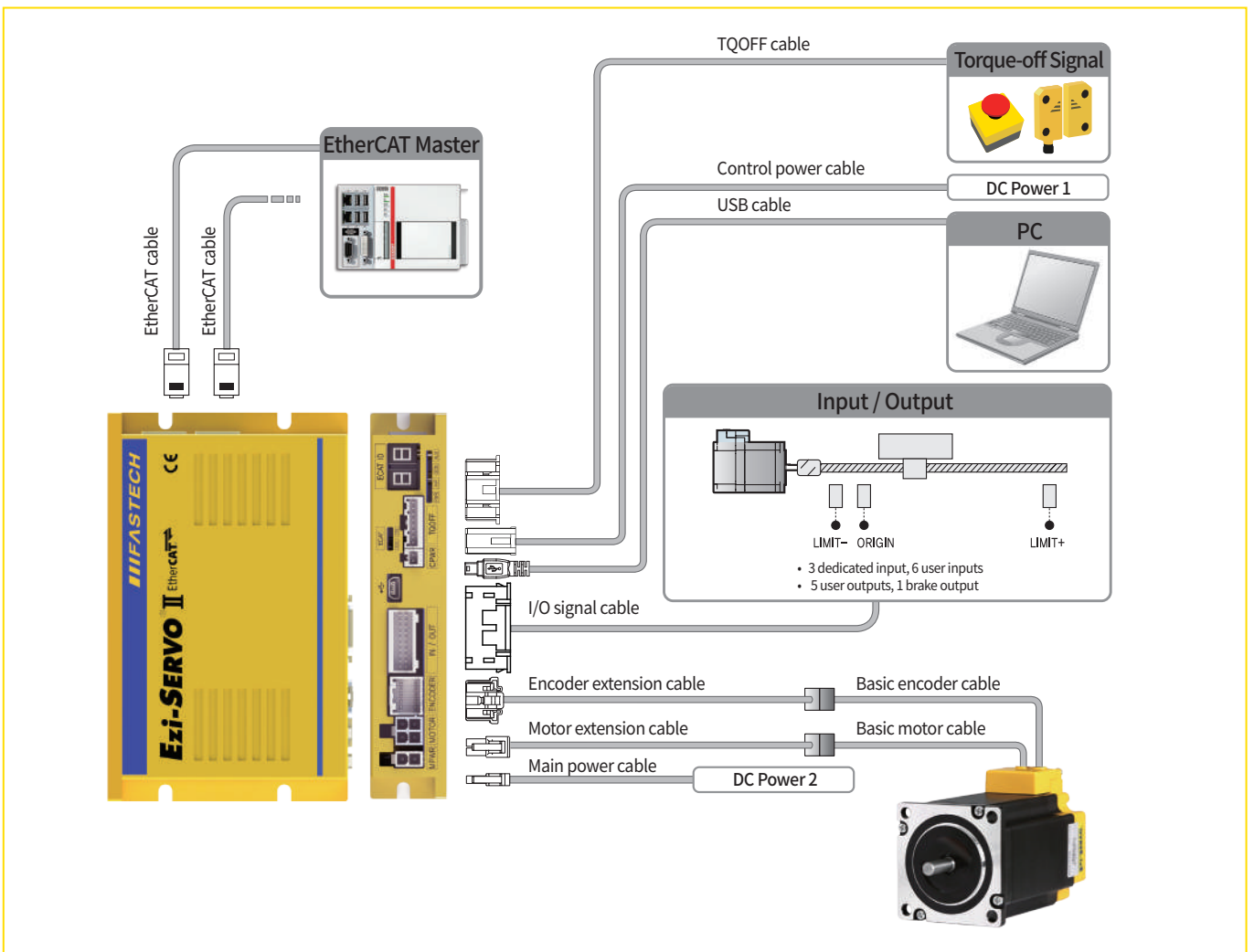
Module Overview



Dimension



System Configuration



Ezi-SERVO[®] II EtherCAT[®] MINI

Closed Loop Stepping System

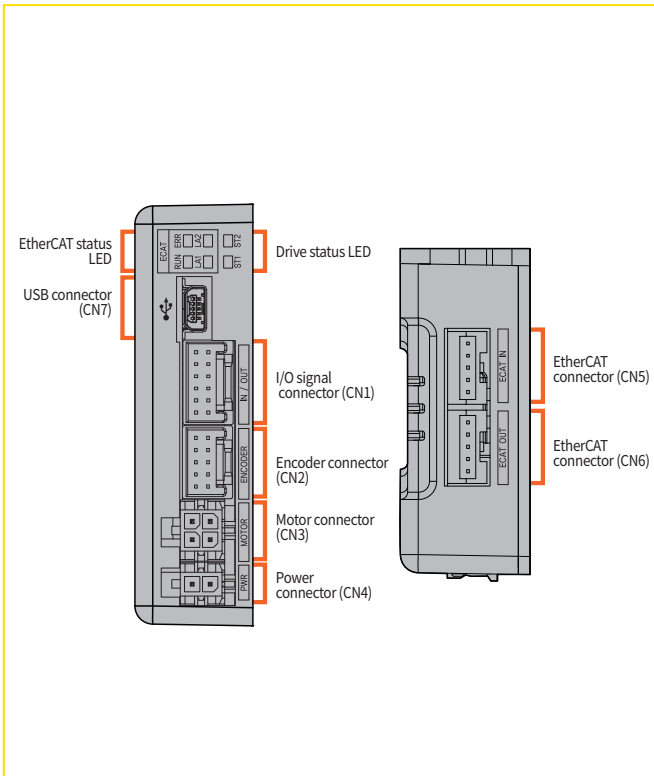
- EtherCAT-compatible Closed Loop Stepping System
- CiA402 Drive Profile
- Compact & Light-Weight Drive
- Space Saving, Reduced Wiring
- Tuning Not Required, No Hunting
- High Resolution Encoder, Fast Response
- Low Heat Generation, High Torque



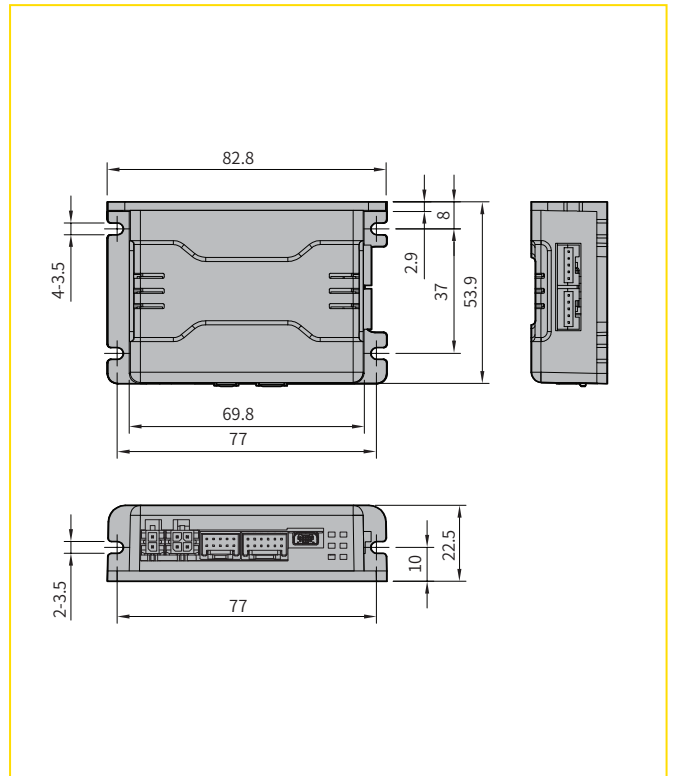
Specifications

| | | |
|--------------------------|---|---|
| Model | Ezi-SERVOII-EC-MI | |
| Power Supply | DC 24V ± 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 3 user inputs | |
| Digital Output | 2 user outputs and 1 Brake signal output | |
| EtherCAT | Communication Protocol | CoE (CiA402 Drive Profile), FoE (Firmware Download) |
| | Operation Mode | CiA402 Drive Profile : Cyclic Synchronous Position Mode (CSP) Profile Position Mode (PP) Homing Mode (HM) |
| | Synchronization | Free Run, SM Event, DC SYNC Event |
| Status Display | LED | EtherCAT status: Run, Error, Link/Activity Drive status: Status 1, Status 2 |

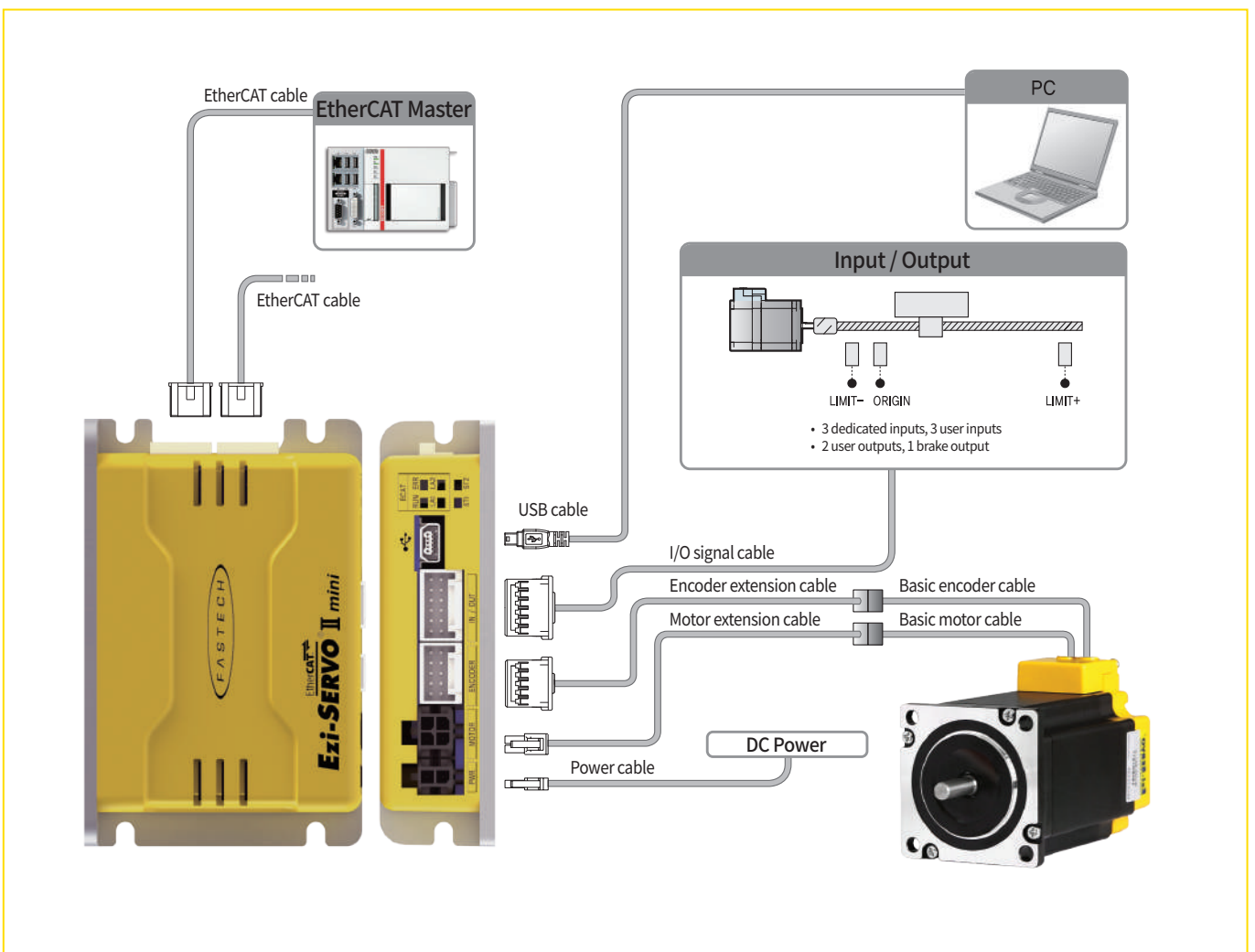
Module Overview



Dimension



System Configuration



Ezi-SERVO[®] II EtherCAT[®]

Closed Loop Stepping System **ALL**

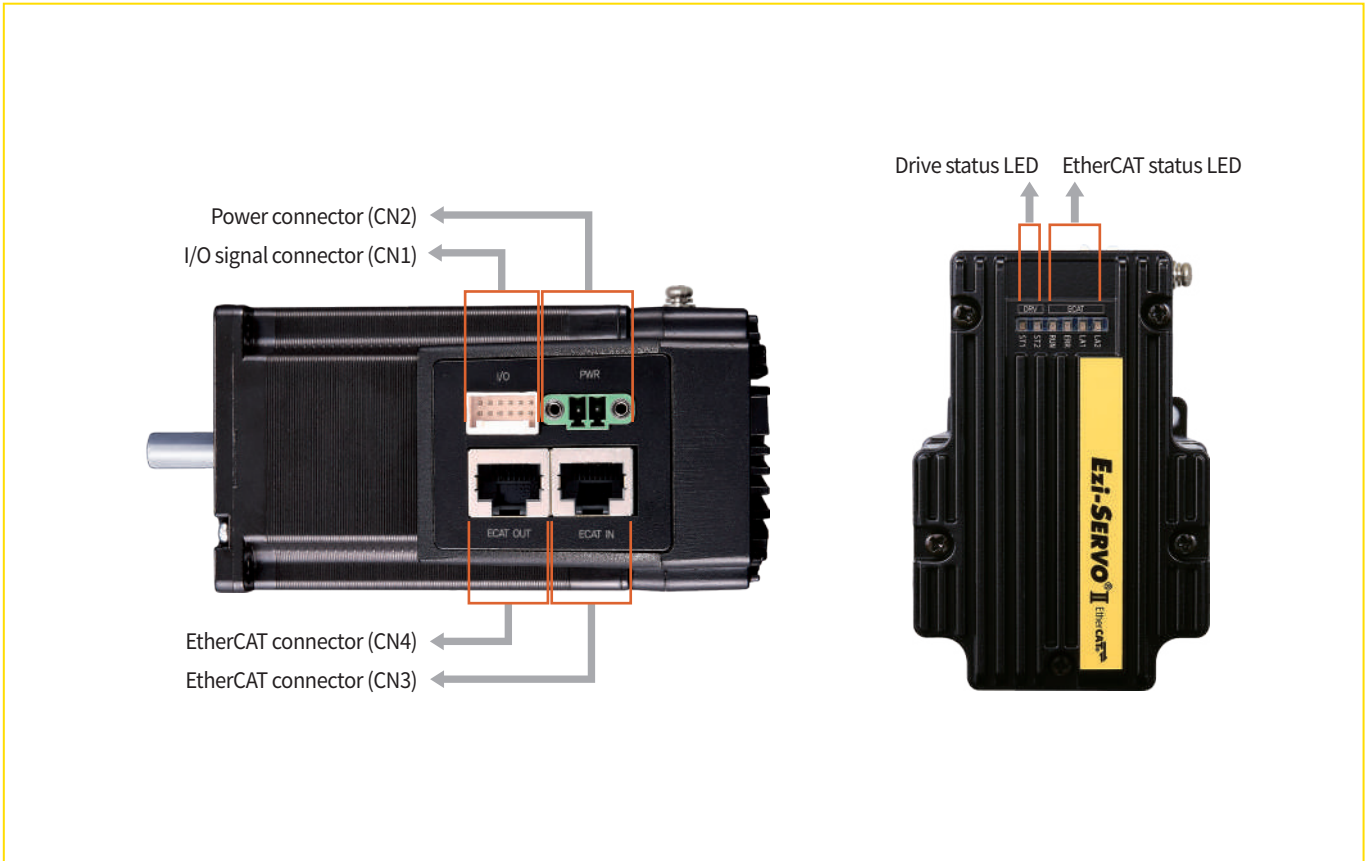
- EtherCAT-compatible Closed Loop Stepping System
- CiA402 Drive Profile
- Motor + Drive Integrated
- Space Saving, Reduced Wiring
- Tuning Not Required, No Hunting
- High Resolution Encoder, Fast Response
- Low Heat Generation, High Torque



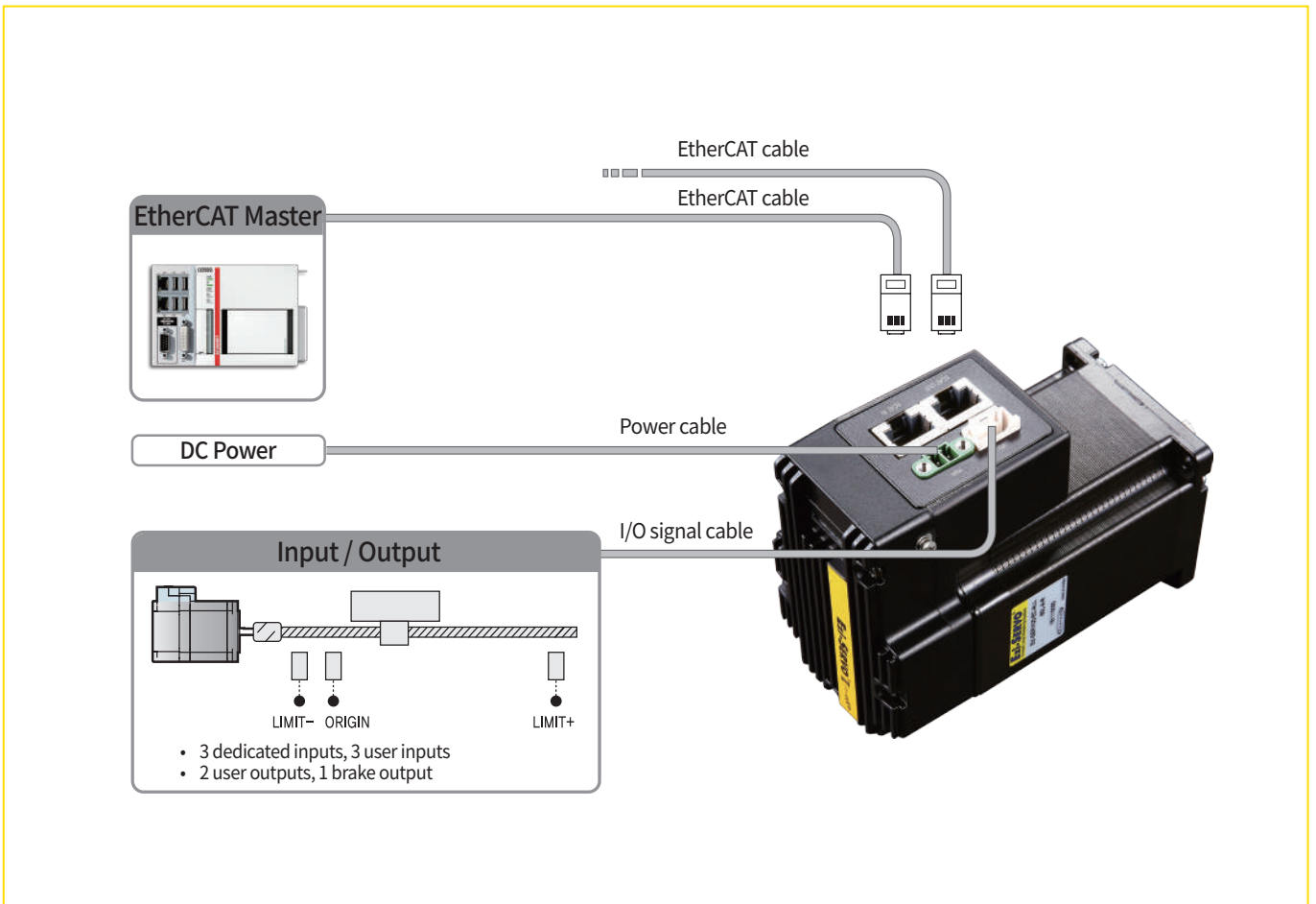
Specifications

| Model | Ezi-SERVOII-EC-ALL-42 | Ezi-SERVOII-EC-ALL-56 | Ezi-SERVOII-EC-ALL-60 | Ezi-SERVOII-EC-ALL-86 |
|--------------------------|---|---|-----------------------|-----------------------|
| Power Supply | DC 24 V ± 10 % | | | DC 48 V ± 10 % |
| Speed Control Range | 0 ~ 3,000 r/min | | | 0 ~ 2,000 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 | | | |
| EtherCAT | Communication Protocol | CoE (CiA402 Drive Profile), FoE (Firmware Download) | | |
| | Operation Mode | CiA402 Drive Profile : Cyclic Synchronous Position Mode (CSP) Profile Position Mode (PP) Homing Mode (HM) | | |
| | Synchronization | Free Run, SM Event, DC SYNC Event | | |
| Status Display | LED | EtherCAT status: Run, Error, Link/Activity Drive status: Status 1, Status 2 | | |

■ Module Overview



■ System Configuration



Ezi-SERVO[®] II EtherCAT[®] 4X

Closed Loop Stepping System

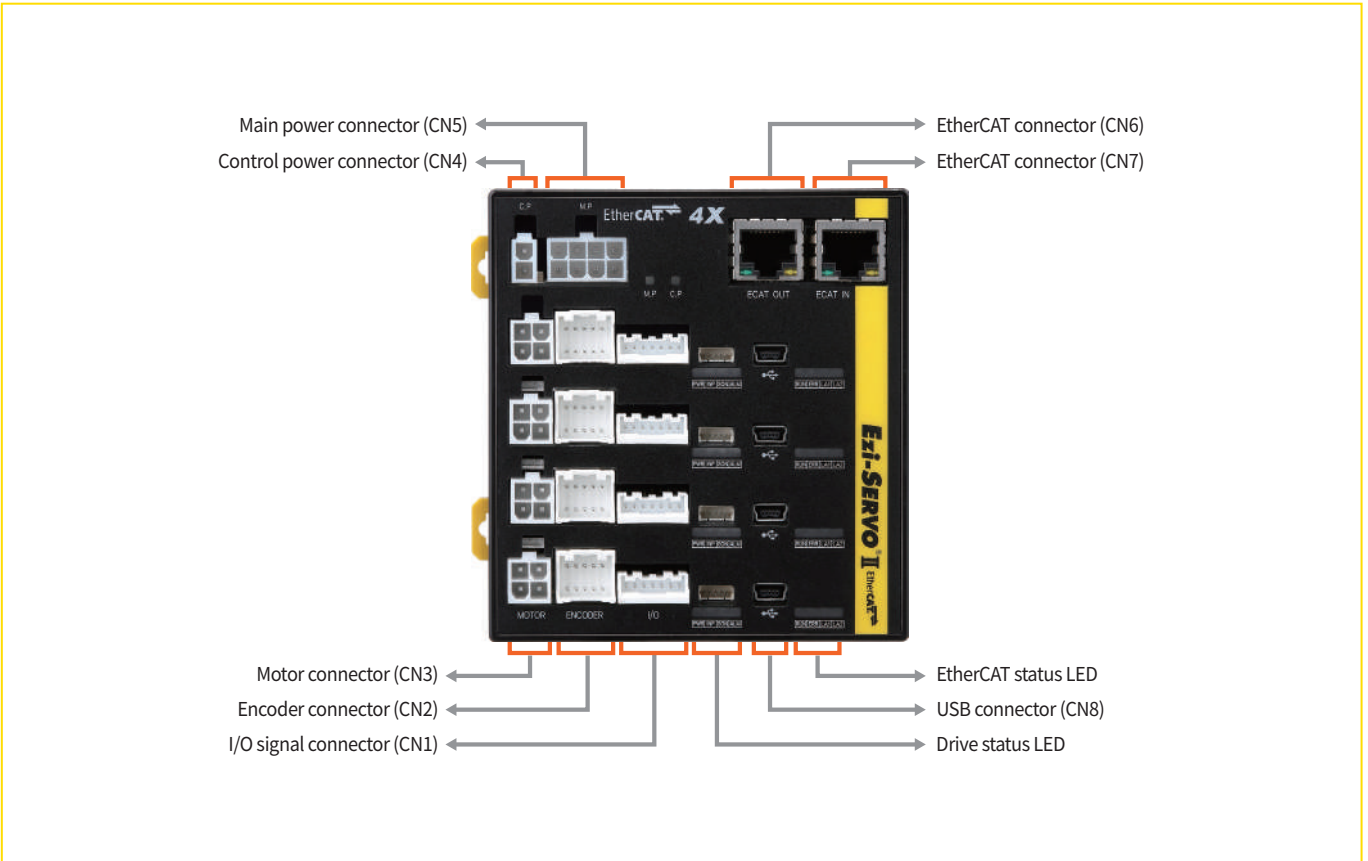
- EtherCAT-compatible Closed Loop Stepping System
- CiA402 Drive Profile
- Compact Multi-Axis Drive (up to 4 axes)
- Space Saving, Reduced Wiring
- Tuning Not Required, No Hunting
- High Resolution Encoder, Fast Response
- Low Heat Generation, High Torque



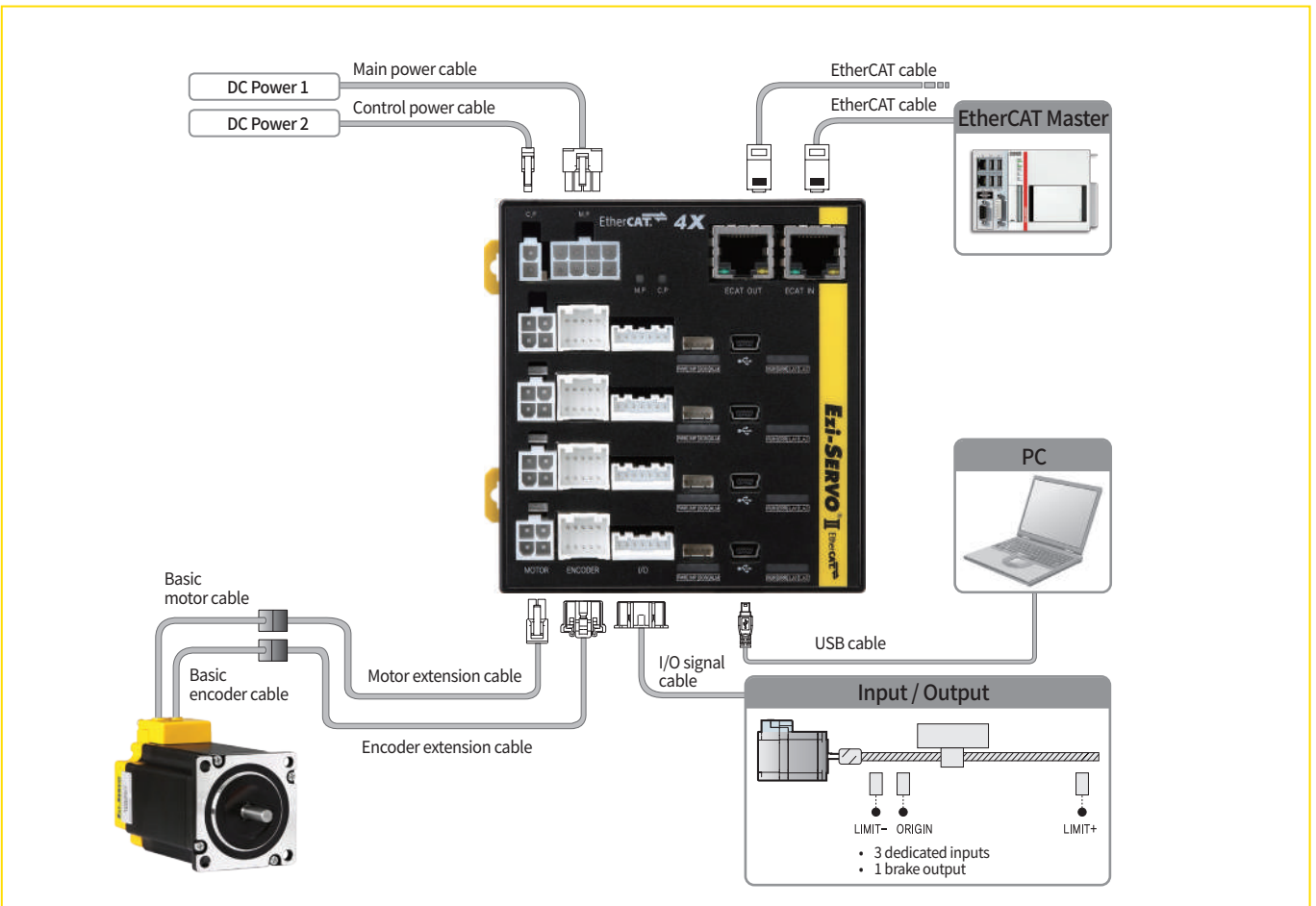
Specifications

| Model | Ezi-SERVOII-EC-4X Ezi-SERVOII-EC-3X | |
|--------------------------|---|---|
| Main Power Supply | DC 24 V ± 10 % | |
| Control Power Supply | DC 24 V ± 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 | |
| EtherCAT | Communication Protocol | CoE (CiA402 Drive Profile), FoE (Firmware Download) |
| | Operation Mode | CiA402 Drive Profile : Cyclic Synchronous Position Mode (CSP) Profile Position Mode (PP) Homing Mode (HM) |
| | Synchronization | Free Run, SM Event, DC SYNC Event |
| Status Display | LED | EtherCAT status: Run, Error, Link/Activity 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[®] II EtherCAT[®]

Micro Stepping System

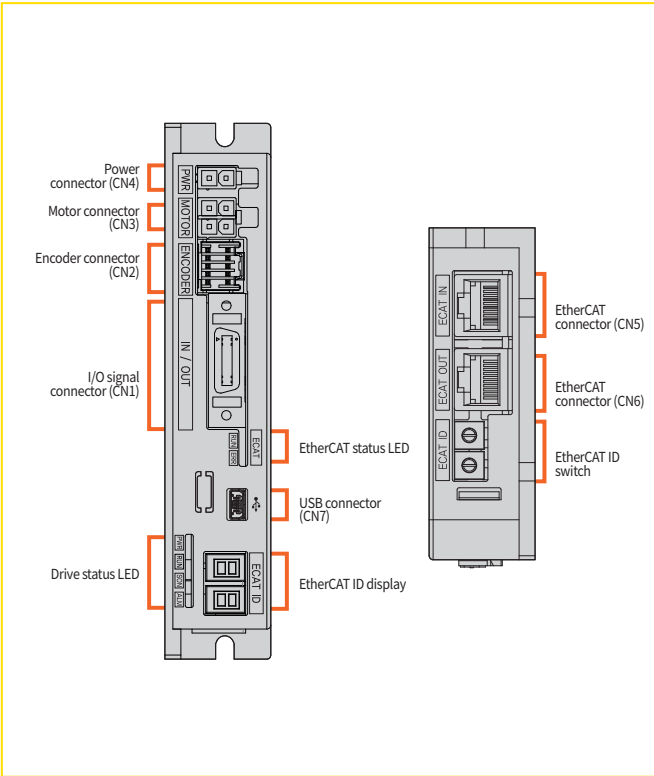
- EtherCAT-compatible Microstepping System
- CiA402 Drive Profile
- Software Damping (Resonance & Vibration Suppression)
- High Torque



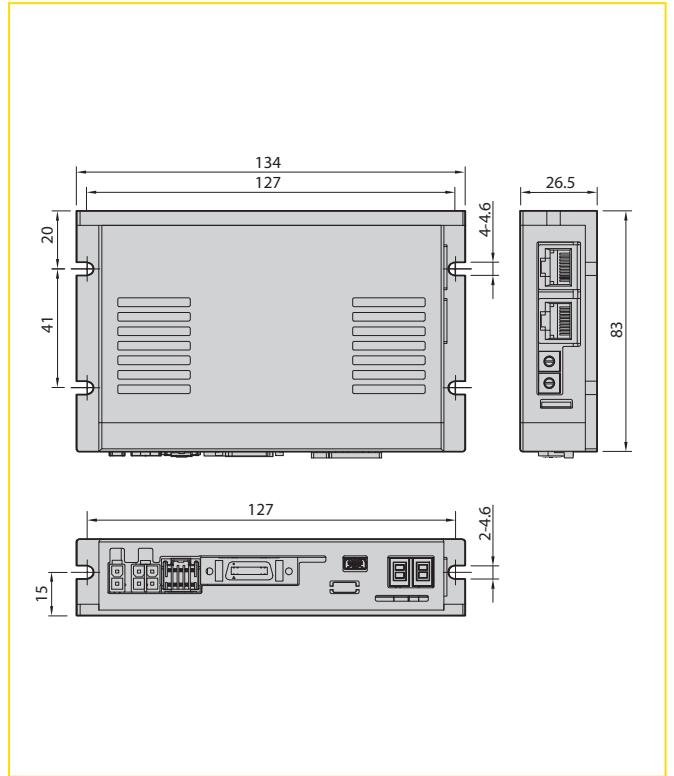
Specifications

| Model | Ezi-STEP II-EC | Ezi-STEP II-EC-86 |
|----------------------------|--|---|
| Power Supply | DC 24 V ± 10 % | DC 40 ~ 70 V |
| Speed Control Range | 0 ~ 3,000 r/min | |
| Reference Resolution [P/R] | Configurable Resolution 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 7 user inputs | |
| Digital Output | 6 user outputs and 1 Brake signal output | |
| EtherCAT | Communication Protocol | CoE (CiA402 Drive Profile), FoE (Firmware Download) |
| | Operation Mode | CiA402 Drive Profile : Cyclic Synchronous Position Mode (CSP) Profile Position Mode (PP) Homing Mode (HM) |
| | Synchronization | Free Run, SM Event, DC SYNC Event |
| Status Display | 7-SEG | 2 digits: EtherCAT ID or Error Code |
| | LED | EtherCAT status: Run, Error, Link/Activity Drive status : Power, Run, Step On, Alarm |

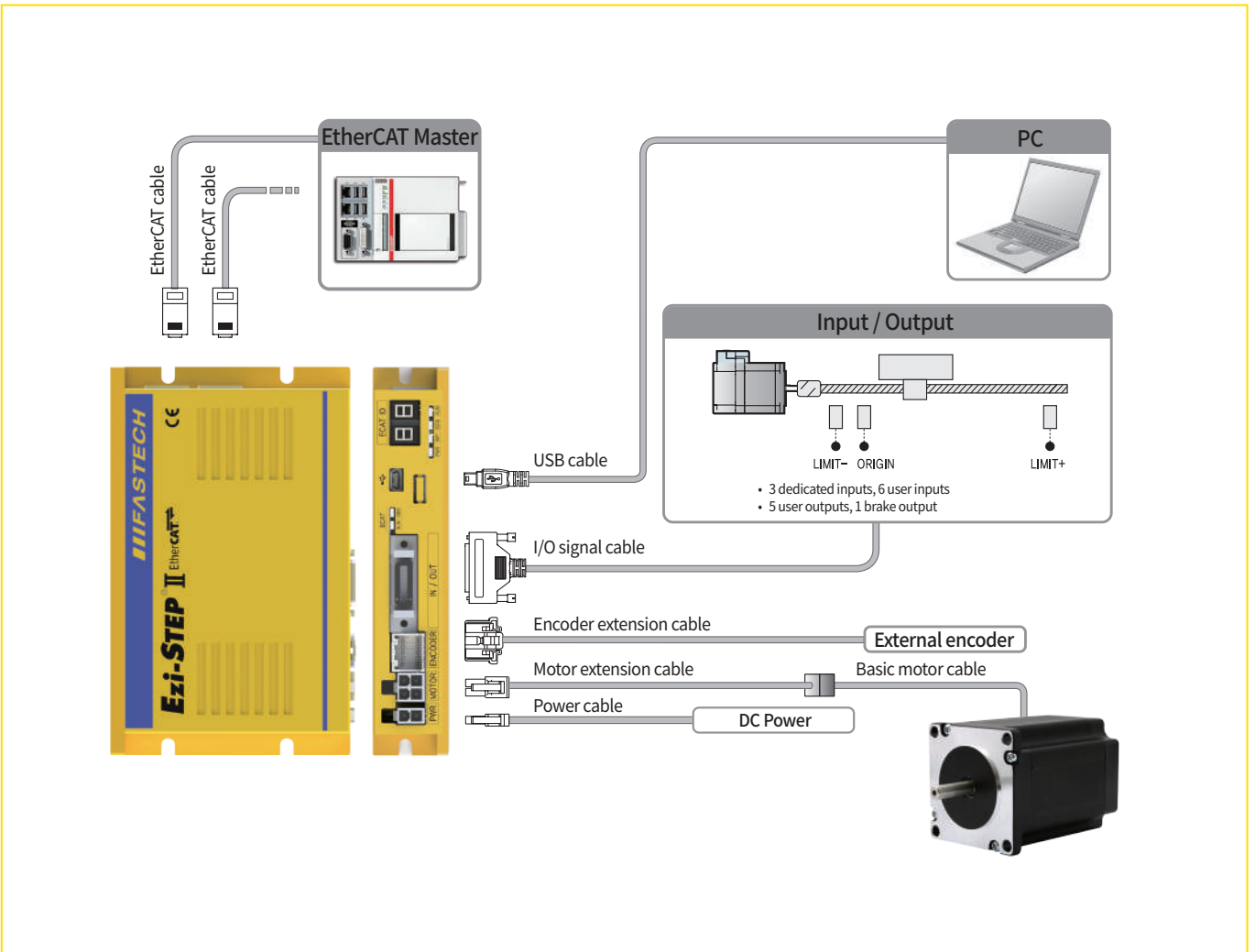
Module Overview



Dimension



System Configuration



Ezi-STEP[®] II EtherCAT[®] TO

Micro Stepping System

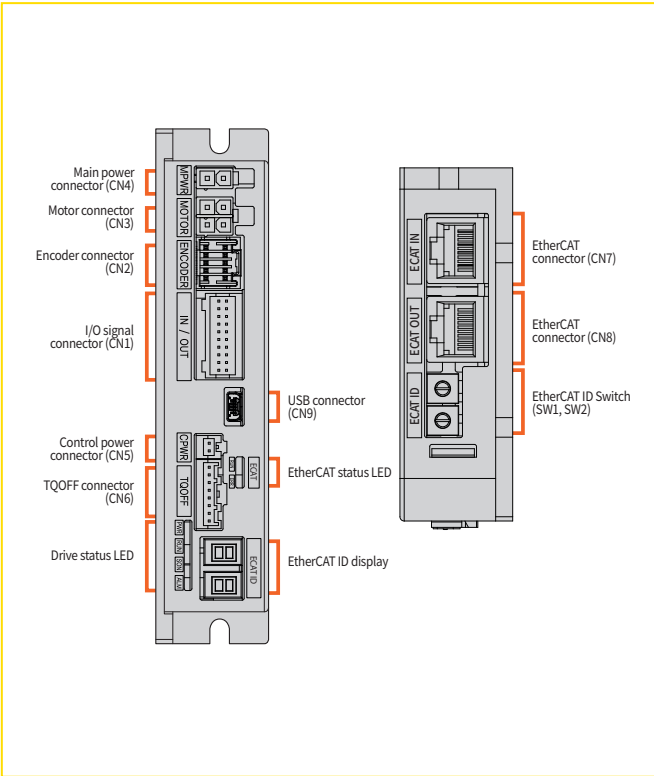
- EtherCAT-compatible Microstepping System
- CiA402 Drive Profile
- Torque-Off Function
- Software Damping (Resonance & Vibration Suppression)
- High Torque



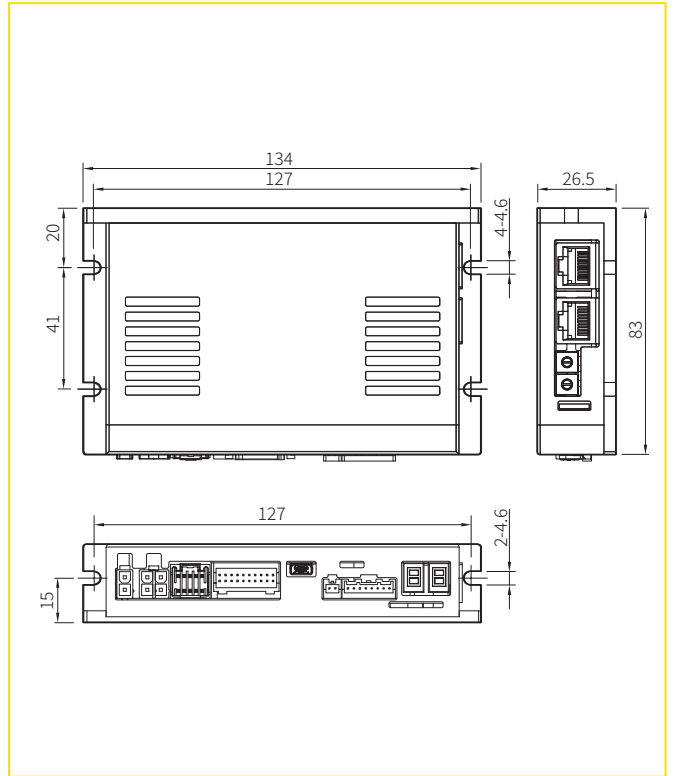
Specifications

| Model | Ezi-STEP II-EC-TO | |
|----------------------------|--|---|
| Main Power Supply | DC 24 V \pm 10 % | |
| Control Power Supply | DC 24 V \pm 10 % | |
| Speed Control Range | 0 ~ 3,000 r/min | |
| Reference Resolution [P/R] | Configurable Resolution 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) | |
| EtherCAT | Communication Protocol | CoE (CiA402 Drive Profile), FoE (Firmware Download) |
| | Operation Mode | CiA402 Drive Profile : Cyclic Synchronous Position Mode (CSP) Profile Position Mode (PP) Homing Mode (HM) |
| | Synchronization | Free Run, SM Event, DC SYNC Event |
| Status Display | 7-SEG | 2 digits: EtherCAT ID or Error Code |
| | LED | EtherCAT status: Run, Error, Link/Activity Drive status : Power, Run, Step On, Alarm |

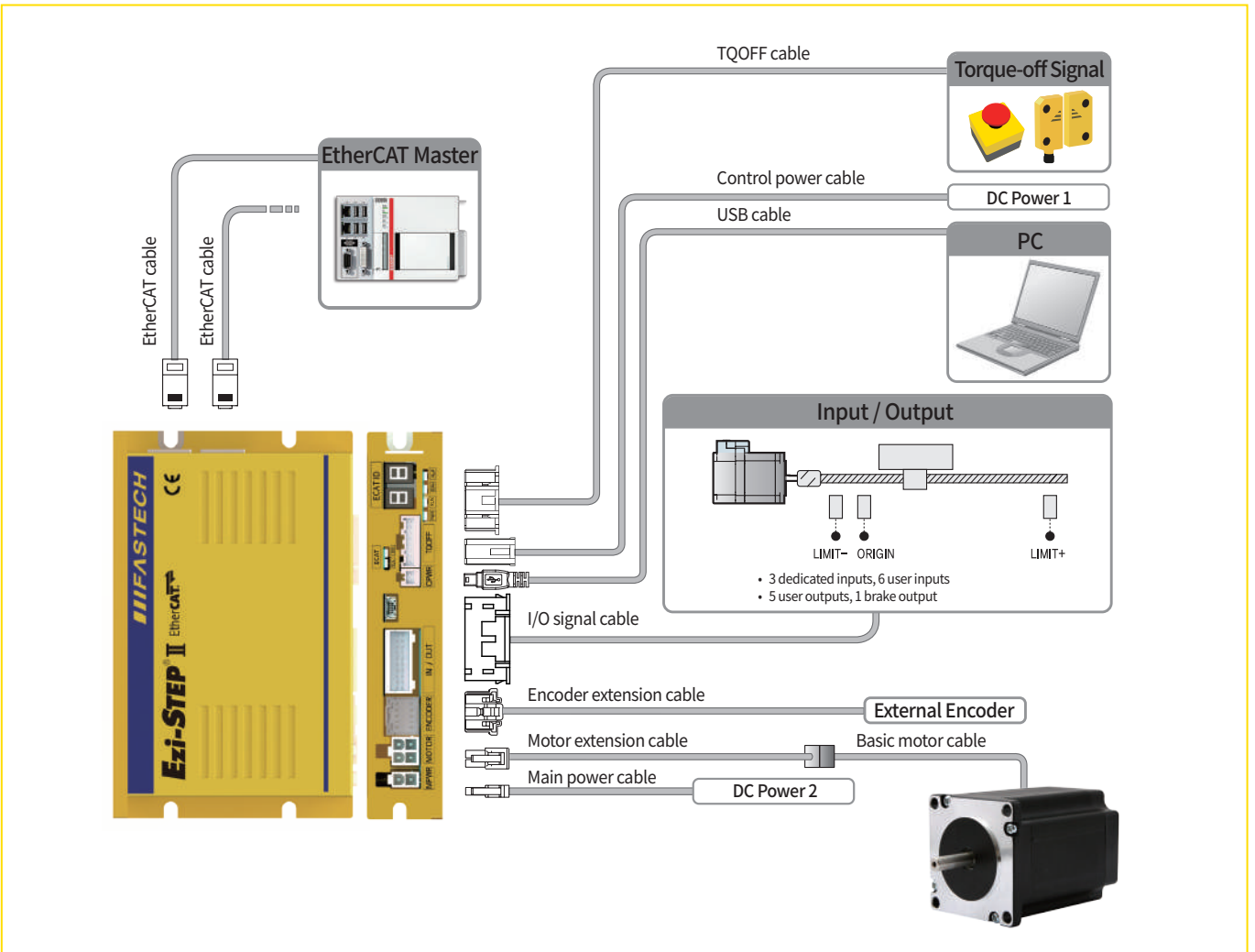
Module Overview



Dimension



System Configuration



Ezi-STEP[®] II EtherCAT[®] MINI

Micro Stepping System

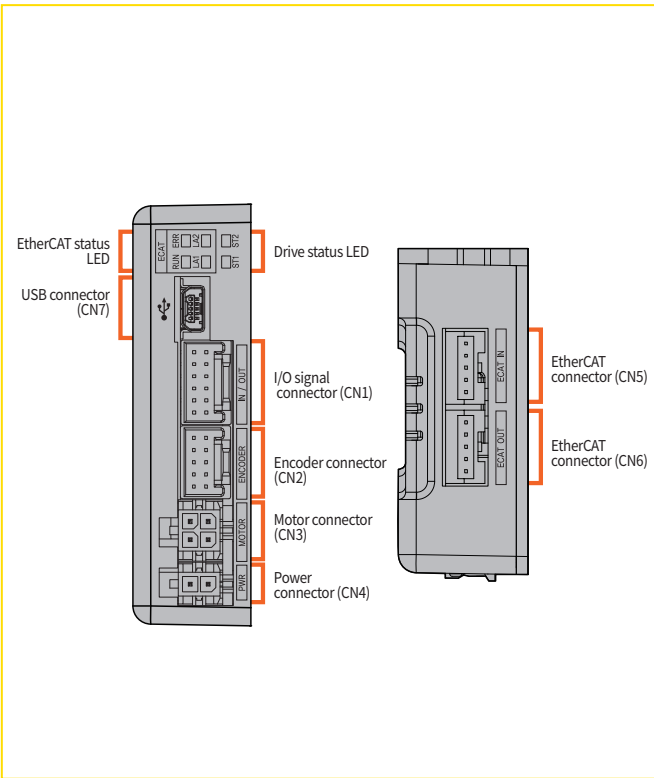
- EtherCAT-compatible Microstepping System
- CiA402 Drive Profile
- Compact & Light-Weight Drive
- Space Saving, Reduced Wiring
- Software Damping (Resonance & Vibration Suppression)
- High Torque



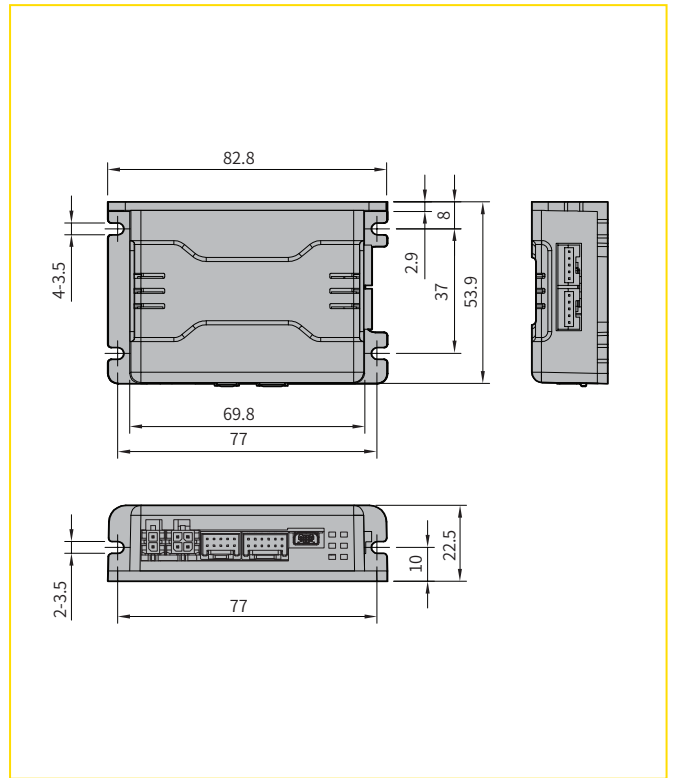
Specifications

| Model | | Ezi-STEP II-EC-MI |
|----------------------------|------------------------|--|
| Power Supply | | DC 24 V \pm 10 % |
| Speed Control Range | | 0 ~ 3,000 r/min |
| Reference Resolution [P/R] | | Configurable Resolution 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 |
| EtherCAT | Communication Protocol | CoE (CiA402 Drive Profile), FoE (Firmware Download) |
| | Operation Mode | CiA402 Drive Profile : Cyclic Synchronous Position Mode (CSP) Profile Position Mode (PP) Homing Mode (HM) |
| | Synchronization | Free Run, SM Event, DC SYNC Event |
| Status Display | LED | EtherCAT status: Run, Error, Link/Activity Drive status: Status 1, Status 2 |

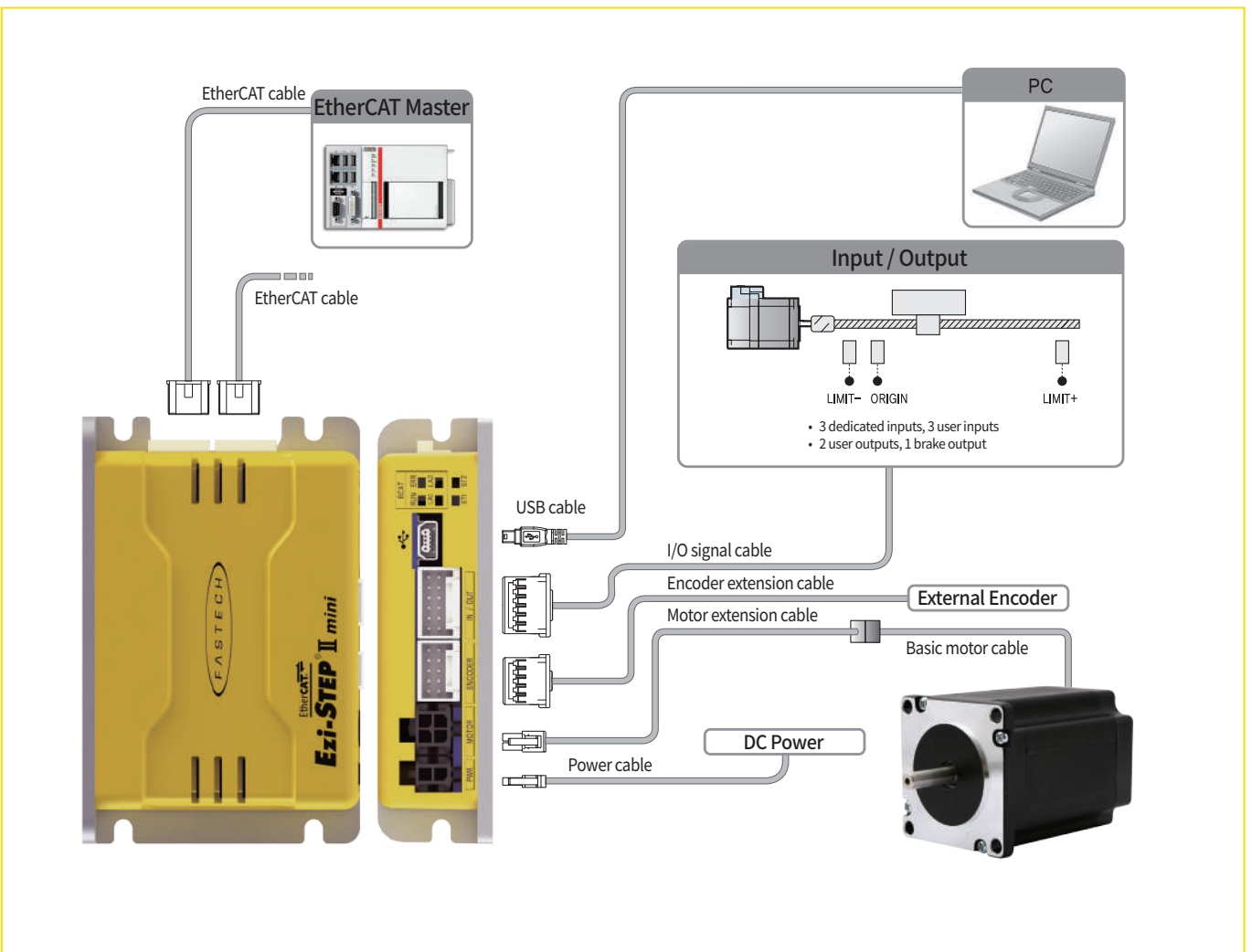
Module Overview



Dimension



System Configuration



Ezi-STEP[®] II EtherCAT[®]

Micro Stepping System **ALL**

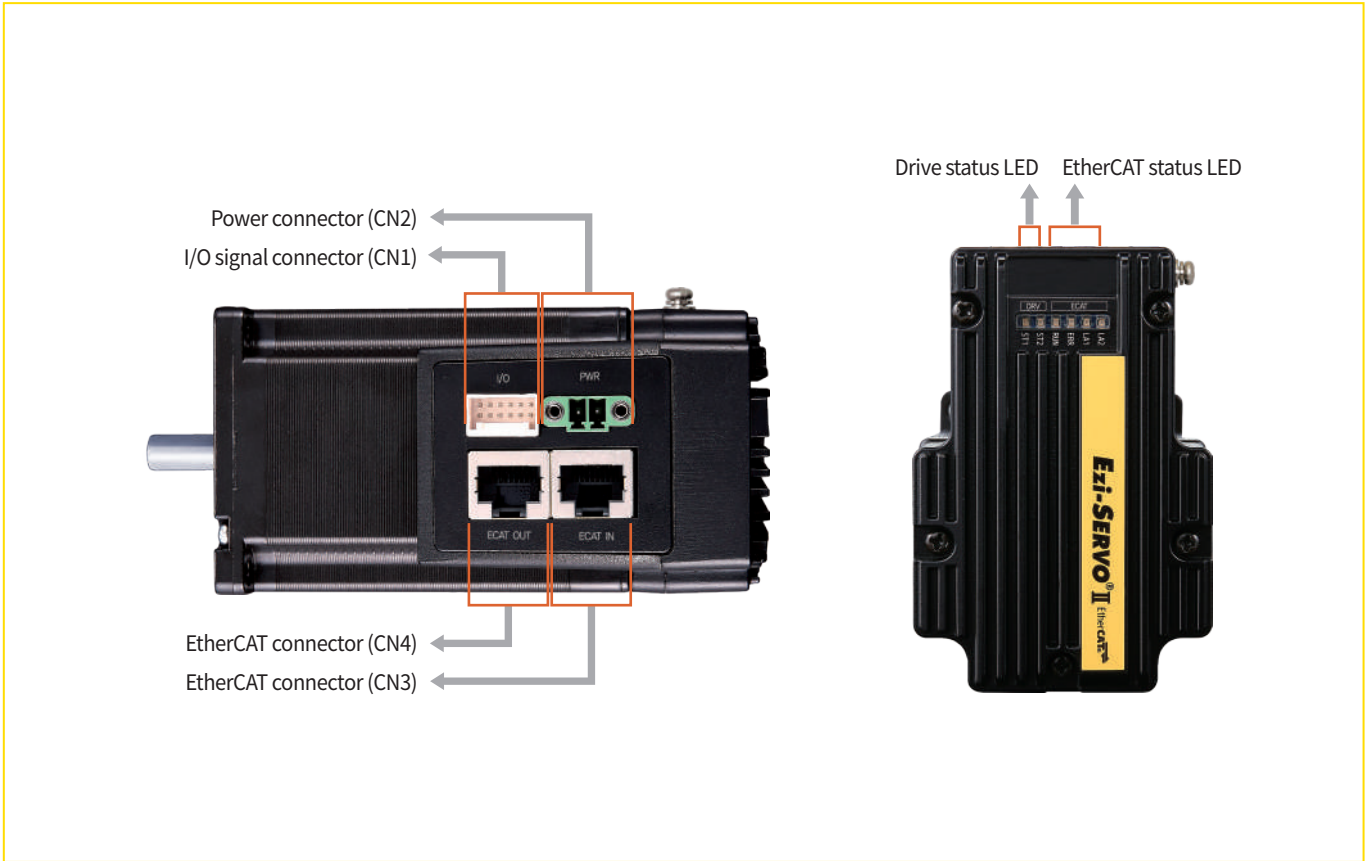
- EtherCAT-compatible Microstepping System
- CiA402 Drive Profile
- Motor + Drive Integrated
- Space Saving, Reduced Wiring
- Software Damping (Resonance & Vibration Suppression)
- High Torque



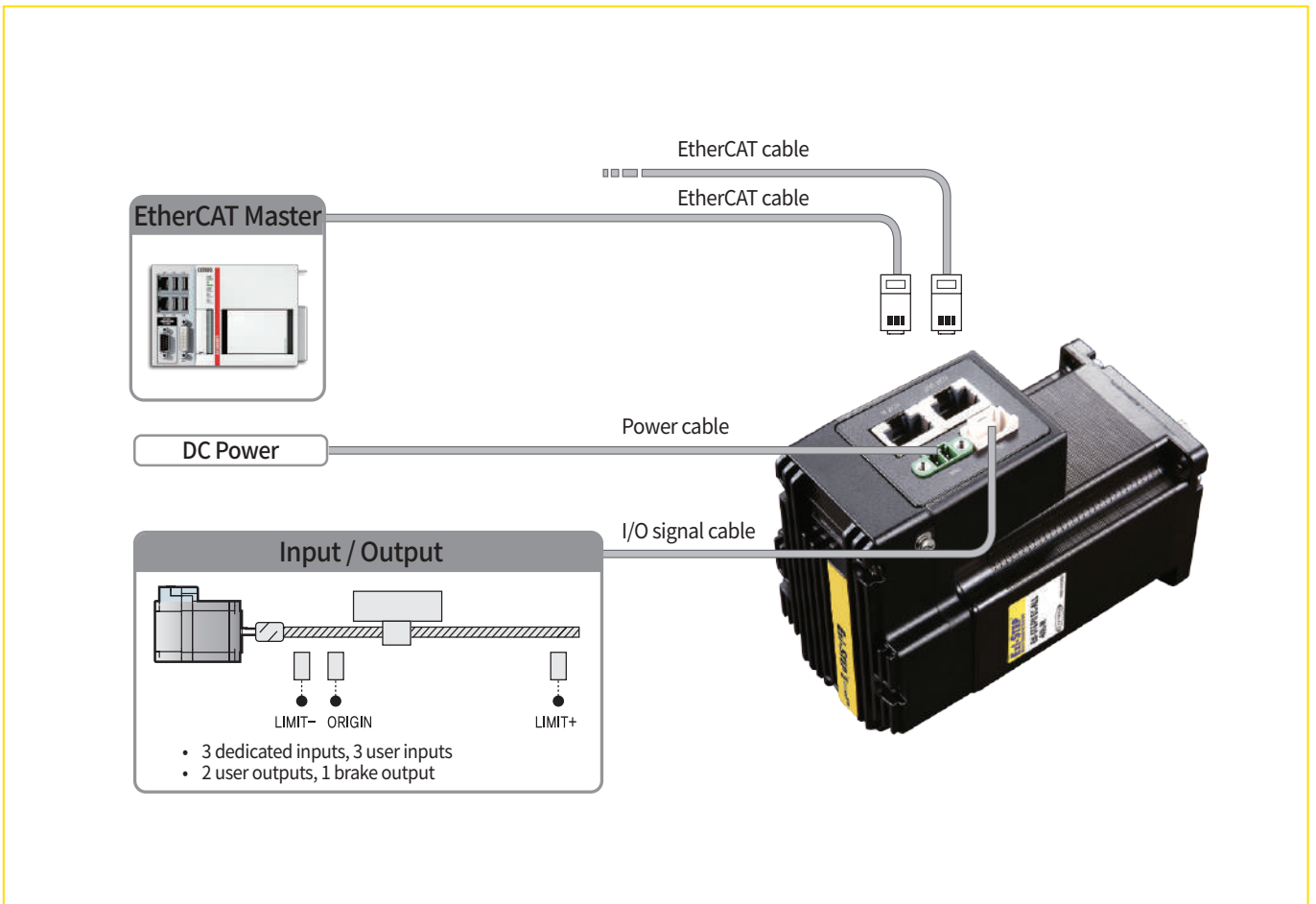
Specifications

| Model | Ezi-STEP II-EC-ALL-42 | Ezi-STEP II-EC-ALL-56 | Ezi-STEP II-EC-ALL-60 | Ezi-STEP II-EC-ALL-86 |
|----------------------------|--|---|-----------------------|-----------------------|
| Power Supply | DC 24 V ± 10 % | | | DC 48 V ± 10 % |
| Speed Control Range | 0 ~ 3,000 r/min | | | 0 ~ 2,000 r/min |
| Reference Resolution [P/R] | Configurable Resolution 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 | | | |
| EtherCAT | Communication Protocol | CoE (CiA402 Drive Profile), FoE (Firmware Download) | | |
| | Operation Mode | CiA402 Drive Profile : Cyclic Synchronous Position Mode (CSP) Profile Position Mode (PP) Homing Mode (HM) | | |
| | Synchronization | Free Run, SM Event, DC SYNC Event | | |
| Status Display | LED | EtherCAT status: Run, Error, Link/Activity Drive status: Status 1, Status 2 | | |

■ Module Overview



■ System Configuration



Ezi-STEP[®] II EtherCAT[®] 4X

Micro Stepping System

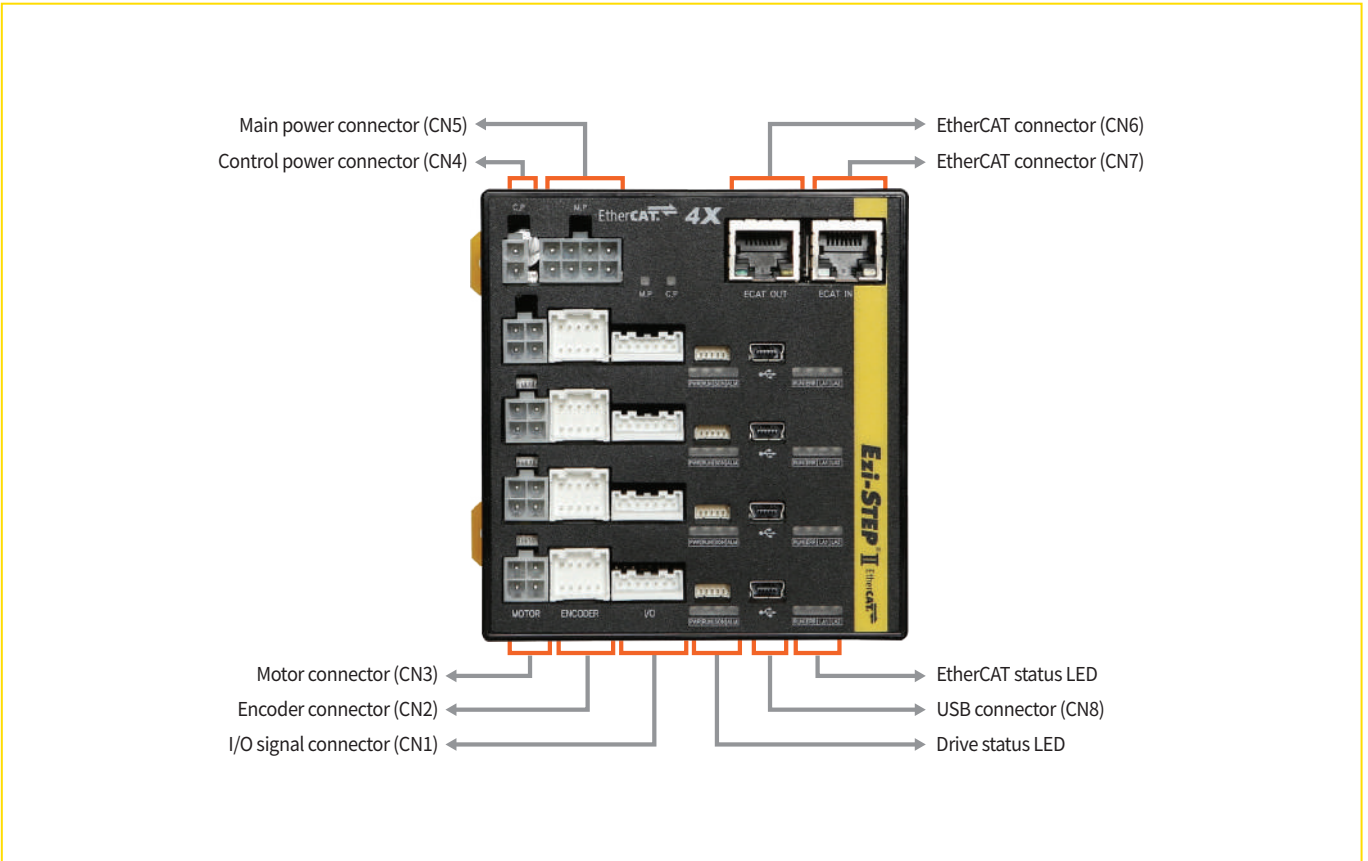
- EtherCAT-compatible Microstepping System
- CiA402 Drive Profile
- Compact Multi-Axis Drive (up to 4 axes)
- Space Saving, Reduced Wiring
- Software Damping (Resonance & Vibration Suppression)
- High Torque



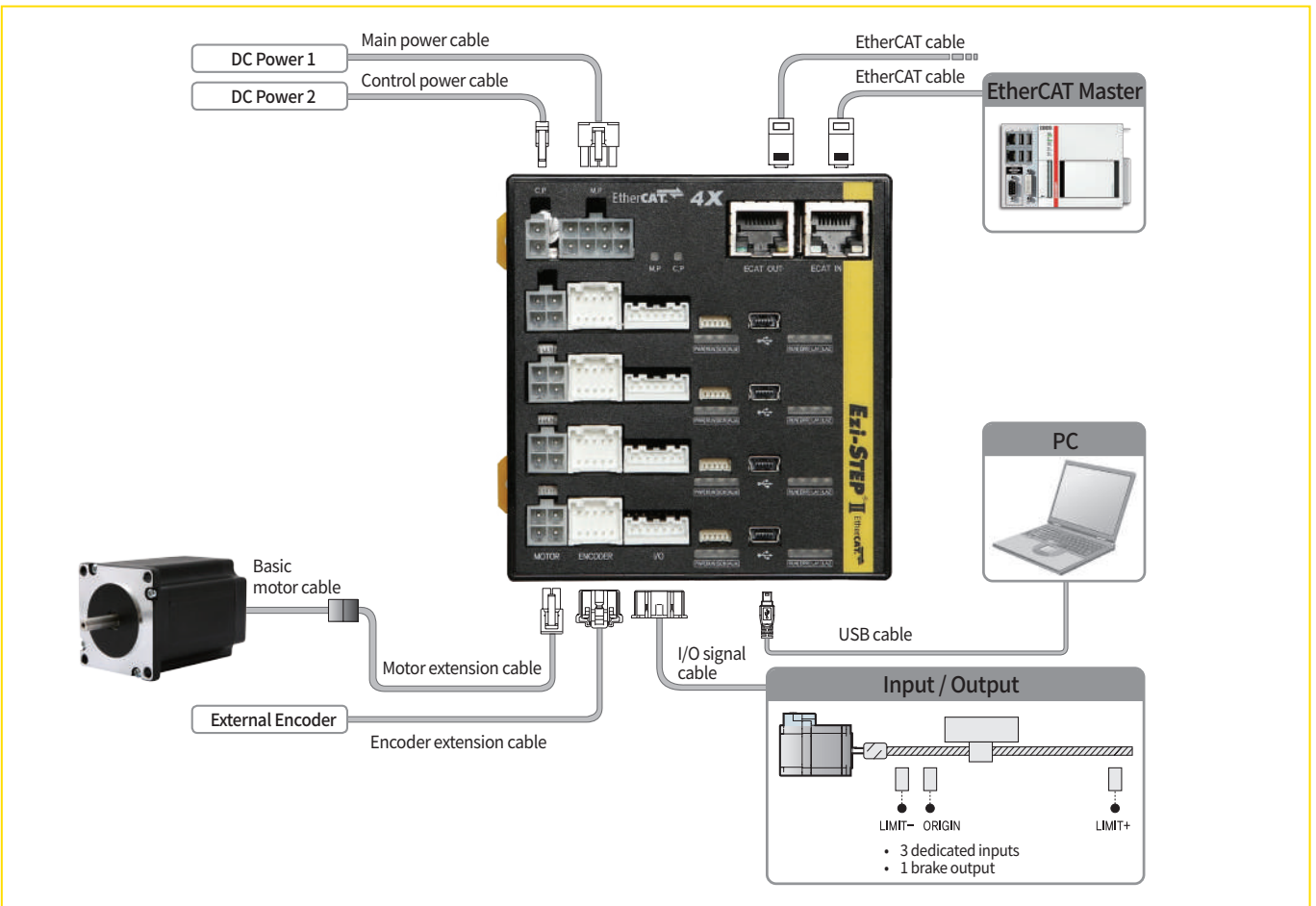
Specifications

| Model | | Ezi-STEP II-EC-4X Ezi-STEP II-EC-3X |
|----------------------------|------------------------|--|
| Main Power Supply | | DC 24 V ± 10 % |
| Control Power Supply | | DC 24 V ± 10 % |
| Speed Control Range | | 0 ~ 3,000 r/min |
| Reference Resolution [P/R] | | Configurable Resolution 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 |
| EtherCAT | Communication Protocol | CoE (CiA402 Drive Profile), FoE (Firmware Download) |
| | Operation Mode | CiA402 Drive Profile : Cyclic Synchronous Position Mode (CSP) Profile Position Mode (PP) Homing Mode (HM) |
| | Synchronization | Free Run, SM Event, DC SYNC Event |
| Status Display | LED | EtherCAT status: Run, Error, Link/Activity Drive status : Power, Run, Step On, Alarm |
| Dimension [mm] | | 100.4(W) x 100 (D) x 84(H) |

Module Overview



System Configuration



Ezi-POS[®] EtherCAT[®]

Servo Control System

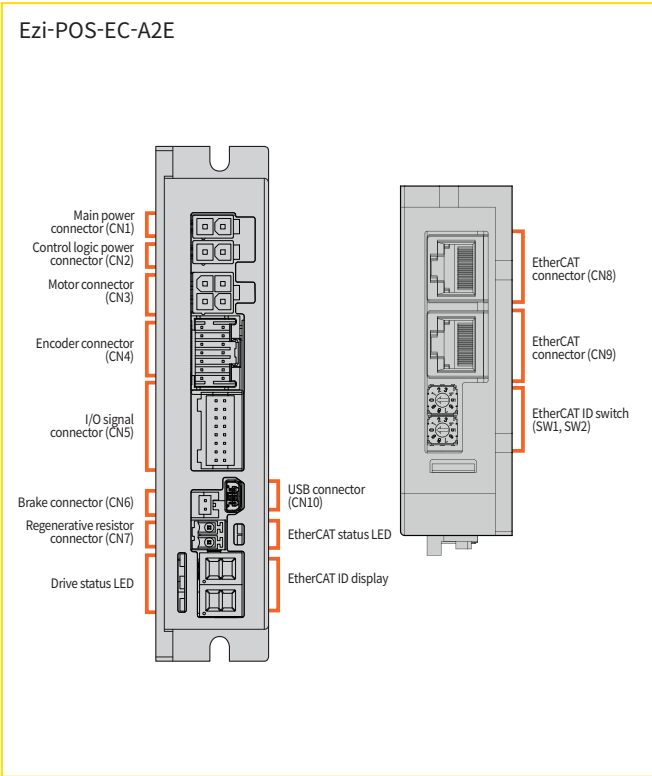
- EtherCAT-compatible Low-Voltage Servo Control System
- CiA402 Drive Profile
- DC Power Supply Input (DC 12 ~ 48 V)
- Auto-tuning
- Torque-Off Function
- Various Motor Options (BLDC Motor, Servo Motor, Linear Motor, VCM, etc)
- Various Position Sensor Options (Incremental/Absolute Encoders)



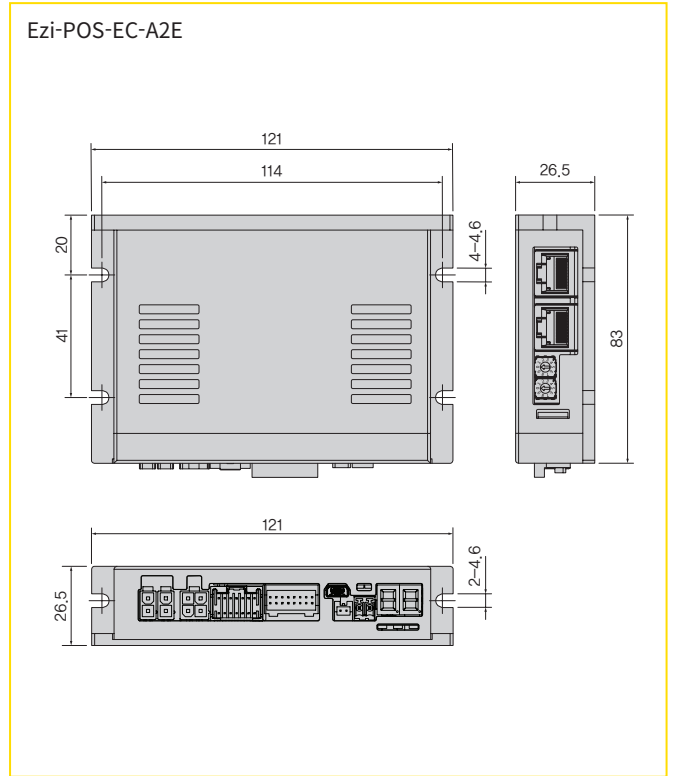
Specifications

| Model | Ezi-POS-EC-A2A | Ezi-POS-EC-A2E |
|--------------------------------------|---|---|
| Power Supply | DC 12 ~ 48 V \pm 10 % | |
| Input Current (continuous / max) | ~7 A / 10 A (< 60 s) | |
| Output Current (continuous / max) | ~200 W / 350 W (< 60 s) | |
| PWM Frequency | 25 kHz or 50 kHz | |
| Current Control Sampling Rate | 25 kHz (40 μ s) | |
| Position/Speed Control Sampling Rate | 2.5 kHz (400 μ 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) and 2 user inputs | |
| Digital Output | 3 user outputs | |
| Torque-Off Function | 2 inputs (TQOFF1, TQOFF2) | |
| Additional I/O | Brake | Dedicated connector for external brake |
| | Regeneration Resistor | Dedicated connector for external regenerative resistor |
| EtherCAT | Communication Protocol | CoE (CiA402 Drive Profile), FoE (Firmware Download) |
| | Operation Mode | CiA402 Drive Profile : Cyclic Synchronous Position Mode (CSP) Profile Position Mode (PP) Homing Mode (HM) |
| | Synchronization | Free Run, SM Event, DC SYNC Event |

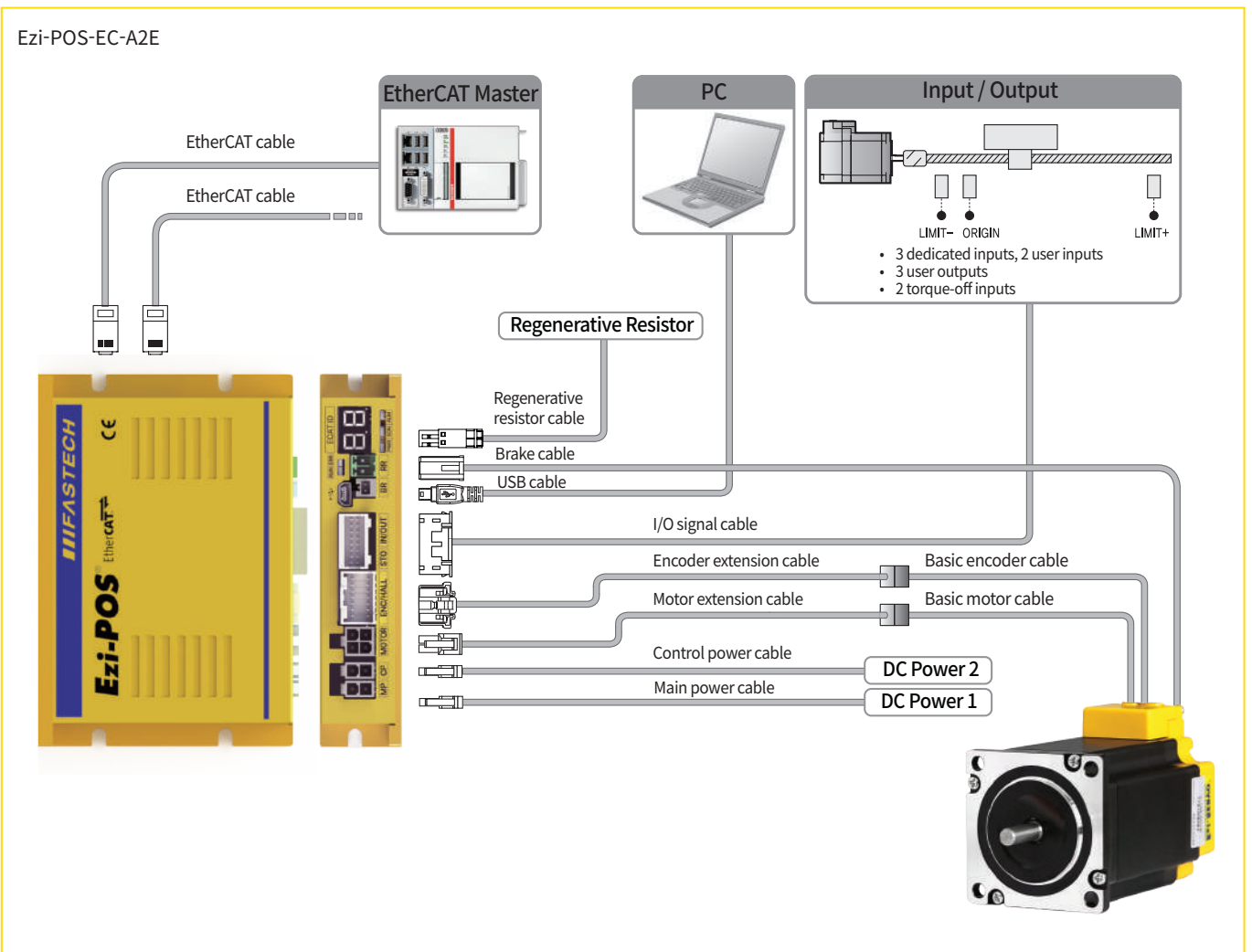
Module Overview



Dimension



System Configuration



Ezi-SPEED[®] EtherCAT[®]

BLDC Motor Speed Control System **DC**

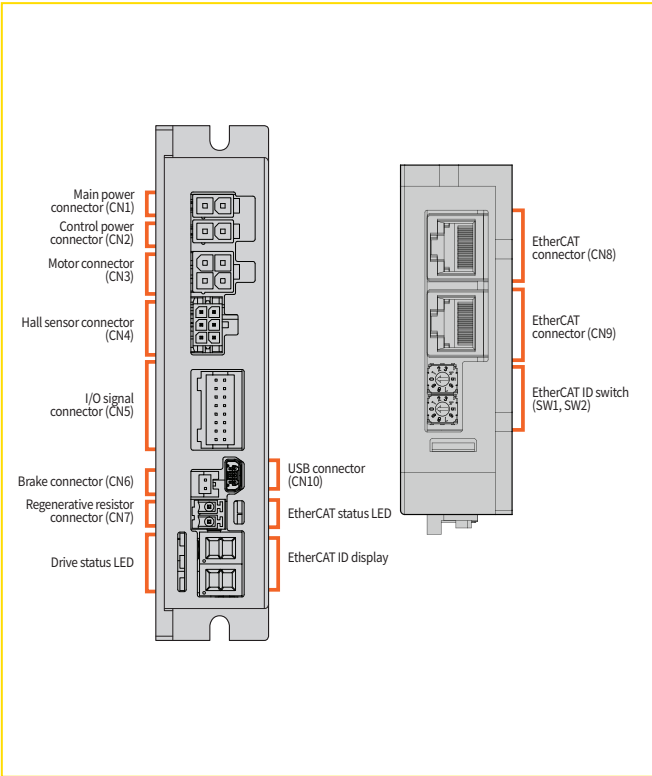
- EtherCAT-compatible Low Voltage BLDC Motor Speed Control System
- CiA402 Drive Profile
- DC Power Input (DC 12 ~ 48 V)
- Auto-tuning
- Wide Speed Control Range (50 ~ 4,000 r/min)
- Stable Speed Regulation ($\pm 0.2\%$)



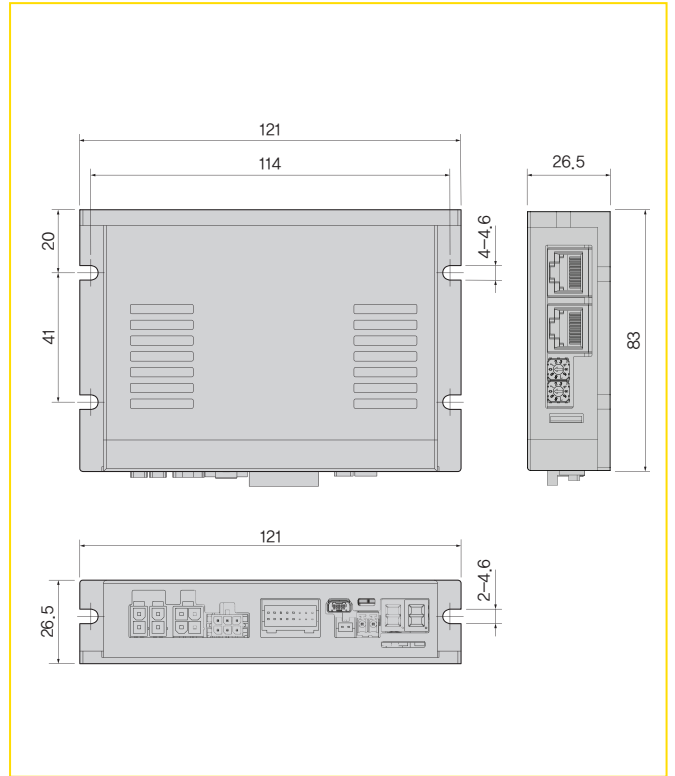
■ Specifications

| Model | | Ezi-SPEED-EC-A2H |
|----------------------------------|------------------------|---|
| Power Supply | | DC 12 ~ 48 V $\pm 10\%$ |
| 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 μ s) |
| Speed Control Sampling Rate | | 2.5 kHz (400 μ 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 | Dedicated connector for external brake |
| | Regeneration Resistor | Dedicated connector for external regenerative resistor |
| EtherCAT | Communication Protocol | CoE (CiA402 Drive Profile), FoE (Firmware Download) |
| | Operation Mode | CiA402 Drive Profile: Velocity Mode (PV) Manufacturer-specific Mode: IO-Map Command Mode |
| | Synchronization | Free Run, SM Event, DC SYNC Event |

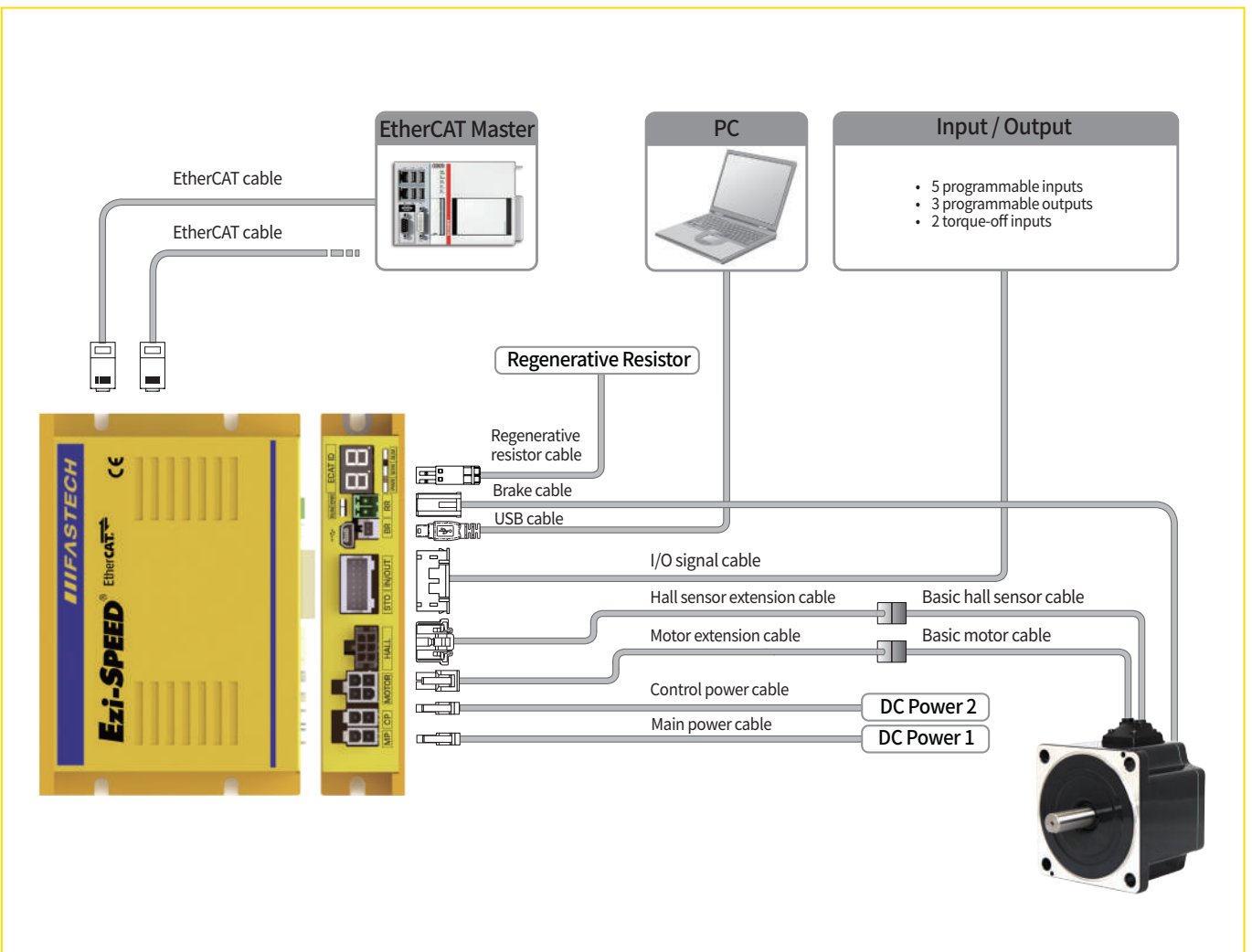
Module Overview



Dimension



System Configuration



Ezi-SPEED[®] EtherCAT[®]

BLDC Motor Speed Control System

- EtherCAT-compatible BLDC Motor Speed Control System
- CiA402 Drive Profile
- AC Power Supply Input (AC 200 ~ 240 V)
- 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)

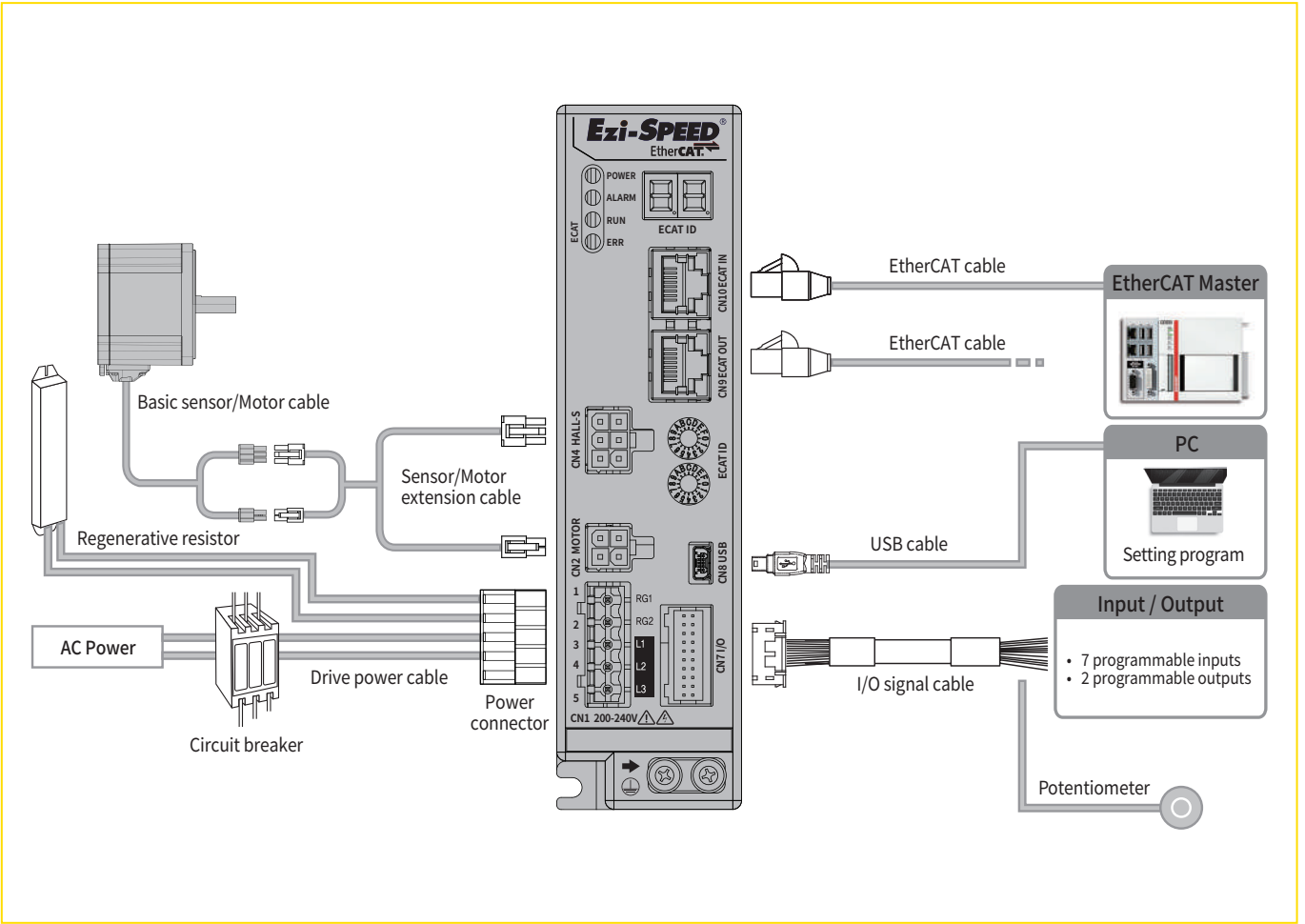


Specifications

□: Motor flange size
■: Shaft figuration

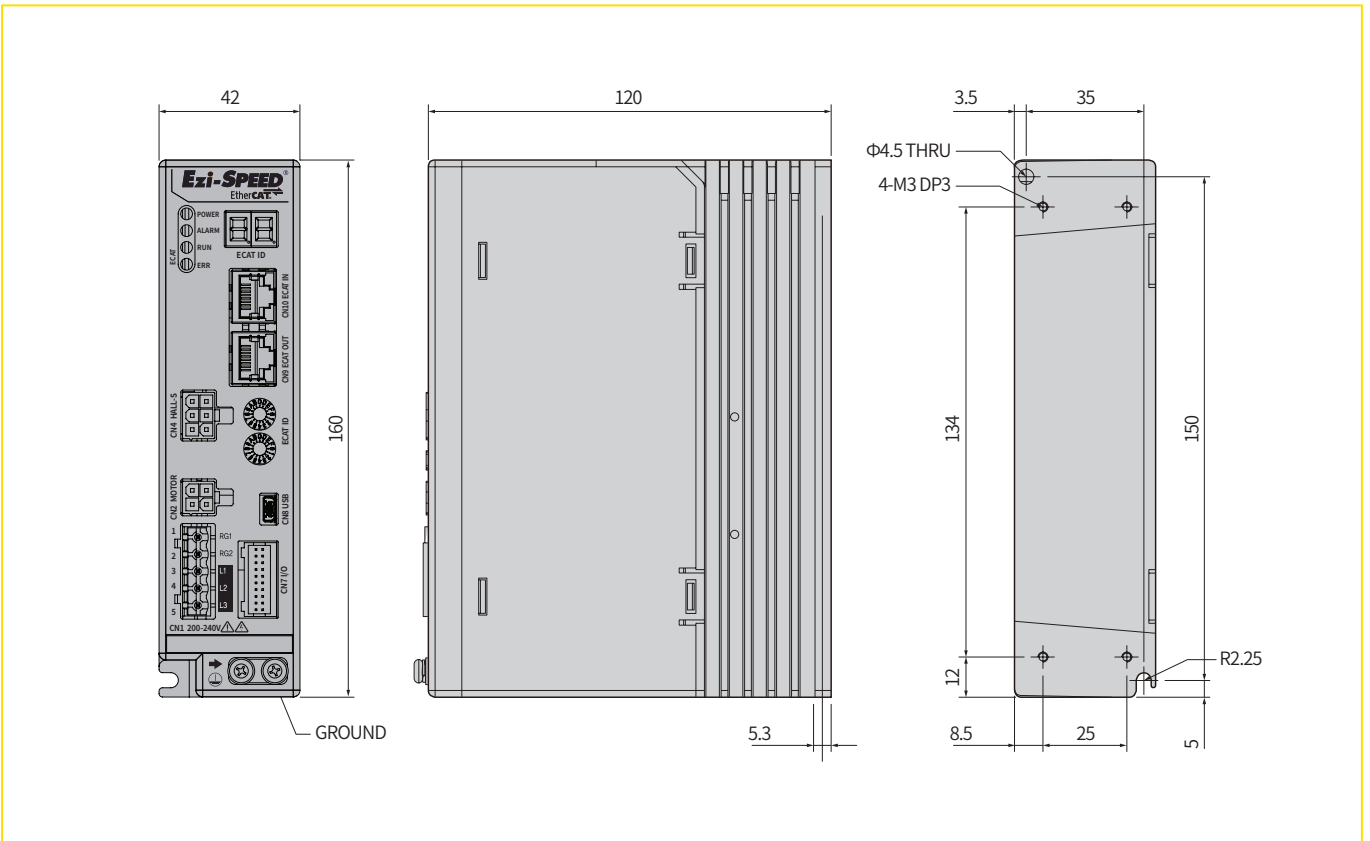
| Model | Ezi-SPEED-EC-□-■-30 | Ezi-SPEED-EC-□-■-60 | Ezi-SPEED-EC-□-■-120 | Ezi-SPEED-EC-□-■-200 | Ezi-SPEED-EC-□-■-400 |
|---|---|---|---|---|---|
| Rated Output Power (Continuous) | 30 W | 60 W | 120 W | 200 W | 400 W |
| Power Supply | Rated Voltage | | | | |
| | Single-phase 200 ~ 240 V / Three-phase 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 | | | | |
| EtherCAT | Communication Protocol | | | | |
| | CoE (CiA402 Drive Profile), FoE (Firmware Download) | | | | |
| | Operation Mode | | | | |
| CiA402 Drive Profile: Velocity Mode (VL) Manufacturer-specific Mode: IO-Map Command Mode | | | | | |
| Synchronization | | | | | |
| Free Run, SM Event, DC SYNC Event | | | | | |

System Configuration



Dimension

Unit [mm]



Ezi-IO[®] EtherCAT[®]

Network Input/Output **DIO**

- EtherCAT-compatible Digital I/O Module
- CiA401 I/O Profile
- Simple and Easy Wiring
- DIN Rail Mounting

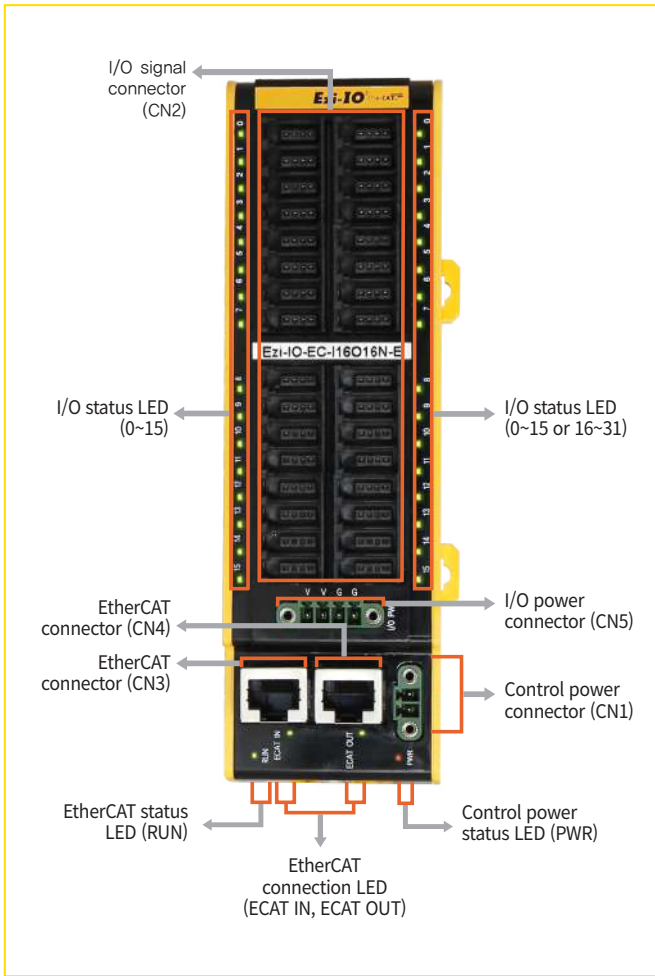


Specifications

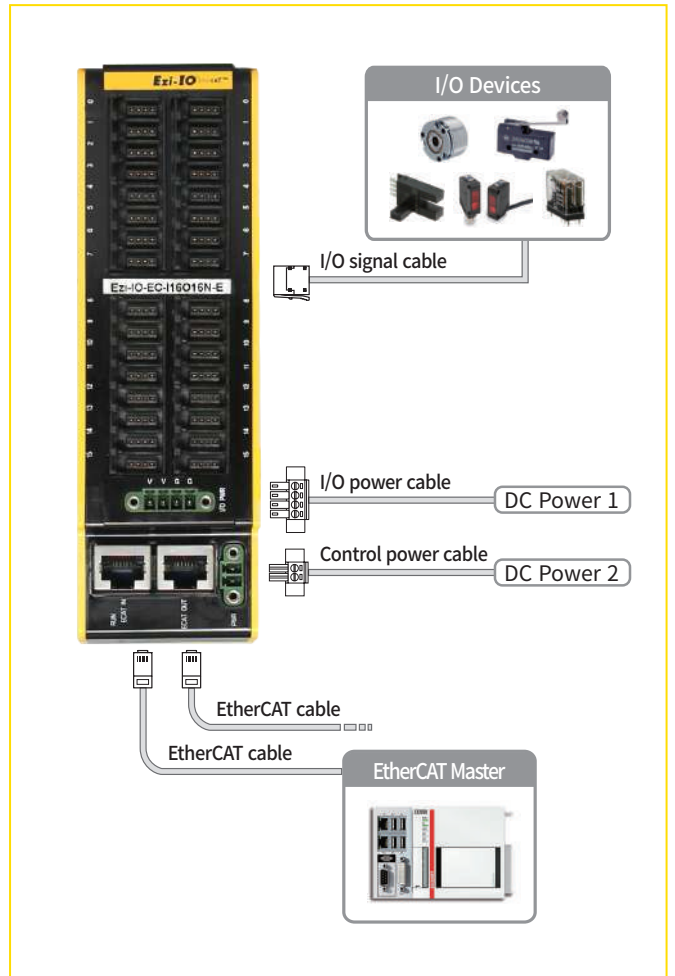
*□: NPN/PNP Type
 ■: e-CON / Terminal Block Type

| Model | | Ezi-IO-EC-I32□-■ | Ezi-IO-EC-O32□-■ | Ezi-IO-EC-I16O16□-■ | |
|----------------------|-----------------|--|---|--|------------------------|
| Control Power Supply | | DC 24 V ± 10 % | | | |
| Function | Input | Number of Input Channels | 32 CH | 16 CH | |
| | | Rated Input Voltage | DC 24 V | DC 24 V | |
| | | Rated Input Current | 5 mA/CH | 5mA/CH | |
| | | Isolation Method | Photocoupler Isolation | - | Photocoupler Isolation |
| | | Common Method | 16 CH/COM | | 16 CH/COM |
| | | Off→On Response Time | 10 μs or lower | | 10 μs or lower |
| | | On→Off Response Time | 70 μs or lower | | 70 μs or lower |
| | Output | Number of Output Channels | | 32 CH | 16 CH |
| | | Rated Output Voltage | | DC 24 V | DC 24 V |
| | | Rated Phase Current | | 0.2 A/CH | 0.2 A/CH |
| | | Isolation Method | - | Photocoupler Isolation | Photocoupler Isolation |
| | | Common Method | | 16 CH/COM | 16 CH/COM |
| | | Off→On Response Time | | 4 μs or lower | 4 μs or lower |
| | | On→Off Response Time | | 190 μs or lower | 190 μs or lower |
| LED Display | | <ul style="list-style-type: none"> • EtherCAT status: Run, Link/Activity • Device status: Power • I/O status: 32 inputs | <ul style="list-style-type: none"> • EtherCAT status: Run, Link/Activity • Device status: Power • I/O status: 32 outputs | <ul style="list-style-type: none"> • EtherCAT status: Run, Link/Activity • Device status: Power • I/O status: 16 inputs, 16 outputs | |
| EtherCAT | Synchronization | Free RUN, SM Event | | | |

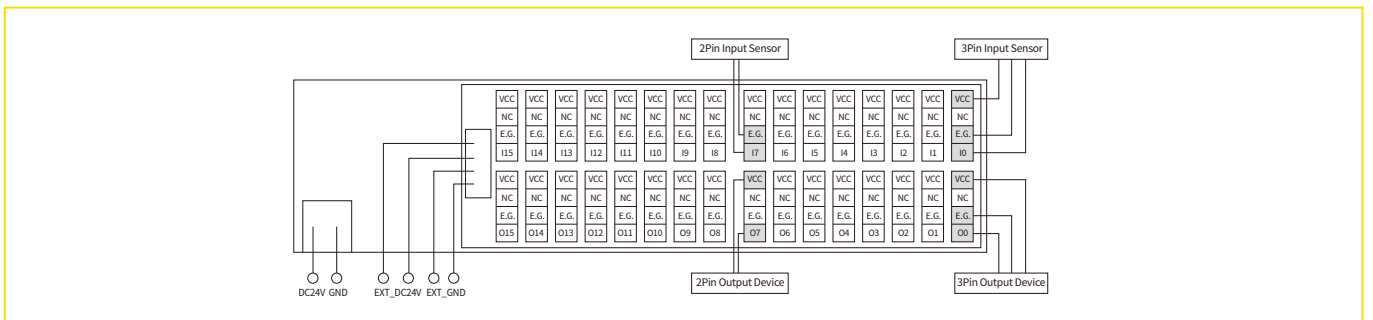
Module Overview



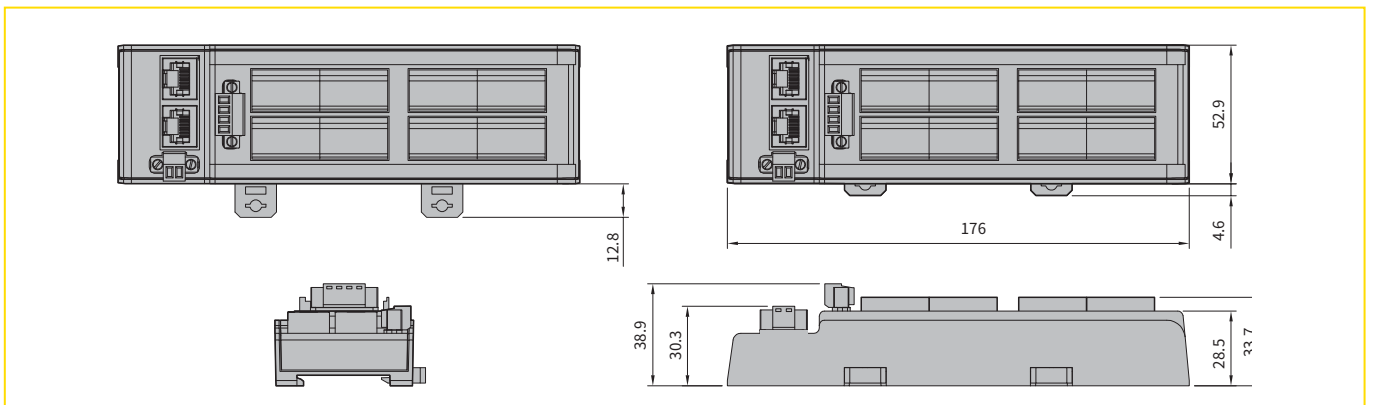
System Configuration



Wiring Example (Ezi-IO-EC-I16O16N-E)



Dimension



Ezi-IO[®] EtherCAT[®]

Network Input/Output **AD**

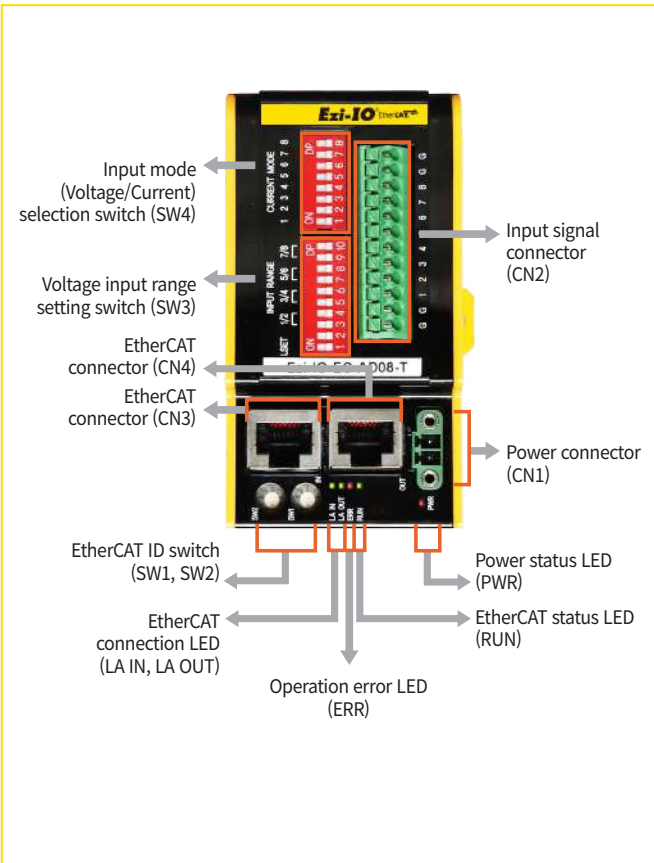
- EtherCAT-compatible Analog Input Module
- CiA401 I/O Profile
- Configurable Input Mode and Input Range
- Moving Average Filtering
- Simple and Easy Wiring
- DIN Rail Mounting



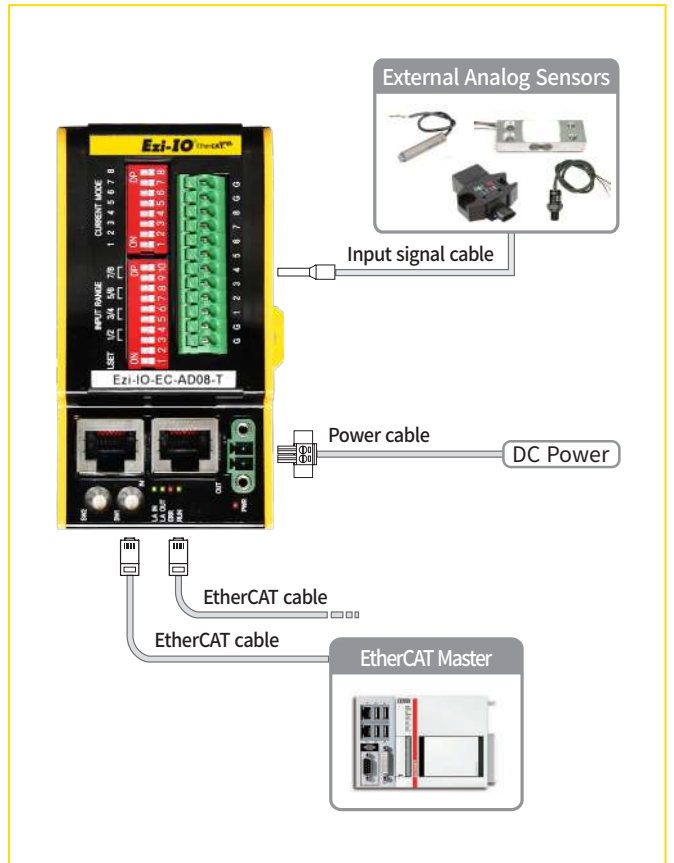
Specifications

| | | | | |
|--------------------|--|---|--------------------------|--------------------------|
| Model | | Ezi-IO-EC-AD08-T | | |
| Input Mode | | Voltage Input | Current Input | |
| Power Supply | | DC 24 V \pm 10 % | | |
| Function | Number of Input Channels | 8 CH | | |
| | Max. Signal Input | \pm 15 V | \pm 30 mA | |
| | Input Range | $-10 \sim 10$ V / $-5 \sim 5$ V / $-2.5 \sim 2.5$ V / $0 \sim 10$ V | $0 \sim 20$ mA | |
| | Input Range Setting Method | ·SDO Communications (Separate settings for CH1 ~ CH8) ·DIP Switch (Separate settings for CH1/CH2, CH3/CH4, CH5/CH6, CH7/CH8) | | |
| | Input Impedance | 1M Ω | 249 Ω | |
| | Max. Resolution | 1/8,191 (Full Scale) | | |
| | Accuracy | 25°C | \pm 0.3 % (Full Scale) | \pm 0.3 % (Full Scale) |
| | | 0~50°C | \pm 0.4 % (Full Scale) | \pm 0.6 % (Full Scale) |
| | Conversion Cycle | 200 μ s/8 CH | | |
| A/D Converted Data | $-10 \sim 10$ V : -4,096~4,095 $-5 \sim 5$ V : -4,096~4,095 | $-2.5 \sim 2.5$ V : -4,096~4,095 $0 \sim 10$ V : 0~8,191 | $0 \sim 20$ mA : 0~8,191 | |
| Isolation Method | Between analog input and communication connections : Digital isolation (Between channels : Non-isolated) | | | |
| LED Display | | EtherCAT status: Run, Link/Activity Device status: Power, Operation Error | | |
| EtherCAT | Communication Protocol | CoE (CiA401 I/O Profile), FoE (Firmware Download) | | |
| | Synchronization | Free Run, SM Event, DC SYNC Event | | |

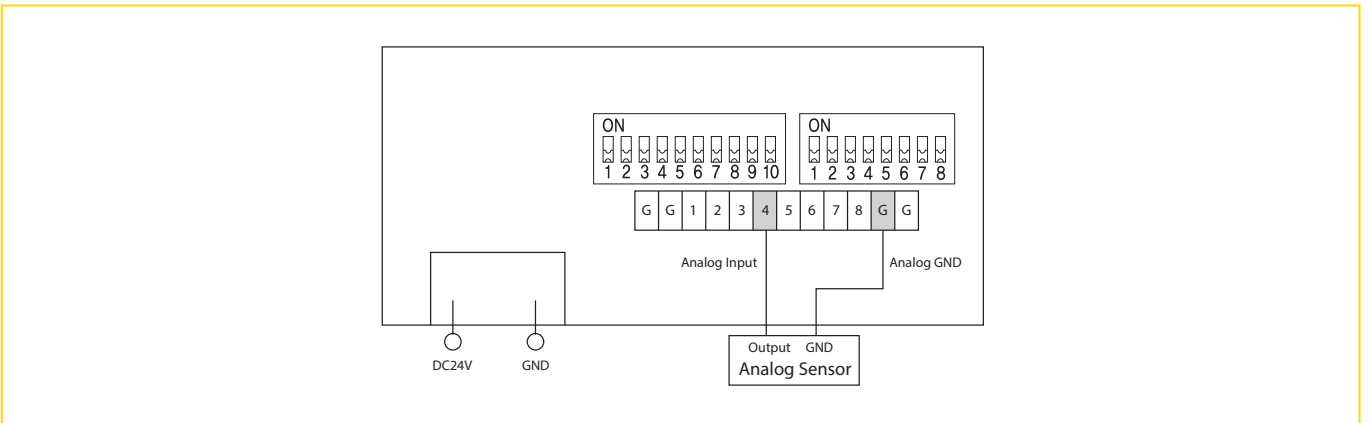
Module Overview



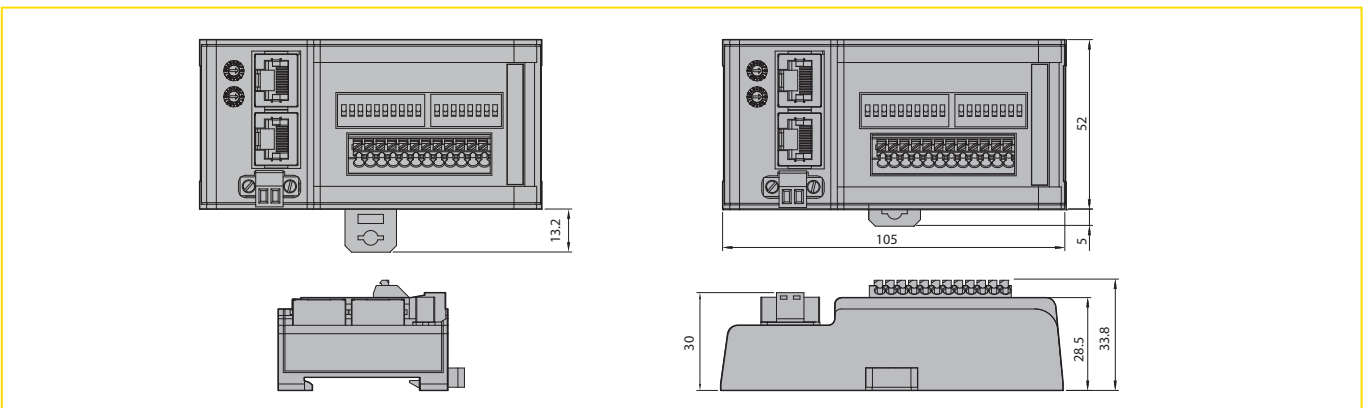
System Configuration



Wiring Example (Ezi-IO-EC-AD08-T)



Dimension



Ezi-IO[®] EtherCAT[®]

Network Input/Output DA

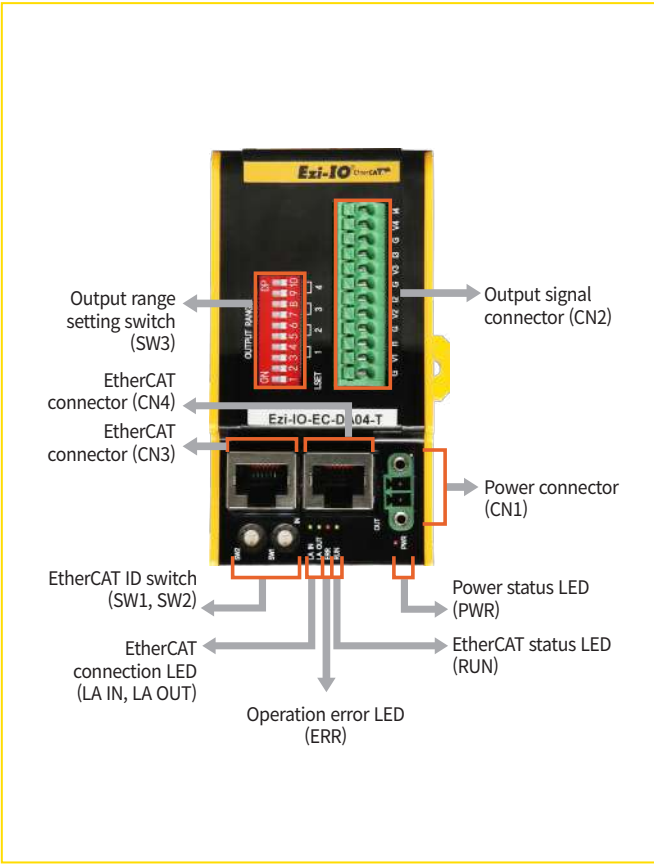
- EtherCAT-compatible Analog Output Module
- CiA401 I/O Profile
- Configurable Output Range
- Calibration for Output Deviation
- Simple and Easy Wiring
- DIN Rail Mounting



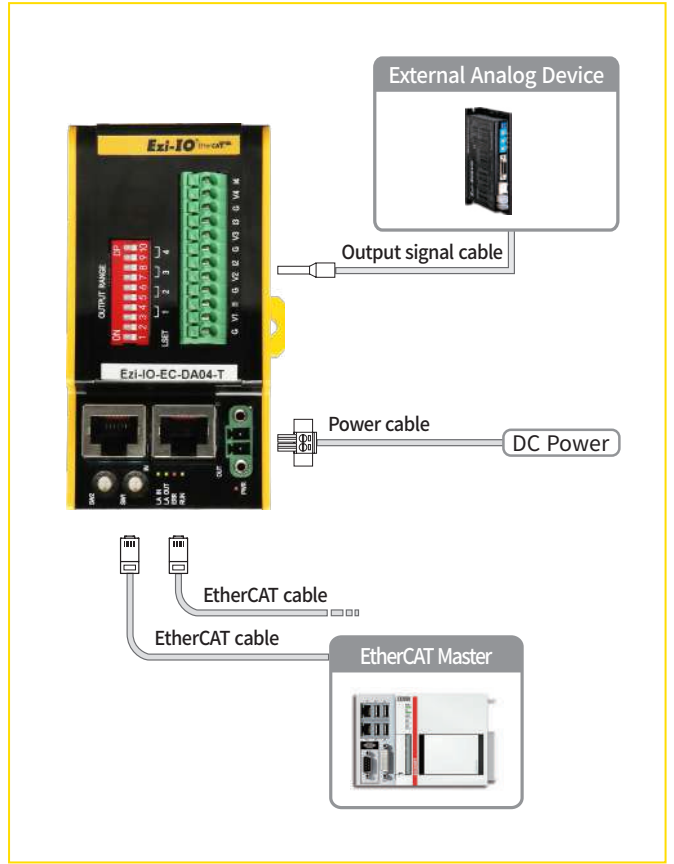
Specifications

| | | | | |
|------------------|---|--|-------------------------------|--|
| Model | | Ezi-IO-EC-DA04-T | | |
| Output Mode | | Voltage Output | Current Output | |
| Power Supply | | DC 24 V \pm 10 % | | |
| Function | Number of Output Channels | 4 CH | | |
| | Output Range | \cdot 0 ~ 5 V / 1 ~ 5 V / 0 ~ 10 V / -10 ~ 10 V | \cdot 0 ~ 20 mA / 4 ~ 20 mA | |
| | Output Range Setting Method | \cdot SDO Communications (Separate settings for CH1 ~ CH4) \cdot DIP Switch (Separate settings for CH1 ~ CH4) | | |
| | External Load Resistance | 1 M Ω or higher | 400 Ω 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 μ s / 4CH | | |
| | D/A Converted Data | \cdot -25,000 ~ 25,000 (-10 ~ 10 V output range) \cdot 0 ~ 25,000 (Other output ranges except -10 ~ 10 V) | \cdot 0 ~ 25,000 | |
| Isolation Method | Between analog output and communication connections : Digital isolation (Between channels : Non-isolated) | | | |
| LED Display | | EtherCAT status: Run, Link/Activity Device status: Power, Operation Error | | |
| EtherCAT | Communication Protocol | CoE (CiA401 I/O Profile), FoE (Firmware Download) | | |
| | Synchronization | Free Run, SM Event, DC SYNC Event | | |

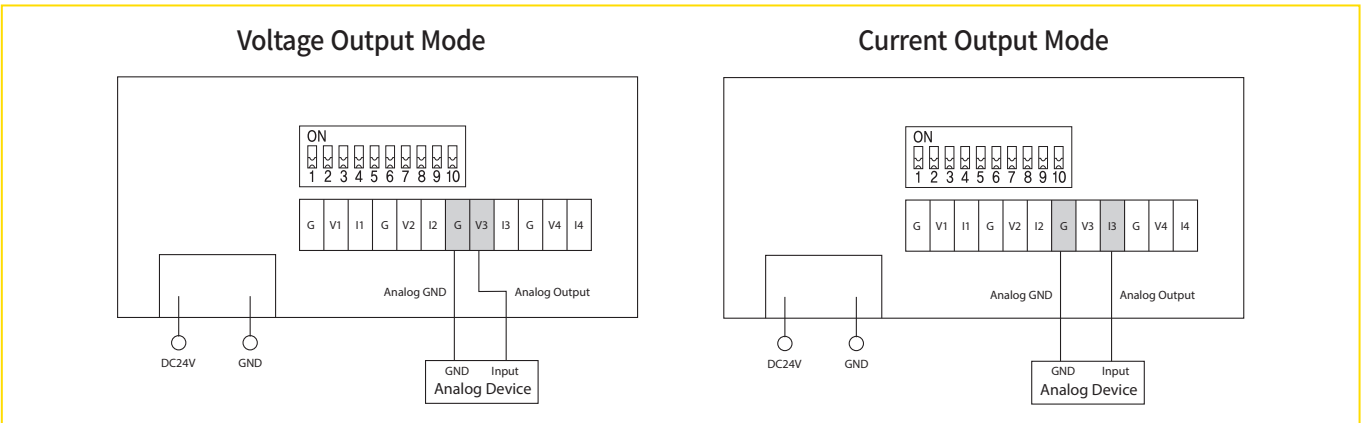
Module Overview



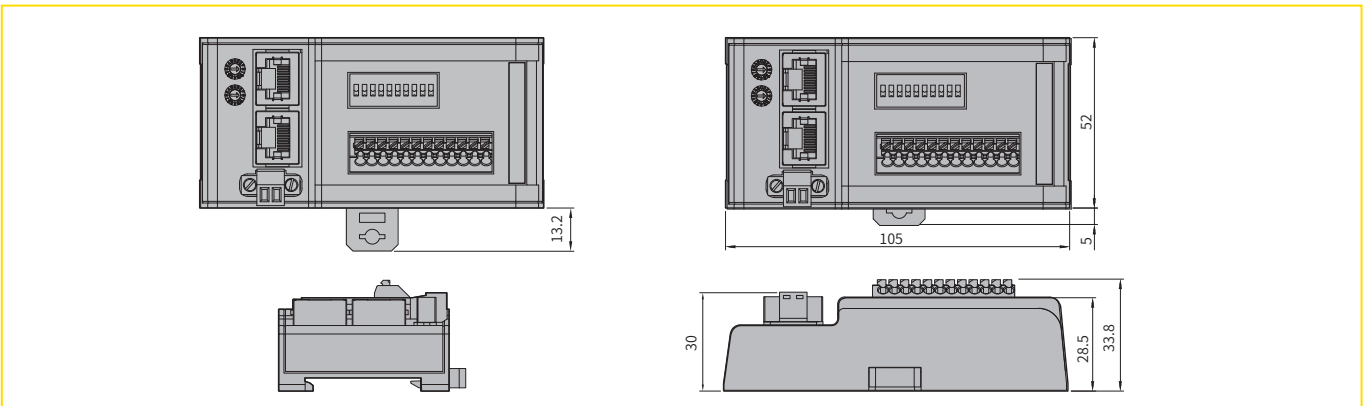
System Configuration



Wiring Example (Ezi-IO-EC-DA04-T)



Dimension



Ezi-IO[®] EtherCAT[®]

Network Input/Output **CNT**

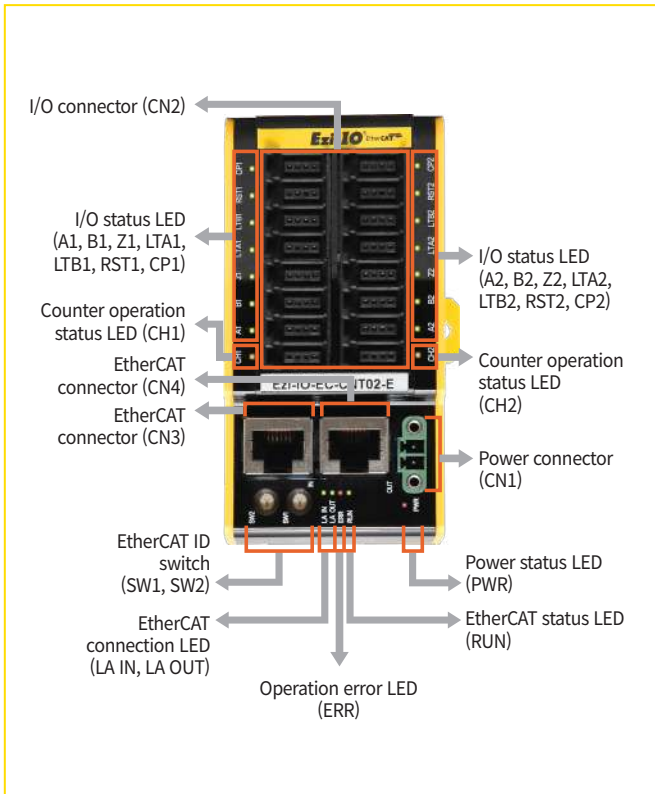
- EtherCAT-compatible High Speed Pulse Counter Module
- Line Receiver and DC Input Type Provided
- Comparison Output Function
- Simple and Easy Wiring
- DIN Rail Mounting



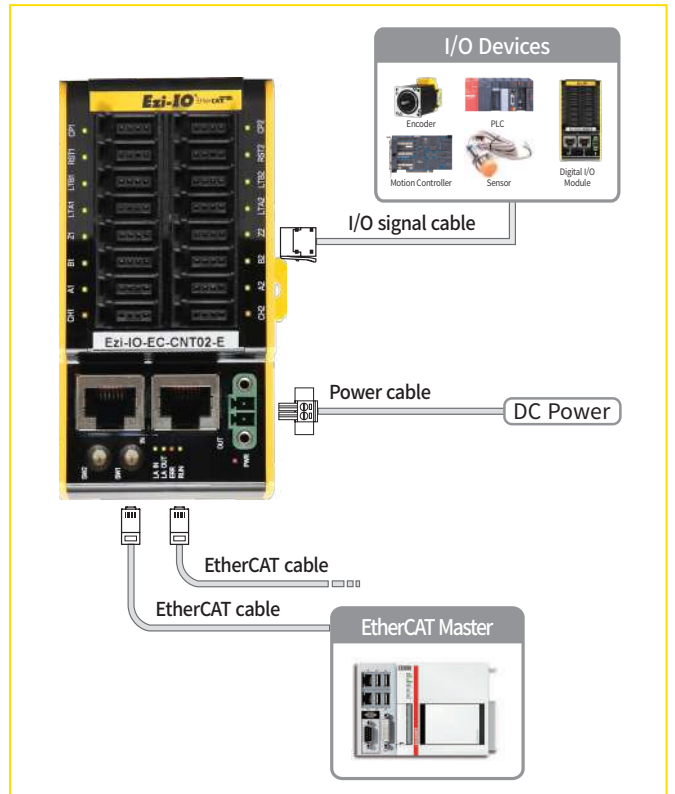
Specifications

| Model | | Ezi-IO-EC-CNT02-E | | |
|-------------------|------------------------|--|--|---|
| Power Supply | | DC 24 V \pm 10 % | | |
| Function | Number of Channels | 2 CH | | |
| | Count Range | 0~4, 294, 967, 295 (32 bit) | | |
| | Counter Function | <ul style="list-style-type: none"> · Counter Value Latch · Counter Value Reset · Counter Value Preset | | <ul style="list-style-type: none"> · 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 | | DC 5 V | DC 24 V, DC 5 V |
| | Rated Input Current | | 6.3 mA | |
| | Pulse Input Method | | <ul style="list-style-type: none"> · Phase Differential Pulse Input (Multiplication X2, X4) · 1 Pulse Input (Pulse/Direction Input) | · 2 Pulse (CW/CCW Input) |
| | Max Input Frequency | | <ul style="list-style-type: none"> · 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 | DC 24 V | DC 5 V |
| | | 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 | Open Collector Output (Transistor Output) | |
| | Rated Output Voltage | DC 5 V | DC 30 V or lower | |
| | Rated Phase Current | Max. 20 mA | Max. 20 mA | |
| LED Display | | EtherCAT status: Run, Link/Activity Device status: Power, Operation Error | | |
| EtherCAT | Communication Protocol | CoE, FoE (Firmware Download) | | |
| | Synchronization | Free Run, SM Event, DC SYNC Event | | |

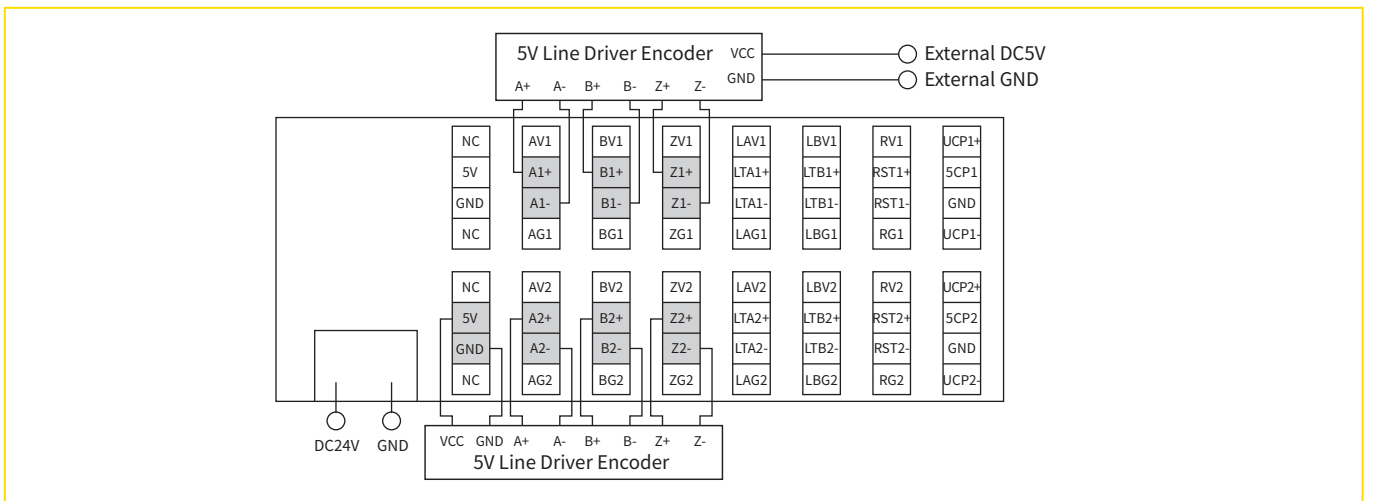
Module Overview



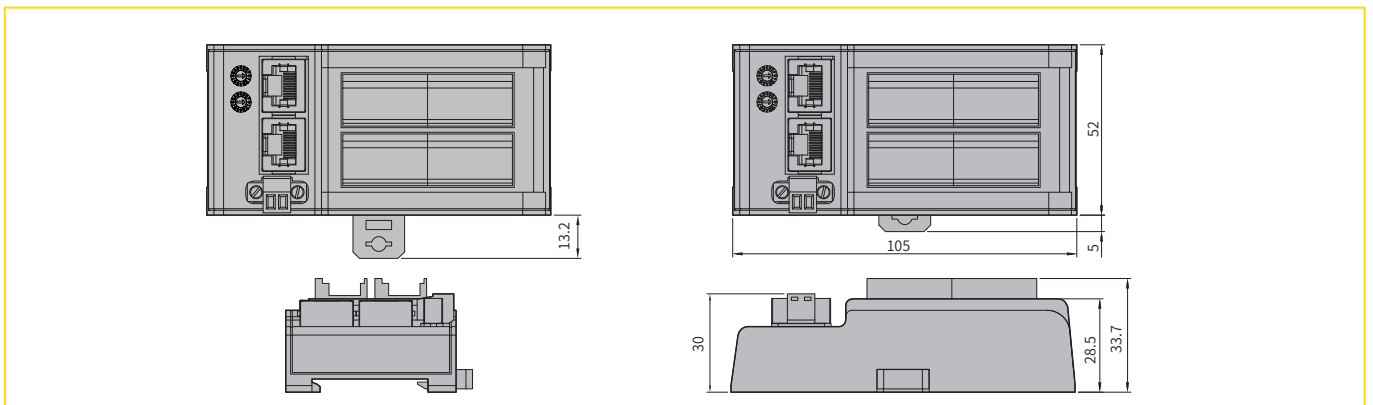
System Configuration



Wiring Example (Ezi-IO-EC-CNT02-E)



Dimension



Ezi-Robo[®] EtherCAT[®]

Precise Actuator System IGH

- Slider Type Electric Actuator with Stepping Motor & Ball Screw
- High Strength Steel Frame
- Repeatability (± 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 (Ethernet, EtherCAT, CC-Link IE TSN, 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 | | Cleanroom | |
| Lead | [mm] | 1 | 2 | 2 | 5 |
| Guide Rail Length | [mm] | 100 ~ 200 | | 150 ~ 300 | |
| Stroke | [mm] | 60 ~ 160 | | 76 ~ 226 | |
| Repeatability | [mm] | ± 0.005 | | ± 0.005 | |
| Maximum Speed | [mm/s] | 50 | 100 | 100 | 250 |
| Permissible Moment | [N·m] | $M_p: 10$ $M_v: 11$ $M_R: 28$ | | $M_p: 46$ $M_v: 51$ $M_R: 134$ | |
| Cleanroom Classification | | - | | Class3, ISO Standard | |

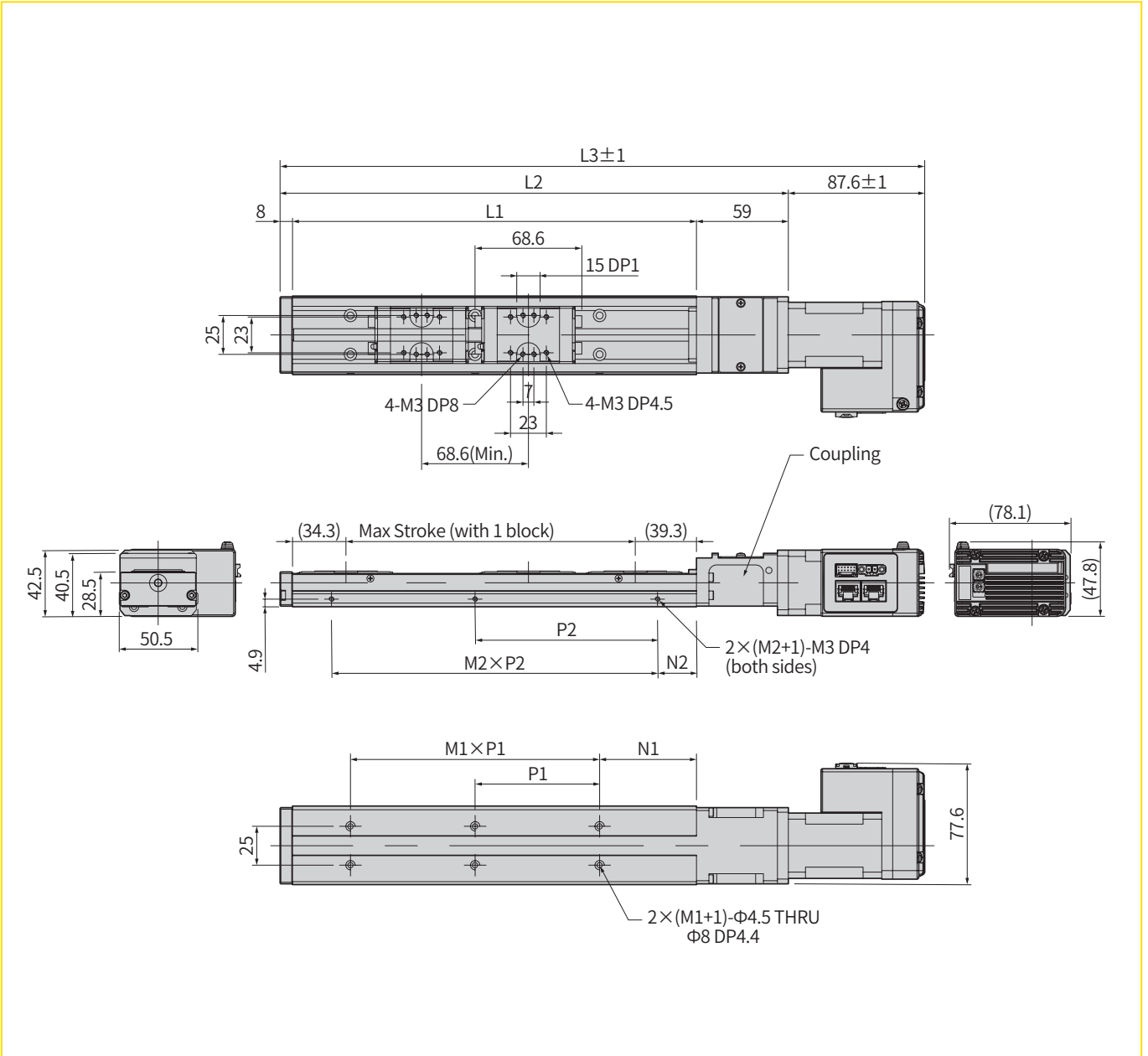
IGH-30

| Model | | Ezi-Robo-IGH-30-□ Ezi-Robo-IGH-30S-□ | Ezi-Robo-IGH-303C-□ |
|--------------------------|--------|---|---------------------|
| Actuator Type | [mm] | Open / Cover | |
| Lead | [mm] | 5 | 10 |
| Guide Rail Length | [mm] | 150 ~ 500 | |
| Stroke | [mm] | 60 ~ 410 | |
| Repeatability | [mm] | ± 0.005 | |
| Maximum Speed | [mm/s] | 250 | 500 |
| Permissible Moment | [N·m] | $M_p: 101$ $M_v: 120$ $M_R: 260$ | |
| Cleanroom Classification | | - | |

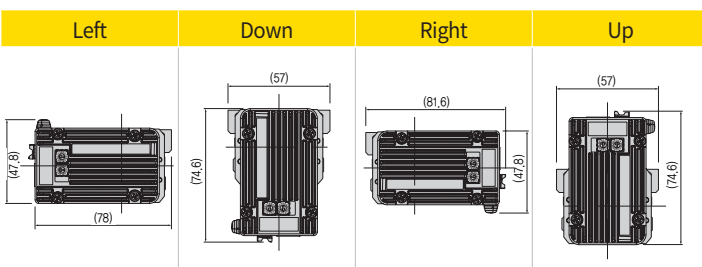
Dimension (IGH-23)

Unit [mm]

| Guide Rail Length L1 | Overall Length | | M1 x P1 | M2 x P2 | Stroke |
|----------------------|----------------|-------|---------|---------|--------|
| | L2 | L3 | | | |
| 150 | 217 | 304.6 | 1 x 80 | 1 x 100 | 76 |
| 200 | 267 | 354.6 | 2 x 80 | | 126 |
| 250 | 317 | 404.6 | 3 x 80 | 2 x 100 | 176 |
| 300 | 367 | 454.6 | | | 226 |



Motor Direction



Ezi-Robo[®] EtherCAT[®]

Precise Actuator System IGS

- Slider Type Electric Actuator with Stepping Motor & Ball Screw
- Repeatability (± 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 (Ethernet, EtherCAT, CC-Link IE TSN, 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] | ± 0.005 | ± 0.005 | | | | |
| Maximum Speed | [mm/s] | 20 | 100 | | | 200 | |
| Permissible Moment | [N·m] | $M_p: 25$ $M_y: 25$ $M_R: 47$ | $M_p: 58$ $M_y: 58$ $M_R: 126$ | | | | |
| Holding Force | | - | 560 | | | 224 | |

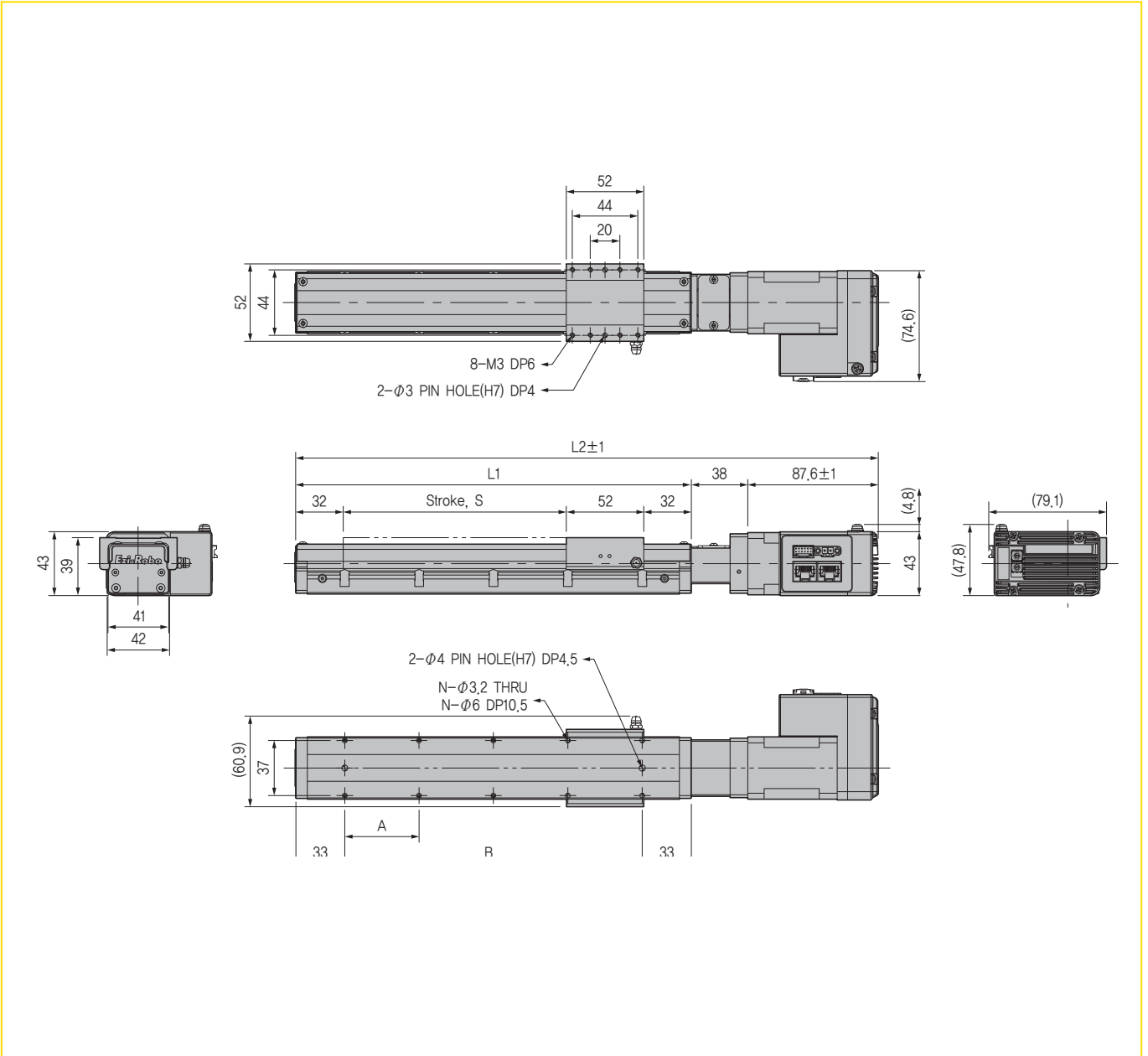
IGS-50/60

| 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 ~ 100 | | 50 ~ 100 | |
| Repeatability | [mm] | ± 0.005 | | ± 0.005 | |
| Maximum Speed | [mm/s] | 250 | 500 | 250 | 500 |
| Permissible Moment | [N·m] | $M_p: 25$ $M_y: 25$ $M_R: 47$ | | $M_p: 58$ $M_y: 58$ $M_R: 126$ | |
| Holding Force | | 224 | 112 | 224 | 112 |

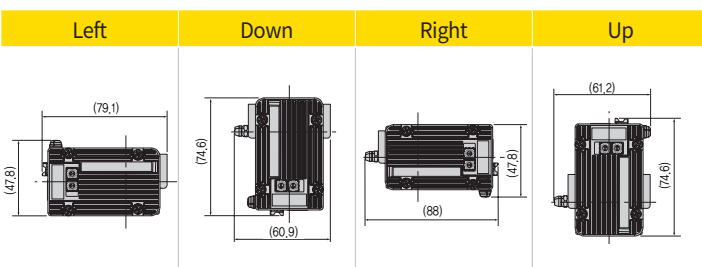
Dimension (IGS-40S)

Unit [mm]

| Stroke | L1 | L2 | A | B | N |
|--------|-----|-------|----|-----|----|
| 50 | 166 | 291.6 | 50 | 100 | 6 |
| 100 | 216 | 341.6 | 50 | 150 | 8 |
| 150 | 266 | 391.6 | 50 | 200 | 10 |
| 200 | 316 | 441.6 | 50 | 250 | 12 |
| 250 | 366 | 491.6 | 50 | 300 | 14 |



Motor Direction



Ezi-Robo[®] EtherCAT[®]

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: ± 0.01 mm / R Axis: ± 0.1)
- High Resolution Encoder (Max. 20,000 P/R)
- Size Line-up (28 mm, 42 mm)
- Compatible with Field Networks (Ethernet, EtherCAT, CC-Link IE TSN, PROFINET, Pulse Input)

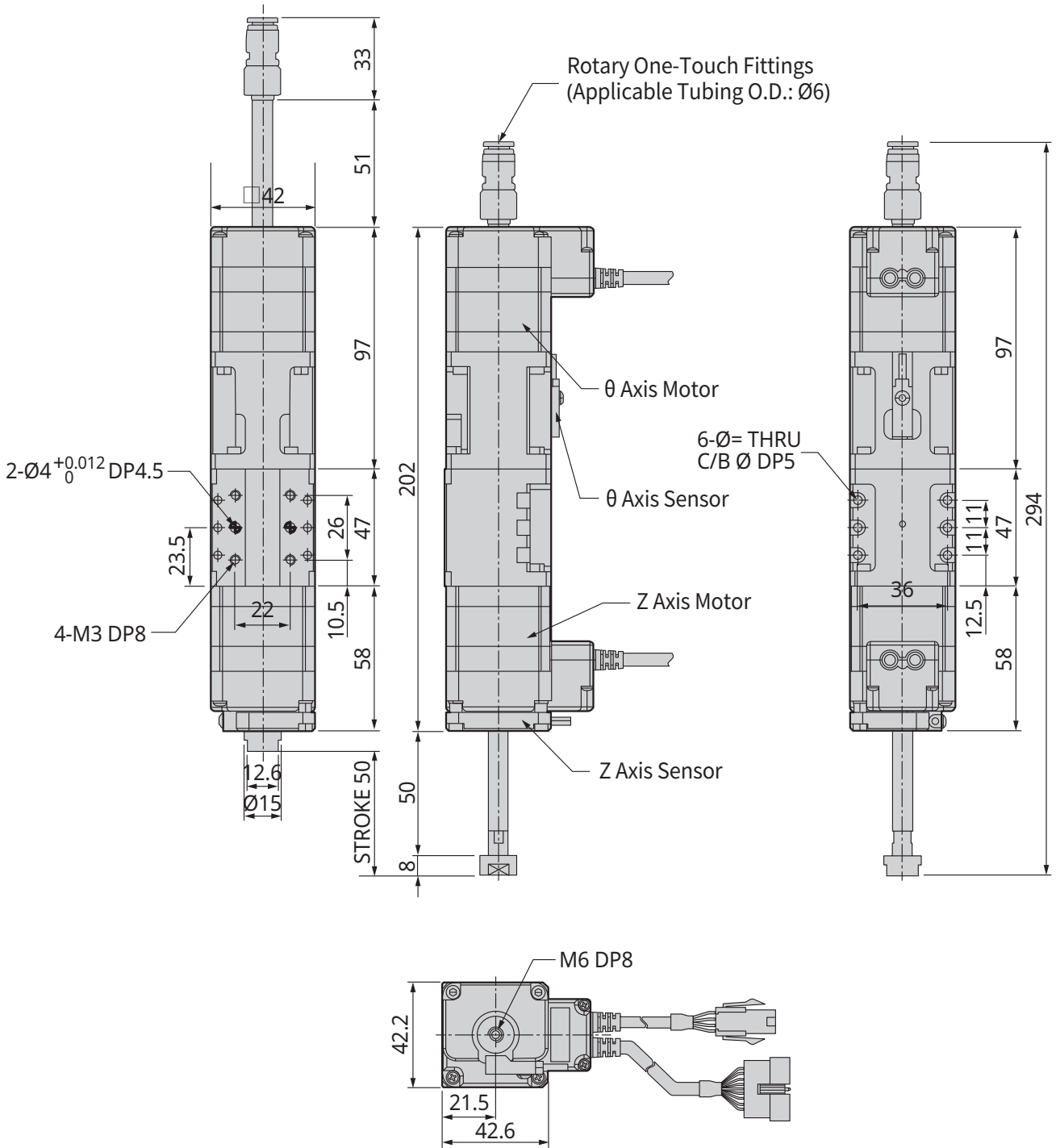


Specifications

| 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] | ± 0.01 | ± 0.01 |
| | θ Axis | [deg] | ± 0.1 | ± 0.1 |
| Maximum Speed | Z Axis | [mm/s] | 60 | 100 |
| | θ Axis | [rev/s] | 3 | 3 |
| Maximum Acceleration | Z Axis | [mm/s ²] | 0.3 | 0.5 |
| | θ Axis | [rad/s ²] | 150π | 150π |
| Permissible Load | | [kg] | 0.5 | 1.5 |
| Reference Thrust Force | | [N] | 7 | 25 |
| Permissible Moment | | [kg·m ²] | 0.15×10^{-4} | 0.35×10^{-4} |
| Stroke | | [mm] | 50 | 50 |

■ Dimension (VZR-42)

Unit [mm]



Ezi-Robo[®] EtherCAT[®]

Precise Actuator System **CLA**

- Compact Linear Actuator with Hollow Shaft Motor & Ball Screw
- Repeatability (± 0.01 mm), Lost Motion (≤ 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 (Ethernet, EtherCAT, CC-Link IE TSN, PROFINET, Pulse Input, RS-485)



■ CLAT (Table Type)

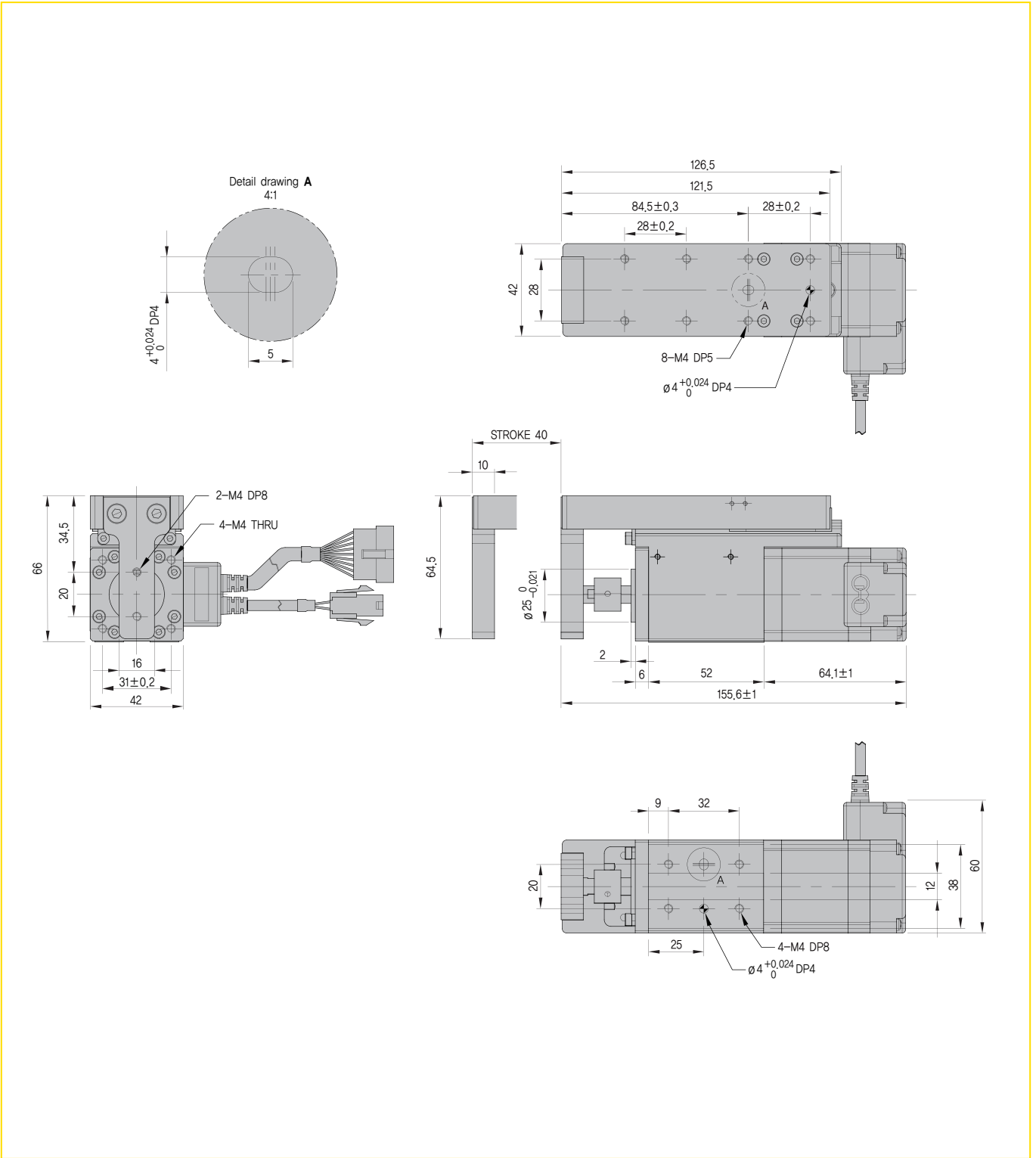
| Model | | Ezi-Robo-CLAT-20-25R1 | Ezi-Robo-CLAT-28-30R1 | Ezi-Robo-CLAT-42-40R2 Ezi-Robo-CLAT-42-40R8 | Ezi-Robo-CLAT-56-50R4 |
|--------------------|-----------------|-------------------------------------|-----------------------------------|--|----------------------------------|
| Lead | [mm] | 1 | 1 | 2 8 | 4 |
| Repeatability | [mm] | ± 0.01 | ± 0.01 | ± 0.01 ± 0.01 | ± 0.01 |
| Lost Motion | [mm] | ≤ 0.05 | ≤ 0.05 | ≤ 0.05 ≤ 0.05 | ≤ 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] | 10 | 10 | 20 80 | 40 |

■ CLAR (Rod Type)

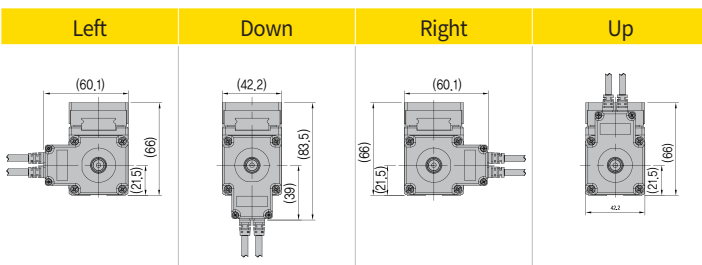
| Model | | Ezi-Robo-CLAR-20-25R1 | Ezi-Robo-CLAR-28-30R1 | Ezi-Robo-CLAR-42-40R2 Ezi-Robo-CLAR-42-40R8 | Ezi-Robo-CLAR-56-50R4 |
|------------------|-----------------|-----------------------|-----------------------|--|-----------------------|
| Lead | [mm] | 1 | 1 | 2 8 | 4 |
| Repeatability | [mm] | ± 0.01 | ± 0.01 | ± 0.01 ± 0.01 | ± 0.01 |
| Lost Motion | [mm] | ≤ 0.05 | ≤ 0.05 | ≤ 0.05 ≤ 0.05 | ≤ 0.05 |
| Permissible Load | Horizontal [kg] | 0.5 | 4 | 8 4 | 10 |
| | Vertical [kg] | 1 | 2 | 4 3 | 5 |
| Stroke | [mm] | 25 | 30 | 40 40 | 50 |
| Maximum Speed | [mm/s] | 10 | 10 | 20 80 | 40 |

Dimension (CLAT-42)

Unit [mm]



Cable Direction



Ezi-Robo[®] EtherCAT[®]

Precise Actuator System **HG**

- Hollow Rotary Index Table with Stepping Motor
- Hollow Diameter (Max. Ø85 mm)
- Permissible Torque (Max. 170 N·m)
- Axial Load (Max. 4000 N)
- Repeatability (± 10 arcsec)
- High Resolution Encoder (Max. 20,000 P/R)
- Size Line-up (□60 mm, □100 mm, □130 mm, □170mm)
- Compatible with Field Networks (Ethernet, EtherCAT, CC-Link IE TSN, PROFINET, Pulse Input)



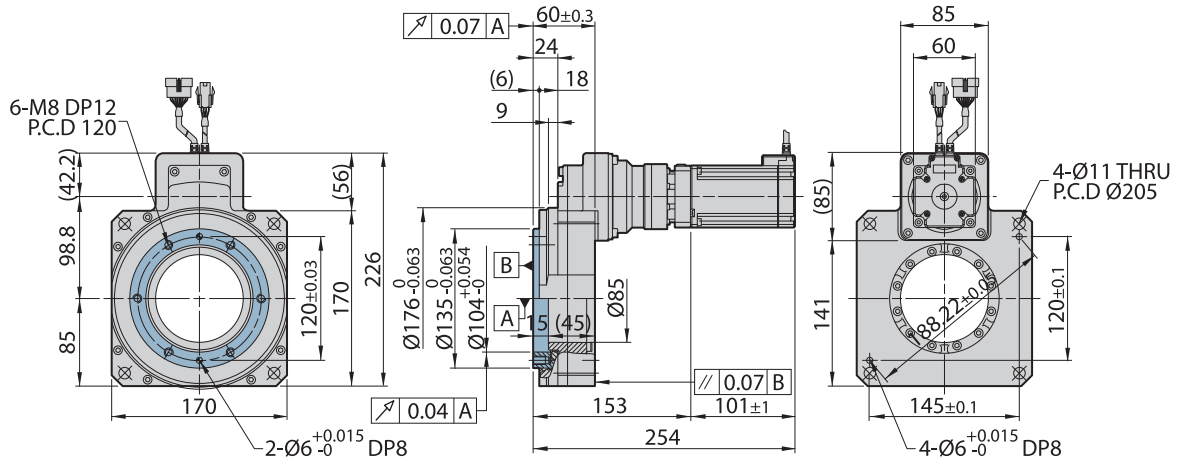
■ Specifications

| 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 ²] | 2,330x10 ⁻⁷ | 3,898x10 ⁻⁶ | 3,127x10 ⁻⁵ | 4,752x10 ⁻⁵ | 12,351x10 ⁻⁵ | 7,484x10 ⁻⁵ | 21,203x10 ⁻⁵ |
| 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°) | | | | | | |
| 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 |

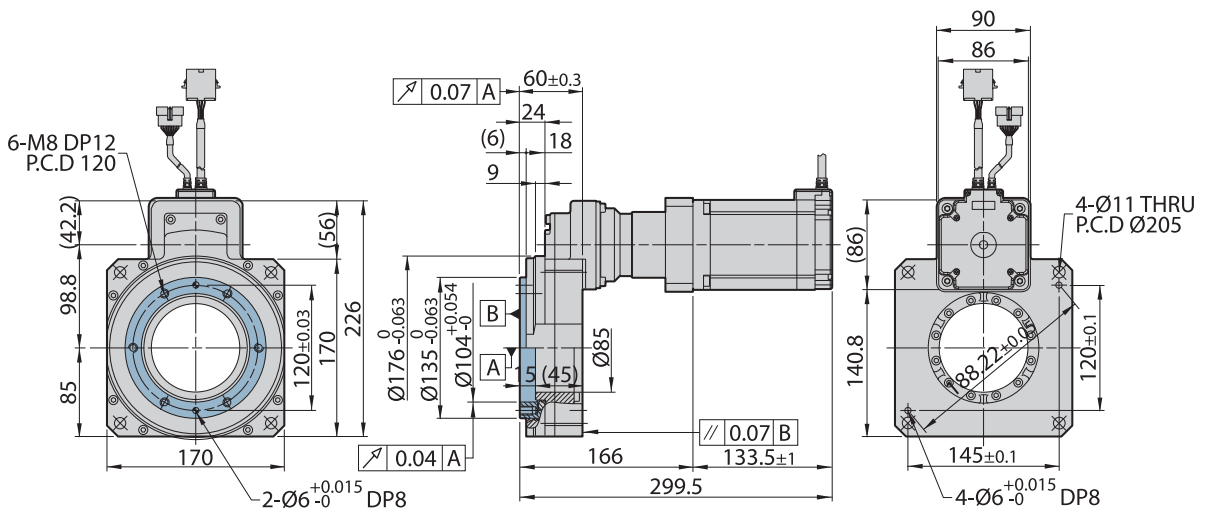
■ Dimension (HG170S)

Unit [mm]

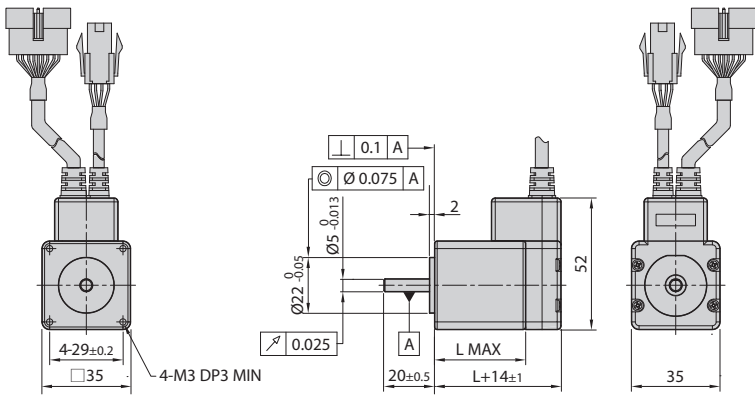
RB-HG170S-20-60L-□
 RB-HG170S-36-60L-□



RB-HG170S-20-86L-□
 RB-HG170S-36-86L-□



※ □ is a drive type.

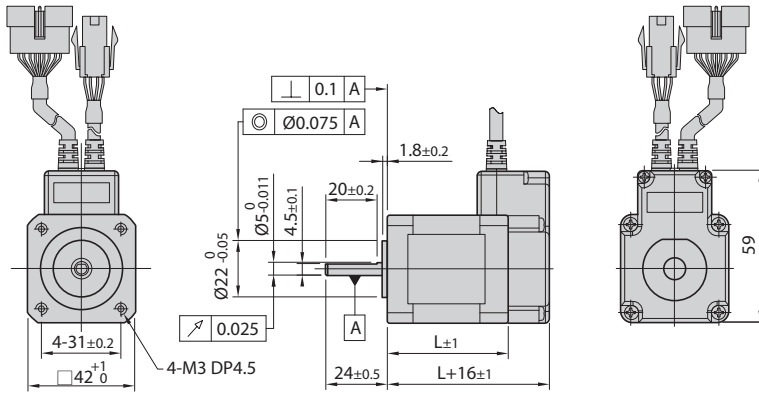


35 mm

(Stopper type)

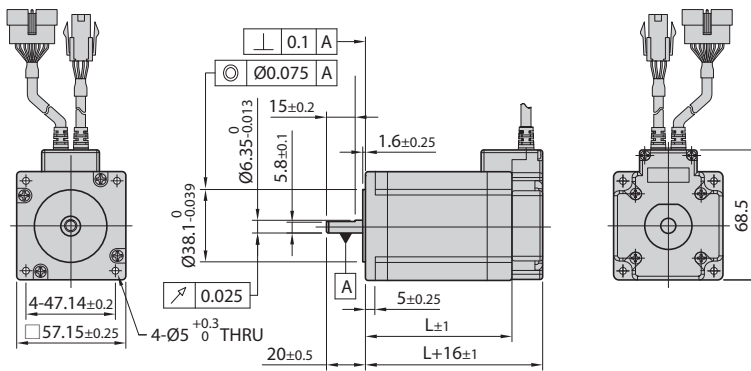
| Model name | Length(L) |
|------------|-----------|
| EzM2-35MM | 32 |
| EzM2-35LM | 36 |

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



42 mm

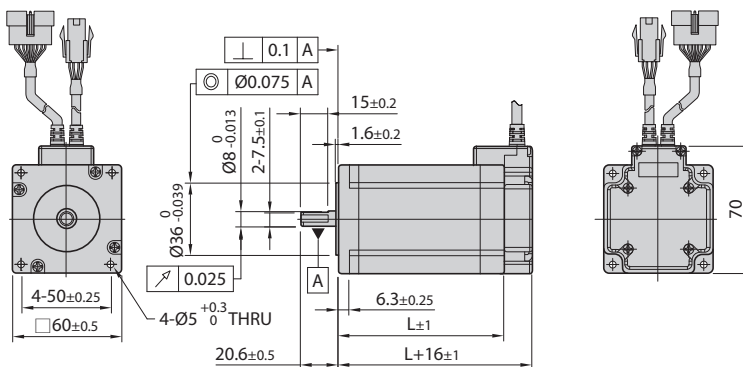
| Model name | Length(L) |
|------------|-----------|
| EzM2-42S | 34 |
| EzM2-42M | 40 |
| EzM2-42L | 48 |
| EzM2-42XL | 60 |



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 |

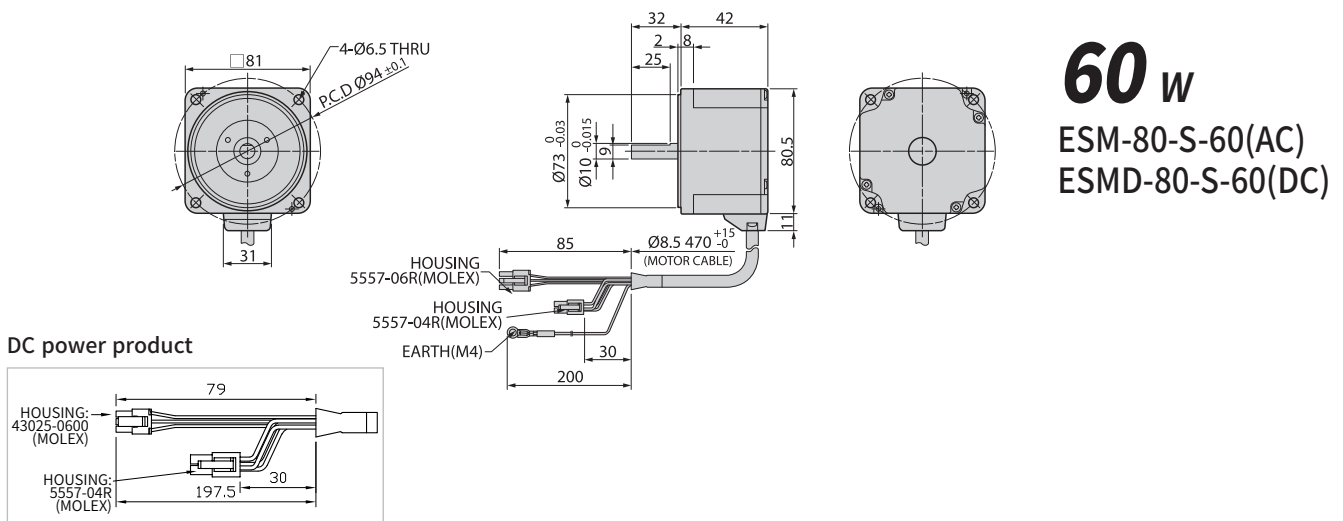
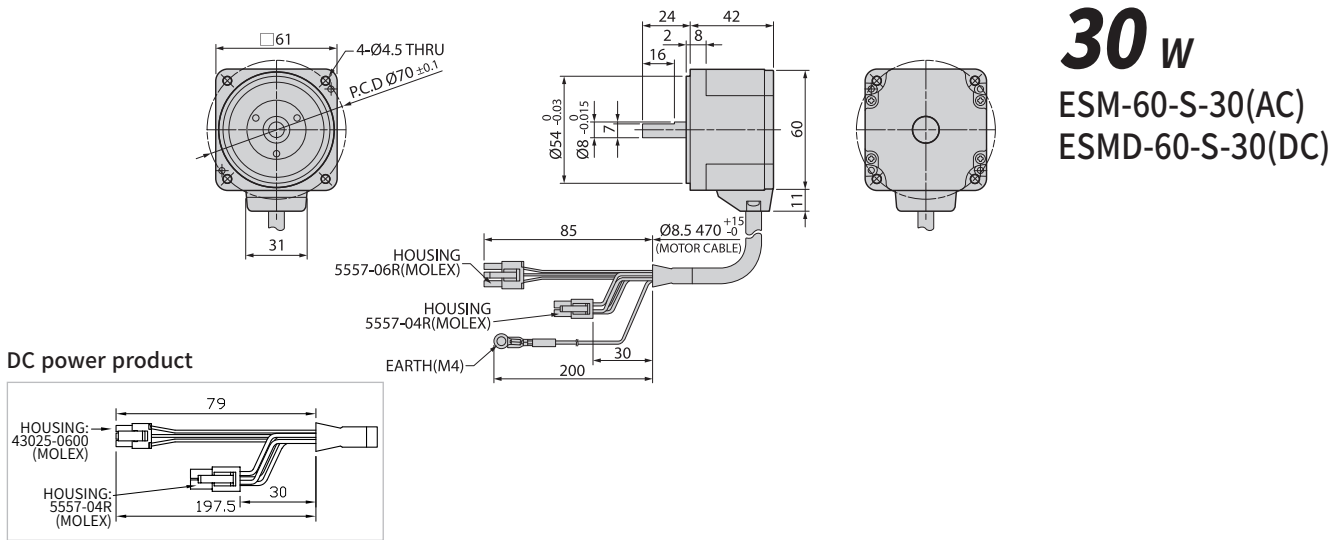
Motors & Gearboxes for

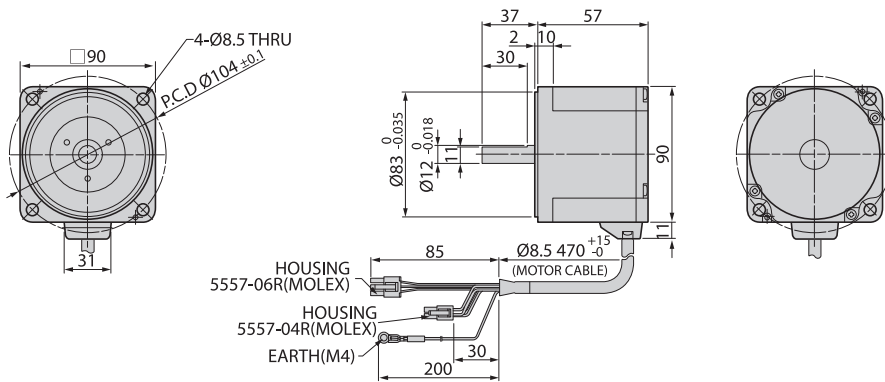
Ezi-SPEED® EtherCAT.™
BLDC Motor Speed Control System **AC**

Ezi-SPEED® EtherCAT.™
BLDC Motor Speed Control System **DC**



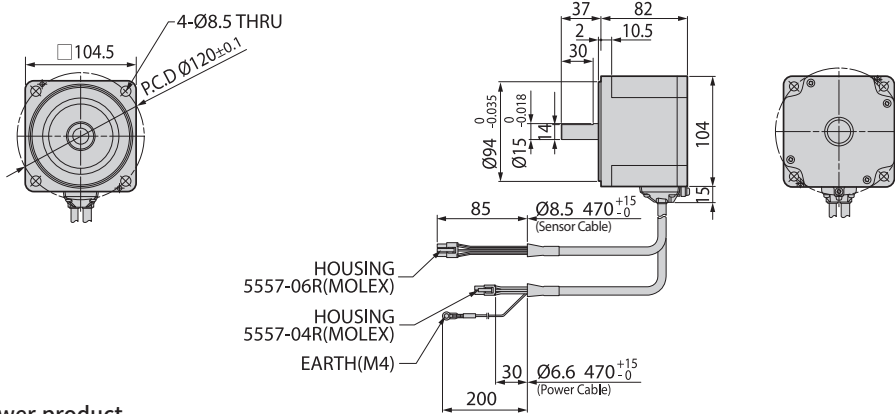
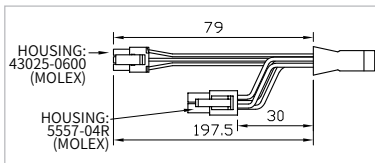
Dimensions of Motors [mm]





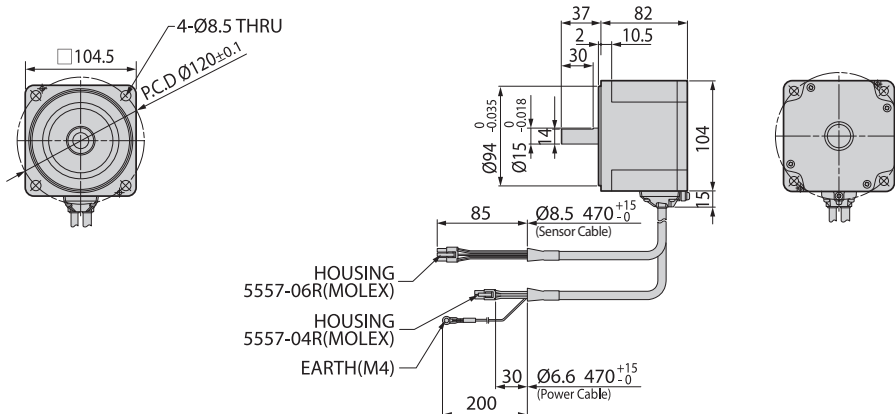
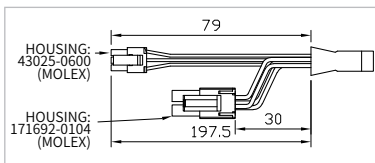
120_w
 ESM-90-S-120(AC)
 ESMD-90-S-120(DC)

DC power product



200_w
 ESM-104-S-200(AC)
 ESMD-104-S-200(DC)

DC power product

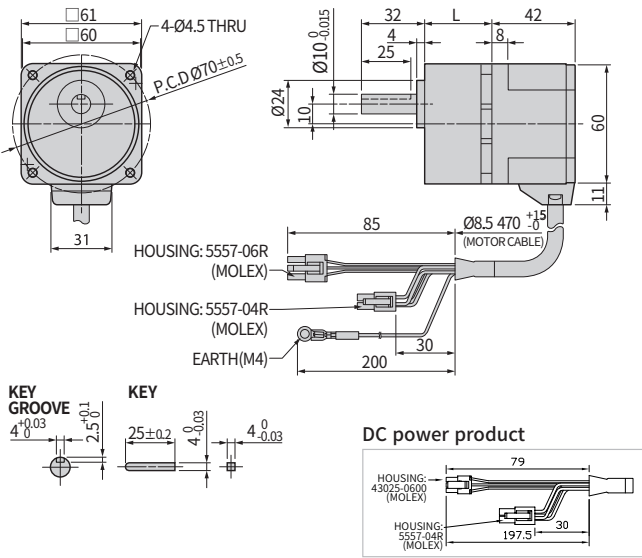


400_w
 ESM-104-S-400(AC)

Dimensions of Motors & Parallel Gearboxes [mm]

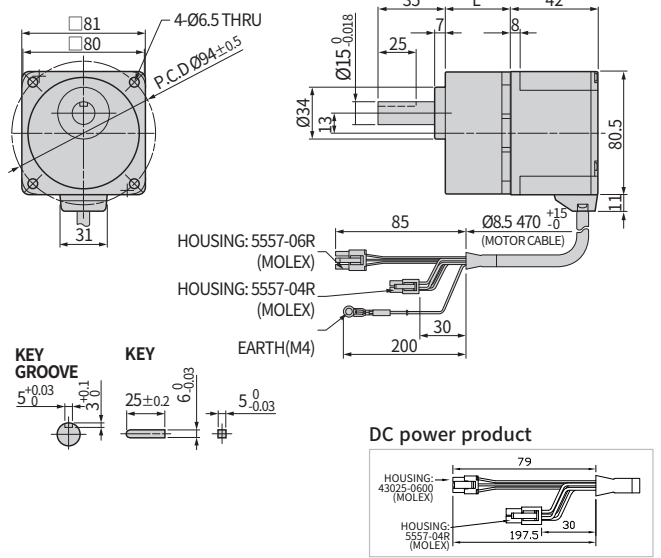
30 W

| 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 |



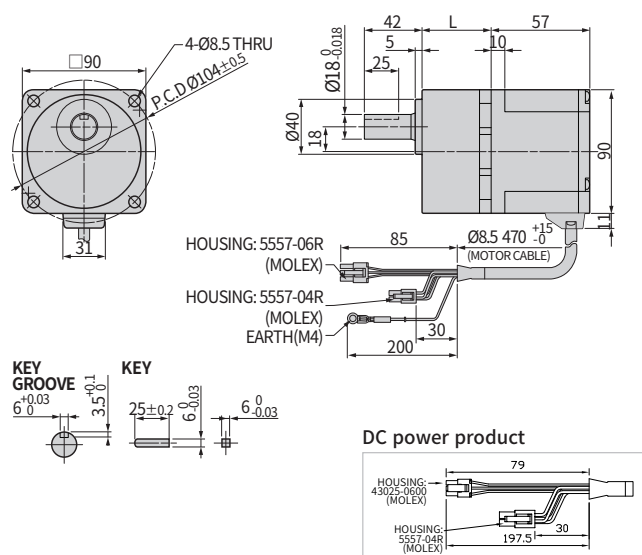
60 W

| 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

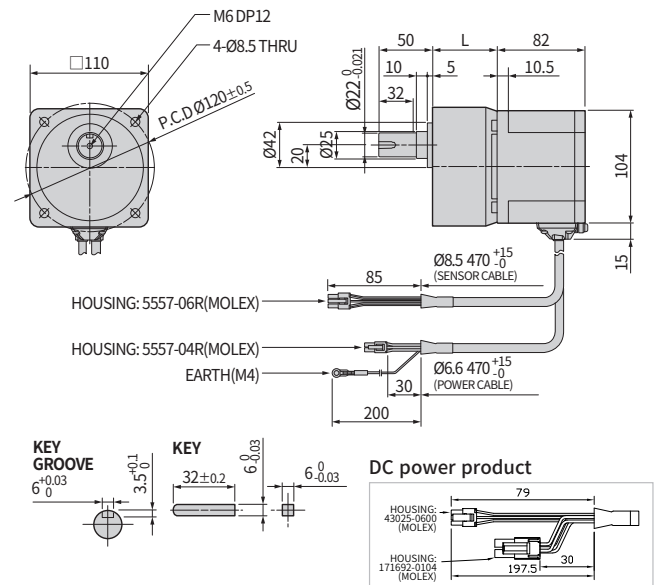
| Gearbox Part Number | □ Gear Ratio | Mounting Bolt | L [mm] |
|---------------------|---------------|---------------|--------|
| ESG-90-H-R□-P | 5, 10, 15, 20 | M8×75 | 45 |
| | 30, 50, 100 | M8×90 | 58 |
| | 200 | M8×95 | 64 |



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 |

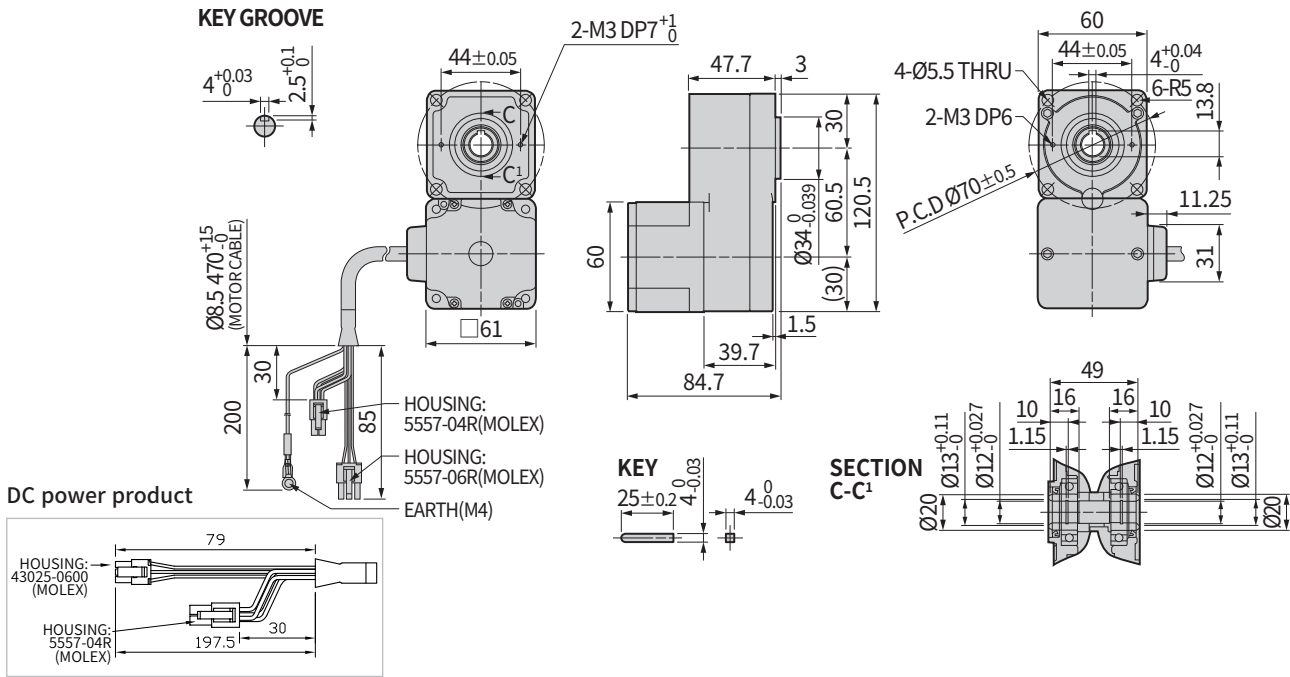
* DC power product : 200 W only



Dimensions of Motors & Hollow Flat Gearboxes [mm]

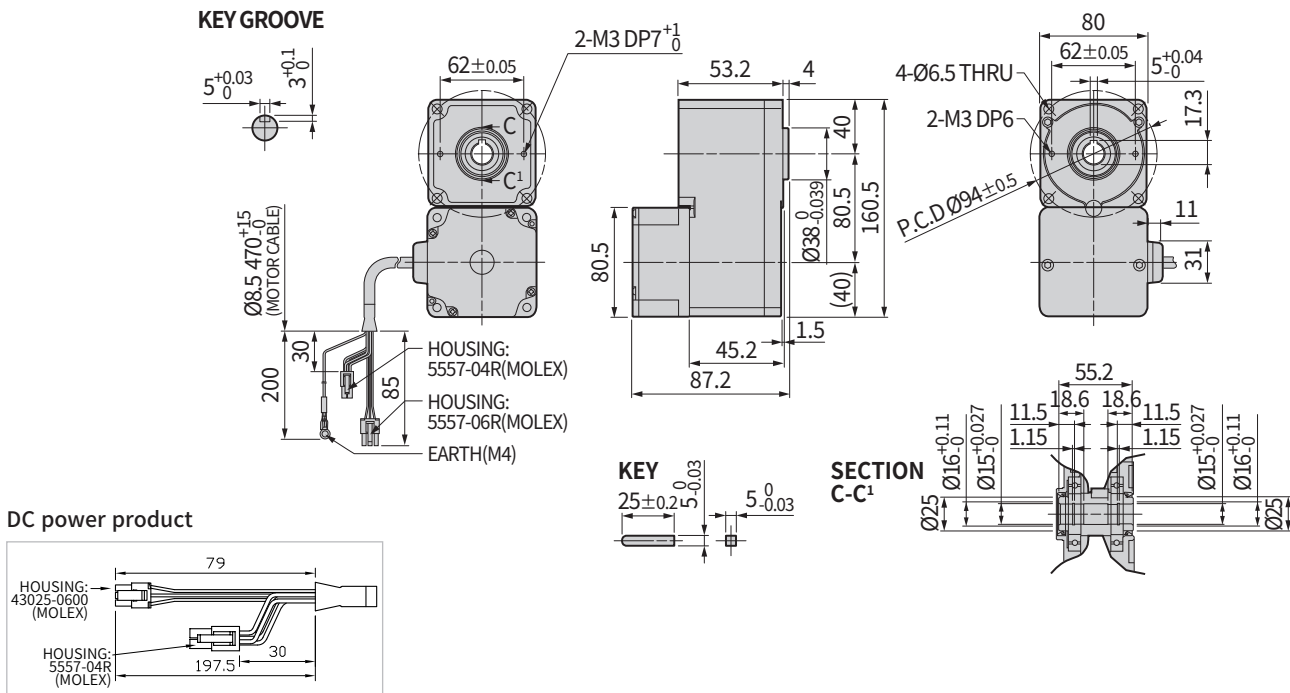
30 W

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



60 W

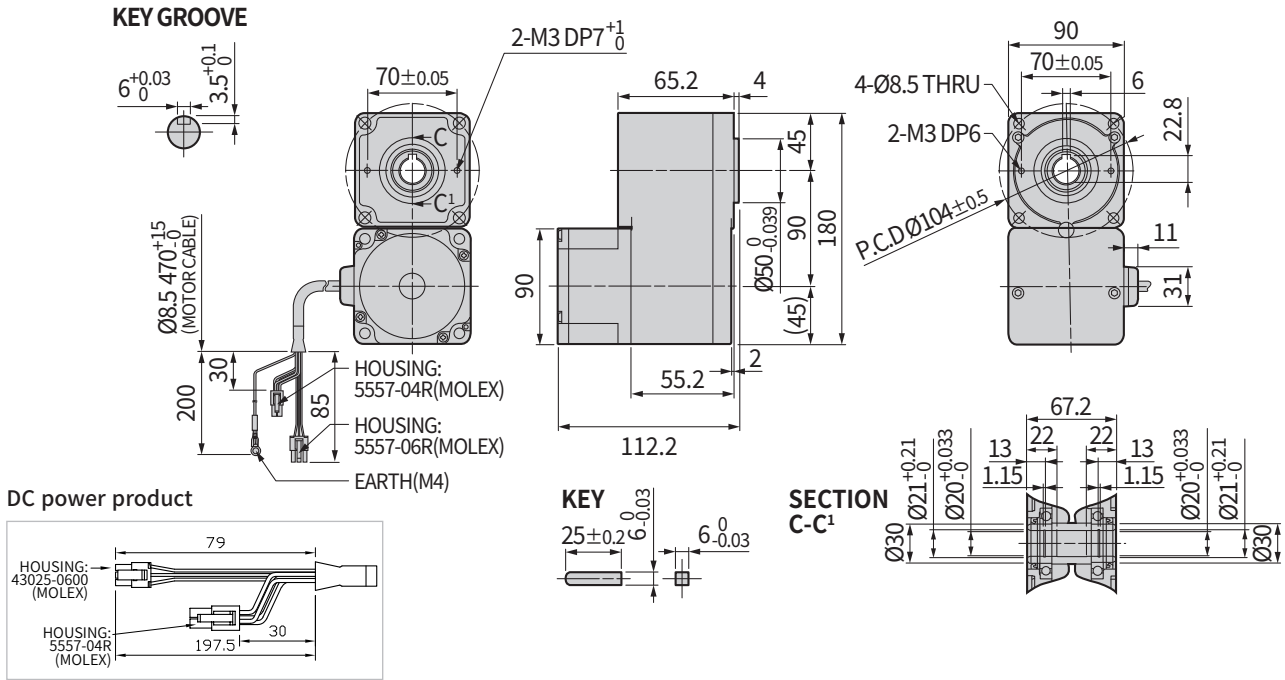
| Gearbox Part Number | □ Gear Ratio | Mounting Bolt |
|---------------------|---------------------------------|---------------|
| ESG-80-H-R□-H | 5, 10, 15, 20, 30, 50, 100, 200 | M6×70 |



Dimensions of Motors & Hollow Flat Gearboxes [mm]

120 W

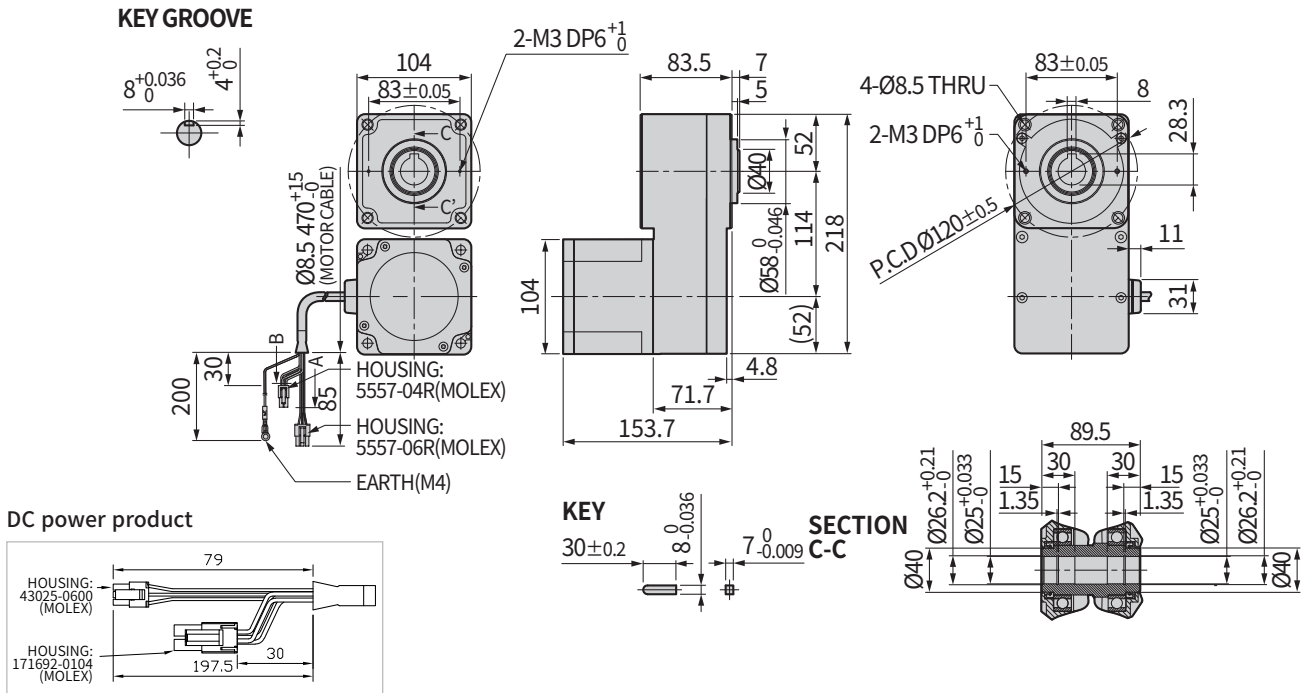
| Gearbox Part Number | Gear Ratio | Mounting Bolt |
|---------------------|---------------------------------|---------------|
| ESG-80-H-R□-H | 5, 10, 15, 20, 30, 50, 100, 200 | M6×70 |



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

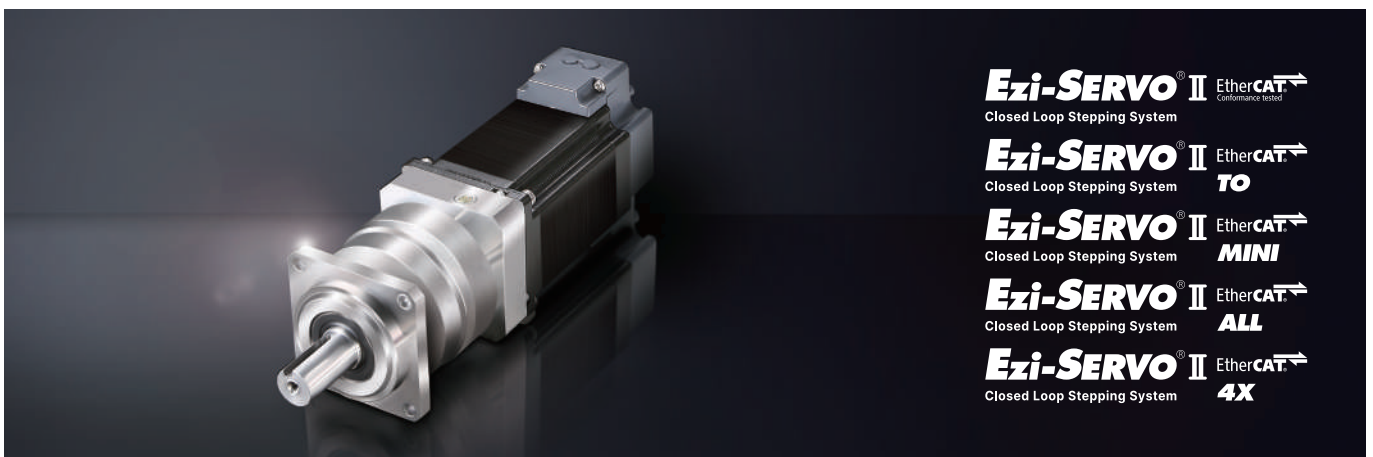


OPTION Brake



| Model | Motor / Brake Size | | |
|---------------------------|--------------------|-------|-------|
| | 42 mm | 56 mm | 60 mm |
| Ezi-SERVOII EtherCAT | 0 | 0 | 0 |
| Ezi-SERVOII EtherCAT TO | 0 | 0 | 0 |
| Ezi-SERVOII EtherCAT MINI | 0 | 0 | 0 |
| Ezi-SERVOII EtherCAT ALL | 0 | 0 | 0 |
| Ezi-SERVOII EtherCAT 4X | 0 | 0 | 0 |
| Ezi-STEP II EtherCAT | 0 | 0 | 0 |
| Ezi-STEP II EtherCAT TO | 0 | 0 | 0 |
| Ezi-STEP II EtherCAT MINI | 0 | 0 | 0 |
| Ezi-STEP II EtherCAT ALL | 0 | 0 | 0 |
| Ezi-STEP II EtherCAT 4X | 0 | 0 | 0 |

OPTION Gearbox



| Model | Gearbox Size | | |
|---------------------------|--------------|-------|-------|
| | 42 mm | 60 mm | |
| | Motor Size | | |
| | 42 mm | 56 mm | 60 mm |
| Ezi-SERVOII EtherCAT | 0 | 0 | 0 |
| Ezi-SERVOII EtherCAT TO | 0 | 0 | 0 |
| Ezi-SERVOII EtherCAT MINI | 0 | 0 | 0 |
| Ezi-SERVOII EtherCAT ALL | 0 | 0 | 0 |
| Ezi-SERVOII EtherCAT 4X | 0 | 0 | 0 |

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

EtherCAT®



Fast Accurate Smooth Motion

FASTECH Co., Ltd.

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※ Please note that the color and size of the products in this catalog may differ depending on the measurement method and the specifications can be changed without prior notice for quality improvement.