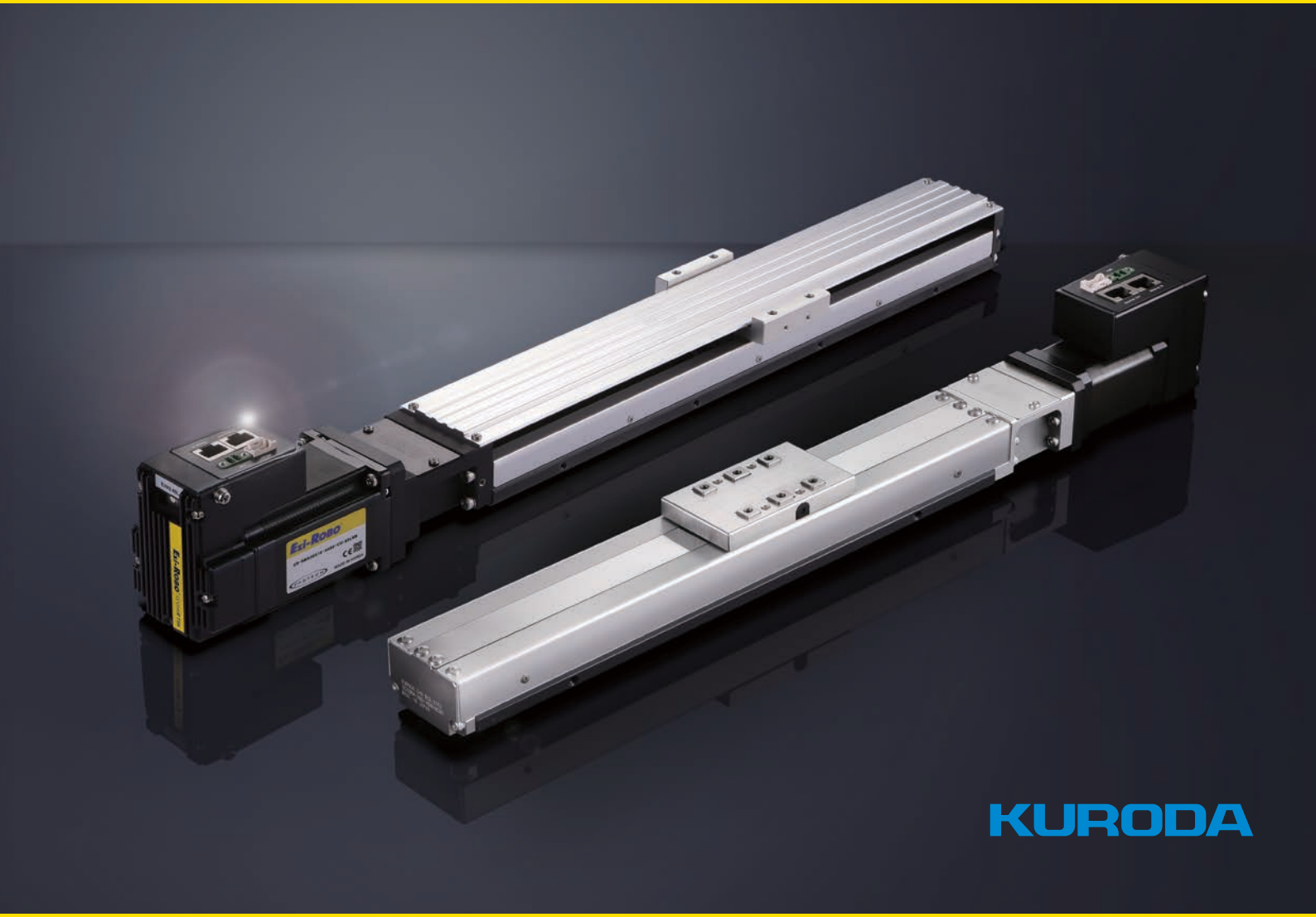
Ezi-ROBO®

Precise Actuator System

CC-Link IE TSN

IGH

- Slider Type Electric Actuator with Stepper Motor & Ball Screw
- Repeatability (±0.005 mm)
- High Strength Steel Frame
- CiA402 Drive Profile
- CC-Link IE TSN-compatible Closed Loop Stepper System
- Tuning Not Required, No Hunting
- Low Heat Generation, High Torque, High Resolution, Fast Response



FASTECH

Fast Accurate Smooth Motion

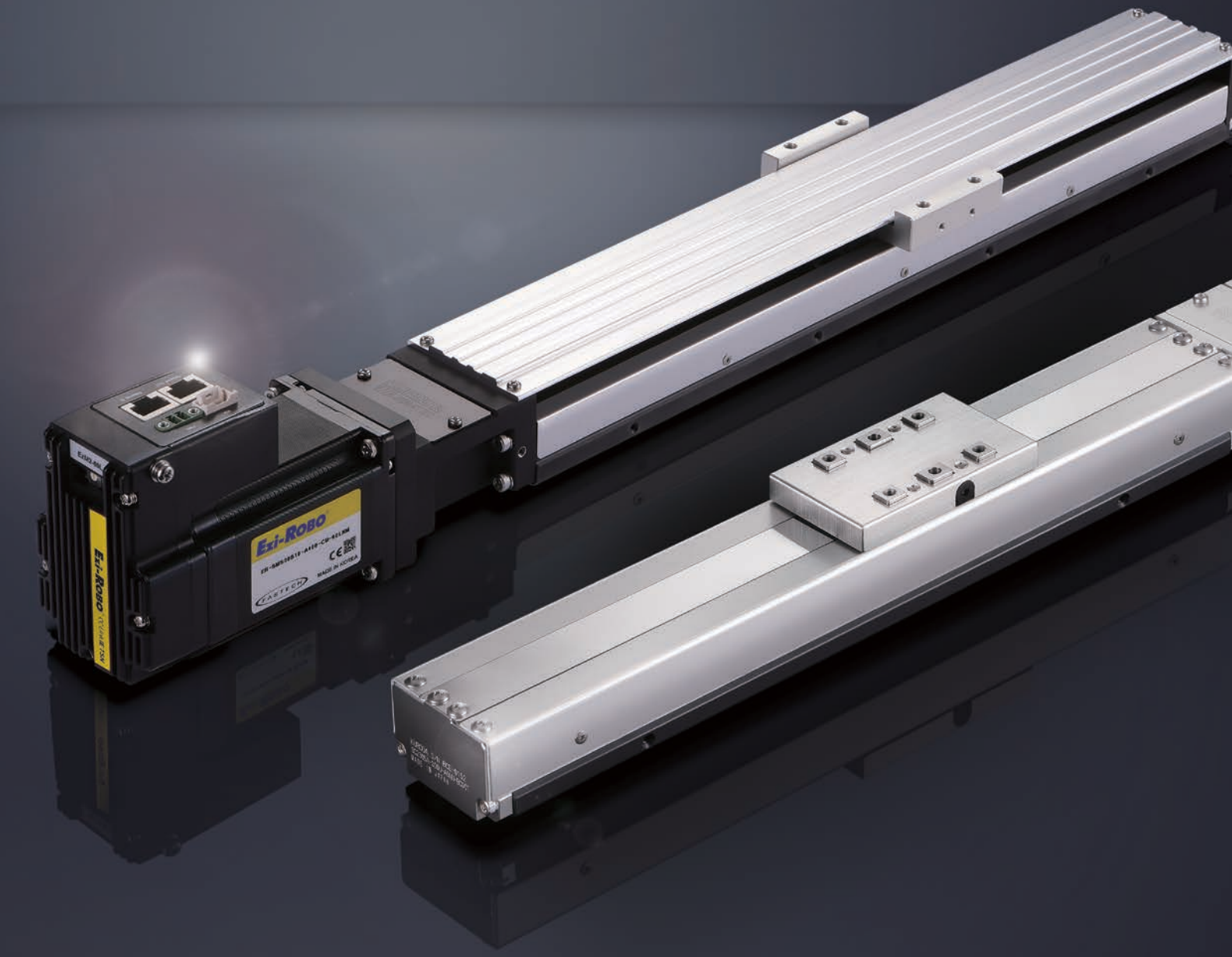
Ezi-ROBO®

Precise Actuator System

CC-LinkIE TSN

IGH

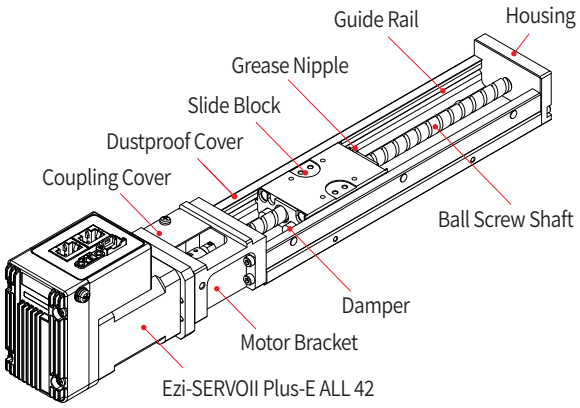
*IGH : Integrated Guide-rail High-ridigity Actuator

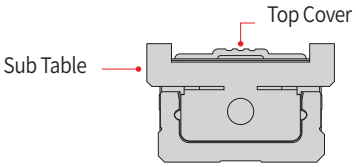


Compact Electric Slider

Ezi-ROBO IGH is an integrated product that combines a ball screw actuator※ and a stepper motor from the Ezi-SERVO series. By eliminating the need for precise alignment during assembly, it significantly reduces labor and setup time.

※ Ball screw actuator: A compact unit that integrates a ball screw and a slide guide.

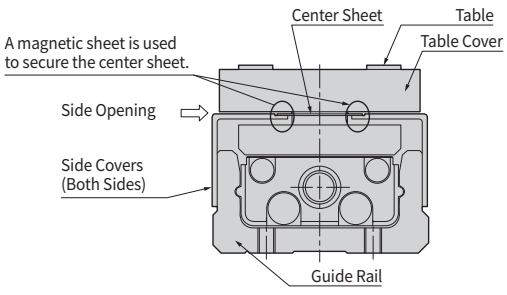




ex) **Ezi-ROBO**-IGH-23

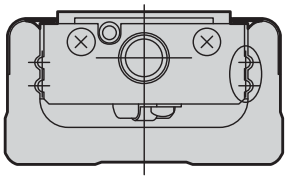
Dustproof Type Available

Ezi-ROBO IGH is designed to accommodate systems requiring dustproof protection. Compared to the cover type, the dustproof model maintains a compact yet highly rigid structure by utilizing the same guide rail width and a steel U-shaped design. To prevent the ingress of external contaminants, the actuator's exposed surface has been minimized. Additionally, the center sheet employs a stainless steel sheet securely held in place by magnets, preventing sheet lifting or displacement.



High-Precision & Rigid Ball Screw Actuator

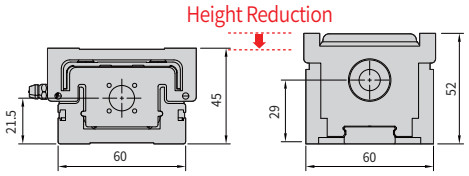
Ezi-ROBO IGH incorporates a ball screw actuator manufactured by KURODA Precision Industries of Japan. The actuator's guide rail features a U-shaped design, providing a compact structure with excellent rigidity. Due to its superior precision, it is ideally suited for applications requiring highly accurate positioning.



U-shaped Guide Rail

Space-Saving with a Compact Size

By installing a specialized linear guide on the body frame instead of using a conventional linear guide, the overall height can be significantly reduced.



Ezi-ROBO-IGH-30S Cross-section

Cross-section of Other Actuator

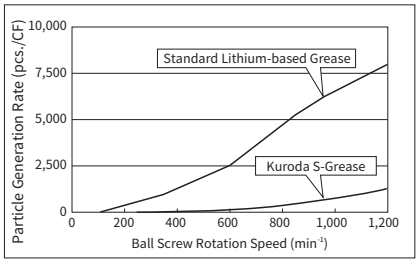
Various Product Lineup

To accommodate various environments, we offer Cover Type, and Dustproof Type models. The Dustproof Type is specially designed with enhanced protection to effectively prevent the ingress of external contaminants.

Cover Type	Dustproof Type
	

Low-Dust Grease

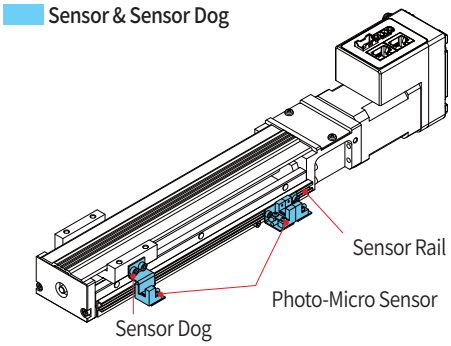
Ezi-ROBO IGH provides low-outgassing grease as an optional feature. This low-outgassing grease is optimized for standard clean environments and offers superior outgassing performance compared to conventional lithium-based grease. With excellent lubrication capability, it ensures stable torque characteristics and helps reduce maintenance requirements for the actuator.



Simple Homing

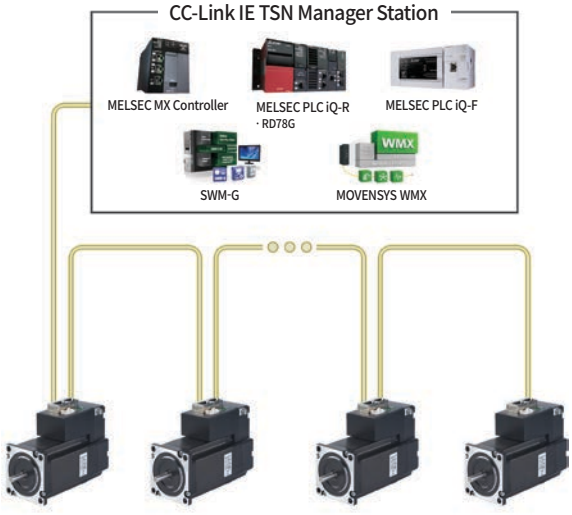
The Ezi-ROBO IGH offers an optional home sensor set to simplify home return operations, one of its most frequently used functions. The set includes all the components required for easy installation of the home sensor.

ex) **Ezi-ROBO**-IGH-23S



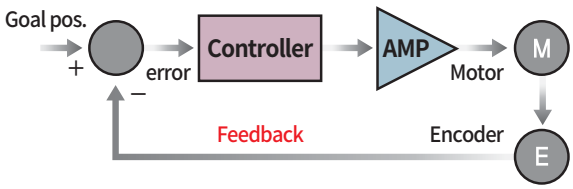
CC-Link IE TSN-compatible Motion Control

Ezi-SERVO CC-Link IE TSN ALL is stepper motor control system using CC-Link IE TSN, high speed Ethernet (1 Gbps Full-Duplex) based industrial network.
Ezi-SERVO CC-Link IE TSN ALL employs CiA402 drive profile and supports Profile Position Mode (PP Mode), Homing Mode (HM Mode) and Cyclic Synchronous Position Mode (CSP Mode).



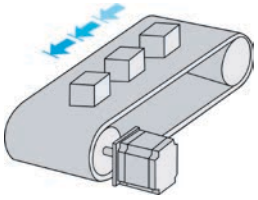
Closed-Loop System

Ezi-SERVO is an innovative Closed-Loop System that utilizes a high-resolution motor mounted encoder constantly to monitor the current position. The encoder feedback allows the Ezi-SERVO to update the current position every 50 µs. It allows the Ezi-SERVO drive to compensate for the loss of position, ensuring accurate positioning. For example, due to a sudden load change, a conventional stepper motor and drive could lose a step but Ezi-SERVO automatically correct the position by encoder feedback.



Tuning Not Required

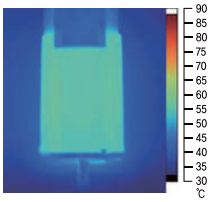
To ensure machine performance, conventional servo systems require the adjustment of its servo's gains as an initial crucial step. Even systems that employ auto-tuning require manual tuning after the system is installed.
Ezi-SERVO employs the best characteristics of the stepper motor to eliminate the need of tedious gain tuning required for conventional closed-loop servo systems. Ezi-SERVO is especially well suited for low-rigidity loads (e.g., a belt and pulley system) that sometimes require conventional servo systems to use the additional bulky and expensive gearbox.



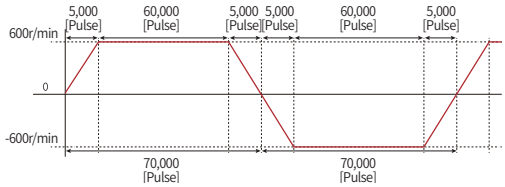
Low Heat Generation / Energy Savings

(Motor Current Control according to load)

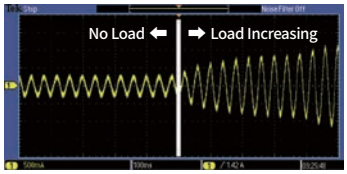
Ezi-SERVO automatically controls motor current according to load. Ezi-SERVO reduces motor current when motor load is low and increases motor current when load is high. By optimizing the motor current, motor heat can be minimized and energy can be saved.



Motor temperature [Measured by Thermal Imaging Camera]



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

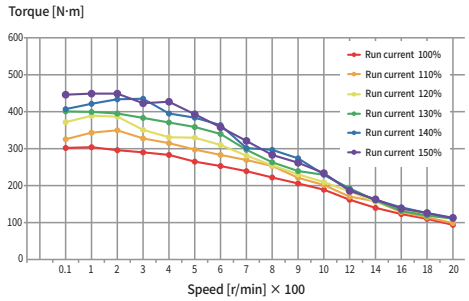


Motor Current
[Example of the Motor Current Control according to load]

High Torque

(Motor Current Setting)

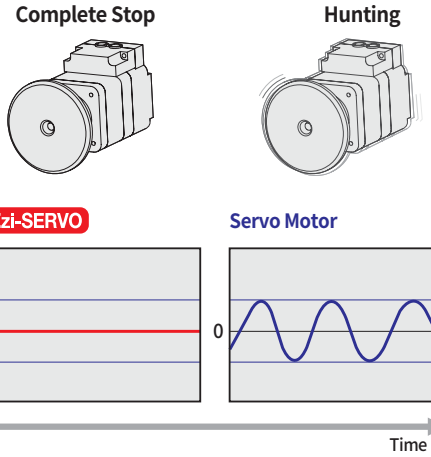
Ezi-SERVO features an internal voltage boosting circuit that increases the motor supply voltage above the drive's input voltage. This elevated motor voltage enhances torque at high speeds and allows the run current to be set up to 150 %. As a result, torque is also improved at low speeds. Ezi-SERVO can achieve approximately 30 % torque improvement across the entire speed range.



※ The torque at low speed is improved about 30 %
Measurement Conditions: Drive = Ezi-SERVO-CT-ALL-42L

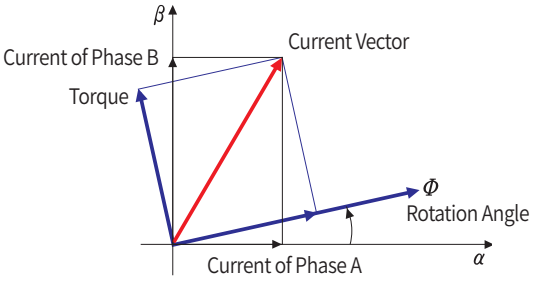
No Hunting

Ezi-SERVO utilizes the unique characteristics of stepper motors and locks itself into the desired target position, preventing vibration and eliminating Null Hunt which happens to the conventional servo systems.
This feature is especially useful in applications such as vision systems in which system oscillation and vibration could be a problem.



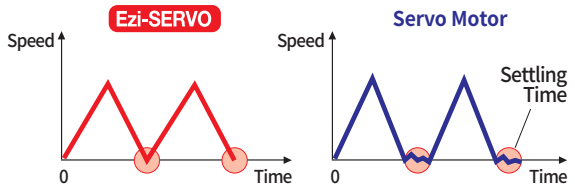
Smooth and Accurate Operation

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



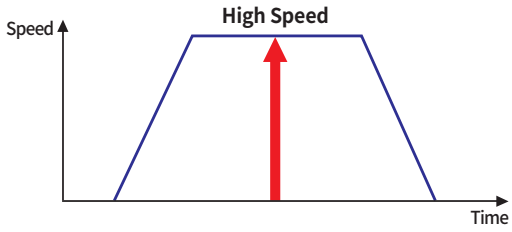
Fast Response

Similar to conventional stepper motors, Ezi-SERVO instantly synchronizes with command pulses providing fast positional response. Ezi-SERVO is the optimum choice when zero-speed stability and rapid motions within a short distance are required. Traditional servo motor systems have a natural delay called settling time between the command input signals and the resultant motion because of the constant monitoring of the current position.



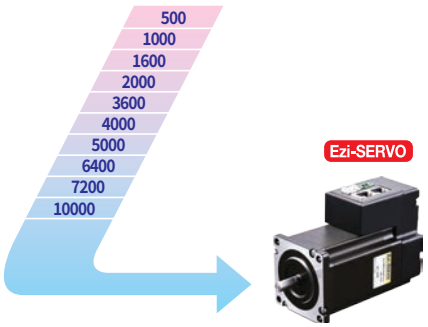
High Speed

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



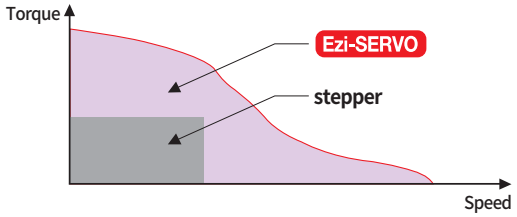
High Resolution

The unit of the position command can be divided precisely. (Max. 10,000 pulse/revolution)



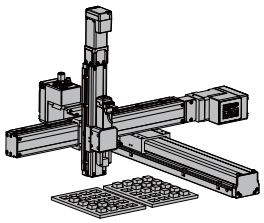
High Torque / Continuous Operation

Compared with common stepper motors and drives, Ezi-SERVO motion control systems can maintain a high torque state over relatively long period of time. This means that Ezi-SERVO continuously operates without loss of position under 100 % of the load. Unlike conventional Microstep drives, Ezi-SERVO exploits continuous high torque operation during high speed motion due to its innovative optimum current phase control.

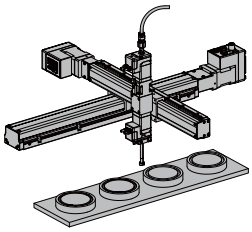


Examples

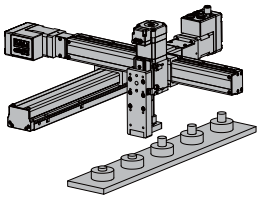
Pallet-to-Pallet Workpiece Placement System



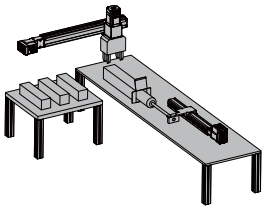
Automatic Dispensing



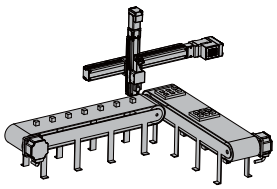
Component Assembly System



Packaging



Conveyor Logistics Transfer



Ezi-ROBO IGH Part Numbering

Ezi-ROBO-IGH-23 S-100-R 2-42 BK U A-CT-ALL-R-Option

- **Series**
- **Model Type**
- **Installation Dimensions**
  - 23 : 50.5 mm
  - 30 : 60 mm
- **Actuator Type**
  - S: Cover Type
  - C: Dustproof Type
- **Guide Rail Length**
  - 150 ~ 500 mm
- **Ball Screw Grade**
  - R : Standard
  - P : Precision
- **Lead**
  - 2 : 2 mm 5 : 5 mm
  - 10 : 10 mm
- **Motor Size**
  - 42 : 42 mm 60 : 60 mm
- **Motor Brake**
  - Blank : None
  - BK : With Brake
- **Motor Direction**
  - U: Up D: Down
  - L: Left R: Right
- **Encoder Resolution**
  - A : 10,000 P/R
- **Drive Series**
  - CT-ALL : CC-Link IE TSN ALL
- **Option**
  - Sensor
  - Positioning Pinhole
  - Low-Dust Grease
  - Surface Treatment

Applicable Product Series

Product	Specifications
Ezi-SERVO CC-Link IE TSN ALL	CC-Link IE TSN Compatible, Motor+Drive Integrated type



Ezi-SERVO CC-Link IE TSN ALL

Actuator and Drive Combination

Unit Part Number	Motor-Drive Integrated Model Number
Ezi-ROBO-IGH-23S-□*1-42□*2A-CT-ALL-R	Ezi-SERVO-CT-ALL-RB42LH-A-R
Ezi-ROBO-IGH-30S-□*1-60□*2A-CT-ALL-R	Ezi-SERVO-CT-ALL-RB60L-A-R
Ezi-ROBO-IGH-23C-□*1-42□*2A-CT-ALL-R	Ezi-SERVO-CT-ALL-RB42LH-A-R
Ezi-ROBO-IGH-30C-□*1-60□*2A-CT-ALL-R	Ezi-SERVO-CT-ALL-RB60L-A-R

Actuator and Drive Combination with Brake

Unit Part Number	Motor-Drive Integrated Model Number
Ezi-ROBO-IGH-23S-□*1-42BK□*2A-CT-ALL-R	Ezi-SERVO-CT-ALL-RB42LH-A-BK-R
Ezi-ROBO-IGH-30S-□*1-60BK□*2A-CT-ALL-R	Ezi-SERVO-CT-ALL-RB60L-A-BK-R
Ezi-ROBO-IGH-23C-□*1-42BK□*2A-CT-ALL-R	Ezi-SERVO-CT-ALL-RB42LH-A-BK-R
Ezi-ROBO-IGH-30C-□*1-60BK□*2A-CT-ALL-R	Ezi-SERVO-CT-ALL-RB60L-A-BK-R

*1: Indicates the stroke.
*2: Indicates the motor direction.

Actuator Combination

Unit Part Number			Ezi-ROBO-IGH-23	Ezi-ROBO-IGH-30
Installation Dimensions		[mm]	50.5	60
Actuator Type	Cover Type		○	○
	Dustproof Type		○	○
Lead		[mm]	2, 5	5, 10
Ball screw grade	R(Standard Grade)			
	P(Precision Grade)			
Guide Rail Length (mm)	100		-	-
	150		○	○
	200		○	○
	250		○	-
	300		○	○
	400		-	○
	500		-	○
Motor Size		[mm]	42L	60L
Motor Brake			○	○
Encoder Resolution	Standard Motor	[P/R]	B(20,000)	B(20,000)
	Motor + Drive Integrated		A(10,000)	A(10,000)
Option	Sensor	NPN	○	○
		PNP	○	○
	Positioning Pinhole		○	○
	Low-Dust Grease		○	○
	Surface Treatment		○	○

- The Dustproof Type do not support the application of positioning pinholes.
- For detailed information on options, please refer to page 21 of the catalog.

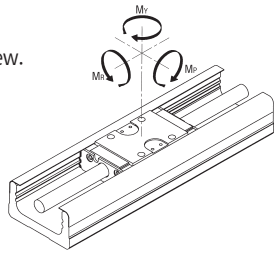
Specifications of Drive

<table>
<tr><th colspan="2">Part Number</th><th>Ezi-SERVO-CT-ALL-RB42 series</th><th>Ezi-SERVO-CT-ALL-RB60 series</th></tr>
<tr><td colspan="2">Input Voltage</td><td colspan="2">24 V DC ± 10 %</td></tr>
<tr><td colspan="2">Control Method</td><td colspan="2">Closed loop control with 32 bit MCU</td></tr>
<tr><td colspan="2">Current Consumption</td><td colspan="2">Max. 500 mA/axis (Except motor current)</td></tr>
<tr><td rowspan="3">Operating Condition</td><td>Ambient Temperature</td><td colspan="2">· In Use: 0 ~ 50 °C
· In Storage: -20 ~ 70 °C</td></tr>
<tr><td>Humidity</td><td colspan="2">· In Use: 35 ~ 85 % RH (Non-Condensing)
· In Storage: 10 ~ 90 % RH (Non-Condensing)</td></tr>
<tr><td>Vib. Resist.</td><td colspan="2">0.5 g</td></tr>
<tr><td rowspan="3">Function</td><td>Rotation Speed</td><td colspan="2">0 ~ 2,000 r/min</td></tr>
<tr><td>Resolution</td><td colspan="2">Encoder Resolution [P/R] | Configurable Resolution [P/R]
10,000 | 500 1,000 1,600 2,000 3,600 5,000 6,400 7,200 10,000
(Selectable by parameter)</td></tr>
<tr><td>Error Type</td><td colspan="2">Over Current Error, Over Speed Error, Position Tracking Error, Over Load Error, Over Temperature Error, Over Regenerative Voltage Error, Motor Connection Error, Encoder Connection Error, Main Power Voltage Error, In-Position Error, ROM Error, Position Overflow Error, Torque Off Circuit Error</td></tr>
<tr><td rowspan="3">CC-Link IE TSN</td><td>Communication Protocol</td><td colspan="2">CC-Link IE TSN Class B</td></tr>
<tr><td>Operation Mode</td><td colspan="2">CiA402 Drive Profile: Cyclic Synchronous Position Mode, Profile Position Mode, Homing Mode</td></tr>
<tr><td>Synchronization</td><td colspan="2">Minimum Cycle Time: 250 µs / Synchronous Communication(CSP, PP, HM) / Asynchronous Communication(PP, HM)</td></tr>
<tr><td rowspan="2">I/O Signal</td><td>Input Signals</td><td colspan="2">3 dedicated inputs (LIMIT+, LIMIT-, ORIGIN), 3 user inputs (photocoupler inputs)</td></tr>
<tr><td>Output Signals</td><td colspan="2">2 user outputs (photocoupler outputs), 1 brake signal output</td></tr>
</table>

How to Read Specifications

Model			Ezi-ROBO-IGH-23C-□ *1			
① Actuator Type			Dustproof Type			
② Lead		[mm]	2, 5			
③ Guide Rail Length		[mm]	150	200	250	300
④ Stroke		[mm]	66	116	166	216
⑤ Positioning Accuracy*2		[mm]	0.070 (0.060)	0.075 (0.060)	0.085 (0.060)	0.090 (0.060)
⑥ Repeatability*2		[mm]	±0.005 (±0.003)			
⑦ Backlash*2		[mm]	0.005 (0.005)			
⑧ Travel Parallelism*2		[mm]	0.015 (0.015)			
⑨ Maximum Speed*3	Standard Motor	[mm/s]	Lead 2: 80, Lead 5: 200			
	Motor + Drive Integrated	[mm/s]	Lead 2: 65, Lead 5: 165			
⑩ Starting Torque		[N·m]	0.06			
⑪ Permissible load*4	Horizontal	[kg]	7.5			
	Vertical	[kg]	5			
⑫ Permissible moment*5		[N·m]	M_P: 29 M_Y: 69 M_R: 34			
⑬ Actuator Weight		[kg]	1.37	1.57	1.76	1.96
⑭ Motor + Brake Weight	Motor	[kg]	0.47 ~ 0.52 (Varies by Motor Type)			
	Brake		0.26			

*1: □ includes the option and drive name.
*2: The values in parentheses are the specifications of the precision-grade ball screw.
*3: The speed is limited by the motor's maximum speed and the permissible rotation speed of the ball screw.
*4: The permissible load varies depending on speed and acceleration/deceleration.
*5: The direction definition of the permissible moment is as shown on the right.



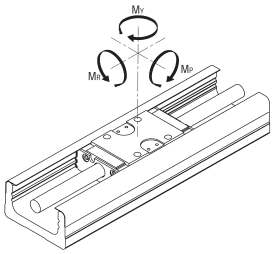
Description of Specification Items

No.	Item	Description
①	Actuator Type	Classified into General Environment and Dustproof Environment Types.
②	Lead	The distance that the ball screw travels in the linear direction when the motor rotates once.
③	Guide Rail Length	Refers to the length of the guide rail body, which is different from the stroke and overall length.
④	Stroke	This is the maximum distance that the load can be reciprocated.
⑤	Positioning Accuracy	The degree of error between the actual position traveled and the commanded position when moved to a specified location.
⑥	Repeatability	This value indicates the amount of error that occurs when the same position is commanded repeatedly in the same direction. (The accuracy is the value when the temperature and load are constant.)
⑦	Backlash	Refers to the gap between the ball screw and nut, indicating the looseness between the two components.
⑧	Travel Parallelism	This value indicates the degree to which the running surface is tilted relative to the surface on which the actuator is mounted.
⑨	Maximum Speed	This is the maximum speed at which the load can be reciprocated.
⑩	Starting Torque	The amount of torque required to start the motor's rotation from a stationary position.
⑪	Permissible load	The maximum load that can be transported when the compact linear actuator is used in the horizontal or vertical direction.
⑫	Permissible moment	The maximum force the guide that can handle when a workpiece is placed off-center relative to the compact linear actuator's guide.
⑬	Actuator Weight	The weight of the actuator (measured with the motor installed).
⑭	Motor + Brake Weight	The combined weight of the motor and brake.

Specification [IGH23 Type]

Model			Ezi-ROBO-IGH-23S-□*1				Ezi-ROBO-IGH-23C-□*1			
Actuator Type			Cover Type				Dustproof Type			
Lead		[mm]	2, 5				2, 5			
Guide Rail Length		[mm]	150	200	250	300	150	200	250	300
Stroke		[mm]	76	126	176	226	66	116	166	216
Positioning Accuracy*2		[mm]	0.070 (0.060)	0.075 (0.060)	0.085 (0.060)	0.090 (0.060)	0.070 (0.060)	0.075 (0.060)	0.085 (0.060)	0.090 (0.060)
Repeatability*2		[mm]	±0.005 (±0.003)				±0.005 (±0.003)			
Backlash*2		[mm]	0.005 (0.005)				0.005 (0.005)			
Running Parallelism*2		[mm]	0.015 (0.015)				0.015 (0.015)			
Maximum Speed*3	Standard Motor	[mm/s]	Lead 2: 80, Lead 5: 200				Lead 2: 80, Lead 5: 200			
	Motor + Drive Integrated	[mm/s]	Lead 2: 65, Lead 5: 165				Lead 2: 65, Lead 5: 165			
Starting Torque		[N·m]	0.06							
Permissible load*4	Horizontal	[kg]	7.5				7.5			
	Vertical	[kg]	5				5			
Permissible moment*5		[N·m]	M_P: 46 M_Y: 51 M_R: 134				M_P: 29 M_Y: 69 M_R: 34			
Actuator Weight		[kg]	1.11	1.32	1.52	1.73	1.37	1.57	1.76	1.96
Motor + Brake Weight	Motor	[kg]	0.47 ~ 0.52 (Varies by Motor Type)				0.47 ~ 0.52 (Varies by Motor Type)			
	Brake		0.26				0.26			

*1: □ includes optional components and drive name.
*2: The values in parentheses indicate the specifications for precision-grade ball screws.
*3: The maximum speed is limited by the motor's maximum speed and the permissible rotational speed of the ball screw.
*4: The permissible load varies depending on speed and acceleration/deceleration. Please refer to the table below.
*5: The definition of permissible moment direction is shown on the right.



Permissible load Table by Speed and Acceleration / Deceleration

Lead 2 mm — Permissible load Unit : kg

Mounting Direction	Horizontal			Vertical		
Speed [mm/s]	Acceleration[m/s²]					
	0.5	1	3	0.5	1	3
20	7.5	7.5	7.5	5	5	4
40	6	6	-	4	4	-
60	5	5	-	3.5	3.5	-
80	4.5	4.5	-	3.5	3.5	-

Lead 5 mm — Permissible load Unit : kg

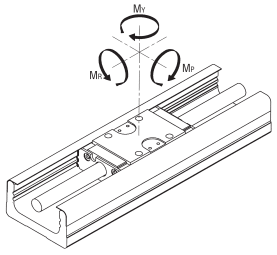
Mounting Direction	Horizontal					Vertical				
Speed [mm/s]	Acceleration[m/s²]									
	0.5	1	3	5	7	0.5	1	3	5	7
20	7.5	7.5	7.5	7.5	5.5	5	5	5	5	2.5
50	5.5	5.5	5.5	5.5	3.5	4	4	4	4	1.5
100	4.5	4.5	4.5	4.5	-	3	3	3	1.5	-
150	4	4	4	-	-	3	2.5	1	-	-
200	3.5	3.5	-	-	-	2.5	2	-	-	-

Applicable models			
Ezi-SERVO CC-Link IE TSN	Ezi-SERVO CC-Link IE TSN 4X	Ezi-SERVO CC-Link IE TSN ALL	

Specification [IGH30 Type]

Model			Ezi-ROBO-IGH-30S-□*1					Ezi-ROBO-IGH-30C-□*1				
Actuator Type			Cover Type					Cleanroom Type				
Lead		[mm]	5, 10					5, 10				
Guide Rail Length		[mm]	150	200	300	400	500	150	200	300	400	500
Stroke		[mm]	60	110	210	310	410	50	100	200	300	400
Positioning Accuracy*2		[mm]	0.070 (0.060)	0.080 (0.060)	0.090 (0.060)	0.095 (0.060)	0.100 (0.100)	0.070 (0.060)	0.080 (0.060)	0.090 (0.060)	0.095 (0.060)	0.100 (0.100)
Repeatability*2		[mm]	±0.005 (±0.003)					±0.005 (±0.003)				
Backlash*2		[mm]	0.005 (0.005)					0.005 (0.005)				
Running Parallelism*2		[mm]	0.015 (0.015)				0.025 (0.025)	0.015 (0.015)				0.025 (0.025)
Maximum Speed*3	Standard Motor	[mm/s]	Lead 5: 200, Lead 10: 400					Lead 5: 200, Lead 10: 400				
	Motor + Drive Integrated	[mm/s]	Lead 5: 165, Lead 10: 330					Lead 5: 165, Lead 10: 330				
Starting Torque		[N·m]	0.15					0.15				
Permissible load*4	Horizontal	[kg]	15					15				
	Vertical	[kg]	12					12				
Permissible moment*5		[N·m]	MP: 101 MY: 120 MR: 260					MP: 43 MY: 118 MR: 50				
Actuator Weight		[kg]	1.7	2.1	2.7	3.2	4.1	2.33	2.63	3.33	3.93	4.63
Motor + Brake Weight	Motor	[kg]	1.54 ~ 1.80 (Varies by Motor Type)					1.54 ~ 1.80 (Varies by Motor Type)				
	Brake		0.44					0.44				

*1: □ includes optional components and drive name.
*2: The values in parentheses indicate the specifications for precision-grade ball screws.
*3: The maximum speed is limited by the motor's maximum speed and the permissible rotational speed of the ball screw.
*4: The permissible load varies depending on speed and acceleration/deceleration. Please refer to the table below
*5: The definition of permissible moment direction is shown on the right.



Permissible load Table by Speed and Acceleration / Deceleration

Lead 5 mm — Permissible load Unit : kg

Mounting Direction	Horizontal				Vertical			
Speed [mm/s]	Acceleration[m/s²]							
	0.5	1	3	5	0.5	1	3	5
20	15	15	15	6.5	12	12	12	2
50	11	11	11	-	8.5	8.5	8.5	-
100	9	9	4.5	-	7	7	1	-
150	8	8	-	-	6	6	-	-
200	7.5	7	-	-	5.5	0.5	-	-

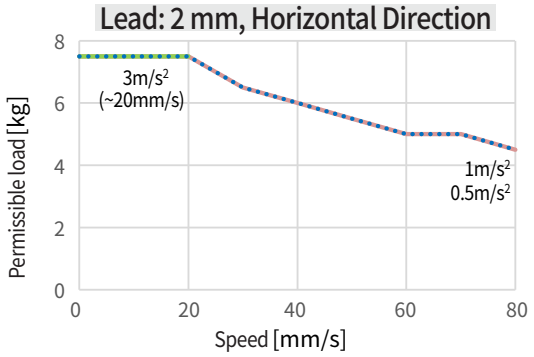
Lead 10 mm — Permissible load Unit : kg

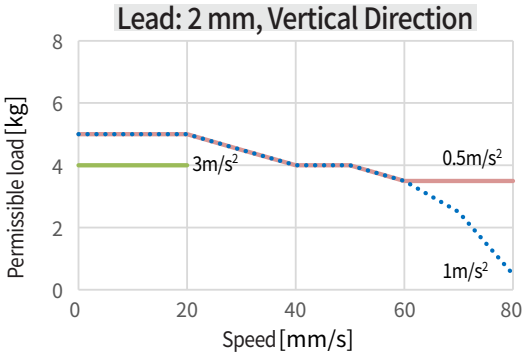
Mounting Direction	Horizontal						Vertical					
Speed [mm/s]	Acceleration[m/s²]											
	0.5	1	3	5	7	10	0.5	1	3	5	7	10
20	15	15	15	15	15	5	12	12	12	12	7.5	2.5
50	11	11	11	11	7.7	7.5	8.5	8.5	8.5	8.5	5	0.5
100	9	9	9	9	7.5		7	7	7	7	3	
150	8	8	7.5	7.5			6	6	6	3		
200	7.5	7	7	5.5			5	5.5	5.5	1.5		
250	7	7	6.5				5.5	5.5	1.5			
300	7	6.5	2.5				5.5	5	0.5			
350	6.5	6.5					4.5	3				
400	6.5	6					3.5	2.5				

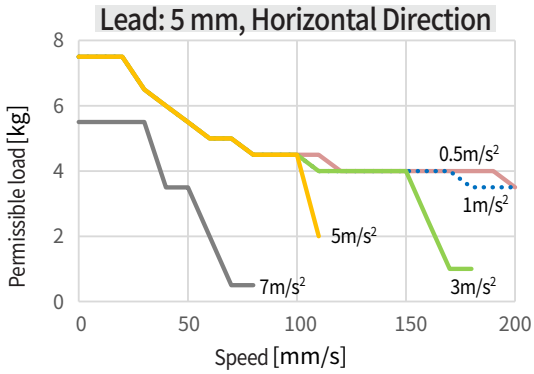
Applicable models		
Ezi-SERVO CC-Link IE TSN	Ezi-SERVO CC-Link IE TSN 4X	Ezi-SERVO CC-Link IE TSN ALL

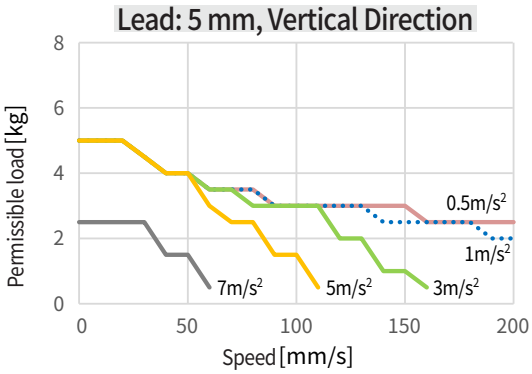
Permissible load Graph by Speed and Acceleration / Deceleration

IGH-23

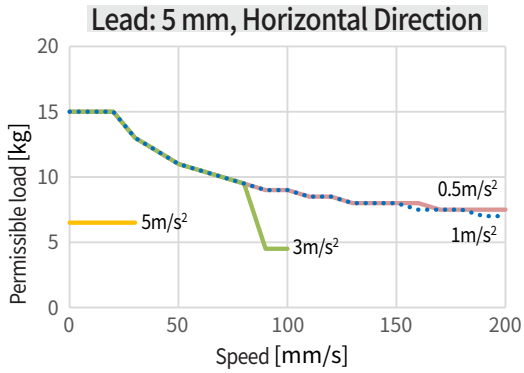


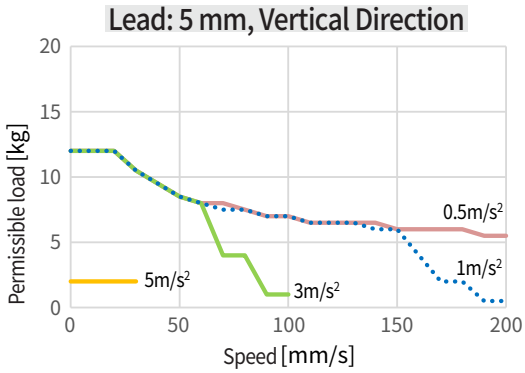


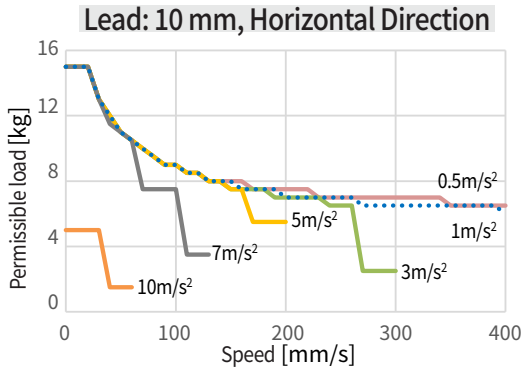


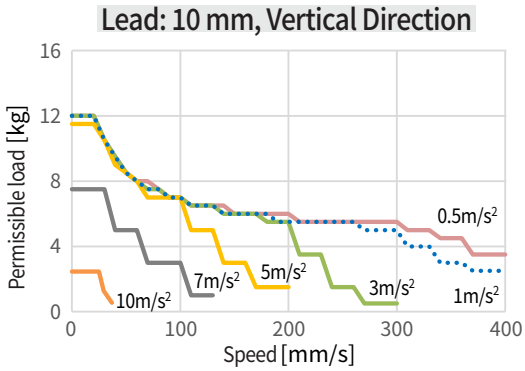


IGH-30





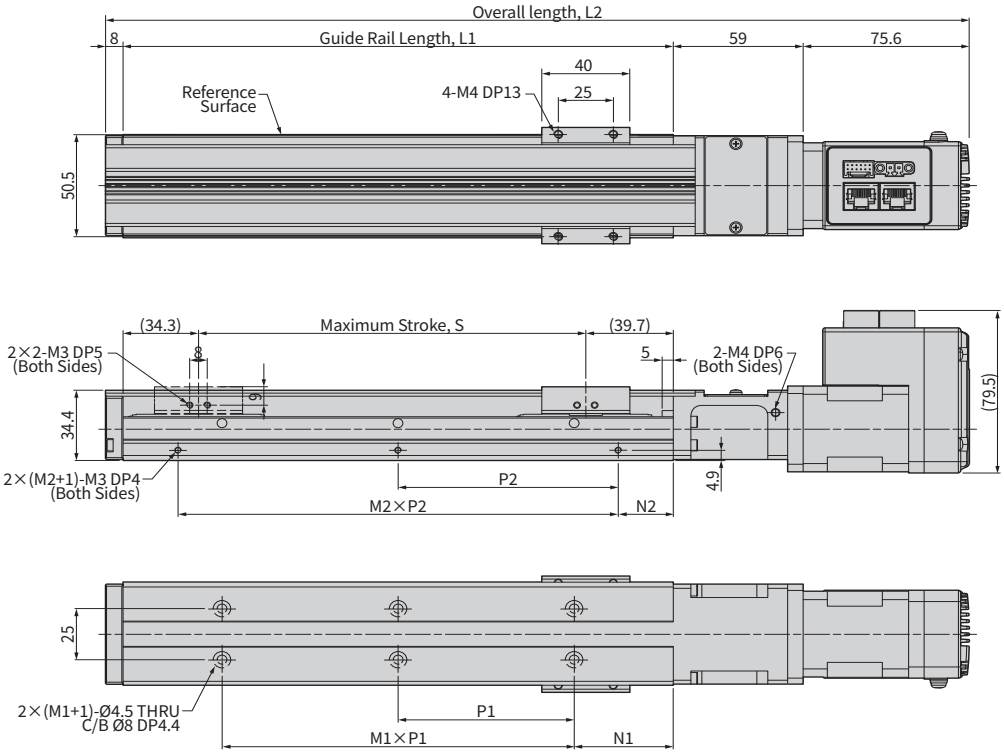




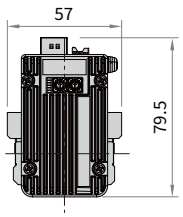
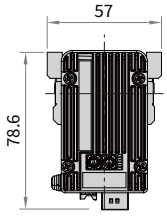
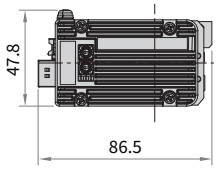
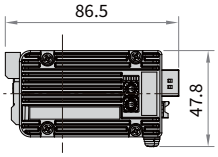
Dimensions of Product : Cover Type [mm]

When using an integrated drive

Ezi-ROBO-IGH-23S-□-R2-42UA-CT-ALL-R
Ezi-ROBO-IGH-23S-□-R5-42UA-CT-ALL-R



- Motor Direction

Up	Down	Left	Right
			

※ The symbol "□" indicates the stroke.
The drawings in this catalog are based on products equipped with a CC-Link IE TSN ALL R connector type drive.
Some dimensions differ depending on the drive type. Please refer to the product drawings for detailed information.

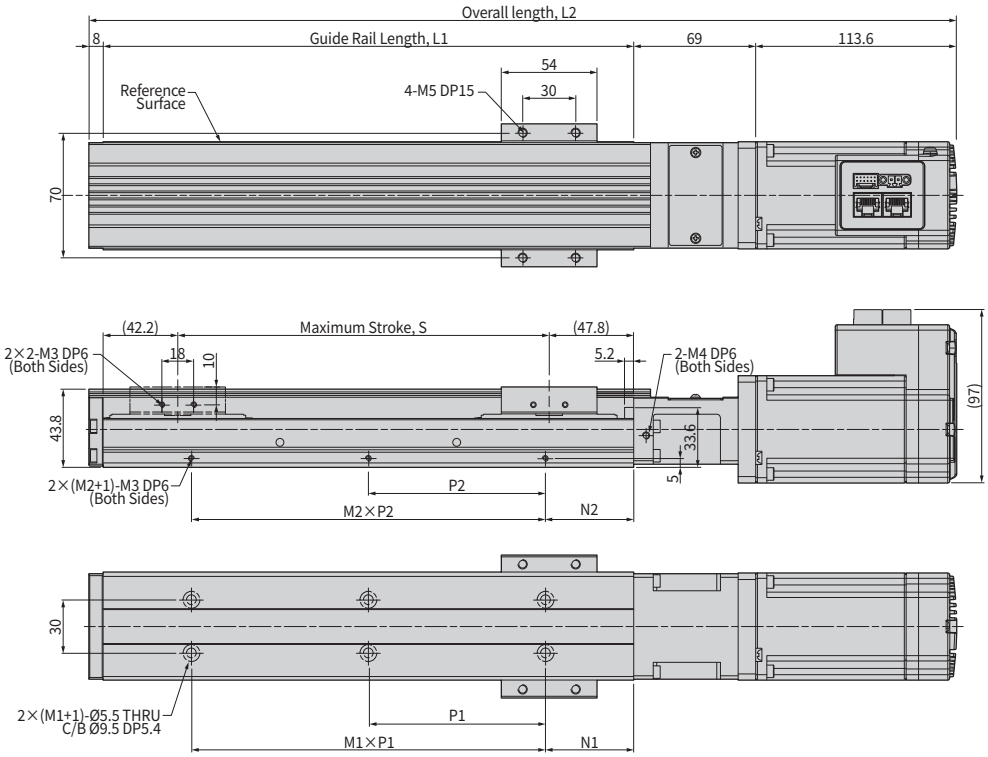
Unit : mm

L1, Guide Rail Length	L2 (Overall Length)	Stroke, S	N1	M1XP1	N2	M2XP2
150	292.6	76	35	1 X 80	25	1 X 100
200	342.6	126	20	2 X 80	50	
250	392.6	176	45		25	2 X 100
300	442.6	226	30	3 X 80	50	

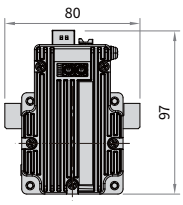
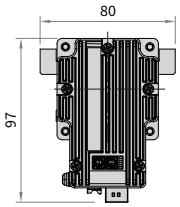
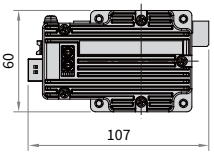
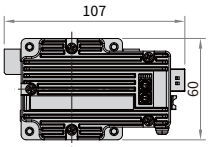
Dimensions of Product : Cover Type [mm]

When using an integrated drive

Ezi-ROBO-IGH-30S-□-R5-60UA-CT-ALL-R
Ezi-ROBO-IGH-30S-□-R10-60UA-CT-ALL-R



- Motor Direction

Up	Down	Left	Right
			

※ The symbol "□" indicates the stroke.
The drawings in this catalog are based on products equipped with a CC-Link IE TSN ALL R connector type drive.
Some dimensions differ depending on the drive type. Please refer to the product drawings for detailed information.

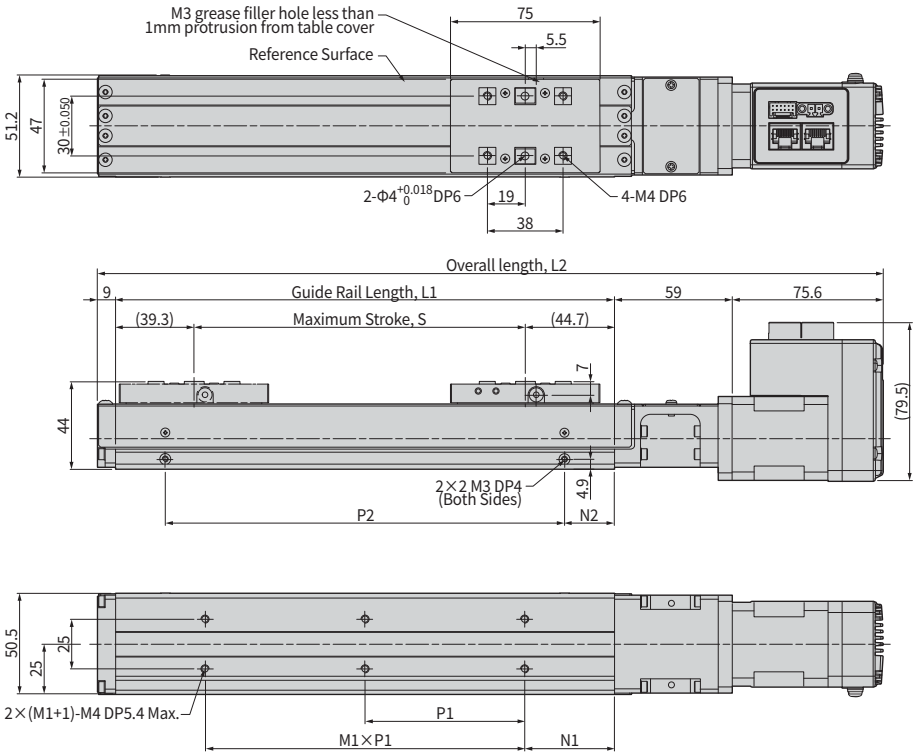
Unit : mm

L1, Guide Rail Length	L2 (Overall Length)	Stroke, S	N1	M1XP1	N2	M2XP2
150	340.6	60	25	1 X 100	25	1 X 100
200	390.6	110	50		50	
300	490.6	210		2 X 100		2 X 100
400	590.6	310		3 X 100		3 X 100
500	690.6	410		4 X 100		4 X 100

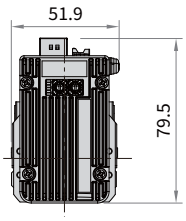
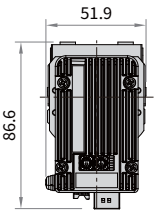
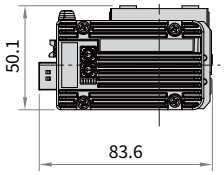
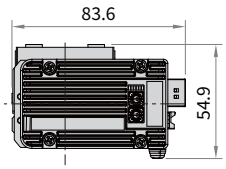
Dimensions of Product : Dustproof Type [mm]

When using an integrated drive

Ezi-ROBO-IGH-23C-□-R2-42UA-CT-ALL-R
Ezi-ROBO-IGH-23C-□-R5-42UA-CT-ALL-R



- Motor Direction

Up	Down	Left	Right
			

※ The symbol "□" indicates the stroke.
The drawings in this catalog are based on products equipped with a CC-Link IE TSN ALL R connector type drive.
Some dimensions differ depending on the drive type. Please refer to the product drawings for detailed information.

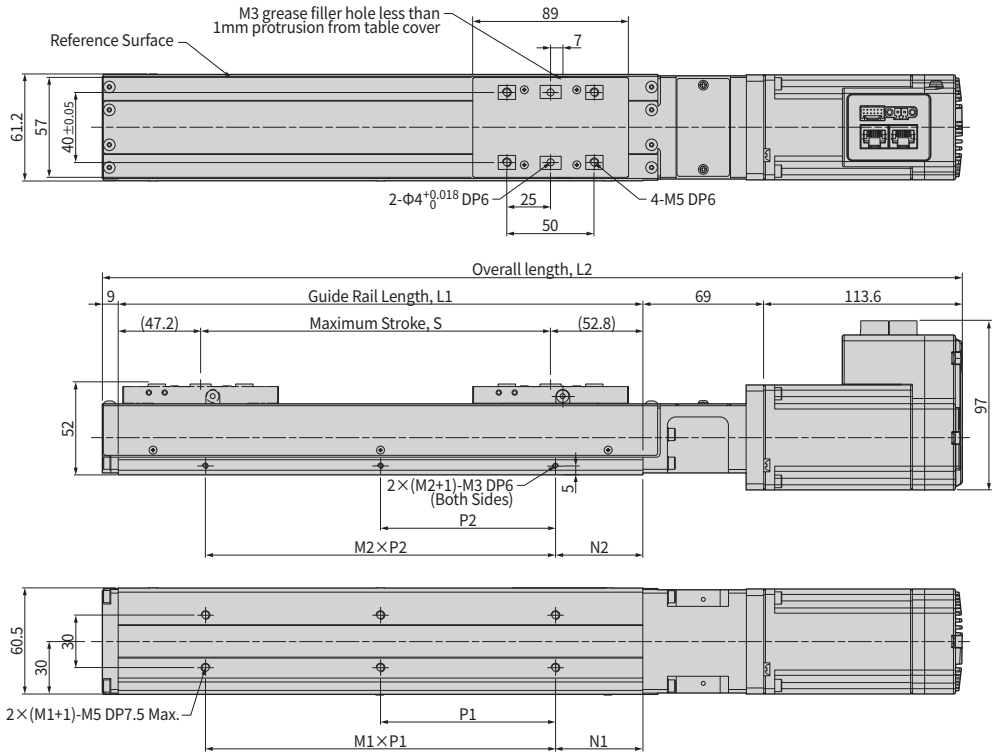
Unit : mm

L1, Guide Rail Length	L2 (Overall Length)	Stroke, S	N1	M1XP1	N2	P2
150	293.6	66	35	1 X 80	25	100
200	343.6	116	20	2 X 80	50	
250	393.6	166	45		25	200
300	443.6	216	30	3 X 80	50	

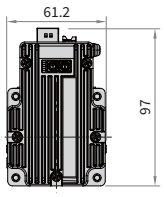
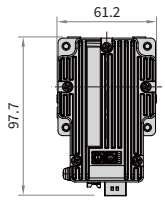
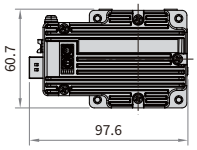
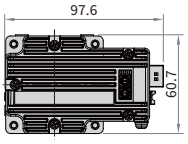
Dimensions of Product : Dustproof Type [mm]

When using an integrated drive

Ezi-ROBO-IGH-30C-□-R5-60UA-CT-ALL-R
Ezi-ROBO-IGH-30C-□-R10-60UA-CT-ALL-R



- Motor Direction

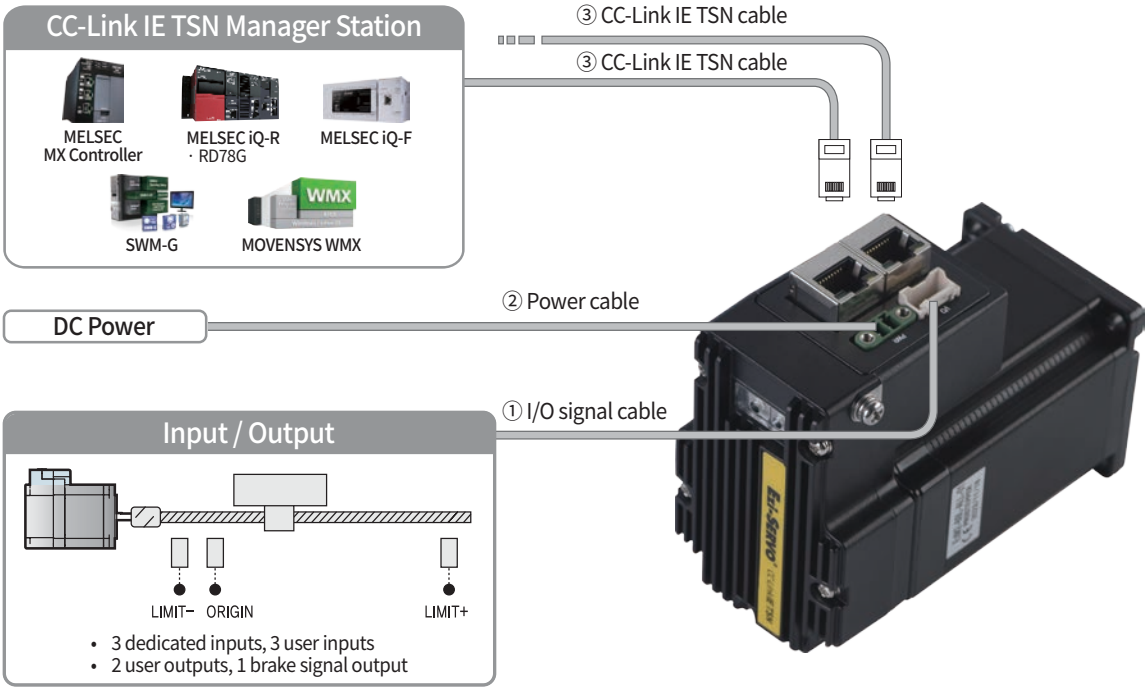
Up	Down	Left	Right
			

※ The symbol "□" indicates the stroke.
The drawings in this catalog are based on products equipped with a CC-Link IE TSN ALL R connector type drive.
Some dimensions differ depending on the drive type. Please refer to the product drawings for detailed information.

Unit : mm

L1, Guide Rail Length	L2 (Overall Length)	Stroke, S	N1	M1XP1	N2	M2XP2
150	341.6	50	25	1 X 100	25	1 X 100
200	391.6	100	50		50	
300	491.6	200		2 X 100		1 X 200
400	591.6	300		3 X 100		1 X 300
500	691.6	400		4 X 100		1 X 400

System Configuration

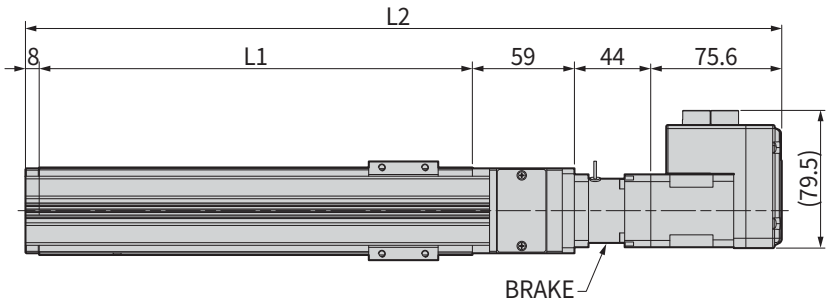


Cable Type	Max. Cable Length	Remarks
① I/O Signal Cable	20 m	Options (Sold separately)
② Power Cable	2 m	
③ CC-Link IE TSN Cable	100 m	

Dimensions with Brake Mounted

When using an integrated drive

Ezi-ROBO-IGH-23S-□-R2-42BKRA-CT-ALL-R
Ezi-ROBO-IGH-23S-□-R5-42BKRA-CT-ALL-R



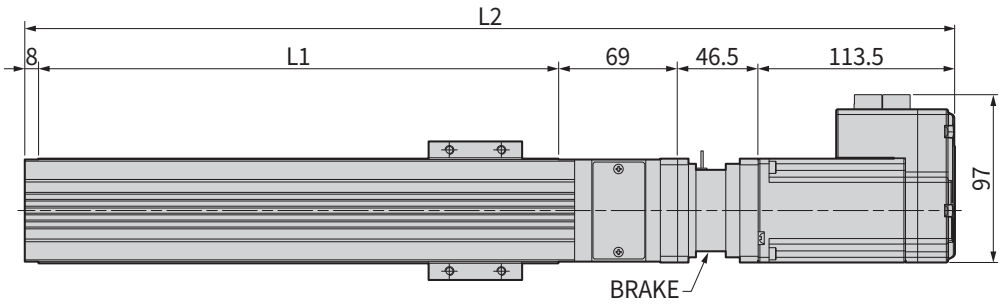
Unit : mm

L1 (Guide Rail Length)	L2 (Overall Length)		Stroke, S
	Before Brake Installation	After Brake Installation	
150	292.6	337.6	76
200	342.6	387.6	126
250	392.6	437.6	176
300	442.6	487.6	226

※ The symbol "□" indicates the stroke.

When using an integrated drive

Ezi-ROBO-IGH-30S-□-R5-60BKRA-CT-ALL-R
Ezi-ROBO-IGH-30S-□-R10-60BKRA-CT-ALL-R



Unit : mm

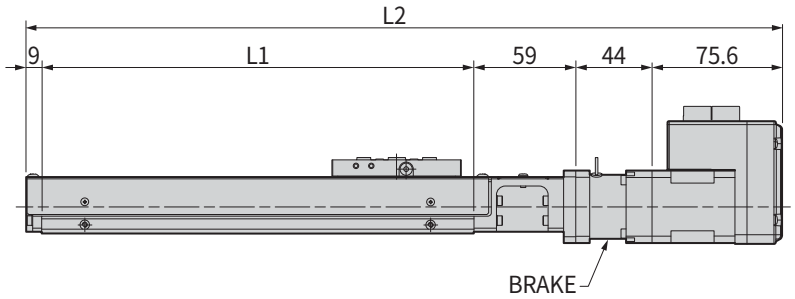
L1 (Guide Rail Length)	L2 (Overall Length)		Stroke, S
	Before Brake Installation	After Brake Installation	
150	340.6	387.1	60
200	390.6	437.1	110
300	490.6	537.1	210
400	590.6	637.1	310
500	690.6	737.1	410

※ The symbol "□" indicates the stroke.

Dimensions with Brake Mounted

When using an integrated drive

Ezi-ROBO-IGH-23C-□-R2-42BKUA-CT-ALL-R
Ezi-ROBO-IGH-23C-□-R5-42BKUA-CT-ALL-R



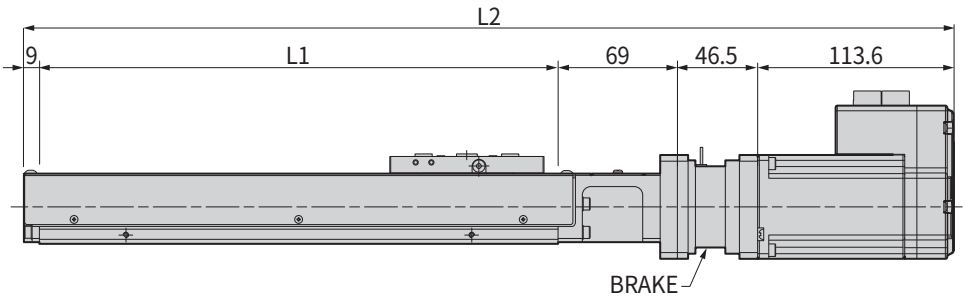
Unit : mm

L1 (Guide Rail Length)	L2 (Overall Length)		Stroke, S
	Before Brake Installation	After Brake Installation	
150	293.6	337.6	66
200	343.6	387.6	116
250	393.6	437.6	166
300	443.6	487.6	216

※ The symbol "□" indicates the stroke.

When using an integrated drive

Ezi-ROBO-IGH-30C-□-R5-60BKUA-CT-ALL-R
Ezi-ROBO-IGH-30C-□-R10-60BKUA-CT-ALL-R



Unit : mm

L1 (Guide Rail Length)	L2 (Overall Length)		Stroke, S
	Before Brake Installation	After Brake Installation	
150	341.6	388.1	50
200	391.6	438.1	100
300	491.6	538.1	200
400	591.6	638.1	300
500	691.6	738.1	400

※ The symbol "□" indicates the stroke.

Option Name and Combination

Option : R-BP - C - CB
① ② ③ ④

①	Sensor	**No Symbol** : No Sensor **N** : NPN Type Sensor	**R** : Sensor Rail Only **P** : PNP Type Sensor
②	Positioning Pin Hole (Slide Block Pin Hole)	**No Symbol** : No Pin Hole	**BP** : Slide Block Pin Hole
③	Grease	**No Symbol** : Standard Grease	**C** : Low Vibration Grease
④	Surface Treatment	**No Symbol** : Guide Rail in Black Oxide Finish Only **CB** : Black Oxide Coating for Corrosion Protection	

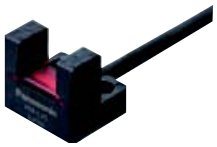
Item		Cover Type		Dustproof Type	
		IGH-23S	IGH-30S	IGH-23C	IGH-30C
①	Sensor	○	○	○	○
②	Positioning Pin Hole	○	○	-	-
③	Low Vibration Grease	○	○	○	○
④	Black Oxide Coating for Corrosion Protection	○	○	○	○

Option ① Home Sensor Set

1. Type

Part Number	Sensor Output	Applicable products
PM-L25	NPN	IGH-23S, IGH-30S, IGH-23C, IGH-30C
PM-Y65		
PM-L25-P	PNP	IGH-23S, IGH-30S, IGH-23C, IGH-30C
PM-Y65-P		

2. Components (PM-L25)



PM-L25
PM-L25-P



PM-Y65
PM-Y65P



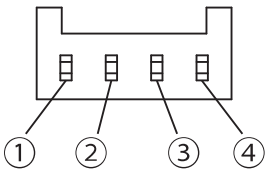
CN-14
(Sensor con-
nector)

3. Specifications

Type	NPN Type	PNP Type
Sensor Part Number	PM-L25 (Panasonic)	PM-L25-P (Panasonic)
Power Supply Voltage	5 ~ 24 V DC ±10 %, Ripple (P-P) 10 % or less	5 ~ 24 V DC ±10 %, Ripple (P-P) 10 % or less
Current Consumption	15 mA or less	15 mA or less
Control Output	NPN Open Collector Output 5 ~ 24 V DC, 50 mA or less Residual Voltage 2 V or less (at 50 mA load current)	PNP Open Collector Output 5 ~ 24 V DC, 50 mA or less Residual Voltage 2 V or less (at 50 mA load current)
Indicator LED	Detection Display (Red)	Detection Display (Red)
Sensor Logic	Normally Open / Normally Closed (Selectable depending on connection)	Normally Open / Normally Closed (Selectable depending on connection)

4. Accessories Items

Item	NPN Type	PNP Type	NPN Type	PNP Type
Sensor Type	PM-L25 (Qty. 3)	PM--L25-P (Qty. 3)	PM-Y65 (Qty. 3)	PM-Y65P (Qty. 3)
Sensor Connector	-	-	CN-14 (Qty. 3)	CN-14 (Qty. 3)
Sensor Rail	Qty. 1	Qty. 1	Qty. 1	Qty. 1
Sensor Dog	Qty. 1	Qty. 1	Qty. 1	Qty. 1
Sensor Bracket	Qty. 2	Qty. 2	Qty. 3	Qty. 3



① +V
② Normally Open
③ Normally Closed
④ 0V

5. Precautions for Home Sensor Set Installation

- Use the home sensor set in environments where the installation surface temperature does not exceed 55 °C.
- Do not install the home sensor while power is applied, as this may cause injury or equipment damage.
- After exposure to vibration or impact, check the sensor to ensure it remains properly mounted and functional.
- Accumulated dust on the sensor may cause malfunctions. Regular cleaning or replacement is recommended.

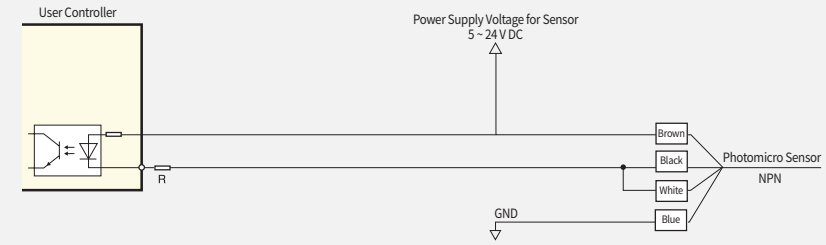
6. Precautions for Sensor Cable Extension

- The cable can be extended up to a maximum of 100 meters using a cable with a cross-sectional area of at least 0.3 mm^2. However, as the cable length increases, voltage drop may occur. Therefore, ensure that the voltage supplied at the end of the sensor's accessory cable remains within the rated range.

Home Sensor Cable Installation

1. NPN Type

• With User's Controller



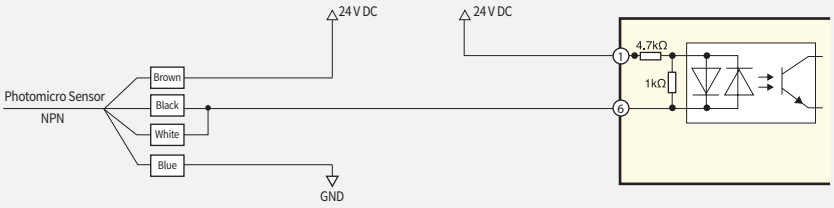
When applying N.C (Normally Closed), connect the output wire to the black lead.

When applying N.O (Normally Open), connect the output wire to the white lead.

Any unused output wires must be properly insulated.

The power supply voltage for the sensor is 5 ~ 24 V DC, and the sensor's signal current can be used up to 50 mA. For detailed information, please refer to the controller specifications and wire accordingly. If the sensor's signal current exceeds the current range of the controller or sensor, please connect a current-limiting resistor (R).

• With Embedded Motion Controller Type Products (e.g., Ezi-SERVO CC-Link IE TSN ALL)



When applying N.C (Normally Closed), connect the output wire to the black lead.

When applying N.O (Normally Open), connect the output wire to the white lead.

Any unused output wires must be properly insulated.

2. PNP Type

• With User's Controller



When applying N.C (Normally Closed), connect the output wire to the black lead.

When applying N.O (Normally Open), connect the output wire to the white lead.

Any unused output wires must be properly insulated.

The power supply voltage for the sensor is 5 ~ 24 V DC, and the sensor's signal current can be used up to 50 mA. For detailed information, please refer to the controller specifications and wire accordingly. If the sensor's signal current exceeds the current range of the controller or sensor, please connect a current-limiting resistor (R).

• With Embedded Motion Controller Type Products (e.g., Ezi-SERVO CC-Link IE TSN ALL)



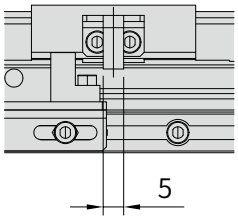
When applying N.C (Normally Closed), connect the output wire to the black lead.

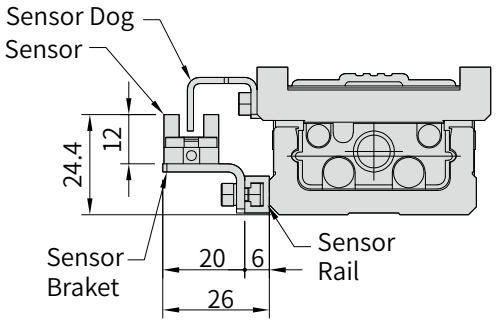
When applying N.O (Normally Open), connect the output wire to the white lead.

Any unused output wires must be properly insulated.

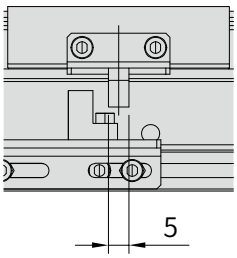
Dimensions with Sensor Installed: Cover Type [mm]

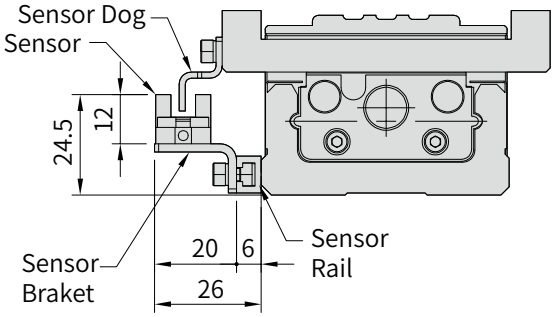
Ezi-ROBO-IGH-23S-□





Ezi-ROBO-IGH-30S-□

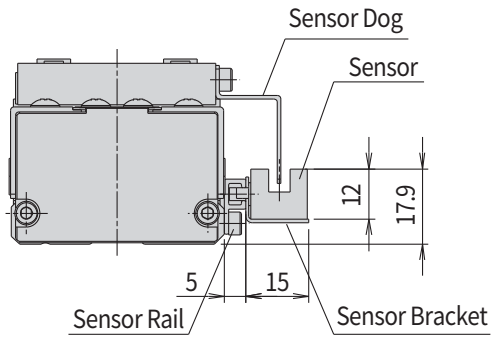


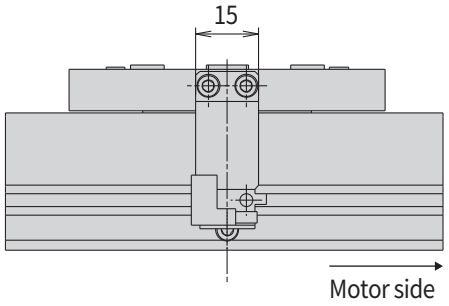


※ □ includes actuator, drive, and option specifications.

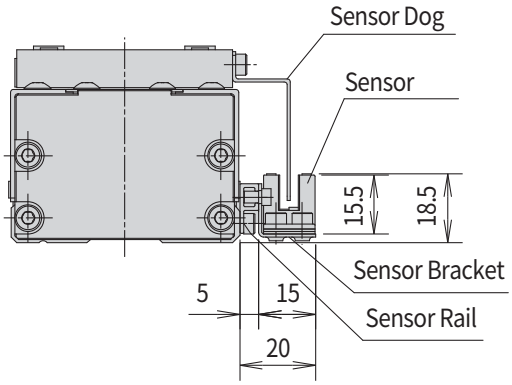
Dimensions with Sensor Installed: Dustproof Type [mm]

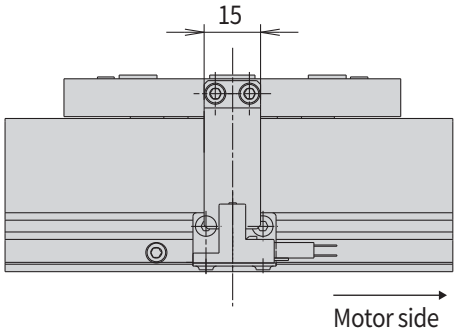
Ezi-ROBO-IGH-23C-□





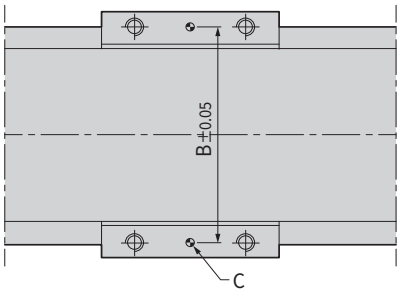
Ezi-ROBO-IGH-30C-□





※ □ includes actuator, drive, and option specifications.
※ The dustproof-type sensor dog (light-blocking plate) is not removable.

Option ② Positioning Pin Hole



Unit : mm

Cover Type			
Actuator Type	B	C	Pin Height
Ezi-ROBO-IGH-23S-□	50	2-Ø2 $^{+0.016}_{0}$ Depth 4	Below 5.9
Ezi-ROBO-IGH-30S-□	70	2-Ø3 $^{+0.016}_{0}$ Depth 5	Below 8.0

Other Option V : ③ Grease

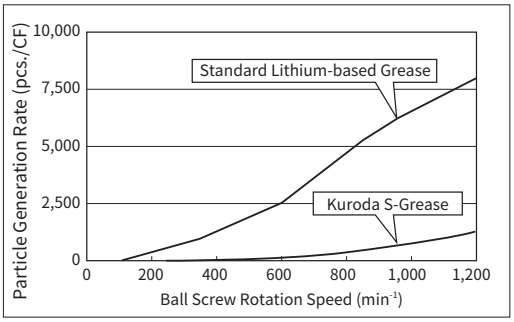
1. Type

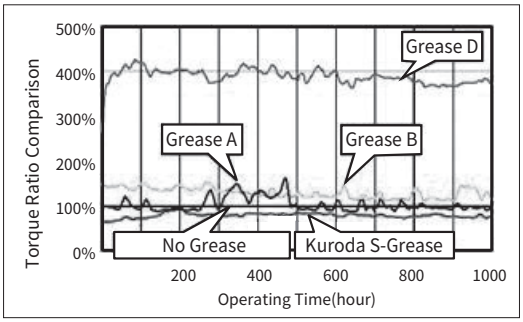
Classification	Product Code	Applicable Products
Standard Grease (Kyodo Yushi Maru Tenpu PS NO.2)	No Symbol	IGH-23S, IGH-23C, IGH-30S, IGH-30C
Low Vibration Grease (Kuroda S Grease)	C	

2. Characteristic

Item	Standard Grease	Low Vibration Grease*1
Appearance	White	Yellowish White
Main Topic	Lithium-based	Urea-based
Lubricating Oil	Synthetic Oil / Mineral Oil	Mineral Oil
Operating Temperature Range	-50 ~ +130 °C	-20 ~ +150 °C

*1: Low-outgassing grease is optimized for clean environments and provides excellent torque stability and lubrication performance.





3. Precautions for Use

When using grease, please read the precautions listed in the relevant 'Material Safety Data Sheet (MSDS)' thoroughly.

Precautions	• It is a flammable substance (flash point 195 °C), so do not store near fire. • Always wear protective goggles when handling grease. It may cause irritation if it gets into the eyes. • Always wear protective gloves when handling grease. It may cause irritation if it comes into contact with the skin. • Do not ingest. It may cause diarrhea or vomiting. • Keep out of reach of children. • After use, seal tightly to prevent contamination from dust or moisture.
First Aid	• If it gets into the eyes, rinse with clean water for at least 15 minutes and seek medical attention. • If it comes into contact with the skin, wash thoroughly with water and soap. • If swallowed, do not induce vomiting and seek medical attention immediately.
Disposal of Waste Oil and Waste Containers	When disposing of, please handle in accordance with waste management regulations.
Storage Method	Store in a cool, dark place, away from direct sunlight, heat sources, and open flames.

Supported FASTECH Drive Types

Built-in Torque-Off Function Drive



Multi-Axis Drive (Max. 4-Axis)



Motor+Drive Integrated type



Batteryless Absolute Encoder type



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