Oriental motor

αSTEP AZ Series Equipped

Motorized Linear Slides **EAS Series**

Motorized Cylinders **EAC Series**

Standard Type/Side-Mounted Type

NEW
Lineup
Added

Battery-free Absolute Sensor Equipped

Advanced "Positioning" is in your hand.

Oriental motor αSTEP AZ Series Equipped Motorized Linear Slides EAS Series Motorized Cylinders EAC Series Standard Type/Side-Mounted Type

Motorized Linear Slides **EAS** Series
Motorized Cylinders **EAC** Series

Battery-free **AZ** Series Equipped with Built-in Absolute Sensor

Equipped with Stepping Motor with Built-in Compact Battery-free ABZO Sensor Contributing to improvement in productivity and cutting cost

Products equipped with the **AZ** Series with built-in absolute sensor are added to the lineup of Motorized Linear Slides **EAS** Series and Motorized Cylinders **EAC** Series.

Motorized Actuators .....Page 6

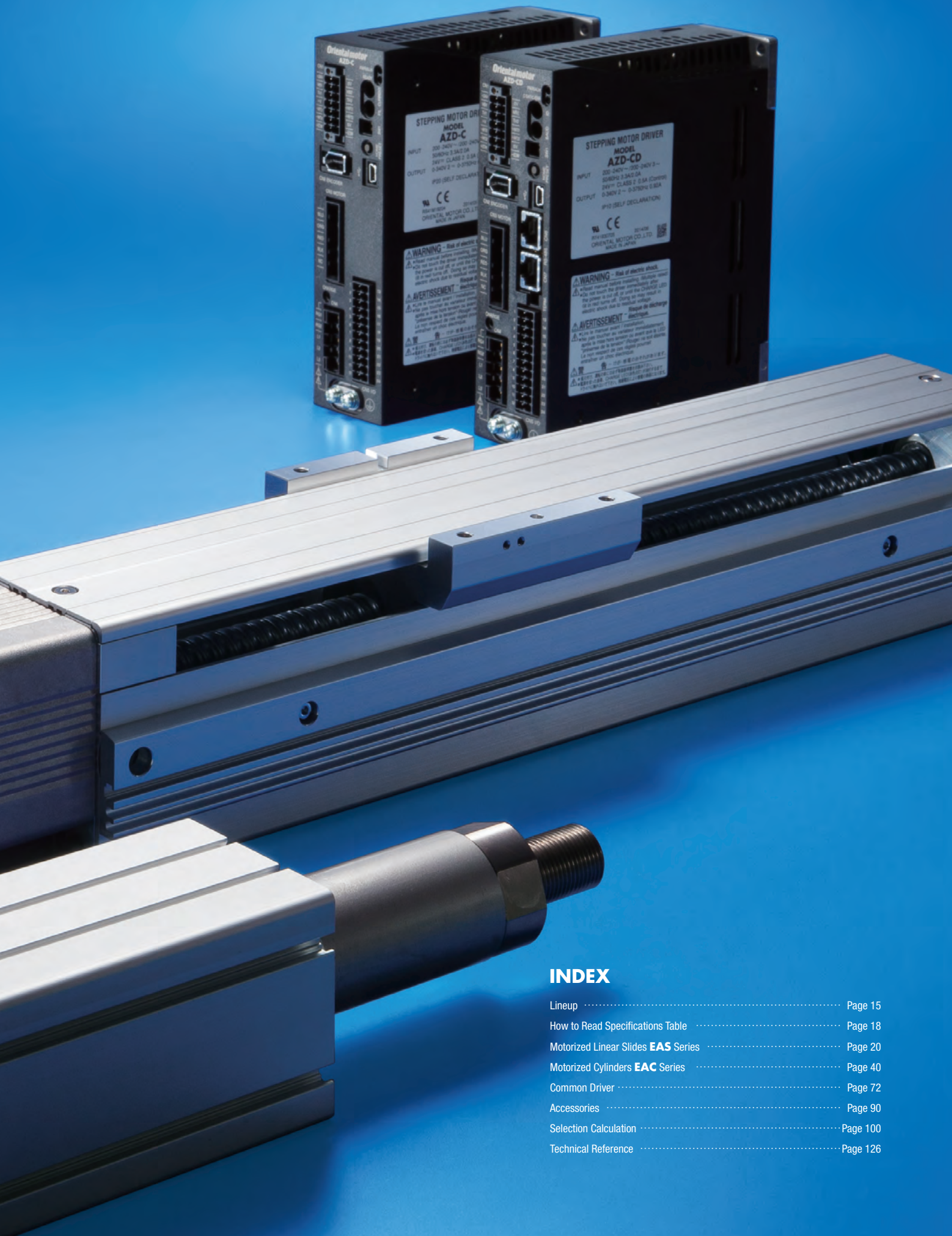
Supporting a wide range of speeds and loads: From low to high speed and from low to high load. In addition to the standard type, the side-mounted type with shorter overall length is provided. These high-performance motorized linear slides and motorized cylinders have become more easier to use.

Battery-free Absolute Sensor Equipped
AZ Series.....Page 10

No battery is required for positioning in the absolute system.
High-speed return to home is achieved without any external sensor, leading to higher productivity and less cost.

Data Setting Software
MEXE02 .....Page 14

Data setting, actual running, and check using the monitor functions are easy to use.



INDEX

Extensive Lineup for A Variety of Combinations!
Motorized Linear Slides and Motorized Cylinders

Battery-free **AZ** Series Equipped with Built-in Absolute Sensor

Motorized Linear Slides **EAS** Series

Standard Type
Side-Mounted Type
Same Price

Built-in Controller Type (FLEX)
- AC Power Supply Input
- DC Power Supply Input

Pulse Input Type
- AC Power Supply Input
- DC Power Supply Input

Standard Type

Side-Mounted Type

※ The photo shows Right-side-mounted Type.

Standard Type
- X Table
- Y Table

Side-Mounted Type (Right sided/Left sided)
- X Table
- Y Table

- Stroke: 50～850 mm
- Maximum Speed: 800 mm/s
- Maximum Transportable Mass: 60 kg (Horizontal), 30 kg (Vertical)
- Repetitive Positioning Accuracy: ± 0.02 mm

Stepping Motor Unit α_{STEP}
Battery-free Absolute Sensor Equipped

AZ Series Equipped

- Standard
- With Electromagnetic Brake

Product for positioning in the absolute system without any battery, leading to better productivity and cost reduction.

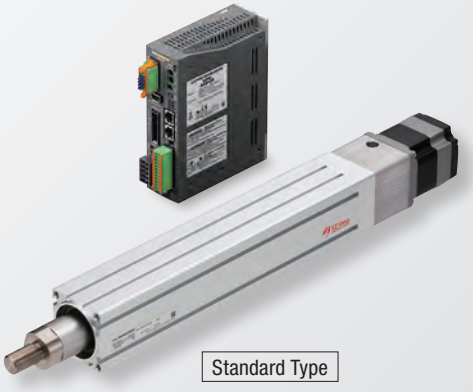
Battery-free **AZ** Series Equipped with Built-in Absolute Sensor

Motorized Cylinders **EAC** Series

Standard Type
Side-Mounted Type
Same Price

Built-in Controller Type (FLEX)
- AC Power Supply Input
- DC Power Supply Input

Pulse Input Type
- AC Power Supply Input
- DC Power Supply Input



Standard Type

Side-Mounted Type

Standard Type
- Standard
- With Shaft Guide
- With Shaft Guide Cover

Side-Mounted Type
- Standard
- With Shaft Guide
- With Shaft Guide Cover

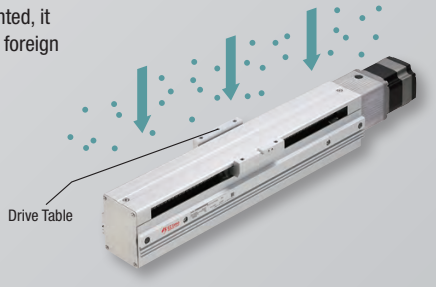
- Stroke: 50～300 mm
- Maximum Speed: 600 mm/s
- Maximum Transportable Mass: 60 kg (Horizontal), 30 kg (Vertical)
- Repetitive Positioning Accuracy: ± 0.02 mm

Designed to Achieve Great Usability

Table

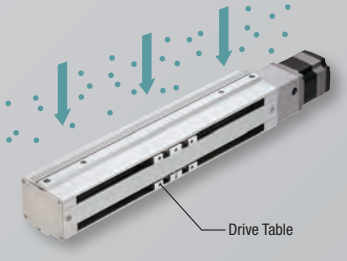
X Table

When horizontally mounted, it lessens the intrusion of foreign objects.



Y Table

When attached to the wall, it can lessen the intrusion of foreign objects.



With/without Sensor Rails

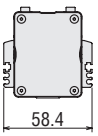
With Sensor Rails

A sensor (sold separately) can be fixed to the sensor rails on either side of the linear slide.

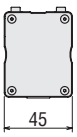
Without Sensor Rails NEW

More compact design can be achieved by reducing space for sensor rails.

EAS4
Y Table
With sensor rails



EAS4
Y Table
Without sensor rails



Shorter by 13 mm

What is FLEX?

FLEX is a collective term for products compatible with I/O control, Modbus (RTU) control, and FA network control via network converters.
These products enable simple connection and simple control, shortening the total lead time for system configuration.

Standard

To be compatible with the device of the customer, an external guide is required.

Equipped with shaft guide

The customer is not required to design or arrange for the parts, therefore reduce the time required to start up the equipment.

Equipped with shaft guide cover

The movable parts of the cylinder body are protected, thereby improving the safety of the device. It also helps prevent the spattering of grease on the shaft guide and also prevent the intrusion of foreign matter into linear bushing.

Features of Motorized Actuators

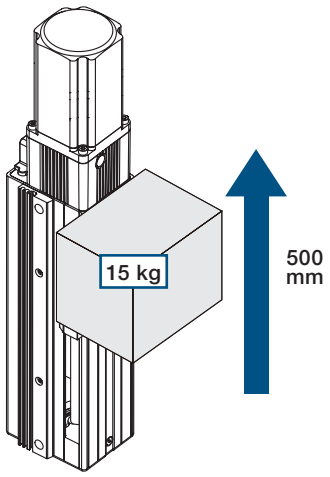
Supporting a wide range of speeds and loads: From low to high speed and from low to high load.
These high-performance motorized linear slides and motorized cylinders have become more easier to use.

High-speed Drive Even with Different Weight

High-speed drive is possible from light loads to heavy loads even during inching operation.

<Product used>
Product Name: **EAS6**
Lead: 6 mm
Power Supply Input: 200 VAC

<Operation example>
Transportable Mass: 15 kg
Positioning Distance: 500 mm
Drive Direction: Vertical



Performance at a glance in characteristics graph!

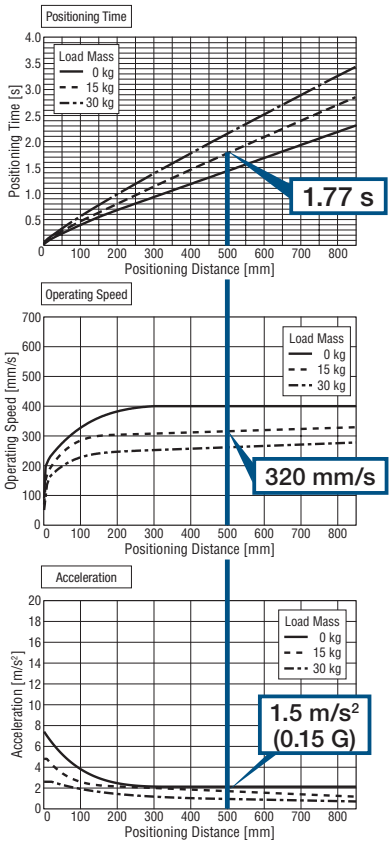
What Oriental Motor Can Provide

The positioning time, drive speed, and acceleration can be easily retrieved from the graph in this brochure.
A model can be selected while assuming a movement from the same graph, even if changing operating conditions, such as no load or inching.

High-speed drive with heavy load

Capable for high-speed drive when transporting a heavy load vertically.

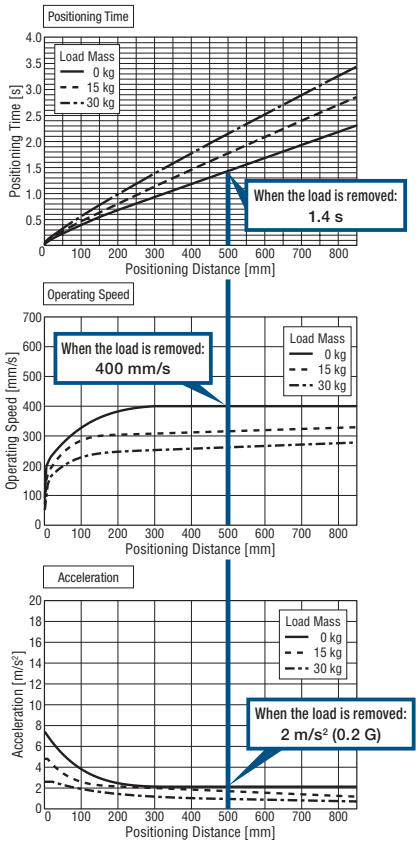
Transportable Mass: 15 kg
Positioning Distance: 500 mm
Positioning Time: 1.77 s
Operating Speed: 320 mm/s
Acceleration: 1.5 m/s² (0.15 G)



High-speed drive with light load

Capable for higher-speed drive when load lessens during the return.

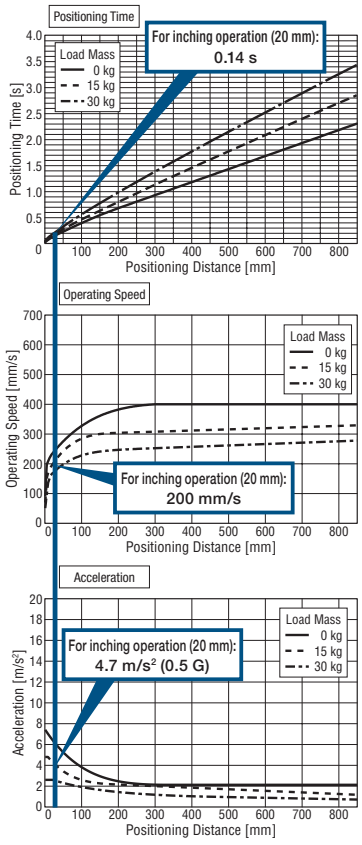
Transportable Mass: 0 kg
Positioning Distance: 500 mm
Positioning Time: 1.4 s
Operating Speed: 400 mm/s
Acceleration: 2 m/s² (0.2 G)



High-speed drive during inching operation

Capable for higher-speed drive during an inching operation for short distances.

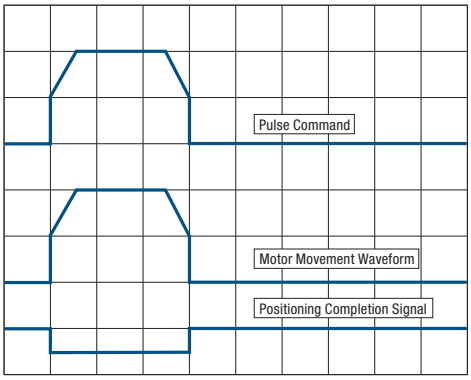
Transportable Mass: 15 kg
Positioning Distance: 20 mm
Positioning Time: 0.14 s
Operating Speed: 200 mm/s
Acceleration: 4.7 m/s² (0.5 G)



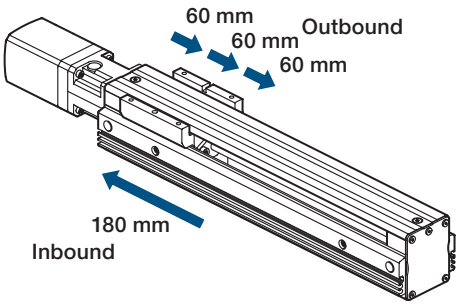
Quick Responsiveness

Using the high responsiveness of the closed loop stepping motor, short distance positioning can be achieve in a shorter time.

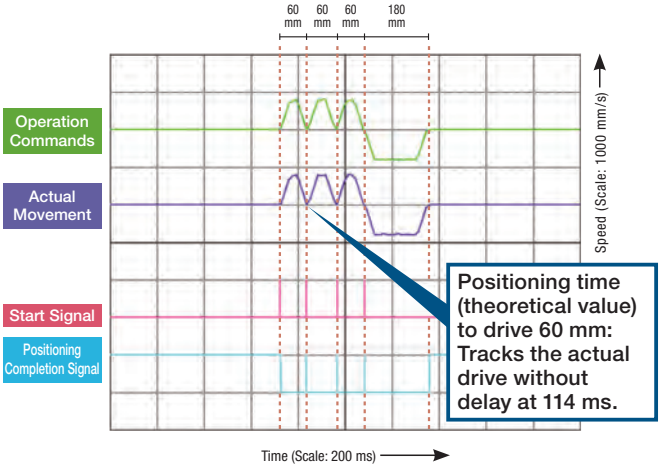
Closed-loop stepping motors operate synchronously with pulse commands and generate high torque with a compact body, and offer excellent acceleration performance and response.



<Product used>		<Operation example>	
Product Name:	**EAS4**	Horizontal	
Lead:	12 mm	Transportable Mass:	No load
Power Supply Input:	200 VAC	Inching Drive:	60 mm (Outbound 3 times), 180 mm (Inbound once)
		Operating Speed:	800 mm/s
		Acceleration:	20 m/s^2 (2 G)



Actual movement of the motorized linear slide table for the operation command



This Contributes to A Reduction in Equipment Tact Time.

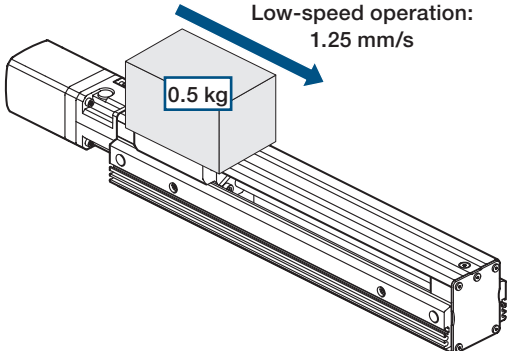
Low Speed Stability

With the microstep drive method of the closed-loop stepping motor and the smooth drive function*, the resolution is improved without mechanical factors such as the reduction gear mechanism. This results in minimal variation in speed, and the speed is continuously kept constant.

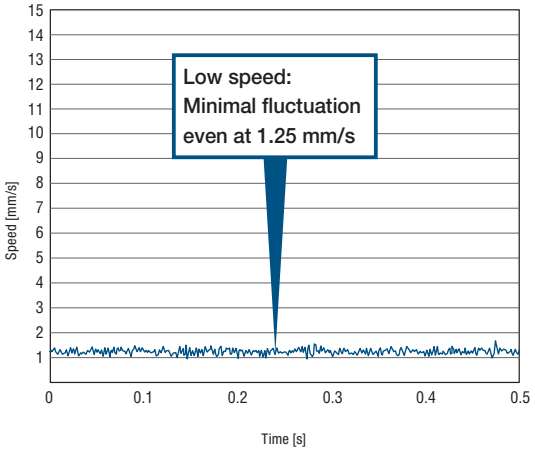
***Smooth drive function**

is a control method using the microstep drive to automatically keep the distance traveled and the travel speed the same as with the full step, without changing the pulse input setting.

<Product used>		<Operation example>	
Product Name:	**EAS4**	Horizontal Transportable Mass:	0.5 kg
Lead:	12 mm	Operating Current:	100 %
Power Supply Input:	200 VAC	Resolution:	0.01 mm/step
		Operating Speed:	1.25 mm/s



Actual speed of motorized linear slide table for the operation command (1.25 mm/s)

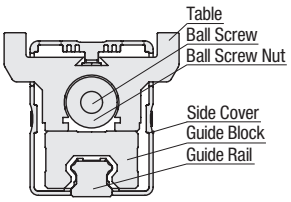


Minimal Speed Fluctuation Can Be Attained Even at A Low Speed, and Vibration Can Be Reduced.

Features of Motorized Actuators

In addition to the standard type, the side-mounted type with shorter overall length is provided.
Either type can be selected according to the installation space for more flexibility.

Compact, Highly Accurate and Highly Rigid Linear Slides



A motorized linear slide that uses ball screws and adopts a THK-made LM guide*. The highly accurate LM Guide is installed directly to the enclosure base of your equipment, making it ideal for applications that require parallelism. (Traveling parallelism of 0.03 mm)
Besides being compact, it is highly rigid and has achieved a large portable mass.

* "LM Guide" is a registered trademark of THK.

For **EAS6**

■ EAS6 Type Transportable Mass

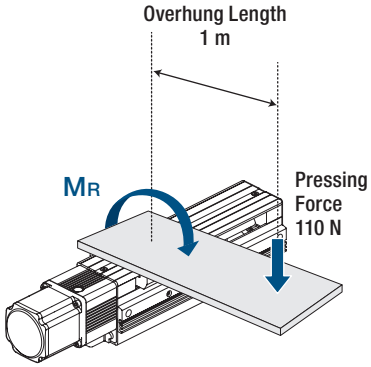
- Horizontal Maximum Transportable Mass: 60 kg
- Vertical Maximum Transportable Mass: 30 kg

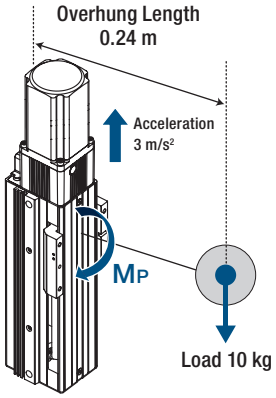
■ Horizontal Installation

Even if the overhung length is 1 m, the permissible pressing force is up to 110 N.

■ Vertical Installation

Even if the overhung length is 0.24 m, a load of 10 kg is transportable.





Static Permissible Moment
Permissible load moment on the linear guide while stopped

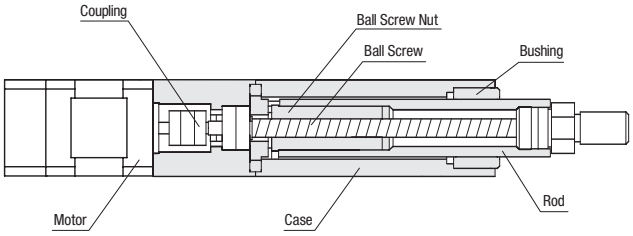
Dynamic Permissible Moment
Permissible load moment on the linear guide while in operation

The pressing force and the load are calculated from the static permissible moment 110.0 N·m, and the dynamic permissible moment 31.8 N·m of the **EAS6**. (The weight of the plate is not considered.)

Dynamic Permissible Moment [N·m]	MP: 31.8	MY: 10.3	MR: 40.6
Static Permissible Moment [N·m]	MP: 86.0	MY: 34.0	MR: 110.0

Compact/High-Thrust Cylinder

These motorized cylinders produce high thrust force even though their compact and lightweight bodies uses an aluminum rod. The unique structure suppresses vibration to achieve improved acceleration characteristics and high-speed positioning operation.



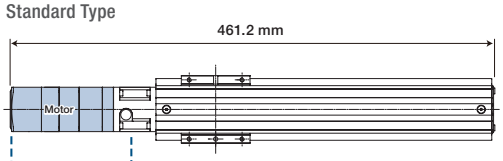
Motor Installation Direction

Standard Type
Side-Mounted Type
Same Price

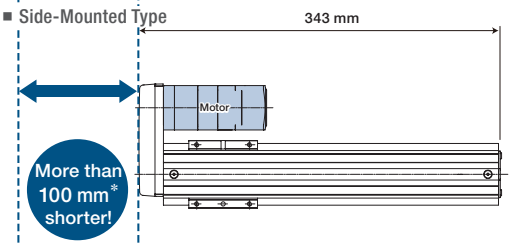
Motor side-mounted models are lined up in fully motorized linear slides/motorized cylinders. These models contribute in reducing the total length and saving space.
The Standard Type and the Side-Mounted Type are the same price.

Equipped with **EAS4** electromagnetic brake Stroke 200 mm

■ Standard Type



■ Side-Mounted Type

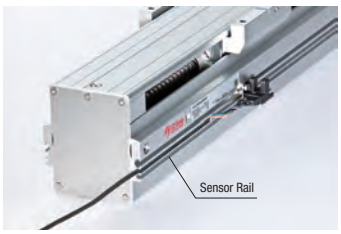


*For Electromagnetic Brake

Selectable from With/Without Sensor Rails

With Sensor Rails

A sensor (sold separately) can be fixed to the sensor rails on the either side of the linear slide.

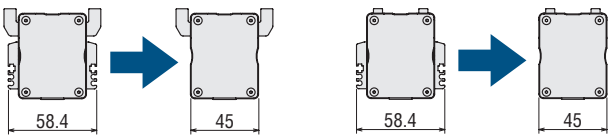


Without Sensor Rails NEW

This is recommended when not using a sensor or attaching it to a part other than the linear slide. This type contributes to space-saving and more compact design.

● **EAS4** X Table
With sensor rails Without sensor rails

● **EAS4** Y Table
With sensor rails Without sensor rails

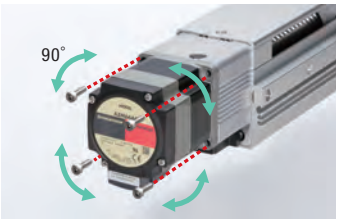


Shorter linear slide width by 13 mm

Cable Drawing Direction

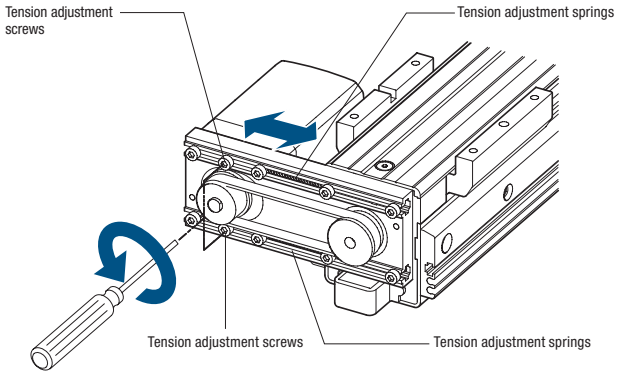
Changeable to 4 directions (3 directions for the Side-mounted type)

The direction of drawing the motor cable can be changed easily.
The cable comes out from the side of the motor, therefore space is saved while no space is required at the back of the motor.



Simple Belt Replacement (Side-mounted type)

The belt is easily replaced using Oriental Motor's unique belt tension adjustment mechanism.

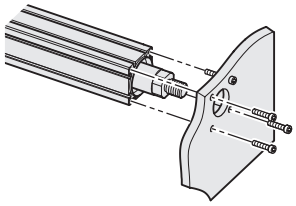


When the screw is loosened, the belt tension is adjusted to the appropriate tension using the force from the spring.
The above figure shows the side-mounted mechanism in the **EAS** Series, but it is also similar with the **EAC** Series.

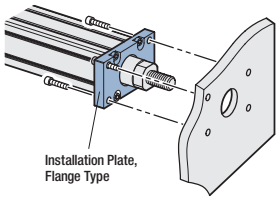
Flexible Installation of Motorized Cylinders

Motorized Cylinders **EAC** Series can be installed using the following methods:

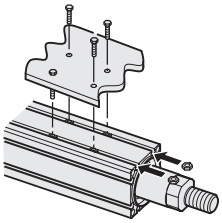
■ **Front Surface Installation (Direct installation)**



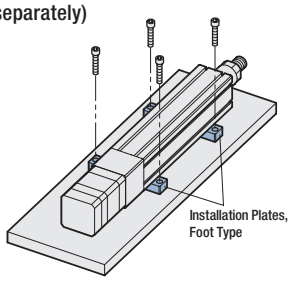
■ **Front Surface Installation (Installation plate flange type: Sold separately)**



■ **Side Surface Installation (Direct installation)**



■ **Side Surface Installation (Installation plate flange type: Sold separately)**



Battery-free Features of **AZ** Series Equipped with Absolute Sensor

Positioning in the absolute system does not require a battery.

Equipped with newly developed <ABZO sensor> using condensed advanced technologies.

High Reliability with Our Unique Control System

Battery-free **AZ** Series Equipped with Absolute Sensor

The **AZ** Series is closed loop stepping motor unit α_{STEP}.

■ Operation continues even at sudden load change or sudden acceleration

At normal times, this compact unit operates by the open loop control synchronously with pulse commands and generates high torques, having excellent acceleration and responsiveness. When overloaded, the current control immediately changes to the closed loop control and corrects the position.

■ Alarm signal output in case of abnormality

If continuously overloaded, an alarm signal is output. A signal is also output when the positioning operation is finished. These features provide high reliability.

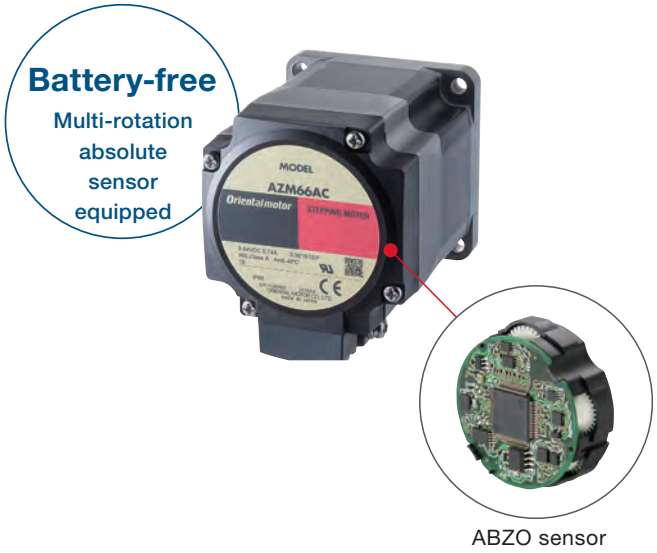
■ No tuning is required

At normal times, this unit operates by the open loop control. Therefore, even if the load fluctuates, the set movement is achieved without adjusting.

■ The stop position is retained without hunting

With the open loop control, the stepping motor normally does not cause hunting. This means it always enable the motor to maintain the stop position, thus no vibration will occur when stopping.

Oriental MOTOR has developed a compact, battery-free mechanical driven type absolute sensor <ABZO sensor> (Patented), improving productivity and reducing costs.



Newly Developed ABZO Sensor

■ Mechanical driven sensor

A mechanical driven sensor consisting of multiple gears recognizes the angle of each gear to detect positional information. This allows no battery to be required.

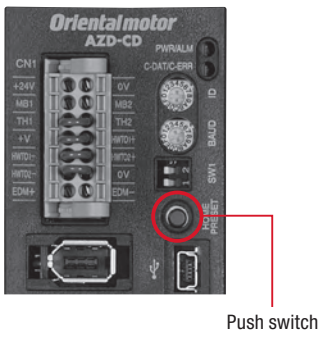
■ Multi-rotation absolute sensor

From the reference point of the origin, absolute position for ±900 rotations (for 1800 rotations) of the motor shaft can be detected.

■ How to set a home position

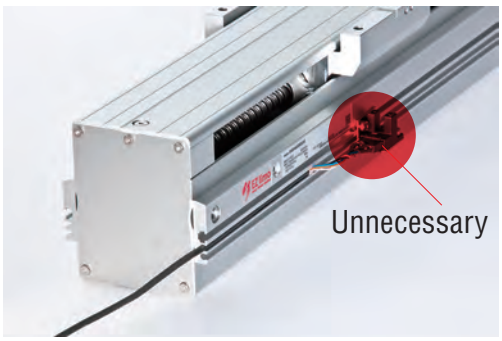
A home position can be easily set by pressing the switch on the driver, and the ABZO sensor saves it.

You can also use the data setting software (**MEXE02**) or external input signals to set a home position.



No External Sensor Required

**This series uses the absolute system,
which does not require external sensors such as a home sensor and a limit sensor.**



■ Cost reduction

The sensor cost and the wiring cost can be reduced, lowering the total cost of the system.

■ Wire-saving

Wire saving allows the equipment to be designed more flexibly.

■ The equipment is not affected by the malfunction of the sensor

There is no need to worry about the malfunction of the sensor, the failure of the sensor, or sensor wire disconnection.

■ Accuracy improvement in return to home

Returning to the home position is possible regardless of variation in the sensing of the home sensor, improving the accuracy of the home position.

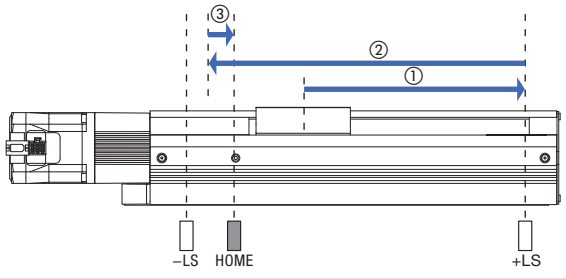
● If there is no limit sensor attached, you can use the software limit of the driver to prevent the threshold from being exceeding.

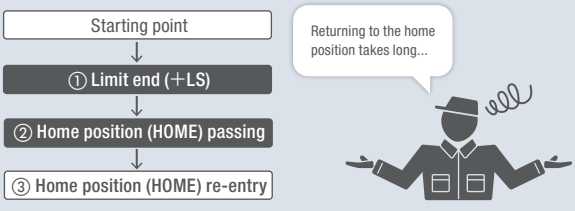
High-speed Return To Home

The return to home without using an external sensor is possible, enabling the return-to-home position at a high speed regardless of the sensor sensitivity. This leads to reduction in the machine cycle time.

Return-to-home operation by home sensor detection

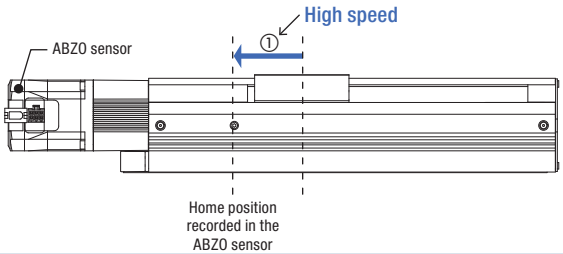
While detecting the limit sensor (±LS) or the home sensor (HOME), the home position is detected at a low speed.

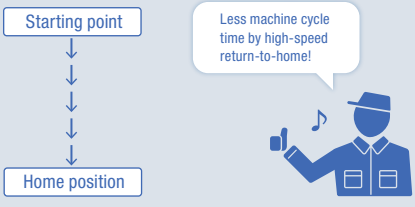




The return-to-home operation of products equipped with the **AZ** Series

There is no need to sense the limit sensor, allowing the device to move directly at a high speed to the home position stored in the ABZO sensor.

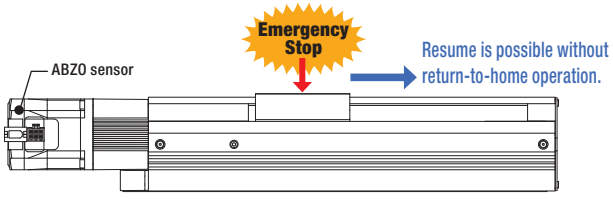




No Need to Return to The Home

Even if power is turned off during positioning operation, position information can be retained. In case of the built-in controller type, positioning operation can be resumed without returning to home when recover from emergency stop or backout at the production line.

For a built-in positioning type



Battery-free Features of **AZ** Series Equipped with Absolute Sensor

A highly functional driver provides smooth startup.
A network or multiple axes can be connected.

Battery-free

A mechanical driven sensor is used, require no battery.
The positional information is mechanically managed by the ABZO sensor. This can retain the position information even if the power is turned off or the cable between the motor and the driver is removed.

■ Less maintenance work

Do not require of battery replacement, able to reduce the maintenance work and costs.

■ Desired installation of the driver

There is no need of space for battery replacement, thus the driver can be installed in any location, and more flexible in layout design for the control panel or other devices.

■ Overseas transportation trouble-free

An ordinary battery discharges itself, so handle with care when it is transported over a long period of time for international or long-distance shipment. The ABZO sensor does not require a battery, and there is no time limit for retaining the positioning information. In addition, there is no need to consider the regulations applied to battery export.

■ The position is retained even if the cable between the motor and the driver is removed

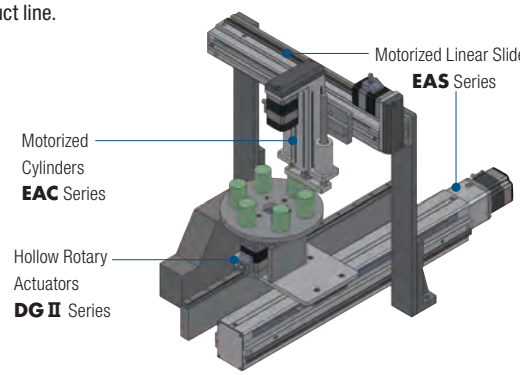
The position information is retained within the ABZO sensor.

Product Variation with Unified Control Method

All the product lines equipped with the **AZ** Series have unified controllability.

■ Application examples

The equipment of the following image can be built by using the **AZ** Series product line.



Integrating motor units also provides the following advantages.

- Integration of wiring
  The same pin assignment is used for I/O, requiring less time for electrical design and wiring.
- Integration of user's manuals
  The same user's manual is applied to the products as the products use the same driver.
  Less time required to read the user's manual and understand how to use the product and its functions.
- Integration of setting
  The same setting method is used, requiring less time to set drivers.
  In addition, the common use of **MEXE02**, data setting software, is possible.
- Integration of maintenance parts
  Drivers and cables are common to these products, minimizing the number of parts to be stored for maintenance.
  This leads to reduction in management cost (parts cost, management space).

Reduced Startup Time

Parameters necessary for the operation of the motorized linear slides and motorized cylinders are set in advance, require less time for startup.

Examples
- No calculation is required for setting the electronic gear for a different lead.
- The coordinate of the traveling direction does not require to set again regardless of the standard type/side-mounted type.

■ Operation setting of motorized linear slides

For the motorized linear slides equipped with the **AZ** Series, set the operation data in mm.

- Minimum Traveling Amount Set in mm
- Traveling Amount Set in mm
- Operating Speed Set in mm/s
- Acceleration Set in m/s^2

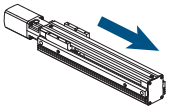
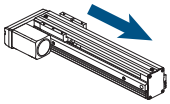
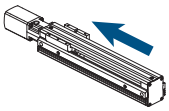
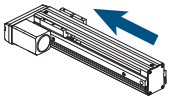
■ Minimum traveling amount

The factory setting of the minimum traveling amount is as follows:

- Built-in Controller Type Minimum Traveling Amount 0.01 mm
- Pulse Input Type Minimum Traveling Amount 0.01 mm/step

■ Traveling direction of the table

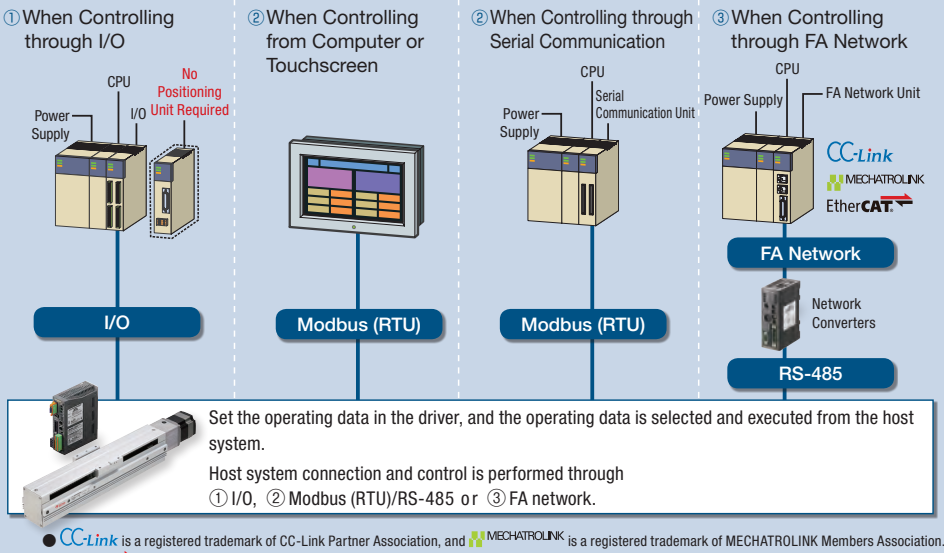
The traveling direction of the table is set by default as follows:

	Standard Type for Motor Installation	Side-Mounted Type for Motor Installation
When the traveling amount is set to the positive side	 Travels to the opposite side of the motor	 Travels to the opposite side of the motor
When the traveling amount is set to the negative side	 Travels to the motor side	 Travels to the motor side

2 Driver Types Selectable by System Configuration

Two types of drivers are provided for the **EAS** and **EAC** Series. Either type can be selected according to your upper-level system.

■ Built-in Controller Type FLEX



By using a network converter (sold separately), the CC-Link communication, the MECHATROLINK communication, and the EtherCAT communication can be supported. Operating data, parameter setting, and operation commands can be input for each communication. FLEX can be flexibly used on your network, reducing the design time.

■ Pulse Input Type

Data Setting Software **MEXE02**

Data setting, actual running, and check using the monitor functions are made easy.

Easy Operation by Using of the Data Setting Software

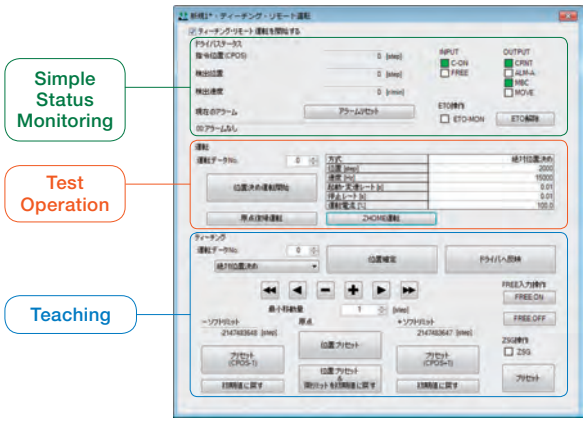
By using the data setting software, data settings, actual operation, and checks by the various monitor functions are also easily performed on the computer.

Data Setting Software **MEXE02**

Data Setting Software can be downloaded from the Oriental Motor website.
The CD-ROM is also available (for free).

● Teaching/Remote Operation

From the data setting software, you can easily set a home position or drive the motor. You can use this function for teaching or trial operation before connecting to the host system.



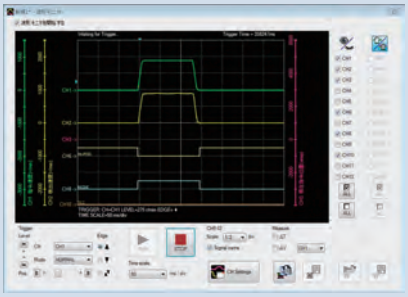
● I/O Test

You can monitor input signals, and output forcibly output signals. Use function for wire connection with the host system or check network I/O operations.

Various Monitor Functions

● Waveform Monitoring

Similar to using an oscilloscope, the motor drive condition and output signal status can be checked. Use this during the startup of the device and when adjusting.

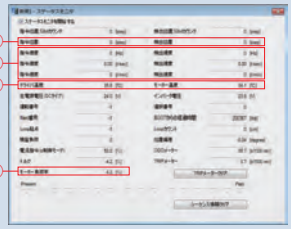


● Alarm Monitor

If an error occurs, you can check the error details, operation condition at the time of error occurrence, and measures to be taken.

● Status Monitoring

In addition to the speed, motor, temperature of the driver, and load factor, you can monitor other items including rotation amount accumulated from the start of use. Signals can be output for each item as needed, achieving efficient maintenance.



① The actual position is detected for the command position.
② The actual speed is detected for the command speed.
③ The temperatures of the encoder of the motor and the inside of the driver are detected.
④ This shows the current load factor to the output torque at the speed during rotation as 100%.

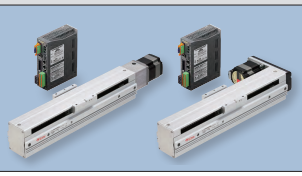
● Supporting multi-monitoring, the software allows you to perform remote operation or teaching while monitoring the operational status.

Motorized Linear Slides **EAS** Series/Motorized Cylinders **EAC** Series Lineup

Battery-free **AZ** Series Equipped with Absolute Sensor, and **AR** Series
The lineup includes 2 types of motor units to suit your specific application.

The products equipped with the AZ Series with built-in battery-free absolute sensor are added to the motorized linear slides EAS Series and the motorized cylinders EAC Series lineup.
From the lineup of the same type as the AR Series, you can select a motor unit appropriate for your specific application.

Motorized Linear Slides **EAS** Series

Series Name	Type			
	Standard Type		Side-Mounted Type	
	X Table	Y Table	X Table	Y Table
Stepping Motor Unit α_{STEP} Battery-free Built-in Absolute Sensor **AZ** Series Equipped 	●	●	●	●
Stepping Motor Unit α_{STEP} **AR** Series Equipped 	●	●	●	●

Motorized Cylinders **EAC** Series

Series Name	Type					
	Standard Type			Side-Mounted Type		
	Standard	With Shaft Guide	With Shaft Guide Cover	Standard	With Shaft Guide	With Shaft Guide Cover
Stepping Motor Unit α_{STEP} Battery-free Built-in Absolute Sensor **AZ** Series Equipped 	●	●	●	●	●	●
Stepping Motor Unit α_{STEP} **AR** Series Equipped 	●	●	●	●	●	●

Lineup

Battery-free Built-in Absolute Sensor **AZ** Series Equipped

Series Name Type Name	Product Width × Height Mass	Power Supply Input [VAC]	Lead [mm]	Stroke [mm] 100 200 300 400 500 600 700 800 900	Maximum Speed [mm/s] 100 200 300 400 500 600 700 800
EAS Series Standard Type	**EAS4** 58.4×60 mm* 1.8～4.0 kg	Single-Phase 100-120 Single-Phase/Three-Phase 200-240	12	50~700	800
			6	50~700	400
		DC 24/48	12	50~700	600
			6	50~700	300
	EAS6 75.4×83 mm* 3.9～8.8 kg	Single-Phase 100-120 Single-Phase/Three-Phase 200-240	12	50~850	800
			6	50~850	400
		DC 24/48	12	50~850	600
			6	50~850	300
EAS Series Side-Mounted Type	**EAS4R** **EAS4L** 58.4×60 mm* 1.8～4.0 kg	Single-Phase 100-120 Single-Phase/Three-Phase 200-240	12	50~700	800
			6	50~700	400
		DC 24/48	12	50~700	600
			6	50~700	300
	EAS6R **EAS6L** 75.4×83 mm* 3.9～8.8 kg	Single-Phase 100-120 Single-Phase/Three-Phase 200-240	12	50~850	800
			6	50~850	400
		DC 24/48	12	50~850	600
			6	50~850	300

* Without sensor rails, **EAS4**: 45×60 mm, **EAS6**: 62×83 mm

Series Name Type Name	Product Width × Height Mass	Power Supply Input [VAC]	Lead [mm]	Stroke [mm] 100 200 300 400 500 600 700 800 900	Maximum Speed [mm/s] 100 200 300 400 500 600 700 800
EAC Series Standard Type Standard	**EAC4** 42 × 42 mm 1.0 ～ 2.1 kg	Single-Phase 100-120 Single-Phase/Three-Phase 200-240	12	50~300	600
			6	50~300	300
		DC 24/48	12	50~300	600
			6	50~300	300
	EAC6 60 × 60 mm 2.6 ～ 4.9 kg	Single-Phase 100-120 Single-Phase/Three-Phase 200-240	12	50~300	600
			6	50~300	300
		DC 24/48	12	50~300	600
			6	50~300	300
EAC Series Standard Type	**EAC4W** 42 × 114 mm 1.7 ～ 3.5 kg	Single-Phase 100-120 Single-Phase/Three-Phase 200-240	12	50~300	600
With Shaft Guide Cover			6	50~300	300
		DC 24/48	12	50~300	600
			6	50~300	300
With Shaft Guide	**EAC6W** 60 × 156 mm 4.1 ～ 7.6 kg	Single-Phase 100-120 Single-Phase/Three-Phase 200-240	12	50~300	600
			6	50~300	300
		DC 24/48	12	50~300	600
			6	50~300	300
EAC Series Side-Mounted Type Standard	**EAC4R** 42 × 42 mm 1.0 ～ 2.1 kg	Single-Phase 100-120 Single-Phase/Three-Phase 200-240	12	50~300	600
			6	50~300	300
		DC 24/48	12	50~300	600
			6	50~300	300
	EAC6R 60 × 60 mm 2.6 ～ 4.9 kg	Single-Phase 100-120 Single-Phase/Three-Phase 200-240	12	50~300	600
			6	50~300	300
		DC 24/48	12	50~300	600
			6	50~300	300
EAC Series Side-Mounted Type	**EAC4RW** 42 × 114 mm 1.7 ～ 3.5 kg	Single-Phase 100-120 Single-Phase/Three-Phase 200-240	12	50~300	600
With Shaft Guide Cover			6	50~300	300
		DC 24/48	12	50~300	600
			6	50~300	300
With Shaft Guide	**EAC6RW** 60 × 156 mm 4.1 ～ 7.6 kg	Single-Phase 100-120 Single-Phase/Three-Phase 200-240	12	50~300	600
			6	50~300	300
		DC 24/48	12	50~300	600
			6	50~300	300

Upper Level: Dynamic Permissible Moment [N·m] Lower Level: Static Permissible Moment [N·m]			Horizontal Transportable Mass [kg]	Vertical Transportable Mass [kg]	Repetitive Positioning Accuracy [mm]
M_P	M_Y	M_R	10 20 30 40 50 60 70 80 90	10 20 30 40 50 60	
16.3 58.3	4.8 16.0	15.0 53.3	~15 ~30 ~15 ~30	~7 ~14 ~7 ~14	± 0.02
31.8 86.0	10.3 34.0	40.6 110.0	~30 ~60 ~30 ~60	~15 ~30 ~15 ~30	± 0.02
16.3 58.3	4.8 16.0	15.0 53.3	~15 ~30 ~15 ~30	~7 ~12.5 ~7 ~12.5	± 0.02
31.8 86.0	10.3 34.0	40.6 110.0	~30 ~60 ~30 ~60	~15 ~30 ~15 ~30	± 0.02

Thrust [N]	Pushing Force [N]	Horizontal Transportable Mass [kg]	Vertical Transportable Mass [kg]	Repetitive Positioning Accuracy [mm]
		10 20 30 40 50 60 70 80 90	10 20 30 40 50 60	
~ 70	100	~15	~7	± 0.02
~ 140	200	~30	~14	
~ 70	100	~15	~7	
~ 140	200	~30	~14	
~ 200	400	~30	~15	± 0.02
~ 400	500	~60	~30	
~ 200	400	~30	~15	
~ 400	500	~60	~30	
~ 70	100	~15	~6	± 0.02
~ 140	200	~30	~13	
~ 70	100	~15	~6	
~ 140	200	~30	~13	
~ 200	400	~30	~13	± 0.02
~ 400	500	~60	~28	
~ 200	400	~30	~13	
~ 400	500	~60	~28	
~ 70	100	~15	~7	± 0.02
~ 125	200	~30	~12.5	
~ 70	100	~15	~7	
~ 125	200	~30	~12.5	
~ 200	400	~30	~15	± 0.02
~ 360	500	~60	~30	
~ 200	400	~30	~15	
~ 360	500	~60	~30	
~ 70	100	~15	~6	± 0.02
~ 125	200	~30	~11.5	
~ 70	100	~15	~6	
~ 125	200	~30	~11.5	
~ 200	400	~30	~13	± 0.02
~ 360	500	~60	~28	
~ 200	400	~30	~13	
~ 360	500	~60	~28	

How to Read Specifications Table

Using the specifications of the motorized linear slide as example, the method of reading the specifications table is described below.

Motorized Linear Slide Specifications

①		②		③		⑤	
Drive System	Ball Screw			Minimum Traveling Amount [mm]	0.01	Dynamic Permissible Moment [N·m]	M_P:16.3 M_Y:4.8 M_R:15.0
Repetitive Positioning Accuracy [mm]	±0.02	④	Traveling Parallelism [mm]		0.03	⑥ Static Permissible Moment [N·m]	M_P:58.3 M_Y:16.0 M_R:53.3

Product Name	⑦ Lead [mm]	⑧ Transportable Mass [kg] Horizontal	Vertical	⑨ Thrust [N]	⑩ Pushing Force [N]	⑪ Holding Force [N]	Maximum Speed [mm/s] by Stroke 50～550 mm	⑫ 600 mm	650 mm	700 mm
EAS4③④-D⑥-AZAK⑩-⑪	12	～15	–	～70	100	70	600	550	460	400
EAS4③④-D⑥-AZMK⑩-⑪			～7							
EAS4③④-E⑥-AZAK⑩-⑪	6	～30	–	～140	200	140	300	270	220	200
EAS4③④-E⑥-AZMK⑩-⑪			～14							

①Drive System

Mechanism used to convert motor rotation to linear motion.

②Repetitive Positioning Accuracy

A value indicating the amount of error that is generated when positioning is performed repeatedly to the same position in the same direction (The repetitive positioning accuracy is measured at a constant temperature under a constant load).

③Minimum Traveling Amount

The minimum traveling amount when the table (rod) travels. (Factory setting)

④Traveling Parallelism*1

Runout widths in the vertical and lateral directions between the installing surface of the motorized linear slide and the top surface of the table.

⑤Dynamic Permissible Moment*2

The load moment acts on the linear guide if the load position is offset from the center of the table (rod).

The direction of action applies to three directions, (pitching (M_P), yawing (M_Y), and rolling (M_R)) depending on the position of the offset.

The dynamic permissible moment is the moment allowed during operation.

⑥Static Permissible Moment*2

The load moment acts on the linear guide if the load position is offset from the center of the table (rod).

The direction of action applies to three directions, (pitching (M_P), yawing (M_Y), and rolling (M_R)) depending on the position of the offset.

The static permissible moment is the moment allowed during static conditions.

⑦Lead

Distance the table (rod) moves linearly in one motor rotation.

⑧Transportable Mass

- Horizontal Direction

  Mass that can be moved under operating performance in the horizontal direction of the motorized linear slide (motorized cylinder).
- Vertical Direction

  Mass that can be moved under operating performance in the vertical direction of the motorized linear slide (motorized cylinder).

⑨Thrust

Force from the table (rod) that pushes the load when speed is constant.

⑩Pushing Force

The pressure applied to the load during the pushing operation.

⑪Holding Force

Holding force when the motor is stopped or when the electromagnetic brake is operating, while power is supplied.

⑫Maximum Speed by Stroke

Maximum speed allowed when transporting the maximum transportable mass. The length of stroke restricts the upper limit of speed.

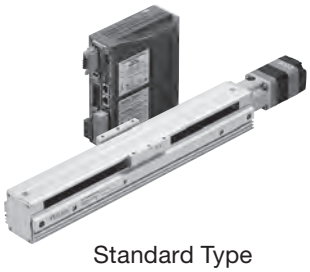
*1 The specifications are for motorized linear slides only.

*2 The motorized cylinders have specifications only for those with shaft guide and those with shaft guide cover.

Motorized Linear Slides

EAS Series α_{STEP} AZ Series Equipped

Side-Mounted Type
With Sensor Rails



Standard Type
With Sensor Rails

Standard Type
Without Sensor Rails

Product Line

AC Power Supply Input

◇Product Number Code

① Product Series	② Motor Installing Direction	③ Sensor Rail	④ Table		⑤ Lead	⑥ Stroke		⑦ Installed Motor	⑧ Motor Shape	⑨ Power Supply Input	⑩ Driver Type		⑪ Connection Cable*
EAS4	L	N	X	–	D	005	–	AZ	A	A	D	–	1
EAS4 **EAS6**	**L**: Left Side Mounted **R**: Right Side Mounted Blank: Standard	**N**: Without Sensor Rails Blank: With Sensor Rails	**X**: X Table **Y**: Y Table		**D**: 12 mm **E**: 6 mm	**005**: 50 mm **010**: 100 mm **015**: 150 mm ～ **085**: 850 mm (50 mm increments)		**AZ** Series	**A**: Single Shaft **M**: With Electromagnetic Brake	**A**: Single-Phase 100-120 VAC **C**: Single-Phase/ Three-Phase 200-240 VAC	**D**: Built-in Controller Type Blank: Pulse Input Type		Number: Length of included cable **1**: 1 m **2**: 2 m **3**: 3 m None: Connection cable not included

* Connection cables with a length of more than 3 m are available as accessories (sold separately).
Connection Cable Sets → Page 90

◇**EAS4** Standard Type/Side-Mounted Type (With sensor rails: Width 58.4 mm × Height 60 mm Without sensor rails: Width 45 mm × Height 60 mm)

②Motor Installing Direction (**L**, **R**, Blank), ③Sensor Rail (**N**, Blank), ④Table (**X**, **Y**), ⑤Lead (**D**, **E**), ⑨Same price regardless of the power supply input (**A**, **C**)

⑩Driver Type (**D**, Blank)	
⑧Motor Shape (**A**, **M**)	
⑪Connection Cable (**1**, **2**, **3**, Blank)	
⑥Stroke	50 mm (**005**)
	100 mm (**010**)
	150 mm (**015**)
	200 mm (**020**)
	250 mm (**025**)
	300 mm (**030**)
	350 mm (**035**)
	400 mm (**040**)
	450 mm (**045**)
	500 mm (**050**)
	550 mm (**055**)
	600 mm (**060**)
	650 mm (**065**)
	700 mm (**070**)

◇**EAS6** Standard Type/Side-Mounted Type (With sensor rails: Width 75.4 mm × Height 83 mm Without sensor rails: Width 62 mm × Height 83 mm)

②Motor Installing Direction (**L**, **R**, Blank), ③Sensor Rail (**N**, Blank), ④Table (**X**, **Y**), ⑤Lead (**D**, **E**), ⑨Same price regardless of the power supply input (**A**, **C**)

⑩Driver Type (**D**, Blank)	
⑧Motor Shape (**A**, **M**)	
⑪Connection Cable (**1**, **2**, **3**, Blank)	
⑥Stroke	50 mm (**005**)
	100 mm (**010**)
	150 mm (**015**)
	200 mm (**020**)
	250 mm (**025**)
	300 mm (**030**)
	350 mm (**035**)
	400 mm (**040**)
	450 mm (**045**)
	500 mm (**050**)
	550 mm (**055**)
	600 mm (**060**)
	650 mm (**065**)
	700 mm (**070**)
	750 mm (**075**)
	800 mm (**080**)
	850 mm (**085**)

DC Power Supply Input

◇Product Number Code

① Product Series	② Motor Installing Direction	③ Sensor Rail	④ Table		⑤ Lead	⑥ Stroke		⑦ Installed Motor	⑧ Motor Shape	⑨ Power Supply Input	⑩ Driver Type		⑪ Connection Cable*
EAS4	**L**	**N**	**X**	–	**D**	**005**	–	**AZ**	**A**	**K**	**D**	–	**3**
EAS4 **EAS6**	**L**: Left Side Mounted **R**: Right Side Mounted Blank: Standard	**N**: Without Sensor Rails Blank: With Sensor Rails	**X**: X Table **Y**: Y Table		**D**: 12 mm **E**: 6 mm	**005**: 50 mm **010**: 100 mm **015**: 150 mm ～ **085**: 850 mm (50 mm increments)		**AZ** Series	**A**: Single Shaft **M**: With Electromagnetic Brake	**K**: 24 VDC/48 VDC	**D**: Built-in Controller Type Blank: Pulse Input Type		Number: Length of included cable **1**: 1 m **2**: 2 m **3**: 3 m None: Connection cable not included

* Connection cables with a length of more than 3 m are available as accessories (sold separately). Connection Cable Sets → Page 92

◇EAS4 Standard Type/Side-Mounted Type (With sensor rails: Width 58.4 mm × Height 60 mm Without sensor rails: Width 45 mm × Height 60 mm)

②Motor Installing Direction (**L**, **R**, Blank), ③Sensor Rail (**N**, Blank), ④Table (**X**, **Y**), ⑤Same price regardless of the lead (**D**, **E**)

⑩Driver Type (**D**, Blank)	
⑧Motor Shape (**A**, **M**)	
⑪Connection Cable (**1**, **2**, **3**, Blank)	
⑥Stroke	50 mm (**005**)
	100 mm (**010**)
	150 mm (**015**)
	200 mm (**020**)
	250 mm (**025**)
	300 mm (**030**)
	350 mm (**035**)
	400 mm (**040**)
	450 mm (**045**)
	500 mm (**050**)
	550 mm (**055**)
	600 mm (**060**)
	650 mm (**065**)
	700 mm (**070**)

◇EAS6 Standard Type/Side-Mounted Type (With sensor rails: Width 75.4 mm × Height 83 mm Without sensor rails: Width 62 mm × Height 83 mm)

②Motor Installing Direction (**L**, **R**, Blank), ③Sensor Rail (**N**, Blank), ④Table (**X**, **Y**), ⑤Same price regardless of the lead (**D**, **E**)

⑩Driver Type (**D**, Blank)	
⑧Motor Shape (**A**, **M**)	
⑪Connection Cable (**1**, **2**, **3**, Blank)	
⑥Stroke	50 mm (**005**)
	100 mm (**010**)
	150 mm (**015**)
	200 mm (**020**)
	250 mm (**025**)
	300 mm (**030**)
	350 mm (**035**)
	400 mm (**040**)
	450 mm (**045**)
	500 mm (**050**)
	550 mm (**055**)
	600 mm (**060**)
	650 mm (**065**)
	700 mm (**070**)
	750 mm (**075**)
	800 mm (**080**)
	850 mm (**085**)

General Specifications

Motor (AZ Series) Specifications

		AC Power Supply Input	DC Power Supply Input
Heat-Resistant Class		130 (B) [Recognized as 105 (A) by the UL Standards for AC power supply input.]	
Insulation Resistance		The measured value is 100 MΩ or more when a 500 VDC megger is applied between the following locations: ・Case — Motor Windings ・Case — Electromagnetic Brake Windings*2	
Dielectric Strength Voltage		No abnormality is found with the following application for 1 minute: ・Case — Motor Windings 1.5 kVAC 50 Hz or 60 Hz ・Case — Electromagnetic Brake Windings*2 1.5 kVAC 50 Hz or 60 Hz	No abnormality is found with the following application for 1 minute: ・Case — Motor Windings 1.0 kVAC 50 Hz or 60 Hz ・Case — Electromagnetic Brake Windings*2 1.0 kVAC 50 Hz or 60 Hz
Operating Environment (In operation)	Ambient Temperature	0～+40°C (Non-freezing)	
	Ambient Humidity	85% or less (Non-condensing)	
	Atmosphere	Use in an area without corrosive gases and dust. The product should not be exposed to water, oil or other liquids.	
Degree of Protection*3		IP66 (Excluding installation surface of the motor and linear slides and motor connectors)	
Range of Multi-rotation Detection without Power Supplied		±900 rotations (1800 rotations)	

*1 AC power supply input only
*2 Electromagnetic brake type only
*3 Motor only

Note

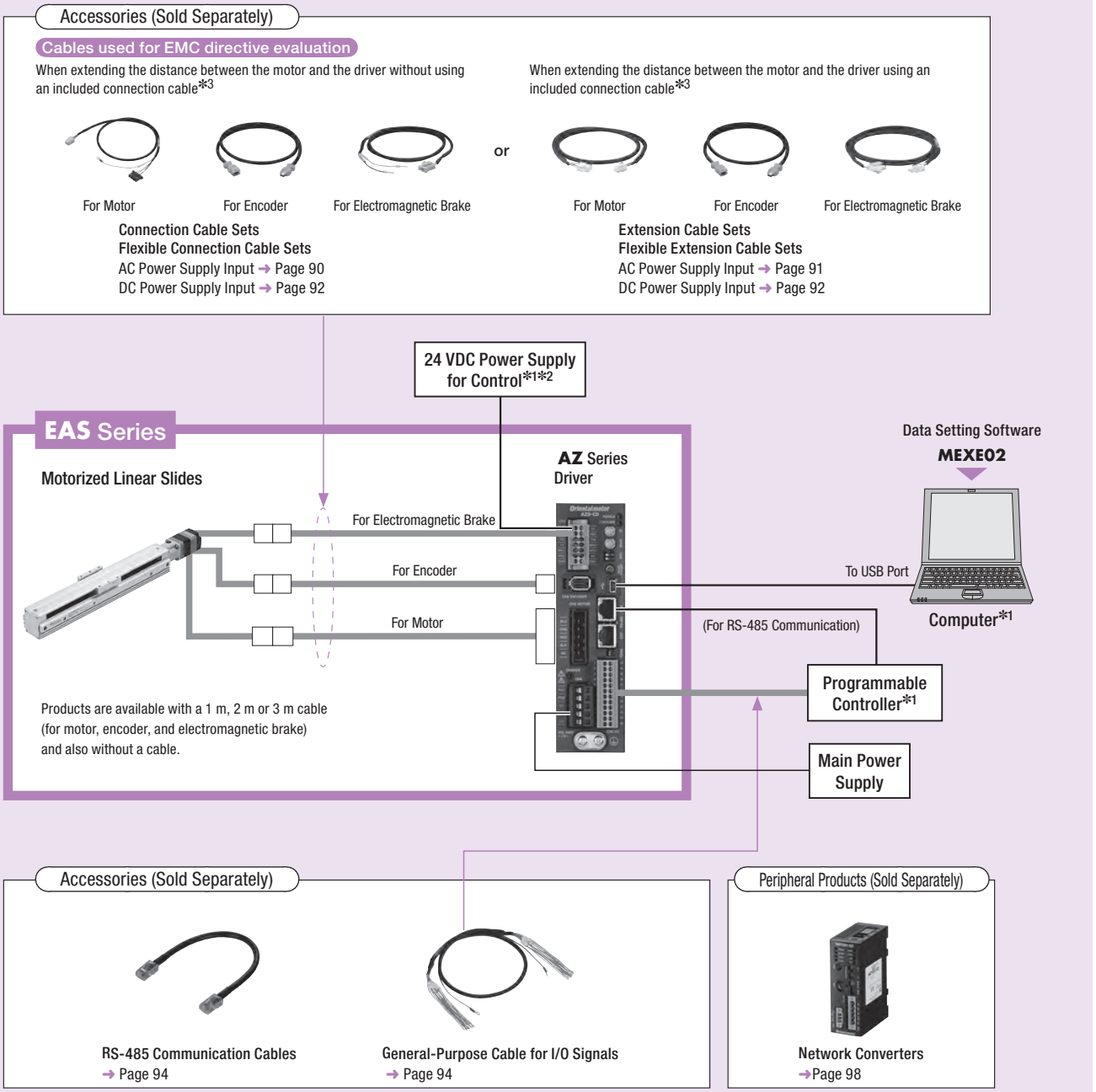
● Do not perform the insulation resistance test and the insulation pressure resistance test if the motorized cylinder (motor) and driver are connected.

System Configuration

Built-in controller type with an electromagnetic brake equipped with the **AZ** Series (AC power supply input and DC power supply input are both indicated. The photo shows a type for AC power supply input.)

An example of a configuration using I/O control or RS-485 communication is shown below.

*1 Not supplied.
*2 A product for DC power supply is unnecessary.
*3 Only with products supplied with a connection cable.



The functions and operation method of this product are common to the stepping motor and driver package **AZ** Series. For details on the functions and operation method, see the User's Manual (for Drivers, Functions) of the **AZ** Series.
The User's Manual for Drivers is included with the product, but the guide for Functions is not included. Contact the nearest Oriental Motor sales office or download from the Oriental Motor website. http://www.orientalmotor.com.sg

System Configuration Example

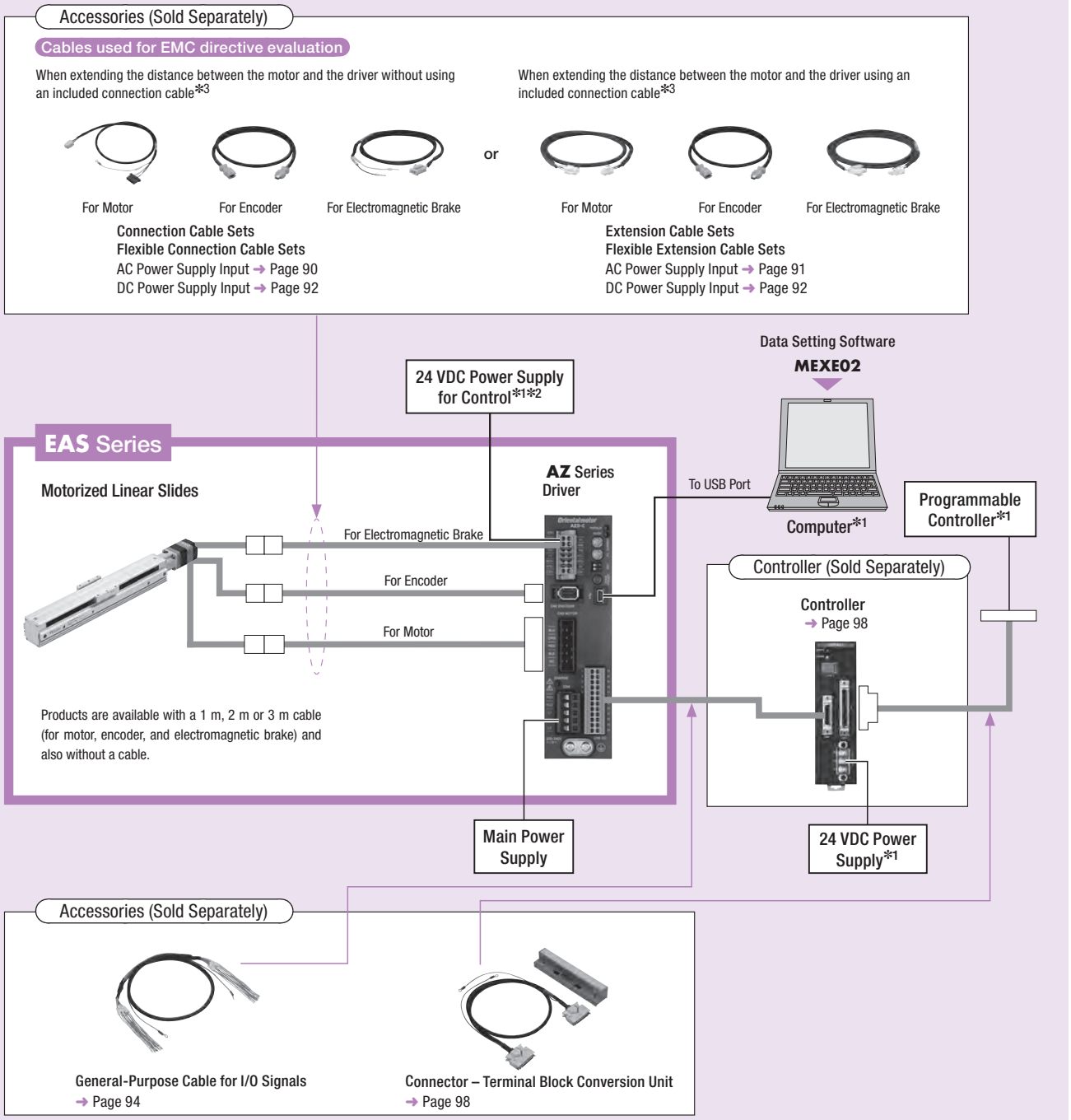
EAS Series	+	Sold Separately General-Purpose Cable for I/O Signals (1 m)
EAS4X-D050-AZMCD-3		**CC16D010B-1**

The system configuration shown above is an example. Other combinations are available.

Pulse input type with an electromagnetic brake equipped with the **AZ** Series (AC power supply input and DC power supply input are both indicated. The photo shows a type for AC power supply input.)

An example of a single-axis system configuration with the **EMP400** controller is shown below.

∗1 Not supplied.
∗2 A product for DC power supply is unnecessary.
∗3 Only with products supplied with a connection cable.



The functions and operation method of this product are common to the stepping motor and driver package **AZ** Series. For details on the functions and operation method, see the User's Manual (for Drivers, Functions) of the **AZ** Series.
The User's Manual for Drivers is included with the product, but the guide for Functions is not included. Contact the nearest Oriental Motor sales office or download from the Oriental Motor website. http://www.orientalmotor.com.sg

System Configuration Example

EAS Series		Sold Separately		
		Controller	General-Purpose Cable for I/O Signals (1 m)	Connector – Terminal Block Conversion Unit (1 m)
EAS4X-D050-AZMC-3	+	**EMP401-1**	**CC16D010B-1**	**CC50T10E**

The system configuration shown above is an example. Other combinations are available.

EAS4: Width 58.4 mm*×Height 60 mm Standard Type AC Power Supply Input

*With sensor rails. Without sensor rails: 45 mm

Maximum Transportable Mass: Horizontal 30 kg/Vertical 14 kg
Stroke: 50～700 mm (50 mm increments)

Motorized Linear Slide Specifications

Drive System	Ball Screw
Repetitive Positioning Accuracy [mm]	±0.02

Minimum Traveling Amount [mm]	0.01
Traveling Parallelism [mm]	0.03

Dynamic Permissible Moment [N·m]	MP:16.3 MY:4.8 MR:15.0
Static Permissible Moment [N·m]	MP:58.3 MY:16.0 MR:53.3

Product Name	Lead [mm]	Transportable Mass [kg]		Thrust [N]	Pushing Force [N]	Holding Force [N]	Maximum Speed [mm/s] by Stroke				
		Horizontal	Vertical				50～500 mm	550 mm	600 mm	650 mm	700 mm
EAS4③④-D⑥-AZA⑨⑩-⑪	12	～15	–	～70	100	70	800	650	550	460	400
EAS4③④-D⑥-AZM⑨⑩-⑪			～7								
EAS4③④-E⑥-AZA⑨⑩-⑪	6	～30	–	～140	200	140	400	320	270	220	200
EAS4③④-E⑥-AZM⑨⑩-⑪			～14								

- Symbols and numbers are substituted for ③, ④, ⑥, ⑨, ⑩ and ⑪ in the product names. For details, refer to "◇ Product Number Code" in Page 20.
- For reading the specifications table, refer to "How to Read Specifications Table" on Page 18.

Note

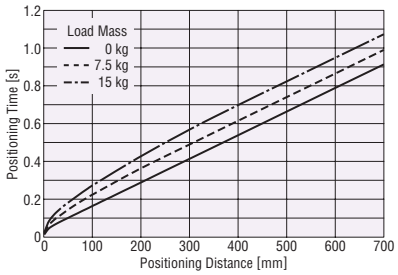
- In the case of upward pushing return-to-home, the home position may vary.
- The push-motion operation speed should be 25 mm/s or less and within the limit of the dynamic permissible moment.

Positioning Distance – Positioning Time

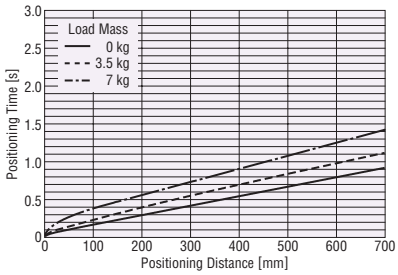
The positioning time (reference) can be checked from the positioning distance.
A reference value for the positioning time can be calculated by multiplying the positioning time calculated from the graph with the positioning time coefficient for the applicable stroke.
Refer to Page 107 for Operating Speed and Acceleration.

Lead: 12 mm

◇Horizontal Direction Installation



◇Vertical Direction Installation

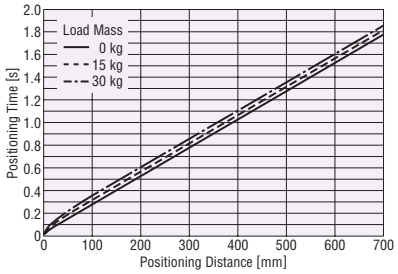


Positioning Time Coefficient

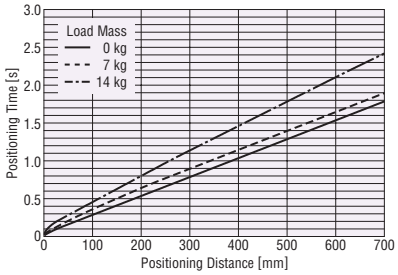
Stroke [mm]	Load Mass					
	Horizontal Direction Installation			Vertical Direction Installation		
	0 kg	7.5 kg	15 kg	0 kg	3.5 kg	7 kg
50～500	1.0	1.0	1.0	1.0	1.0	1.0
550	1.2	1.1	1.1	1.2	1.0	1.0
600	1.4	1.3	1.2	1.4	1.2	1.0
650	1.7	1.5	1.4	1.7	1.4	1.2
700	1.9	1.8	1.6	1.9	1.6	1.3

Lead: 6 mm

◇Horizontal Direction Installation



◇Vertical Direction Installation



Positioning Time Coefficient

Stroke [mm]	Load Mass					
	Horizontal Direction Installation			Vertical Direction Installation		
	0 kg	15 kg	30 kg	0 kg	7 kg	14 kg
50～500	1.0	1.0	1.0	1.0	1.0	1.0
550	1.2	1.2	1.2	1.2	1.2	1.0
600	1.5	1.4	1.4	1.5	1.4	1.1
650	1.8	1.7	1.7	1.8	1.7	1.3
700	2.0	1.9	1.9	2.0	1.9	1.5

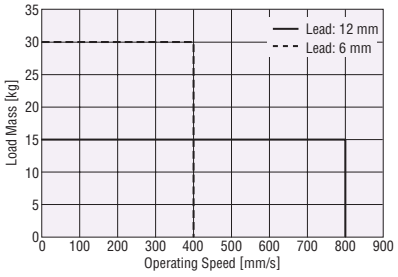
Note

- The positioning time in the graph does not include the settling time. Use a settling time of 0.15 s or less as a reference. (Settling time is adjustable by the velocity filter function.)
- The starting speed should be 6 mm/s or less.

Operating Speed – Transportable Mass

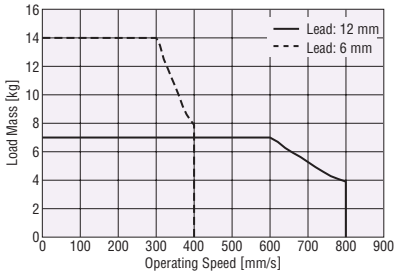
During Horizontal Installation

(Acceleration of 3 m/s²)



During Vertical Installation

(Acceleration of 2 m/s²)



Dimensions

Motorized Linear Slides
→ Page 30, 32

EAS4: Width 58.4 mm*×Height 60 mm Side-Mounted Type AC Power Supply Input

*With sensor rails. Without sensor rails: 45 mm

Maximum Transportable Mass: Horizontal 30 kg/Vertical 12.5 kg
Stroke: 50～700 mm (50 mm increments)

Motorized Linear Slide Specifications

Drive System	Ball Screw	Minimum Traveling Amount [mm]	0.01	Dynamic Permissible Moment [N·m]	MP:16.3 MY:4.8 MR:15.0
Repetitive Positioning Accuracy [mm]	±0.02	Traveling Parallelism [mm]	0.03	Static Permissible Moment [N·m]	MP:58.3 MY:16.0 MR:53.3

Product Name	Lead [mm]	Transportable Mass [kg]		Thrust [N]	Pushing Force [N]	Holding Force [N]	Maximum Speed [mm/s] by Stroke				
		Horizontal	Vertical				50～500 mm	550 mm	600 mm	650 mm	700 mm
EAS4②③④-D⑥-AZA⑨⑩-⑪	12	～15	–	～70	100	70	800	650	550	460	400
EAS4②③④-D⑥-AZM⑨⑩-⑪			～7								
EAS4②③④-E⑥-AZA⑨⑩-⑪	6	～30	–	～125	200	125	400	320	270	220	200
EAS4②③④-E⑥-AZM⑨⑩-⑪			～12.5								

- Symbols and numbers are substituted for ②, ③, ④, ⑥, ⑨, ⑩ and ⑪ in the product names. For details, refer to "◇ Product Number Code" in Page 20.
- For reading the specifications table, refer to "How to Read Specifications Table" on Page 18.

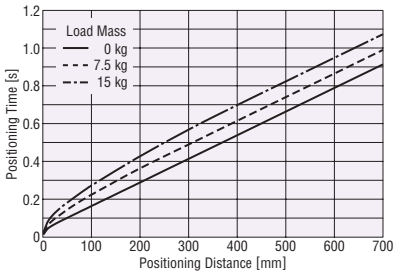
Note
- In the case of upward pushing return-to-home, the home position may vary.
- The push-motion operation speed should be 25 mm/s or less and within the limit of the dynamic permissible moment.

Positioning Distance – Positioning Time

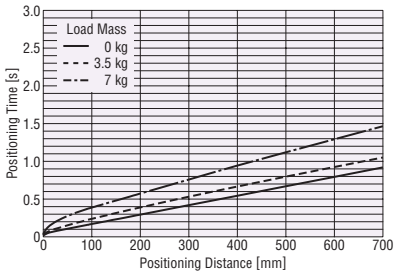
The positioning time (reference) can be checked from the positioning distance.
A reference value for the positioning time can be calculated by multiplying the positioning time calculated from the graph with the positioning time coefficient for the applicable stroke.
Refer to pages 107 and 108 for Operating Speed and Acceleration.

Lead: 12 mm

◇Horizontal Direction Installation



◇Vertical Direction Installation

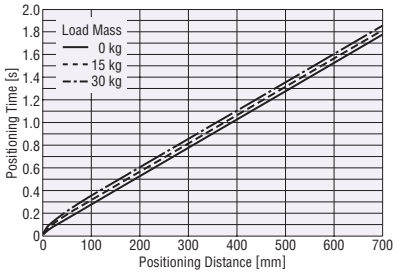


Positioning Time Coefficient

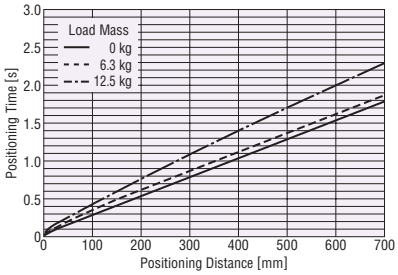
Stroke [mm]	Load Mass					
	Horizontal Direction Installation			Vertical Direction Installation		
	0 kg	7.5 kg	15 kg	0 kg	3.5 kg	7 kg
50～500	1.0	1.0	1.0	1.0	1.0	1.0
550	1.2	1.1	1.1	1.2	1.0	1.0
600	1.4	1.3	1.2	1.4	1.2	1.0
650	1.7	1.5	1.4	1.7	1.4	1.2
700	1.9	1.8	1.6	1.9	1.6	1.3

Lead: 6 mm

◇Horizontal Direction Installation



◇Vertical Direction Installation



Positioning Time Coefficient

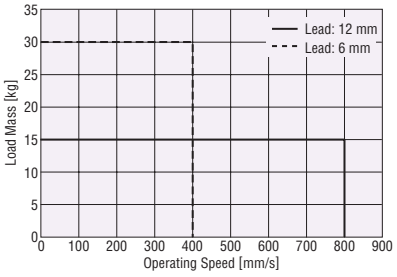
Stroke [mm]	Load Mass					
	Horizontal Direction Installation			Vertical Direction Installation		
	0 kg	15 kg	30 kg	0 kg	6.3 kg	12.5 kg
50～500	1.0	1.0	1.0	1.0	1.0	1.0
550	1.2	1.2	1.2	1.2	1.2	1.0
600	1.5	1.4	1.4	1.5	1.4	1.2
650	1.8	1.7	1.7	1.8	1.7	1.4
700	2.0	1.9	1.9	2.0	1.9	1.6

Note
- The positioning time in the graph does not include the settling time. Use a settling time of 0.15 s or less as a reference. (Settling time is adjustable by the velocity filter function.)
- The starting speed should be 6 mm/s or less.

Operating Speed – Transportable Mass

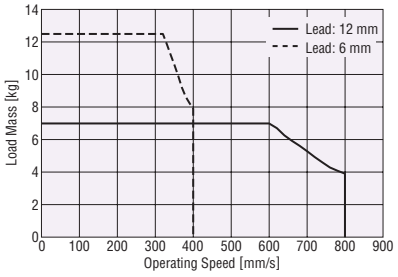
During Horizontal Installation

(Acceleration of 3 m/s²)



During Vertical Installation

(Acceleration of 2 m/s²)



Dimensions

Motorized Linear Slides → Page 31, 33

EAS4: Width 58.4 mm*×Height 60 mm Standard Type 24 VDC Input

*With sensor rails. Without sensor rails: 45 mm

Maximum Transportable Mass: Horizontal 30 kg/Vertical 14 kg
Stroke: 50～700 mm (50 mm increments)

Motorized Linear Slide Specifications

Drive System	Ball Screw
Repetitive Positioning Accuracy [mm]	±0.02

Minimum Traveling Amount [mm]	0.01
Traveling Parallelism [mm]	0.03

Dynamic Permissible Moment [N·m]	MP:16.3 MY:4.8 MR:15.0
Static Permissible Moment [N·m]	MP:58.3 MY:16.0 MR:53.3

Product Name	Lead [mm]	Transportable Mass [kg]		Thrust [N]	Pushing Force [N]	Holding Force [N]	Maximum Speed [mm/s] by Stroke			
		Horizontal	Vertical				50～550 mm	600 mm	650 mm	700 mm
EAS4③④-D⑥-AZAK⑩-⑪	12	～15	–	～70	100	70	600	550	460	400
EAS4③④-D⑥-AZMK⑩-⑪			～7							
EAS4③④-E⑥-AZAK⑩-⑪	6	～30	–	～140	200	140	300	270	220	200
EAS4③④-E⑥-AZMK⑩-⑪			～14							

- Symbols and numbers are substituted for ③, ④, ⑥, ⑩ and ⑪ in the product names. For details, refer to "◇ Product Number Code" in Page 21.
- For reading the specifications table, refer to "How to Read Specifications Table" on Page 18.
- For the specifications and characteristics for 48 VDC input, contact the nearest Oriental Motor sales office.

Note

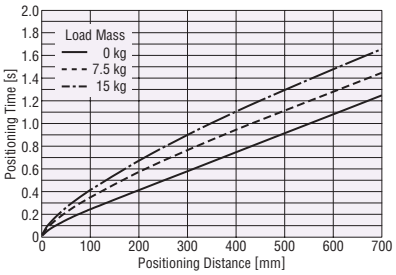
- In the case of upward pushing return-to-home, the home position may vary.
- The push-motion operation speed should be 25 mm/s or less and within the limit of the dynamic permissible moment.
- The maximum speed may decrease depending on the ambient temperature and motor cable length.

Positioning Distance – Positioning Time

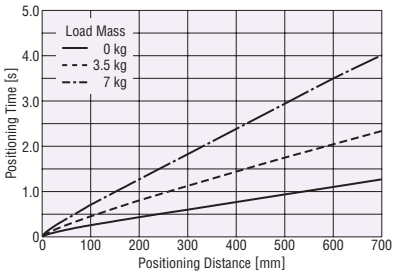
The positioning time (reference) can be checked from the positioning distance.
A reference value for the positioning time can be calculated by multiplying the positioning time calculated from the graph with the positioning time coefficient for the applicable stroke.
Refer to pages 108 and 109 for Operating Speed and Acceleration.

Lead: 12 mm

◇Horizontal Direction Installation



◇Vertical Direction Installation

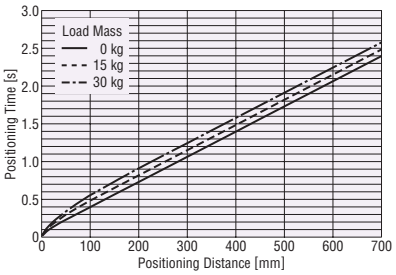


Positioning Time Coefficient

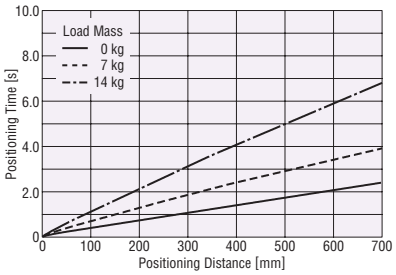
Stroke [mm]	Load Mass					
	Horizontal Direction Installation			Vertical Direction Installation		
	0 kg	7.5 kg	15 kg	0 kg	3.5 kg	7 kg
50～550	1.0	1.0	1.0	1.0	1.0	1.0
600	1.1	1.0	1.0	1.1	1.0	1.0
650	1.2	1.1	1.1	1.2	1.0	1.0
700	1.4	1.3	1.2	1.4	1.0	1.0

Lead: 6 mm

◇Horizontal Direction Installation



◇Vertical Direction Installation



Positioning Time Coefficient

Stroke [mm]	Load Mass					
	Horizontal Direction Installation			Vertical Direction Installation		
	0 kg	15 kg	30 kg	0 kg	7 kg	14 kg
50～550	1.0	1.0	1.0	1.0	1.0	1.0
600	1.1	1.1	1.1	1.1	1.0	1.0
650	1.3	1.3	1.3	1.3	1.0	1.0
700	1.5	1.4	1.4	1.5	1.0	1.0

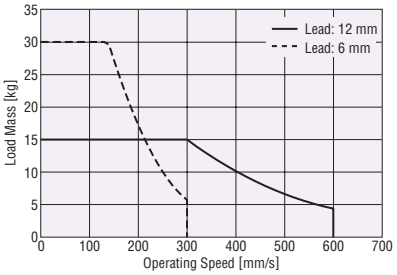
Note

- The positioning time in the graph does not include the settling time. Use a settling time of 0.15 s or less as a reference. (Settling time is adjustable by the velocity filter function.)
- The starting speed should be 6 mm/s or less.

Operating Speed – Transportable Mass

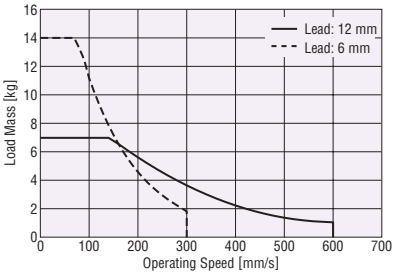
During Horizontal Installation

(Acceleration of 3 m/s²)



During Vertical Installation

(Acceleration of 2 m/s²)



Dimensions

Motorized Linear Slides
→ Page 30, 32

EAS4: Width 58.4 mm*×Height 60 mm Side-Mounted Type 24 VDC Input

*With sensor rails. Without sensor rails: 45 mm

Maximum Transportable Mass: Horizontal 30 kg/Vertical 12.5 kg
Stroke: 50～700 mm (50 mm increments)

Motorized Linear Slide Specifications

Drive System	Ball Screw	Minimum Traveling Amount [mm]	0.01	Dynamic Permissible Moment [N·m]	MP:16.3 MY:4.8 MR:15.0
Repetitive Positioning Accuracy [mm]	±0.02	Traveling Parallelism [mm]	0.03	Static Permissible Moment [N·m]	MP:58.3 MY:16.0 MR:53.3

Product Name	Lead [mm]	Transportable Mass [kg]		Thrust [N]	Pushing Force [N]	Holding Force [N]	Maximum Speed [mm/s] by Stroke			
		Horizontal	Vertical				50～550 mm	600 mm	650 mm	700 mm
EAS4②③④-D⑥-AZAK⑩-⑪	12	～15	–	～70	100	70	600	550	460	400
EAS4②③④-D⑥-AZMK⑩-⑪			～7							
EAS4②③④-E⑥-AZAK⑩-⑪	6	～30	–	～125	200	125	300	270	220	200
EAS4②③④-E⑥-AZMK⑩-⑪			～12.5							

- Symbols and numbers are substituted for ②, ③, ④, ⑥, ⑩ and ⑪ in the product names. For details, refer to "◇ Product Number Code" in Page 21.
- For reading the specifications table, refer to "How to Read Specifications Table" on Page 18.
- For the specifications and characteristics for 48 VDC input, contact the nearest Oriental Motor sales office.

Note

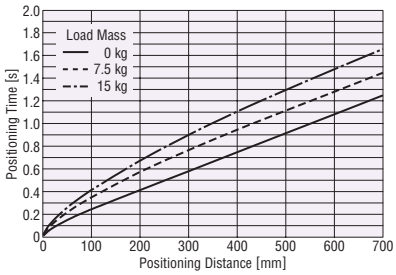
- In the case of upward pushing return-to-home, the home position may vary.
- The push-motion operation speed should be 25 mm/s or less and within the limit of the dynamic permissible moment.
- The maximum speed may decrease depending on the ambient temperature and motor cable length.

Positioning Distance – Positioning Time

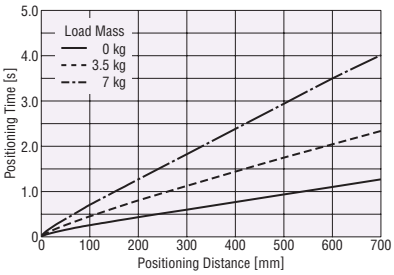
The positioning time (reference) can be checked from the positioning distance.
A reference value for the positioning time can be calculated by multiplying the positioning time calculated from the graph with the positioning time coefficient for the applicable stroke.
Refer to pages 108 and 109 for Operating Speed and Acceleration.

Lead: 12 mm

◇Horizontal Direction Installation



◇Vertical Direction Installation

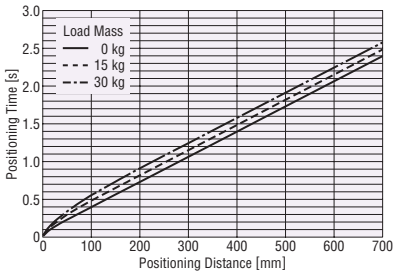


Positioning Time Coefficient

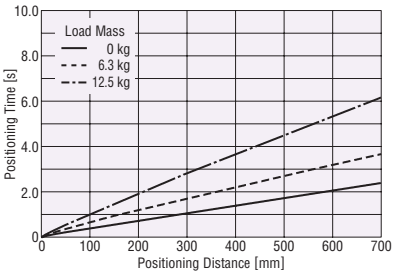
Stroke [mm]	Load Mass					
	Horizontal Direction Installation			Vertical Direction Installation		
	0 kg	7.5 kg	15 kg	0 kg	3.5 kg	7 kg
50～550	1.0	1.0	1.0	1.0	1.0	1.0
600	1.1	1.0	1.0	1.1	1.0	1.0
650	1.2	1.1	1.1	1.2	1.0	1.0
700	1.4	1.3	1.2	1.4	1.0	1.0

Lead: 6 mm

◇Horizontal Direction Installation



◇Vertical Direction Installation



Positioning Time Coefficient

Stroke [mm]	Load Mass					
	Horizontal Direction Installation			Vertical Direction Installation		
	0 kg	15 kg	30 kg	0 kg	6.3 kg	12.5 kg
50～550	1.0	1.0	1.0	1.0	1.0	1.0
600	1.1	1.1	1.1	1.1	1.0	1.0
650	1.3	1.3	1.3	1.3	1.0	1.0
700	1.5	1.4	1.4	1.5	1.0	1.0

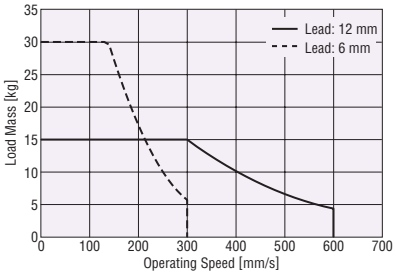
Note

- The positioning time in the graph does not include the settling time. Use a settling time of 0.15 s or less as a reference. (Settling time is adjustable by the velocity filter function.)
- The starting speed should be 6 mm/s or less.

Operating Speed – Transportable Mass

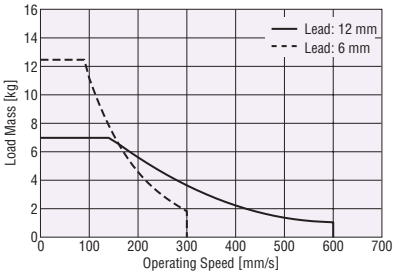
During Horizontal Installation

(Acceleration of 3 m/s²)



During Vertical Installation

(Acceleration of 2 m/s²)



Dimensions

Motorized Linear Slides → Page 31, 33

EAS6: Width 75.4 mm*×Height 83 mm Standard Type Side-Mounted Type AC Power Supply Input

*With sensor rails. Without sensor rails: 62 mm

Maximum Transportable Mass: Horizontal 60 kg/Vertical 30 kg
Stroke: 50～850 mm (50 mm increments)

Motorized Linear Slide Specifications

Drive System	Ball Screw
Repetitive Positioning Accuracy [mm]	±0.02

Minimum Traveling Amount [mm]	0.01
Traveling Parallelism [mm]	0.03

Dynamic Permissible Moment [N·m]	MP:31.8 MY:10.3 MR:40.6
Static Permissible Moment [N·m]	MP:86.0 MY:34.0 MR:110.0

Product Name	Lead [mm]	Transportable Mass [kg] Horizontal	Transportable Mass [kg] Vertical	Thrust [N]	Pushing Force [N]	Holding Force [N]	Maximum Speed [mm/s] by Stroke 50～550 mm	600 mm	650 mm	700 mm	750 mm	800 mm	850 mm
EAS6②③④-D⑥-AZA⑨⑩-⑪	12	～30	–	～200	400	200	800		640	550	470	420	360
EAS6②③④-D⑥-AZM⑨⑩-⑪			～15										
EAS6②③④-E⑥-AZA⑨⑩-⑪	6	～60	–	～400 (～360)	500	400 (360)	400	350	300	260	230	200	180
EAS6②③④-E⑥-AZM⑨⑩-⑪			～30										

- Symbols and numbers are substituted for ②, ③, ④, ⑥, ⑨, ⑩ and ⑪ in the product names. For details, refer to "◇ Product Number Code" in Page 20.
  The parentheses ( ) indicate specifications for the Side-Mounted Type.
- For reading the specifications table, refer to "How to Read Specifications Table" on Page 18.

Note

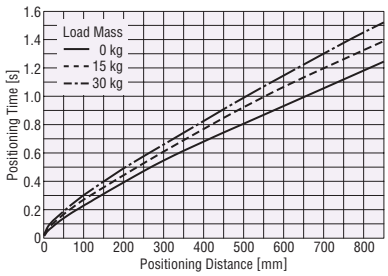
- In the case of upward pushing return-to-home, the home position may vary.
- The push-motion operation speed should be 25 mm/s or less and within the limit of the dynamic permissible moment.

Positioning Distance – Positioning Time

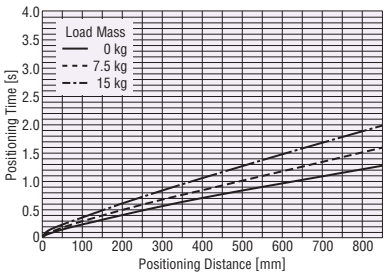
The positioning time (reference) can be checked from the positioning distance.
A reference value for the positioning time can be calculated by multiplying the positioning time calculated from the graph with the positioning time coefficient for the applicable stroke.
Refer to Page 110 for Operating Speed and Acceleration.

Lead: 12 mm

◇Horizontal Direction Installation



◇Vertical Direction Installation

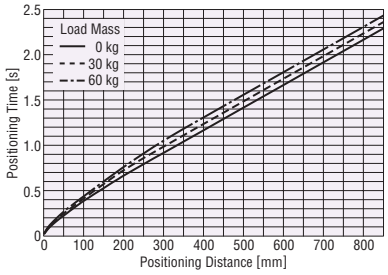


Positioning Time Coefficient

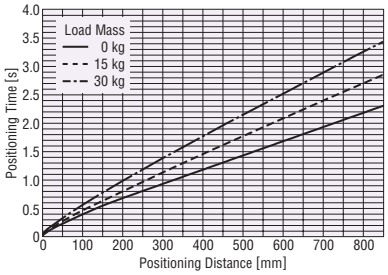
Stroke [mm]	Load Mass Horizontal Direction Installation 0 kg	15 kg	30 kg	Vertical Direction Installation 0 kg	7.5 kg	15 kg
50～600	1.0	1.0	1.0	1.0	1.0	1.0
650	1.1	1.0	1.0	1.1	1.0	1.0
700	1.3	1.1	1.0	1.2	1.1	1.0
750	1.5	1.3	1.2	1.4	1.2	1.0
800	1.6	1.5	1.4	1.6	1.3	1.1
850	1.9	1.7	1.6	1.9	1.5	1.2

Lead: 6 mm

◇Horizontal Direction Installation



◇Vertical Direction Installation



Positioning Time Coefficient

Stroke [mm]	Load Mass Horizontal Direction Installation 0 kg	30 kg	60 kg	Vertical Direction Installation 0 kg	15 kg	30 kg
50～550	1.0	1.0	1.0	1.0	1.0	1.0
600	1.1	1.1	1.1	1.1	1.0	1.0
650	1.2	1.2	1.2	1.2	1.0	1.0
700	1.4	1.4	1.3	1.4	1.2	1.0
750	1.6	1.6	1.5	1.6	1.3	1.1
800	1.9	1.8	1.7	1.8	1.5	1.3
850	2.1	2.0	2.0	2.1	1.7	1.4

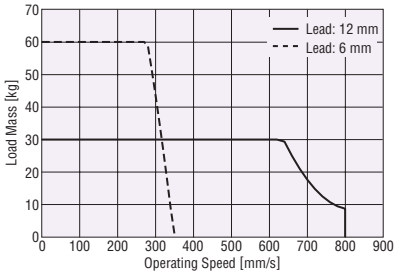
Note

- The positioning time in the graph does not include the settling time. Use a settling time of 0.15 s or less as a reference. (Settling time is adjustable by the velocity filter function.)
- The starting speed should be 6 mm/s or less.

Operating Speed – Transportable Mass

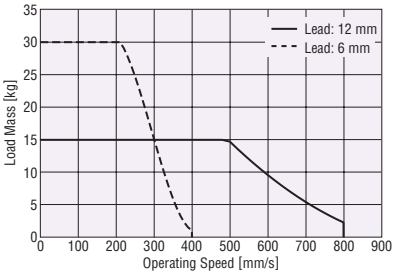
During Horizontal Installation

(Acceleration of 3 m/s²)



During Vertical Installation

(Acceleration of 2 m/s²)



Dimensions

Motorized Linear Slides
→ Page 34～37

EAS6: Width 75.4 mm*×Height 83 mm

Standard Type
Side-Mounted Type

24 VDC Input

*With sensor rails. Without sensor rails: 62 mm

Maximum Transportable Mass: Horizontal 60 kg/Vertical 30 kg
Stroke: 50～850 mm (50 mm increments)

Motorized Linear Slide Specifications

Drive System	Ball Screw
Repetitive Positioning Accuracy [mm]	±0.02

Minimum Traveling Amount [mm]	0.01
Traveling Parallelism [mm]	0.03

Dynamic Permissible Moment [N·m]	MP:31.8 MY:10.3 MR:40.6
Static Permissible Moment [N·m]	MP:86.0 MY:34.0 MR:110.0

Product Name	Lead [mm]	Transportable Mass [kg]		Thrust [N]	Pushing Force [N]	Holding Force [N]	Maximum Speed [mm/s] by Stroke				
		Horizontal	Vertical				50～650 mm	700 mm	750 mm	800 mm	850 mm
EAS6②③④-D⑥-AZAK⑩-⑪	12	～30	–	～200	400	200	600	550	470	420	360
EAS6②③④-D⑥-AZMK⑩-⑪			～15								
EAS6②③④-E⑥-AZAK⑩-⑪	6	～60	–	～400 (～360)	500	400 (360)	300	260	230	200	180
EAS6②③④-E⑥-AZMK⑩-⑪			～30								

- Symbols and numbers are substituted for ②, ③, ④, ⑥, ⑩ and ⑪ in the product names. For details, refer to "◇ Product Number Code" in Page 21.
  The parentheses ( ) indicate specifications for the Side-Mounted Type.
- For reading the specifications table, refer to "How to Read Specifications Table" on Page 18.
- For the specifications and characteristics for 48 VDC input, contact the nearest Oriental Motor sales office.

Note

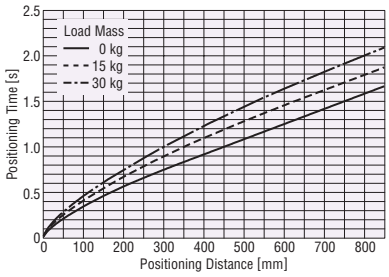
- In the case of upward pushing return-to-home, the home position may vary.
- The push-motion operation speed should be 25 mm/s or less and within the limit of the dynamic permissible moment.
- The maximum speed may decrease depending on the ambient temperature and motor cable length.

Positioning Distance – Positioning Time

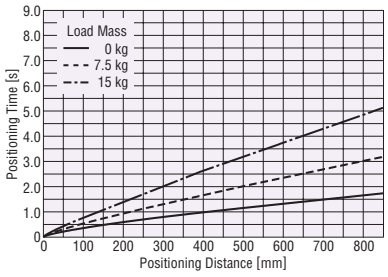
The positioning time (reference) can be checked from the positioning distance.
A reference value for the positioning time can be calculated by multiplying the positioning time calculated from the graph with the positioning time coefficient for the applicable stroke.
Refer to Page 111 for Operating Speed and Acceleration.

Lead: 12 mm

◇Horizontal Direction Installation



◇Vertical Direction Installation

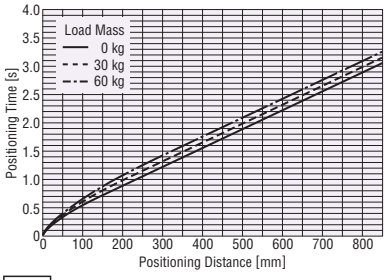


Positioning Time Coefficient

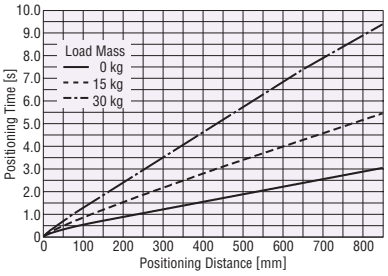
Stroke [mm]	Load Mass					
	Horizontal Direction Installation			Vertical Direction Installation		
	0 kg	15 kg	30 kg	0 kg	7.5 kg	15 kg
50～650	1.0	1.0	1.0	1.0	1.0	1.0
700	1.0	1.0	1.0	1.0	1.0	1.0
750	1.2	1.1	1.0	1.1	1.0	1.0
800	1.3	1.2	1.1	1.2	1.0	1.0
850	1.5	1.3	1.2	1.4	1.0	1.0

Lead: 6 mm

◇Horizontal Direction Installation



◇Vertical Direction Installation



Positioning Time Coefficient

Stroke [mm]	Load Mass					
	Horizontal Direction Installation			Vertical Direction Installation		
	0 kg	30 kg	60 kg	0 kg	15 kg	30 kg
50～650	1.0	1.0	1.0	1.0	1.0	1.0
700	1.1	1.1	1.1	1.1	1.0	1.0
750	1.2	1.2	1.2	1.2	1.0	1.0
800	1.4	1.4	1.3	1.4	1.0	1.0
850	1.6	1.5	1.5	1.6	1.0	1.0

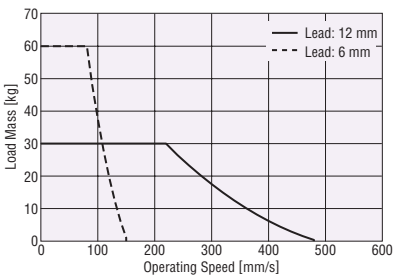
Note

- The positioning time in the graph does not include the settling time. Use a settling time of 0.15 s or less as a reference. (Settling time is adjustable by the velocity filter function.)
- The starting speed should be 6 mm/s or less.

Operating Speed – Transportable Mass

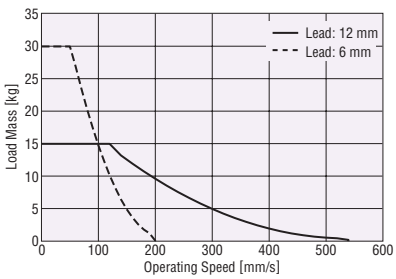
During Horizontal Installation

(Acceleration of 3 m/s²)



During Vertical Installation

(Acceleration of 2 m/s²)



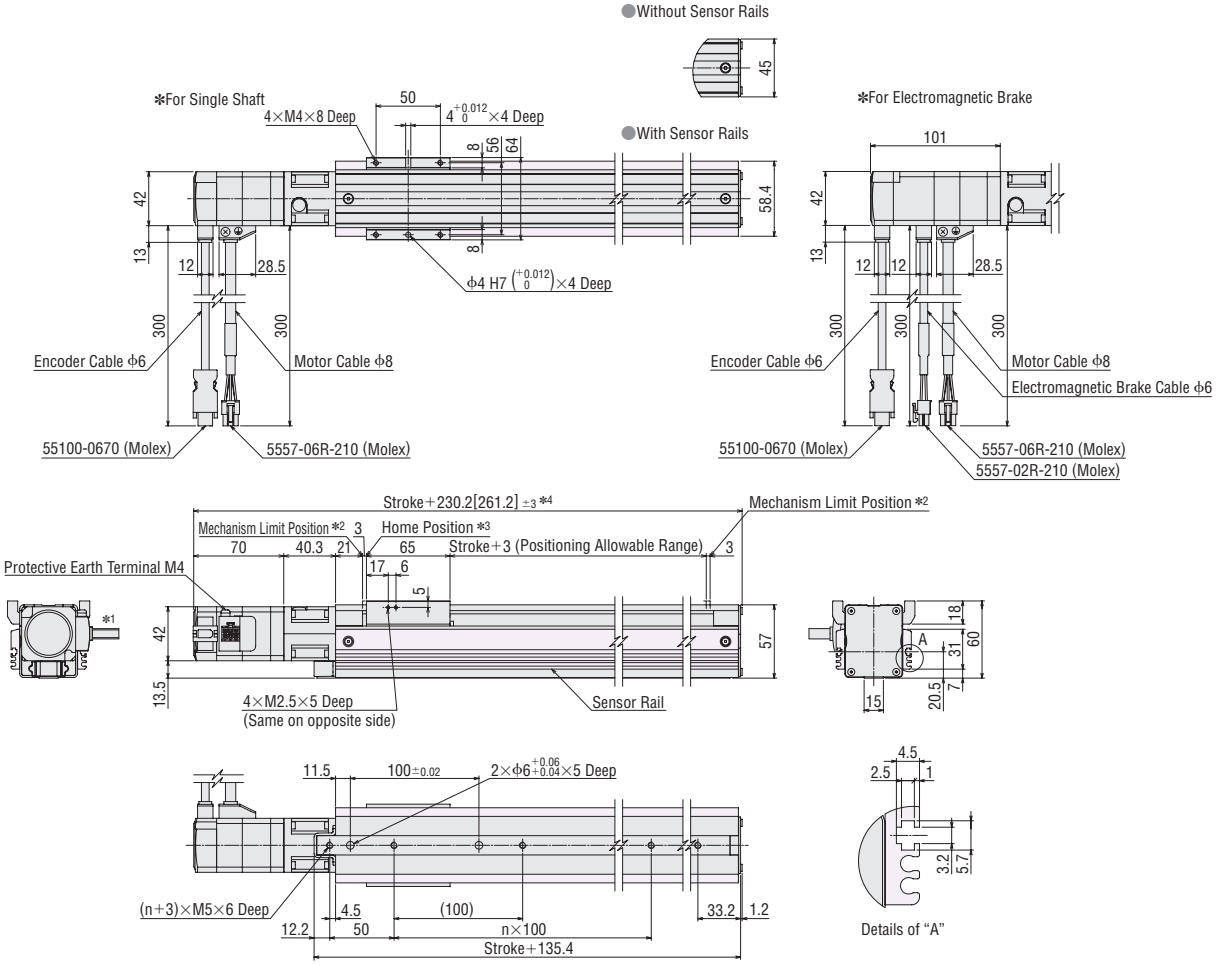
Dimensions

Motorized Linear Slides → Page 34～37

Dimensions (Unit = mm)

Motorized Linear Slides

◇EAS4 Standard Type X Table



*1 The motor cable outlet direction can be changed in 90° intervals in four directions.

*2 During the pushing return-to-home operation, the table moves to the position limit of the mechanism.

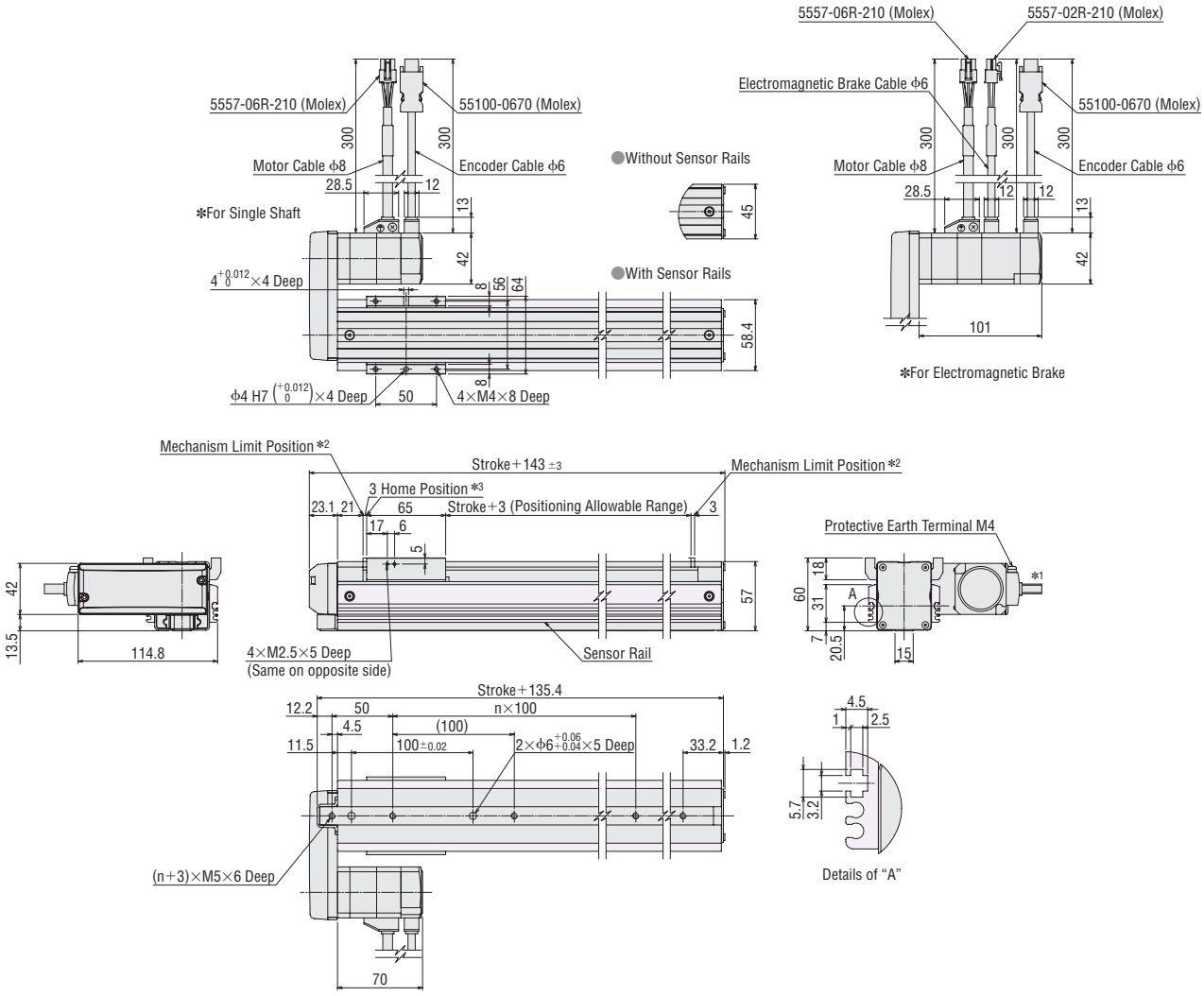
*3 When using an accessory sensor, the home position differs.

*4 The brackets [ ] indicate the value for a product with an electromagnetic brake.

Stroke [mm]			50	100	150	200	250	300	350	400	450	500	550	600	650	700
Hole Coefficient (n)			1	1	2	2	3	3	4	4	5	5	6	6	7	7
Mass [kg]	With Sensor Rails	Single Shaft	1.8	1.9	2.1	2.2	2.4	2.5	2.7	2.9	3.0	3.2	3.4	3.5	3.7	3.8
		Electromagnetic Brake Type	2.0	2.1	2.3	2.4	2.6	2.7	2.9	3.1	3.2	3.4	3.6	3.7	3.9	4.0
	Without Sensor Rails	Single Shaft	1.6	1.7	1.9	2.0	2.1	2.2	2.3	2.5	2.6	2.7	2.8	2.9	3.0	3.2
		Electromagnetic Brake Type	1.8	1.9	2.1	2.2	2.3	2.4	2.5	2.7	2.8	2.9	3.0	3.1	3.2	3.4

For CAD data, please download from the Oriental Motor website.
http://www.orientalmotor.com.sg

◇**EAS4** Side-Mounted Type (Left side mounted) **X** Table



✻1 The motor cable outlet direction can be changed in 90˚ intervals in three directions.

✻2 During the pushing return-to-home operation, the table moves to the position limit of the mechanism.

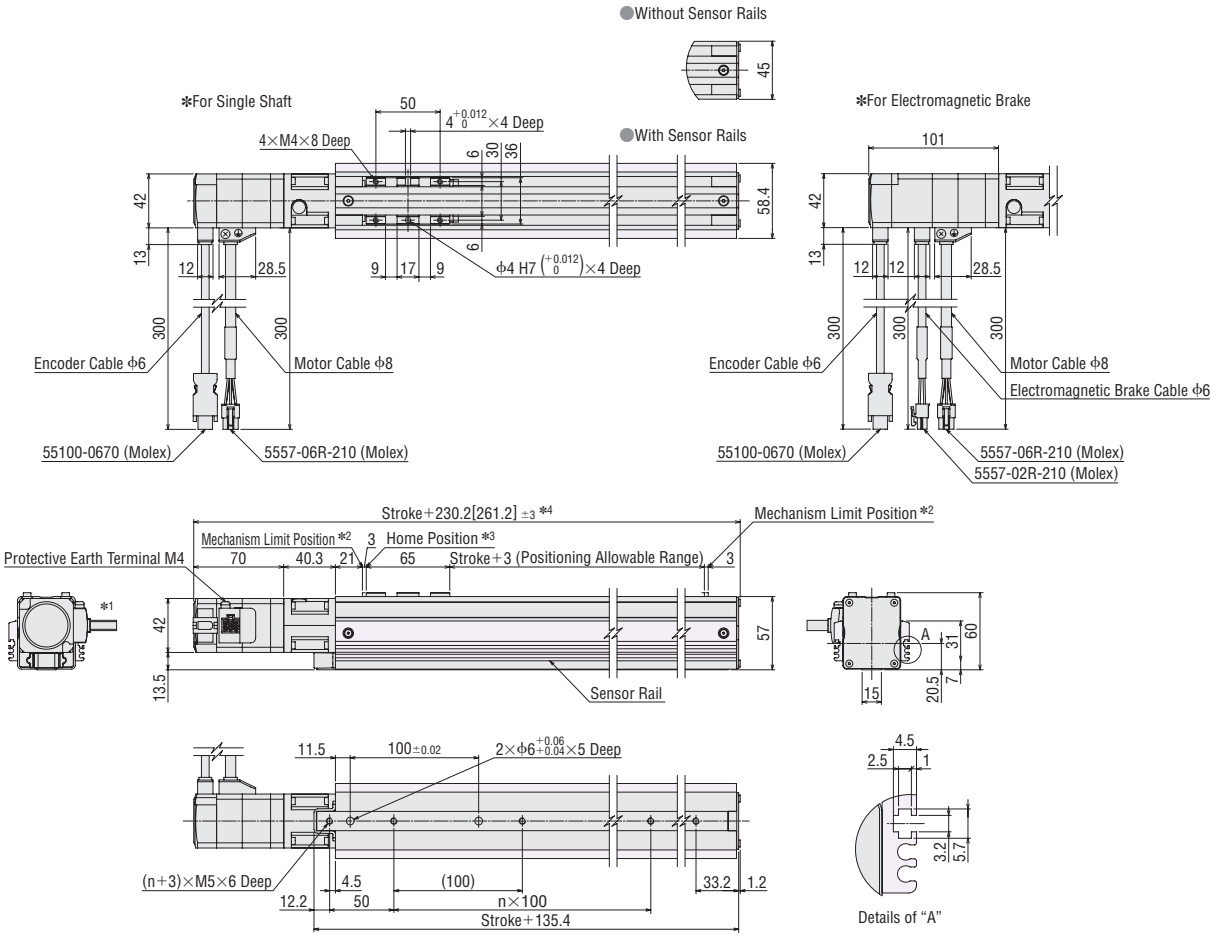
✻3 When using an accessory sensor, the home position differs.

● The above figure is an outline drawing of the motor installation direction for the type left side mounted. For the type right side mounted, the motor is located on the opposite side if the linear slide is centered.

Stroke [mm]			50	100	150	200	250	300	350	400	450	500	550	600	650	700
Hole Coefficient (n)			1	1	2	2	3	3	4	4	5	5	6	6	7	7
Mass [kg]	With Sensor Rails	Single Shaft	1.8	1.9	2.1	2.2	2.4	2.5	2.7	2.9	3.0	3.2	3.4	3.5	3.7	3.8
		Electromagnetic Brake Type	2.0	2.1	2.3	2.4	2.6	2.7	2.9	3.1	3.2	3.4	3.6	3.7	3.9	4.0
	Without Sensor Rails	Single Shaft	1.6	1.7	1.9	2.0	2.1	2.2	2.3	2.5	2.6	2.7	2.8	2.9	3.0	3.2
		Electromagnetic Brake Type	1.8	1.9	2.1	2.2	2.3	2.4	2.5	2.7	2.8	2.9	3.0	3.1	3.2	3.4

● For CAD data, please download from the Oriental Motor website.
http://www.orientalmotor.com.sg

◇**EAS4** Standard Type **Y** Table

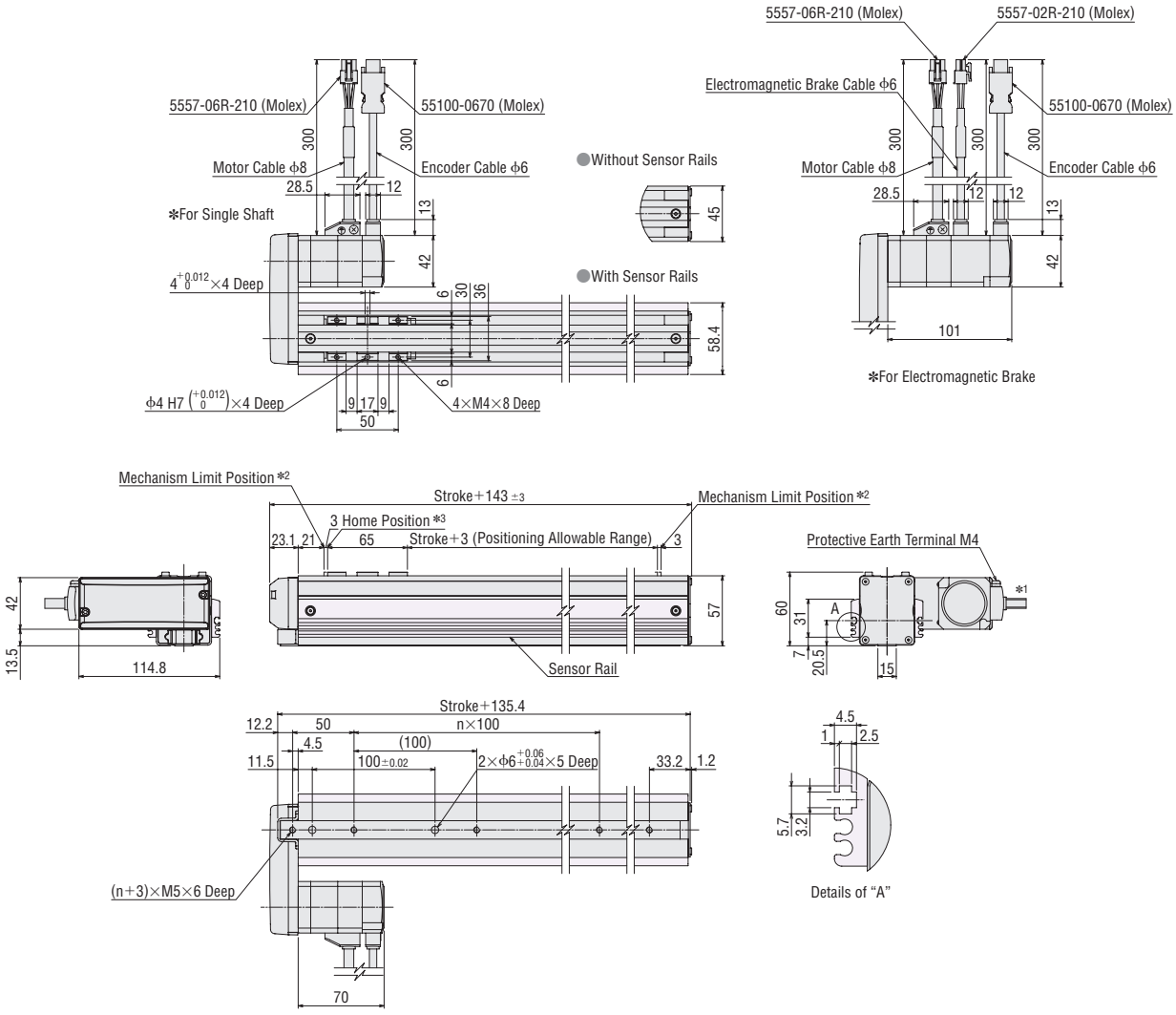


✻1 The motor cable outlet direction can be changed in 90° intervals in four directions.
✻2 During the pushing return-to-home operation, the table moves to the position limit of the mechanism.
✻3 When using an accessory sensor, the home position differs.
✻4 The brackets [ ] indicate the value for a product with an electromagnetic brake.

Stroke [mm]			50	100	150	200	250	300	350	400	450	500	550	600	650	700
Hole Coefficient (n)			1	1	2	2	3	3	4	4	5	5	6	6	7	7
Mass [kg]	With Sensor Rails	Single Shaft	1.8	1.9	2.1	2.2	2.4	2.5	2.7	2.9	3.0	3.2	3.4	3.5	3.7	3.8
		Electromagnetic Brake Type	2.0	2.1	2.3	2.4	2.6	2.7	2.9	3.1	3.2	3.4	3.6	3.7	3.9	4.0
	Without Sensor Rails	Single Shaft	1.6	1.7	1.9	2.0	2.1	2.2	2.3	2.5	2.6	2.7	2.8	2.9	3.0	3.2
		Electromagnetic Brake Type	1.8	1.9	2.1	2.2	2.3	2.4	2.5	2.7	2.8	2.9	3.0	3.1	3.2	3.4

●For CAD data, please download from the Oriental Motor website.
http://www.orientalmotor.com.sg

◇**EAS4** Side-Mounted Type (Left side mounted) **Y** Table



✻1 The motor cable outlet direction can be changed in 90° intervals in three directions.

✻2 During the pushing return-to-home operation, the table moves to the position limit of the mechanism.

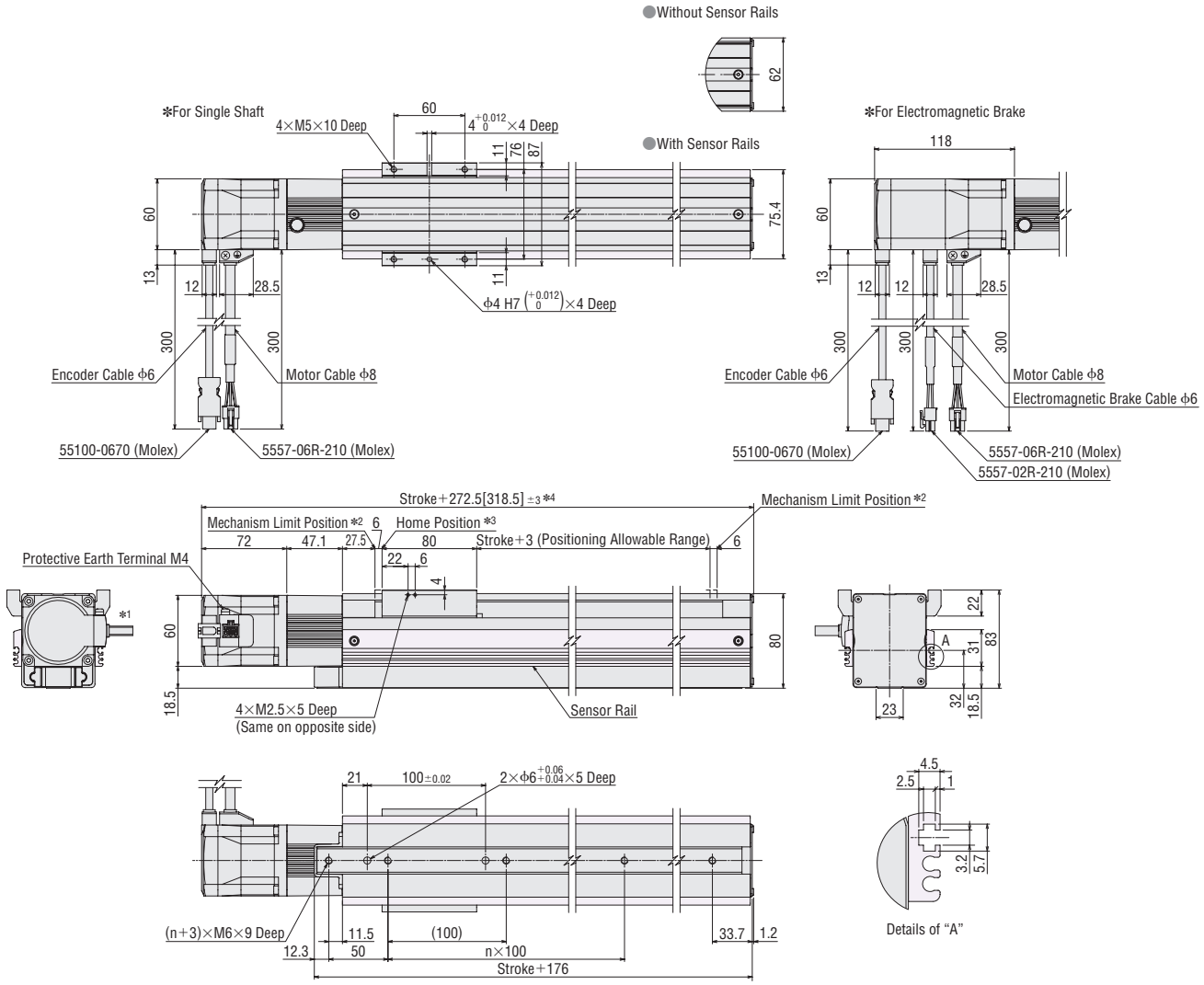
✻3 When using an accessory sensor, the home position differs.

●The above figure is an outline drawing of the motor installation direction for the type left side mounted. For the type right side mounted, the motor is located on the opposite side if the linear slide is centered.

Stroke [mm]			50	100	150	200	250	300	350	400	450	500	550	600	650	700
Hole Coefficient (n)			1	1	2	2	3	3	4	4	5	5	6	6	7	7
Mass [kg]	With Sensor Rails	Single Shaft	1.8	1.9	2.1	2.2	2.4	2.5	2.7	2.9	3.0	3.2	3.4	3.5	3.7	3.8
		Electromagnetic Brake Type	2.0	2.1	2.3	2.4	2.6	2.7	2.9	3.1	3.2	3.4	3.6	3.7	3.9	4.0
	Without Sensor Rails	Single Shaft	1.6	1.7	1.9	2.0	2.1	2.2	2.3	2.5	2.6	2.7	2.8	2.9	3.0	3.2
		Electromagnetic Brake Type	1.8	1.9	2.1	2.2	2.3	2.4	2.5	2.7	2.8	2.9	3.0	3.1	3.2	3.4

●For CAD data, please download from the Oriental Motor website.
http://www.orientalmotor.com.sg

◇**EAS6** Standard Type **X** Table

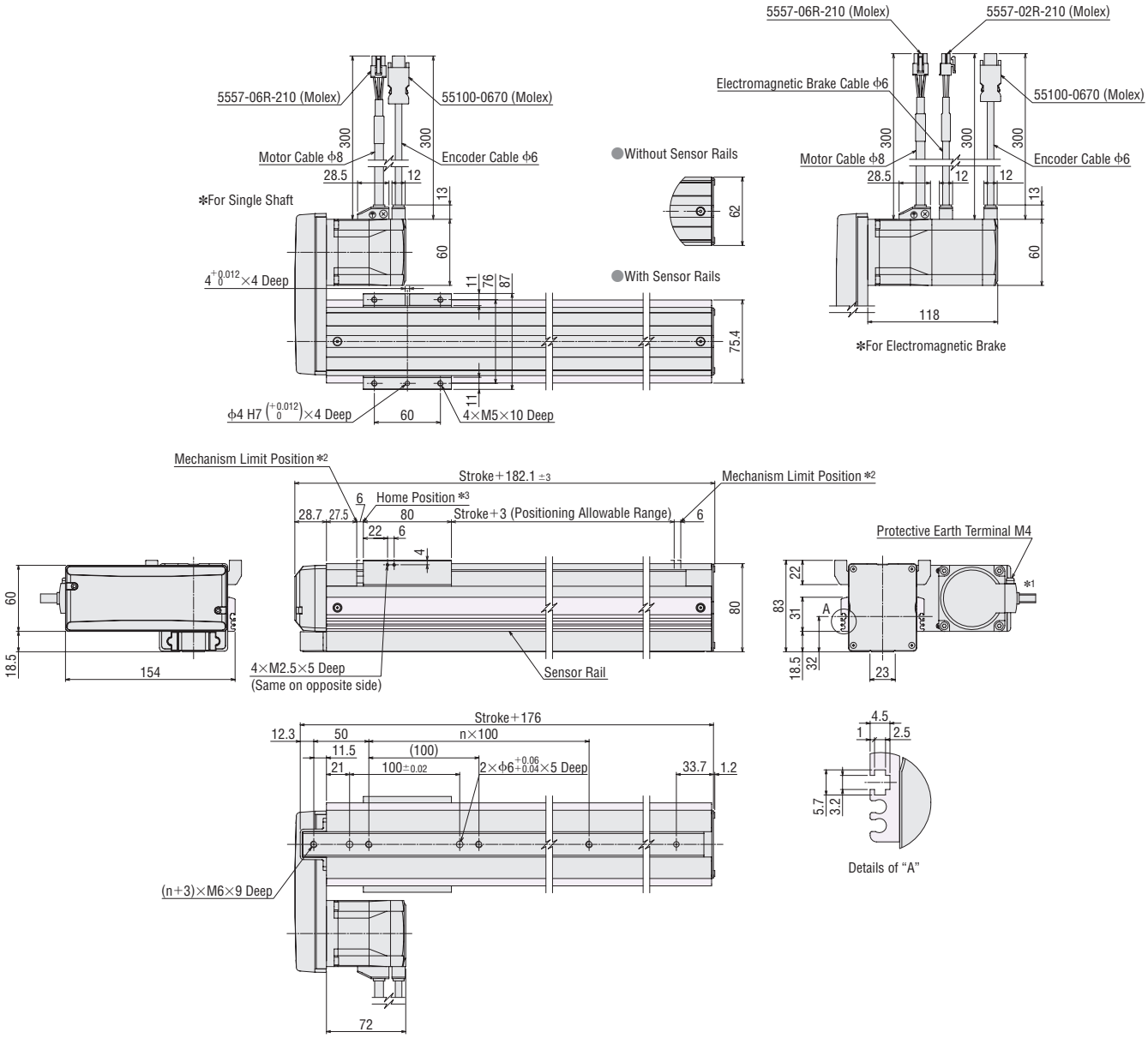


✻1 The motor cable outlet direction can be changed in 90° intervals in four directions.
✻2 During the pushing return-to-home operation, the table moves to the position limit of the mechanism.
✻3 When using an accessory sensor, the home position differs.
✻4 The brackets [ ] indicate the value for a product with an electromagnetic brake.

Stroke [mm]			50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850
Hole Coefficient (n)			1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9
Mass [kg]	With Sensor Rails	Single Shaft	3.9	4.2	4.5	4.8	5.1	5.3	5.6	5.9	6.2	6.5	6.7	7.0	7.3	7.6	7.9	8.1	8.4
		Electromagnetic Brake Type	4.3	4.6	4.9	5.2	5.5	5.7	6.0	6.3	6.6	6.9	7.1	7.4	7.7	8.0	8.3	8.5	8.8
	Without Sensor Rails	Single Shaft	3.8	4.0	4.3	4.5	4.7	5.0	5.2	5.5	5.7	6.0	6.2	6.4	6.7	6.9	7.2	7.4	7.6
		Electromagnetic Brake Type	4.2	4.3	4.7	4.9	5.1	5.4	5.6	5.9	6.1	6.4	6.6	6.8	7.1	7.3	7.6	7.8	8.0

●For CAD data, please download from the Oriental Motor website.
http://www.orientalmotor.com.sg

◇**EAS6** Side-Mounted Type (Left side mounted) **X** Table

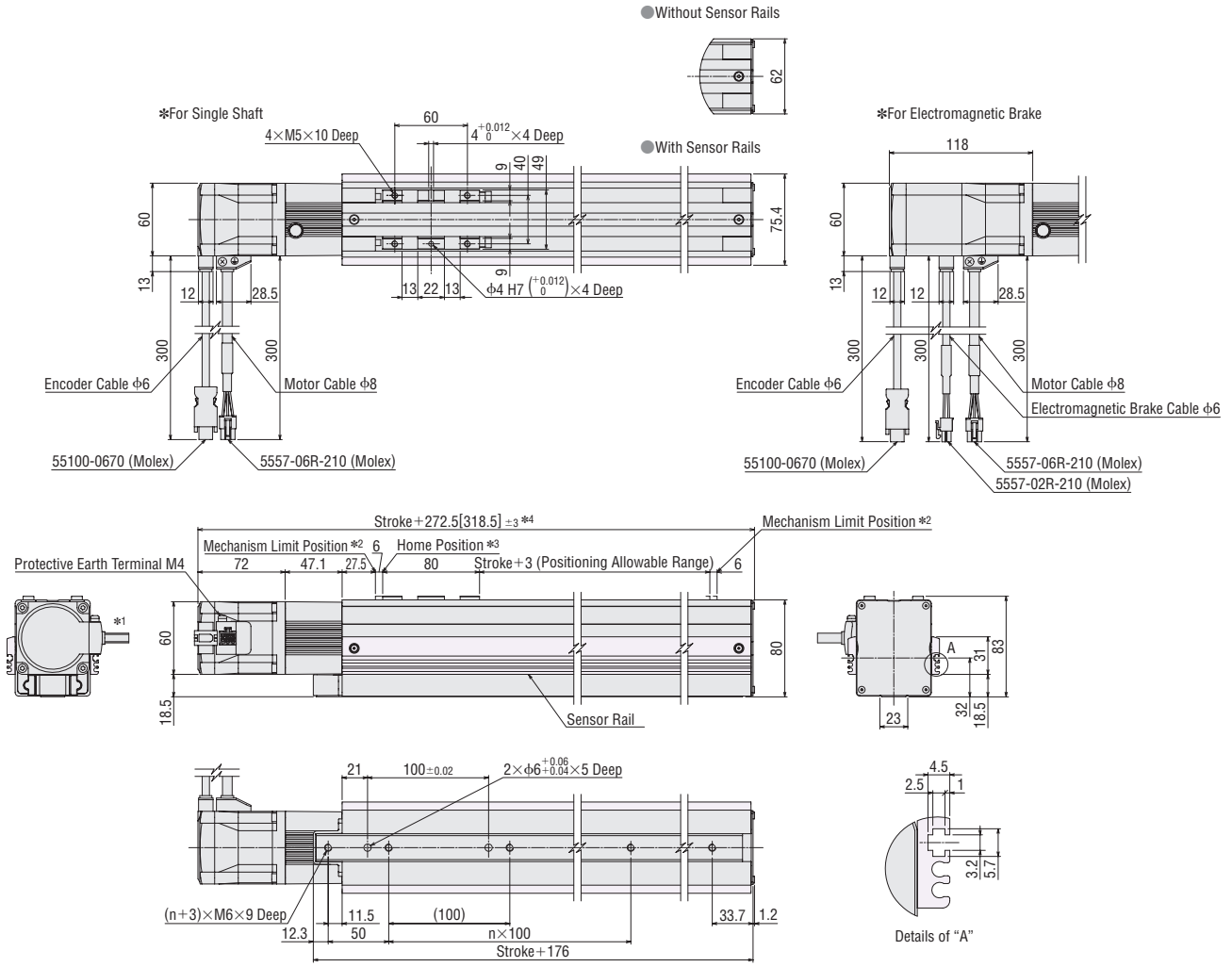


✻1 The motor cable outlet direction can be changed in 90° intervals in three directions.
✻2 During the pushing return-to-home operation, the table moves to the position limit of the mechanism.
✻3 When using an accessory sensor, the home position differs.
● The above figure is an outline drawing of the motor installation direction for the type left side mounted. For the type right side mounted, the motor is located on the opposite side if the linear slide is centered.

Stroke [mm]			50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850
Hole Coefficient (n)			1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9
Mass [kg]	With Sensor Rails	Single Shaft	3.9	4.2	4.5	4.8	5.1	5.3	5.6	5.9	6.2	6.5	6.7	7.0	7.3	7.6	7.9	8.1	8.4
		Electromagnetic Brake Type	4.3	4.6	4.9	5.2	5.5	5.7	6.0	6.3	6.6	6.9	7.1	7.4	7.7	8.0	8.3	8.5	8.8
	Without Sensor Rails	Single Shaft	3.8	4.0	4.3	4.5	4.7	5.0	5.2	5.5	5.7	6.0	6.2	6.4	6.7	6.9	7.2	7.4	7.6
		Electromagnetic Brake Type	4.2	4.3	4.7	4.9	5.1	5.4	5.6	5.9	6.1	6.4	6.6	6.8	7.1	7.3	7.6	7.8	8.0

● For CAD data, please download from the Oriental Motor website.
http://www.orientalmotor.com.sg

◇**EAS6** Standard Type **Y** Table

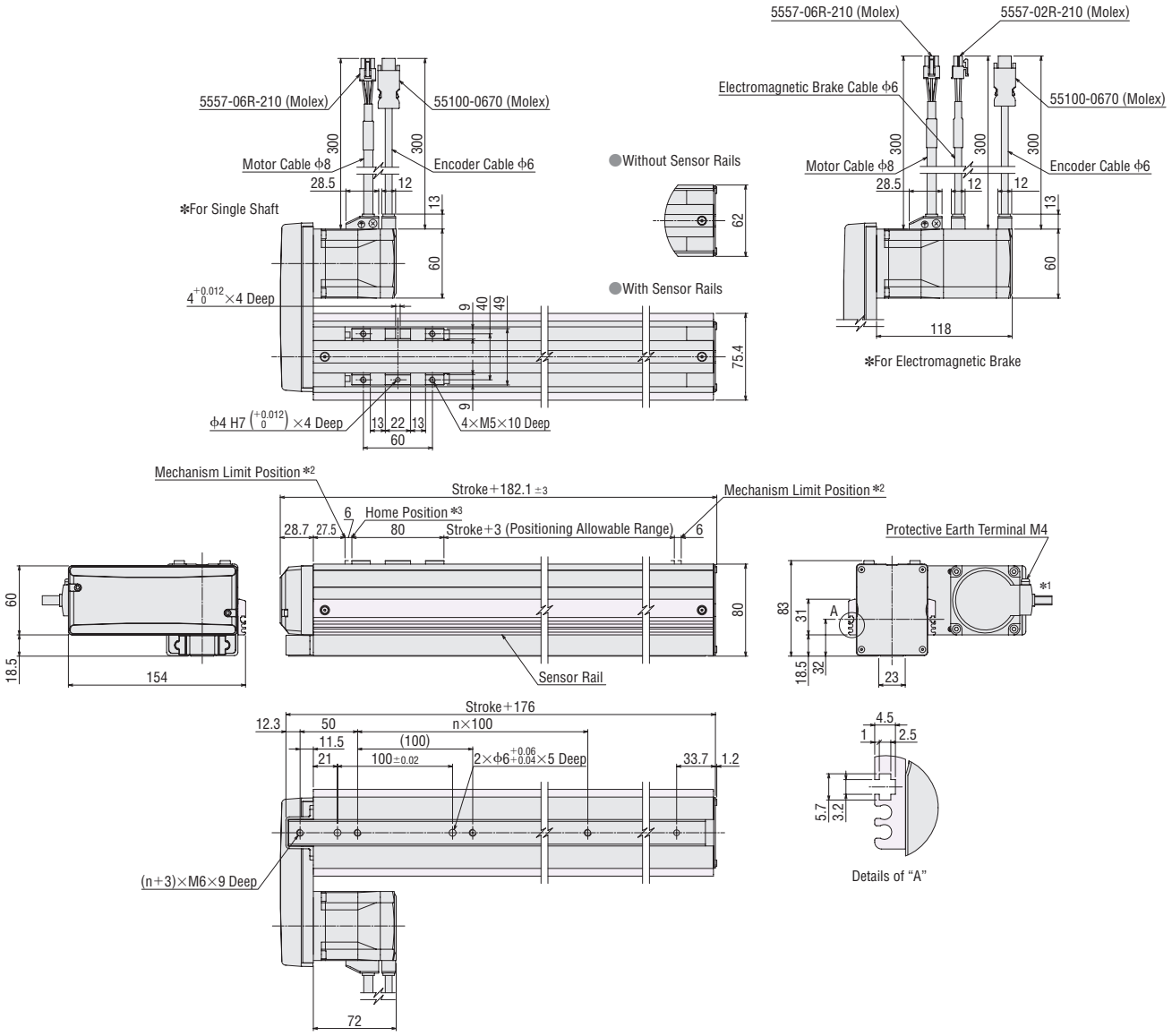


*1 The motor cable outlet direction can be changed in 90° intervals in four directions.
*2 During the pushing return-to-home operation, the table moves to the position limit of the mechanism.
*3 When using an accessory sensor, the home position differs.
*4 The brackets [ ] indicate the value for a product with an electromagnetic brake.

Stroke [mm]			50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850
Hole Coefficient (n)			1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9
Mass [kg]	With Sensor Rails	Single Shaft	3.9	4.2	4.5	4.8	5.1	5.3	5.6	5.9	6.2	6.5	6.7	7.0	7.3	7.6	7.9	8.1	8.4
		Electromagnetic Brake Type	4.3	4.6	4.9	5.2	5.5	5.7	6.0	6.3	6.6	6.9	7.1	7.4	7.7	8.0	8.3	8.5	8.8
	Without Sensor Rails	Single Shaft	3.8	4.0	4.3	4.5	4.7	5.0	5.2	5.5	5.7	6.0	6.2	6.4	6.7	6.9	7.2	7.4	7.6
		Electromagnetic Brake Type	4.2	4.3	4.7	4.9	5.1	5.4	5.6	5.9	6.1	6.4	6.6	6.8	7.1	7.3	7.6	7.8	8.0

For CAD data, please download from the Oriental Motor website.
http://www.orientalmotor.com.sg

◇**EAS6** Side-Mounted Type (Left side mounted) **Y** Table



✻1 The motor cable outlet direction can be changed in 90° intervals in three directions.
✻2 During the pushing return-to-home operation, the table moves to the position limit of the mechanism.
✻3 When using an accessory sensor, the home position differs.
●The above figure is an outline drawing of the motor installation direction for the type left side mounted. For the type right side mounted, the motor is located on the opposite side if the linear slide is centered.

Stroke [mm]			50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850
Hole Coefficient (n)			1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9
Mass [kg]	With Sensor Rails	Single Shaft	3.9	4.2	4.5	4.8	5.1	5.3	5.6	5.9	6.2	6.5	6.7	7.0	7.3	7.6	7.9	8.1	8.4
		Electromagnetic Brake Type	4.3	4.6	4.9	5.2	5.5	5.7	6.0	6.3	6.6	6.9	7.1	7.4	7.7	8.0	8.3	8.5	8.8
	Without Sensor Rails	Single Shaft	3.8	4.0	4.3	4.5	4.7	5.0	5.2	5.5	5.7	6.0	6.2	6.4	6.7	6.9	7.2	7.4	7.6
		Electromagnetic Brake Type	4.2	4.3	4.7	4.9	5.1	5.4	5.6	5.9	6.1	6.4	6.6	6.8	7.1	7.3	7.6	7.8	8.0

●For CAD data, please download from the Oriental Motor website.
http://www.orientalmotor.com.sg

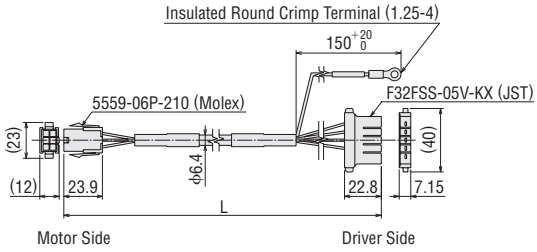
Cables for Motor (Included), Cables for Encoder (Included), Cables for Electromagnetic Brake (Included)

Only with products supplied with a connection cable

◇AC Power Supply Input

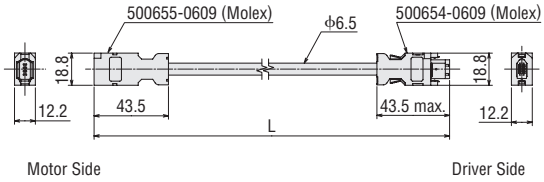
• Cables for Motor

Cable Type	Length L (m)
Cable for Motor 1 m	1
Cable for Motor 2 m	2
Cable for Motor 3 m	3



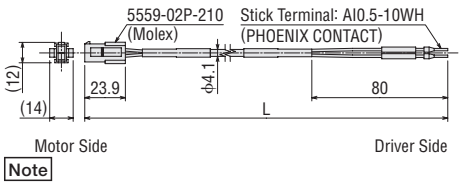
• Cables for Encoder

Cable Type	Length L (m)
Cable for Encoder 1 m	1
Cable for Encoder 2 m	2
Cable for Encoder 3 m	3



• Cables for Electromagnetic Brake (Electromagnetic brake type only)

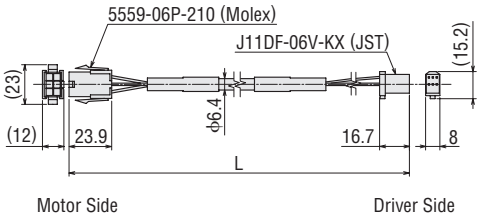
Cable Type	Length L (m)
Cable for Electromagnetic Brake 1 m	1
Cable for Electromagnetic Brake 2 m	2
Cable for Electromagnetic Brake 3 m	3



◇DC Power Supply Input

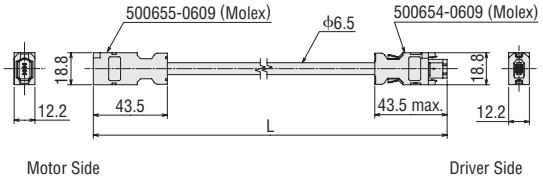
• Cables for Motor

Cable Type	Length L (m)
Cable for Motor 1 m	1
Cable for Motor 2 m	2
Cable for Motor 3 m	3



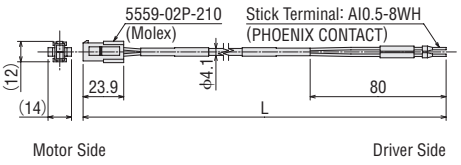
• Cables for Encoder

Cable Type	Length L (m)
Cable for Encoder 1 m	1
Cable for Encoder 2 m	2
Cable for Encoder 3 m	3



• Cables for Electromagnetic Brake (Electromagnetic brake type only)

Cable Type	Length L (m)
Cable for Electromagnetic Brake 1 m	1
Cable for Electromagnetic Brake 2 m	2
Cable for Electromagnetic Brake 3 m	3



Note

The motor cable and electromagnetic brake cable from the motorized linear slides cannot be directly connected to a driver. To connect to a driver, use an accessory connection cable (sold separately) or the connection cable included in the product (if included).

Motorized Linear Slide and Driver Combinations

The product names for motorized linear slide and driver combinations are shown below.
The product name enclosed with ( ) in the motorized linear slide product name is the installed motor product name.
When you would like to purchase the installed motor for maintenance, contact the nearest Oriental Motor sales office.

AC Power Supply Input

◇Built-in Controller Type Single Shaft

Product Name	Motorized Linear Slide Product Name (Installed Motor Product Name)	Driver Product Name
EAS4②X-E⑥-AZA⑨D-⑪	EASM4②XE⑥AZAC (AZM46AC)	AZD-⑨D
EAS4②X-D⑥-AZA⑨D-⑪	EASM4②XD⑥AZAC (AZM46AC)	
EAS4②Y-E⑥-AZA⑨D-⑪	EASM4②YE⑥AZAC (AZM46AC)	
EAS4②Y-D⑥-AZA⑨D-⑪	EASM4②YD⑥AZAC (AZM46AC)	
EAS4②NX-E⑥-AZA⑨D-⑪	EASM4②NXE⑥AZAC (AZM46AC)	
EAS4②NX-D⑥-AZA⑨D-⑪	EASM4②NXD⑥AZAC (AZM46AC)	
EAS4②NY-E⑥-AZA⑨D-⑪	EASM4②NYE⑥AZAC (AZM46AC)	
EAS4②NY-D⑥-AZA⑨D-⑪	EASM4②NYD⑥AZAC (AZM46AC)	
EAS6②X-E⑥-AZA⑨D-⑪	EASM6②XE⑥AZAC (AZM66AC)	
EAS6②X-D⑥-AZA⑨D-⑪	EASM6②XD⑥AZAC (AZM66AC)	
EAS6②Y-E⑥-AZA⑨D-⑪	EASM6②YE⑥AZAC (AZM66AC)	
EAS6②Y-D⑥-AZA⑨D-⑪	EASM6②YD⑥AZAC (AZM66AC)	
EAS6②NX-E⑥-AZA⑨D-⑪	EASM6②NXE⑥AZAC (AZM66AC)	
EAS6②NX-D⑥-AZA⑨D-⑪	EASM6②NXD⑥AZAC (AZM66AC)	
EAS6②NY-E⑥-AZA⑨D-⑪	EASM6②NYE⑥AZAC (AZM66AC)	
EAS6②NY-D⑥-AZA⑨D-⑪	EASM6②NYD⑥AZAC (AZM66AC)	

◇Built-in Controller Type With Electromagnetic Brake

Product Name	Motorized Linear Slide Product Name (Installed Motor Product Name)	Driver Product Name
EAS4②X-E⑥-AZM⑨D-⑪	EASM4②XE⑥AZMC (AZM46MC)	AZD-⑨D
EAS4②X-D⑥-AZM⑨D-⑪	EASM4②XD⑥AZMC (AZM46MC)	
EAS4②Y-E⑥-AZM⑨D-⑪	EASM4②YE⑥AZMC (AZM46MC)	
EAS4②Y-D⑥-AZM⑨D-⑪	EASM4②YD⑥AZMC (AZM46MC)	
EAS4②NX-E⑥-AZM⑨D-⑪	EASM4②NXE⑥AZMC (AZM46MC)	
EAS4②NX-D⑥-AZM⑨D-⑪	EASM4②NXD⑥AZMC (AZM46MC)	
EAS4②NY-E⑥-AZM⑨D-⑪	EASM4②NYE⑥AZMC (AZM46MC)	
EAS4②NY-D⑥-AZM⑨D-⑪	EASM4②NYD⑥AZMC (AZM46MC)	
EAS6②X-E⑥-AZM⑨D-⑪	EASM6②XE⑥AZMC (AZM66MC)	
EAS6②X-D⑥-AZM⑨D-⑪	EASM6②XD⑥AZMC (AZM66MC)	
EAS6②Y-E⑥-AZM⑨D-⑪	EASM6②YE⑥AZMC (AZM66MC)	
EAS6②Y-D⑥-AZM⑨D-⑪	EASM6②YD⑥AZMC (AZM66MC)	
EAS6②NX-E⑥-AZM⑨D-⑪	EASM6②NXE⑥AZMC (AZM66MC)	
EAS6②NX-D⑥-AZM⑨D-⑪	EASM6②NXD⑥AZMC (AZM66MC)	
EAS6②NY-E⑥-AZM⑨D-⑪	EASM6②NYE⑥AZMC (AZM66MC)	
EAS6②NY-D⑥-AZM⑨D-⑪	EASM6②NYD⑥AZMC (AZM66MC)	

◇Pulse Input Type　Single Shaft

Product Name	Motorized Linear Slide Product Name (Installed Motor Product Name)	Driver Product Name
EAS4②X-E⑥-AZA⑨-⑪	EASM4②XE⑥AZAC (AZM46AC)	AZD-⑨
EAS4②X-D⑥-AZA⑨-⑪	EASM4②XD⑥AZAC (AZM46AC)	
EAS4②Y-E⑥-AZA⑨-⑪	EASM4②YE⑥AZAC (AZM46AC)	
EAS4②Y-D⑥-AZA⑨-⑪	EASM4②YD⑥AZAC (AZM46AC)	
EAS4②NX-E⑥-AZA⑨-⑪	EASM4②NXE⑥AZAC (AZM46AC)	
EAS4②NX-D⑥-AZA⑨-⑪	EASM4②NXD⑥AZAC (AZM46AC)	
EAS4②NY-E⑥-AZA⑨-⑪	EASM4②NYE⑥AZAC (AZM46AC)	
EAS4②NY-D⑥-AZA⑨-⑪	EASM4②NYD⑥AZAC (AZM46AC)	
EAS6②X-E⑥-AZA⑨-⑪	EASM6②XE⑥AZAC (AZM66AC)	
EAS6②X-D⑥-AZA⑨-⑪	EASM6②XD⑥AZAC (AZM66AC)	
EAS6②Y-E⑥-AZA⑨-⑪	EASM6②YE⑥AZAC (AZM66AC)	
EAS6②Y-D⑥-AZA⑨-⑪	EASM6②YD⑥AZAC (AZM66AC)	
EAS6②NX-E⑥-AZA⑨-⑪	EASM6②NXE⑥AZAC (AZM66AC)	
EAS6②NX-D⑥-AZA⑨-⑪	EASM6②NXD⑥AZAC (AZM66AC)	
EAS6②NY-E⑥-AZA⑨-⑪	EASM6②NYE⑥AZAC (AZM66AC)	
EAS6②NY-D⑥-AZA⑨-⑪	EASM6②NYD⑥AZAC (AZM66AC)	

◇Pulse Input Type　With Electromagnetic Brake

Product Name	Motorized Linear Slide Product Name (Installed Motor Product Name)	Driver Product Name
EAS4②X-E⑥-AZM⑨-⑪	EASM4②XE⑥AZMC (AZM46MC)	AZD-⑨
EAS4②X-D⑥-AZM⑨-⑪	EASM4②XD⑥AZMC (AZM46MC)	
EAS4②Y-E⑥-AZM⑨-⑪	EASM4②YE⑥AZMC (AZM46MC)	
EAS4②Y-D⑥-AZM⑨-⑪	EASM4②YD⑥AZMC (AZM46MC)	
EAS4②NX-E⑥-AZM⑨-⑪	EASM4②NXE⑥AZMC (AZM46MC)	
EAS4②NX-D⑥-AZM⑨-⑪	EASM4②NXD⑥AZMC (AZM46MC)	
EAS4②NY-E⑥-AZM⑨-⑪	EASM4②NYE⑥AZMC (AZM46MC)	
EAS4②NY-D⑥-AZM⑨-⑪	EASM4②NYD⑥AZMC (AZM46MC)	
EAS6②X-E⑥-AZM⑨-⑪	EASM6②XE⑥AZMC (AZM66MC)	
EAS6②X-D⑥-AZM⑨-⑪	EASM6②XD⑥AZMC (AZM66MC)	
EAS6②Y-E⑥-AZM⑨-⑪	EASM6②YE⑥AZMC (AZM66MC)	
EAS6②Y-D⑥-AZM⑨-⑪	EASM6②YD⑥AZMC (AZM66MC)	
EAS6②NX-E⑥-AZM⑨-⑪	EASM6②NXE⑥AZMC (AZM66MC)	
EAS6②NX-D⑥-AZM⑨-⑪	EASM6②NXD⑥AZMC (AZM66MC)	
EAS6②NY-E⑥-AZM⑨-⑪	EASM6②NYE⑥AZMC (AZM66MC)	
EAS6②NY-D⑥-AZM⑨-⑪	EASM6②NYD⑥AZMC (AZM66MC)	

●DC Power Supply Input

◇Built-in Controller Type　Single Shaft

Product Name	Motorized Linear Slide Product Name (Installed Motor Product Name)	Driver Product Name
EAS4②X-E⑥-AZAKD-⑪	EASM4②XE⑥AZAK (AZM46AK)	AZD-KD
EAS4②X-D⑥-AZAKD-⑪	EASM4②XD⑥AZAK (AZM46AK)	
EAS4②Y-E⑥-AZAKD-⑪	EASM4②YE⑥AZAK (AZM46AK)	
EAS4②Y-D⑥-AZAKD-⑪	EASM4②YD⑥AZAK (AZM46AK)	
EAS4②NX-E⑥-AZAKD-⑪	EASM4②NXE⑥AZAK (AZM46AK)	
EAS4②NX-D⑥-AZAKD-⑪	EASM4②NXD⑥AZAK (AZM46AK)	
EAS4②NY-E⑥-AZAKD-⑪	EASM4②NYE⑥AZAK (AZM46AK)	
EAS4②NY-D⑥-AZAKD-⑪	EASM4②NYD⑥AZAK (AZM46AK)	
EAS6②X-E⑥-AZAKD-⑪	EASM6②XE⑥AZAK (AZM66AK)	
EAS6②X-D⑥-AZAKD-⑪	EASM6②XD⑥AZAK (AZM66AK)	
EAS6②Y-E⑥-AZAKD-⑪	EASM6②YE⑥AZAK (AZM66AK)	
EAS6②Y-D⑥-AZAKD-⑪	EASM6②YD⑥AZAK (AZM66AK)	
EAS6②NX-E⑥-AZAKD-⑪	EASM6②NXE⑥AZAK (AZM66AK)	
EAS6②NX-D⑥-AZAKD-⑪	EASM6②NXD⑥AZAK (AZM66AK)	
EAS6②NY-E⑥-AZAKD-⑪	EASM6②NYE⑥AZAK (AZM66AK)	
EAS6②NY-D⑥-AZAKD-⑪	EASM6②NYD⑥AZAK (AZM66AK)	

◇Built-in Controller Type　With Electromagnetic Brake

Product Name	Motorized Linear Slide Product Name (Installed Motor Product Name)	Driver Product Name
EAS4②X-E⑥-AZMKD-⑪	EASM4②XE⑥AZMK (AZM46MK)	AZD-KD
EAS4②X-D⑥-AZMKD-⑪	EASM4②XD⑥AZMK (AZM46MK)	
EAS4②Y-E⑥-AZMKD-⑪	EASM4②YE⑥AZMK (AZM46MK)	
EAS4②Y-D⑥-AZMKD-⑪	EASM4②YD⑥AZMK (AZM46MK)	
EAS4②NX-E⑥-AZMKD-⑪	EASM4②NXE⑥AZMK (AZM46MK)	
EAS4②NX-D⑥-AZMKD-⑪	EASM4②NXD⑥AZMK (AZM46MK)	
EAS4②NY-E⑥-AZMKD-⑪	EASM4②NYE⑥AZMK (AZM46MK)	
EAS4②NY-D⑥-AZMKD-⑪	EASM4②NYD⑥AZMK (AZM46MK)	
EAS6②X-E⑥-AZMKD-⑪	EASM6②XE⑥AZMK (AZM66MK)	
EAS6②X-D⑥-AZMKD-⑪	EASM6②XD⑥AZMK (AZM66MK)	
EAS6②Y-E⑥-AZMKD-⑪	EASM6②YE⑥AZMK (AZM66MK)	
EAS6②Y-D⑥-AZMKD-⑪	EASM6②YD⑥AZMK (AZM66MK)	
EAS6②NX-E⑥-AZMKD-⑪	EASM6②NXE⑥AZMK (AZM66MK)	
EAS6②NX-D⑥-AZMKD-⑪	EASM6②NXD⑥AZMK (AZM66MK)	
EAS6②NY-E⑥-AZMKD-⑪	EASM6②NYE⑥AZMK (AZM66MK)	
EAS6②NY-D⑥-AZMKD-⑪	EASM6②NYD⑥AZMK (AZM66MK)	

◇Pulse Input Type　Single Shaft

Product Name	Motorized Linear Slide Product Name (Installed Motor Product Name)	Driver Product Name
EAS4②X-E⑥-AZAK-⑪	EASM4②XE⑥AZAK (AZM46AK)	AZD-K
EAS4②X-D⑥-AZAK-⑪	EASM4②XD⑥AZAK (AZM46AK)	
EAS4②Y-E⑥-AZAK-⑪	EASM4②YE⑥AZAK (AZM46AK)	
EAS4②Y-D⑥-AZAK-⑪	EASM4②YD⑥AZAK (AZM46AK)	
EAS4②NX-E⑥-AZAK-⑪	EASM4②NXE⑥AZAK (AZM46AK)	
EAS4②NX-D⑥-AZAK-⑪	EASM4②NXD⑥AZAK (AZM46AK)	
EAS4②NY-E⑥-AZAK-⑪	EASM4②NYE⑥AZAK (AZM46AK)	
EAS4②NY-D⑥-AZAK-⑪	EASM4②NYD⑥AZAK (AZM46AK)	
EAS6②X-E⑥-AZAK-⑪	EASM6②XE⑥AZAK (AZM66AK)	
EAS6②X-D⑥-AZAK-⑪	EASM6②XD⑥AZAK (AZM66AK)	
EAS6②Y-E⑥-AZAK-⑪	EASM6②YE⑥AZAK (AZM66AK)	
EAS6②Y-D⑥-AZAK-⑪	EASM6②YD⑥AZAK (AZM66AK)	
EAS6②NX-E⑥-AZAK-⑪	EASM6②NXE⑥AZAK (AZM66AK)	
EAS6②NX-D⑥-AZAK-⑪	EASM6②NXD⑥AZAK (AZM66AK)	
EAS6②NY-E⑥-AZAK-⑪	EASM6②NYE⑥AZAK (AZM66AK)	
EAS6②NY-D⑥-AZAK-⑪	EASM6②NYD⑥AZAK (AZM66AK)	

◇Pulse Input Type　With Electromagnetic Brake

Product Name	Motorized Linear Slide Product Name (Installed Motor Product Name)	Driver Product Name
EAS4②X-E⑥-AZMK-⑪	EASM4②XE⑥AZMK (AZM46MK)	AZD-K
EAS4②X-D⑥-AZMK-⑪	EASM4②XD⑥AZMK (AZM46MK)	
EAS4②Y-E⑥-AZMK-⑪	EASM4②YE⑥AZMK (AZM46MK)	
EAS4②Y-D⑥-AZMK-⑪	EASM4②YD⑥AZMK (AZM46MK)	
EAS4②NX-E⑥-AZMK-⑪	EASM4②NXE⑥AZMK (AZM46MK)	
EAS4②NX-D⑥-AZMK-⑪	EASM4②NXD⑥AZMK (AZM46MK)	
EAS4②NY-E⑥-AZMK-⑪	EASM4②NYE⑥AZMK (AZM46MK)	
EAS4②NY-D⑥-AZMK-⑪	EASM4②NYD⑥AZMK (AZM46MK)	
EAS6②X-E⑥-AZMK-⑪	EASM6②XE⑥AZMK (AZM66MK)	
EAS6②X-D⑥-AZMK-⑪	EASM6②XD⑥AZMK (AZM66MK)	
EAS6②Y-E⑥-AZMK-⑪	EASM6②YE⑥AZMK (AZM66MK)	
EAS6②Y-D⑥-AZMK-⑪	EASM6②YD⑥AZMK (AZM66MK)	
EAS6②NX-E⑥-AZMK-⑪	EASM6②NXE⑥AZMK (AZM66MK)	
EAS6②NX-D⑥-AZMK-⑪	EASM6②NXD⑥AZMK (AZM66MK)	
EAS6②NY-E⑥-AZMK-⑪	EASM6②NYE⑥AZMK (AZM66MK)	
EAS6②NY-D⑥-AZMK-⑪	EASM6②NYD⑥AZMK (AZM66MK)	

●The following symbols and number are substituted for ②, ⑥, ⑨ and ⑪ in the product names.
②: **L** (Left Side-Mounted) or **R** (Right Side-Mounted) indicating the motor installation direction is substituted. For the standard type, no symbol is substituted for this.
⑥: A number indicating the stroke length is substituted.
⑨: **A** (Single-Phase 100-120 VAC) or **C** (Single-Phase/Three-Phase 200-240 VAC) indicating the type of power supply voltage is substituted.
⑪: A number indicating the length of desired connection cable, if included. **1** (1 m), **2** (2 m) or **3** (3 m) is substituted. If no connection cable is included, the product name does not have -⑪.

Motorized Cylinders

EAC Series

α_{STEP} AZ Series Equipped

Side-Mounted Type
With Shaft Guide

Standard Type

Product Line

AC Power Supply Input

◇Product Number Code

① Product Series	② Motor Installing Direction	③ Shaft Guide		④ Lead	⑤ Stroke		⑥ Installed Motor	⑦ Motor Shape	⑧ Power Supply Input	⑨ Driver Type		⑩ Connection Cable*		⑪ Shaft Guide Cover
EAC4	R	W	–	D	05	–	AZ	A	A	D	–	3	–	G
EAC4 **EAC6**	**R**: Right Side Mounted Blank: Standard	**W**: With Shaft Guide Blank: Standard		**D**: 12 mm **E**: 6 mm	**05**: 50 mm **10**: 100 mm **15**: 150 mm ～ **30**: 300 mm (50 mm increments)		**AZ** Series	**A**: Single Shaft **M**: With Electromagnetic Brake	**A**: Single-Phase 100-120 VAC **C**: Single-Phase/ Three-Phase 200-240 VAC	**D**: Built-in Controller Type Blank: Pulse Input Type		Number: Length of included cable **1**: 1m **2**: 2m **3**: 3m None: Connection cable not included		**G**: With Shaft Guide Cover Blank: No Shaft Guide Cover

∗ Connection cables with a length of more than 3 m are available as accessories (sold separately).
Connection Cable Sets → Page 90

◇EAC4 Standard Type/Side-Mounted Type (Frame size 42 mm × 42 mm)

②Motor Installing Direction (**R**, Blank), ④Lead (**D**, **E**), ⑧Same price regardless of the power supply input (**A**, **C**)

⑨Driver Type (**D**, Blank)	
⑦Motor Shape (**A**, **M**)	
⑩Connection Cable (**1**, **2**, **3**, Blank)	
⑤Stroke	50 mm (**05**)
	100 mm (**10**)
	150 mm (**15**)
	200 mm (**20**)
	250 mm (**25**)
	300 mm (**30**)

◇EAC4 Standard Type/Side-Mounted Type With Shaft Guide (Frame size 42 mm × 114 mm)

②Motor Installing Direction (**R**, Blank), ④Lead (**D**, **E**), ⑧Same price regardless of the power supply input (**A**, **C**)

⑨Driver Type (**D**, Blank)	
⑦Motor Shape (**A**, **M**)	
⑩Connection Cable (**1**, **2**, **3**, Blank)	
⑤Stroke	50 mm (**05**)
	100 mm (**10**)
	150 mm (**15**)
	200 mm (**20**)
	250 mm (**25**)
	300 mm (**30**)

◇EAC4 Standard Type/Side-Mounted Type With Shaft Guide Cover (Frame size 42 mm × 114 mm)

②Motor Installing Direction (**R**, Blank), ④Lead (**D**, **E**), ⑧Same price regardless of the power supply input (**A**, **C**)

⑨Driver Type (**D**, Blank)	
⑦Motor Shape (**A**, **M**)	
⑩Connection Cable (**1**, **2**, **3**, Blank)	
⑤Stroke	50 mm (**05**)
	100 mm (**10**)
	150 mm (**15**)
	200 mm (**20**)
	250 mm (**25**)
	300 mm (**30**)

◇EAC6 Standard Type/Side-Mounted Type (Frame size 60 mm × 60 mm)

②Motor Installing Direction (**R**, Blank), ④Lead (**D**, **E**), ⑧Same price regardless of the power supply input (**A**, **C**)

⑨Driver Type (**D**, Blank)	
⑦Motor Shape (**A**, **M**)	
⑩Connection Cable (**1**, **2**, **3**, Blank)	
⑤Stroke	50 mm (**05**)
	100 mm (**10**)
	150 mm (**15**)
	200 mm (**20**)
	250 mm (**25**)
	300 mm (**30**)

◇EAC6 Standard Type/Side-Mounted Type With Shaft Guide (Frame size 60 mm × 156 mm)

②Motor Installing Direction (**R**, Blank), ④Lead (**D**, **E**), ⑧Same price regardless of the power supply input (**A**, **C**)

⑨Driver Type (**D**, Blank)	
⑦Motor Shape (**A**, **M**)	
⑩Connection Cable (**1**, **2**, **3**, Blank)	
⑤Stroke	50 mm (**05**)
	100 mm (**10**)
	150 mm (**15**)
	200 mm (**20**)
	250 mm (**25**)
	300 mm (**30**)

◇EAC6 Standard Type/Side-Mounted Type With Shaft Guide Cover (Frame size 60 mm × 156 mm)

②Motor Installing Direction (**R**, Blank), ④Lead (**D**, **E**), ⑧Same price regardless of the power supply input (**A**, **C**)

⑨Driver Type (**D**, Blank)	
⑦Motor Shape (**A**, **M**)	
⑩Connection Cable (**1**, **2**, **3**, Blank)	
⑤Stroke	50 mm (**05**)
	100 mm (**10**)
	150 mm (**15**)
	200 mm (**20**)
	250 mm (**25**)
	300 mm (**30**)

●DC Power Supply Input

◇Product Number Code

① Product Series	② Motor Installing Direction	③ Shaft Guide		④ Lead	⑤ Stroke		⑥ Installed Motor	⑦ Motor Shape	⑧ Power Supply Input	⑨ Driver Type		⑩ Connection Cable*		⑪ Shaft Guide Cover
EAC4	**R**	**W**	–	**D**	**05**	–	**AZ**	**A**	**K**	**D**	–	**3**	–	**G**
EAC4 **EAC6**	**R**: Right Side Mounted Blank: Standard	**W**: With Shaft Guide Blank: Standard		**D**: 12 mm **E**: 6 mm	**05**: 50 mm **10**: 100 mm **15**: 150 mm ～ **30**: 300 mm (50 mm increments)		**AZ** Series	**A**: Single Shaft **M**: With Electromagnetic Brake	**K**: 24 VDC/48 VDC	**D**: Built-in Controller Type Blank: Pulse Input Type		Number: Length of included cable **1**: 1m **2**: 2m **3**: 3m None: Connection cable not included		**G**: With Shaft Guide Cover Blank: No Shaft Guide Cover

∗ Connection cables with a length of more than 3 m are available as accessories (sold separately).
Connection Cable Sets → Page 92

◇**EAC4** Standard Type/Side-Mounted Type (Frame size 42 mm × 42 mm)

②Motor Installing Direction (**R**, Blank), ④Same price regardless of the lead (**D**, **E**)

⑨Driver Type (**D**, Blank)	
⑦Motor Shape (**A**, **M**)	
⑩Connection Cable (**1**, **2**, **3**, Blank)	
⑤Stroke	50 mm (**05**)
	100 mm (**10**)
	150 mm (**15**)
	200 mm (**20**)
	250 mm (**25**)
	300 mm (**30**)

◇**EAC4** Standard Type/Side-Mounted Type With Shaft Guide (Frame size 42 mm × 114 mm)

②Motor Installing Direction (**R**, Blank), ④Same price regardless of the lead (**D**, **E**)

⑨Driver Type (**D**, Blank)	
⑦Motor Shape (**A**, **M**)	
⑩Connection Cable (**1**, **2**, **3**, Blank)	
⑤Stroke	50 mm (**05**)
	100 mm (**10**)
	150 mm (**15**)
	200 mm (**20**)
	250 mm (**25**)
	300 mm (**30**)

◇**EAC4** Standard Type/Side-Mounted Type With Shaft Guide Cover (Frame size 42 mm × 114 mm)

②Motor Installing Direction (**R**, Blank), ④Same price regardless of the lead (**D**, **E**)

⑨Driver Type (**D**, Blank)	
⑦Motor Shape (**A**, **M**)	
⑩Connection Cable (**1**, **2**, **3**, Blank)	
⑤Stroke	50 mm (**05**)
	100 mm (**10**)
	150 mm (**15**)
	200 mm (**20**)
	250 mm (**25**)
	300 mm (**30**)

◇**EAC6** Standard Type/Side-Mounted Type (Frame size 60 mm × 60 mm)

②Motor Installing Direction (**R**, Blank), ④Same price regardless of the lead (**D**, **E**)

⑨Driver Type (**D**, Blank)	
⑦Motor Shape (**A**, **M**)	
⑩Connection Cable (**1**, **2**, **3**, Blank)	
⑤Stroke	50 mm (**05**)
	100 mm (**10**)
	150 mm (**15**)
	200 mm (**20**)
	250 mm (**25**)
	300 mm (**30**)

◇**EAC6** Standard Type/Side-Mounted Type With Shaft Guide (Frame size 60 mm × 156 mm)

②Motor Installing Direction (**R**, Blank), ④Same price regardless of the lead (**D**, **E**)

⑨Driver Type (**D**, Blank)	
⑦Motor Shape (**A**, **M**)	
⑩Connection Cable (**1**, **2**, **3**, Blank)	
⑤Stroke	50 mm (**05**)
	100 mm (**10**)
	150 mm (**15**)
	200 mm (**20**)
	250 mm (**25**)
	300 mm (**30**)

◇**EAC6** Standard Type/Side-Mounted Type With Shaft Guide Cover (Frame size 60 mm × 156 mm)

②Motor Installing Direction (**R**, Blank), ④Same price regardless of the lead (**D**, **E**)

⑨Driver Type (**D**, Blank)	
⑦Motor Shape (**A**, **M**)	
⑩Connection Cable (**1**, **2**, **3**, Blank)	
⑤Stroke	50 mm (**05**)
	100 mm (**10**)
	150 mm (**15**)
	200 mm (**20**)
	250 mm (**25**)
	300 mm (**30**)

General Specifications

Motor (**AZ** Series) Specifications

		AC Power Supply Input	DC Power Supply Input
Heat-Resistant Class		130 (B) [Recognized as 105 (A) by the UL Standards for AC power supply input.]	
Insulation Resistance		The measured value is 100 MΩ or more when a 500 VDC megger is applied between the following locations: ・Case — Motor Windings ・Case — Electromagnetic Brake Windings*2	
Dielectric Strength Voltage		No abnormality is found with the following application for 1 minute: ・Case — Motor Windings 1.5 kVAC 50 Hz or 60 Hz ・Case — Electromagnetic Brake Windings*2 1.5 kVAC 50 Hz or 60 Hz	No abnormality is found with the following application for 1 minute: ・Case — Motor Windings 1.0 kVAC 50 Hz or 60 Hz ・Case — Electromagnetic Brake Windings*2 1.0 kVAC 50 Hz or 60 Hz
Operating Environment (In operation)	Ambient Temperature	0～+40°C (Non-freezing)	
	Ambient Humidity	85% or less (Non-condensing)	
	Atmosphere	Use in an area without corrosive gases and dust. The product should not be exposed to water, oil or other liquids.	
Degree of Protection*3		IP66 (excluding installation surface of the motor and linear slides and motor connectors)	
Range of Multi-rotation Detection without Power Supplied		±900 rotations (1800 rotations)	

*1 AC power supply input only
*2 Electromagnetic brake type only
*3 Motor only

Note

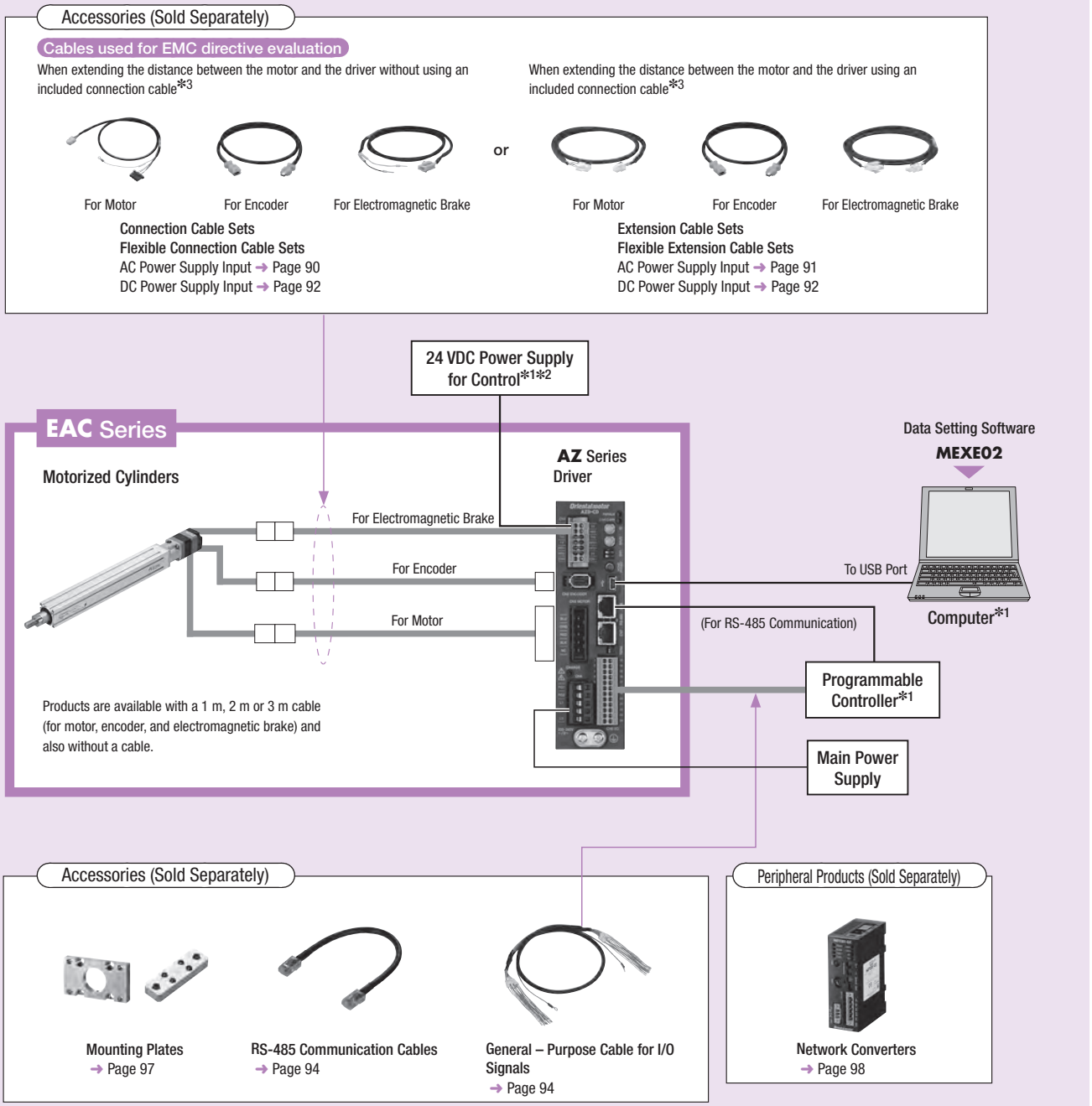
● Do not perform the insulation resistance test and the insulation pressure resistance test if the motorized cylinder (motor) and driver are connected.

System Configuration

Built-in controller type with an electromagnetic brake equipped with the **AZ** Series (AC power supply input and DC power supply input are both indicated. The photo shows a type for AC power supply input.)

An example of a configuration using I/O control or RS-485 communication is shown below.

*1 Not supplied.
*2 A product for DC power supply is unnecessary.
*3 Only with products supplied with a connection cable.



The functions and operation method of this product are common to the stepping motor and driver package **AZ** Series. For details on the functions and operation method, see the User's Manual (for Drivers, Functions) of the **AZ** Series.
The User's Manual for Drivers is included with the product, but the guide for Functions is not included. Contact the nearest Oriental Motor sales office or download from the Oriental Motor website. http://www.orientalmotor.com.sg

System Configuration Example

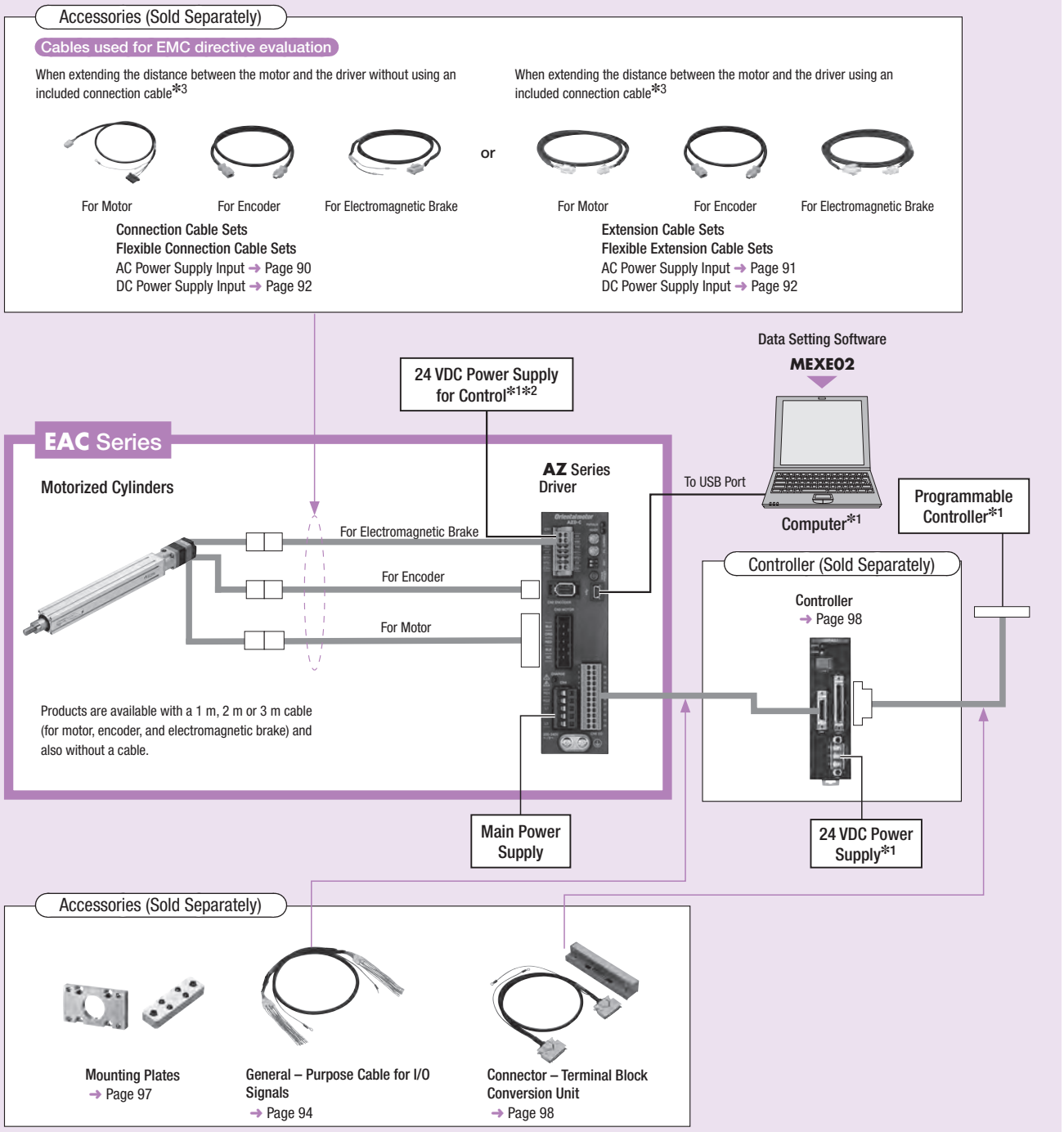
EAC Series	+	Sold Separately General – Purpose Cable for I/O Signals (1 m)
EAC4-D05-AZMCD-3		**CC16D010B-1**

The system configuration shown above is an example. Other combinations are available.

Pulse input type with an electromagnetic brake equipped with the **AZ** Series (AC power supply input and DC power supply input are both indicated. The photo shows a type for AC power supply input.)

An example of a single-axis system configuration with the **EMP400** controller is shown below.

*1 Not supplied.
*2 A product for DC power supply is unnecessary.
*3 Only with products supplied with a connection cable.



The functions and operation method of this product are common to the stepping motor and driver package **AZ** Series. For details on the functions and operation method, see the User's Manual (for Drivers, Functions) of the **AZ** Series.
The User's Manual for Drivers is included with the product, but the guide for Functions is not included. Contact the nearest Oriental Motor sales office or download from the Oriental Motor website. http://www.orientalmotor.com.sg

System Configuration Example

EAC Series	+	Sold Separately		
		Controller	General – Purpose Cable for I/O Signals (1 m)	Connector – Terminal Block Conversion Unit (1 m)
EAC4-D05-AZMC-3		**EMP401-1**	**CC16D010B-1**	**CC50T10E**

The system configuration shown above is an example. Other combinations are available.

EAC4: Frame Size 42 mm×42 mm AC Power Supply Input Standard Type

Maximum Transportable Mass: Horizontal 30 kg/Vertical 14 kg
Stroke: 50～300 mm (50 mm increments)

Motorized Cylinders

Drive System	Ball Screw	Repetitive Positioning Accuracy [mm]	±0.02	Minimum Traveling Amount [mm]	0.01

Product Name	Lead [mm]	Transportable Mass [kg]*		Thrust [N]	Pushing Force [N]	Holding Force [N]	Maximum Speed [mm/s]
		Horizontal	Vertical				
EAC4-D⑤-AZA⑧⑨-⑩	12	～15	–	～70	100	70	600
EAC4-D⑤-AZM⑧⑨-⑩			～7				
EAC4-E⑤-AZA⑧⑨-⑩	6	～30	–	～140	200	140	300
EAC4-E⑤-AZM⑧⑨-⑩			～14				

*The transportable mass is the value when an external linear guide is used.

- Symbols and numbers are substituted for ⑤, ⑧, ⑨ and ⑩ in the product names. For details, refer to "◇ Product Number Code" in Page 40.
- For reading the specifications table, refer to "How to Read Specifications Table" on Page 18.

Note

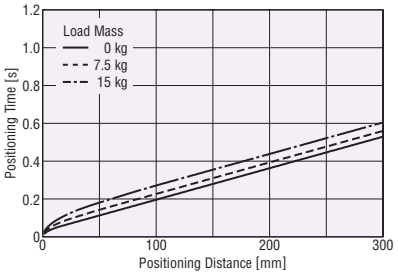
- In the case of upward pushing return-to-home, the home position may vary.
- The push-motion operation speed should be 25 mm/s or less.
- Do not apply radial load or load moment to the rod of the motorized cylinders. Make sure to provide a guide although a simple anti-spin mechanism is already provided.

Positioning Distance – Positioning Time

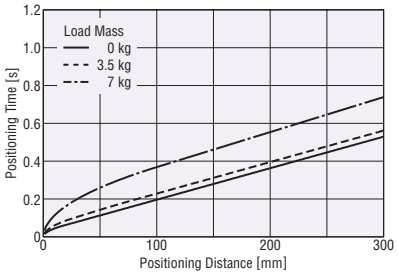
The positioning time (reference) can be checked from the positioning distance.
Refer to Page 112 for Operating Speed and Acceleration.

Lead: 12 mm

◇Horizontal Direction Installation

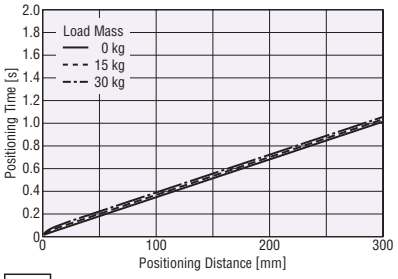


◇Vertical Direction Installation

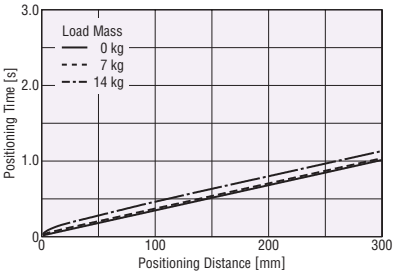


Lead: 6 mm

◇Horizontal Direction Installation



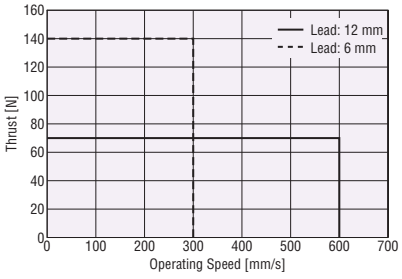
◇Vertical Direction Installation



Note

- The positioning time in the graph does not include the settling time.
  Use a settling time of 0.15 s or less as a reference. (Settling time is adjustable by the velocity filter function.)
- The starting speed should be 6 mm/s or less.

Operating Speed – Thrust



Dimensions

Motorized Cylinders → Page 62

EAC4R: Frame Size 42 mm×42 mm AC Power Supply Input Side-Mounted Type

Maximum Transportable Mass: Horizontal 30 kg/Vertical 12.5 kg
Stroke: 50～300 mm (50 mm increments)

Motorized Cylinders

Drive System	Ball Screw	Repetitive Positioning Accuracy [mm]	±0.02	Minimum Traveling Amount [mm]	0.01

Product Name	Lead [mm]	Transportable Mass [kg]*		Thrust [N]	Pushing Force [N]	Holding Force [N]	Maximum Speed [mm/s]
		Horizontal	Vertical				
EAC4R-D⑤-AZA⑧⑨-⑩	12	～15	–	～70	100	70	600
EAC4R-D⑤-AZM⑧⑨-⑩			～7				
EAC4R-E⑤-AZA⑧⑨-⑩	6	～30	–	～125	200	125	300
EAC4R-E⑤-AZM⑧⑨-⑩			～12.5				

*The transportable mass is the value when an external linear guide is used.

- Symbols and numbers are substituted for ⑤, ⑧, ⑨ and ⑩ in the product names. For details, refer to "◇ Product Number Code" in Page 40.
- For reading the specifications table, refer to "How to Read Specifications Table" on Page 18.

Note

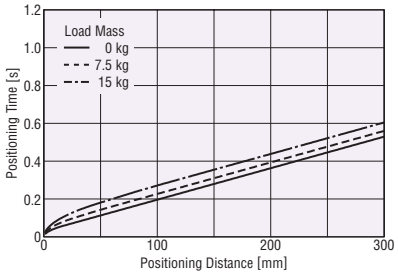
- In the case of upward pushing return-to-home, the home position may vary.
- The push-motion operation speed should be 25 mm/s or less.
- Do not apply radial load or load moment to the rod of the motorized cylinders. Make sure to provide a guide although a simple anti-spin mechanism is already provided.

Positioning Distance – Positioning Time

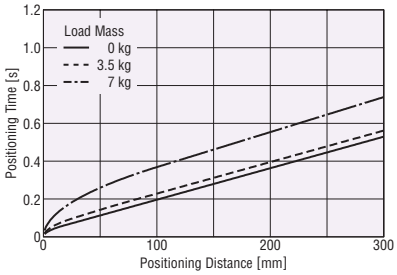
The positioning time (reference) can be checked from the positioning distance.
Refer to Page 113 for Operating Speed and Acceleration.

Lead: 12 mm

◇Horizontal Direction Installation

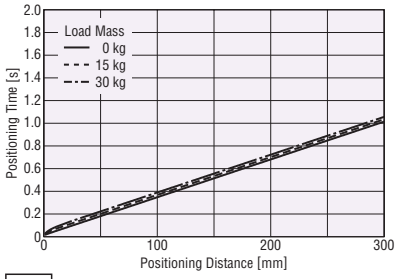


◇Vertical Direction Installation

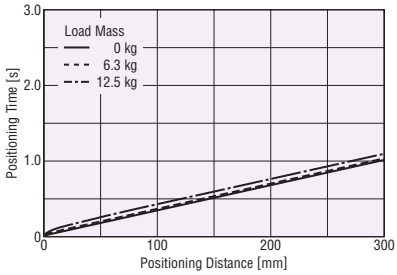


Lead: 6 mm

◇Horizontal Direction Installation



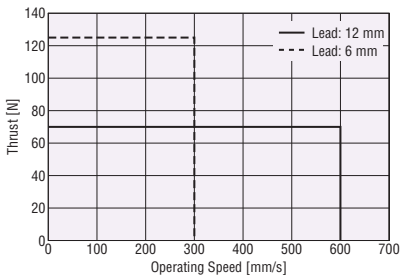
◇Vertical Direction Installation



Note

- The positioning time in the graph does not include the settling time.
  Use a settling time of 0.15 s or less as a reference. (Settling time is adjustable by the velocity filter function.)
- The starting speed should be 6 mm/s or less.

Operating Speed – Thrust



Dimensions

Motorized Cylinders → Page 63

EAC4: Frame Size 42 mm×42 mm 24 VDC Input Standard Type

Maximum Transportable Mass: Horizontal 30 kg/Vertical 14 kg
Stroke: 50～300 mm (50 mm increments)

Motorized Cylinders

Drive System	Ball Screw	Repetitive Positioning Accuracy [mm]	±0.02	Minimum Traveling Amount [mm]	0.01

Product Name	Lead [mm]	Transportable Mass [kg]*		Thrust [N]	Pushing Force [N]	Holding Force [N]	Maximum Speed [mm/s]
		Horizontal	Vertical				
EAC4-D⑤-AZAK⑨-⑩	12	～15	–	～70	100	70	600
EAC4-D⑤-AZMK⑨-⑩			～7				
EAC4-E⑤-AZAK⑨-⑩	6	～30	–	～140	200	140	300
EAC4-E⑤-AZMK⑨-⑩			～14				

*The transportable mass is the value when an external linear guide is used.

- Symbols and numbers are substituted for ⑤, ⑨ and ⑩ in the product names. For details, refer to "◇ Product Number Code" in Page 42.
- For reading the specifications table, refer to "How to Read Specifications Table" on Page 18.
- For the specifications and characteristics for 48 VDC input, contact the nearest Oriental Motor sales office.

Note

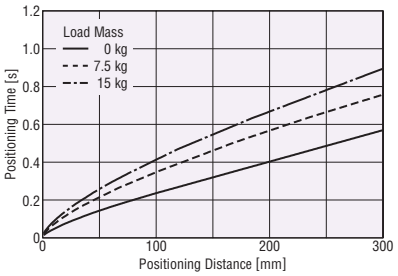
- In the case of upward pushing return-to-home, the home position may vary.
- The push-motion operation speed should be 25 mm/s or less.
- Do not apply radial load or load moment to the rod of the motorized cylinders. Make sure to provide a guide although a simple anti-spin mechanism is already provided.
- The maximum speed may decrease depending on the ambient temperature and motor cable length.

Positioning Distance – Positioning Time

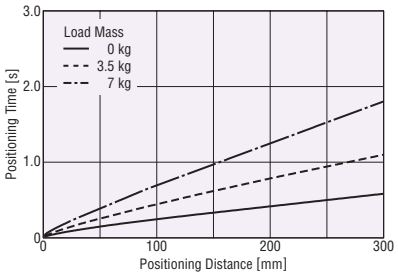
The positioning time (reference) can be checked from the positioning distance.
Refer to Page 114 for Operating Speed and Acceleration.

Lead: 12 mm

◇Horizontal Direction Installation

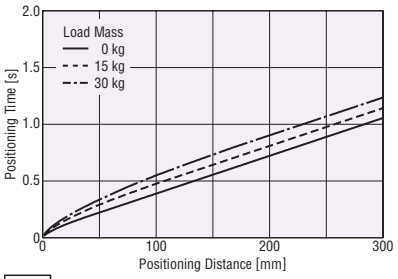


◇Vertical Direction Installation

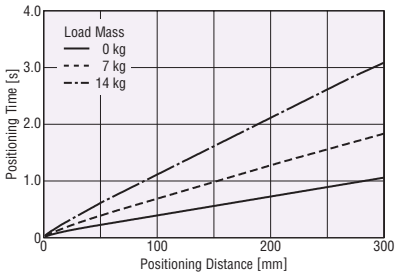


Lead: 6 mm

◇Horizontal Direction Installation



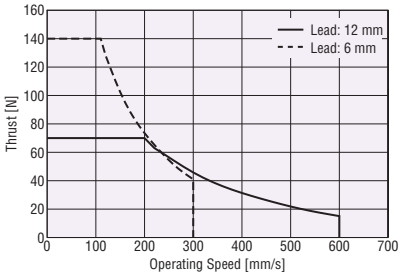
◇Vertical Direction Installation



Note

- The positioning time in the graph does not include the settling time.
  Use a settling time of 0.15 s or less as a reference. (Settling time is adjustable by the velocity filter function.)
- The starting speed should be 6 mm/s or less.

Operating Speed – Thrust



Dimensions

Motorized Cylinders → Page 62

EAC4R: Frame Size 42 mm×42 mm 24 VDC Input Side-Mounted Type

Maximum Transportable Mass: Horizontal 30 kg/Vertical 12.5 kg
Stroke: 50～300 mm (50 mm increments)

Motorized Cylinders

Drive System	Ball Screw	Repetitive Positioning Accuracy [mm]	±0.02	Minimum Traveling Amount [mm]	0.01

Product Name	Lead [mm]	Transportable Mass [kg]*		Thrust [N]	Pushing Force [N]	Holding Force [N]	Maximum Speed [mm/s]
		Horizontal	Vertical				
EAC4R-D⑤-AZAK⑨-⑩	12	～15	–	～70	100	70	600
EAC4R-D⑤-AZMK⑨-⑩			～7				
EAC4R-E⑤-AZAK⑨-⑩	6	～30	–	～125	200	125	300
EAC4R-E⑤-AZMK⑨-⑩			～12.5				

*The transportable mass is the value when an external linear guide is used.

- Symbols and numbers are substituted for ⑤, ⑨ and ⑩ in the product names. For details, refer to "◇ Product Number Code" in Page 42.
- For reading the specifications table, refer to "How to Read Specifications Table" on Page 18.
- For the specifications and characteristics for 48 VDC input, contact the nearest Oriental Motor sales office.

Note

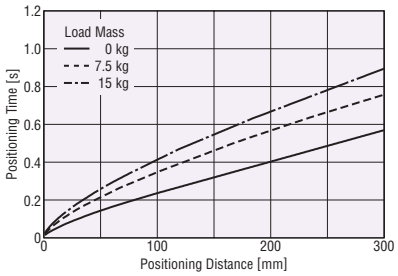
- In the case of upward pushing return-to-home, the home position may vary.
- The push-motion operation speed should be 25 mm/s or less.
- Do not apply radial load or load moment to the rod of the motorized cylinders. Make sure to provide a guide although a simple anti-spin mechanism is already provided.
- The maximum speed may decrease depending on the ambient temperature and motor cable length.

Positioning Distance – Positioning Time

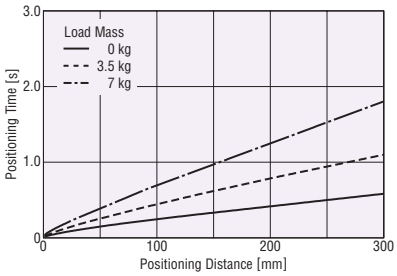
The positioning time (reference) can be checked from the positioning distance.
Refer to Page 115 for Operating Speed and Acceleration.

Lead: 12 mm

◇Horizontal Direction Installation

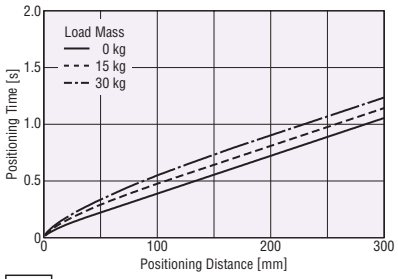


◇Vertical Direction Installation

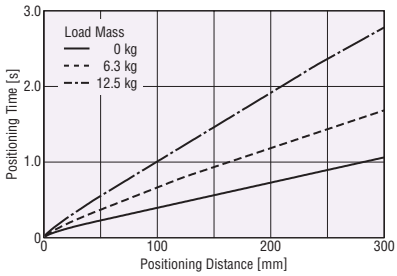


Lead: 6 mm

◇Horizontal Direction Installation



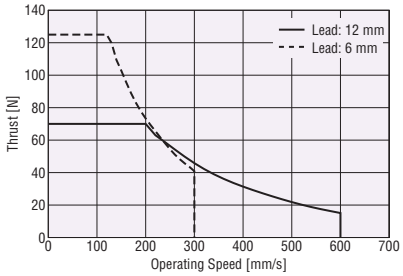
◇Vertical Direction Installation



Note

- The positioning time in the graph does not include the settling time.
  Use a settling time of 0.15 s or less as a reference. (Settling time is adjustable by the velocity filter function.)
- The starting speed should be 6 mm/s or less.

Operating Speed – Thrust



Dimensions

Motorized Cylinders → Page 63

EAC6: Frame Size 60 mm×60 mm AC Power Supply Input Standard Type

Maximum Transportable Mass: Horizontal 60 kg/Vertical 30 kg
Stroke: 50～300 mm (50 mm increments)

Motorized Cylinders

Drive System	Ball Screw	Repetitive Positioning Accuracy [mm]	±0.02	Minimum Traveling Amount [mm]	0.01

Product Name	Lead [mm]	Transportable Mass [kg]*		Thrust [N]	Pushing Force [N]	Holding Force [N]	Maximum Speed [mm/s]
		Horizontal	Vertical				
EAC6-D⑤-AZA⑧⑨-⑩	12	～30	–	～200	400	200	600
EAC6-D⑤-AZM⑧⑨-⑩			～15				
EAC6-E⑤-AZA⑧⑨-⑩	6	～60	–	～400	500	400	300
EAC6-E⑤-AZM⑧⑨-⑩			～30				

*The transportable mass is the value when an external linear guide is used.

- Symbols and numbers are substituted for ⑤, ⑧, ⑨ and ⑩ in the product names. For details, refer to "◇ Product Number Code" in Page 40.
- For reading the specifications table, refer to "How to Read Specifications Table" on Page 18.

Note

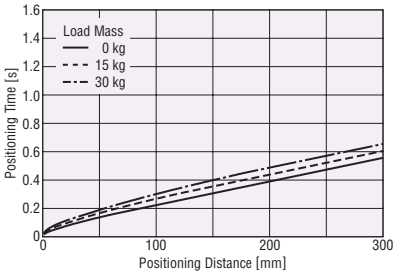
- In the case of upward pushing return-to-home, the home position may vary.
- The push-motion operation speed should be 25 mm/s or less.
- Do not apply radial load or load moment to the rod of the motorized cylinders. Make sure to provide a guide although a simple anti-spin mechanism is already provided.

Positioning Distance – Positioning Time

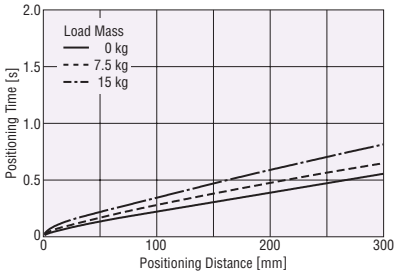
The positioning time (reference) can be checked from the positioning distance.
Refer to Page 116 for Operating Speed and Acceleration.

Lead: 12 mm

◇Horizontal Direction Installation

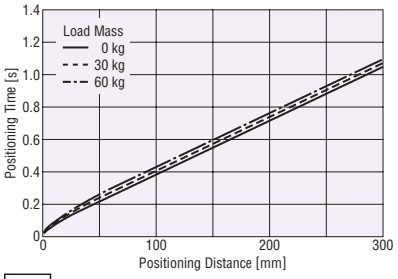


◇Vertical Direction Installation

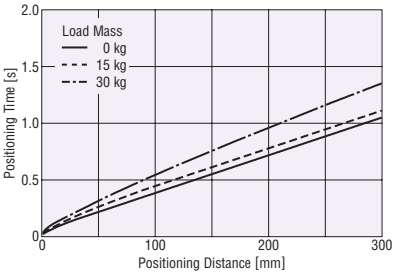


Lead: 6 mm

◇Horizontal Direction Installation



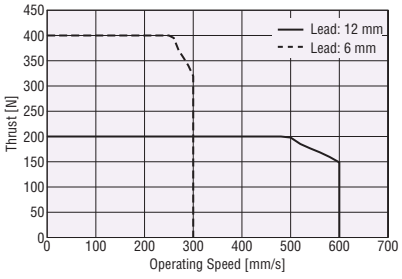
◇Vertical Direction Installation



Note

- The positioning time in the graph does not include the settling time.
  Use a settling time of 0.15 s or less as a reference. (Settling time is adjustable by the velocity filter function.)
- The starting speed should be 6 mm/s or less.

Operating Speed – Thrust



Dimensions

Motorized Cylinders → Page 64

EAC6R: Frame Size 60 mm×60 mm AC Power Supply Input Side-Mounted Type

Maximum Transportable Mass: Horizontal 60 kg/Vertical 30 kg
Stroke: 50～300 mm (50 mm increments)

Motorized Cylinders

Drive System	Ball Screw	Repetitive Positioning Accuracy [mm]	±0.02	Minimum Traveling Amount [mm]	0.01

Product Name	Lead [mm]	Transportable Mass [kg]*		Thrust [N]	Pushing Force [N]	Holding Force [N]	Maximum Speed [mm/s]
		Horizontal	Vertical				
EAC6R-D⑤-AZA⑧⑨-⑩	12	～30	–	～200	400	200	600
EAC6R-D⑤-AZM⑧⑨-⑩			～15				
EAC6R-E⑤-AZA⑧⑨-⑩	6	～60	–	～360	500	360	300
EAC6R-E⑤-AZM⑧⑨-⑩			～30				

*The transportable mass is the value when an external linear guide is used.

- Symbols and numbers are substituted for ⑤, ⑧, ⑨ and ⑩ in the product names. For details, refer to "◇ Product Number Code" in Page 40.
- For reading the specifications table, refer to "How to Read Specifications Table" on Page 18.

Note

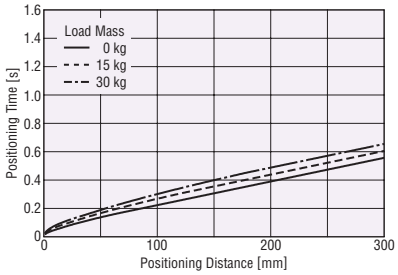
- In the case of upward pushing return-to-home, the home position may vary.
- The push-motion operation speed should be 25 mm/s or less.
- Do not apply radial load or load moment to the rod of the motorized cylinders. Make sure to provide a guide although a simple anti-spin mechanism is already provided.

Positioning Distance – Positioning Time

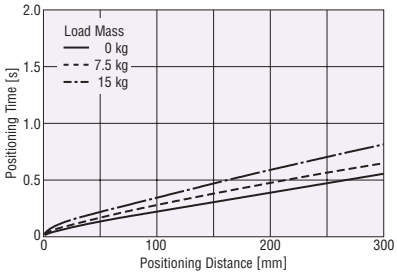
The positioning time (reference) can be checked from the positioning distance.
Refer to Page 116 for Operating Speed and Acceleration.

Lead: 12 mm

◇Horizontal Direction Installation

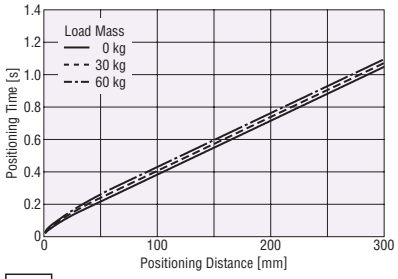


◇Vertical Direction Installation

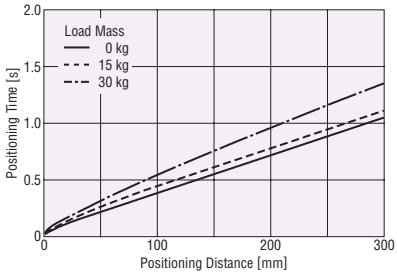


Lead: 6 mm

◇Horizontal Direction Installation



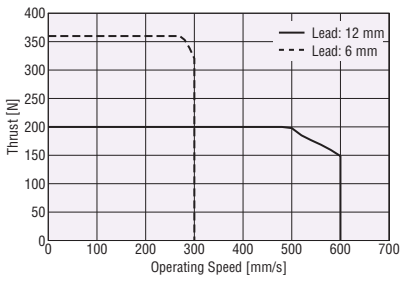
◇Vertical Direction Installation



Note

- The positioning time in the graph does not include the settling time.
  Use a settling time of 0.15 s or less as a reference. (Settling time is adjustable by the velocity filter function.)
- The starting speed should be 6 mm/s or less.

Operating Speed – Thrust



Dimensions

Motorized Cylinders → Page 65

EAC6: Frame Size 60 mm×60 mm 24 VDC Input Standard Type

Maximum Transportable Mass: Horizontal 60 kg/Vertical 30 kg
Stroke: 50～300 mm (50 mm increments)

Motorized Cylinders

Drive System	Ball Screw	Repetitive Positioning Accuracy [mm]	±0.02	Minimum Traveling Amount [mm]	0.01

Product Name	Lead [mm]	Transportable Mass [kg]*		Thrust [N]	Pushing Force [N]	Holding Force [N]	Maximum Speed [mm/s]
		Horizontal	Vertical				
EAC6-D⑤-AZAK⑨-⑩	12	～30	–	～200	400	200	600
EAC6-D⑤-AZMK⑨-⑩			～15				
EAC6-E⑤-AZAK⑨-⑩	6	～60	–	～400	500	400	300
EAC6-E⑤-AZMK⑨-⑩			～30				

*The transportable mass is the value when an external linear guide is used.

- Symbols and numbers are substituted for ⑤, ⑨ and ⑩ in the product names. For details, refer to "◇ Product Number Code" in Page 42.
- For reading the specifications table, refer to "How to Read Specifications Table" on Page 18.
- For the specifications and characteristics for 48 VDC input, contact the nearest Oriental Motor sales office.

Note

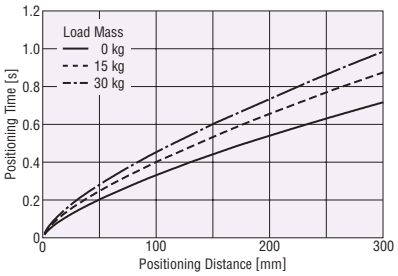
- In the case of upward pushing return-to-home, the home position may vary.
- The push-motion operation speed should be 25 mm/s or less.
- Do not apply radial load or load moment to the rod of the motorized cylinders. Make sure to provide a guide although a simple anti-spin mechanism is already provided.
- The maximum speed may decrease depending on the ambient temperature and motor cable length.

Positioning Distance – Positioning Time

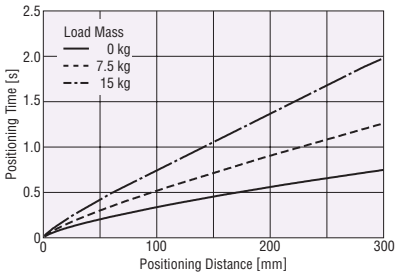
The positioning time (reference) can be checked from the positioning distance.
Refer to Page 117 for Operating Speed and Acceleration.

Lead: 12 mm

◇Horizontal Direction Installation

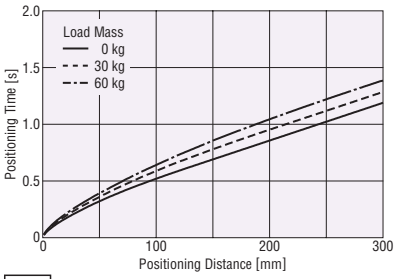


◇Vertical Direction Installation

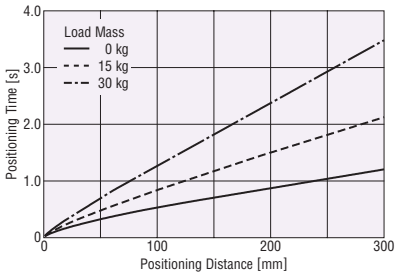


Lead: 6 mm

◇Horizontal Direction Installation



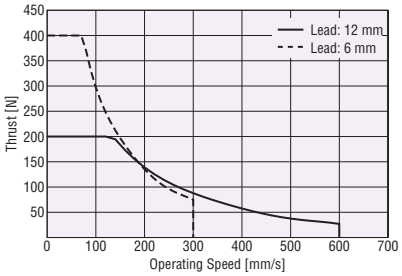
◇Vertical Direction Installation



Note

- The positioning time in the graph does not include the settling time.
  Use a settling time of 0.15 s or less as a reference. (Settling time is adjustable by the velocity filter function.)
- The starting speed should be 6 mm/s or less.

Operating Speed – Thrust



Dimensions

Motorized Cylinders → Page 64

EAC6R: Frame Size 60 mm×60 mm 24 VDC Input Side-Mounted Type

Maximum Transportable Mass: Horizontal 60 kg/Vertical 30 kg
Stroke: 50～300 mm (50 mm increments)

Motorized Cylinders

Drive System	Ball Screw	Repetitive Positioning Accuracy [mm]	±0.02	Minimum Traveling Amount [mm]	0.01

Product Name	Lead [mm]	Transportable Mass [kg]*		Thrust [N]	Pushing Force [N]	Holding Force [N]	Maximum Speed [mm/s]
		Horizontal	Vertical				
EAC6R-D⑤-AZAK⑨-⑩	12	～30	—	～200	400	200	600
EAC6R-D⑤-AZMK⑨-⑩			～15				
EAC6R-E⑤-AZAK⑨-⑩	6	～60	—	～360	500	360	300
EAC6R-E⑤-AZMK⑨-⑩			～30				

*The transportable mass is the value when an external linear guide is used.

- Symbols and numbers are substituted for ⑤, ⑨ and ⑩ in the product names. For details, refer to "◇ Product Number Code" in Page 42.
- For reading the specifications table, refer to "How to Read Specifications Table" on Page 18.
- For the specifications and characteristics for 48 VDC input, contact the nearest Oriental Motor sales office.

Note

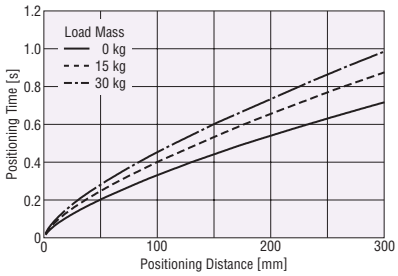
- In the case of upward pushing return-to-home, the home position may vary.
- The push-motion operation speed should be 25 mm/s or less.
- Do not apply radial load or load moment to the rod of the motorized cylinders. Make sure to provide a guide although a simple anti-spin mechanism is already provided.
- The maximum speed may decrease depending on the ambient temperature and motor cable length.

Positioning Distance – Positioning Time

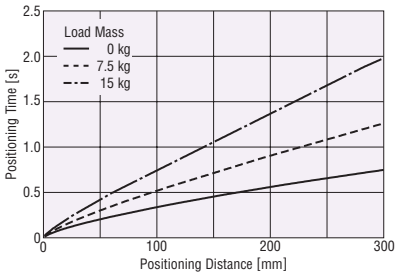
The positioning time (reference) can be checked from the positioning distance.
Refer to Page 117 for Operating Speed and Acceleration.

Lead: 12 mm

◇Horizontal Direction Installation

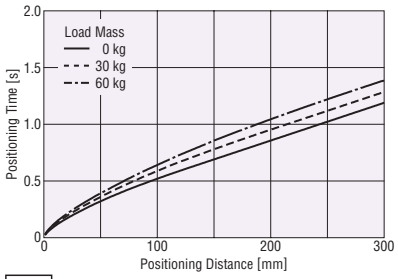


◇Vertical Direction Installation

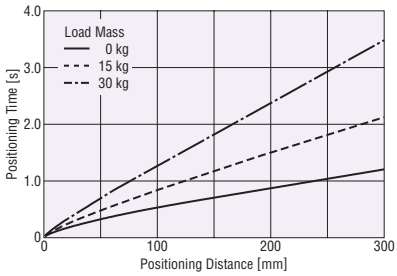


Lead: 6 mm

◇Horizontal Direction Installation



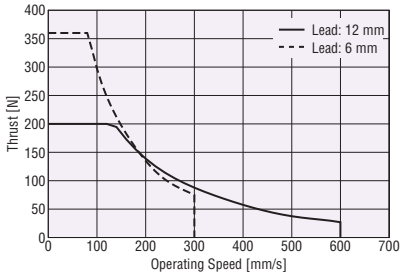
◇Vertical Direction Installation



Note

- The positioning time in the graph does not include the settling time.
  Use a settling time of 0.15 s or less as a reference. (Settling time is adjustable by the velocity filter function.)
- The starting speed should be 6 mm/s or less.

Operating Speed – Thrust



Dimensions

Motorized Cylinders → Page 65

EAC4W: Frame Size 42 mm×114 mm AC Power Supply Input Standard Type With Shaft Guide (With cover)

Maximum Transportable Mass: Horizontal 30 kg/Vertical 13 kg
Stroke: 50～300 mm (50 mm increments)

Motorized Cylinders

Drive System	Ball Screw

Repetitive Positioning Accuracy [mm]	±0.02

Minimum Traveling Amount [mm]	0.01

Dynamic Permissible Moment[N·m]	MP:1.3	MY:1.3	MR:0.6
Static Permissible Moment[N·m]	MP:3.7	MY:3.7	MR:3.0

Product Name	Lead [mm]	Transportable Mass [kg]*		Thrust [N]	Pushing Force [N]	Holding Force [N]	Maximum Speed [mm/s]
		Horizontal	Vertical				
EAC4W-D⑤-AZA⑧⑨-⑩-⑪	12	～15	–	～70	100	70	600
EAC4W-D⑤-AZM⑧⑨-⑩-⑪			～6				
EAC4W-E⑤-AZA⑧⑨-⑩-⑪	6	～30	–	～140	200	140	300
EAC4W-E⑤-AZM⑧⑨-⑩-⑪			～13				

*The transportable mass is the value when an external linear guide is used. When not using a linear guide, refer to " ■ Horizontal Transportable Mass."
● Symbols and numbers are substituted for ⑤, ⑧, ⑨, ⑩ and ⑪ in the product names. For details, refer to "◇ Product Number Code" in Page 40.
● For reading the specifications table, refer to "How to Read Specifications Table" on Page 18.

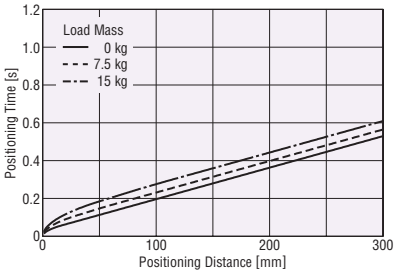
Note
● In the case of upward pushing return-to-home, the home position may vary.
● The push-motion operation speed should be 25 mm/s or less and within the limit of the dynamic permissible moment.

Positioning Distance – Positioning Time

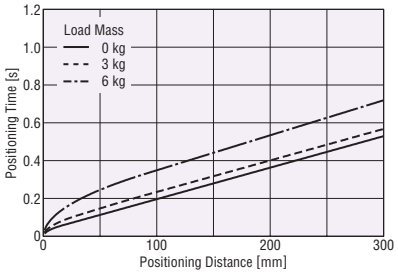
The positioning time (reference) can be checked from the positioning distance.
Refer to Page 118 for Operating Speed and Acceleration.

● Lead: 12 mm

◇Horizontal Direction Installation

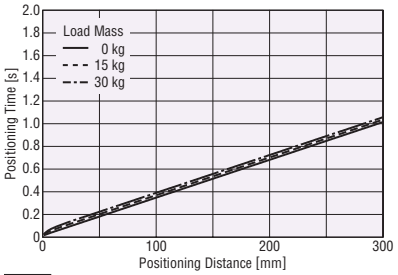


◇Vertical Direction Installation

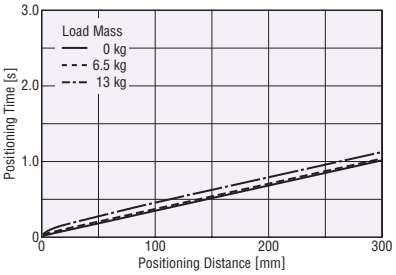


● Lead: 6 mm

◇Horizontal Direction Installation



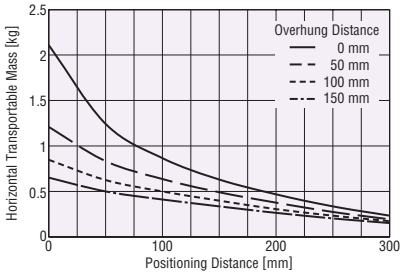
◇Vertical Direction Installation



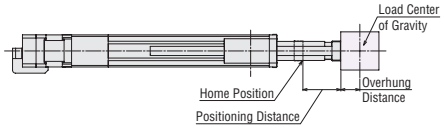
Note
● The positioning time in the graph does not include the settling time.
Use a settling time of 0.15 s or less as a reference. (Settling time is adjustable by the velocity filter function.)
● The starting speed should be 6 mm/s or less.

Horizontal Transportable Mass

◇Positioning Distance – Horizontal Transportable Mass

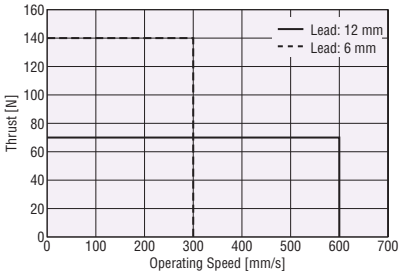


Products with shaft guide and shaft guide cover can be applied with load, and can transport the load. Refer to the above graph for the horizontally transportable mass.



● The positioning distance is the distance from the home position.
● The overhung distance is the distance taken by the protrusion from the load installation surface.

Operating Speed – Thrust

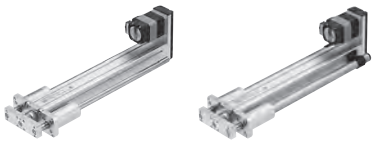


Dimensions

● Motorized Cylinders → Page 66

EAC4RW: Frame Size 42 mm×114 mm AC Power Supply Input Side-Mounted Type With Shaft Guide (With cover)

Maximum Transportable Mass: Horizontal 30 kg/Vertical 11.5 kg
Stroke: 50～300 mm (50 mm increments)



Motorized Cylinders

Drive System	Ball Screw	Repetitive Positioning Accuracy [mm]	±0.02	Minimum Traveling Amount [mm]	0.01

Dynamic Permissible Moment [N·m]	MP:1.3	MY:1.3	MR:0.6
Static Permissible Moment [N·m]	MP:3.7	MY:3.7	MR:3.0

Product Name	Lead [mm]	Transportable Mass [kg]* Horizontal	Transportable Mass [kg]* Vertical	Thrust [N]	Pushing Force [N]	Holding Force [N]	Maximum Speed [mm/s]
EAC4RW-D⑤-AZA⑧⑨-⑩-⑪	12	～15	—	～70	100	70	600
EAC4RW-D⑤-AZM⑧⑨-⑩-⑪			～6				
EAC4RW-E⑤-AZA⑧⑨-⑩-⑪	6	～30	—	～125	200	125	300
EAC4RW-E⑤-AZM⑧⑨-⑩-⑪			～11.5				

*The transportable mass is the value when an external linear guide is used. When not using a linear guide, refer to "■ Horizontal Transportable Mass."

- Symbols and numbers are substituted for ⑤, ⑧, ⑨, ⑩ and ⑪ in the product names. For details, refer to "◇ Product Number Code" in Page 40.
- For reading the specifications table, refer to "How to Read Specifications Table" on Page 18.

Note

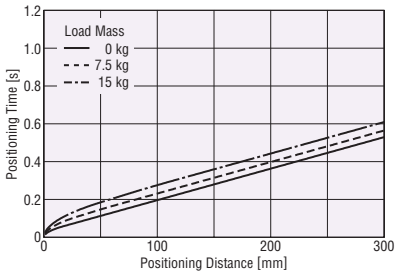
- In the case of upward pushing return-to-home, the home position may vary.
- The push-motion operation speed should be 25 mm/s or less and within the limit of the dynamic permissible moment.

Positioning Distance – Positioning Time

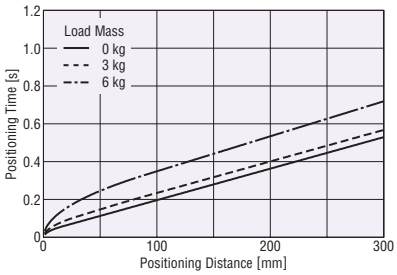
The positioning time (reference) can be checked from the positioning distance.
Refer to Page 119 for Operating Speed and Acceleration.

Lead: 12 mm

◇Horizontal Direction Installation

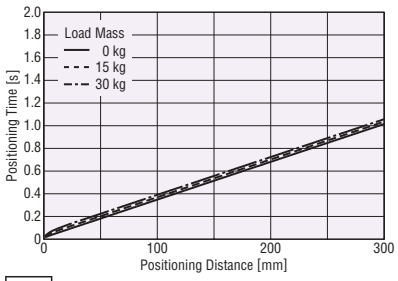


◇Vertical Direction Installation

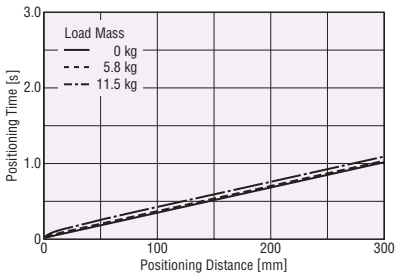


Lead: 6 mm

◇Horizontal Direction Installation



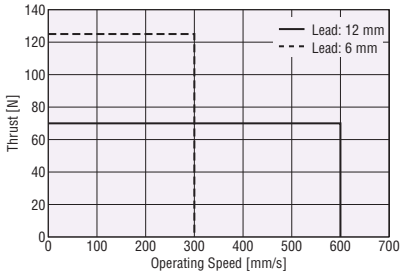
◇Vertical Direction Installation



Note

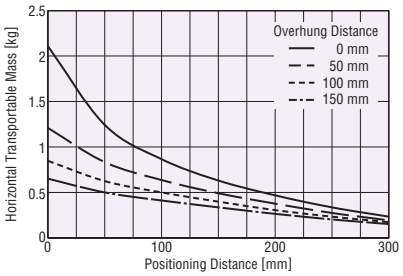
- The positioning time in the graph does not include the settling time.
  Use a settling time of 0.15 s or less as a reference. (Settling time is adjustable by the velocity filter function.)
- The starting speed should be 6 mm/s or less.

Operating Speed – Thrust

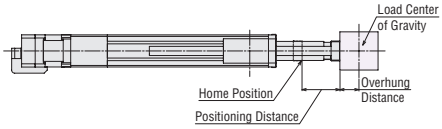


Horizontal Transportable Mass

◇Positioning Distance – Horizontal Transportable Mass



Products with shaft guide and shaft guide cover can be applied with load, and can transport the load. Refer to the above graph for the horizontally transportable mass.



- The positioning distance is the distance from the home position.
- The overhung distance is the distance taken by the protrusion from the load installation surface.

Dimensions

Motorized Cylinders → Page 67

EAC4W: Frame Size 42 mm×114 mm 24 VDC Input Standard Type With Shaft Guide (With cover)

Maximum Transportable Mass: Horizontal 30 kg/Vertical 13 kg
Stroke: 50～300 mm (50 mm increments)

Motorized Cylinders

Drive System	Ball Screw

Repetitive Positioning Accuracy [mm]	±0.02

Minimum Traveling Amount [mm]	0.01

Dynamic Permissible Moment[N·m]	MP:1.3	MY:1.3	MR:0.6
Static Permissible Moment[N·m]	MP:3.7	MY:3.7	MR:3.0

Product Name	Lead [mm]	Transportable Mass [kg]*		Thrust [N]	Pushing Force [N]	Holding Force [N]	Maximum Speed [mm/s]
		Horizontal	Vertical				
EAC4W-D⑤-AZAK⑨-⑩-⑪	12	～15	–	～70	100	70	600
EAC4W-D⑤-AZMK⑨-⑩-⑪			～6				
EAC4W-E⑤-AZAK⑨-⑩-⑪	6	～30	–	～140	200	140	300
EAC4W-E⑤-AZMK⑨-⑩-⑪			～13				

*The transportable mass is the value when an external linear guide is used. When not using a linear guide, refer to " ■ Horizontal Transportable Mass."

- Symbols and numbers are substituted for ⑤, ⑨, ⑩ and ⑪ in the product names. For details, refer to " ◇ Product Number Code" in Page 42.
- For reading the specifications table, refer to "How to Read Specifications Table" on Page 18.
- For the specifications and characteristics for 48 VDC input, contact the nearest Oriental Motor sales office.

Note

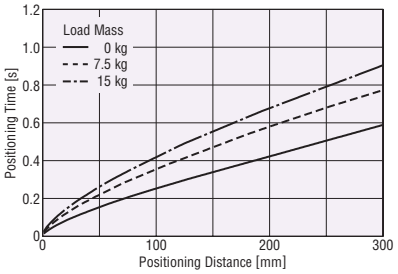
- In the case of upward pushing return-to-home, the home position may vary.
- The push-motion operation speed should be 25 mm/s or less and within the limit of the dynamic permissible moment.
- The maximum speed may decrease depending on the ambient temperature and motor cable length.

Positioning Distance – Positioning Time

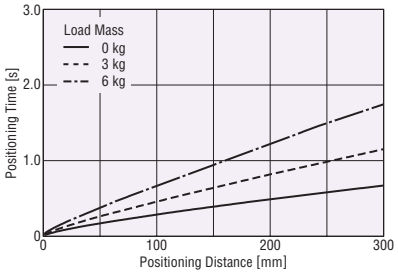
The positioning time (reference) can be checked from the positioning distance.
Refer to Page 120 for Operating Speed and Acceleration.

Lead: 12 mm

◇Horizontal Direction Installation

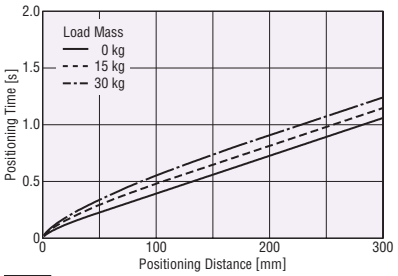


◇Vertical Direction Installation

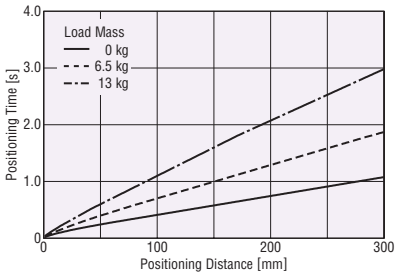


Lead: 6 mm

◇Horizontal Direction Installation



◇Vertical Direction Installation

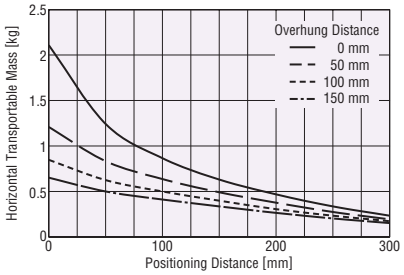


Note

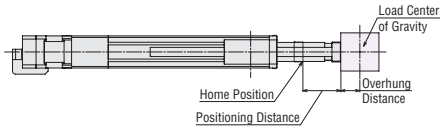
- The positioning time in the graph does not include the settling time.
  Use a settling time of 0.15 s or less as a reference. (Settling time is adjustable by the velocity filter function.)
- The starting speed should be 6 mm/s or less.

Horizontal Transportable Mass

◇Positioning Distance – Horizontal Transportable Mass

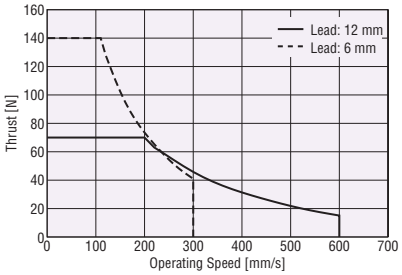


Products with shaft guide and shaft guide cover can be applied with load, and can transport the load. Refer to the above graph for the horizontally transportable mass.



- The positioning distance is the distance from the home position.
- The overhung distance is the distance taken by the protrusion from the load installation surface.

Operating Speed – Thrust

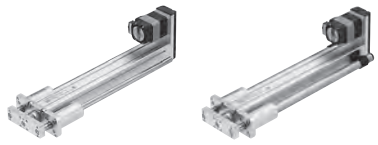


Dimensions

Motorized Cylinders → Page 66

EAC4RW: Frame Size 42 mm×114 mm 24 VDC Input Side-Mounted Type With Shaft Guide (With cover)

Maximum Transportable Mass: Horizontal 30 kg/Vertical 11.5 kg
Stroke: 50～300 mm (50 mm increments)



Motorized Cylinders

Drive System	Ball Screw

Repetitive Positioning Accuracy [mm]	±0.02

Minimum Traveling Amount [mm]	0.01

Dynamic Permissible Moment[N·m]	MP:1.3 MY:1.3 MR:0.6
Static Permissible Moment[N·m]	MP:3.7 MY:3.7 MR:3.0

Product Name	Lead [mm]	Transportable Mass [kg]*		Thrust [N]	Pushing Force [N]	Holding Force [N]	Maximum Speed [mm/s]
		Horizontal	Vertical				
EAC4RW-D⑤-AZAK⑨-⑩-⑪	12	～15	—	～70	100	70	600
EAC4RW-D⑤-AZMK⑨-⑩-⑪			～6				
EAC4RW-E⑤-AZAK⑨-⑩-⑪	6	～30	—	～125	200	125	300
EAC4RW-E⑤-AZMK⑨-⑩-⑪			～11.5				

*The transportable mass is the value when an external linear guide is used. When not using a linear guide, refer to "■ Horizontal Transportable Mass."

- Symbols and numbers are substituted for ⑤, ⑨, ⑩ and ⑪ in the product names. For details, refer to "◇ Product Number Code" in Page 42.
- For reading the specifications table, refer to "How to Read Specifications Table" on Page 18.
- For the specifications and characteristics for 48 VDC input, contact the nearest Oriental Motor sales office.

Note

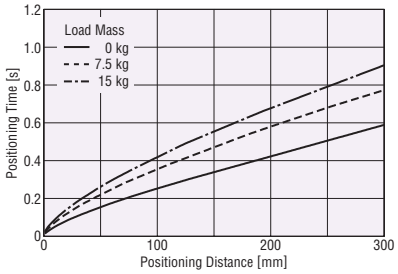
- In the case of upward pushing return-to-home, the home position may vary.
- The push-motion operation speed should be 25 mm/s or less and within the limit of the dynamic permissible moment.
- The maximum speed may decrease depending on the ambient temperature and motor cable length.

Positioning Distance – Positioning Time

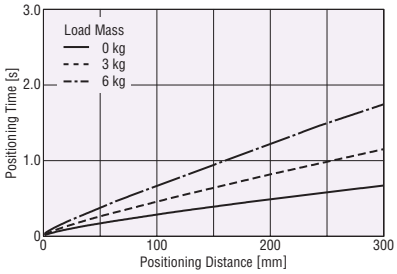
The positioning time (reference) can be checked from the positioning distance.
Refer to Page 121 for Operating Speed and Acceleration.

Lead: 12 mm

◇Horizontal Direction Installation

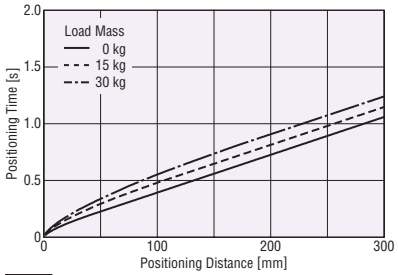


◇Vertical Direction Installation

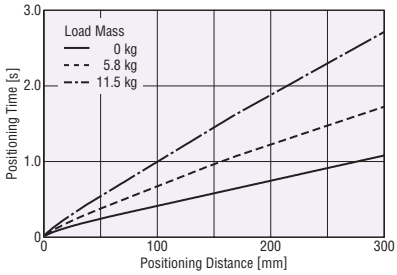


Lead: 6 mm

◇Horizontal Direction Installation



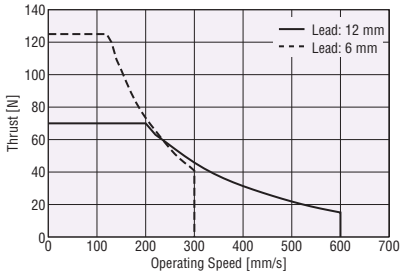
◇Vertical Direction Installation



Note

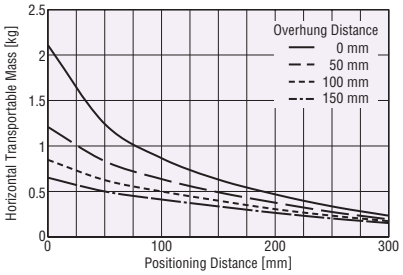
- The positioning time in the graph does not include the settling time.
  Use a settling time of 0.15 s or less as a reference. (Settling time is adjustable by the velocity filter function.)
- The starting speed should be 6 mm/s or less.

Operating Speed – Thrust

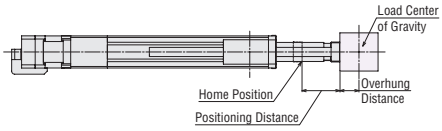


Horizontal Transportable Mass

◇Positioning Distance – Horizontal Transportable Mass



Products with shaft guide and shaft guide cover can be applied with load, and can transport the load. Refer to the above graph for the horizontally transportable mass.



- The positioning distance is the distance from the home position.
- The overhung distance is the distance taken by the protrusion from the load installation surface.

Dimensions

Motorized Cylinders → Page 67

EAC6W: Frame Size 60 mm×156 mm AC Power Supply Input Standard Type With Shaft Guide (With cover)

Maximum Transportable Mass: Horizontal 60 kg/Vertical 28 kg
Stroke: 50～300 mm (50 mm increments)

Motorized Cylinders

Drive System	Ball Screw

Repetitive Positioning Accuracy [mm]	±0.02

Minimum Traveling Amount [mm]	0.01

Dynamic Permissible Moment [N·m]	MP:2.2	MY:2.2	MR:1.3
Static Permissible Moment [N·m]	MP:7.8	MY:7.8	MR:3.0

Product Name	Lead [mm]	Transportable Mass [kg]*		Thrust [N]	Pushing Force [N]	Holding Force [N]	Maximum Speed [mm/s]
		Horizontal	Vertical				
EAC6W-D⑤-AZA⑧⑨-⑩-⑪	12	～30	–	～200	400	200	600
EAC6W-D⑤-AZM⑧⑨-⑩-⑪			～13				
EAC6W-E⑤-AZA⑧⑨-⑩-⑪	6	～60	–	～400	500	400	300
EAC6W-E⑤-AZM⑧⑨-⑩-⑪			～28				

*The transportable mass is the value when an external linear guide is used. When not using a linear guide, refer to " ■ Horizontal Transportable Mass."
●Symbols and numbers are substituted for ⑤, ⑧, ⑨, ⑩ and ⑪ in the product names. For details, refer to "◇ Product Number Code" in Page 40.
●For reading the specifications table, refer to "How to Read Specifications Table" on Page 18.

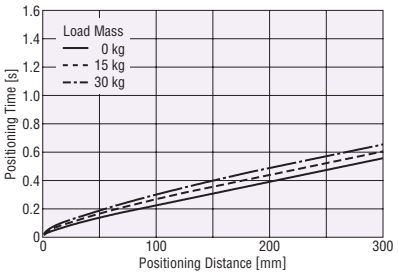
Note
●In the case of upward pushing return-to-home, the home position may vary.
●The push-motion operation speed should be 25 mm/s or less and within the limit of the dynamic permissible moment.

Positioning Distance – Positioning Time

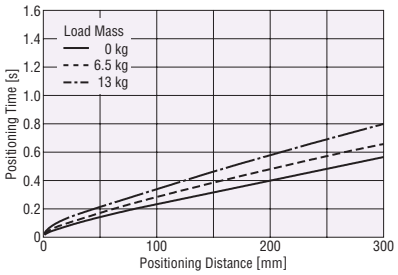
The positioning time (reference) can be checked from the positioning distance.
Refer to Page 122 for Operating Speed and Acceleration.

●Lead: 12 mm

◇Horizontal Direction Installation

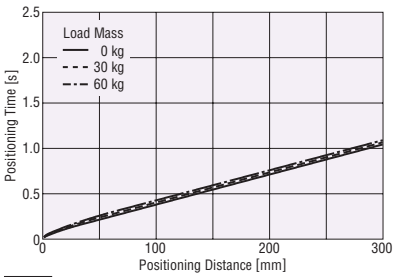


◇Vertical Direction Installation

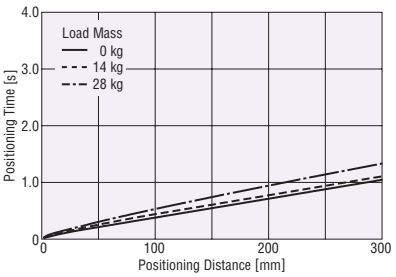


●Lead: 6 mm

◇Horizontal Direction Installation

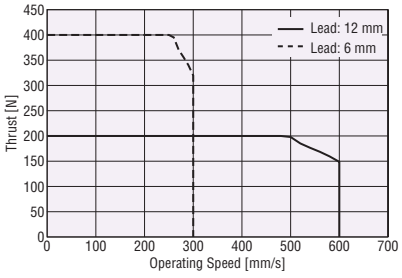


◇Vertical Direction Installation



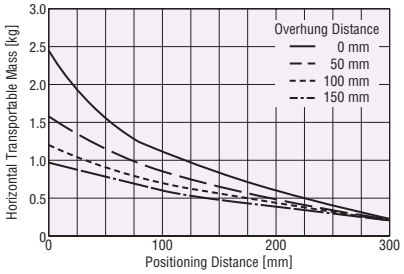
Note
●The positioning time in the graph does not include the settling time.
Use a settling time of 0.15 s or less as a reference. (Settling time is adjustable by the velocity filter function.)
●The starting speed should be 6 mm/s or less.

Operating Speed – Thrust

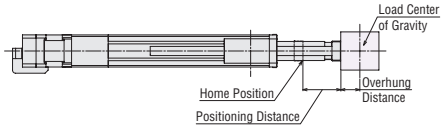


Horizontal Transportable Mass

◇Positioning Distance – Horizontal Transportable Mass



Products with shaft guide and shaft guide cover can be applied with load, and can transport the load. Refer to the above graph for the horizontally transportable mass.



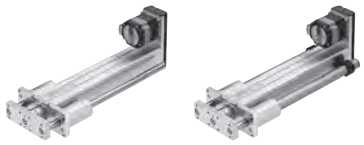
●The positioning distance is the distance from the home position.
●The overhung distance is the distance taken by the protrusion from the load installation surface.

Dimensions

●Motorized Cylinders → Page 68

EAC6RW: Frame Size 60 mm×156 mm AC Power Supply Input Side-Mounted Type With Shaft Guide (With cover)

Maximum Transportable Mass: Horizontal 60 kg/Vertical 28 kg
Stroke: 50～300 mm (50 mm increments)



Motorized Cylinders

Drive System	Ball Screw

Repetitive Positioning Accuracy [mm]	±0.02

Minimum Traveling Amount [mm]	0.01

Dynamic Permissible Moment [N·m]	MP:2.2	MY:2.2	MR:1.3
Static Permissible Moment [N·m]	MP:7.8	MY:7.8	MR:3.0

Product Name	Lead [mm]	Transportable Mass [kg]*		Thrust [N]	Pushing Force [N]	Holding Force [N]	Maximum Speed [mm/s]
		Horizontal	Vertical				
EAC6RW-D⑤-AZA⑧⑨-⑩-⑪	12	～30	—	～200	400	200	600
EAC6RW-D⑤-AZM⑧⑨-⑩-⑪			～13				
EAC6RW-E⑤-AZA⑧⑨-⑩-⑪	6	～60	—	～360	500	360	300
EAC6RW-E⑤-AZM⑧⑨-⑩-⑪			～28				

*The transportable mass is the value when an external linear guide is used. When not using a linear guide, refer to "■ Horizontal Transportable Mass."

●Symbols and numbers are substituted for ⑤, ⑧, ⑨, ⑩ and ⑪ in the product names. For details, refer to "◇ Product Number Code" in Page 40.

●For reading the specifications table, refer to "How to Read Specifications Table" on Page 18.

Note

●In the case of upward pushing return-to-home, the home position may vary.

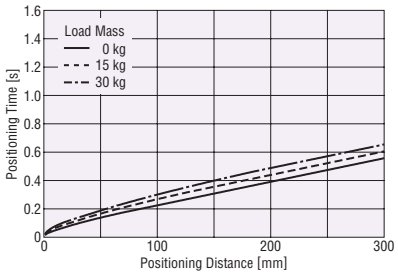
●The push-motion operation speed should be 25 mm/s or less and within the limit of the dynamic permissible moment.

Positioning Distance – Positioning Time

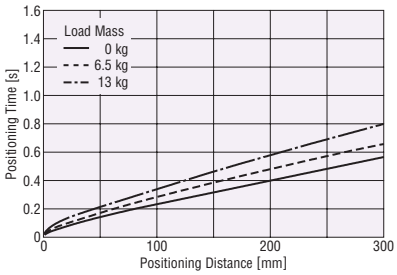
The positioning time (reference) can be checked from the positioning distance.
Refer to Page 122 for Operating Speed and Acceleration.

●Lead: 12 mm

◇Horizontal Direction Installation

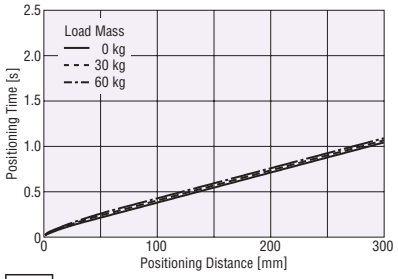


◇Vertical Direction Installation

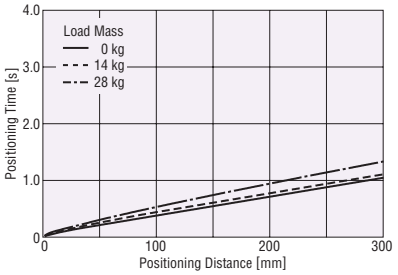


●Lead: 6 mm

◇Horizontal Direction Installation



◇Vertical Direction Installation



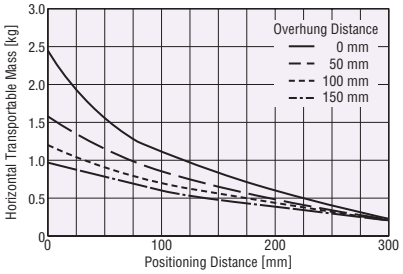
Note

●The positioning time in the graph does not include the settling time.
Use a settling time of 0.15 s or less as a reference. (Settling time is adjustable by the velocity filter function.)

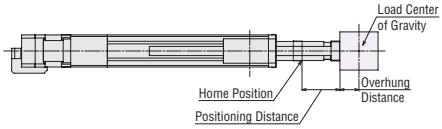
●The starting speed should be 6 mm/s or less.

Horizontal Transportable Mass

◇Positioning Distance – Horizontal Transportable Mass



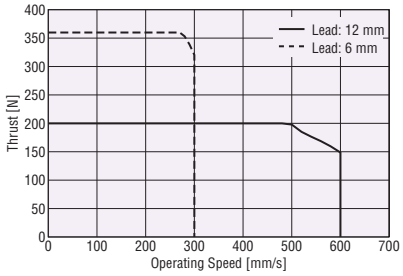
Products with shaft guide and shaft guide cover can be applied with load, and can transport the load. Refer to the above graph for the horizontally transportable mass.



●The positioning distance is the distance from the home position.

●The overhung distance is the distance taken by the protrusion from the load installation surface.

Operating Speed – Thrust



Dimensions

●Motorized Cylinders → Page 69

EAC6W: Frame Size 60 mm×156 mm 24 VDC Input Standard Type With Shaft Guide (With cover)

Maximum Transportable Mass: Horizontal 60 kg/Vertical 28 kg
Stroke: 50～300 mm (50 mm increments)

Motorized Cylinders

Drive System	Ball Screw

Repetitive Positioning Accuracy [mm]	±0.02

Minimum Traveling Amount [mm]	0.01

Dynamic Permissible Moment [N·m]	MP:2.2	MY:2.2	MR:1.3
Static Permissible Moment [N·m]	MP:7.8	MY:7.8	MR:3.0

Product Name	Lead [mm]	Transportable Mass [kg]*		Thrust [N]	Pushing Force [N]	Holding Force [N]	Maximum Speed [mm/s]
		Horizontal	Vertical				
EAC6W-D⑤-AZAK⑨-⑩-⑪	12	～30	–	～200	400	200	600
EAC6W-D⑤-AZMK⑨-⑩-⑪			～13				
EAC6W-E⑤-AZAK⑨-⑩-⑪	6	～60	–	～400	500	400	300
EAC6W-E⑤-AZMK⑨-⑩-⑪			～28				

*The transportable mass is the value when an external linear guide is used. When not using a linear guide, refer to " ■ Horizontal Transportable Mass."

- Symbols and numbers are substituted for ⑤, ⑨, ⑩ and ⑪ in the product names. For details, refer to "◇ Product Number Code" in Page 42.
- For reading the specifications table, refer to "How to Read Specifications Table" on Page 18.
- For the specifications and characteristics for 48 VDC input, contact the nearest Oriental Motor sales office.

Note

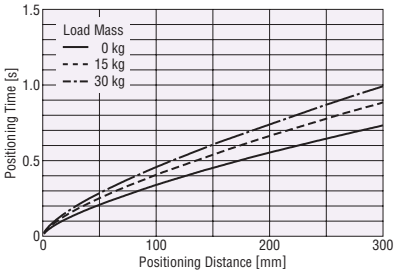
- In the case of upward pushing return-to-home, the home position may vary.
- The push-motion operation speed should be 25 mm/s or less and within the limit of the dynamic permissible moment.
- The maximum speed may decrease depending on the ambient temperature and motor cable length.

Positioning Distance – Positioning Time

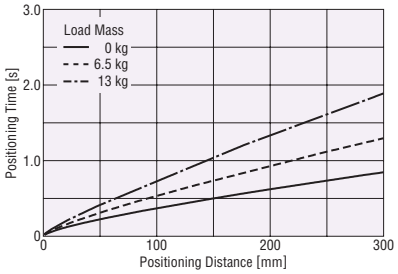
The positioning time (reference) can be checked from the positioning distance.
Refer to Page 123 for Operating Speed and Acceleration.

Lead: 12 mm

◇Horizontal Direction Installation

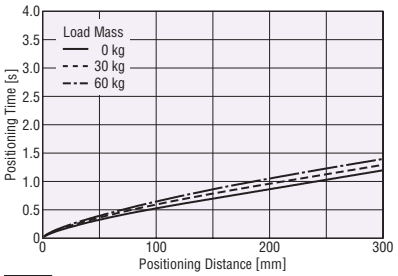


◇Vertical Direction Installation

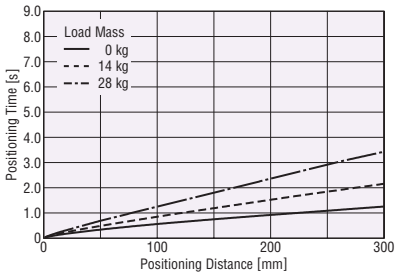


Lead: 6 mm

◇Horizontal Direction Installation



◇Vertical Direction Installation

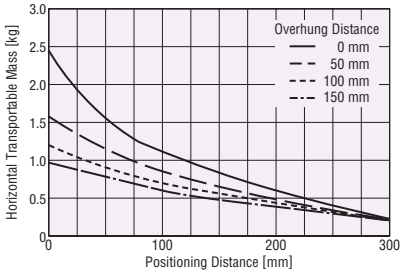


Note

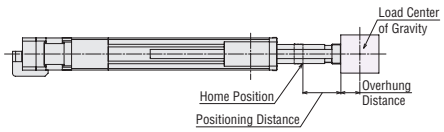
- The positioning time in the graph does not include the settling time.
  Use a settling time of 0.15 s or less as a reference. (Settling time is adjustable by the velocity filter function.)
- The starting speed should be 6 mm/s or less.

Horizontal Transportable Mass

◇Positioning Distance – Horizontal Transportable Mass

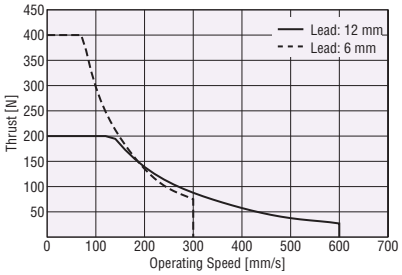


Products with shaft guide and shaft guide cover can be applied with load, and can transport the load. Refer to the above graph for the horizontally transportable mass.



- The positioning distance is the distance from the home position.
- The overhung distance is the distance taken by the protrusion from the load installation surface.

Operating Speed – Thrust

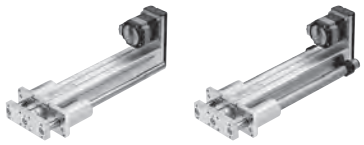


Dimensions

Motorized Cylinders → Page 68

EAC6RW: Frame Size 60 mm×156 mm 24 VDC Input Side-Mounted Type With Shaft Guide (With cover)

Maximum Transportable Mass: Horizontal 60 kg/Vertical 28 kg
Stroke: 50～300 mm (50 mm increments)



Motorized Cylinders

Drive System	Ball Screw

Repetitive Positioning Accuracy [mm]	±0.02

Minimum Traveling Amount [mm]	0.01

Dynamic Permissible Moment [N·m]	MP:2.2	MY:2.2	MR:1.3
Static Permissible Moment [N·m]	MP:7.8	MY:7.8	MR:3.0

Product Name	Lead [mm]	Transportable Mass [kg]*		Thrust [N]	Pushing Force [N]	Holding Force [N]	Maximum Speed [mm/s]
		Horizontal	Vertical				
EAC6RW-D⑤-AZAK⑨-⑩-⑪	12	～30	—	～200	400	200	600
EAC6RW-D⑤-AZMK⑨-⑩-⑪			～13				
EAC6RW-E⑤-AZAK⑨-⑩-⑪	6	～60	—	～360	500	360	300
EAC6RW-E⑤-AZMK⑨-⑩-⑪			～28				

*The transportable mass is the value when an external linear guide is used. When not using a linear guide, refer to "■ Horizontal Transportable Mass."

- Symbols and numbers are substituted for ⑤, ⑨, ⑩ and ⑪ in the product names. For details, refer to "◇ Product Number Code" in Page 42.
- For reading the specifications table, refer to "How to Read Specifications Table" on Page 18.
- For the specifications and characteristics for 48 VDC input, contact the nearest Oriental Motor sales office.

Note

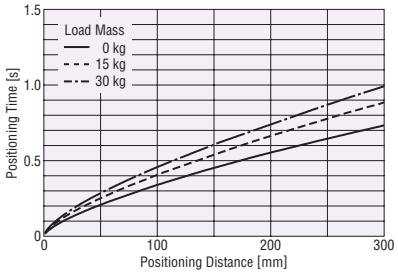
- In the case of upward pushing return-to-home, the home position may vary.
- The push-motion operation speed should be 25 mm/s or less and within the limit of the dynamic permissible moment.
- The maximum speed may decrease depending on the ambient temperature and motor cable length.

Positioning Distance – Positioning Time

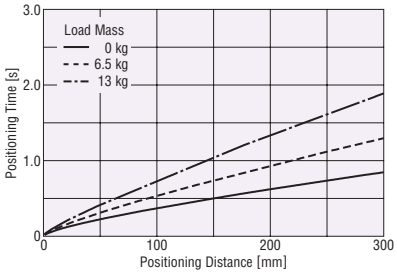
The positioning time (reference) can be checked from the positioning distance.
Refer to Page 123 for Operating Speed and Acceleration.

Lead: 12 mm

◇Horizontal Direction Installation

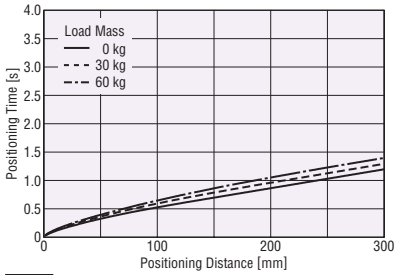


◇Vertical Direction Installation

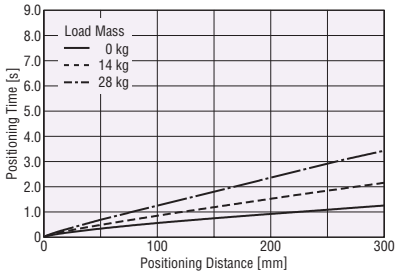


Lead: 6 mm

◇Horizontal Direction Installation



◇Vertical Direction Installation

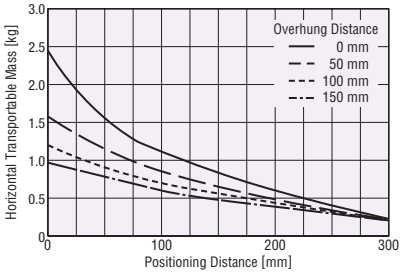


Note

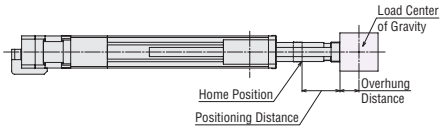
- The positioning time in the graph does not include the settling time.
  Use a settling time of 0.15 s or less as a reference. (Settling time is adjustable by the velocity filter function.)
- The starting speed should be 6 mm/s or less.

Horizontal Transportable Mass

◇Positioning Distance – Horizontal Transportable Mass

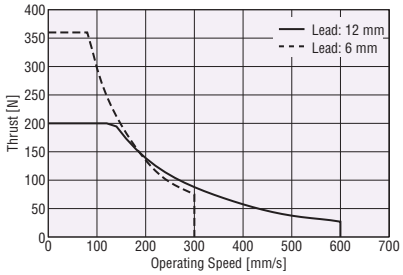


Products with shaft guide and shaft guide cover can be applied with load, and can transport the load. Refer to the above graph for the horizontally transportable mass.



- The positioning distance is the distance from the home position.
- The overhung distance is the distance taken by the protrusion from the load installation surface.

Operating Speed – Thrust



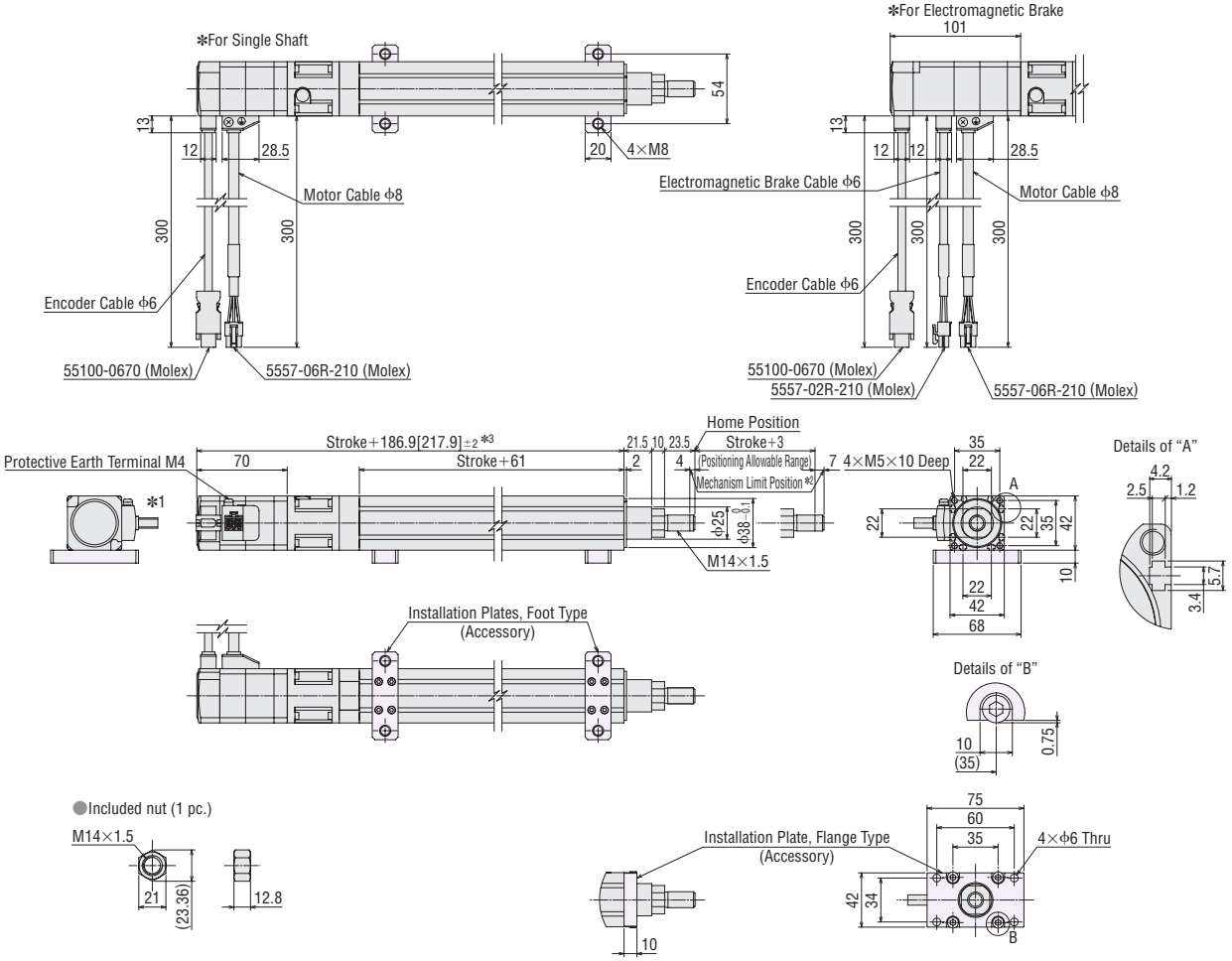
Dimensions

Motorized Cylinders → Page 69

Dimensions (Unit = mm)

Motorized Cylinders

◇EAC4 Standard Type



*1 The motor cable outlet direction can be changed in 90° intervals in four directions.

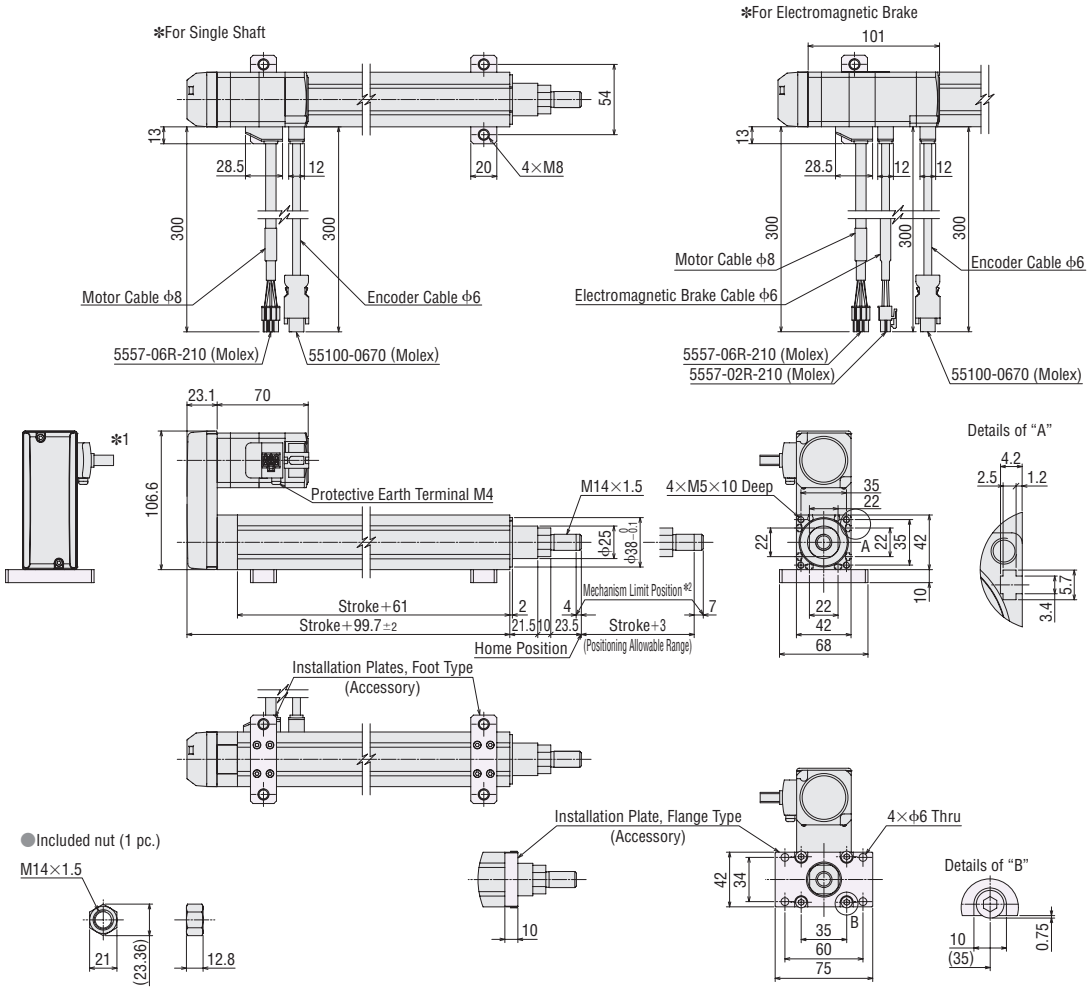
*2 During the pushing return-to-home operation, the rod moves to the position limit of the mechanism. The pushing return-to-home operation cannot be performed on the opposite side of the motor.

*3 The brackets [ ] indicate the value for a product with an electromagnetic brake.

Stroke [mm]		50	100	150	200	250	300
Mass [kg]	Single Shaft	1.0	1.2	1.4	1.6	1.7	1.9
	Electromagnetic Brake Type	1.2	1.4	1.6	1.8	1.9	2.1

For CAD data, please download from the Oriental Motor website.
http://www.orientalmotor.com.sg

◇EAC4R Side-Mounted Type



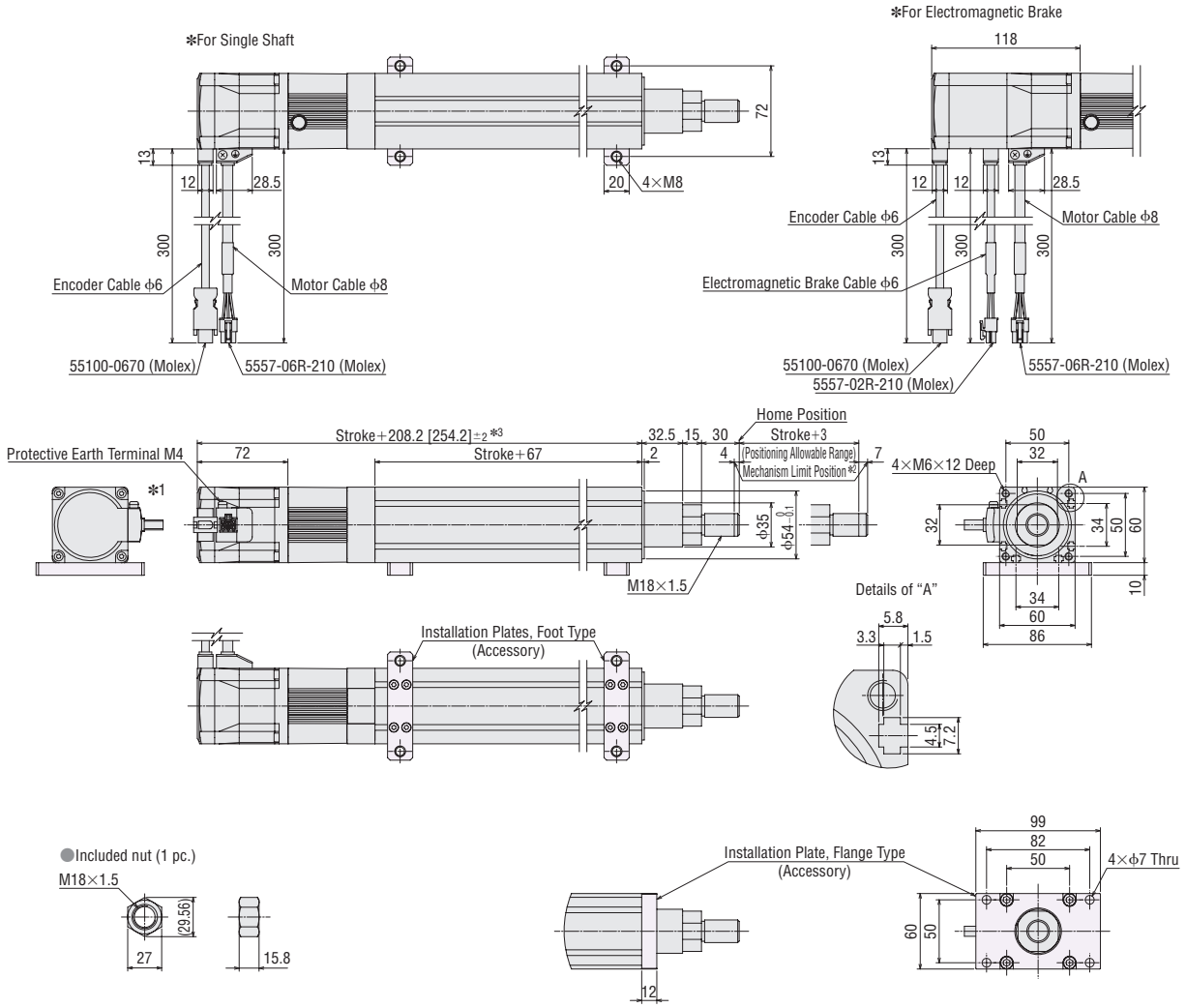
✻1 The motor cable outlet direction can be changed in 90° intervals in three directions.

✻2 During the pushing return-to-home operation, the rod moves to the position limit of the mechanism. The pushing return-to-home operation cannot be performed on the opposite side of the motor.

Stroke [mm]		50	100	150	200	250	300
Mass [kg]	Single Shaft	1.0	1.2	1.4	1.6	1.7	1.9
	Electromagnetic Brake Type	1.2	1.4	1.6	1.8	1.9	2.1

● For CAD data, please download from the Oriental Motor website.
http://www.orientalmotor.com.sg

◇EAC6 Standard Type



✻1 The motor cable outlet direction can be changed in 90° intervals in four directions.

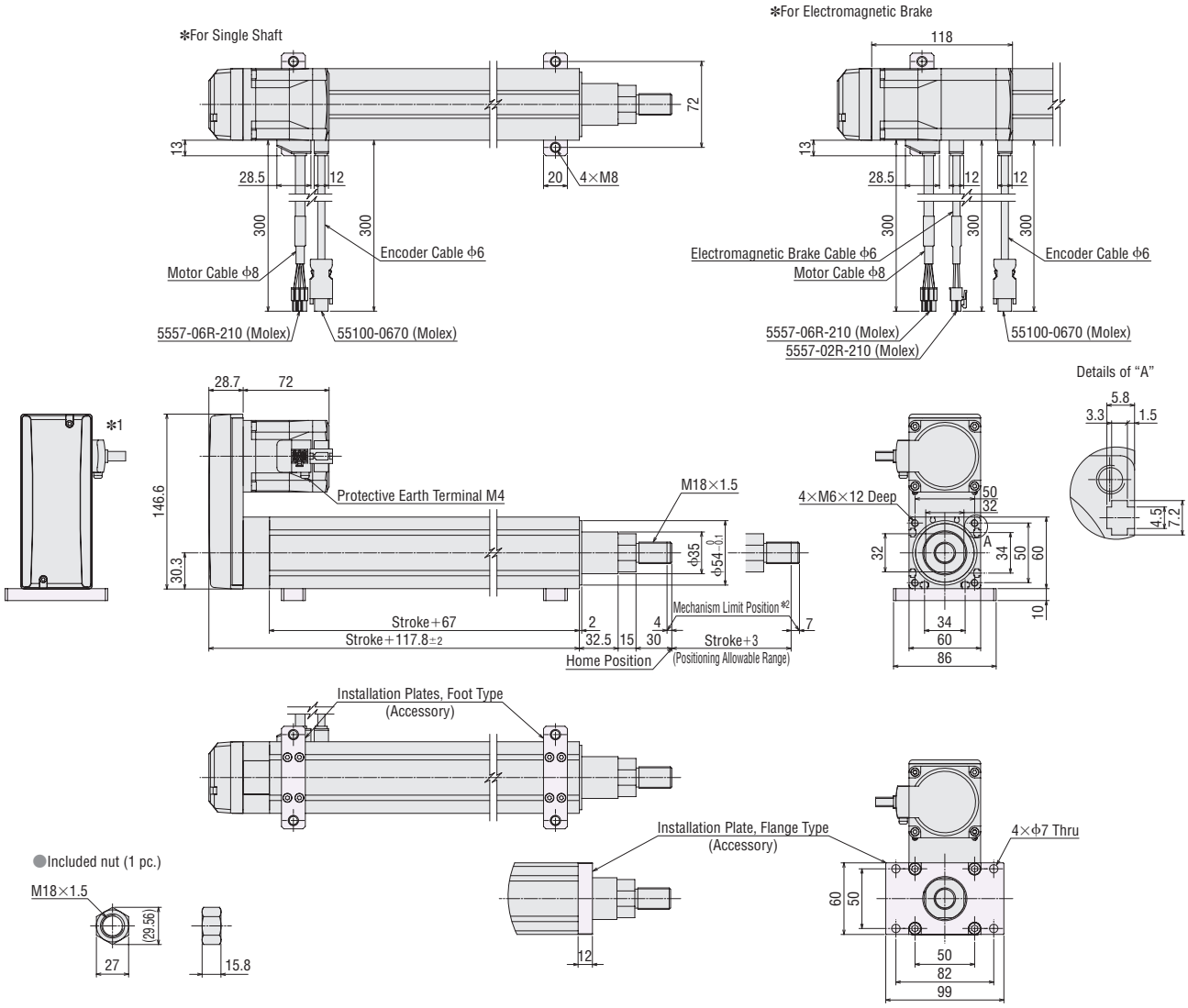
✻2 During the pushing return-to-home operation, the rod moves to the position limit of the mechanism. The pushing return-to-home operation cannot be performed on the opposite side of the motor.

✻3 The brackets [ ] indicate the value for a product with an electromagnetic brake.

Stroke [mm]		50	100	150	200	250	300
Mass [kg]	Single Shaft	2.6	3.0	3.4	3.7	4.1	4.5
	Electromagnetic Brake Type	3.0	3.4	3.8	4.1	4.5	4.9

● For CAD data, please download from the Oriental Motor website.
http://www.orientalmotor.com.sg

◇EAC6R Side-Mounted Type



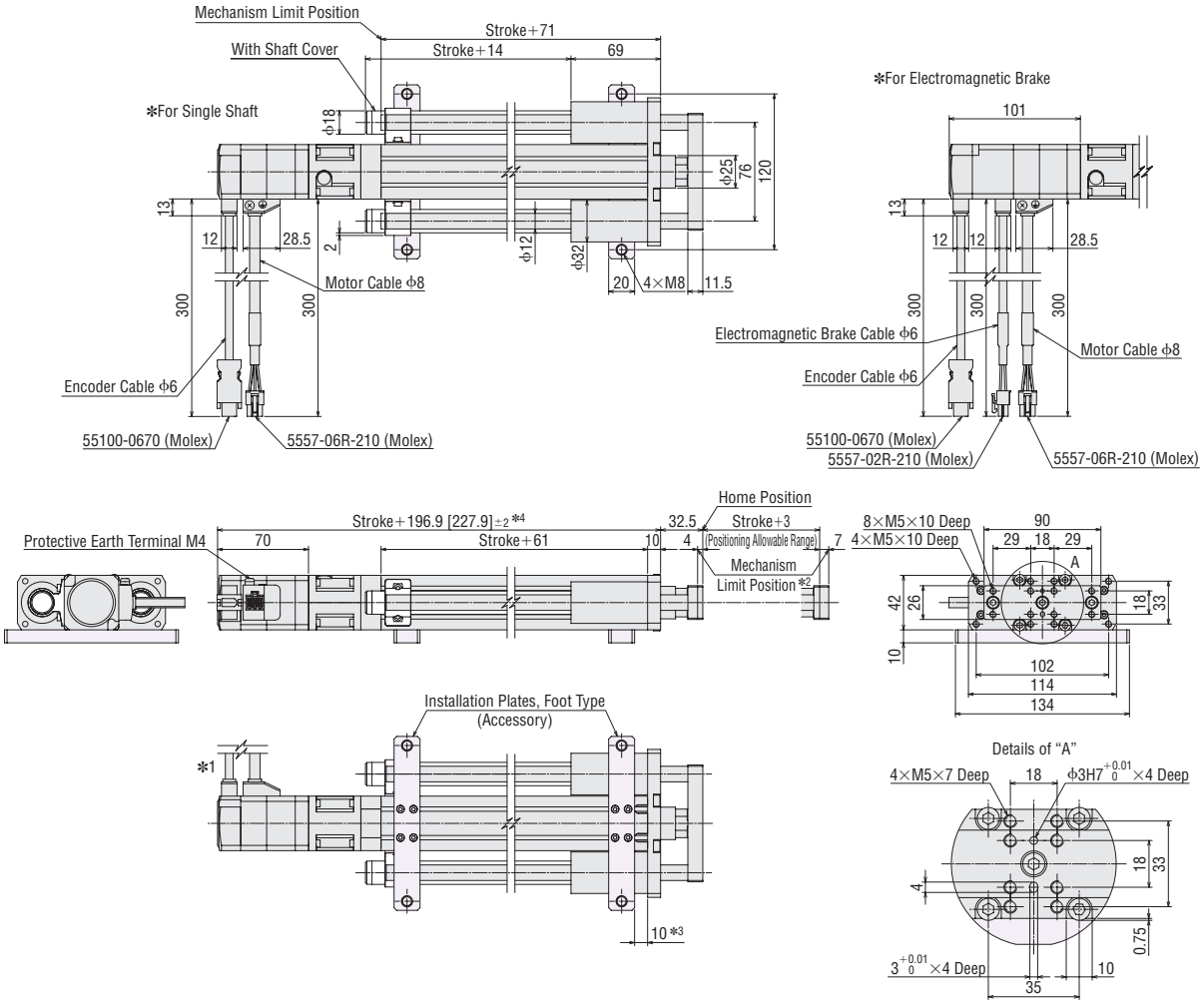
✻1 The motor cable outlet direction can be changed in 90° intervals in three directions.

✻2 During the pushing return-to-home operation, the rod moves to the position limit of the mechanism. The pushing return-to-home operation cannot be performed on the opposite side of the motor.

Stroke [mm]		50	100	150	200	250	300
Mass [kg]	Single Shaft	2.6	3.0	3.4	3.7	4.1	4.5
	Electromagnetic Brake Type	3.0	3.4	3.8	4.1	4.5	4.9

● For CAD data, please download from the Oriental Motor website.
http://www.orientalmotor.com.sg

◇EAC4W Standard Type With Shaft Guide/With Shaft Guide Cover



✻1 The motor cable outlet direction can be changed in 90° intervals in four directions.

✻2 During the pushing return-to-home operation, the rod moves to the position limit of the mechanism. The pushing return-to-home operation cannot be performed on the opposite side of the motor.

✻3 The installation plate foot type cannot be installed on this part.

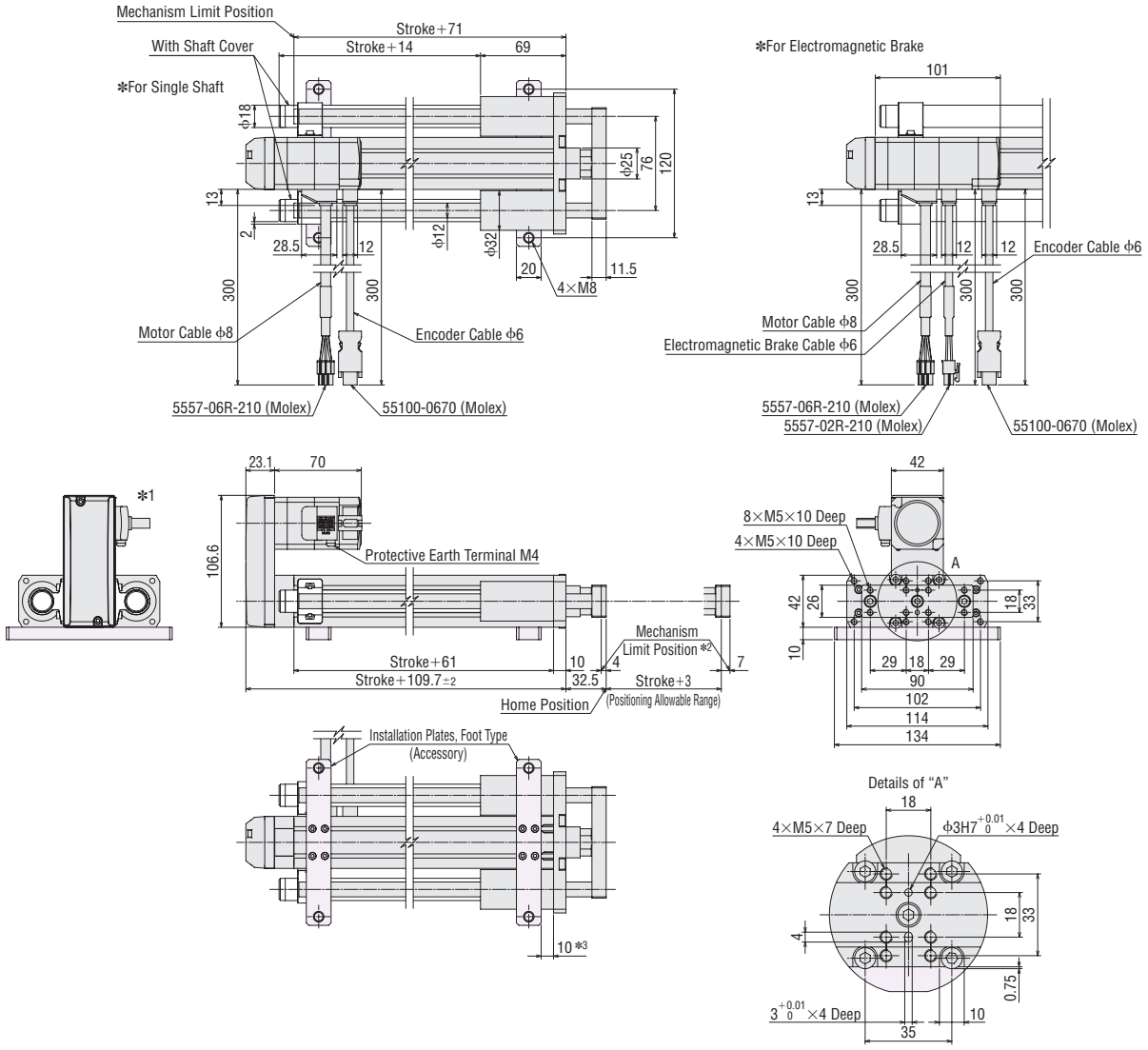
✻4 The brackets [ ] indicate the value for a product with an electromagnetic brake.

Stroke [mm]		50	100	150	200	250	300
Mass [kg]	With Shaft Guide	1.7 (1.9)	2.0 (2.2)	2.3 (2.5)	2.5 (2.7)	2.8 (3.0)	3.1 (3.3)
	With Shaft Guide Cover	1.8 (1.9)	2.1 (2.3)	2.4 (2.6)	2.6 (2.8)	3.0 (3.1)	3.3 (3.5)

● The values in the parentheses ( ) for the mass refer to the mass using models with electromagnetic brake.

● For CAD data, please download from the Oriental Motor website.
http://www.orientalmotor.com.sg

◇EAC4RW Side-Mounted Type With Shaft Guide/With Shaft Guide Cover



✻1 The motor cable outlet direction can be changed in 90° intervals in three directions.

✻2 During the pushing return-to-home operation, the rod moves to the position limit of the mechanism. The pushing return-to-home operation cannot be performed on the opposite side of the motor.

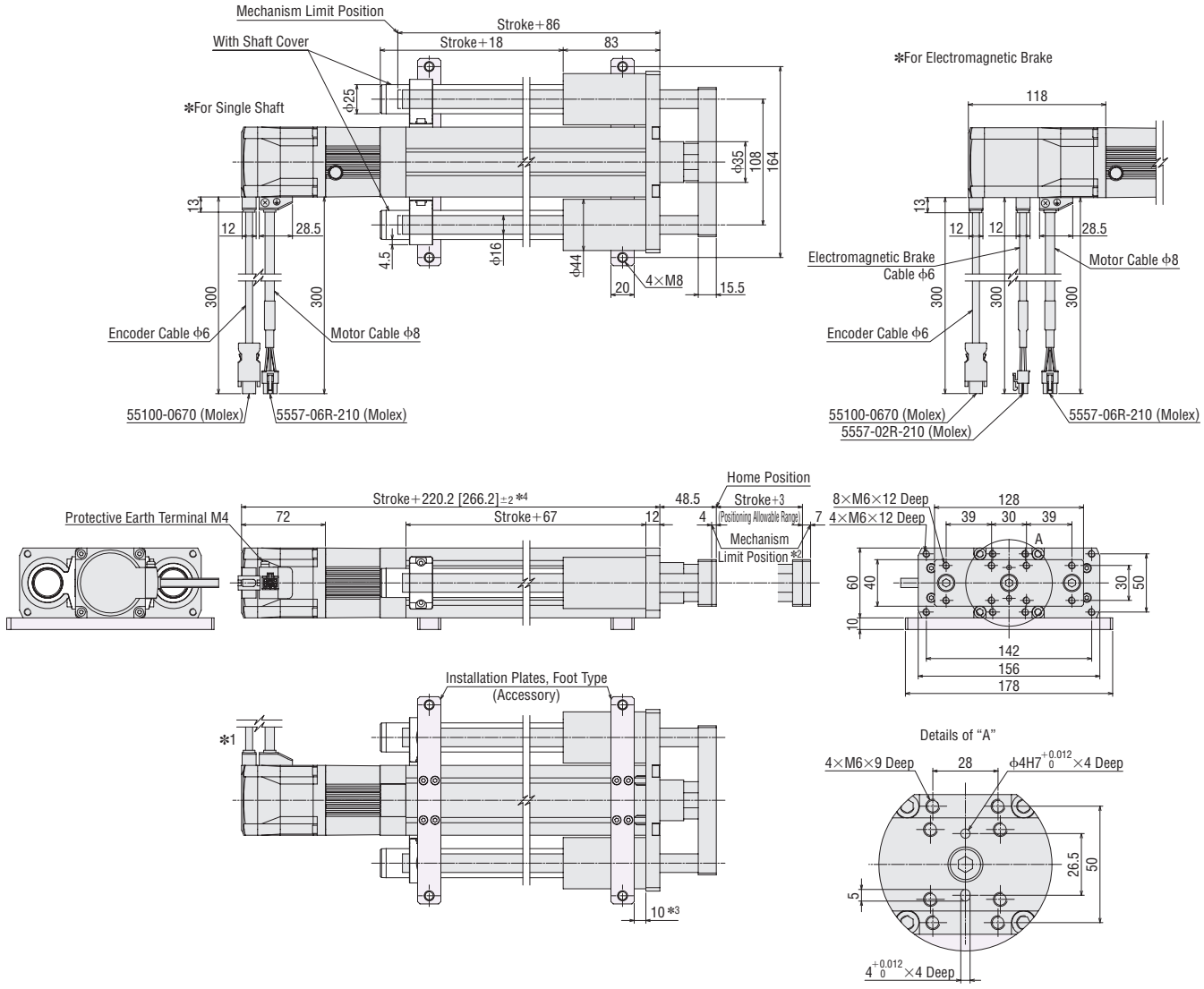
✻3 The installation plate foot type cannot be installed on this part.

Stroke [mm]		50	100	150	200	250	300
Mass [kg]	With Shaft Guide	1.7 (1.9)	2.0 (2.2)	2.3 (2.5)	2.5 (2.7)	2.8 (3.0)	3.1 (3.3)
	With Shaft Guide Cover	1.8 (1.9)	2.1 (2.3)	2.4 (2.6)	2.6 (2.8)	3.0 (3.1)	3.3 (3.5)

● The values in the parentheses ( ) for the mass refer to the mass using models with electromagnetic brake.

● For CAD data, please download from the Oriental Motor website.
http://www.orientalmotor.com.sg

◇EAC6W Standard Type With Shaft Guide/With Shaft Guide Cover



✻1 The motor cable outlet direction can be changed in 90° intervals in four directions.

✻2 During the pushing return-to-home operation, the rod moves to the position limit of the mechanism. The pushing return-to-home operation cannot be performed on the opposite side of the motor.

✻3 The installation plate foot type cannot be installed on this part.

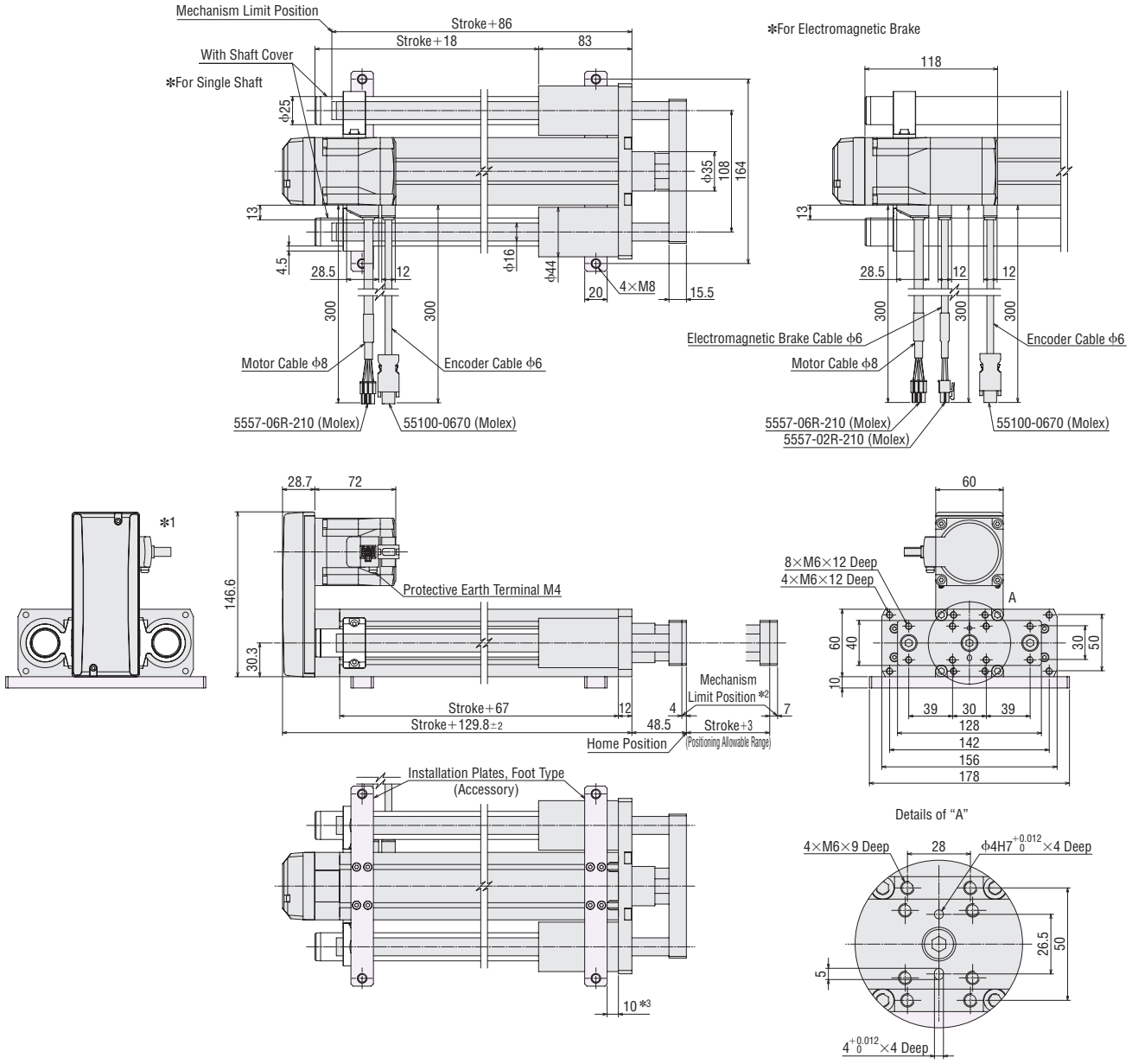
✻4 The brackets [ ] indicate the value for a product with an electromagnetic brake.

Stroke [mm]		50	100	150	200	250	300
Mass [kg]	With Shaft Guide	4.1 (4.5)	4.7 (5.1)	5.2 (5.6)	5.7 (6.1)	6.3 (6.7)	6.8 (7.2)
	With Shaft Guide Cover	4.2 (4.6)	4.9 (5.3)	5.4 (5.8)	6.0 (6.4)	6.6 (7.0)	7.2 (7.6)

● The values in the parentheses ( ) for the mass refer to the mass using models with electromagnetic brake.

● For CAD data, please download from the Oriental Motor website.
http://www.orientalmotor.com.sg

◇EAC6RW Side-Mounted Type With Shaft Guide/With Shaft Guide Cover



✻1 The motor cable outlet direction can be changed in 90° intervals in three directions.
✻2 During the pushing return-to-home operation, the rod moves to the position limit of the mechanism. The pushing return-to-home operation cannot be performed on the opposite side of the motor.
✻3 The installation plate foot type cannot be installed on this part.

Stroke [mm]		50	100	150	200	250	300
Mass [kg]	With Shaft Guide	4.1 (4.5)	4.7 (5.1)	5.2 (5.6)	5.7 (6.1)	6.3 (6.7)	6.8 (7.2)
	With Shaft Guide Cover	4.2 (4.6)	4.9 (5.3)	5.4 (5.8)	6.0 (6.4)	6.6 (7.0)	7.2 (7.6)

● The values in the parentheses ( ) for the mass refer to the mass using models with electromagnetic brake.

● For CAD data, please download from the Oriental Motor website.
http://www.orientalmotor.com.sg

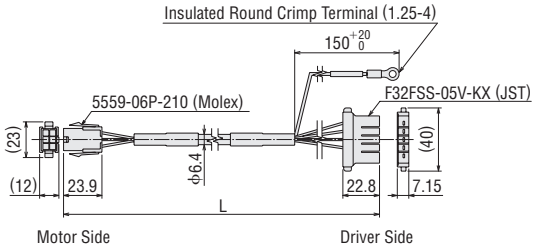
Cables for Motor (Included), Cables for Encoder (Included), Cables for Electromagnetic Brake (Included)

Only with products supplied with a connection cable

◇AC Power Supply Input

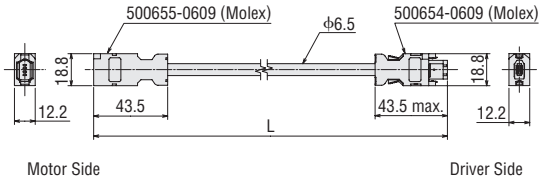
・Cables for Motor

Cable Type	Length L (m)
Cable for Motor 1 m	1
Cable for Motor 2 m	2
Cable for Motor 3 m	3



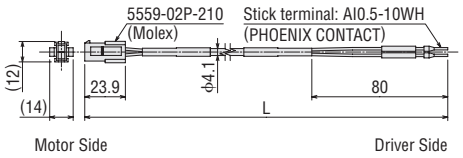
・Cables for Encoder

Cable Type	Length L (m)
Cable for Encoder 1 m	1
Cable for Encoder 2 m	2
Cable for Encoder 3 m	3



・Cables for Electromagnetic Brake (Electromagnetic brake type only)

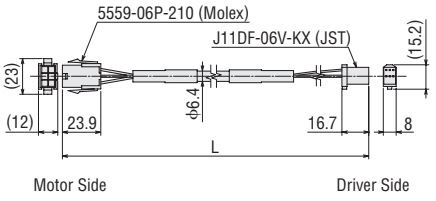
Cable Type	Length L (m)
Cable for Electromagnetic Brake 1 m	1
Cable for Electromagnetic Brake 2 m	2
Cable for Electromagnetic Brake 3 m	3



◇DC Power Supply Input

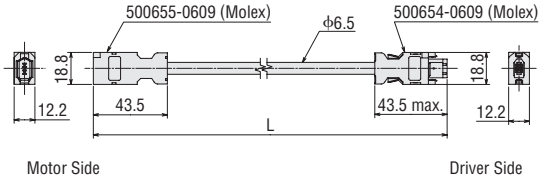
・Cables for Motor

Cable Type	Length L (m)
Cable for Motor 1 m	1
Cable for Motor 2 m	2
Cable for Motor 3 m	3



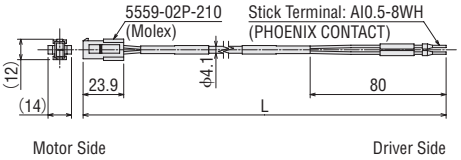
・Cables for Encoder

Cable Type	Length L (m)
Cable for Encoder 1 m	1
Cable for Encoder 2 m	2
Cable for Encoder 3 m	3



・Cables for Electromagnetic Brake (Electromagnetic brake type only)

Cable Type	Length L (m)
Cable for Electromagnetic Brake 1 m	1
Cable for Electromagnetic Brake 2 m	2
Cable for Electromagnetic Brake 3 m	3



Note

- The motor cable and electromagnetic brake cable from the motorized cylinders cannot be directly connected to a driver. To connect to a driver, use an accessory connection cable (sold separately) or the connection cable included in the product (if included).

Motorized Cylinder and Driver Combinations

The product names for motorized cylinder and driver combinations are shown below.
The product name enclosed with ( ) in the motorized cylinder product name is the installed motor product name.
When you would like to purchase the installed motor for maintenance, contact the nearest Oriental Motor sales office.

AC Power Supply Input

◇Built-in Controller Type　Single Shaft

Product Name	Motorized Cylinder Product Name (Installed motor product name)	Driver Product Name
EAC4②-E⑤-AZA⑧D-⑩	EACM4②E⑤AZAC (AZM46AC)	AZD-⑧D
EAC4②-D⑤-AZA⑧D-⑩	EACM4②D⑤AZAC (AZM46AC)	
EAC4②W-E⑤-AZA⑧D-⑩	EACM4②WE⑤AZAC (AZM46AC)	
EAC4②W-D⑤-AZA⑧D-⑩	EACM4②WD⑤AZAC (AZM46AC)	
EAC4②W-E⑤-AZA⑧D-⑩-G	EACM4②WE⑤AZAC-G (AZM46AC)	
EAC4②W-D⑤-AZA⑧D-⑩-G	EACM4②WD⑤AZAC-G (AZM46AC)	
EAC6②-E⑤-AZA⑧D-⑩	EACM6②E⑤AZAC (AZM66AC)	
EAC6②-D⑤-AZA⑧D-⑩	EACM6②D⑤AZAC (AZM66AC)	
EAC6②W-E⑤-AZA⑧D-⑩	EACM6②WE⑤AZAC (AZM66AC)	
EAC6②W-D⑤-AZA⑧D-⑩	EACM6②WD⑤AZAC (AZM66AC)	
EAC6②W-E⑤-AZA⑧D-⑩-G	EACM6②WE⑤AZAC-G (AZM66AC)	
EAC6②W-D⑤-AZA⑧D-⑩-G	EACM6②WD⑤AZAC-G (AZM66AC)	

◇Built-in Controller Type　With Electromagnetic Brake

Product Name	Motorized Cylinder Product Name (Installed motor product name)	Driver Product Name
EAC4②-E⑤-AZM⑧D-⑩	EACM4②E⑤AZMC (AZM46MC)	AZD-⑧D
EAC4②-D⑤-AZM⑧D-⑩	EACM4②D⑤AZMC (AZM46MC)	
EAC4②W-E⑤-AZM⑧D-⑩	EACM4②WE⑤AZMC (AZM46MC)	
EAC4②W-D⑤-AZM⑧D-⑩	EACM4②WD⑤AZMC (AZM46MC)	
EAC4②W-E⑤-AZM⑧D-⑩-G	EACM4②WE⑤AZMC-G (AZM46MC)	
EAC4②W-D⑤-AZM⑧D-⑩-G	EACM4②WD⑤AZMC-G (AZM46MC)	
EAC6②-E⑤-AZM⑧D-⑩	EACM6②E⑤AZMC (AZM66MC)	
EAC6②-D⑤-AZM⑧D-⑩	EACM6②D⑤AZMC (AZM66MC)	
EAC6②W-E⑤-AZM⑧D-⑩	EACM6②WE⑤AZMC (AZM66MC)	
EAC6②W-D⑤-AZM⑧D-⑩	EACM6②WD⑤AZMC (AZM66MC)	
EAC6②W-E⑤-AZM⑧D-⑩-G	EACM6②WE⑤AZMC-G (AZM66MC)	
EAC6②W-D⑤-AZM⑧D-⑩-G	EACM6②WD⑤AZMC-G (AZM66MC)	

◇Pulse Input Type　Single Shaft

Product Name	Motorized Cylinder Product Name (Installed motor product name)	Driver Product Name
EAC4②-**E**⑤-**AZA**⑧-⑩	EACM4②E⑤AZAC (AZM46AC)	AZD-⑧
EAC4②-**D**⑤-**AZA**⑧-⑩	EACM4②D⑤AZAC (AZM46AC)	
EAC4②**W-E**⑤-**AZA**⑧-⑩	EACM4②WE⑤AZAC (AZM46AC)	
EAC4②**W-D**⑤-**AZA**⑧-⑩	EACM4②WD⑤AZAC (AZM46AC)	
EAC4②**W-E**⑤-**AZA**⑧-⑩-**G**	EACM4②WE⑤AZAC-G (AZM46AC)	
EAC4②**W-D**⑤-**AZA**⑧-⑩-**G**	EACM4②WD⑤AZAC-G (AZM46AC)	
EAC6②-**E**⑤-**AZA**⑧-⑩	EACM6②E⑤AZAC (AZM66AC)	
EAC6②-**D**⑤-**AZA**⑧-⑩	EACM6②D⑤AZAC (AZM66AC)	
EAC6②**W-E**⑤-**AZA**⑧-⑩	EACM6②WE⑤AZAC (AZM66AC)	
EAC6②**W-D**⑤-**AZA**⑧-⑩	EACM6②WD⑤AZAC (AZM66AC)	
EAC6②**W-E**⑤-**AZA**⑧-⑩-**G**	EACM6②WE⑤AZAC-G (AZM66AC)	
EAC6②**W-D**⑤-**AZA**⑧-⑩-**G**	EACM6②WD⑤AZAC-G (AZM66AC)	

◇Pulse Input Type　With Electromagnetic Brake

Product Name	Motorized Cylinder Product Name (Installed motor product name)	Driver Product Name
EAC4②-**E**⑤-**AZM**⑧-⑩	EACM4②E⑤AZMC (AZM46MC)	AZD-⑧
EAC4②-**D**⑤-**AZM**⑧-⑩	EACM4②D⑤AZMC (AZM46MC)	
EAC4②**W-E**⑤-**AZM**⑧-⑩	EACM4②WE⑤AZMC (AZM46MC)	
EAC4②**W-D**⑤-**AZM**⑧-⑩	EACM4②WD⑤AZMC (AZM46MC)	
EAC4②**W-E**⑤-**AZM**⑧-⑩-**G**	EACM4②WE⑤AZMC-G (AZM46MC)	
EAC4②**W-D**⑤-**AZM**⑧-⑩-**G**	EACM4②WD⑤AZMC-G (AZM46MC)	
EAC6②-**E**⑤-**AZM**⑧-⑩	EACM6②E⑤AZMC (AZM66MC)	
EAC6②-**D**⑤-**AZM**⑧-⑩	EACM6②D⑤AZMC (AZM66MC)	
EAC6②**W-E**⑤-**AZM**⑧-⑩	EACM6②WE⑤AZMC (AZM66MC)	
EAC6②**W-D**⑤-**AZM**⑧-⑩	EACM6②WD⑤AZMC (AZM66MC)	
EAC6②**W-E**⑤-**AZM**⑧-⑩-**G**	EACM6②WE⑤AZMC-G (AZM66MC)	
EAC6②**W-D**⑤-**AZM**⑧-⑩-**G**	EACM6②WD⑤AZMC-G (AZM66MC)	

●DC Power Supply Input

◇Built-in Controller Type　Single Shaft

Product Name	Motorized Cylinder Product Name (Installed motor product name)	Driver Product Name
EAC4②-**E**⑤-**AZAKD**-⑩	EACM4②E⑤AZAK (AZM46AK)	AZD-KD
EAC4②-**D**⑤-**AZAKD**-⑩	EACM4②D⑤AZAK (AZM46AK)	
EAC4②**W-E**⑤-**AZAKD**-⑩	EACM4②WE⑤AZAK (AZM46AK)	
EAC4②**W-D**⑤-**AZAKD**-⑩	EACM4②WD⑤AZAK (AZM46AK)	
EAC4②**W-E**⑤-**AZAKD**-⑩-**G**	EACM4②WE⑤AZAK-G (AZM46AK)	
EAC4②**W-D**⑤-**AZAKD**-⑩-**G**	EACM4②WD⑤AZAK-G (AZM46AK)	
EAC6②-**E**⑤-**AZAKD**-⑩	EACM6②E⑤AZAK (AZM66AK)	
EAC6②-**D**⑤-**AZAKD**-⑩	EACM6②D⑤AZAK (AZM66AK)	
EAC6②**W-E**⑤-**AZAKD**-⑩	EACM6②WE⑤AZAK (AZM66AK)	
EAC6②**W-D**⑤-**AZAKD**-⑩	EACM6②WD⑤AZAK (AZM66AK)	
EAC6②**W-E**⑤-**AZAKD**-⑩-**G**	EACM6②WE⑤AZAK-G (AZM66AK)	
EAC6②**W-D**⑤-**AZAKD**-⑩-**G**	EACM6②WD⑤AZAK-G (AZM66AK)	

◇Built-in Controller Type　With Electromagnetic Brake

Product Name	Motorized Cylinder Product Name (Installed motor product name)	Driver Product Name
EAC4②-**E**⑤-**AZMKD**-⑩	EACM4②E⑤AZMK (AZM46MK)	AZD-KD
EAC4②-**D**⑤-**AZMKD**-⑩	EACM4②D⑤AZMK (AZM46MK)	
EAC4②**W-E**⑤-**AZMKD**-⑩	EACM4②WE⑤AZMK (AZM46MK)	
EAC4②**W-D**⑤-**AZMKD**-⑩	EACM4②WD⑤AZMK (AZM46MK)	
EAC4②**W-E**⑤-**AZMKD**-⑩-**G**	EACM4②WE⑤AZMK-G (AZM46MK)	
EAC4②**W-D**⑤-**AZMKD**-⑩-**G**	EACM4②WD⑤AZMK-G (AZM46MK)	
EAC6②-**E**⑤-**AZMKD**-⑩	EACM6②E⑤AZMK (AZM66MK)	
EAC6②-**D**⑤-**AZMKD**-⑩	EACM6②D⑤AZMK (AZM66MK)	
EAC6②**W-E**⑤-**AZMKD**-⑩	EACM6②WE⑤AZMK (AZM66MK)	
EAC6②**W-D**⑤-**AZMKD**-⑩	EACM6②WD⑤AZMK (AZM66MK)	
EAC6②**W-E**⑤-**AZMKD**-⑩-**G**	EACM6②WE⑤AZMK-G (AZM66MK)	
EAC6②**W-D**⑤-**AZMKD**-⑩-**G**	EACM6②WD⑤AZMK-G (AZM66MK)	

◇Pulse Input Type　Single Shaft

Product Name	Motorized Cylinder Product Name (Installed motor product name)	Driver Product Name
EAC4②-**E**⑤-**AZAK**-⑩	EACM4②E⑤AZAK (AZM46AK)	AZD-K
EAC4②-**D**⑤-**AZAK**-⑩	EACM4②D⑤AZAK (AZM46AK)	
EAC4②**W-E**⑤-**AZAK**-⑩	EACM4②WE⑤AZAK (AZM46AK)	
EAC4②**W-D**⑤-**AZAK**-⑩	EACM4②WD⑤AZAK (AZM46AK)	
EAC4②**W-E**⑤-**AZAK**-⑩-**G**	EACM4②WE⑤AZAK-G (AZM46AK)	
EAC4②**W-D**⑤-**AZAK**-⑩-**G**	EACM4②WD⑤AZAK-G (AZM46AK)	
EAC6②-**E**⑤-**AZAK**-⑩	EACM6②E⑤AZAK (AZM66AK)	
EAC6②-**D**⑤-**AZAK**-⑩	EACM6②D⑤AZAK (AZM66AK)	
EAC6②**W-E**⑤-**AZAK**-⑩	EACM6②WE⑤AZAK (AZM66AK)	
EAC6②**W-D**⑤-**AZAK**-⑩	EACM6②WD⑤AZAK (AZM66AK)	
EAC6②**W-E**⑤-**AZAK**-⑩-**G**	EACM6②WE⑤AZAK-G (AZM66AK)	
EAC6②**W-D**⑤-**AZAK**-⑩-**G**	EACM6②WD⑤AZAK-G (AZM66AK)	

◇Pulse Input Type　With Electromagnetic Brake

Product Name	Motorized Cylinder Product Name (Installed motor product name)	Driver Product Name
EAC4②-**E**⑤-**AZMK**-⑩	EACM4②E⑤AZMK (AZM46MK)	AZD-K
EAC4②-**D**⑤-**AZMK**-⑩	EACM4②D⑤AZMK (AZM46MK)	
EAC4②**W-E**⑤-**AZMK**-⑩	EACM4②WE⑤AZMK (AZM46MK)	
EAC4②**W-D**⑤-**AZMK**-⑩	EACM4②WD⑤AZMK (AZM46MK)	
EAC4②**W-E**⑤-**AZMK**-⑩-**G**	EACM4②WE⑤AZMK-G (AZM46MK)	
EAC4②**W-D**⑤-**AZMK**-⑩-**G**	EACM4②WD⑤AZMK-G (AZM46MK)	
EAC6②-**E**⑤-**AZMK**-⑩	EACM6②E⑤AZMK (AZM66MK)	
EAC6②-**D**⑤-**AZMK**-⑩	EACM6②D⑤AZMK (AZM66MK)	
EAC6②**W-E**⑤-**AZMK**-⑩	EACM6②WE⑤AZMK (AZM66MK)	
EAC6②**W-D**⑤-**AZMK**-⑩	EACM6②WD⑤AZMK (AZM66MK)	
EAC6②**W-E**⑤-**AZMK**-⑩-**G**	EACM6②WE⑤AZMK-G (AZM66MK)	
EAC6②**W-D**⑤-**AZMK**-⑩-**G**	EACM6②WD⑤AZMK-G (AZM66MK)	

●The following symbols and number are substituted for ②, ⑤, ⑧ and ⑩ in the product names.
②: **L** (Left Side-Mounted) or **R** (Right Side-Mounted) indicating the motor installation direction is substituted. For the standard type, no symbol is substituted for this.
⑤: A number indicating the stroke length is substituted.
⑧: **A** (Single-Phase 100-120 VAC) or **C** (Single-Phase/Three-Phase 200-240 VAC) indicating the type of power supply voltage is substituted.
⑩: A number indicating the length of desired connection cable, if included. **1** (1 m), **2** (2 m) or **3** (3 m) is substituted. If no connection cable is included, the product name does not have -⑩.

Motorized Linear Slides/Motorized Cylinders

Common Driver

Motorized linear slides **EAS** Series and motorized cylinders **EAC** Series employ the stepping motor and driver package α_{STEP} **AZ** Series.

Built-in Controller Type		Pulse Input Type Driver	
AC Power Supply Input	DC Power Supply Input	AC Power Supply Input	DC Power Supply Input
AZD-□D 	AZD-KD 	AZD-□ 	AZD-K 

●Either **A** (Single-Phase 100-120 VAC), **C** (Single-Phase/Three-Phase 200-240 VAC) indicating power supply input is entered where the box □ is located within the driver product name.

Driver Specifications

Classification	Name		Built-in Controller Type	Pulse Input Type
I/O Function	Pulse Input		–	Max. Input Pulse Frequency: Line driver output by programmable controller: 1 MHz (When the pulse duty is 50%) Open-collector output by programmable controller: 250 kHz (When the pulse duty is 50%) Negative Logic Pulse Input (Initial value)
	Direct Input		Number of inputs: 10 inputs	Number of inputs: 6 inputs
	Direct Output		Number of outputs: 6 outputs	
	RS-485 Communication	Network Input	16 inputs	–
		Network Output	16 inputs	–

●The driver specifications are common to AC power supply and DC power supply.

Power Supply Input Specifications

●AC Power Supply Input Driver

Item			EAS4, EAC4	EAS6, EAC6
Main Power Supply Input	Voltage and Frequency		Single-Phase 100-120 VAC, Single-Phase/Three-Phase 200-240 VAC −15～+6% 50/60 Hz	
	Input Current A	Single-Phase 100-120 VAC	2.7	3.8
		Single-Phase 200-240 VAC	1.7	2.3
		Three-Phase 200-240 VAC	1.0	1.4
Control Power Source	Voltage		24 VDC ± 5%*1	
	Input Current A		0.25 (0.33)*2	0.25 (0.5)*2

●DC Power Supply Input Driver

Item		EAS4, EAC4	EAS6, EAC6
Main Power Supply Input	Voltage	24 VDC ± 5%*1	
	Input Current A	1.72 (1.8)*2	3.55 (3.8)*2

●The power supply input specifications are common to the built-in controller type and the pulse input type.

*1 If the wiring distance between the motor and driver is extended to 20 m min. using an accessory cable (sold separately), the 24 VDC ± 4% specification applies to a driver with an electromagnetic brake.

*2 The parenthesis ( ) indicates the specifications for the electromagnetic brake type.

Driver General Specifications

		AC Power Supply Input		DC Power Supply Input	
		Built-in Controller Type	Pulse Input Type	Built-in Controller Type	Pulse Input Type
Insulation Resistance*1		Measurement points · Protective Earth Terminal – Power Supply Terminal · Encoder Connector – Power Supply Terminal · Power Input Terminal – Power Supply Terminal		Measurement points · Protective Earth Terminal – Power Supply Terminal	
Dielectric Strength Voltage*2		Test points · Protective Earth Terminal – Power Supply Terminal 1.5 kVAC, 50 Hz/60 Hz · Encoder Connector – Power Supply Terminal 1.8 kVAC, 50 Hz/60 Hz · Power Input Terminal – Power Supply Terminal 1.8 kVAC, 50 Hz/60 Hz		–	
Operating Environment (In operation)	Ambient Temperature	0～+55°C (Non-freezing)*3		0～+50°C (Non-freezing)	
	Ambient Humidity	85% or less (Non-condensing)			
	Atmosphere	Use in an area without corrosive gases and dust. The product should not be exposed to water, oil or other liquids.			
Degree of Protection		IP10	IP20	IP10	
Range of Multi-Rotation Detection Without Power Supplied		± 900 rotations (1800 rotations)			

*1 The measured value is 100 MΩ or more when a 500 VDC megger is applied between two points in the table.

*2 No failure is found even if the voltage is applied for 1 minute under the condition shown in the table.

*3 When a heat sink is installed that is equivalent to an aluminum plate size of at least 200×200 mm and 2 mm thickness.

Note

●Do not perform the insulation resistance test or dielectric voltage withstand test while the motorized actuator and driver are connected.

Built-in Controller Type RS-485 Communication Specifications

Protocol	Modbus RTU Mode
Electrical Characteristics	EIA-485 Based, Straight Cable Use shielded twisted-pair cables (TIA/EIA-568B CAT5e or better recommended). The maximum total extension length is 50 m.
Communication Mode	Half duplex and Start-stop synchronization (data: 8 bits, stop bit: 1 bit or 2 bits, parity: none, even, or odd)
Baud Rate	Select from 9600 bps/19200 bps/38400 bps/57600 bps/115200 bps/230400 bps.
Connection Type	Up to 31 units can be connected to a single programmable controller (master unit).

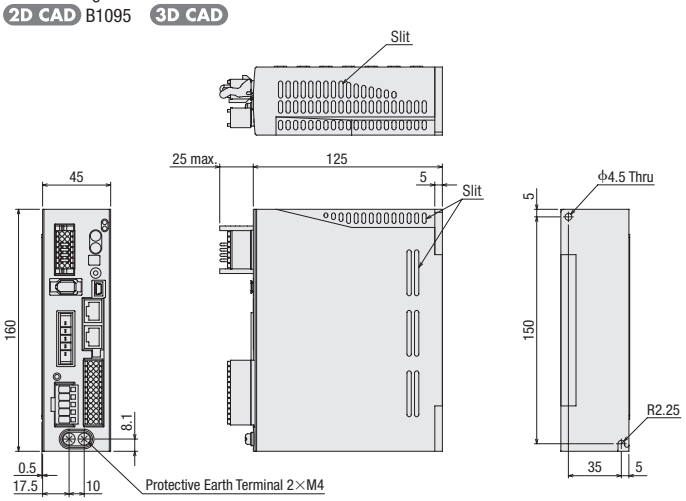
Dimensions (Unit = mm)

Built-in Controller Type

◇AC Power Supply Input (AZD-AD, AZD-CD)

Mass: 0.65 kg

2D CAD B1095 3D CAD



●Included

Main Power, Connector for Regeneration Unit (CN4)
Connector: 05JFAT-SAXGDK-H5.0
(J.S.T)

I/O Signals Connector (CN5)
Connector: DFMC1,5/12-ST-3,5
(PHOENIX CONTACT)

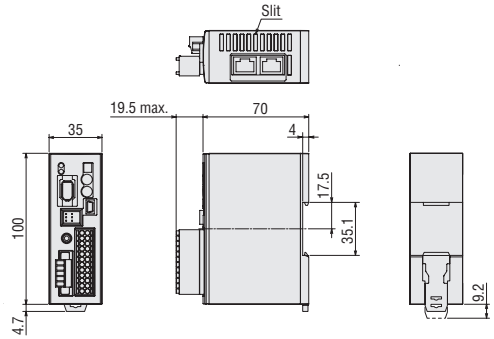
24 VDC Power Input, Electromagnetic Brake Connection, Regeneration Unit Thermal Input, Connector for Power Interruption Signal I/O (CN1)
Connector: DFMC1,5/7-ST-3,5-LR
(PHOENIX CONTACT)

Connector Wiring Lever: J-FAT-0T
(J.S.T)

◇DC Power Supply Input (AZD-KD)

Mass: 0.15 kg

2D CAD B1094 3D CAD



●Included

Main Power Supply, Electromagnetic Brake Connector (CN1)
Connector: MC1,5/5-STF-3,5
(PHOENIX CONTACT)

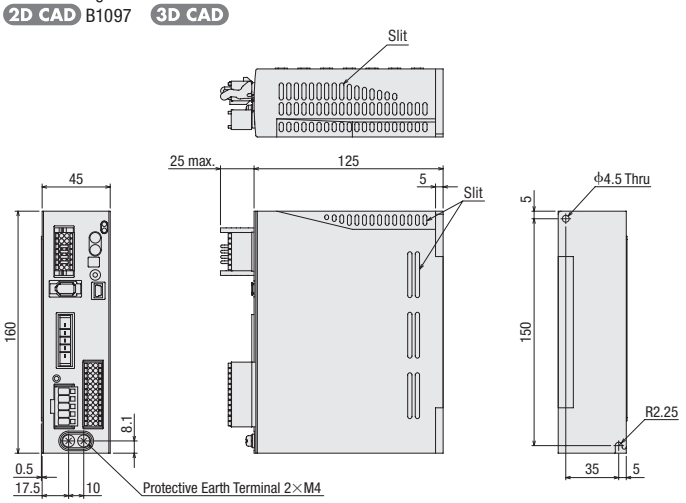
I/O Signals Connector (CN4)
Connector: DFMC1,5/12-ST-3,5
(PHOENIX CONTACT)

Pulse Input Type

◇AC Power Supply Input (AZD-A, AZD-C)

Mass: 0.65 kg

2D CAD B1097 3D CAD



●Included

Main Power, Connector for Regeneration Unit (CN4)
Connector: 05JFAT-SAXGDK-H5.0
(J.S.T)

I/O Signals Connector (CN5)
Connector: DFMC1,5/12-ST-3,5
(PHOENIX CONTACT)

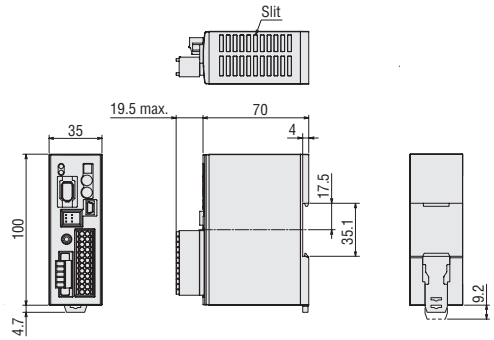
24 VDC Power Input, Electromagnetic Brake Connection, Regeneration Unit Thermal Input, Connector for Power Interruption Signal I/O (CN1)
Connector: DFMC1,5/7-ST-3,5-LR
(PHOENIX CONTACT)

Connector Wiring Lever: J-FAT-0T
(J.S.T)

◇DC Power Supply Input (AZD-K)

Mass: 0.15 kg

2D CAD B1096 3D CAD



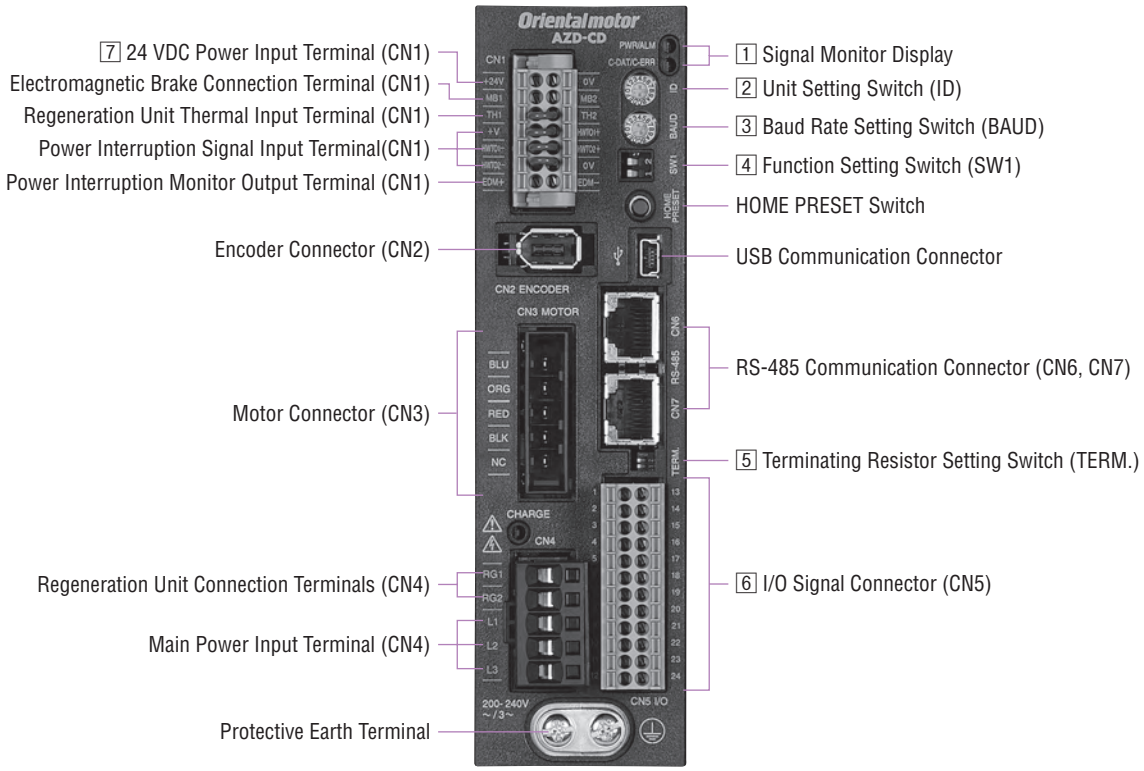
●Included

Main Power Supply, Electromagnetic Brake Connector (CN1)
Connector: MC1,5/5-STF-3,5
(PHOENIX CONTACT)

I/O Signals Connector (CN4)
Connector: DFMC1,5/12-ST-3,5
(PHOENIX CONTACT)

Connection and Operation (Built-in controller type)

Driver Part Names and Functions (Built-in controller type, AC power supply input)



1 Signal Monitor Display

◇LED Display

Indication	Color	Function	Lighting Condition
PWR	Green	Power Supply Indication	When 24 VDC power supply is input
ALM	Red	Alarm Indication	When a protective function is activated (blinking)
C-DAT	Green	Communication Indication	When communication data is being sent or received
C-ERR	Red	Communication Error Indication	When communication data is in error

2 Unit Setting Switch

Indication	Function
ID	Set this when you use RS-485 communication. Set the unit number (Factory setting: 0).

3 Baud Rate Setting Switch

Indication	Function
BAUD	Set this when you use RS-485 communication. Set the baud rate (Factory setting: 7).

4 Function Setting Switch

Indication	No.	Function
SW1	1	Use in combination with the unit setting switch (ID) to set the unit number (Factory setting: OFF).
	2	Set the RS-485 communication protocol (Factory setting: OFF).

◇RS-485 Baud Rate Setting

No.	Baud Rate (bps)
0	9600
1	19200
2	38400
3	57600
4	115200
5	230400
6	Not used
7	Network Converters
8~F	Not used

5 Terminating Resistor Setting Switch

Indication	No.	Function
TERM.	1	Set the RS-485 communication termination resistor (120 Ω) (Factory setting: OFF).
	2	OFF: Terminating resistor not used ON: Terminating resistor used

● Configure both No. 1 and No. 2 to the same setting.

6 I/O Signal Connector (CN5)

Indication	Pin No.	Signal Name	Description	
CN5	1	IN0	START	This signal is used to start positioning operation.
	2	IN2	M1	Use 3 bits (M0, M1, M2) to select the operating data number.
	3	IN4	ZHOME	Move to the home position set with the HOME PRESET switch.
	4	IN6	STOP	Stop the motor.
	5	IN-COM [0-7]*1	IN0～IN7 Input Common	
	6	IN8	FW-JOG	Starts the JOG operation.
	7	OUT0	HOME-END	Output when the home position is determined or the high-speed return to origin operation is completed.
	8	OUT2	PLS-RDY	Not used
	9	OUT4	MOVE	Output during motor operation.
	10	OUT-COM*1	Output Common	
	11	ASG+	A-Phase Pulse Output +	
	12	BSG+	B-Phase Pulse Output +	
	13	IN1	M0	Use 3 bits (M0, M1, M2) to select the operating data number.
	14	IN3	M2	Use 3 bits (M0, M1, M2) to select the operating data number.
	15	IN5	FREE	Stops motor excitation.
	16	IN7	ALM-RST	Reset the alarm.
	17	IN-COM [8-9]*1	IN8, IN9 Input Common	
	18	IN9	RV-JOG	Starts the JOG operation.
	19	OUT1	IN-POS	Output when the motor operation is finished.
	20	OUT3	READY	Output when the driver is ready for operation.
	21	OUT5	ALM-B	Outputs the alarm status for the driver (normal close).
	22	GND*1	Gland	
	23	ASG−	A-Phase Pulse Output −	
	24	BSG−	B-Phase Pulse Output −	

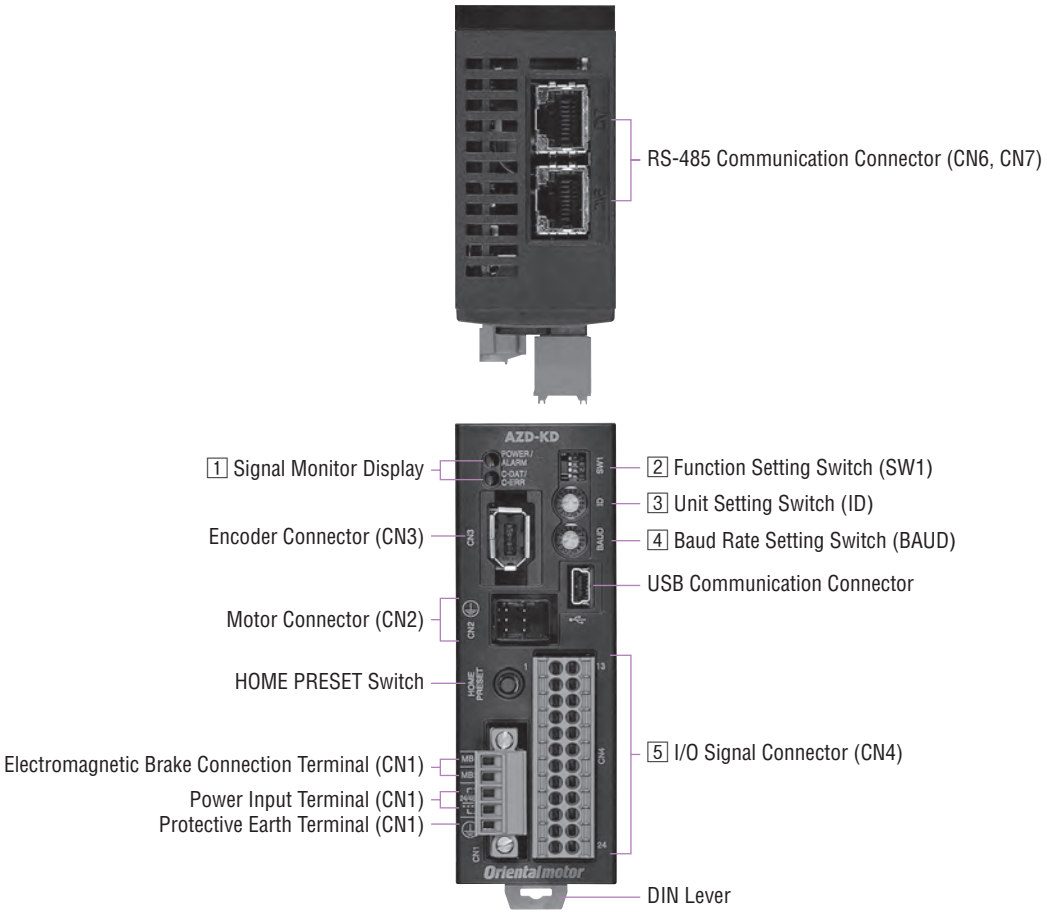
● You can set functions to assign by using parameters. Initial values are shown above. For details, see the User's Manual (Functions) of the **AZ** Series.

*1 The initial value cannot be changed.

7 24 VDC Power Input Terminal/Electromagnetic Brake Connection Terminal/Regeneration Unit Thermal Input Terminal/ Power Interruption Signal Input Terminal/Power Interruption Monitor Output Terminal (CN1)

Indication	I/O	Terminal Name	Description
+24V	Input	24 VDC Power Input Terminal +	The power supply for the driver control circuit. Always connect when using.
0V		24 VDC Power Input Terminal −	
MB1	Output	Electromagnetic Brake Connection Terminal −	For an electromagnetic brake type motor, connect the cable for the electromagnetic brake here.
MB2		Electromagnetic Brake Connection Terminal +	
TH1	Input	Regeneration Unit Thermal Input Terminal	Connect the accessory (sold separately) regeneration unit (**RGB100**). When not connecting a regeneration unit, short these 2 terminals to each other.
TH2		Regeneration Unit Thermal Input Terminal	
HWTO1+	Input	Power Interruption Signal Input Terminal 1+	Connect a switch or the programmable controller. When either of the HWTO1 Input or HWTO2 Input turns OFF, the hardware directly interrupts the power of the motor without involving the CPU.
HWTO1−		Power Interruption Signal Input Terminal 1−	
HWTO2+		Power Interruption Signal Input Terminal 2+	
HWTO2−		Power Interruption Signal Input Terminal 2−	
EDM+	Output	Power Interruption Monitor Output Terminal +	Connect an upper-level controller. When both the HWTO1 Input or HWTO2 Input turn OFF, the EDM output becomes ON.
EDM−		Power Interruption Monitor Output Terminal −	

Driver Part Names and Functions (Built-in controller type, DC power supply input)



1 Signal Monitor Display

◇LED Display

Indication	Color	Function	Lighting Condition
POWER	Green	Power Supply Indication	When power is applied
ALARM	Red	Alarm Indication	When a protective function is activated (blinking)
C-DAT	Green	Communication Indication	When communication data is being sent or received
C-ERR	Red	Communication Error Indication	When communication data is in error

2 Function Setting Switch

Indication	No.	Function
SW1	1	Use in combination with the unit setting switch (ID) to set the unit number (Factory setting: OFF).
	2	Set the RS-485 communication protocol (Factory setting: OFF).
	3	Set the RS-485 communication termination resistor (120 Ω) (Factory setting: OFF). OFF: Terminating resistor not used ON: Terminating resistor used
	4	

✻Configure both No. 3 and No. 4 to the same setting.

3 Unit Setting Switch

Indication	Function
ID	Set this when you use RS-485 communication. Set the unit number (Factory setting: 0).

4 Baud Rate Setting Switch

Indication	Function
BAUD	Set this when you use RS-485 communication. Set the baud rate (Factory setting: 7).

◇RS-485 Baud Rate Setting

No.	Baud Rate (bps)
0	9600
1	19200
2	38400
3	57600
4	115200
5	230400
6	Not used
7	Network Converters
8~F	Not used

5 I/O Signal Connector (CN4)

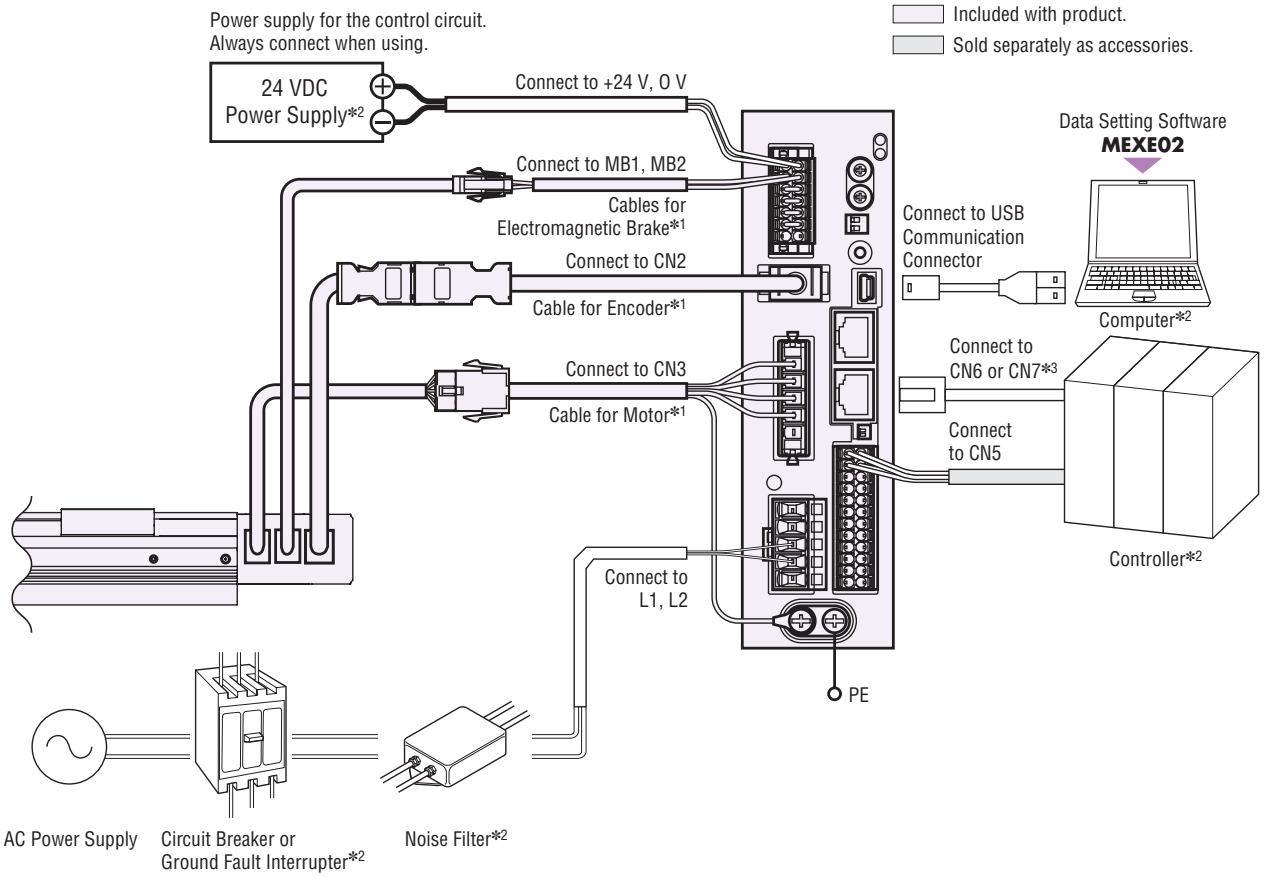
Indication	Pin No.	Signal Name	Description	
CN4	1	IN0	START	This signal is used to start positioning operation.
	2	IN2	M1	Use 3 bits (M0, M1, M2) to select the operating data number.
	3	IN4	ZHOME	Move to the home position set with the HOME PRESET switch.
	4	IN6	STOP	Stop the motor.
	5	IN-COM [0-7]*1	IN0～IN7 Input Common	
	6	IN8	FW-JOG	Starts the JOG operation.
	7	OUT0	HOME-END	Output when the home position is determined or the high-speed return to origin operation is completed.
	8	OUT2	PLS-RDY	Not used
	9	OUT4	MOVE	Output during motor operation.
	10	OUT-COM*1	Output Common	
	11	ASG+	A-Phase Pulse Output +	
	12	BSG+	B-Phase Pulse Output +	
	13	IN1	M0	Use 3 bits (M0, M1, M2) to select the operating data number.
	14	IN3	M2	Use 3 bits (M0, M1, M2) to select the operating data number.
	15	IN5	FREE	Stops motor excitation.
	16	IN7	ALM-RST	Reset the alarm.
	17	IN-COM [8-9]*1	IN8, IN9 Input Common	
	18	IN9	RV-JOG	Starts the JOG operation.
	19	OUT1	IN-POS	Output when the motor operation is finished.
	20	OUT3	READY	Output when the driver is ready for operation.
	21	OUT5	ALM-B	Outputs the alarm status for the driver (normal close).
	22	GND*1	Gland	
	23	ASG−	A-Phase Pulse Output −	
	24	BSG−	B-Phase Pulse Output −	

●You can set functions to assign by using parameters. Initial values are shown above. For details, see the User's Manual (Functions) of the **AZ** Series.

∗1 The initial value cannot be changed.

●Connection Diagram (For built-in controller type, AC power supply input)

◇Connections with Peripheral Equipment



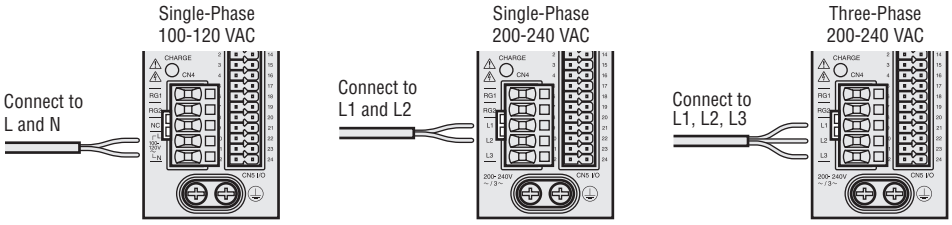
*1 Products are available with a 1 m, 2 m or 3 m cable for motor and driver, and also without.
If you need cables longer than 3 m or flexible cables, select appropriate cables from the accessories (sold separately).
Keep the wiring distance between the motor and driver to 20 m or less.

*2 Not supplied.

*3 Connect to the controller when controlling through RS-485 communication.

◇Connecting the Main Power Supply

The connection method varies with the power supply specifications.



◇USB Cable Connections

Connect the computer where the data setting software **MEXE02** is installed with the driver using a USB cable.
Use a USB cable of the following specifications.

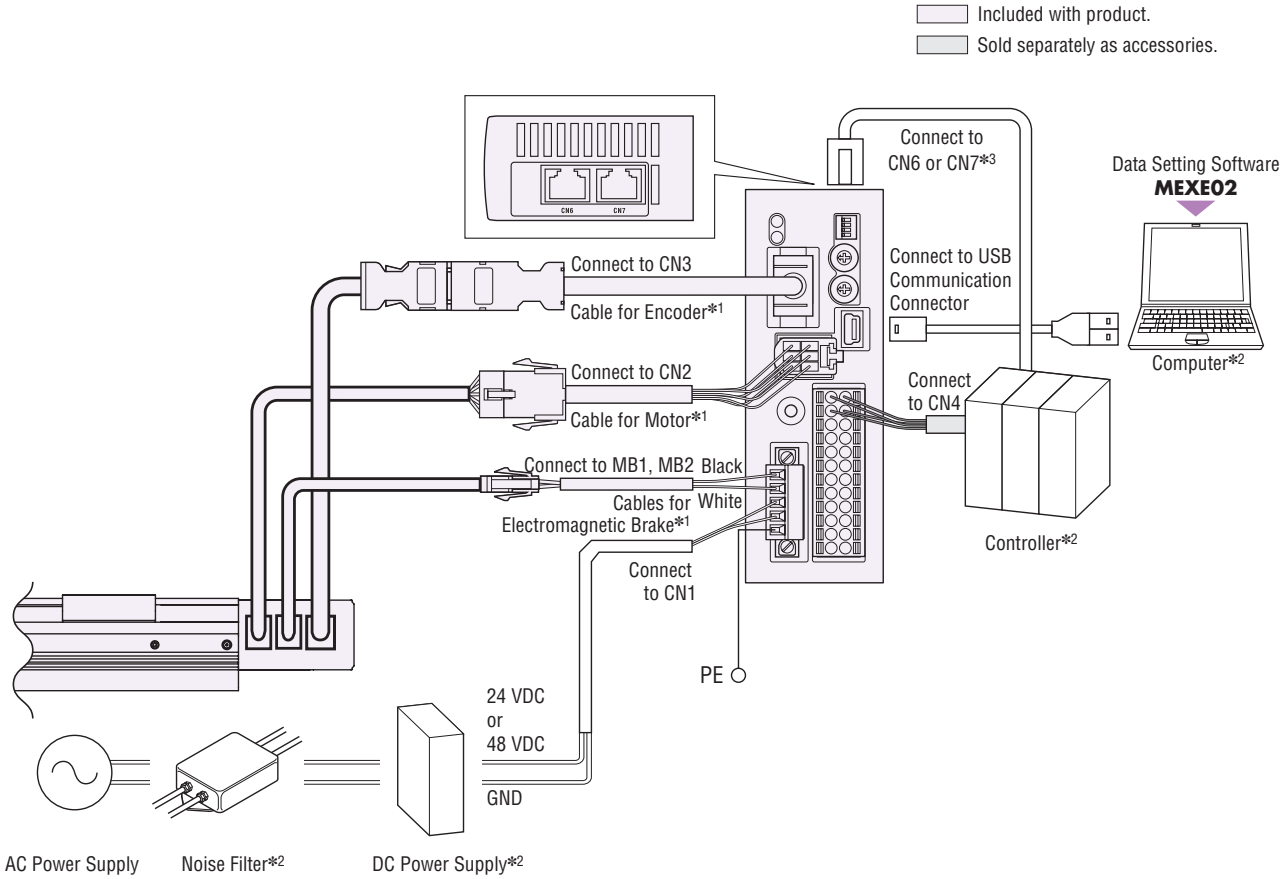
Specifications	USB2.0 (Full speed)
Cable	Length: 3 m or less
	Shape: A-mini-B

◇Connecting to the Host Controller

· Connection Diagram for Connection with Current Sink Output Circuit → Page 80
· Connection Diagram for Connection with Current Source Output Circuit → Page 81

●Connection Diagram (For built-in controller type, DC power supply input)

◇Connections with Peripheral Equipment



*1 Products are available with a 1 m, 2 m or 3 m cable for motor and driver, and also without.
If you need cables longer than 3 m or flexible cables, select appropriate cables from the accessories (sold separately).
Keep the wiring distance between the motor and driver to 20 m or less.

*2 Not supplied.

*3 Connect to the controller when controlling through RS-485 communication.

◇USB Cable Connections

Connect the computer where the data setting software **MEXE02** is installed with the driver using a USB cable.
Use a USB cable of the following specifications.

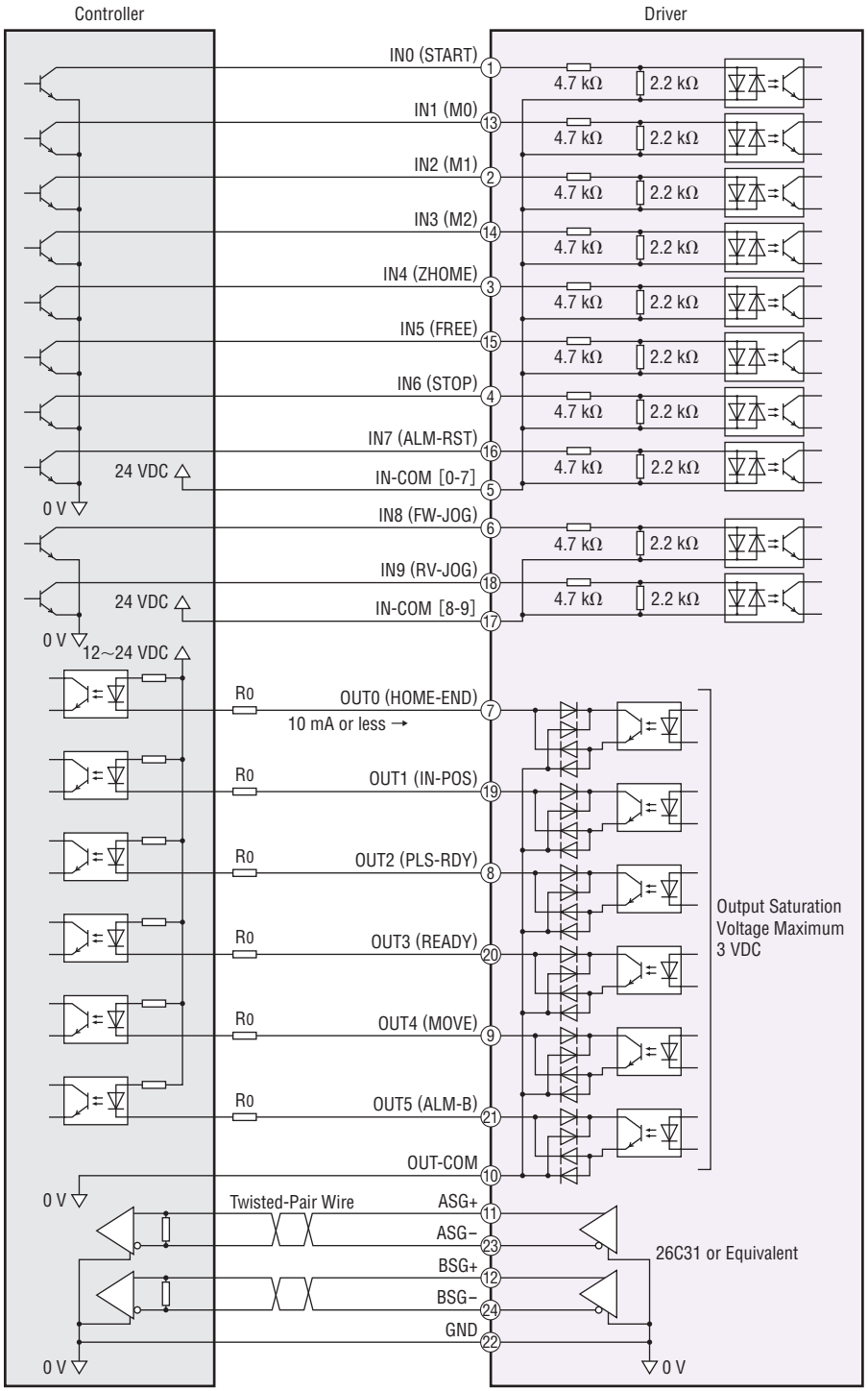
Specifications	USB2.0 (Full speed)
Cable	Length: 3 m or less
	Shape: A-mini-B

◇Connecting to the Host Controller

· Connection Diagram for Connection with Current Sink Output Circuit → Page 80
· Connection Diagram for Connection with Current Source Output Circuit → Page 81

◇Connecting to the Host Controller (Common for the AC power supply input and DC power supply input of the built-in controller type)

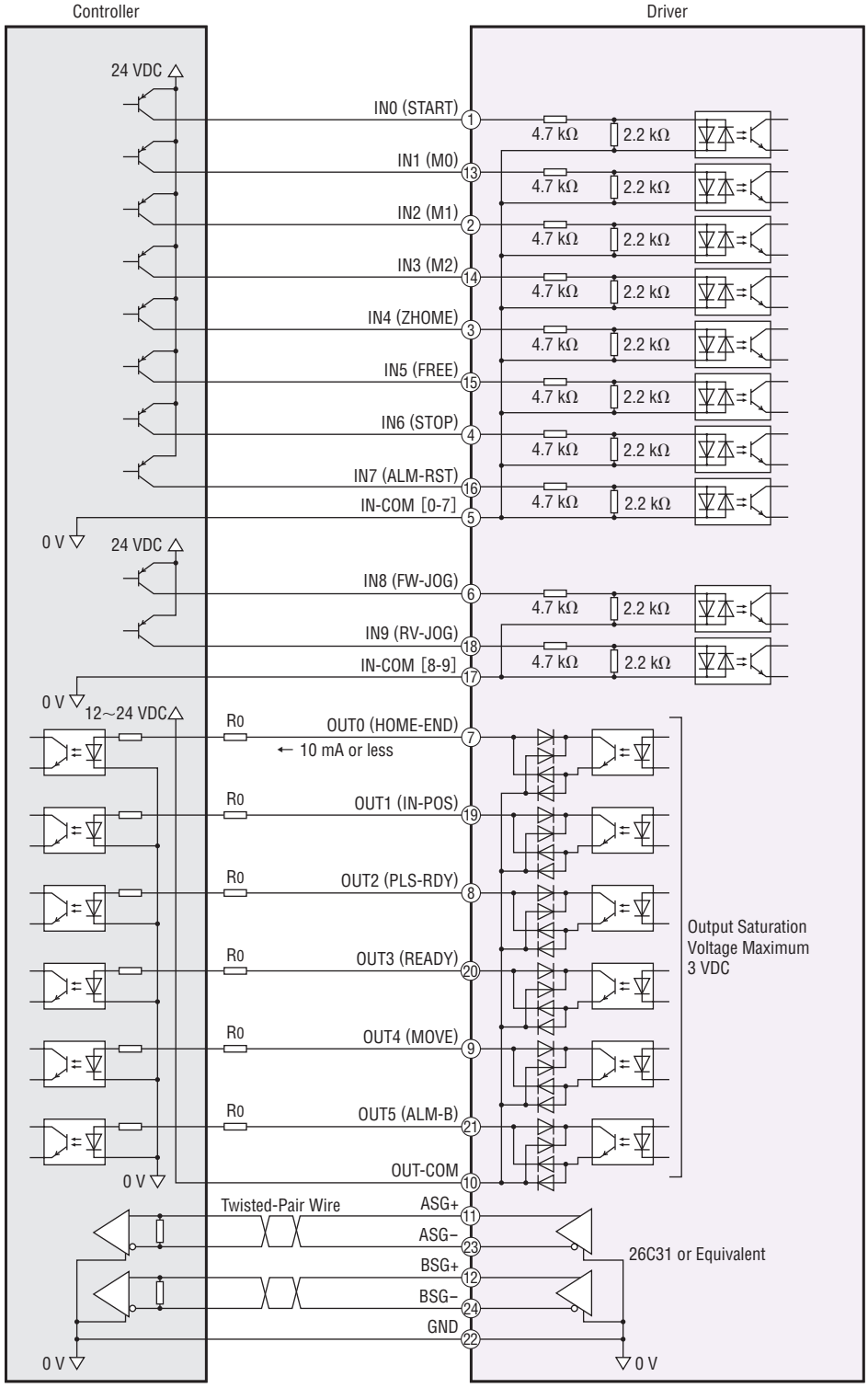
•Connection Diagram for Connection with Current Sink Output Circuit



Note

- Use 24 VDC for the input signals.
- Use 12~24 VDC, 10 mA or less for the output signals. When the current value exceeds 10 mA, connect the external resistor R_0 to reduce the current to 10 mA max.
- Provide a distance of 200 mm or longer between the signal lines and power lines (power supply lines, motor lines).
  Do not run the signal lines in the same piping as power lines or bundle them with power lines.
- If noise generated by the motor cable or power supply cable causes a problem with the specific wiring or layout, shield the cable or use ferrite cores.

•Connection Diagram for Connection with Current Source Output Circuit

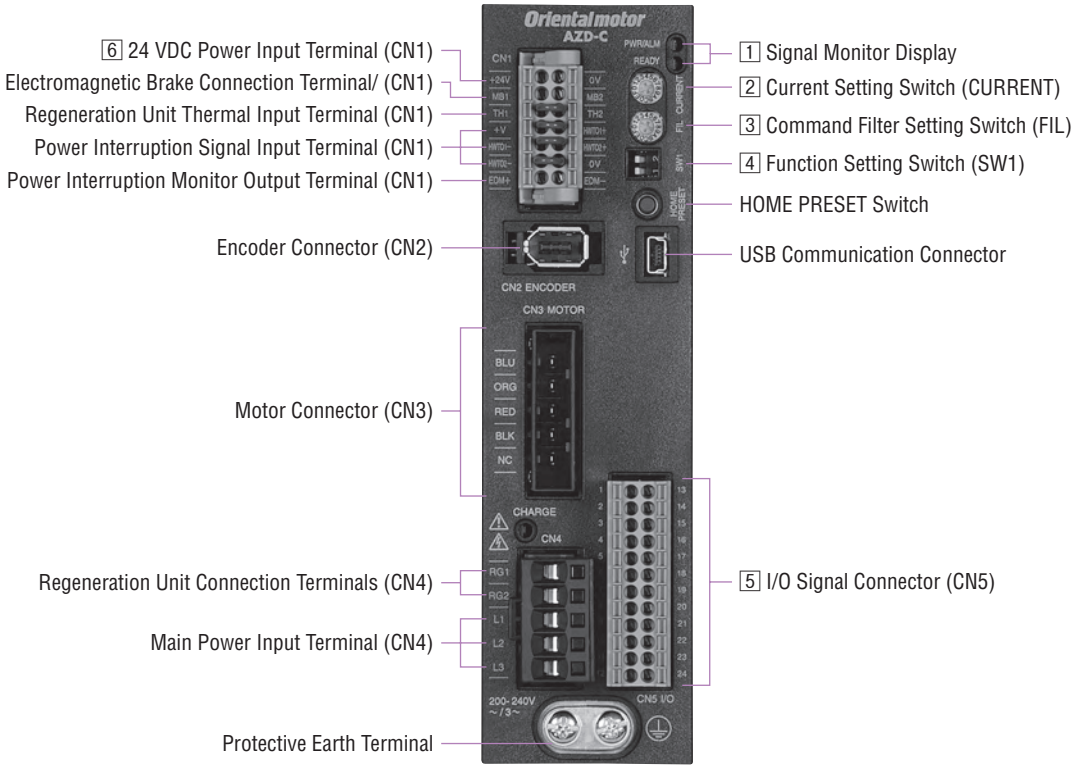


Note

- Use 24 VDC for the input signals.
- Use 12~24 VDC, 10 mA or less for the output signals. When the current value exceeds 10 mA, connect the external resistor R_0 to reduce the current to 10 mA max.
- Provide a distance of 200 mm or longer between the signal lines and power lines (power supply lines, motor lines).
  Do not run the signal lines in the same piping as power lines or bundle them with power lines.
- If noise generated by the motor cable or power supply cable causes a problem with the specific wiring or layout, shield the cable or use ferrite cores.

Connection and Operation (Pulse input type)

Driver Part Names and Functions (Pulse input type, AC power supply input)



1 Signal Monitor Display

◇LED Display

Indication	Color	Function	Lighting Condition
PWR	Green	Power Supply Indication	When 24 VDC power supply is input
ALM	Red	Alarm Indication	When a protective function is activated (blinking)
READY	Green	READY Output	When the READY output is ON

2 Current Setting Switch

Indication	Function
CURRENT	Set the basic current that is the base of the running current and the standstill current (Factory setting: F).

3 Command Filter Setting Switch

Indication	Function
FIL	Adjust the responsiveness of the motor (Factory setting: 1).

4 Function Setting Switch

Indication	No.	Function
SW1	1	Sets the resolution per rotation of the motor output shaft (Factory setting: OFF [1000 p/r]).
	2	Set the pulse input mode to either 1-pulse input mode or 2-pulse input mode. (Factory setting: OFF [2-Pulse Input Mode])

5 I/O Signal Connector (CN5)

Indication	Pin No.	Signal Name	Description	
CN5	1	CW+ [PLS+]*1	CW Pulse Input + [Pulse Input +]	
	2	CCW+ [DIR+]*1	CCW Pulse Input + [Rotation Direction Input +]	
	3	IN4	ZHOME	Move to the home position set with the HOME PRESET switch.
	4	IN6	STOP	Stop the motor.
	5	IN-COM [4-7]*1	IN4~IN7 Input Common	
	6	IN8	FW-JOG	Starts the JOG operation.
	7	OUT0	HOME-END	Output when the home position is determined or the high-speed return to origin operation is completed.
	8	OUT2	PLS-RDY	Output when the pulse input becomes ready.
	9	OUT4	MOVE	Output during motor operation.
	10	OUT-COM*1	Output Common	
	11	ASG+	A-Phase Pulse Output +	
	12	BSG+	B-Phase Pulse Output +	
	13	CW− [PLS-]*1	CW Pulse Input − [Pulse Input −]	
	14	CCW− [DIR-]*1	CCW Pulse Input − [Rotation Direction Input −]	
	15	IN5	FREE	Stops motor excitation.
	16	IN7	ALM-RST	Reset the alarm.
	17	IN-COM [8-9]*1	IN8, IN9 Input Common	
	18	IN9	RV-JOG	Starts the JOG operation.
	19	OUT1	IN-POS	Output when the motor operation is finished.
	20	OUT3	READY	Output when the driver is ready for operation.
	21	OUT5	ALM-B	Outputs the alarm status for the driver (normal close).
	22	GND*1	Gland	
	23	ASG−	A-Phase Pulse Output −	
	24	BSG−	B-Phase Pulse Output −	

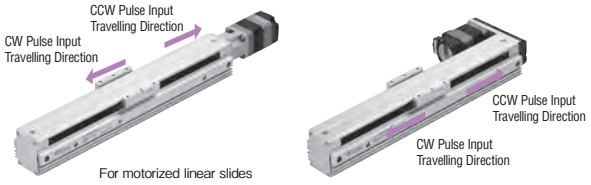
●You can set functions to assign by using parameters. Initial values are shown above. For details, see the User's Manual (Functions) of the **AZ** Series.

*1 The initial value cannot be changed.

Note

The table (rod) moves as follows when receiving CW pulse and CCW pulse of driver input signal:

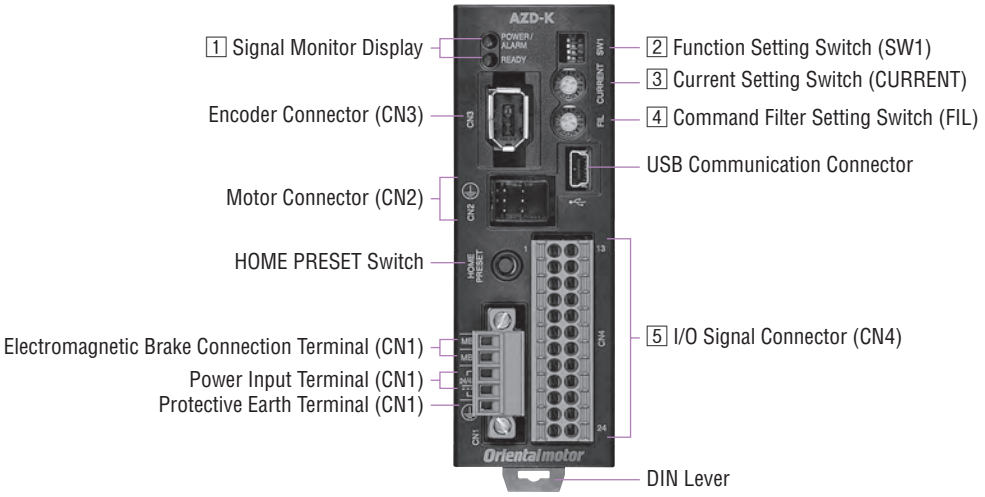
- At CW pulse input: The table (rod) moves to the opposite side.
- At CCW pulse input: The table (rod) moves to the motor side.



6 24 VDC Power Input Terminal/Electromagnetic Brake Connection Terminal/Regeneration Unit Thermal Input Terminal/Power Interruption Signal Input Terminal/Power Interruption Monitor Output Terminal (CN1)

Indication	I/O	Terminal Name	Description
+24V	Input	24 VDC Power Input Terminal +	The power supply for the driver control circuit. Always connect when using.
0V		24 VDC Power Input Terminal −	
MB1	Output	Electromagnetic Brake Connection Terminal −	For an electromagnetic brake type motor, connect the cable for the electromagnetic brake here.
MB2		Electromagnetic Brake Connection Terminal +	
TH1	Input	Regeneration Unit Thermal Input Terminal	Connect the accessory (sold separately) regeneration unit (**RGB100**). When not connecting a regeneration unit, short these 2 terminals to each other.
TH2		Regeneration Unit Thermal Input Terminal	
HWTO1+	Input	Power Interruption Signal Input Terminal 1+	Connect a switch or the programmable controller. When either of the HWTO1 Input or HWTO2 Input turns OFF, the hardware directly interrupts the power of the motor without involving the CPU.
HWTO1−		Power Interruption Signal Input Terminal 1−	
HWTO2+		Power Interruption Signal Input Terminal 2+	
HWTO2−		Power Interruption Signal Input Terminal 2−	
EDM+	Output	Power Interruption Monitor Output Terminal +	Connect an upper-level controller. When both the HWTO1 Input or HWTO2 Input turn OFF, the EDM output becomes ON.
EDM−		Power Interruption Monitor Output Terminal −	

Driver Part Names and Functions (Pulse input type, DC power supply input)



1 Signal Monitor Display

◇LED Display

Indication	Color	Function	Lighting Condition
POWER	Green	Power Supply Indication	When power is applied
ALARM	Red	Alarm Indication	When a protective function is activated (blinking)
READY	Green	READY Output	When the READY output is ON

2 Function Setting Switch

Indication	No.	Function
SW1	1	Sets the resolution per rotation of the motor output shaft (Factory setting: OFF [1000 p/r]).
	2	Set the pulse input mode to 1-pulse input mode or 2-pulse input mode. (Factory setting: OFF [2-Pulse Input Mode])
	3, 4	Not used

3 Current Setting Switch

Indication	Function
CURRENT	Set the basic current that is the base of the running current and the standstill current (Factory setting: F).

4 Command Filter Setting Switch

Indication	Function
FIL	Adjust the responsiveness of the motor (Factory setting: 1)

5 I/O Signal Connector (CN4)

Indication	Pin No.	Signal Name	Description	
CN4	1	CW+ [PLS+]*1	CW Pulse Input + [Pulse Input +]	
	2	CCW+ [DIR+]*1	CCW Pulse Input + [Rotation Direction Input +]	
	3	IN4	ZHOME	Move to the home position set with the HOME PRESET switch.
	4	IN6	STOP	Stop the motor.
	5	IN-COM [4-7]*1	IN4~IN7 Input Common	
	6	IN8	FW-JOG	Starts the JOG operation.
	7	OUT0	HOME-END	Output when the home position is determined or the high-speed return to origin operation is completed.
	8	OUT2	PLS-RDY	Output when the pulse input becomes ready.
	9	OUT4	MOVE	Output during motor operation.
	10	OUT-COM*1	Output Common	
	11	ASG+	A-Phase Pulse Output +	
	12	BSG+	B-Phase Pulse Output +	
	13	CW− [PLS−]*1	CW Pulse Input − [Pulse Input −]	
	14	CCW− [DIR−]*1	CCW Pulse Input − [Rotation Direction Input −]	
	15	IN5	FREE	Stops motor excitation.
	16	IN7	ALM-RST	Reset the alarm.
	17	IN-COM [8-9]*1	IN8, IN9 Input Common	
	18	IN9	RV-JOG	Starts the JOG operation.
	19	OUT1	IN-POS	Output when the motor operation is finished.
	20	OUT3	READY	Output when the driver is ready for operation.
	21	OUT5	ALM-B	Outputs the alarm status for the driver (normal close).
	22	GND*1	Gland	
	23	ASG−	A-Phase Pulse Output −	
	24	BSG−	B-Phase Pulse Output −	

●You can set functions to assign by using parameters. Initial values are shown above. For details, see the User's Manual (Functions) of the **AZ** Series.

*1 The initial value cannot be changed.

Note

The table (rod) moves as follows when receiving CW pulse and CCW pulse of driver input signal:

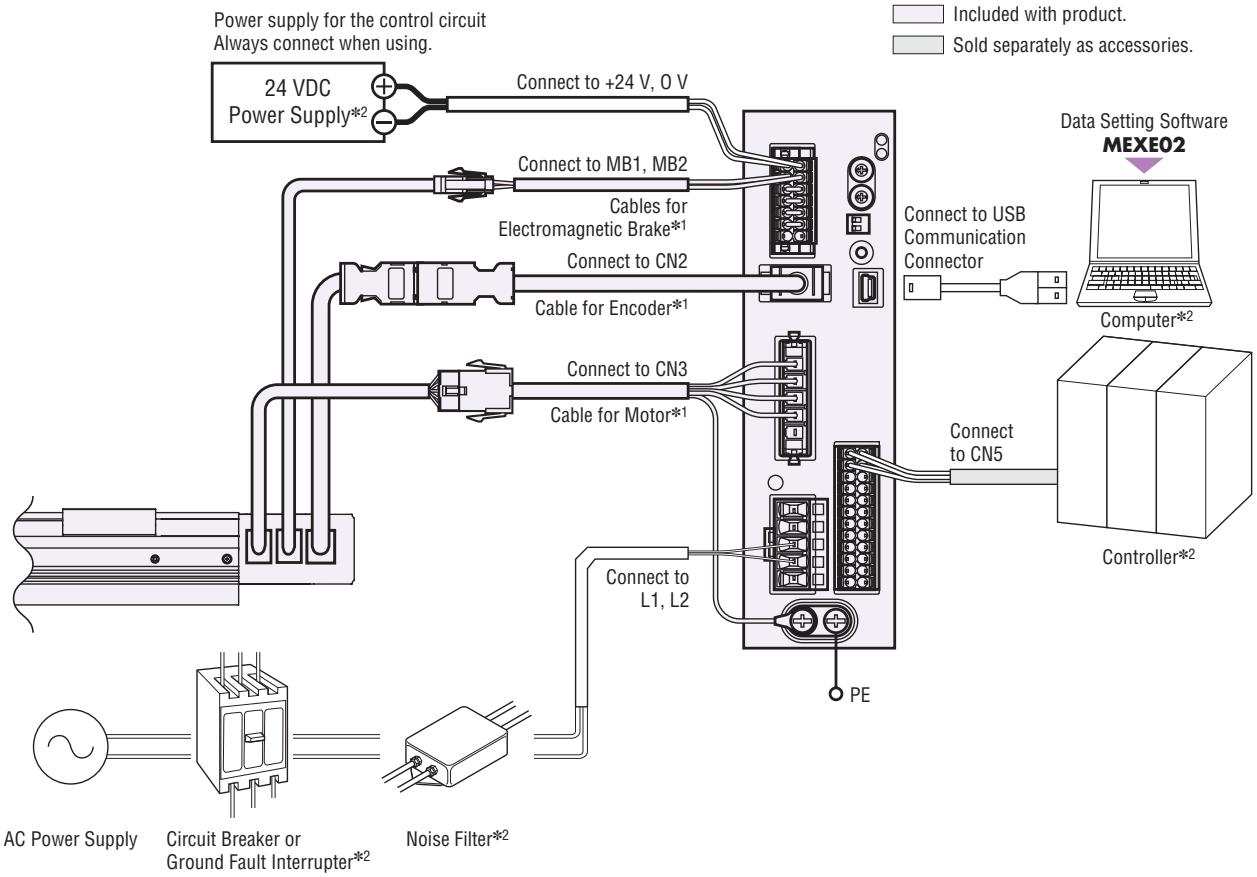
· At CW pulse input: The table (rod) moves to the opposite side.

· At CCW pulse input: The table (rod) moves to the motor side.

For motorized linear slides

●Connection Diagram (For pulse input type, AC power supply input)

◇Connections with Peripheral Equipment

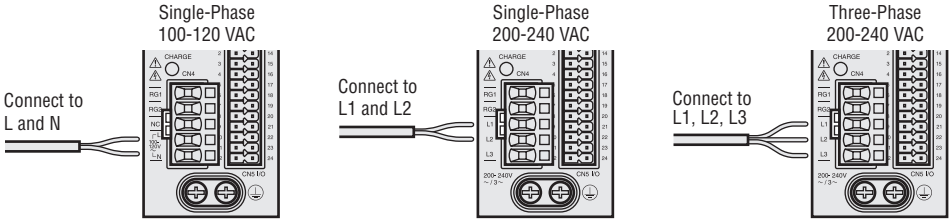


*1 Products are available with a 1 m, 2 m or 3 m cable for motor and driver, and also without.
If you need cables longer than 3 m or flexible cables, select appropriate cables from the accessories (sold separately).
Keep the wiring distance between the motor and driver to 20 m or less.

*2 Not supplied.

◇Connecting the Main Power Supply

The connection method varies with the power supply specifications.



◇USB Cable Connections

Connect the computer where the data setting software **MEXE02** is installed with the driver using a USB cable.
Use a USB cable of the following specifications.

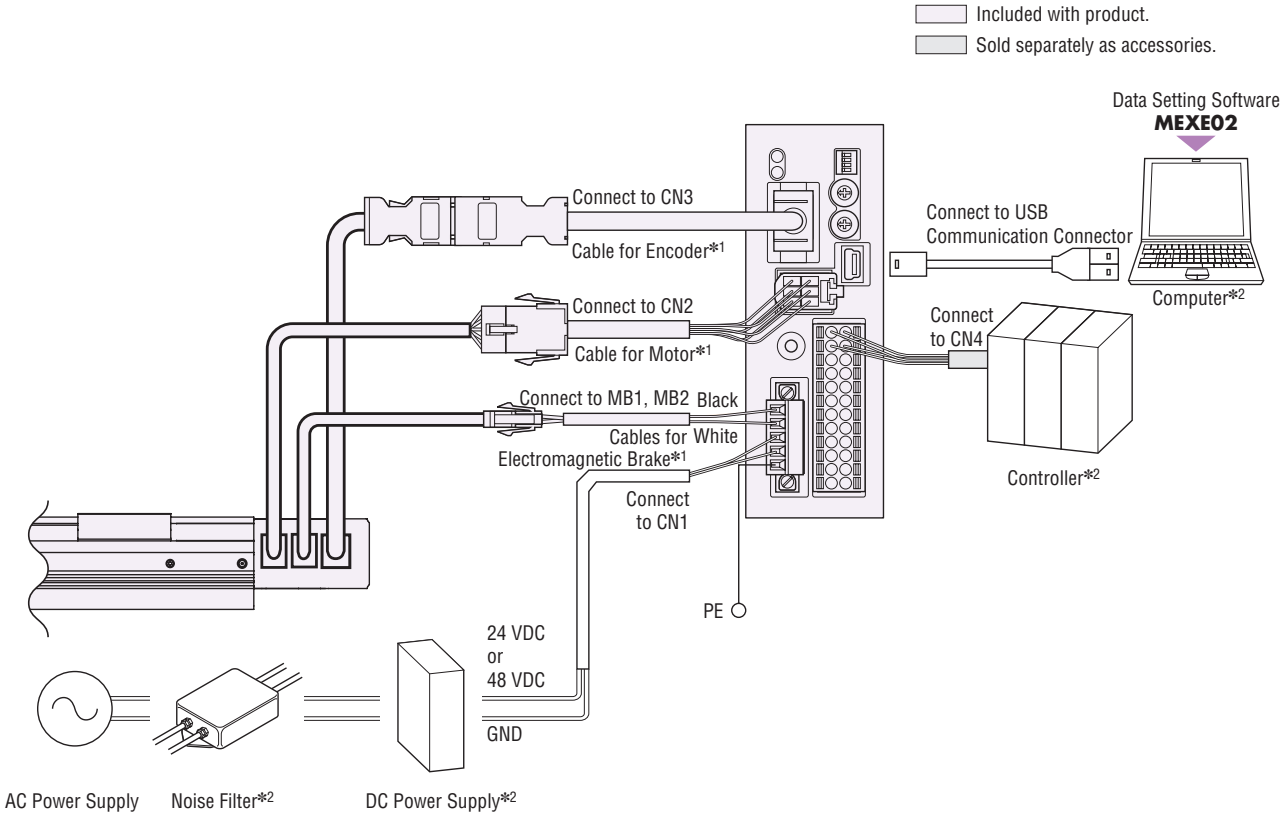
Specifications	USB2.0 (Full speed)
Cable	Length: 3 m or less
	Shape: A-mini-B

◇Connecting to the Host Controller

· Connection Diagram for Connection with Current Sink Output Circuit → Page 88
· Connection Diagram for Connection with Current Source Output Circuit → Page 89

●Connection Diagram (For pulse input type, DC power supply input)

◇Connections with Peripheral Equipment



*1 Products are available with a 1 m, 2 m or 3 m cable for motor and driver, and also without.
If you need cables longer than 3 m or flexible cables, select appropriate cables from the accessories (sold separately).
Keep the wiring distance between the motor and driver to 20 m or less.

*2 Not supplied.

◇USB Cable Connections

Connect the computer where the data setting software **MEXE02** is installed with the driver using a USB cable.
Use a USB cable of the following specifications.

Specifications	USB2.0 (Full speed)
Cable	Length: 3 m or less
	Shape: A-mini-B

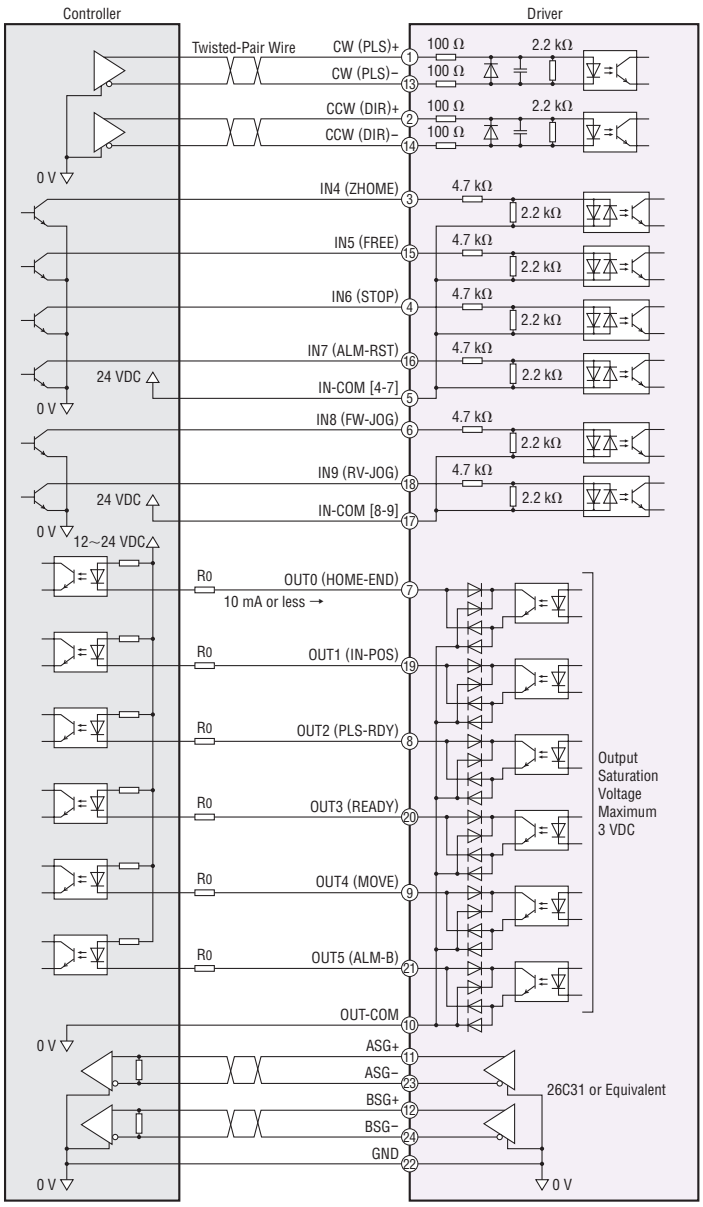
◇Connecting to the Host Controller

· Connection Diagram for Connection with Current Sink Output Circuit → Page 88
· Connection Diagram for Connection with Current Source Output Circuit → Page 89

◇Connecting to the Host Controller (Common for the AC power supply input and DC power supply input of the pulse input type)

•Connection Diagram for Connection with Current Sink Output Circuit

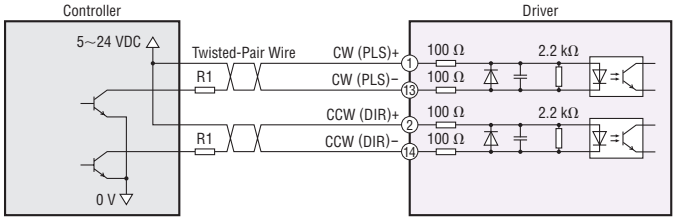
When the Pulse Input is the Line Driver



Note

- Use 24 VDC for the input signals.
- Use 12~24 VDC, 10 mA or less for the output signals. When the current value exceeds 10 mA, connect the external resistor R_0 to reduce the current to 10 mA max.
- Provide a distance of 200 mm or longer between the signal lines and power lines (power supply lines, motor lines).
  Do not run the signal lines in the same piping as power lines or bundle them with power lines.
- If noise generated by the motor cable or power supply cable causes a problem with the specific wiring or layout, shield the cable or use ferrite cores.

When the Pulse Input is Open Collector

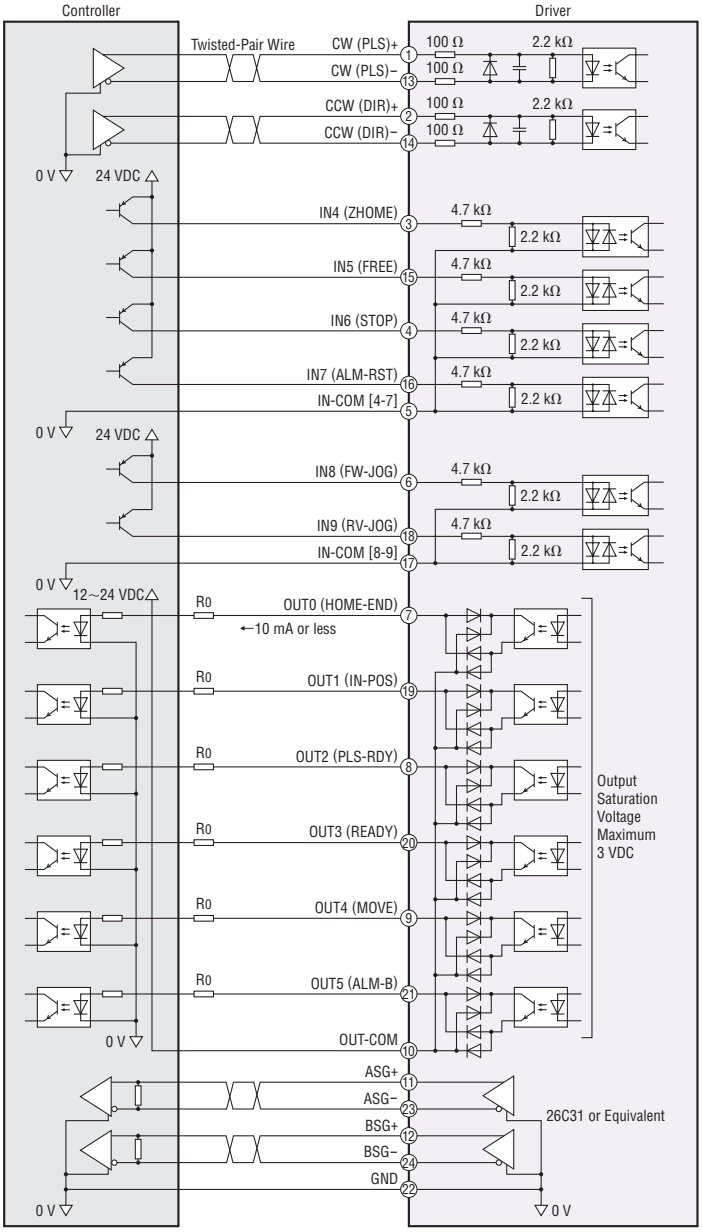


Note

- Use CW (PLS) input and CCW (DIR) Input at 5~24 VDC. When the voltage exceeds 5 VDC, connect the external resistor R_1 to keep the input current between 7~20 mA.

•Connection Diagram for Connection with Current Source Output Circuit

When the Pulse Input is the Line Driver



Note

- Use 24 VDC for the input signals.
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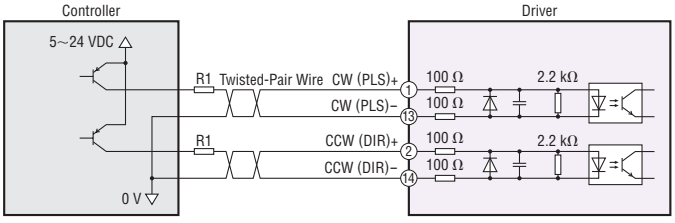
- Provide a distance of 200 mm or longer between the signal lines and power lines (power supply lines, motor lines).
  Do not run the signal lines in the same piping as power lines or bundle them with power lines.
- If noise generated by the motor cable or power supply cable causes a problem with the specific wiring or layout, shield the cable or use ferrite cores.

When the Pulse Input is Open Collector



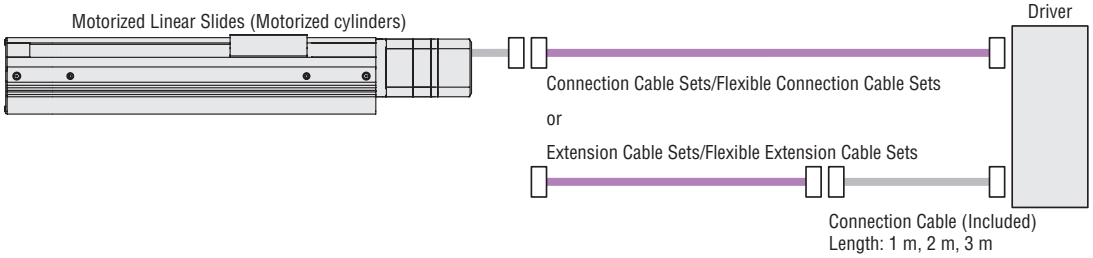
Note

- Use CW (PLS) input and CCW (DIR) Input at 5~24 VDC. When the voltage exceeds 5 VDC, connect the external resistor R_1 to keep the input current between 7~20 mA.

Accessories (Sold Separately)

Connection Cable Sets, Flexible Connection Cable Sets Extension Cable Sets, Flexible Extension Cable Sets

The **EAS** Series and the **EAC** Series are available with a cable (1 m, 2 m or 3 m) for connecting the motor to the driver, and also without a cable.
If the distance between the motor and driver is extended to 3 m or longer, a connection cable set or extension cable set must be used.
The maximum length of the cable extension is 20 m (using included cable).
Connection cable sets and extension cable sets come as a set of cables for motor, encoder, and electromagnetic brake (electromagnetic brake type only).
Use a flexible connection cable set or flexible extension cable set if the cable will be bent repeatedly.



Note

- The motor cable and electromagnetic brake cable from the motor cannot be directly connected to a driver. To connect to a driver, use an accessory connection cable (sold separately) or the connection cable included in the product (if included).

AC Power Supply Input

Connection Cable Sets, Flexible Connection Cable Sets

Product Line

Connection Cable Sets

◇For Standard Motor

Cables for Motor　　Cables for Encoder

Product Name	Length L (m)
CC010VZF	1
CC020VZF	2
CC030VZF	3
CC050VZF	5
CC070VZF	7
CC100VZF	10
CC150VZF	15
CC200VZF	20

◇For Electromagnetic Brake Type Motor

Cables for Motor　　Cables for Encoder　　Cable for Electromagnetic Brake

Product Name	Length L (m)
CC010VZFB	1
CC020VZFB	2
CC030VZFB	3
CC050VZFB	5
CC070VZFB	7
CC100VZFB	10
CC150VZFB	15
CC200VZFB	20

Flexible Connection Cable Sets

◇For Standard Motor

Cables for Motor　　Cables for Encoder

Product Name	Length L (m)
CC010VZR	1
CC020VZR	2
CC030VZR	3
CC050VZR	5
CC070VZR	7
CC100VZR	10
CC150VZR	15
CC200VZR	20

◇For Electromagnetic Brake Type Motor

Cables for Motor　　Cables for Encoder　　Cable for Electromagnetic Brake

Product Name	Length L (m)
CC010VZRB	1
CC020VZRB	2
CC030VZRB	3
CC050VZRB	5
CC070VZRB	7
CC100VZRB	10
CC150VZRB	15
CC200VZRB	20

Extension Cable Sets, Flexible Extension Cable Sets

Product Line

Extension Cable Sets

◇For Standard Motor

Cables for Motor　Cables for Encoder

Product Name	Length L (m)
CC010VZFT	1
CC020VZFT	2
CC030VZFT	3
CC050VZFT	5
CC070VZFT	7
CC100VZFT	10
CC150VZFT	15

◇For Electromagnetic Brake Type Motor

Cables for Motor　Cables for Encoder　Cable for Electromagnetic Brake

Product Name	Length L (m)
CC010VZFBT	1
CC020VZFBT	2
CC030VZFBT	3
CC050VZFBT	5
CC070VZFBT	7
CC100VZFBT	10
CC150VZFBT	15

Flexible Connection Cable Sets

◇For Standard Motor

Cables for Motor　Cables for Encoder

Product Name	Length L (m)
CC010VZRT	1
CC020VZRT	2
CC030VZRT	3
CC050VZRT	5
CC070VZRT	7
CC100VZRT	10
CC150VZRT	15

◇For Electromagnetic Brake Type Motor

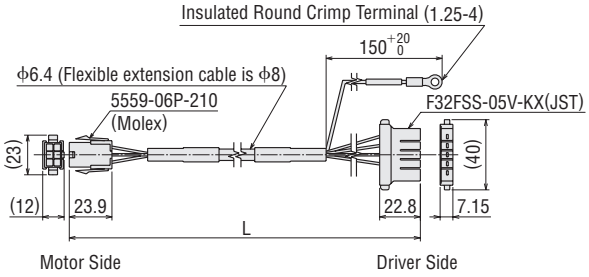
Cables for Motor　Cables for Encoder　Cable for Electromagnetic Brake

Product Name	Length L (m)
CC010VZRBT	1
CC020VZRBT	2
CC030VZRBT	3
CC050VZRBT	5
CC070VZRBT	7
CC100VZRBT	10
CC150VZRBT	15

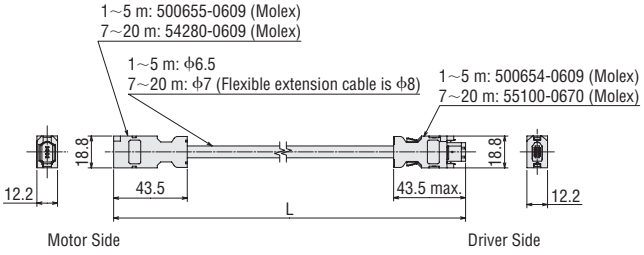
Dimensions (Unit = mm)

Connection Cable

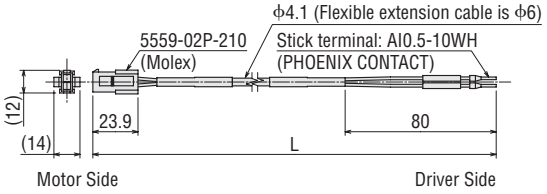
◇Cables for Motor



◇Cables for Encoder

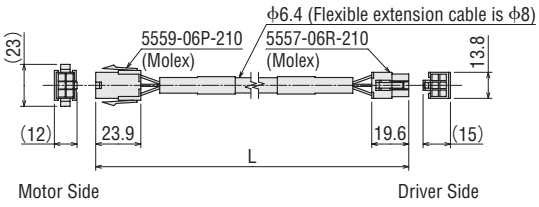


◇Cable for Electromagnetic Brake

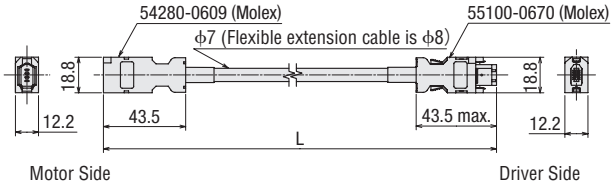


Extension Cable

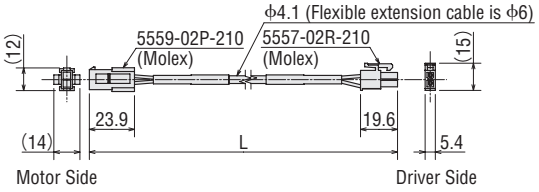
◇Cables for Motor



◇Cables for Encoder



◇Cable for Electromagnetic Brake



Connection Cable Sets, Flexible Connection Cable Sets

Product Line

Connection Cable Sets

◇For Standard Motor

Cables for Motor

Cables for Encoder

Product Name	Length L (m)
CC010VZF2	1
CC020VZF2	2
CC030VZF2	3
CC050VZF2	5
CC070VZF2	7
CC100VZF2	10
CC150VZF2	15
CC200VZF2	20

◇For Electromagnetic Brake Type Motor

Cables for Motor

Cables for Encoder

Cable for Electromagnetic Brake

Product Name	Length L (m)
CC010VZFB2	1
CC020VZFB2	2
CC030VZFB2	3
CC050VZFB2	5
CC070VZFB2	7
CC100VZFB2	10
CC150VZFB2	15
CC200VZFB2	20

Flexible Connection Cable Sets

◇For Standard Motor

Cables for Motor

Cables for Encoder

Product Name	Length L (m)
CC010VZR2	1
CC020VZR2	2
CC030VZR2	3
CC050VZR2	5
CC070VZR2	7
CC100VZR2	10
CC150VZR2	15
CC200VZR2	20

◇For Electromagnetic Brake Type Motor

Cables for Motor

Cables for Encoder

Cable for Electromagnetic Brake

Product Name	Length L (m)
CC010VZRB2	1
CC020VZRB2	2
CC030VZRB2	3
CC050VZRB2	5
CC070VZRB2	7
CC100VZRB2	10
CC150VZRB2	15
CC200VZRB2	20

Extension Cable Sets, Flexible Extension Cable Sets

Product Line

Extension Cable Sets

◇For Standard Motor

Cables for Motor

Cables for Encoder

Product Name	Length L (m)
CC010VZFT	1
CC020VZFT	2
CC030VZFT	3
CC050VZFT	5
CC070VZFT	7
CC100VZFT	10
CC150VZFT	15

◇For Electromagnetic Brake Type Motor

Cables for Motor

Cables for Encoder

Cable for Electromagnetic Brake

Product Name	Length L (m)
CC010VZFBT	1
CC020VZFBT	2
CC030VZFBT	3
CC050VZFBT	5
CC070VZFBT	7
CC100VZFBT	10
CC150VZFBT	15

Flexible Connection Cable Sets

◇For Standard Motor

Cables for Motor　Cables for Encoder

Product Name	Length L (m)
CC010VZRT	1
CC020VZRT	2
CC030VZRT	3
CC050VZRT	5
CC070VZRT	7
CC100VZRT	10
CC150VZRT	15

◇For Electromagnetic Brake Type Motor

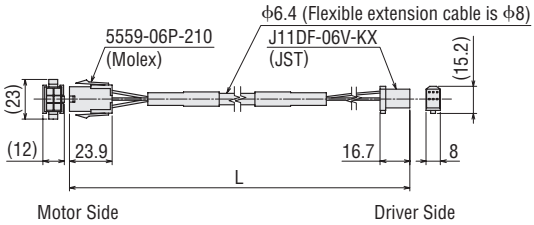
Cables for Motor　Cables for Encoder　Cable for Electromagnetic Brake

Product Name	Length L (m)
CC010VZRBT	1
CC020VZRBT	2
CC030VZRBT	3
CC050VZRBT	5
CC070VZRBT	7
CC100VZRBT	10
CC150VZRBT	15

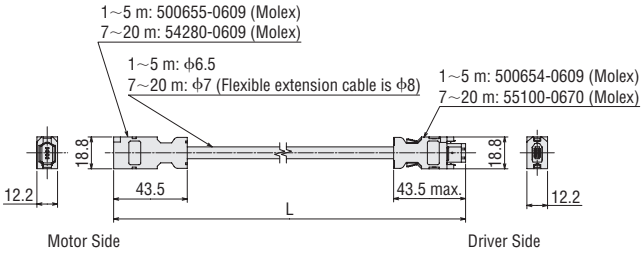
Dimensions (Unit = mm)

Connection Cable

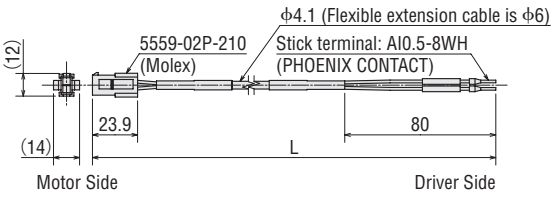
◇Cables for Motor



◇Cables for Encoder

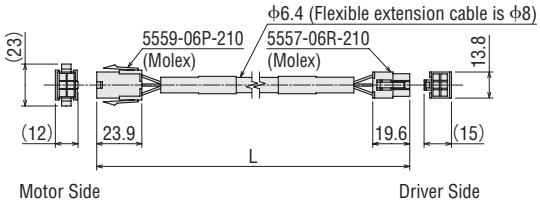


◇Cable for Electromagnetic Brake

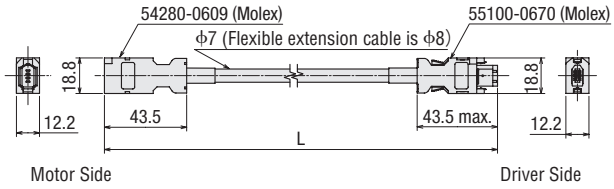


Extension Cable

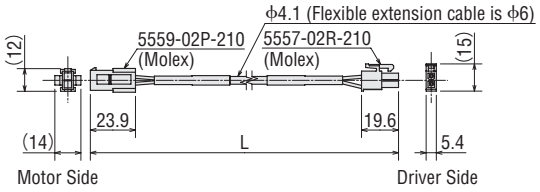
◇Cables for Motor



◇Cables for Encoder

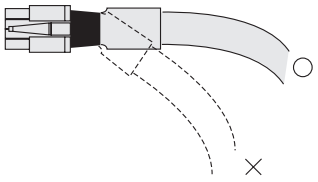


◇Cable for Electromagnetic Brake

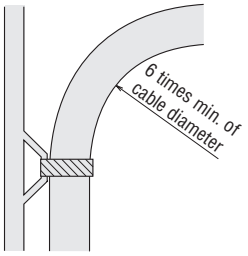


Notes on Use of Flexible Cable

①Do not allow the cable to bend at the cable connector.

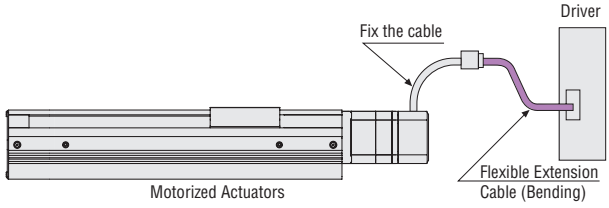


②For the bending radius, use at least 6 times of the cable diameter.

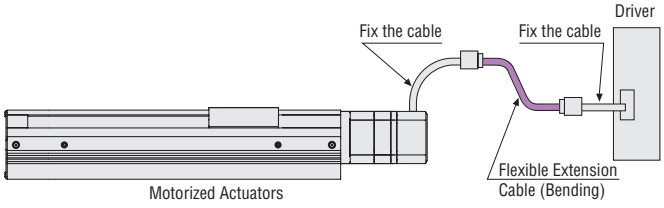


③The cable from the motorized actuator and the included cable are not for bending. If the motor cable is to be bent, bend it at the flexible cable.

- Flexible Connection Cable



- Flexible Extension Cable



Data Setting Software MEXE02

In addition to operating data and various parameter settings with a computer, you can perform teaching and monitor I/O and operating speed waveform with Data Setting Software.
Data Setting Software can be downloaded from the Oriental Motor website.
Oriental Motor can also provide a CD-ROM.
Visit our website, or contact the nearest Oriental Motor sales office.

Computer and Driver Connection

Use a USB cable of the following specifications.

Specifications	USB2.0 (Full speed)
Cable	Length: 3 m or less Shape: A-mini-B

System Requirements

Operating System (OS)

The 32 bit (x86) edition and 64 bit (x64) edition are supported.

- Microsoft Windows XP Service Pack 3*
- Microsoft Windows Vista Service Pack 2
- Microsoft Windows 7 Service Pack 1
- Microsoft Windows 8
- Microsoft Windows 8.1

*For the 64-bit (x64) version, Service Pack 2 is used.

Computer

Recommended CPU*1	Intel Core processor 2 GHz or faster (OS must be supported)
Display	Video adapter and monitor with a minimum resolution of XGA (1024 × 768)
Recommended Memory*1	32 bit (x86) edition: 1 GB or more 64 bit (x64) edition: 2 GB or more
Hard Disk*2	Free disk space of at least 60 MB
USB Port	USB2.0 1 port
Disk Device	CD-ROM drive (for installation)

*1 The system requirements for the OS must be met.
*2 For **MEXE02**, Microsoft .NET Framework 4 Client Profile is required. If not installed, it will be installed automatically. For 64 bit (x64) or 32 bit (x86) editions OS, an additional 1.5 GB or 600 MB of free space,respectively, may be required.

- Windows and Windows Vista are registered trademarks of Microsoft Corporation in the United States and other countries.
- Intel and Core are registered trademarks or trademarks of Intel Corporation in the United States and other countries.
- For the latest information of operating environment, refer to the Oriental Motor website.

Note

- Depending on your system environment, the required memory and hard disk may vary.

General-Purpose Cable for I/O Signals

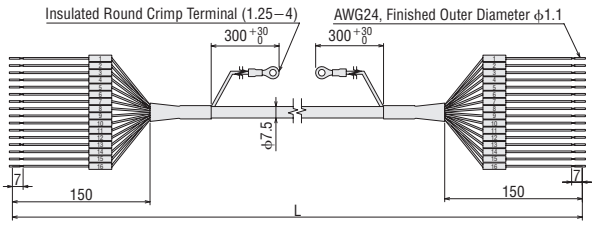
General-purpose multi-core cables provide convenient connection between a driver and programmable controller.

Product Line

Product Name	Length L (m)
CC16D005B-1	0.5
CC16D010B-1	1.0
CC16D015B-1	1.5
CC16D020B-1	2.0

- The number of conductors of the products above is 16. Products with 6, 10, or 12 conductors are also provided.

Dimensions (Unit = mm)



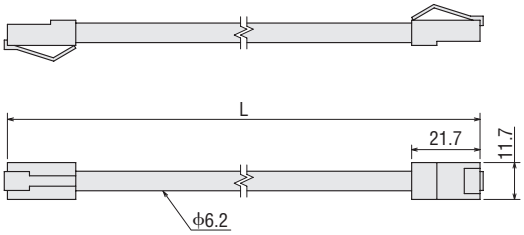
RS-485 Communication Cables

This cable is used to link drivers in multi-axis operations with the built-in controller type.
It also connects the network converter to the driver.

Product Line

Product Name	Applicable Drivers	Length L (m)
CC001-RS4	DC Power Supply Input Driver	0.1
CC002-RS4	AC Power Supply Input Driver DC Power Supply Input Driver	0.25

Dimensions (Unit = mm)



Sensor Set

Sensor sets dedicated to the **EAS** Series.
The sensor set consists of three sets of a sensor, a sensor mounting bracket, a flexible sensor cable with connector (2 m) and 1 shielding plate.
The screws needed for installation are also included.
The product name varies depending on the table type, the motorized linear cylinder model, and the sensor output.

Product Line

For X Table Type

Applicable Product	Sensor Output	Product Name
EAS4	NPN	**PAES-S-4X**
	PNP	**PAES-SY-4X**
EAS6	NPN	**PAES-S-6X**
	PNP	**PAES-SY-6X**

For Y Table Type

Applicable Product	Sensor Output	Product Name
EAS4	NPN	**PAES-S-4Y**
	PNP	**PAES-SY-4Y**
EAS6	NPN	**PAES-S-6Y**
	PNP	**PAES-SY-6Y**

Specifications

NPN Type

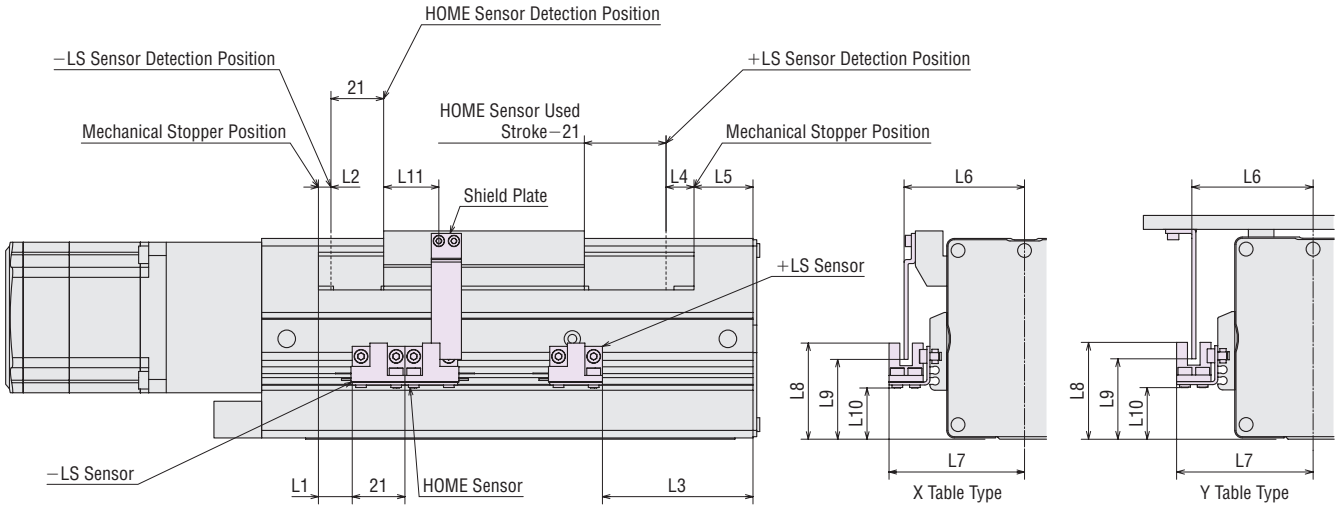
Item	Product Name: EE-SX674A (Made by OMRON)
Power Supply Voltage	5～24 VDC ± 10%, Ripple (P-P) 10% or less
Current Consumption	35 mA or less
Control Output	NPN Open-Collector Output, 5～24 VDC, 100 mA or less Residual Voltage 0.8 V or less (At load current 100 mA)
Logic	Normally Open/Normally Closed (Selectable, depending on connection)
Indicator LED	Detection Display (Red)

PNP Type

Item	Product Name: EE-SX674R (Made by OMRON)
Power Supply Voltage	5～24 VDC ± 10%, Ripple (P-P) 10%
Current Consumption	30 mA or less
Control Output	PNP Open-Collector Output, 5～24 VDC, 50 mA or less Residual Voltage 1.3 V or less (At load current 50 mA)
Logic	Normally Open/Normally Closed (Selectable, depending on connection)
Indicator LED	Detection Display (Red)

Dimensions for Sensor Installation Position (Unit = mm)

The following reference diagram is an example for X Table type. The Y Table type is similar.



Motorized Linear Slide Model	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11
EAS4	5.5	2	52.7	2	22.2	39.5	45.5	25.8	19.3	8.1	17
EAS6	13.5	5	71.7	5	28.2	48	54	37.3	30.8	19.6	22

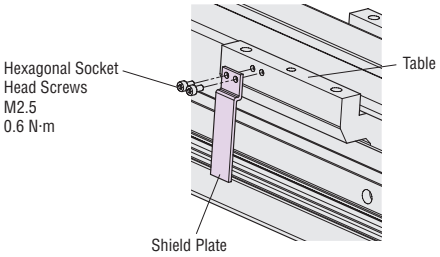
· If the stroke of the motorized linear slide is 50 mm, 2 sensors can be installed.
· Sensors and shield plates can also be installed on the opposite side of the diagram above.
· In case of the Y table, install the shield plate to the load.

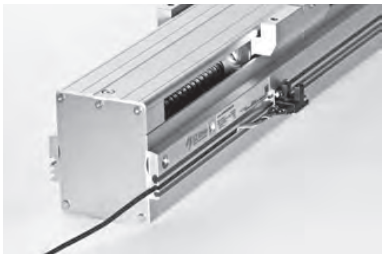
Shield Plate Installation

X Table Type

For the X Table type, the shield plate can be installed to the table of the product. Install the shield plate included in the sensor set to the screw hole in the side of the table.

The cables of the sensor set can be stored within the sensor rails on both sides of the motorized linear slides.





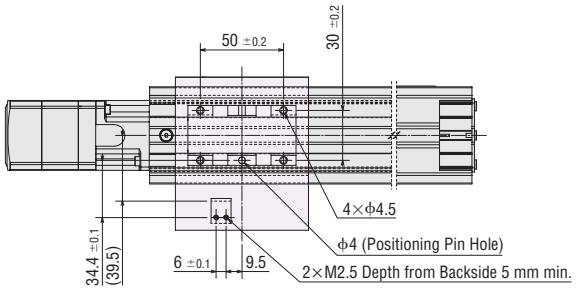
Y Table Type

In case of the Y Table type, install the shield plate to the load. The screw hole, into which the shield plate is installed to the load, needs to be processed. For the positions of the screw holes for installing the shield plate, refer to the shield plate installation hole position reference diagrams.

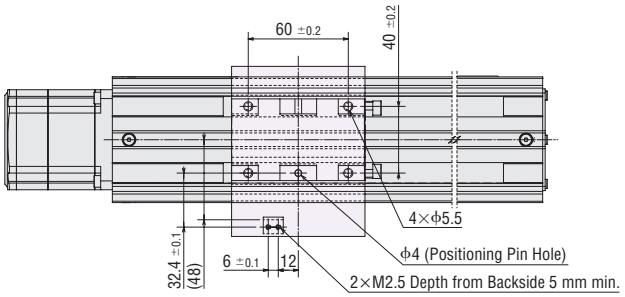
The shield plate must be installed in a way that will not interfere with the sensors. The shield plate dimensions for the Y Table type are shown below. Confirm that the shield plates do not interfere with the sensors. If the included shield plates cannot be used, prepare separate shield plates.

◇Shield Plate Installation Hole Position Dimensions (Unit = mm)

EAS4

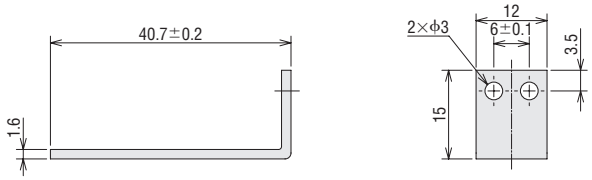


EAS6

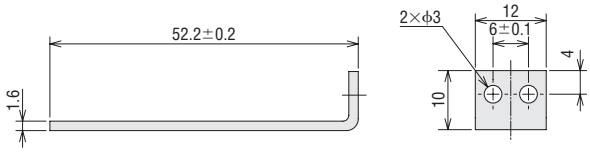


◇Shield Plate Dimensions (Unit = mm)

EAS4

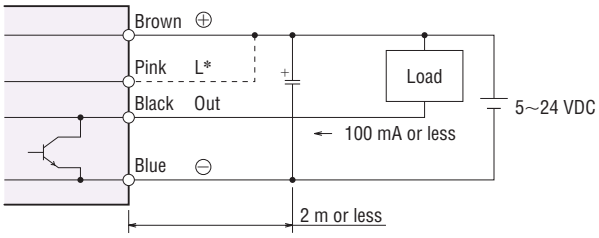


EAS6

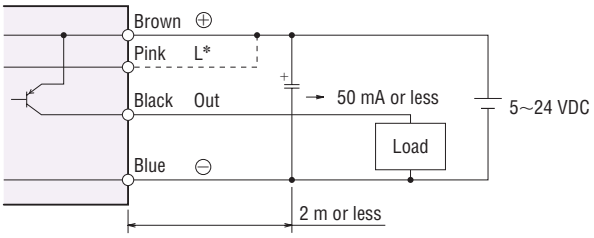


Connection

Sensor Output NPN Type



Sensor Output PNP Type



Note

✻ Connect it when the normally closed logic is used.

- Do not disconnect the connectors for cable-equipped sensors in an energized state. This may damage the sensors.
- When disconnecting the connectors, do not pull the cables.
- If sensor wiring exceeds 2 m, insert an electrolytic capacitor (10 μF, 50 V) within 2 m from the sensor.

Installation Plate

Dedicated installation plates are available for the **EAC** Series.

Foot Type

This is convenient for installing the motorized cylinder to the wall surface or floor surface of the equipment.

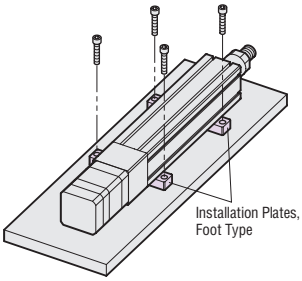
Product Name	Applicable Product
PAP4EAC	**EAC4**, **EAC4R**
PAP6EAC	**EAC6**, **EAC6R**
PAP4EACW	**EAC4W**, **EAC4RW**
PAP6EACW	**EAC6W**, **EAC6RW**

- The product names of the applicable products are described with alphanumeric characters by which the configuration can be identified.

PAP4EAC

PAP4EACW

Installation Example Using the Foot Type



Flange Type

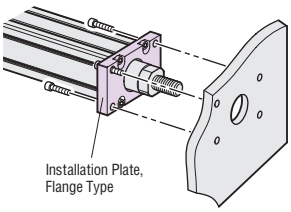
This is convenient for installing the flange surface of the motorized cylinder to the equipment.

Product Name	Applicable Product
PAF4EAC	**EAC4**, **EAC4R**
PAF6EAC	**EAC6**, **EAC6R**

- The product names of the applicable products are described with alphanumeric characters by which the configuration can be identified.
- The flange type installation plate cannot be installed to models with a shaft guide and models with a shaft guide cover.

PAF4EAC

Installation Example Using the Flange Type



Regeneration Unit

The regeneration unit is connected to the driver to release the regenerative power returned from the motor as thermal energy.

Product Line

Product Name	Applicable Product
RGB100	**EAS** Series (AC Power Supply Input) **EAC** Series (AC Power Supply Input)

Specifications

Item	Description
Continuous Regenerative Power	50 W
Resistance Value	150 Ω
Thermostat Operating Temperature	Open: 150±7°C Close: 145±12°C (Normally closed)
Thermostat Electrical Rating	120 VAC 4 A 30 VDC 4 A (Minimum current 5 mA)

✻Install the regeneration unit in the location that has the same heat radiation capability as the heat sink (Material: aluminum, 350×350 mm, 3 mm thick).

Network-Compatible Products (Sold Separately)

Network Converters

The network converter converts host communication protocol to Oriental Motor's original RS-485 communication protocol. You can use a network converter to control Oriental Motor's RS-485-compatible products within the host communication environment.

NETC01-CC　NETC01-M2　NETC01-M3　NETC01-ECT

Product Line

Network Type	Product Name
CC-Link Ver.1.1 Compatible	**NETC01-CC**
CC-Link Ver.2 Compatible	**NETC02-CC**
MECHATROLINK-Ⅱ Compatible	**NETC01-M2**
MECHATROLINK-Ⅲ Compatible	**NETC01-M3**
Compatible with EtherCAT.	**NETC01-ECT**

Controller (Sold Separately)

Stored-Program Type Controllers

EMP400 Series

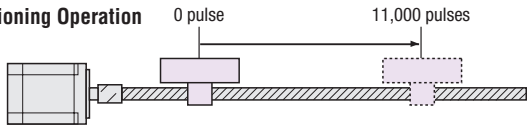
In addition to enhanced oscillation functions that only a motor manufacturer can provide, this series includes I/O control functions and sequence functions that make programming sequential operations possible.

- Allowing the Input of 32 Sequence Programs
- Various Operating Patterns Can be Achieved
- Teaching Function
  Using the accessory **OP300** control module, adjustment of traveling amounts through teaching and monitoring of the current position is possible.
- Dedicated Software is Unnecessary

For Single Axis　For Dual Axis　Control Module (Sold separately)

Sample Program

Positioning Operation



[1] VS1␣500 ; Starting speed 500 Hz
[2] V1␣1000 ; Operating speed 1000 Hz
[3] T1␣30.0 ; Acceleration/deceleration Rate 30.0 ms/kHz
[4] D1␣+11000 ; Traveling amount 11 000 pulses in CW direction
[5] INC1 ; Execution of relative positioning operation

Product Line

Product Name	Number of Axis	Connector
EMP401-1	Single Axis	–
EMP401-2		Included
EMP402-1	Dual Axis	–
EMP402-2		Included

- Control Module **OP300**

Connector – Terminal Block Conversion Unit

The **EMP** Series half-pitch connector can be connected with the terminal block.

- Includes a signal name plate for easy, one-glance identification of signal names
- DIN-rail installable

Product Line

Product Name	Pin No.	Cable Length (m)
CC50T10E	50	1

- For the dimensions, check the Oriental Motor website or contact the Oriental Motor sales office. http://www.orientalmotor.com.sg

Selection Calculation

Selection Procedure

To select a motorized actuator, follow the flowchart below.

1 Determine the Motorized Actuator Type

Select the motorized actuator type that you will use.

2 Check the Motorized Actuator Size and Transport Mass

Select the motorized actuator size that satisfies your desired conditions.

- Product
- Table Height
- Load Mass
- Stroke
- Thrust
- Pushing Force

3 Check the Positioning Time

Check whether your desired positioning time is sufficient using the "Positioning Distance — Positioning Time" graph.
As a reference, the positioning time by the motorized linear slide corresponds to the positioning time calculated from the graph, multiplied by the "positioning time coefficient" corresponding to the applicable stroke.

4 Check the Operating Conditions

Check whether the operating speed and acceleration satisfy the conditions in 3, using the "Positioning Distance — Operating Speed" and "Positioning Distance — Acceleration" graphs.
EAS Series → Page 107 ~ Page 111
EAC Series → Page 112 ~ Page 123

5 Check the Load Moment

Take into account the acceleration conditions taken from 4, and check that the dynamic permissible moment applied to the motorized linear slide and the motorized cylinder (with shaft guide only) is not exceeded.
Calculating Load Moment of Motorized Linear Slides → Page 101
Calculating Load Moment of Motorized Cylinders → Page 103

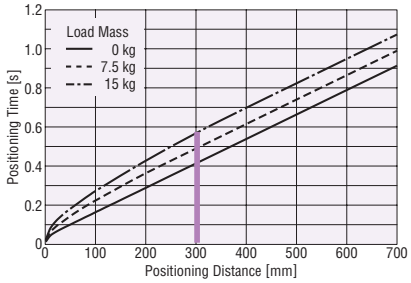
Selection Complete

Motorized Linear Slides
EAS Series

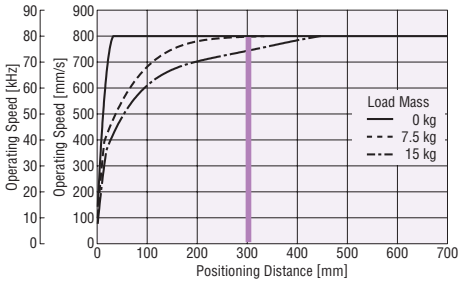
Motorized Cylinders
EAC Series

Example): Check of the operating speed and acceleration in order to execute the positioning time and this operation at a positioning distance of 300 mm.

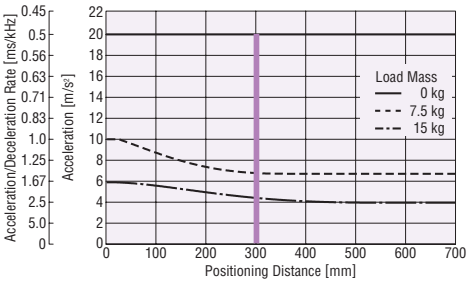
- **Positioning Distance – Positioning Time (Horizontal)**



- **Positioning Distance – Operating Speed (Horizontal)**



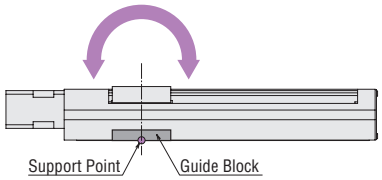
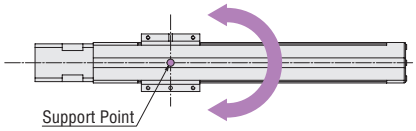
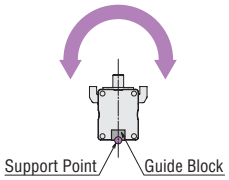
- **Positioning Distance – Acceleration (Horizontal)**



Calculating Load Moment of Motorized Linear Slides

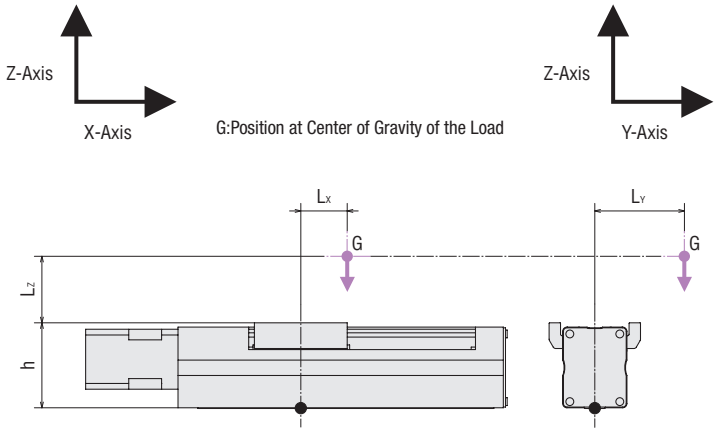
Load Moment

When a load is transported with the motorized linear slides, the load moment acts on the linear guide if the gravity center of the load is offset from the center (support point) of the table. The direction of action applies to three directions, (pitching (M_P), yawing (M_Y), and rolling (M_R)) depending on the position of the offset.

Pitching Direction (M_P)	Yawing Direction (M_Y)	Rolling Direction (M_R)
		
(Linear slide bottom face, center of table)	(Center of table)	(Linear slide bottom face, center of table)

Even though the selected motorized linear slide satisfies the transport mass and positioning time, when the position of the gravity center of the load is overhung from the center (support point) of the table, the run life may decrease as a result of the load moment. It is necessary to check if load moment calculations are not done, and if conditions are within the specified values. Check the moment applied under static conditions with the static permissible moment, and the moment applied under movement with the dynamic permissible moment.

Calculate the load moment of the motorized linear slide based on loads. Check that the static permissible moment and dynamic permissible moment are within limits and check that strength is sufficient.



m : Load mass (kg)
g : Gravitational acceleration 9.807 (m/s^2)
a : Acceleration (m/s^2)
h : Motorized linear slide table height (m)

L_X: Overhung distance in the direction of the X-axis (m)
L_Y: Overhung distance in the direction of the Y-axis (m)
L_Z: Overhung distance in the direction of the Z-axis (m)

ΔM_P: Load moment in the pitching direction (N·m)
ΔM_Y: Load moment in the yawing direction (N·m)
ΔM_R: Load moment in the rolling direction (N·m)
M_P: Permissible moment in the pitching direction (N·m)
M_Y: Permissible moment in the yawing direction (N·m)
M_R: Permissible moment in the rolling direction (N·m)

Load Moment Formula:

$$\frac{|\Delta M_P|}{M_P}+\frac{|\Delta M_Y|}{M_Y}+\frac{|\Delta M_R|}{M_R}\leqq 1$$

When there are several overhung loads, etc., this equation determines the moment from all loads.

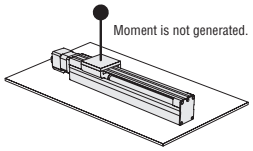
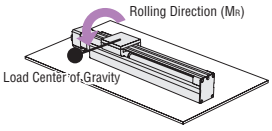
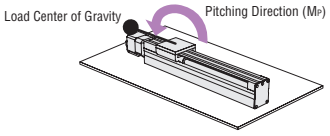
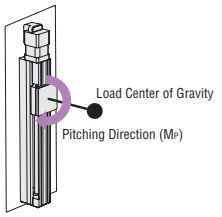
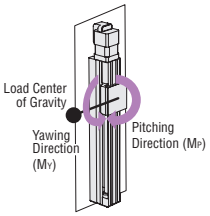
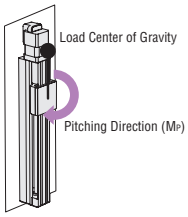
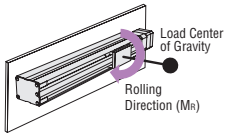
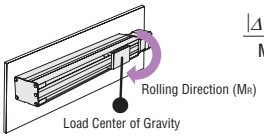
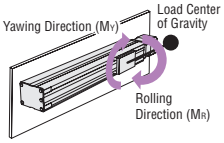
For Multiple Loads (n)

$$\frac{|\Delta M_{P1}+\Delta M_{P2}+\cdots\Delta M_{Pn}|}{M_P}+\frac{|\Delta M_{Y1}+\Delta M_{Y2}+\cdots\Delta M_{Yn}|}{M_Y}+\frac{|\Delta M_{R1}+\Delta M_{R2}+\cdots\Delta M_{Rn}|}{M_R}\leqq 1$$

●Concept of Load Moment Application

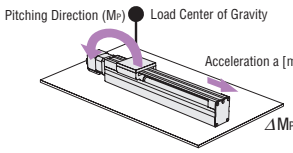
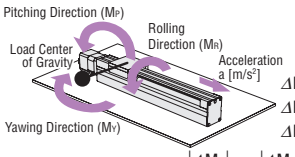
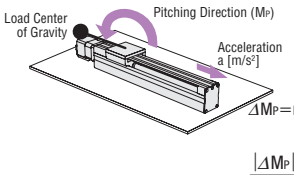
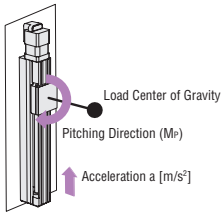
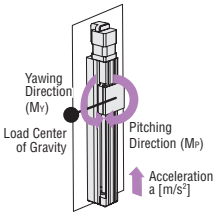
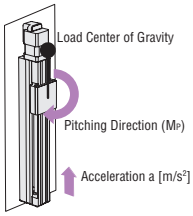
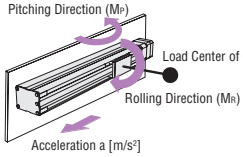
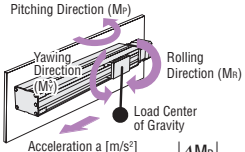
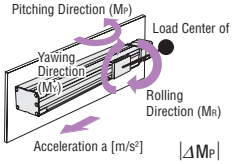
◇Concept of Static Moment Application

The following illustrations are typical examples of the combinations of the installation state of the motorized linear slides and the load overhung state. From these illustration, select one that is suitable for your case. With the motorized linear slides stopped, calculate the load moments (ΔM_P, ΔM_Y, ΔM_R) and use the load moment formula to check that the load is within the range of the static permissible moments (M_P, M_Y, M_R).

Horizontal		 $\Delta M_R = m \cdot g \cdot L_Y$ $\frac{\lvert\Delta M_R\rvert}{M_R} \leqq 1$	 $\Delta M_P = m \cdot g \cdot L_X$ $\frac{\lvert\Delta M_P\rvert}{M_P} \leqq 1$
Vertical	 $\Delta M_P = m \cdot g \cdot (L_Z + h)$ $\frac{\lvert\Delta M_P\rvert}{M_P} \leqq 1$	 $\Delta M_P = m \cdot g \cdot (L_Z + h)$ $\Delta M_Y = m \cdot g \cdot L_Y$ $\frac{\lvert\Delta M_P\rvert}{M_P} + \frac{\lvert\Delta M_Y\rvert}{M_Y} \leqq 1$	 $\Delta M_P = m \cdot g \cdot (L_Z + h)$ $\frac{\lvert\Delta M_P\rvert}{M_P} \leqq 1$
Wall Installing	 $\Delta M_R = m \cdot g \cdot (L_Z + h)$ $\frac{\lvert\Delta M_R\rvert}{M_R} \leqq 1$	 $\Delta M_R = m \cdot g \cdot (L_Z + h)$ $\frac{\lvert\Delta M_R\rvert}{M_R} \leqq 1$	 $\Delta M_Y = m \cdot g \cdot L_X$ $\Delta M_R = m \cdot g \cdot (L_Z + h)$ $\frac{\lvert\Delta M_Y\rvert}{M_Y} + \frac{\lvert\Delta M_R\rvert}{M_R} \leqq 1$

◇Concept of Dynamic Moment Application

The following illustrations show the installation state of the motorized linear slides and the load overhung state. From these illustration, select one that is suitable for your case. Calculate the load moments (ΔM_P, ΔM_Y, ΔM_R) during the motorized linear slides in operation (with the acceleration considered), and use the load moment formula to check that the load is within the range of the static permissible moments (M_P, M_Y, M_R).

Horizontal	 $\Delta M_P = m \cdot a \cdot (L_Z + h)$ $\frac{\lvert\Delta M_P\rvert}{M_P} \leqq 1$	 $\Delta M_P = m \cdot a \cdot (L_Z + h)$ $\Delta M_Y = m \cdot a \cdot L_Y$ $\Delta M_R = m \cdot g \cdot L_Y$ $\frac{\lvert\Delta M_P\rvert}{M_P} + \frac{\lvert\Delta M_Y\rvert}{M_Y} + \frac{\lvert\Delta M_R\rvert}{M_R} \leqq 1$	 $\Delta M_P = m \cdot g \cdot L_X + m \cdot a \cdot (L_Z + h)$ $\frac{\lvert\Delta M_P\rvert}{M_P} \leqq 1$
Vertical	 $\Delta M_P = m \cdot g \cdot (L_Z + h) + m \cdot a \cdot (L_Z + h)$ $\frac{\lvert\Delta M_P\rvert}{M_P} \leqq 1$	 $\Delta M_P = m \cdot g \cdot (L_Z + h) + m \cdot a \cdot (L_Z + h)$ $\Delta M_Y = m \cdot g \cdot L_Y + m \cdot a \cdot L_Y$ $\frac{\lvert\Delta M_P\rvert}{M_P} + \frac{\lvert\Delta M_Y\rvert}{M_Y} \leqq 1$	 $\Delta M_P = m \cdot g \cdot (L_Z + h) + m \cdot a \cdot (L_Z + h)$ $\frac{\lvert\Delta M_P\rvert}{M_P} \leqq 1$
Wall Installing	 $\Delta M_P = m \cdot a \cdot (L_Z + h)$ $\Delta M_R = m \cdot g \cdot (L_Z + h)$ $\frac{\lvert\Delta M_P\rvert}{M_P} + \frac{\lvert\Delta M_R\rvert}{M_R} \leqq 1$	 $\Delta M_P = m \cdot a \cdot (L_Z + h)$ $\Delta M_Y = m \cdot a \cdot L_Y$ $\Delta M_R = m \cdot g \cdot (L_Z + h)$ $\frac{\lvert\Delta M_P\rvert}{M_P} + \frac{\lvert\Delta M_Y\rvert}{M_Y} + \frac{\lvert\Delta M_R\rvert}{M_R} \leqq 1$	 $\Delta M_P = m \cdot a \cdot (L_Z + h)$ $\Delta M_Y = m \cdot g \cdot L_X$ $\Delta M_R = m \cdot g \cdot (L_Z + h)$ $\frac{\lvert\Delta M_P\rvert}{M_P} + \frac{\lvert\Delta M_Y\rvert}{M_Y} + \frac{\lvert\Delta M_R\rvert}{M_R} \leqq 1$

The expected life distance of the linear guide of the motorized linear slide is designed with the expected life of respective series' reference value. However, if the result of the load moment formula exceeds 1, the equipment in this condition of use will have less expected life distance. How much of the expected life distance can be checked in the calculation formula below.

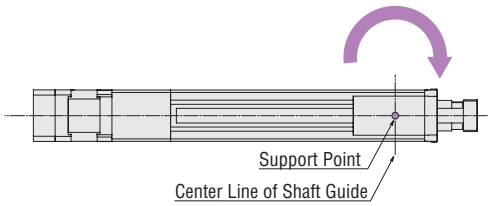
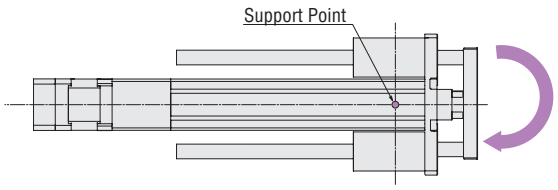
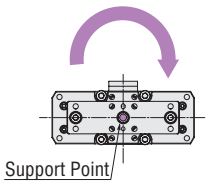
$$\text{Expected life distance (km)} = 5000\ \text{km} \times \left(\frac{1}{\frac{\lvert\Delta M_P\rvert}{M_P} + \frac{\lvert\Delta M_Y\rvert}{M_Y} + \frac{\lvert\Delta M_R\rvert}{M_R}} \right)^3$$

●For the expected life distance of the motorized linear slides including ball screws and bearings, see " ■ Product Service Life" in page 129.

Calculation of Load Moment of Motorized Cylinders (With shaft guide only)

Load Moment

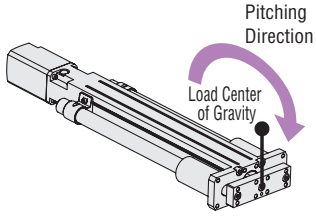
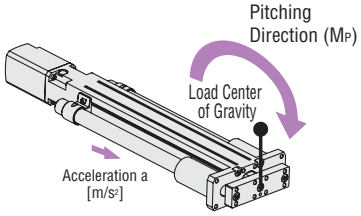
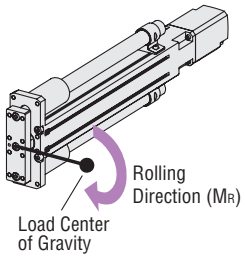
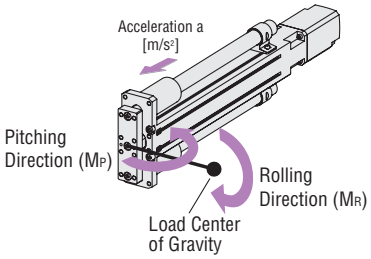
When a load is transported with the motorized cylinders (with shaft guide only), the load moment acts on the shaft guide if the load center of gravity is offset from the center of the shaft (support point). The direction of action applies to three directions, (pitching (M_P), yawing (M_Y), and rolling (M_R)) depending on the position of the offset.

Pitching Direction (M_P)	Yawing Direction (M_Y)	Rolling Direction (M_R)
		

Even though the selected motorized cylinders satisfy the transport mass and positioning time, when the position of the gravity center of the load is overhung from the center (support point) of the shaft guide, the run life may decrease as a result of the load moment. It is necessary to check if load moment calculations are not done, and if conditions are within the specified values. Check the moment applied under static conditions with the static permissible moment, and the moment applied under movement with the dynamic permissible moment.

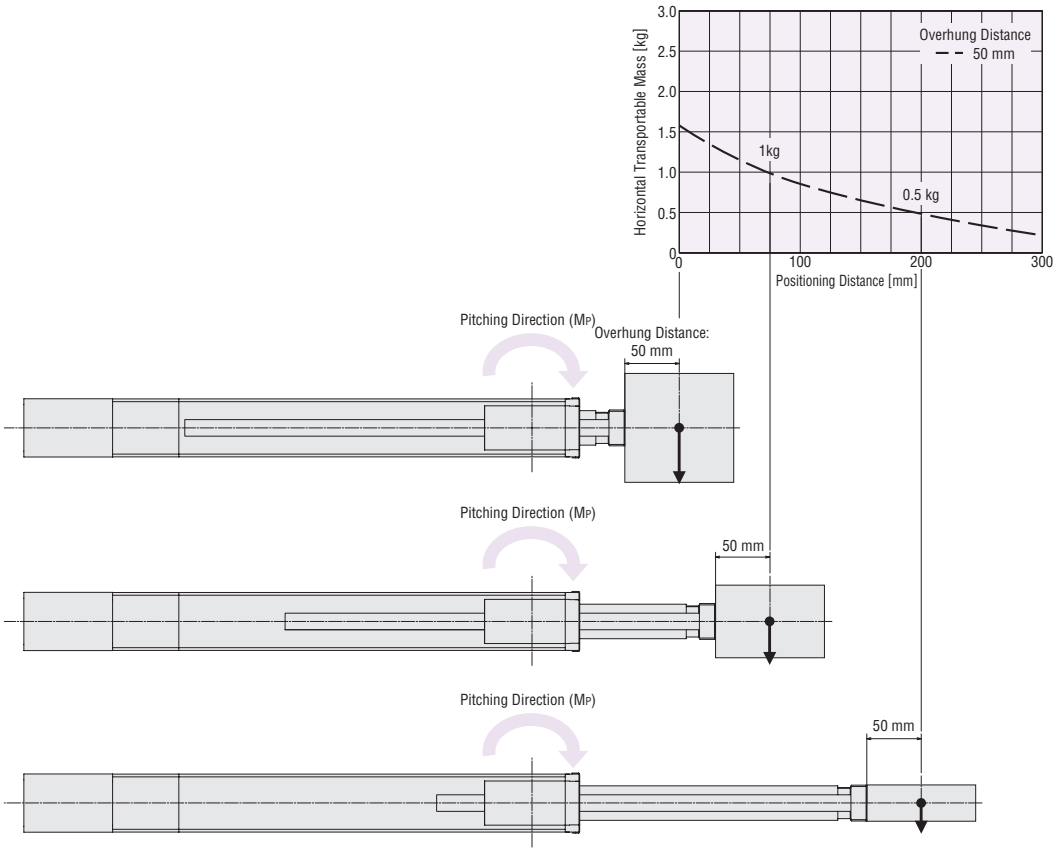
Concept of Load Moment Application (For horizontal or wall-hanging installation)

If the load moment is applied to the motorized cylinders (with shaft guide only) that is stopped or in operation, check the characteristics diagram (■ Horizontal Transportable Mass) in the page showing the motorized cylinders specifications.
This characteristics diagram is common to the static moment and dynamic moment.

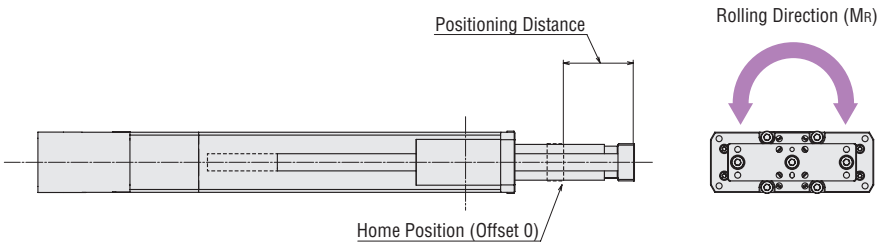
	Stopping	In operation
Horizontal		
Wall Installing		

◇Permissible moment in the pitching direction (M_P)

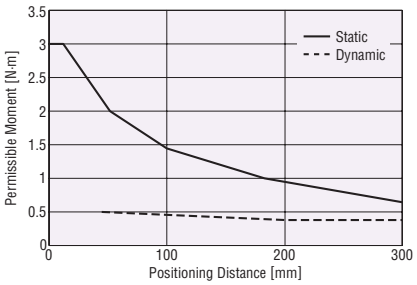
For horizontal installation and wall-hanging installation, characteristic diagrams are provided showing calculation results based on the specification tables of the products with the load moment calculation considered.



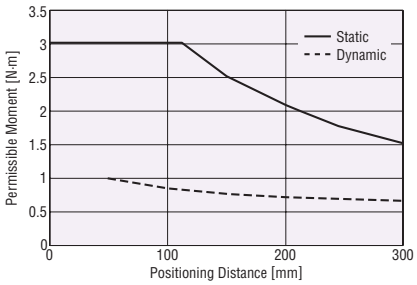
◇Permissible moment in the rolling direction (M_R)



•EAC4W



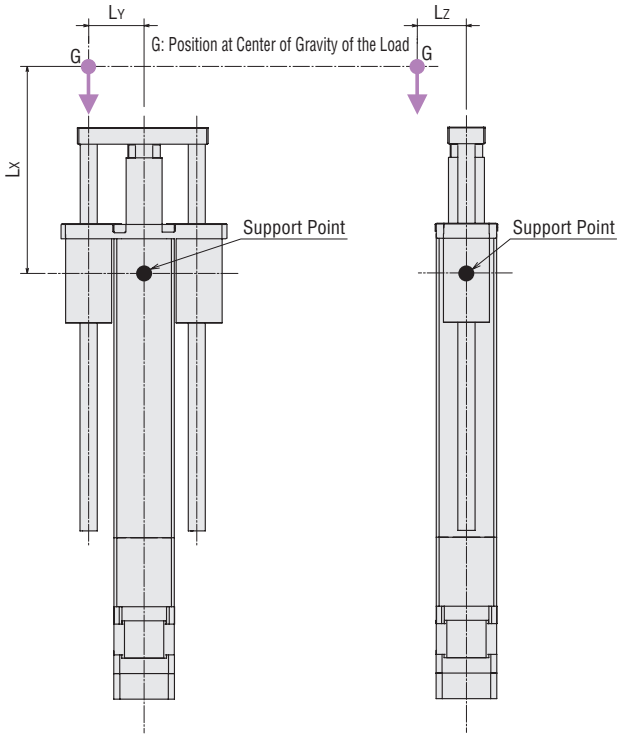
•EAC6W



Concept of Load Moment Application (For vertical installation)

Calculate the load moments of the motorized cylinder (with shaft guide only) based on loads and installation type. Check that strength is sufficient with the static permissible moment and dynamic permissible moment.

- **Motorized Cylinders (With shaft guide only)**



m : Load mass (kg)
g : Gravitational acceleration 9.807 (m/s^2)
a : Acceleration (m/s^2)

L_X: Overhung distance in the direction of the X-axis (m)
L_Y: Overhung distance in the direction of the Y-axis (m)
L_Z: Overhung distance in the direction of the Z-axis (m)

ΔM_P: Load moment in the pitching direction (N·m)
ΔM_Y: Load moment in the yawing direction (N·m)
ΔM_R: Load moment in the rolling direction (N·m)

M_P: Permissible moment in the pitching direction (N·m)
M_Y: Permissible moment in the yawing direction (N·m)
M_R: Permissible moment in the rolling direction (N·m)

Load Moment Formula:

$$\frac{|\Delta M_P|}{M_P}+\frac{|\Delta M_Y|}{M_Y}+\frac{|\Delta M_R|}{M_R}\leqq 1$$

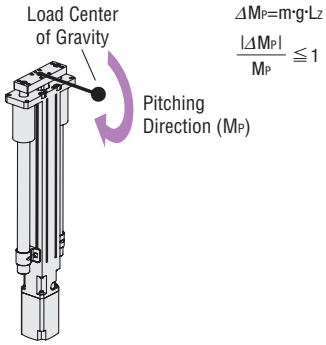
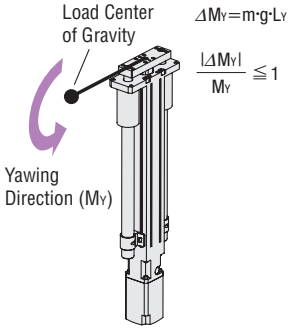
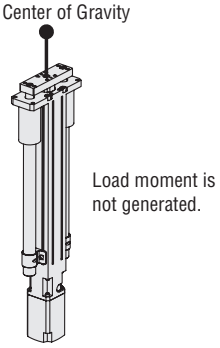
When there are several overhung loads, etc., this equation determines the moment from all loads.

For Multiple Loads (n)

$$\frac{|\Delta M_{P1}+\Delta M_{P2}+\cdots\Delta M_{Pn}|}{M_P}+\frac{|\Delta M_{Y1}+\Delta M_{Y2}+\cdots\Delta M_{Yn}|}{M_Y}+\frac{|\Delta M_{R1}+\Delta M_{R2}+\cdots\Delta M_{Rn}|}{M_R}\leqq 1$$

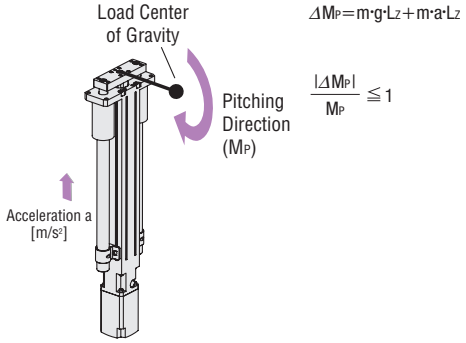
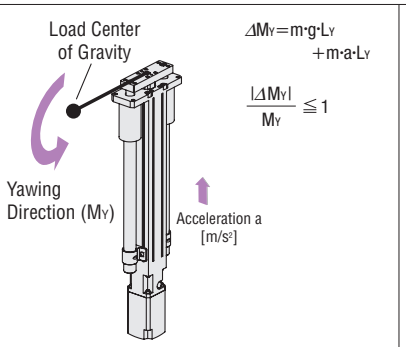
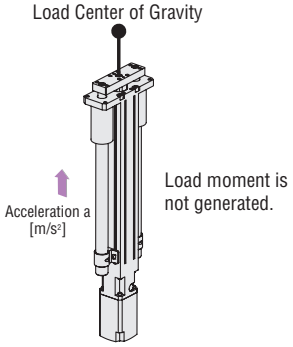
Concept of Static Moment Application

The following illustrations show load moments (ΔM_P, ΔM_Y, ΔM_R) applied when the motorized cylinders (with shaft guide only) that is installed vertically is stopped. Use the load moment formula to check that the load moment is within the range of the static permissible moment (M_P, M_Y, M_R).

Vertical	 $\Delta M_P = m \cdot g \cdot L_Z$ $\frac{\lvert \Delta M_P \rvert}{M_P} \leqq 1$	 $\Delta M_Y = m \cdot g \cdot L_Y$ $\frac{\lvert \Delta M_Y \rvert}{M_Y} \leqq 1$	

Concept of Dynamic Moment Application

The following illustrations show load moments (ΔM_P, ΔM_Y, ΔM_R) applied when the motorized cylinders (with shaft guide only) that is installed vertically is stopped. Use the load moment formula to check that the load moment is within the range of the static permissible moment (M_P, M_Y, M_R).

Vertical	 $\Delta M_P = m \cdot g \cdot L_Z + m \cdot a \cdot L_Z$ $\frac{\lvert \Delta M_P \rvert}{M_P} \leqq 1$	 $\Delta M_Y = m \cdot g \cdot L_Y + m \cdot a \cdot L_Y$ $\frac{\lvert \Delta M_Y \rvert}{M_Y} \leqq 1$	

The expected life distance of the shaft guide of the motorized cylinder is designed with the expected life of respective series' reference value. However, if the result of the load moment formula exceeds 1, the equipment in this condition of use will have less expected life distance. How much of the expected life distance can be checked in the calculation formula below.

$$\text{Expected life distance (km)} = 5000\ \text{km} \times \left(\frac{1}{\frac{\lvert \Delta M_P \rvert}{M_P} + \frac{\lvert \Delta M_Y \rvert}{M_Y} + \frac{\lvert \Delta M_R \rvert}{M_R}} \right)^3$$

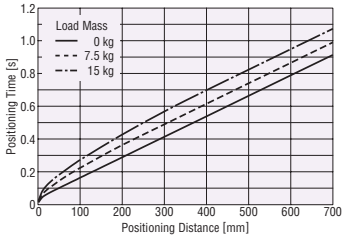
For the expected life distance of the motorized cylinders including ball screws and bearings, see " Product Service Life" in page 129.

Operating Data Under Typical Conditions/EAS Series

EAS4: Standard Type/Side-Mounted Type AC Power Supply Input Lead: 12 mm

◇Horizontal Direction Installation

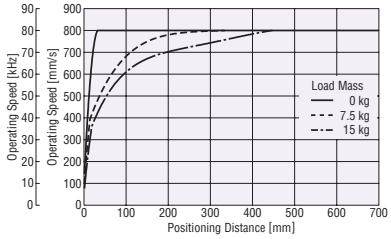
•Positioning Distance – Positioning Time



Positioning Time Coefficient

Stroke [mm]	Load Mass					
	Horizontal Direction Installation			Vertical Direction Installation		
	0 kg	7.5 kg	15 kg	0 kg	3.5 kg	7 kg
50～500	1.0	1.0	1.0	1.0	1.0	1.0
550	1.2	1.1	1.1	1.2	1.0	1.0
600	1.4	1.3	1.2	1.4	1.2	1.0
650	1.7	1.5	1.4	1.7	1.4	1.2
700	1.9	1.8	1.6	1.9	1.6	1.3

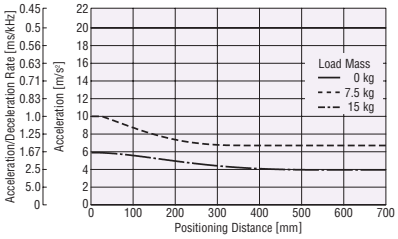
•Positioning Distance – Operating Speed



◇Max. Speed by Stroke

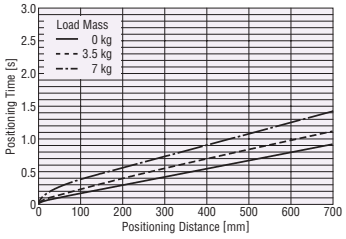
Stroke [mm]	Maximum Speed [mm/s]
50～500	800
550	650
600	550
650	460
700	400

•Positioning Distance – Acceleration

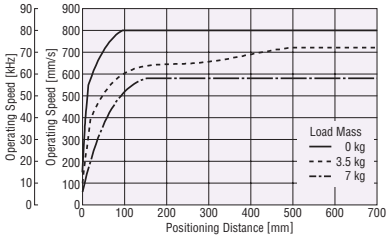


◇Vertical Direction Installation

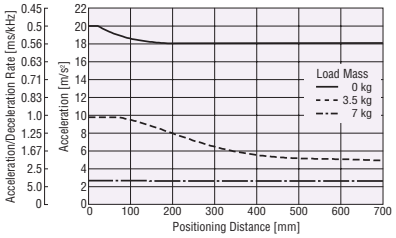
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed



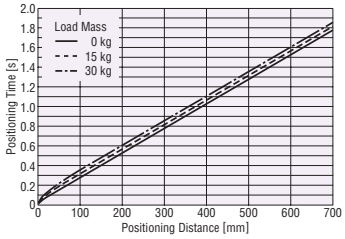
•Positioning Distance – Acceleration



EAS4: Standard Type AC Power Supply Input Lead: 6 mm

◇Horizontal Direction Installation

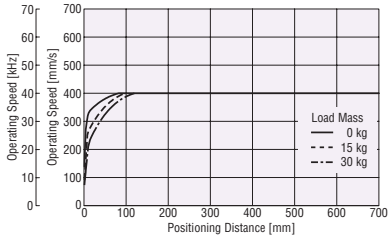
•Positioning Distance – Positioning Time



Positioning Time Coefficient

Stroke [mm]	Load Mass					
	Horizontal Direction Installation			Vertical Direction Installation		
	0 kg	15 kg	30 kg	0 kg	7 kg	14 kg
50～500	1.0	1.0	1.0	1.0	1.0	1.0
550	1.2	1.2	1.2	1.2	1.2	1.0
600	1.5	1.4	1.4	1.5	1.4	1.1
650	1.8	1.7	1.7	1.8	1.7	1.3
700	2.0	1.9	1.9	2.0	1.9	1.5

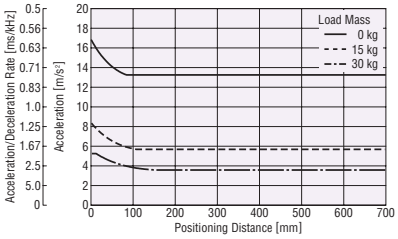
•Positioning Distance – Operating Speed



◇Max. Speed by Stroke

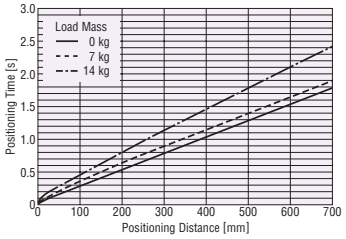
Stroke [mm]	Maximum Speed [mm/s]
50～500	400
550	320
600	270
650	220
700	200

•Positioning Distance – Acceleration

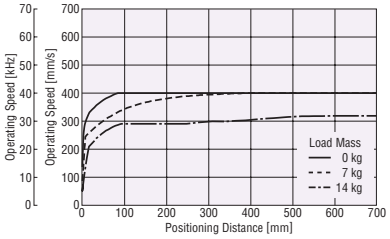


◇Vertical Direction Installation

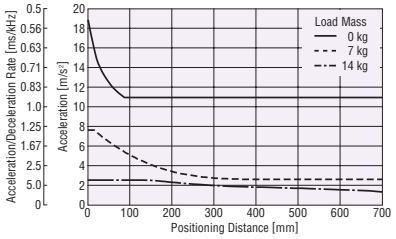
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed



•Positioning Distance – Acceleration

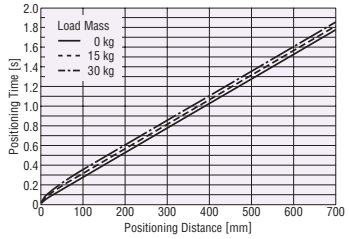


● In the graphs above, the values for the operating speeds [kHz] and acceleration/deceleration rates [ms/kHz] are taken when the minimum traveling amount of the motorized linear slide is set to 0.01 mm.

●EAS4: Side-Mounted Type AC Power Supply Input Lead: 6 mm

◇Horizontal Direction Installation

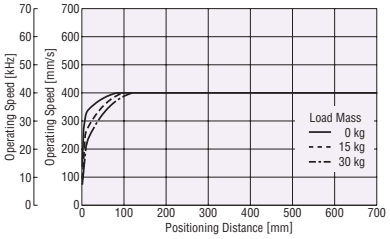
•Positioning Distance – Positioning Time



Positioning Time Coefficient

Stroke [mm]	Load Mass					
	Horizontal Direction Installation			Vertical Direction Installation		
	0 kg	15 kg	30 kg	0 kg	6.3 kg	12.5 kg
50～500	1.0	1.0	1.0	1.0	1.0	1.0
550	1.2	1.2	1.2	1.2	1.2	1.0
600	1.5	1.4	1.4	1.5	1.4	1.2
650	1.8	1.7	1.7	1.8	1.7	1.4
700	2.0	1.9	1.9	2.0	1.9	1.6

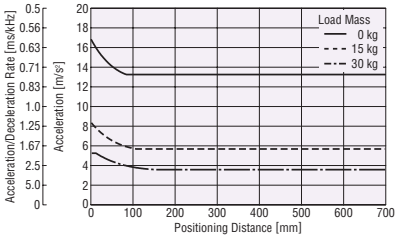
•Positioning Distance – Operating Speed



◇Max. Speed by Stroke

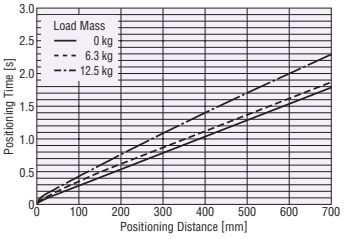
Stroke [mm]	Maximum Speed [mm/s]
50～500	400
550	320
600	270
650	220
700	200

•Positioning Distance – Acceleration

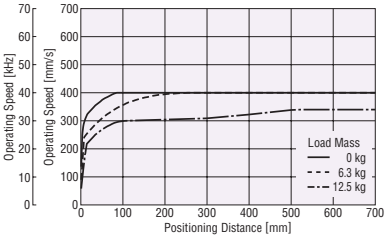


◇Vertical Direction Installation

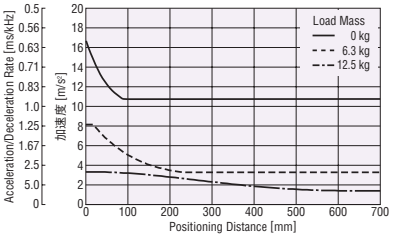
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed



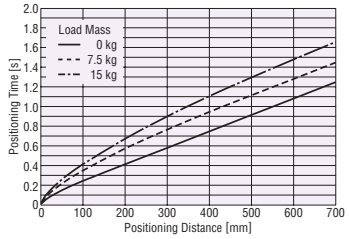
•Positioning Distance – Acceleration



●EAS4: Standard Type/Side-Mounted Type 24 VDC Input Lead: 12 mm

◇Horizontal Direction Installation

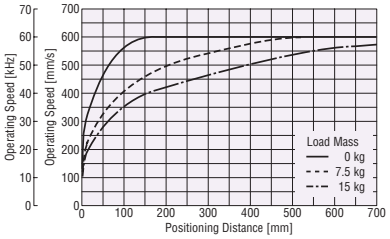
•Positioning Distance – Positioning Time



Positioning Time Coefficient

Stroke [mm]	Load Mass					
	Horizontal Direction Installation			Vertical Direction Installation		
	0 kg	7.5 kg	15 kg	0 kg	3.5 kg	7 kg
50～550	1.0	1.0	1.0	1.0	1.0	1.0
600	1.1	1.0	1.0	1.1	1.0	1.0
650	1.2	1.1	1.1	1.2	1.0	1.0
700	1.4	1.3	1.2	1.4	1.0	1.0

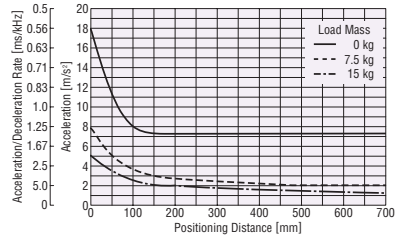
•Positioning Distance – Operating Speed



◇Max. Speed by Stroke

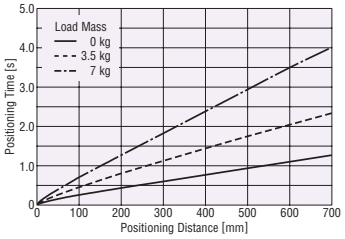
Stroke [mm]	Maximum Speed [mm/s]
50～550	600
600	550
650	460
700	400

•Positioning Distance – Acceleration

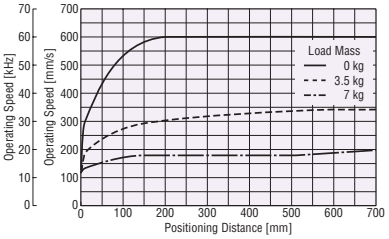


◇Vertical Direction Installation

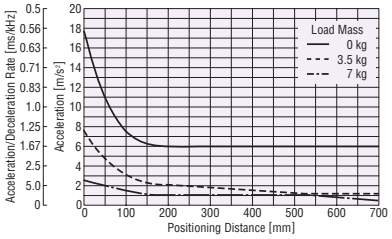
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed



•Positioning Distance – Acceleration

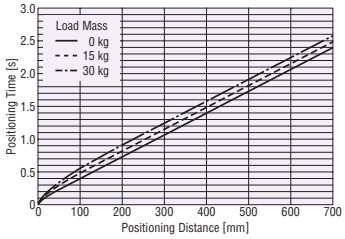


●In the graphs above, the values for the operating speeds [kHz] and acceleration/deceleration rates [ms/kHz] are taken when the minimum traveling amount of the motorized linear slide is set to 0.01 mm.

●EAS4: Standard Type 24 VDC Input Lead: 6 mm

◇Horizontal Direction Installation

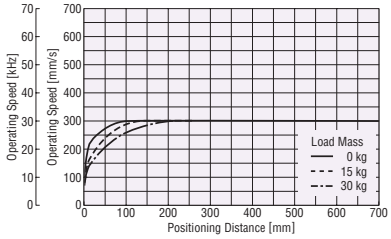
•Positioning Distance – Positioning Time



Positioning Time Coefficient

Stroke [mm]	Load Mass					
	Horizontal Direction Installation			Vertical Direction Installation		
	0 kg	15 kg	30 kg	0 kg	7 kg	14 kg
50～550	1.0	1.0	1.0	1.0	1.0	1.0
600	1.1	1.1	1.1	1.1	1.0	1.0
650	1.3	1.3	1.3	1.3	1.0	1.0
700	1.5	1.4	1.4	1.5	1.0	1.0

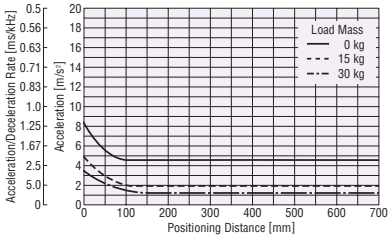
•Positioning Distance – Operating Speed



◇Max. Speed by Stroke

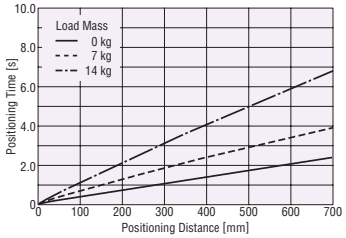
Stroke [mm]	Maximum Speed [mm/s]
50～550	300
600	270
650	220
700	200

•Positioning Distance – Acceleration

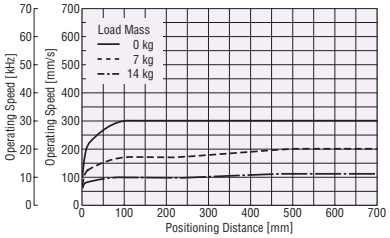


◇Vertical Direction Installation

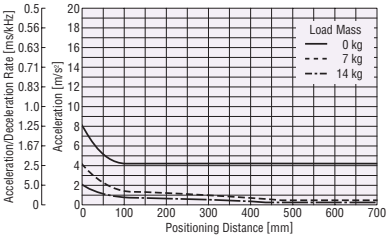
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed



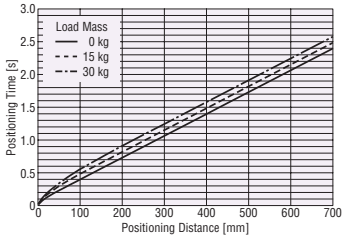
•Positioning Distance – Acceleration



●EAS4: Side-Mounted Type 24 VDC Input Lead: 6 mm

◇Horizontal Direction Installation

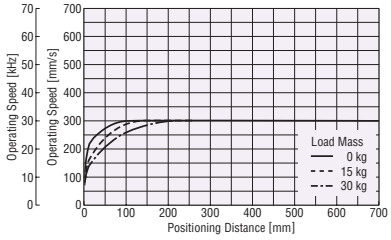
•Positioning Distance – Positioning Time



Positioning Time Coefficient

Stroke [mm]	Load Mass					
	Horizontal Direction Installation			Vertical Direction Installation		
	0 kg	15 kg	30 kg	0 kg	6.3 kg	12.5 kg
50～550	1.0	1.0	1.0	1.0	1.0	1.0
600	1.1	1.1	1.1	1.1	1.0	1.0
650	1.3	1.3	1.3	1.3	1.0	1.0
700	1.5	1.4	1.4	1.5	1.0	1.0

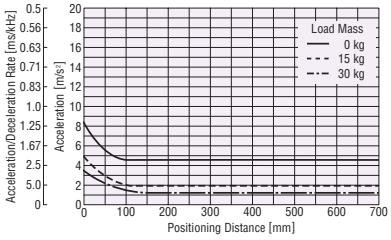
•Positioning Distance – Operating Speed



◇Max. Speed by Stroke

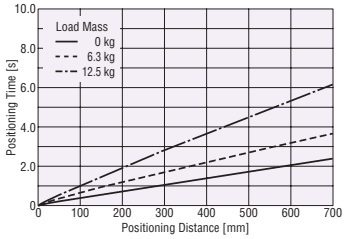
Stroke [mm]	Maximum Speed [mm/s]
50～550	300
600	270
650	220
700	200

•Positioning Distance – Acceleration

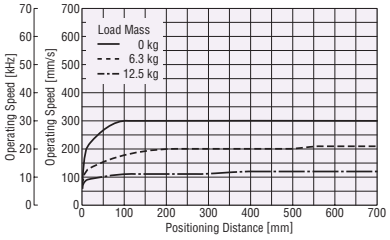


◇Vertical Direction Installation

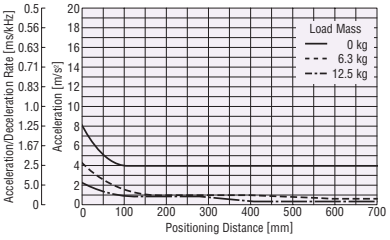
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed



•Positioning Distance – Acceleration

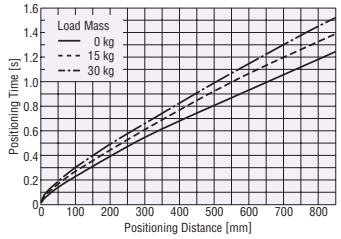


●In the graphs above, the values for the operating speeds [kHz] and acceleration/deceleration rates [ms/kHz] are taken when the minimum traveling amount of the motorized linear slide is set to 0.01 mm.

●EAS6: Standard Type/Side-Mounted Type AC Power Supply Input Lead: 12 mm

◇Horizontal Direction Installation

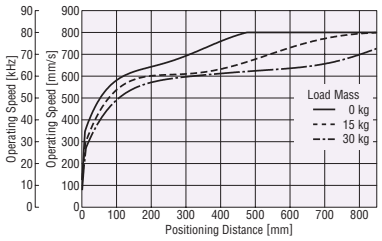
•Positioning Distance – Positioning Time



Positioning Time Coefficient

Stroke [mm]	Load Mass					
	Horizontal Direction Installation			Vertical Direction Installation		
	0 kg	15 kg	30 kg	0 kg	7.5 kg	15 kg
50～600	1.0	1.0	1.0	1.0	1.0	1.0
650	1.1	1.0	1.0	1.1	1.0	1.0
700	1.3	1.1	1.0	1.2	1.1	1.0
750	1.5	1.3	1.2	1.4	1.2	1.0
800	1.6	1.5	1.4	1.6	1.3	1.1
850	1.9	1.7	1.6	1.9	1.5	1.2

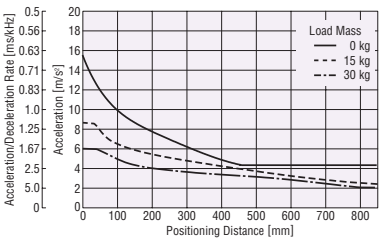
•Positioning Distance – Operating Speed



◇Max. Speed by Stroke

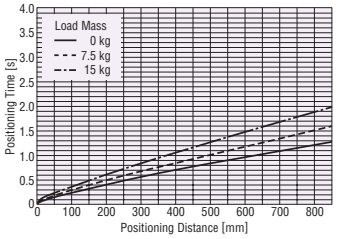
Stroke [mm]	Maximum Speed [mm/s]
50～600	800
650	640
700	550
750	470
800	420
850	360

•Positioning Distance – Acceleration

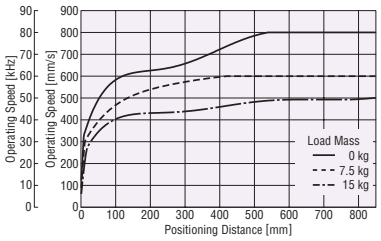


◇Vertical Direction Installation

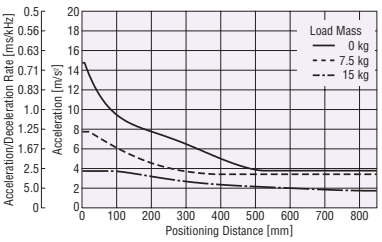
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed



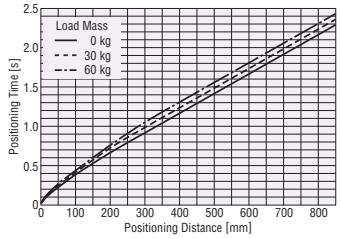
•Positioning Distance – Acceleration



●EAS6: Standard Type/Side-Mounted Type AC Power Supply Input Lead: 6 mm

◇Horizontal Direction Installation

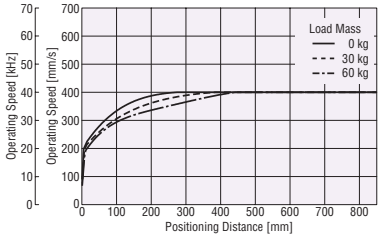
•Positioning Distance – Positioning Time



Positioning Time Coefficient

Stroke [mm]	Load Mass					
	Horizontal Direction Installation			Vertical Direction Installation		
	0 kg	30 kg	60 kg	0 kg	15 kg	30 kg
50～550	1.0	1.0	1.0	1.0	1.0	1.0
600	1.1	1.1	1.1	1.1	1.0	1.0
650	1.2	1.2	1.2	1.2	1.0	1.0
700	1.4	1.4	1.3	1.4	1.2	1.0
750	1.6	1.6	1.5	1.6	1.3	1.1
800	1.9	1.8	1.7	1.8	1.5	1.3
850	2.1	2.0	2.0	2.1	1.7	1.4

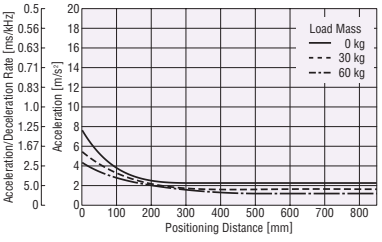
•Positioning Distance – Operating Speed



◇Max. Speed by Stroke

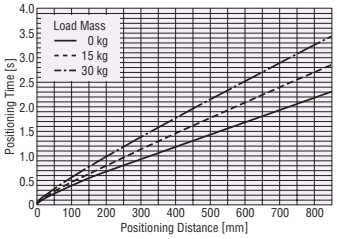
Stroke [mm]	Maximum Speed [mm/s]
50～550	400
600	350
650	300
700	260
750	230
800	200
850	180

•Positioning Distance – Acceleration

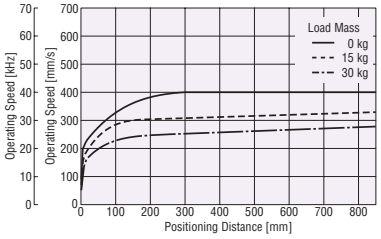


◇Vertical Direction Installation

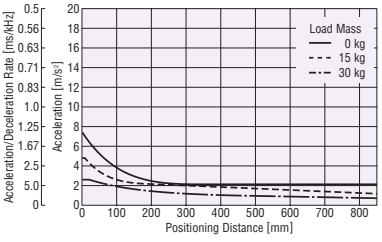
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed



•Positioning Distance – Acceleration

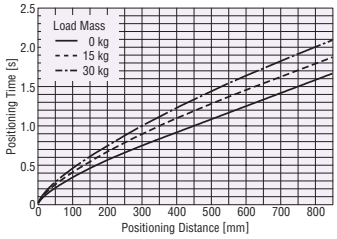


In the graphs above, the values for the operating speeds [kHz] and acceleration/deceleration rates [ms/kHz] are taken when the minimum traveling amount of the motorized linear slide is set to 0.01 mm.

●EAS6: Standard Type/Side-Mounted Type 24 VDC Input Lead: 12 mm

◇Horizontal Direction Installation

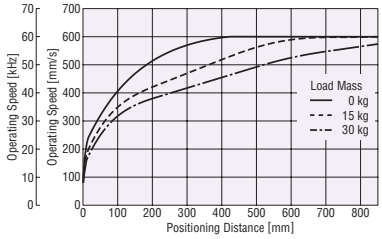
•Positioning Distance – Positioning Time



Positioning Time Coefficient

Stroke [mm]	Load Mass					
	Horizontal Direction Installation			Vertical Direction Installation		
	0 kg	15 kg	30 kg	0 kg	7.5 kg	15 kg
50~650	1.0	1.0	1.0	1.0	1.0	1.0
700	1.0	1.0	1.0	1.0	1.0	1.0
750	1.2	1.1	1.0	1.1	1.0	1.0
800	1.3	1.2	1.1	1.2	1.0	1.0
850	1.5	1.3	1.2	1.4	1.0	1.0

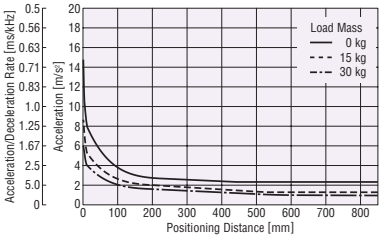
•Positioning Distance – Operating Speed



◇Max. Speed by Stroke

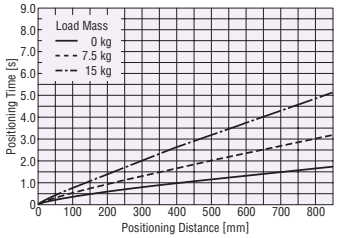
Stroke [mm]	Maximum Speed [mm/s]
50~650	600
700	550
750	470
800	420
850	360

•Positioning Distance – Acceleration

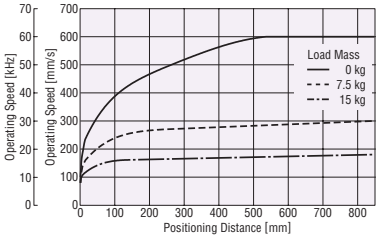


◇Vertical Direction Installation

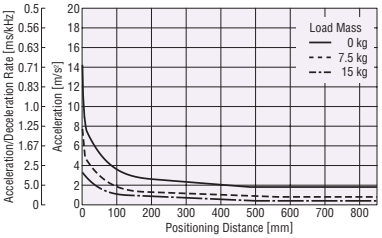
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed



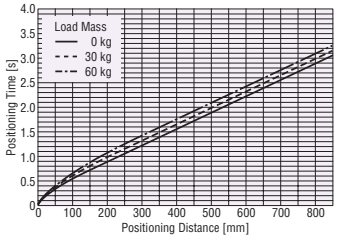
•Positioning Distance – Acceleration



●EAS6: Standard Type/Side-Mounted Type 24 VDC Input Lead: 6 mm

◇Horizontal Direction Installation

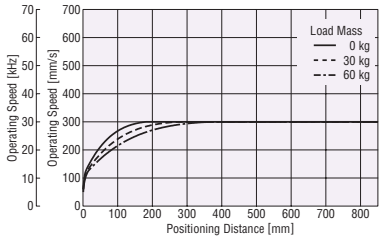
•Positioning Distance – Positioning Time



Positioning Time Coefficient

Stroke [mm]	Load Mass					
	Horizontal Direction Installation			Vertical Direction Installation		
	0 kg	30 kg	60 kg	0 kg	15 kg	30 kg
50~650	1.0	1.0	1.0	1.0	1.0	1.0
700	1.1	1.1	1.1	1.1	1.0	1.0
750	1.2	1.2	1.2	1.2	1.0	1.0
800	1.4	1.4	1.3	1.4	1.0	1.0
850	1.6	1.5	1.5	1.6	1.0	1.0

•Positioning Distance – Operating Speed

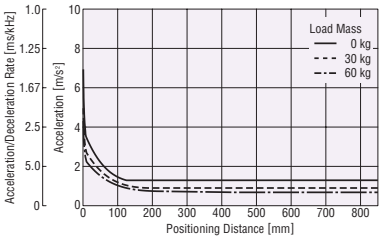


◇Max. Speed by Stroke

Stroke [mm]	Maximum Speed [mm/s]
50~650	300
700	260
750	230
800	200
850	180

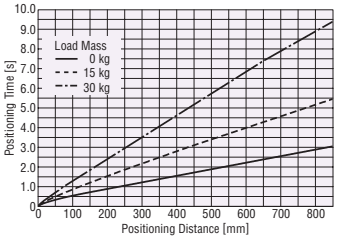
● If used at an operating speed of 150 mm/s or more, acceleration is 2.17 m/s² or less.

•Positioning Distance – Acceleration

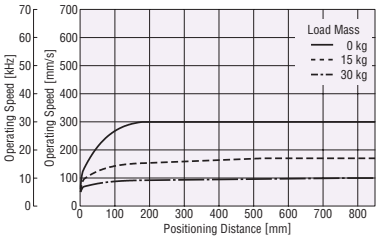


◇Vertical Direction Installation

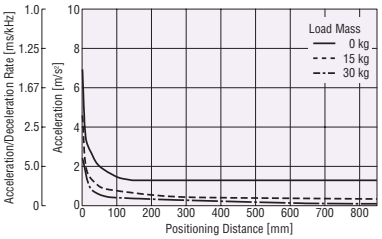
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed



•Positioning Distance – Acceleration



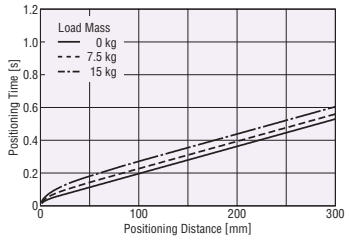
● In the graphs above, the values for the operating speeds [kHz] and acceleration/deceleration rates [ms/kHz] are taken when the minimum traveling amount of the motorized linear slide is set to 0.01 mm.

Operating Data Under Typical Conditions/EAC Series

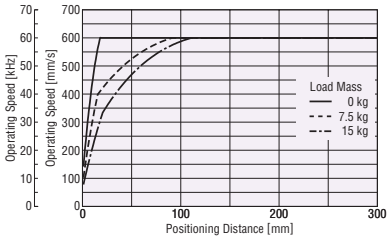
EAC4: Standard Type AC Power Supply Input Lead: 12 mm

◇Horizontal Direction Installation

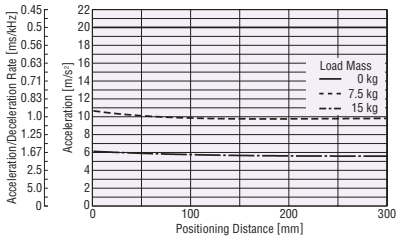
• Positioning Distance – Positioning Time



• Positioning Distance – Operating Speed

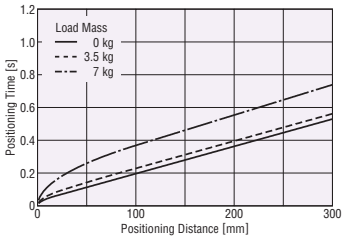


• Positioning Distance – Acceleration

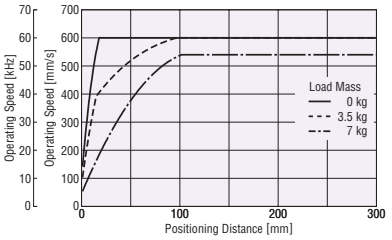


◇Vertical Direction Installation

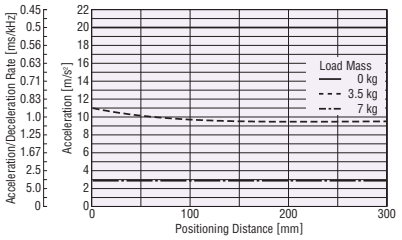
• Positioning Distance – Positioning Time



• Positioning Distance – Operating Speed



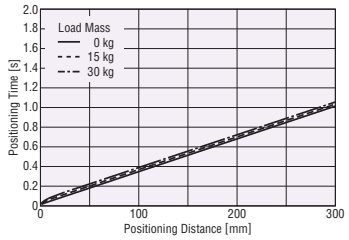
• Positioning Distance – Acceleration



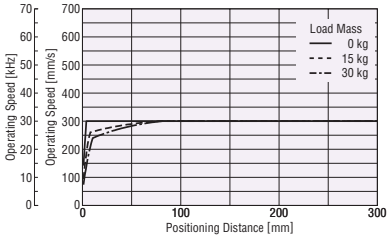
EAC4: Standard Type AC Power Supply Input Lead: 6 mm

◇Horizontal Direction Installation

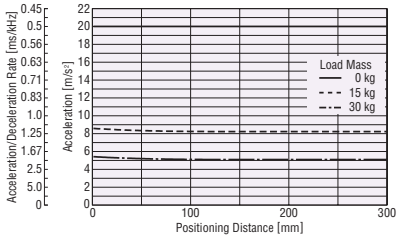
• Positioning Distance – Positioning Time



• Positioning Distance – Operating Speed

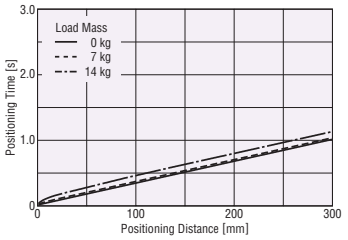


• Positioning Distance – Acceleration

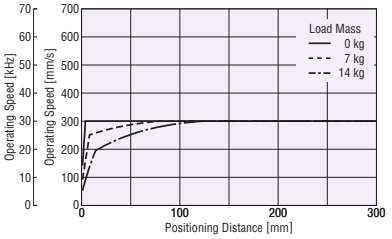


◇Vertical Direction Installation

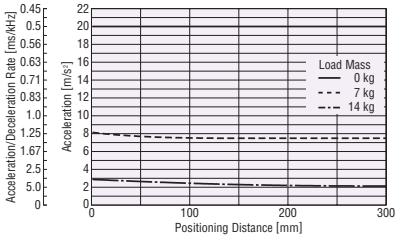
• Positioning Distance – Positioning Time



• Positioning Distance – Operating Speed



• Positioning Distance – Acceleration

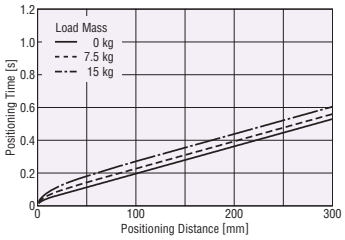


● In the graphs above, the values for the operating speeds [kHz] and acceleration/deceleration rates [ms/kHz] are taken when the minimum traveling amount of the motorized cylinder is set to 0.01 mm.

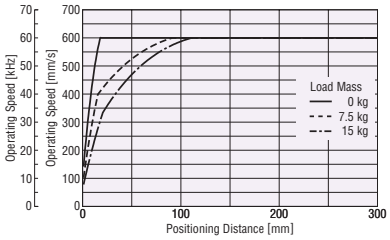
●EAC4: Side-Mounted Type AC Power Supply Input Lead: 12 mm

◇Horizontal Direction Installation

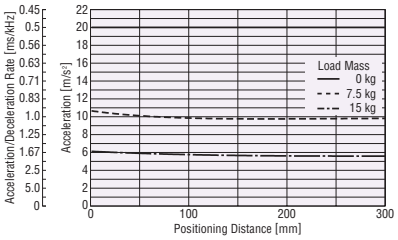
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed

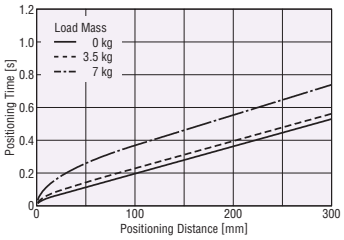


•Positioning Distance – Acceleration

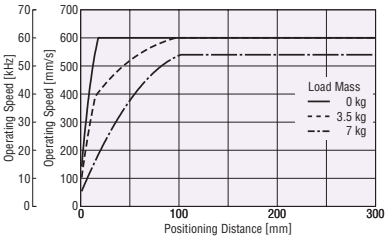


◇Vertical Direction Installation

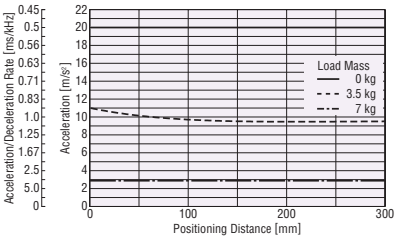
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed



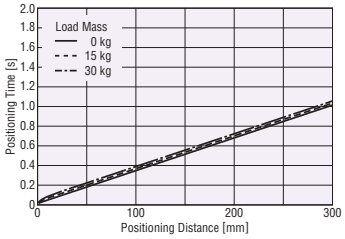
•Positioning Distance – Acceleration



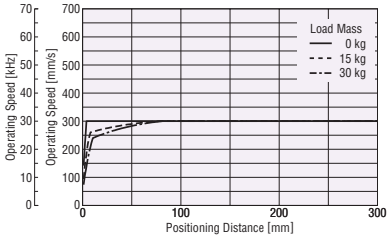
●EAC4: Side-Mounted Type AC Power Supply Input Lead: 6 mm

◇Horizontal Direction Installation

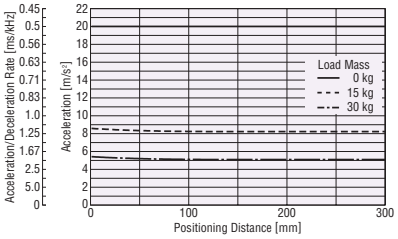
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed

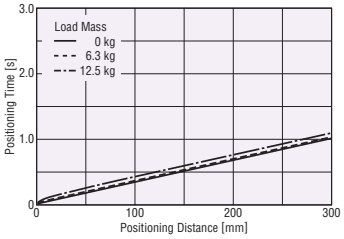


•Positioning Distance – Acceleration

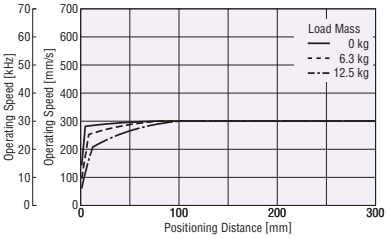


◇Vertical Direction Installation

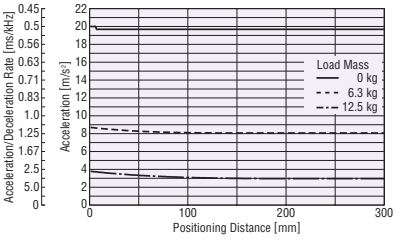
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed



•Positioning Distance – Acceleration

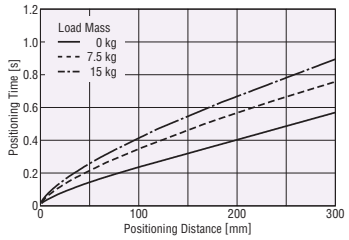


In the graphs above, the values for the operating speeds [kHz] and acceleration/deceleration rates [ms/kHz] are taken when the minimum traveling amount of the motorized cylinder is set to 0.01 mm.

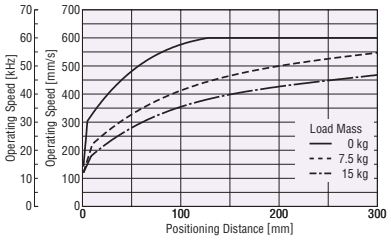
●EAC4: Standard Type 24 VDC Input Lead: 12 mm

◇Horizontal Direction Installation

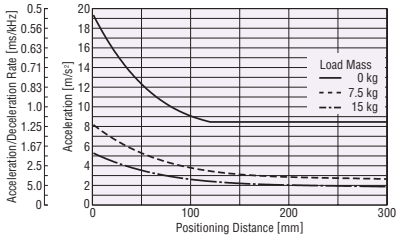
• Positioning Distance – Positioning Time



• Positioning Distance – Operating Speed

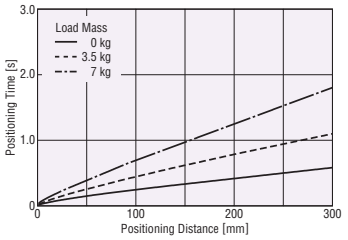


• Positioning Distance – Acceleration

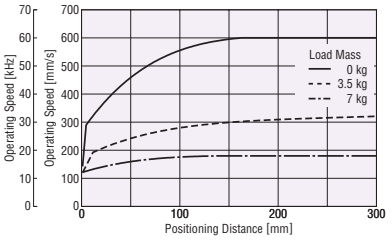


◇Vertical Direction Installation

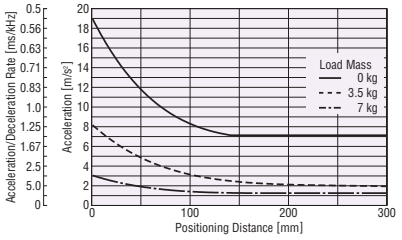
• Positioning Distance – Positioning Time



• Positioning Distance – Operating Speed



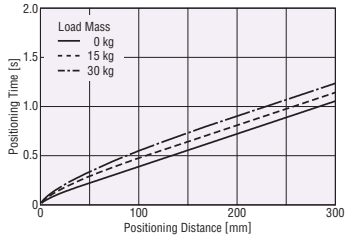
• Positioning Distance – Acceleration



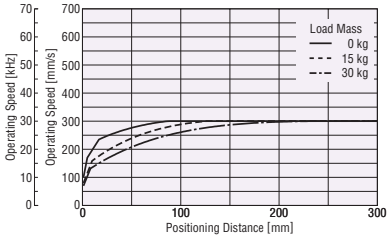
●EAC4: Standard Type 24 VDC Input Lead: 6 mm

◇Horizontal Direction Installation

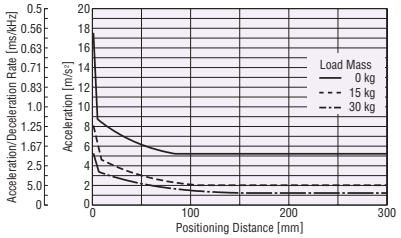
• Positioning Distance – Positioning Time



• Positioning Distance – Operating Speed

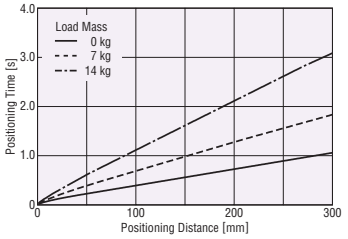


• Positioning Distance – Acceleration

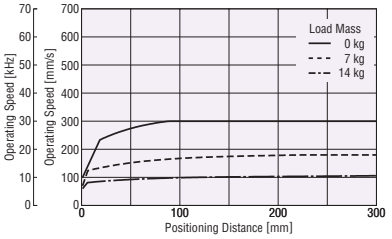


◇Vertical Direction Installation

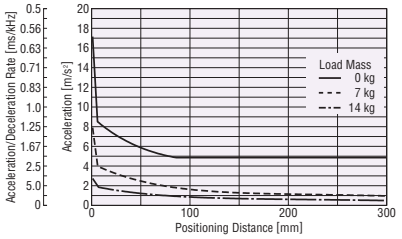
• Positioning Distance – Positioning Time



• Positioning Distance – Operating Speed



• Positioning Distance – Acceleration

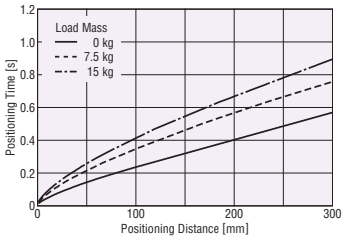


● In the graphs above, the values for the operating speeds [kHz] and acceleration/deceleration rates [ms/kHz] are taken when the minimum traveling amount of the motorized cylinder is set to 0.01 mm.

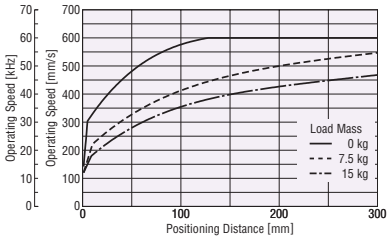
●EAC4: Side-Mounted Type 24 VDC Input Lead: 12 mm

◇Horizontal Direction Installation

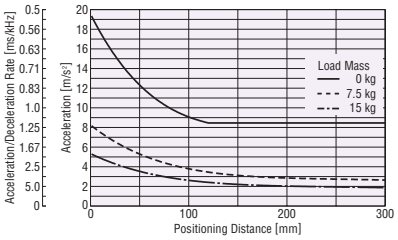
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed

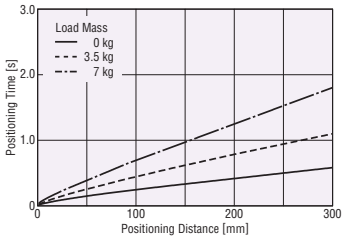


•Positioning Distance – Acceleration

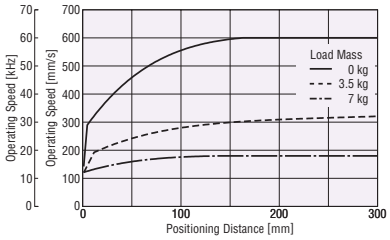


◇Vertical Direction Installation

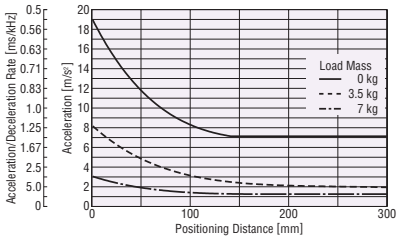
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed



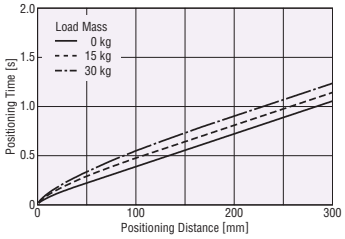
•Positioning Distance – Acceleration



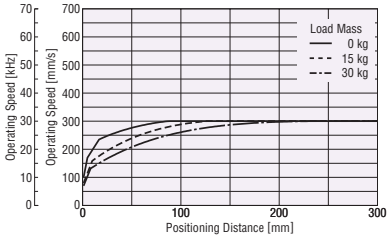
●EAC4: Side-Mounted Type 24 VDC Input Lead: 6 mm

◇Horizontal Direction Installation

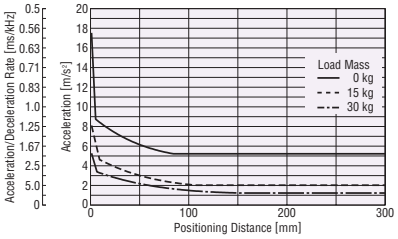
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed

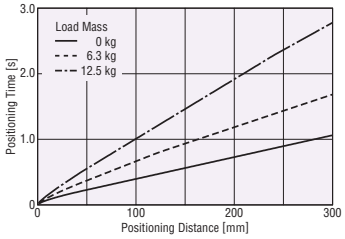


•Positioning Distance – Acceleration

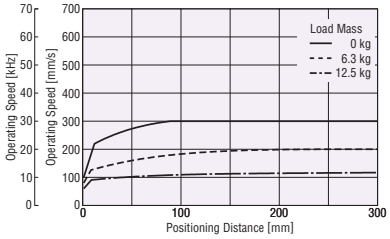


◇Vertical Direction Installation

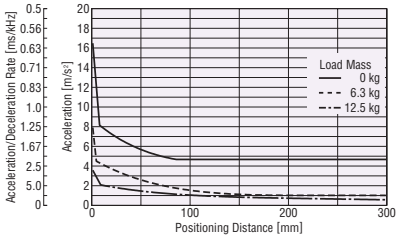
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed



•Positioning Distance – Acceleration

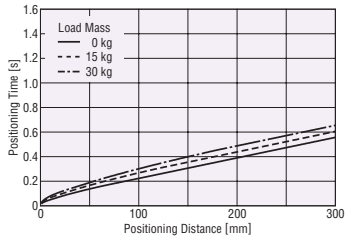


●In the graphs above, the values for the operating speeds [kHz] and acceleration/deceleration rates [ms/kHz] are taken when the minimum traveling amount of the motorized cylinder is set to 0.01 mm.

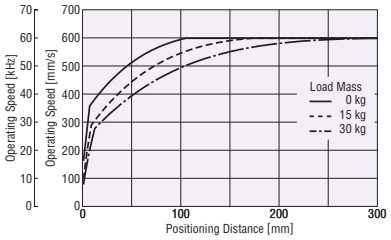
●EAC6: Standard Type/Side-Mounted Type AC Power Supply Input Lead: 12 mm

◇Horizontal Direction Installation

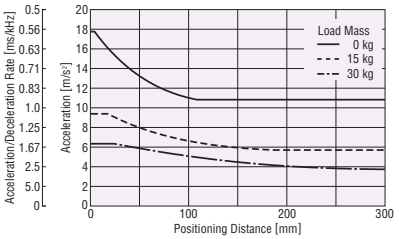
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed

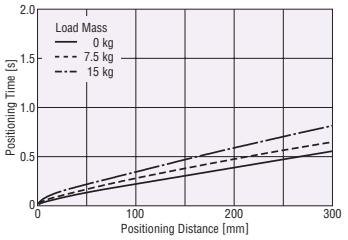


•Positioning Distance – Acceleration

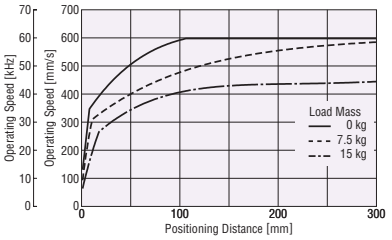


◇Vertical Direction Installation

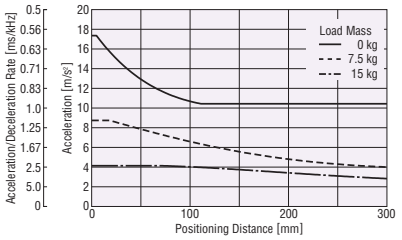
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed



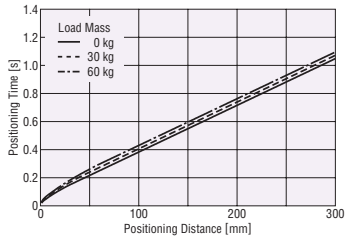
•Positioning Distance – Acceleration



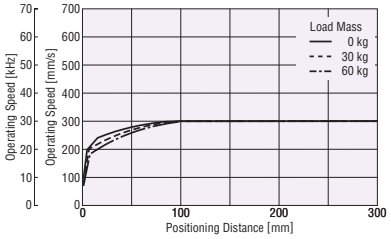
●EAC6: Standard Type/Side-Mounted Type AC Power Supply Input Lead: 6 mm

◇Horizontal Direction Installation

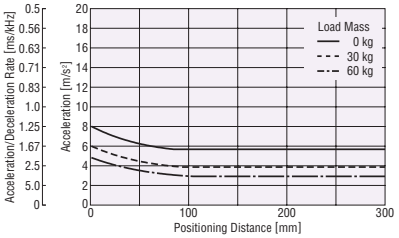
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed

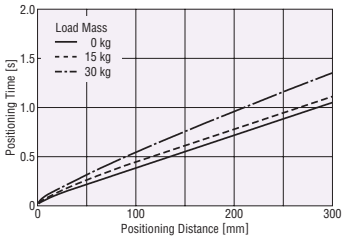


•Positioning Distance – Acceleration

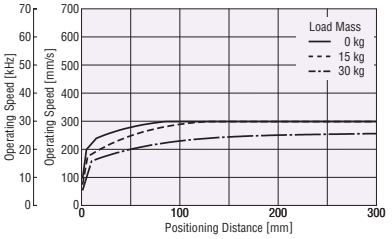


◇Vertical Direction Installation

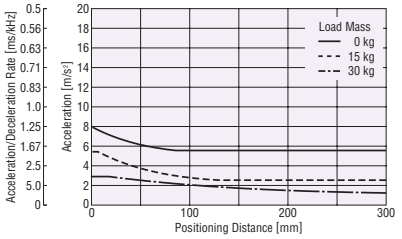
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed



•Positioning Distance – Acceleration

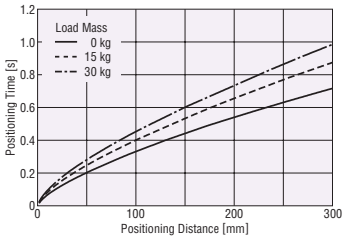


●In the graphs above, the values for the operating speeds [kHz] and acceleration/deceleration rates [ms/kHz] are taken when the minimum traveling amount of the motorized cylinder is set to 0.01 mm.

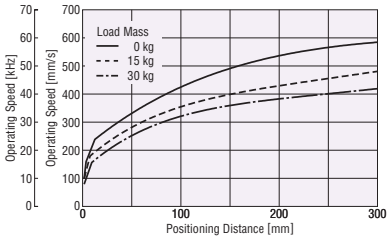
●EAC6: Standard Type/Side-Mounted Type 24 VDC Input Lead: 12 mm

◇Horizontal Direction Installation

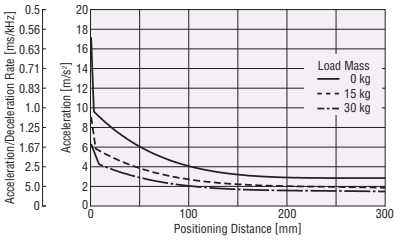
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed

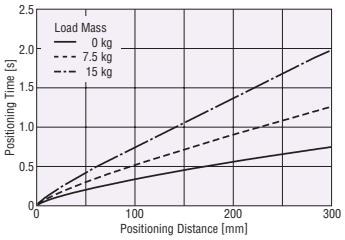


•Positioning Distance – Acceleration

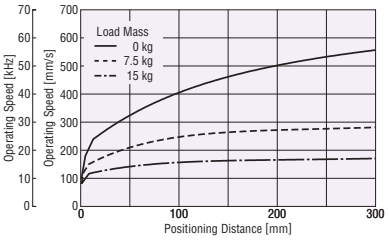


◇Vertical Direction Installation

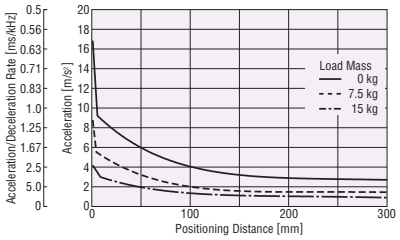
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed



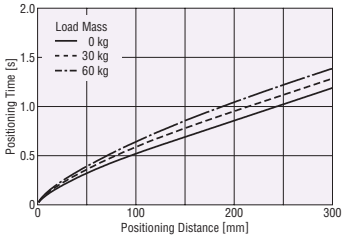
•Positioning Distance – Acceleration



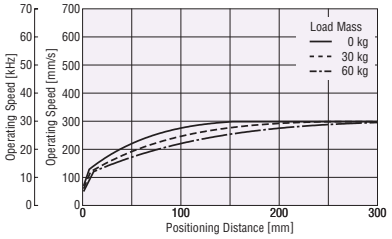
●EAC6: Standard Type/Side-Mounted Type 24 VDC Input Lead: 6 mm

◇Horizontal Direction Installation

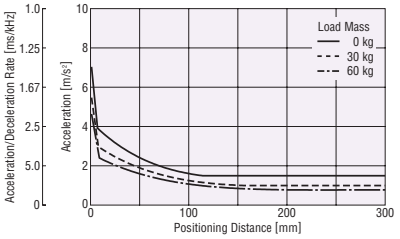
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed

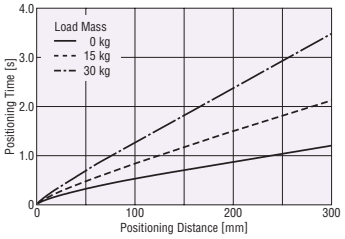


•Positioning Distance – Acceleration

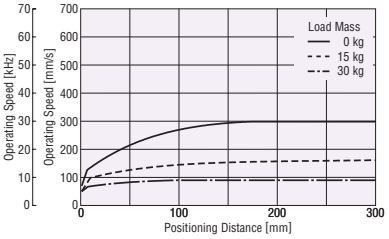


◇Vertical Direction Installation

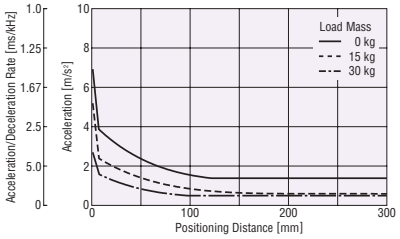
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed



•Positioning Distance – Acceleration

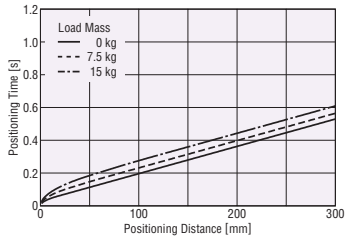


● In the graphs above, the values for the operating speeds [kHz] and acceleration/deceleration rates [ms/kHz] are taken when the minimum traveling amount of the motorized cylinder is set to 0.01 mm.

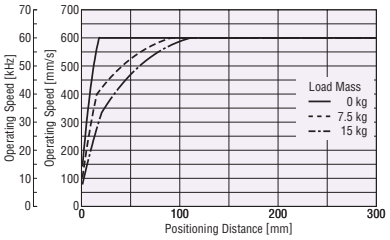
●EAC4: Standard Type With Shaft Guide (With cover) AC Power Supply Input Lead: 12 mm

◇Horizontal Direction Installation

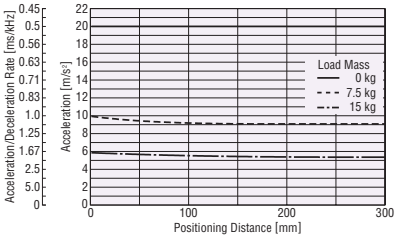
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed

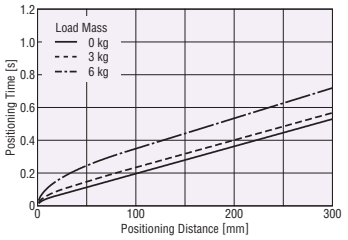


•Positioning Distance – Acceleration

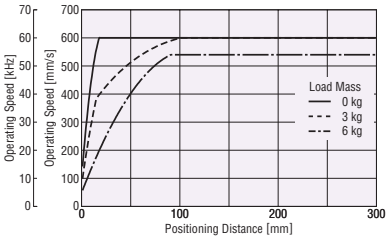


◇Vertical Direction Installation

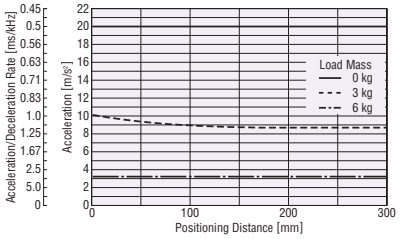
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed



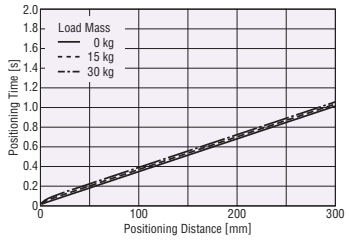
•Positioning Distance – Acceleration



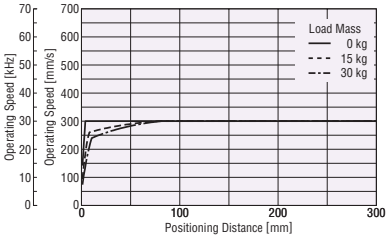
●EAC4: Standard Type With Shaft Guide (With cover) AC Power Supply Input Lead: 6 mm

◇Horizontal Direction Installation

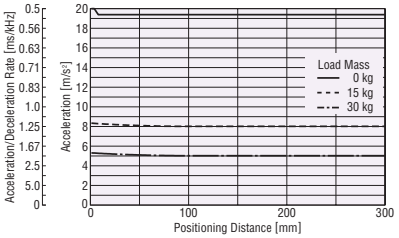
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed

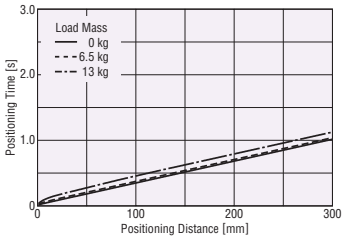


•Positioning Distance – Acceleration

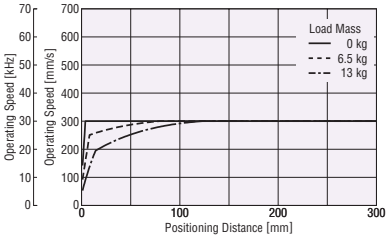


◇Vertical Direction Installation

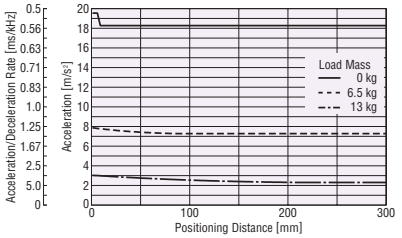
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed



•Positioning Distance – Acceleration

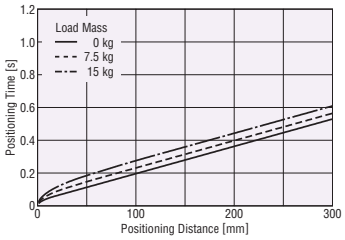


●In the graphs above, the values for the operating speeds [kHz] and acceleration/deceleration rates [ms/kHz] are taken when the minimum traveling amount of the motorized cylinder is set to 0.01 mm.

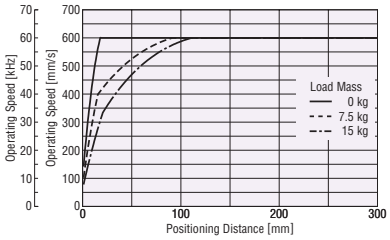
●EAC4: Side-Mounted Type With Shaft Guide (With cover) AC Power Supply Input Lead: 12 mm

◇Horizontal Direction Installation

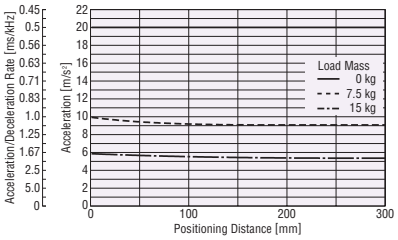
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed

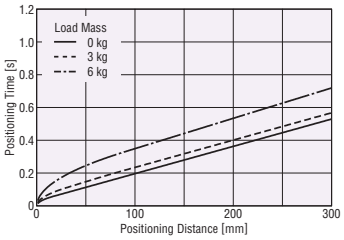


•Positioning Distance – Acceleration

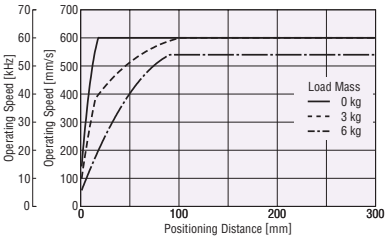


◇Vertical Direction Installation

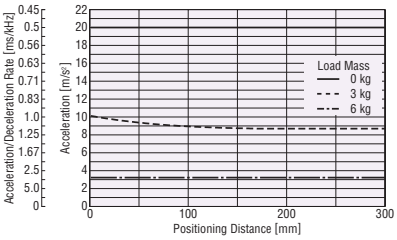
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed



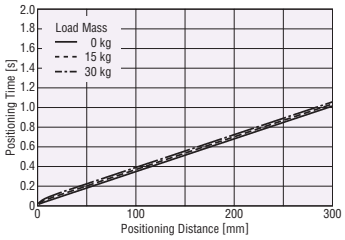
•Positioning Distance – Acceleration



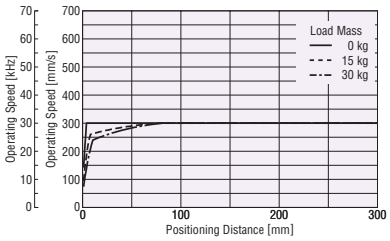
●EAC4: Side-Mounted Type With Shaft Guide (With cover) AC Power Supply Input Lead: 6 mm

◇Horizontal Direction Installation

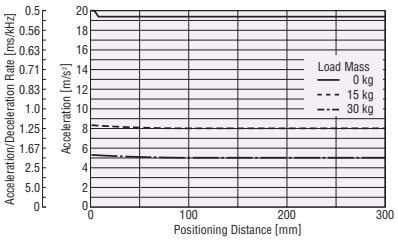
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed

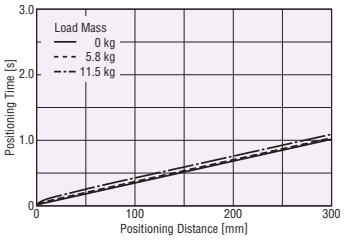


•Positioning Distance – Acceleration

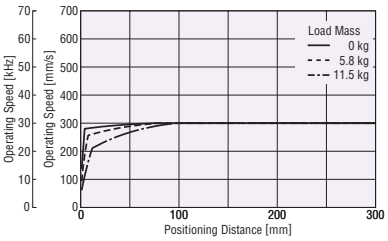


◇Vertical Direction Installation

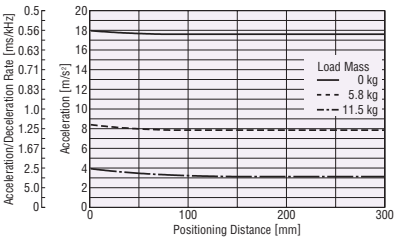
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed



•Positioning Distance – Acceleration

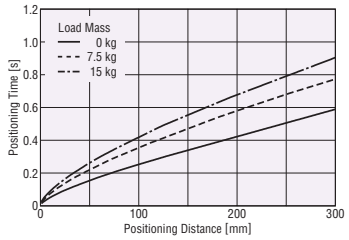


●In the graphs above, the values for the operating speeds [kHz] and acceleration/deceleration rates [ms/kHz] are taken when the minimum traveling amount of the motorized cylinder is set to 0.01 mm.

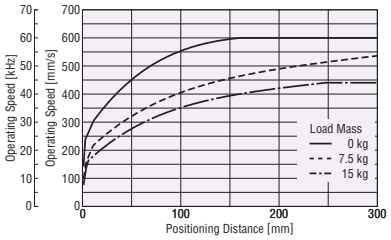
●EAC4: Standard Type With Shaft Guide (With cover) 24 VDC Input Lead: 12 mm

◇Horizontal Direction Installation

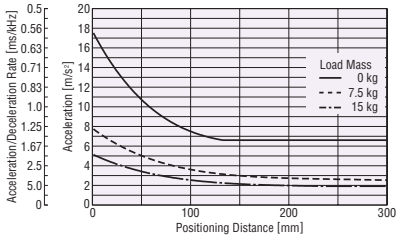
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed

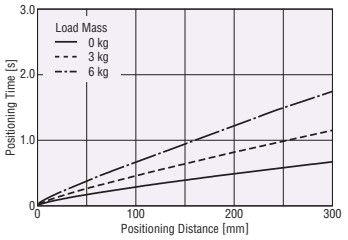


•Positioning Distance – Acceleration

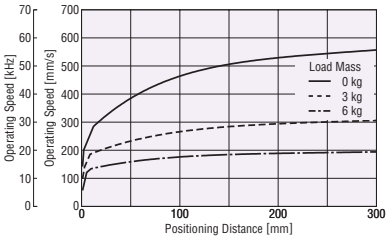


◇Vertical Direction Installation

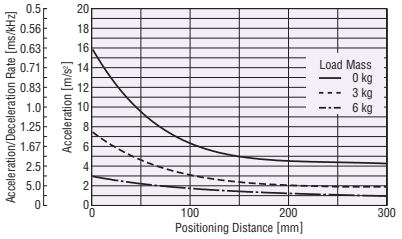
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed



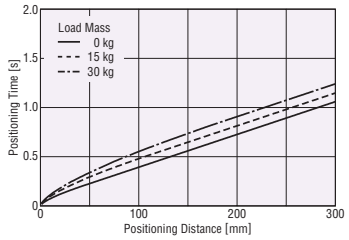
•Positioning Distance – Acceleration



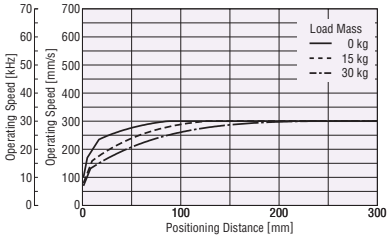
●EAC4: Standard Type With Shaft Guide (With cover) 24 VDC Input Lead: 6 mm

◇Horizontal Direction Installation

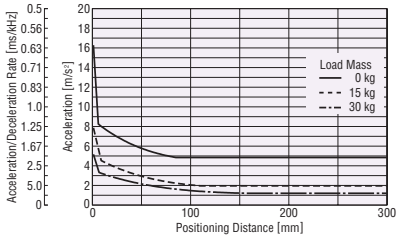
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed

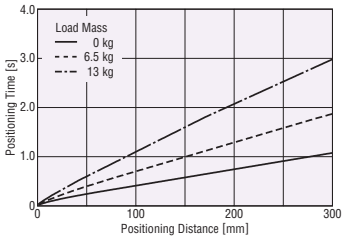


•Positioning Distance – Acceleration

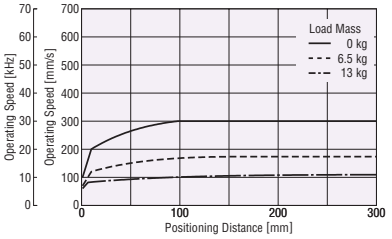


◇Vertical Direction Installation

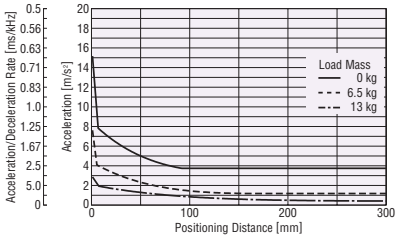
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed



•Positioning Distance – Acceleration

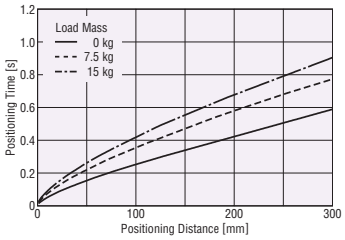


●In the graphs above, the values for the operating speeds [kHz] and acceleration/deceleration rates [ms/kHz] are taken when the minimum traveling amount of the motorized cylinder is set to 0.01 mm.

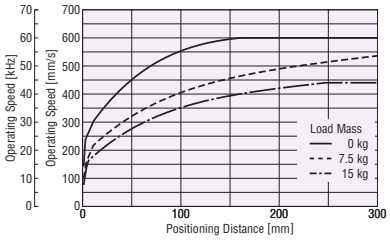
●EAC4: Side-Mounted Type With Shaft Guide (With cover) 24 VDC Input Lead: 12 mm

◇Horizontal Direction Installation

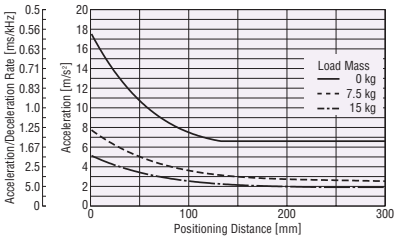
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed

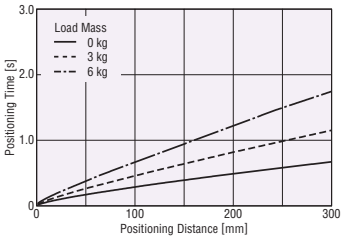


•Positioning Distance – Acceleration

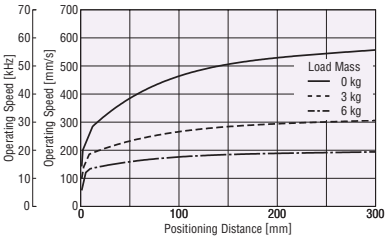


◇Vertical Direction Installation

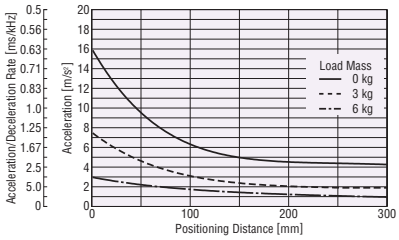
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed



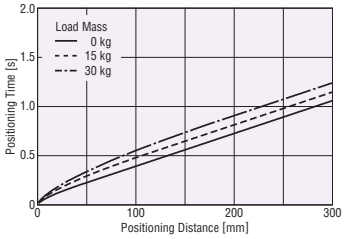
•Positioning Distance – Acceleration



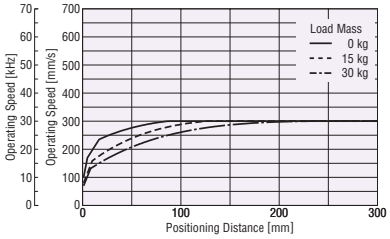
●EAC4: Side-Mounted Type With Shaft Guide (With cover) 24 VDC Input Lead: 6 mm

◇Horizontal Direction Installation

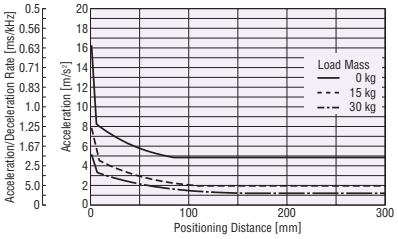
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed

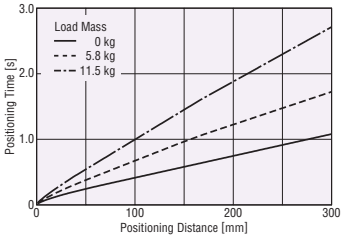


•Positioning Distance – Acceleration

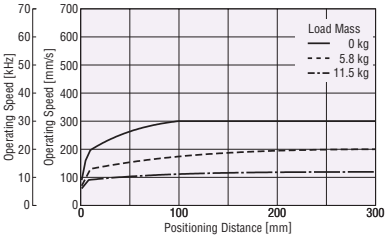


◇Vertical Direction Installation

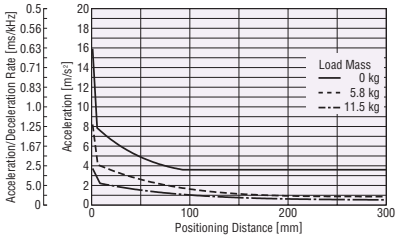
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed



•Positioning Distance – Acceleration

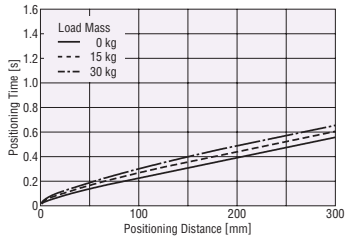


●In the graphs above, the values for the operating speeds [kHz] and acceleration/deceleration rates [ms/kHz] are taken when the minimum traveling amount of the motorized cylinder is set to 0.01 mm.

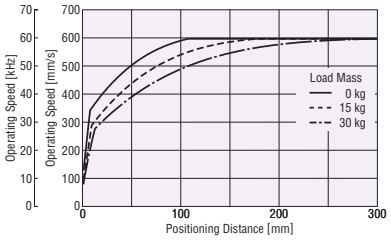
●EAC6: Standard Type/Side-Mounted Type　With Shaft Guide (With cover)　AC Power Supply Input　Lead: 12 mm

◇Horizontal Direction Installation

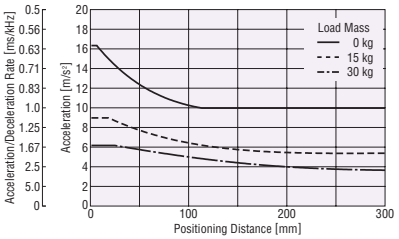
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed

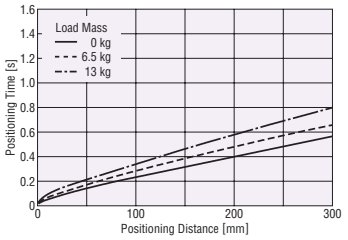


•Positioning Distance – Acceleration

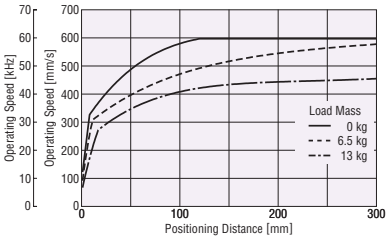


◇Vertical Direction Installation

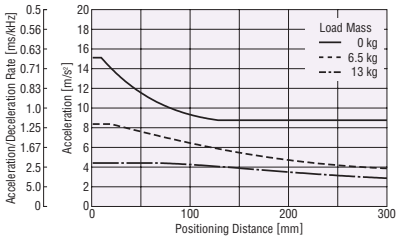
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed



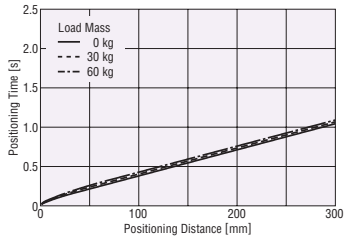
•Positioning Distance – Acceleration



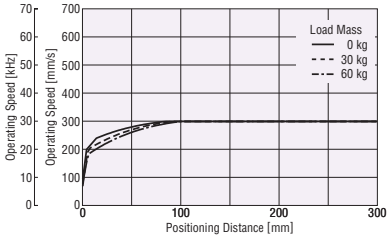
●EAC6: Standard Type/Side-Mounted Type　With Shaft Guide (With cover)　AC Power Supply Input　Lead: 6 mm

◇Horizontal Direction Installation

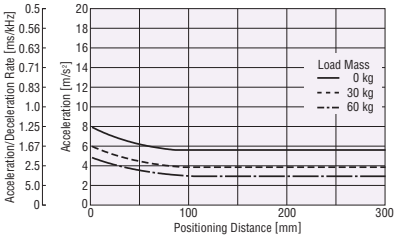
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed

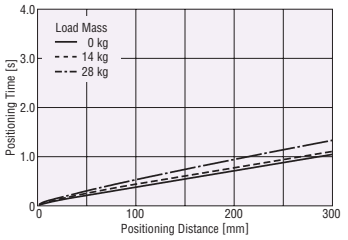


•Positioning Distance – Acceleration

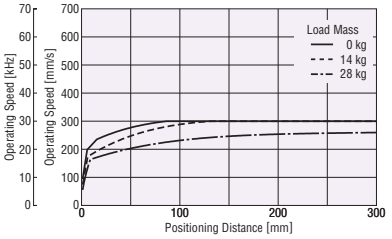


◇Vertical Direction Installation

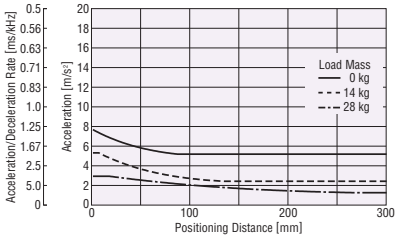
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed



•Positioning Distance – Acceleration

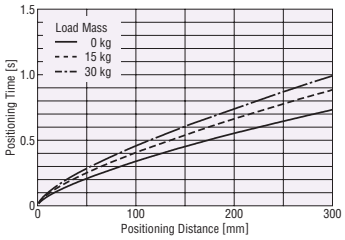


●In the graphs above, the values for the operating speeds [kHz] and acceleration/deceleration rates [ms/kHz] are taken when the minimum traveling amount of the motorized cylinder is set to 0.01 mm.

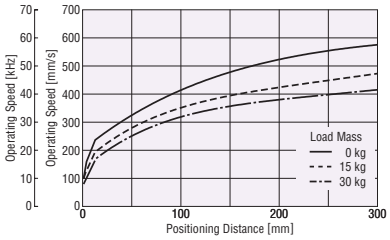
●EAC6: Standard Type/Side-Mounted Type With Shaft Guide (With cover) 24 VDC Input Lead: 12 mm

◇Horizontal Direction Installation

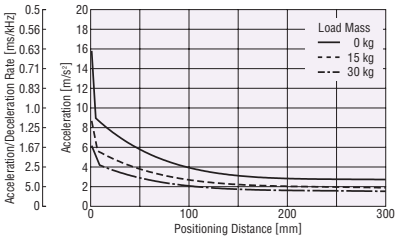
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed

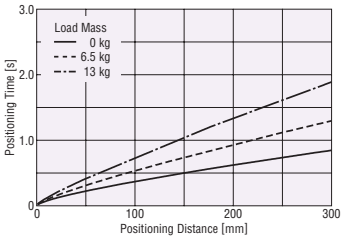


•Positioning Distance – Acceleration

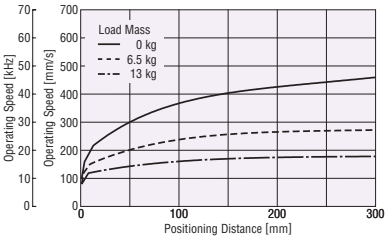


◇Vertical Direction Installation

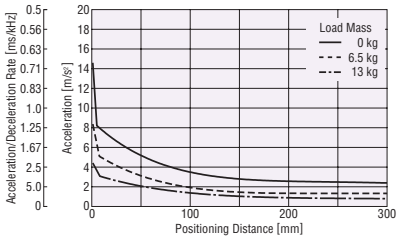
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed



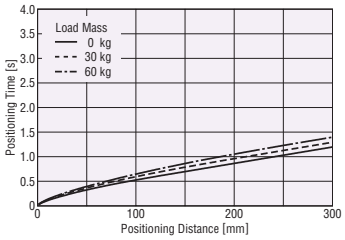
•Positioning Distance – Acceleration



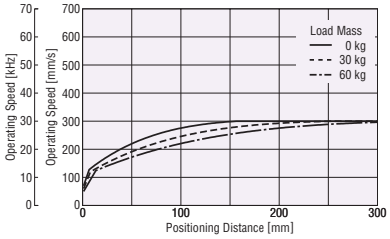
●EAC6: Standard Type/Side-Mounted Type With Shaft Guide (With cover) 24 VDC Input Lead: 6 mm

◇Horizontal Direction Installation

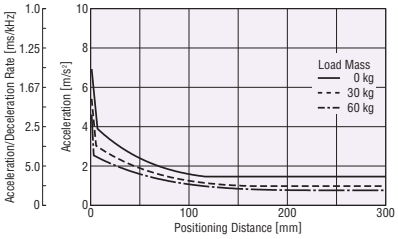
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed

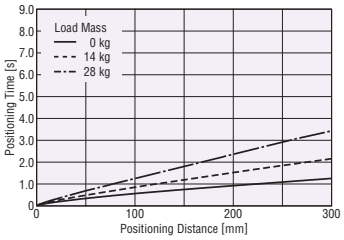


•Positioning Distance – Acceleration

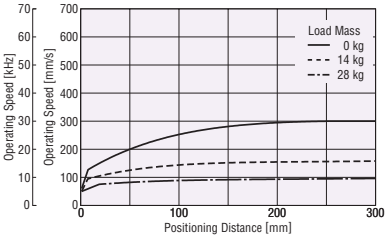


◇Vertical Direction Installation

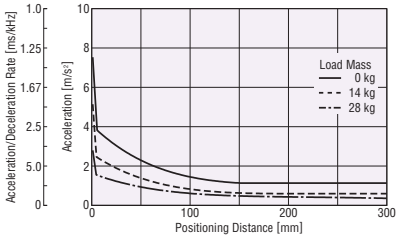
•Positioning Distance – Positioning Time



•Positioning Distance – Operating Speed



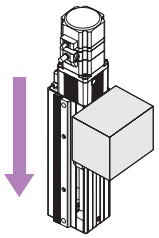
•Positioning Distance – Acceleration



●In the graphs above, the values for the operating speeds [kHz] and acceleration/deceleration rates [ms/kHz] are taken when the minimum traveling amount of the motorized cylinder is set to 0.01 mm.

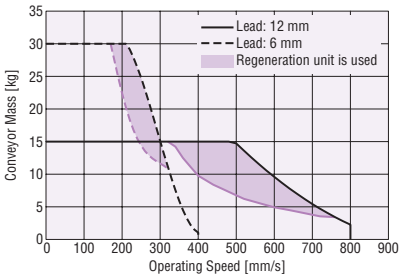
Vertical Drive Using **EAS6**/**EAC6** Type (AC Power Supply Specifications)

When vertically operating the **EAS6** or **EAC6** type, the over-voltage protective function will be activated due to the regenerative power, possibly causing an alarm to sound.
Connect the accessory (sold separately) regeneration unit **RGB100** to the driver by referring to the operating speed - load mass characteristics diagrams shown below.



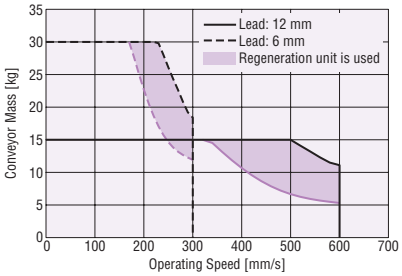
Regeneration Unit **RGB100** → Page 97

Range Where the Regeneration Unit **RGB100** of **EAS6** is Required

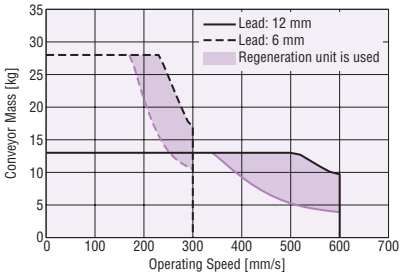


Range Where the Regeneration Unit **RGB100** of **EAC6** is Required

◇Without Shaft Guide



◇With Shaft Guide



Technical Reference

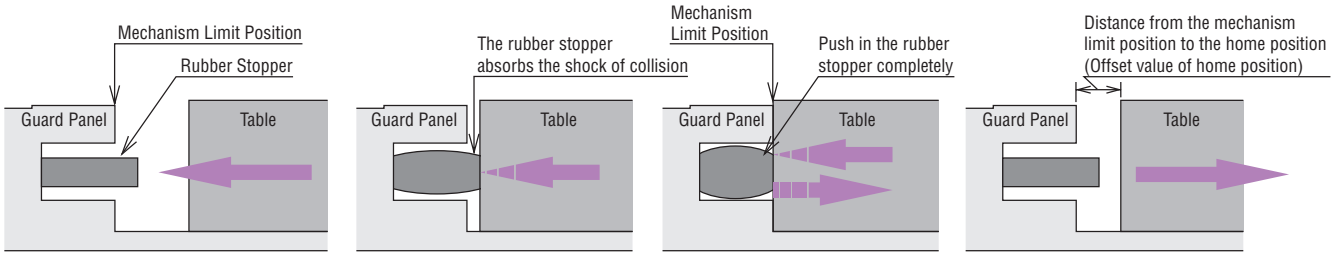
Pushing Return-To-Home Operation

EAS Series equipped with **AZ** and **EAC** Series equipped with **AZ** support the "pushing return-to-home operation." In the "pushing return-to-home operation," the table is pressed against the actuator body to return to the home. By developing a mechanism in which the dedicated rubber stopper and the tip of the metallic part are pushed, we have achieved a high-speed return-to-home operation.

Note

- Check the dynamic permissible moment value before using the pushing return-to-home operation.
- For **EAC** Series, do not use an actuator alone to perform the pushing return-to-home operation to the opposite motor side. The actuator may be damaged. When performing the pushing return-to-home operation to the opposite motor side, provide an external structure against which a rod is pressed.

Operation of Pushing Return-To-Home



① When executing the pushing return-to-home operation, the table moves to the mechanism limit position at a high speed.

② Operate at low speed after contacting the rubber stopper.

③ The table contacts the mechanism limit position. Reversed once the metal surfaces make contact.

④ Return to the home position set for each actuator and stop.

Setting of the Pushing Return-To-Home Offset Value (Distance from the mechanism limit position to the home position [mm])

The pushing return-to-home offset value (distance from the mechanism limit position to the home position [mm]) is set by default to the values shown in the following table.

Series	Product	Home Offset Value (Distance from the mechanism limit position to the home position [mm])
EAS	**4**	3
	6	6
EAC	**4**	4
	6	4

Setting of the Pushing Return-To-Home Operation Current (Pushing force) (Recommended value)

The pushing return-to-home operation current (pushing force) is set by default to the values shown in the following tables.

◇AC Power Supply Input

Series	Product	Ball Screw Lead [mm]	Pushing Return-To-Home Operation Current [%]
EAS	**4**	6	100
		12	100
	6	6	55
		12	85
EAC	**4**	6	100
		12	100
	6	6	55
		12	85

◇DC Power Supply Input

Series	Product	Ball Screw Lead [mm]	Pushing Return-To-Home Operation Current [%]
EAS	**4**	6	100
		12	100
	6	6	80
		12	100
EAC	**4**	6	100
		12	100
	6	6	80
		12	100

Pushing Return-To-Home Speed

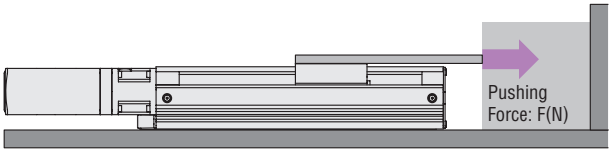
The upper limit of the pushing return-to-home speed is as follows:

Series	Ball Screw Lead [mm]	Pushing Return-To-Home Speed [mm/s]
EAS	6	50
	12	100
EAC	6	50
	12	100

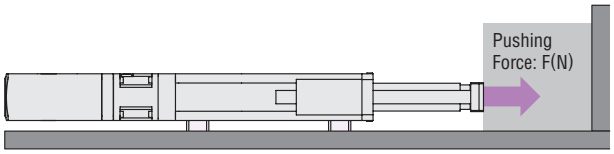
Push-Motion Operation

The push-motion operation is operation that continuously presses a load when the load is touched.
This operation is available for both the Built-in controller type and the pulse input type.

Motorized Linear Slides



Motorized Cylinders



Upper Limit of the Push-Motion Operation Current (Reference values)

The upper limits of the pushing force and the push current are as follows:

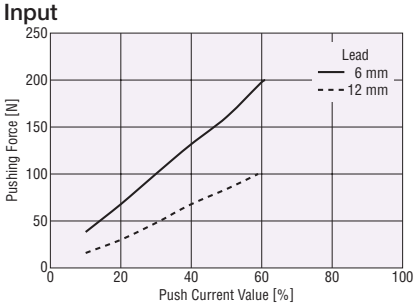
Series/ Product	Power Supply Input	Lead: 6 mm		Lead: 12 mm	
		Push Current [%]	Maximum Pushing Force [N]	Push Current [%]	Maximum Pushing Force [N]
EAS4 **EAC4**	AC Power Supply Input DC Power Supply Input	60	200	60	100
EAS6 **EAC6**	AC Power Supply Input	35	500	60	400
	DC Power Supply Input	50	500	80	400

Actual Pushing Force Value

The following shows the reference values of the pushing forces and push current of the motorized linear slides and motorized cylinders.
When using, check the actual pushing force.

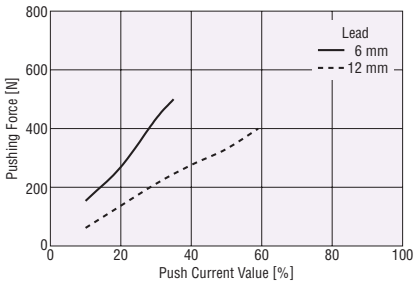
◇EAS4, EAC4

AC Power Supply Input, DC Power Supply Input

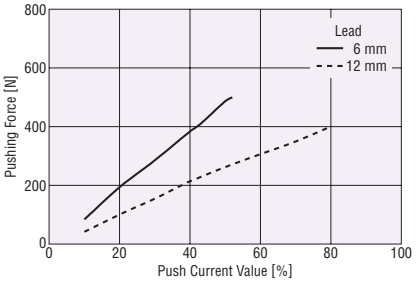


◇EAS6, EAC6

AC Power Supply Input



DC Power Supply Input



● The graphs above show the averages of the measurement results of pushing force during horizontal operation of the **EAC** Series.

Note

● The relationship between the pushing force and the push current differs depending on the following conditions. Check the pushing force of the device after installing it to the actual equipment.

- Conditions for installing the motorized linear slides and motorized cylinders (horizontal and vertical installation)
- Type of the motorized linear slides and motorized cylinders (without/with shaft guide, stroke)
- Load conditions on the customer's jigs or other equipment

Push-Motion Operation Speed (Upper limit)

The upper limits of the push-motion operation are as follows:

Series	Product	Push-Motion Operation Speed [mm/s]
EAS	**4**	25
	6	25
EAC	**4**	25
	6	25

Linear Guide Models for the Motorized Linear Slide

The linear guides used on motorized linear slides are made by THK.
The table below lists the products of linear guides used by each series.

Series	Product	Linear Guide Type
EAS Series	**EAS4**	SHS15V
	EAS6	SSR25XW

Product Service Life

The service life of a motorized linear slide and a motorized cylinder is generally affected by the rolling fatigue life of its ball screw, guide block, or ball bearing. When stress is applied repeatedly to the raceways and rolling balls, flaking (a phenomenon in which the metal surface turns into small scale-like pieces that separate from the base metal) occurs due to material fatigue caused by rolling fatigue. The rolling fatigue life refers to the life time until flaking occurs.
As reference for determining the product life, the operating conditions at maximum specifications (maximum transportable mass, maximum speed, load moment, etc.) are used to calculate the expected life.

Estimated Service Life Traveling Distance of Each Series

Motorized Linear Slides/Motorized Cylinders	Lead: 6 mm	Lead: 12 mm
EAS Series	3000 km	5000 km
EAC Series	3000 km	5000 km

Long-Term Maintenance-Free

EAS Series and **EAC** Series adopt long-term maintenance-free parts for the ball screws and linear guide (only for motorized linear slides). The ball screw is equipped with lubrication system QZ, the linear guide uses a system with ball retainers so that the greasing cycle can be substantially extended.
For Oriental Motor's motorized linear slides and motorized cylinders, the ball screws and linear guide are verified to have no problems even without maintenance until the expected life is reached. However, the state of grease deterioration varies depending on the operating conditions and the use environment. For the actual use, refer to the table below for grease maintenance.

Motorized Linear Slides (**EAS** Series)

Item	Grease Used	Check List	Action
Ball Screw	AFF (Manufactured by THK)	Attachment of dust or any other foreign object?	If there are any foreign objects, remove them.
		Has the grease lost its luster? Has the amount of grease decreased?	Clean the ball screw using a soft cloth and then apply new grease to the nut raceway grooves.
Guide Rail	AFF (Manufactured by THK)	Attachment of dust or any other foreign object?	If there are any foreign objects, remove them.
		Has the grease lost its luster? Has the amount of grease decreased?	Clean the ball raceway grooves on both sides of the guide rail using a soft cloth and then apply new grease to the ball raceway grooves.

● Even if the color of the grease (AFF) for the **EAS** Series has changed to brown, good lubrication is maintained as long as the traveling surface appears shiny.

Motorized Cylinders (**EAC** Series)

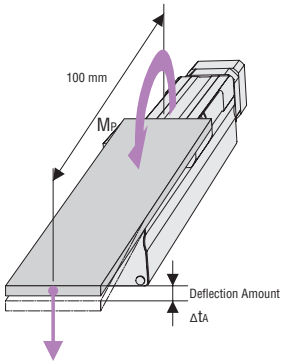
Item	Grease Used	Check List	Action
Rod Shaft	Marutemp SRL (Manufactured by Kyodo Yushi)	Attachment of dust or any other foreign object?	If there are any foreign objects, remove them.
		Has grease color turned brownish, or has the grease lost its gloss?	Clean the rod and the shaft using a soft cloth and then apply new grease.

Table Deflection/Rigidity of Motorized Linear Slides

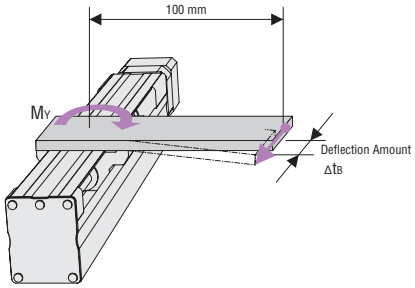
When a load moment acts on the table of the motorized linear slide, the linear guide supports the table. The action of the load moment deflects the ball in the guide block, and as a result, the load is displaced. Shown below are the actual displacements that were measured when a load moment was caused to act upon a motorized linear slide.

Measurement Conditions

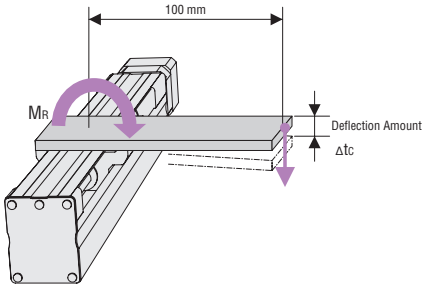
A 100 mm overhung plate was fixed on the linear slide table and load moments equivalent to the dynamic permissible moments (M_P, M_Y, M_R) were caused to act upon the motorized linear slide table in respective directions. The deflection amounts (Δt_A, Δt_B, Δt_C) of the tip were measured under these conditions.



Dynamic Permissible Moment
Pitching Direction (M_P)



Dynamic Permissible Moment
Yawing Direction (M_Y)



Dynamic Permissible Moment
Rolling Direction (M_R)

Table Deflection Amounts (Δt_A, Δt_B, Δt_C) for the Dynamic Permissible Moments (M_P, M_Y, M_R)

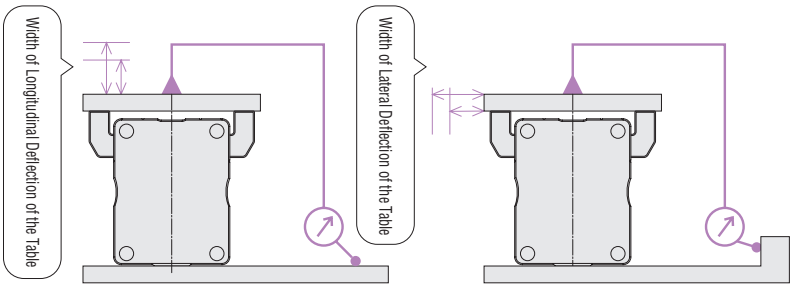
Series	Product	Pitching Direction		Yawing Direction		Rolling Direction	
		M_P [N·m]	Δt_A [mm]	M_Y [N·m]	Δt_B [mm]	M_R [N·m]	Δt_C [mm]
EAS Series	**EAS4**	16.3	0.11	4.8	0.03	15.0	0.38
	EAS6	31.8	0.11	10.3	0.03	40.6	0.41

- Ignore the deflection of the 100 mm plate.
- Deflection characteristics do not change between the X table and the Y table.

Traveling Parallelism of Motorized Linear Slides

The traveling parallelism is the band of fluctuation in the distance between the table and the reference plane as the table travels, with the motorized linear slide installed on the reference plane as shown.

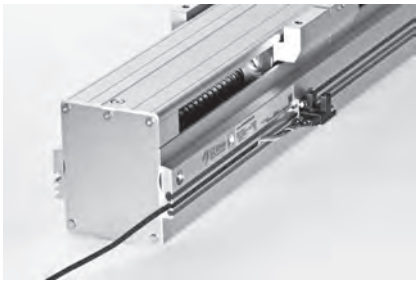
The **EAS** Series achieves high traveling parallelism because the linear guide can be used directly as the installation surface. (Within 0.03 mm)



Installation of Sensor Set (Sold Separately) into Motorized Linear Slides (With Sensor Rails Only)

The motorized linear slides **EAS** Series with sensor rails is equipped with sensor rails on both sides of the motorized linear slide.
The sensor of a sensor set (sold separately) can be installed on the sensor rail. For **EAS4** and **EAS6**, the sensor of the sensor set can be stored inside of the sensor rails.
In addition, the shield plate (included in the sensor set) can be installed on the linear slide table for the X table type.*

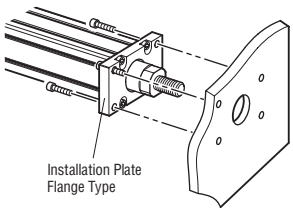
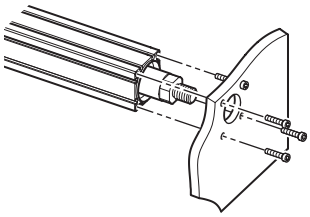
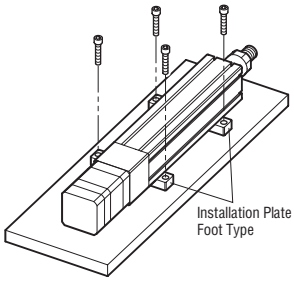
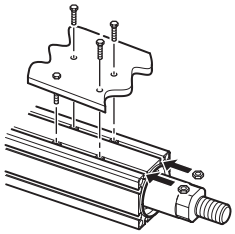
Note
*For the Y table type, a shield plate needs to be installed on the your device.



●Photo is an installation example of a sensor set of the X table type.

Installation of Motorized Cylinders

The motorized cylinders can be installed on the front surface or the side surface.
For each of these installation methods, there are further two installation patterns: using of a installation plate sold separately, and direct installation.

Installation on Front Surface		Side Surface Installation	
Installation Plate Using Flange Type (Sold Separately)	Direct Installation	Installation Plate Using foot type (Sold Separately)	Direct Installation
			

●For details on the flange type installation plate (sold separately) and the foot type installation plate (sold separately), see page 97.

⚠ Safety Precautions

- To ensure correct operation, carefully read the Operating Manual before using it.
- The products listed in this catalogue are for industrial use and for built-in component. Do not use for any other applications.

- The factories which manufacture the products listed in this catalogue have obtained Quality Management Systems ISO9001 and Environment Management Systems ISO14001.
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