

Easy to use RoboCylinder

**ERC**



**RC** ROBO  
CYLINDER



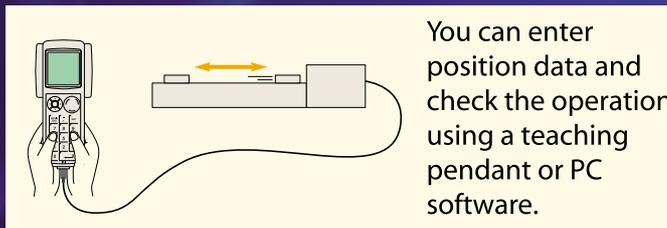
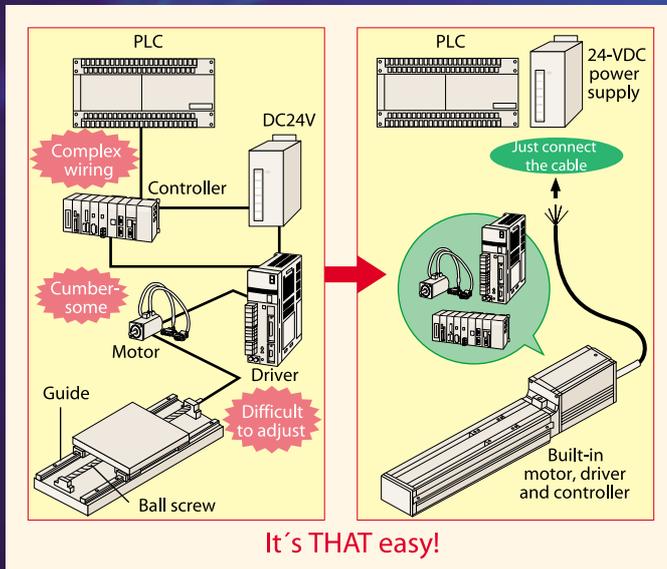
# An Electric Cylinder with Built-in Controller Offering the Ultimate in Simplicity

[Slider type]  
[Rod type]

The ERC Series is a family of new-concept, low-cost electric cylinders. The assembly, wiring and adjustment procedures became even simpler than the traditional user-friendly RoboCylinder Series, allowing machine engineers to operate and adjust the cylinder with greater ease.

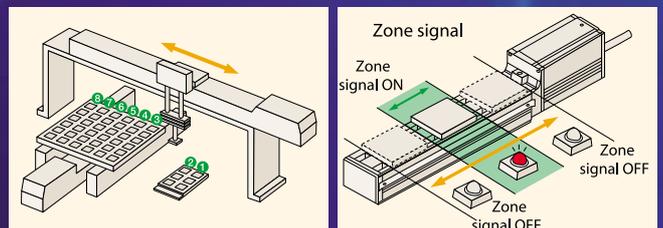
## 1 Installing the Actuator

Install the slider type on the mounting surface by inserting bolts from above into the through holes provided in the bottom face. The rod type is installed on the mounting surface using the flange at the front end of the actuator or with optional foot brackets.



## 2 Multipoint Positioning of Up to Eight Points, and Useful Functions

A maximum of eight positions can be set for both slider and rod types, so non-uniform objects can be handled without the need for changeover. The ERC Series also provides the Pause input signal and Zone Output signal (refer to page 6) - the two popular functions in the Robo Cylinder Series - to let you effortlessly achieve those operations that are difficult to implement with air cylinders.

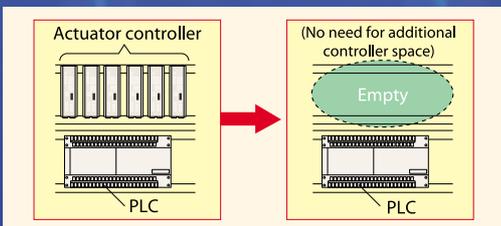
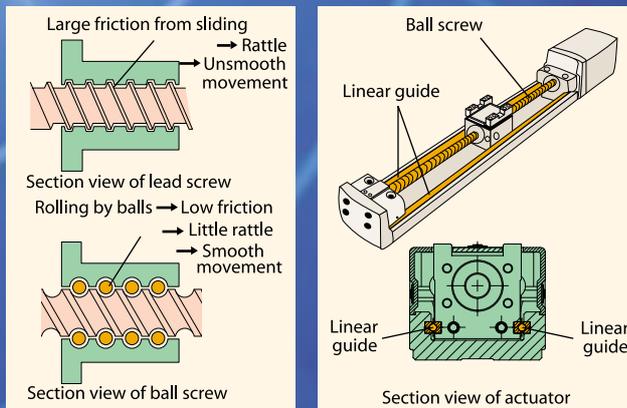




## Ensuring High Accuracy and Rigidity with Ball Screw and Linear Guides

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The affordably priced ERC Series features an accurate ball screw mechanism as the drive means. Reducing the frictional resistance over a lead screw, the ball screw allows for smooth operation and accurate positioning over a long period with less wear. The slider type with built-in linear guides achieves excellent linear motion even when transferring an overhung load.



## Space-Saving

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The ERC actuator has a built-in controller, so there is no need to provide additional space for the actuator controller. Space savings and cost reduction can be achieved in various applications such as when multiple actuators are connected to a single equipment.

## Amazing Low Price

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Both the slider and rod types are available at amazing low prices. These let you build a positioning mechanism with greater ease and at lower costs over a rodless air cylinder used with guides or a combination of ball screw, guides and motor.

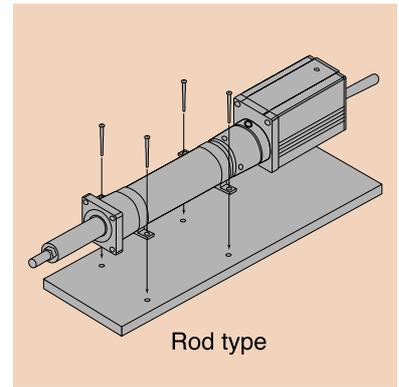
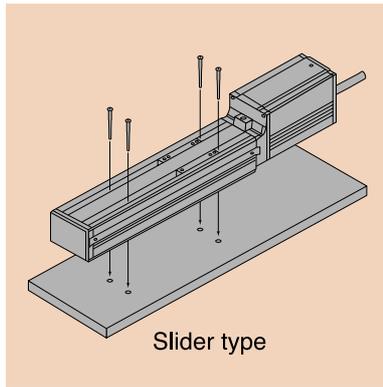
# How to Use the ERC Actuator

Operating the ERC actuator is easy. All you need is to follow the five simple steps shown.

## 1

### Installing the Actuator

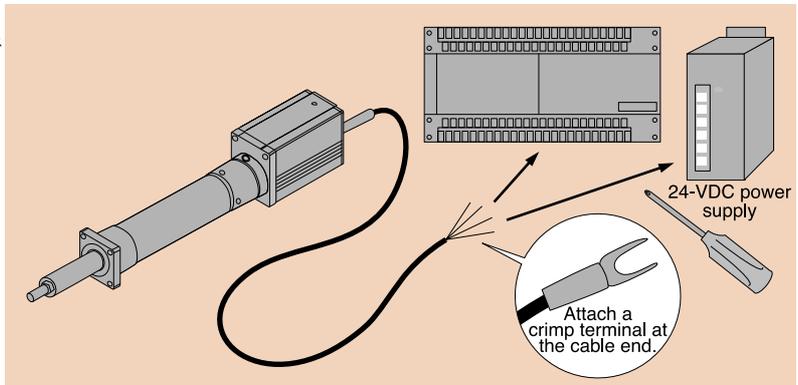
Install the slider type on the mounting surface by inserting bolts from above into the through holes provided in the bottom face. The rod type is installed on the mounting surface using the flange at the front end of the actuator or with optional foot brackets.



## 2

### Wiring

Connect the ERC actuator to the PLC (or PC, etc.) using the power & I/O cable. Supply 24 VDC from the main power supply to the specified wires in the power & I/O cable.

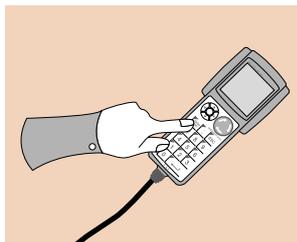


## 3

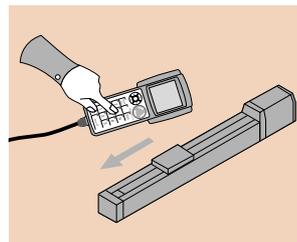
### Entry of Positioning Data

Enter positions (coordinates) to be used in the positioning operation. Position data can be entered in three different ways as shown to the right.

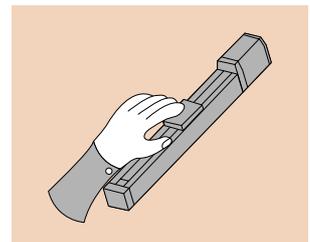
Positions can be entered in the following three ways.



① Enter coordinates(mm) directly.



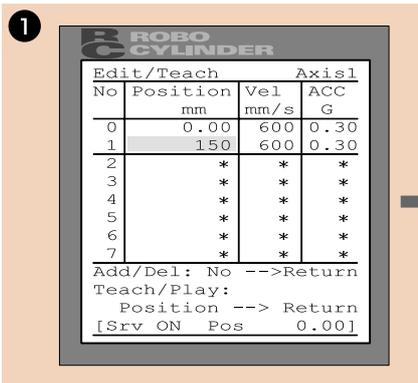
② Jog the actuator to a desired position, and enter the position.



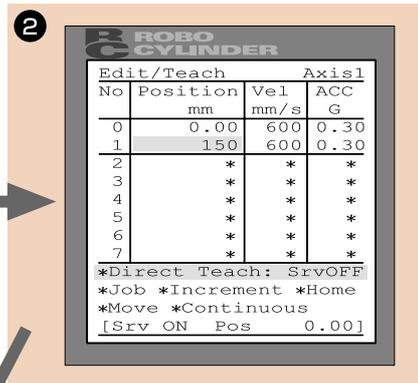
③ Move the actuator by hand to a desired position, and enter the position.

# Operation Check

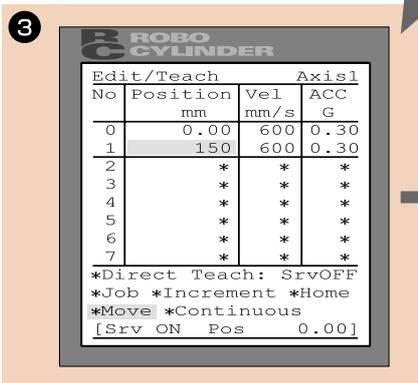
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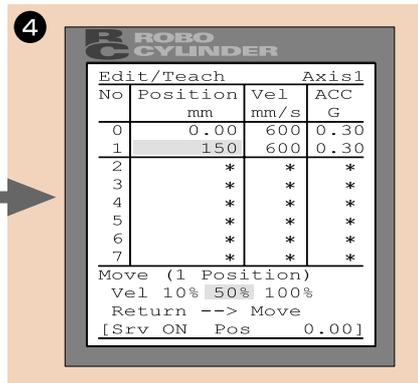
Open the main screen and move the cursor to the number corresponding to the target position.



Pressing [Enter] will display the Move command at the bottom of the screen.



Move the cursor to the Move command and press [Enter].

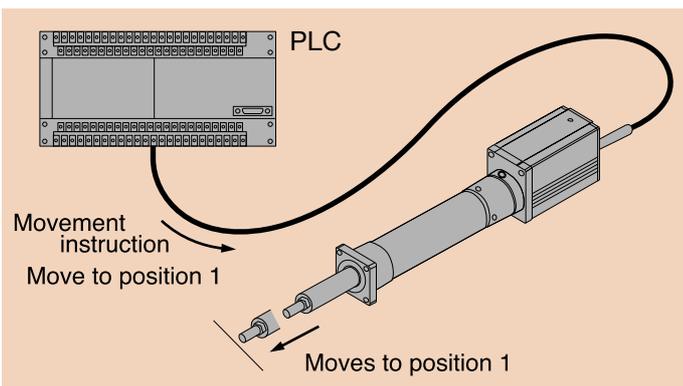


Select a speed and press [Enter], and the cylinder will move to the selected position.

Simply select a target position on the teaching pendant or PC software and execute a movement command on the screen, and the actuator will move to the specified position. (Teaching pendant screens are shown to the left.)

# Operation

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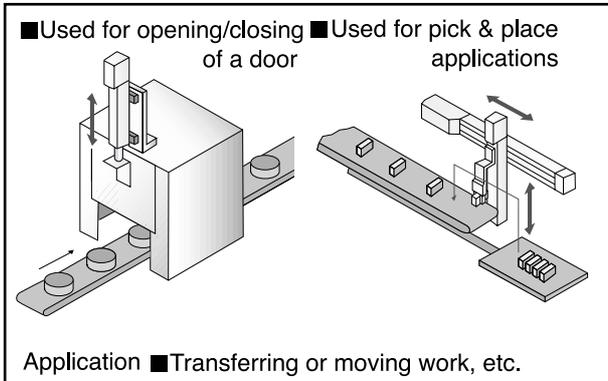
Specify a target position number from the PLC and input the start signal, and the actuator will move to the specified position. Create a PLC program by setting actuator operation patterns matching the operation patterns of your equipment, and run the program to implement desired moves.

# Functions of the Robo Cylinder Series

## Operation pattern 1

### Positioning Operation

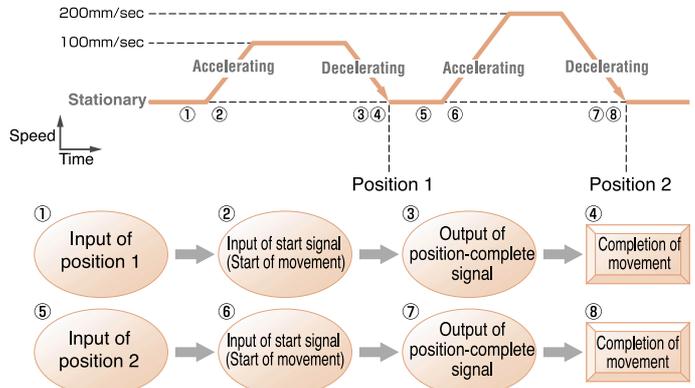
The Robo Cylinder moves the load installed on the axis slider or rod and performs positioning with a repeatability of ±0.05 mm.



#### Features

- Multi-point positioning covering a maximum of eight points.
- Speed and acceleration/deceleration rates can be set for each position.
- A position-complete signal can be output at an arbitrary position before a specified position simply by setting an appropriate positioning width.
- Acceleration and deceleration rates can be set separately for each point.
- Speed can be changed during movement without stopping.

#### Example of operation



#### Position-Data Table

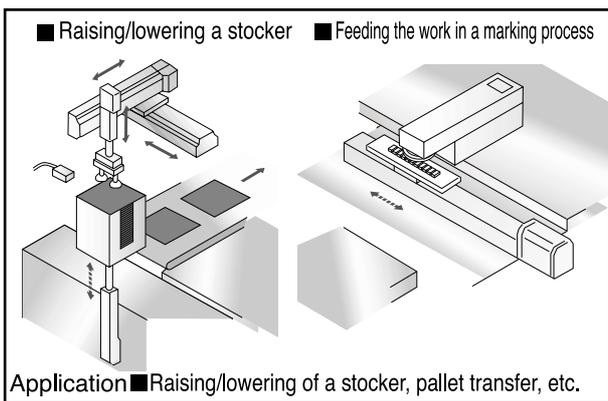
(Set by the teaching pendant or PC software)

No.	Position	Speed	Acceleration/deceleration	Push force	Positioning width	MAX Acceleration only
1	100	100	0.3	0	10	0
2	200	200	0.3	0	20	0

## Operation pattern 2

### Incremental Moves

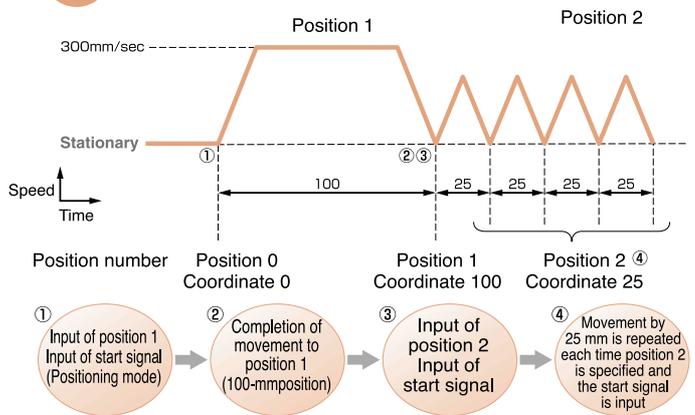
The Robo Cylinder performs positioning based on coordinates specified with respect to origin, or travels an arbitrary distance relative to the current position.



#### Features

- Positioning to eight points or more at a constant pitch is enabled by specifying repeated travel. (Movement can be initiated for as many times as possible within the stroke range.)
- The desired pitch is easily specified using the position-data table.

#### Example of operation



#### Position-Data Table

(Set by the teaching pendant or PC software)

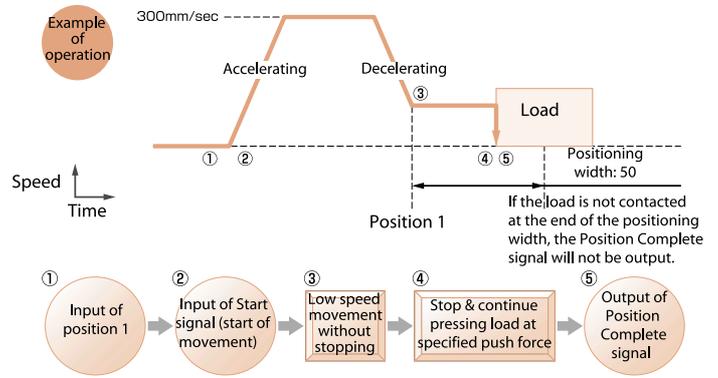
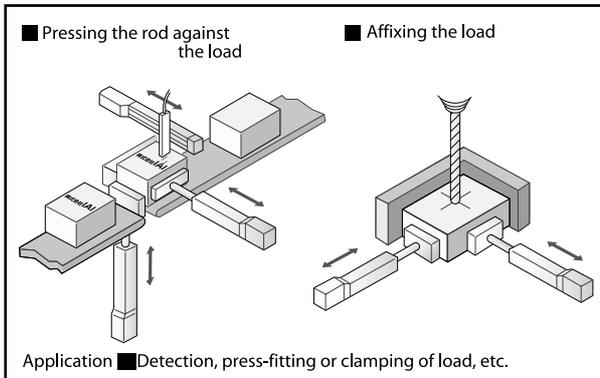
No.	Position	Speed	Acceleration/deceleration	Push force	Positioning width	MAX Acceleration only
1	100	300	0.3	0	0.1	0
2	25	300	0.3	0	0.1	0

A "=" is indicated during Incremental Move mode.

# Push & Hold Operation

## Operation pattern 3 Positioning Operation

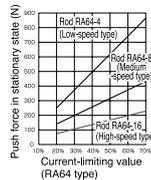
With the Robo Cylinder the rod can be maintained in a condition where it is continually pressed against the load, etc., just like an air cylinder.



### Features

A Position Complete signal is output the moment the rod contacts the load, so the Robo Cylinder can be used for the screening of work, etc., by combining a Position Complete signal with Zone signals.

The force to push the load (push force) can be changed up to 873N by changing the setting in the Position Data table.



### Position Data Table

(Set by the teaching pendant or PC software)

No.	Position (mm)	Speed (mm/sec)	Accel/ decel (G)	Push force (%)	Positioning width (mm)	MAX Accel only (0 or 1)
1	100	300	0.3	50	50	0

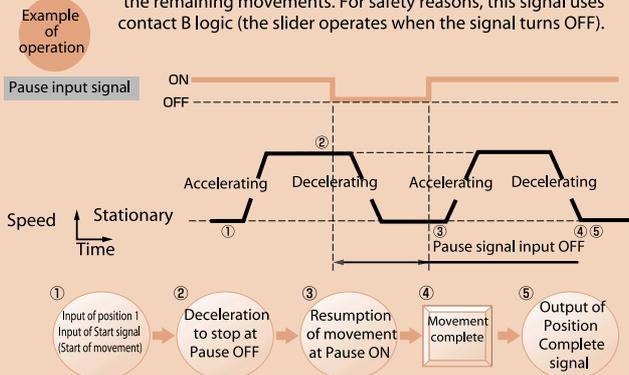
The accuracy of push force is not guaranteed in the stationary state. The above figure is provided only as a reference. Caution should be exercised, because if the push force is too small, push-motion operation may not be performed properly due to slide resistance, etc.

Caution

## Pause Input

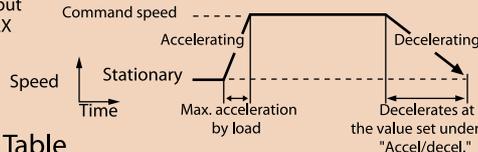
The slider decelerates to a stop upon the input of an external signal.

You can set an interlock (interference prevention) with peripheral equipment to cause the slider to decelerate and stop the moment the Pause input turns OFF. When the Pause input turns ON, the operation will resume to complete the remaining movements. For safety reasons, this signal uses contact B logic (the slider operates when the signal turns OFF).



The acceleration and deceleration rates can be set separately.

The acceleration and deceleration rates of the Robo Cylinder are set using the Position Data table. Normally the Robo Cylinder accelerates/decelerates at the specified rate, but setting "1" under "MAX Acceleration only" enables quick acceleration and gradual deceleration.



### Position Data Table

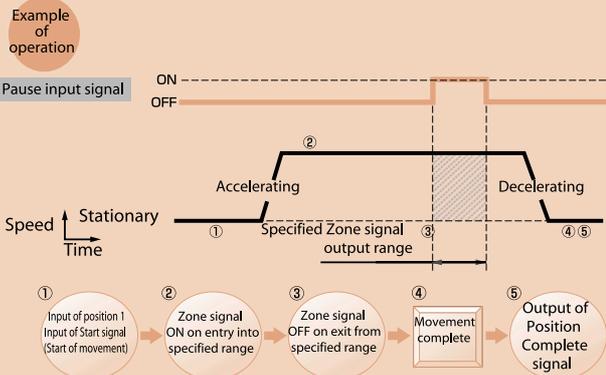
(Set by the teaching pendant or PC software)

No.	Position (mm)	Speed (mm/sec)	Accel/ decel (G)	Push force (%)	Positioning width (mm)	MAX Accel only (0 or 1)
1	300	100	0.3	0	0.1	1
2			0.3			0

## Zone Output

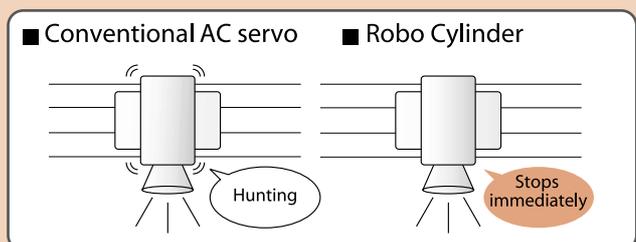
A signal is output when the slider enters the specified range.

A signal can be output at arbitrary positions during movement (the range of positions being set by parameter), so the Robo Cylinder can be used to set a danger area, shorten the tact time, etc.



### No micro-vibration at stop

There is no micro-vibration, which is experienced by conventional servo motors in the action of stopping. This makes the Robo Cylinder ideal for measurement in tandem with an attached camera, etc.



\* If "MAX Acceleration only" is set to "0", the setting under "Acceleration/deceleration" will apply to both acceleration and deceleration. If "MAX Acceleration only" is set to "1", the RoboCylinder will accelerate at the maximum acceleration rate and decelerate at the setting under "Acceleration/deceleration".

# ERC Series Specification Table

## Explanation of Actuator Types

Type	Actuator model	Description	Actuator width (mm)	Maximum stroke (mm)	Page
Slider type	 SA6	A table or other device is installed on the slider to implement movement/positioning in the horizontal or vertical direction. The built-in guides ensure excellent linearity and allow the actuator to accept even an overhung load.	58	600	P15
	SA7		68		P16
Rod type	 RA54*	A chuck or other device is installed at the tip of the rod that extends/contracts from/into the actuator. Although this type has no built-in guides, external guides can be installed in horizontal applications, or even in vertical applications where linearity is required.	54	300	P17
	RA64**		64		P18
			68		

\* RA54 also available with parallel single guide (RA54GS, see page 19) or with parallel double guide (RA54GD, see page 21)

\*\* RA64 also available with parallel single guide (RA64GS, see page 20) or with parallel double guide (RA64GD, see page 22)

## Specification Table

Type	Stroke (mm), Maximum speed (mm/sec)												Load capacity		Lead (mm)	Model	Page		
	50	100	150	200	250	300	350	400	450	500	550	600	Horizontal (kg)	Vertical (kg)					
Slider type	SA6 (Base width: 58mm)		600						515						6~2	1.5~1	12	ERC-SA6-I-PM-12-***	P15
			300						255						12	3~2.5	6	ERC-SA6-I-PM-6-***	
			150						125						12	6~4	3	ERC-SA6-I-PM-3-***	
Slider type	SA7 (Base width: 68mm)		450 (400)						10~2						2.5~0.5	16	ERC-SA7-I-PM-16-***	P16	
			250						20~3.5						5~0.5	8	ERC-SA7-I-PM-8-***		
			125						20						10~2	4	ERC-SA7-I-PM-4-***		
Rod type	RA54 (Flange angle: 54mm)		600						500						25~2.5	4.5~0.5	12	ERC-RA54-I-PM-12-***	P17
			300						250						40~12	12~2.5	6	ERC-RA54-I-PM-6-***	
			150						125						40	18~4	3	ERC-RA54-I-PM-3-***	
Rod type	RA64 (Flange angle: 64mm)		450 (400)						40~2						5~0.5	16	ERC-RA64-I-PM-16-***	P18	
			250 (200)						50~3.5						17.5~1	8	ERC-RA64-I-PM-8-***		
			125						55~25						25~2	4	ERC-RA64-I-PM-4-***		

(400) (200): The figures in parentheses apply to a vertical application.

# Explanation of Model Specification Items

The ERC Series actuators are classified into the following two types.

Refer to the text underneath for the explanation of each specification item ( ① to ⑧ ).

	①		②		③		④		⑤		⑥		⑦		⑧					
	Series		Type		Encoder type		Motor		Lead		Stroke		Cable length		Options					
Slider type	ERC	—	SA6	—	I	—	PM	—	12	—	50	—	N P S M X□□ W□□	—	B NM					
									6											
			3						~											
			16						600											
Rod type		ERC	—	RA54 RA54GS RA54GD		—		I	—	PM	—	12		—		50	—	N P S M X□□ W□□	—	B FT NM
												6								
				3								~								
				16								300								
Rod type	ERC		—	RA64 RA64GS RA64GD	—	I	—		PM		—	16	—	300	—	N P S M X□□ W□□	—		B FT NM	
												8								
				4																
				4																

### ① Series

Indicate the name of the actuator series.

### ② Type

Indicate the classification by shape (slider or rod), size (SA6 or SA7), etc.

### ③ Encoder type

Indicate the type of the encoder installed in the actuator.

I: Incremental type - Since the slider position data are cleared each time the power is turned off, homing must be performed every time the actuator is powered up.

All ERC Series actuators are equipped with an incremental encoder, so "I" is shown here in all model names.

### ④ Motor

Indicate the type of the motor installed in the actuator.

All ERC Series actuators are equipped with a pulse motor, so "PM" is shown here in all model names.

### ⑤ Lead

Indicate the lead of the ball screw.

"Lead" refers to the distance the slider moves when the ball screw rotates by one revolution.

The larger the lead, the faster the maximum speed becomes.

### ⑥ Stroke

Indicate the actuator stroke (operating range) (unit: mm).

### ⑦ Cable length

Indicate the length of the power & I/O cable connecting the actuator to the power supply (24 VDC) and PLC.

N: No cable P: 1m

S: 3m M: 5m

X□□: Fill in these boxes to specify a length other than 1, 3 or 5 m (e.g., X08=8m). (Maximum cable length: 10m)

W□□: Fill in these boxes to specify the length of a cable with connectors on both ends for use with a PIO terminal block (e.g., W03=3m cable with connectors on both ends).

### ⑧ Options

Indicate a desired option to be equipped on the actuator.

When selecting multiple options, enter them in alphabetical order (e.g., FT-NM).

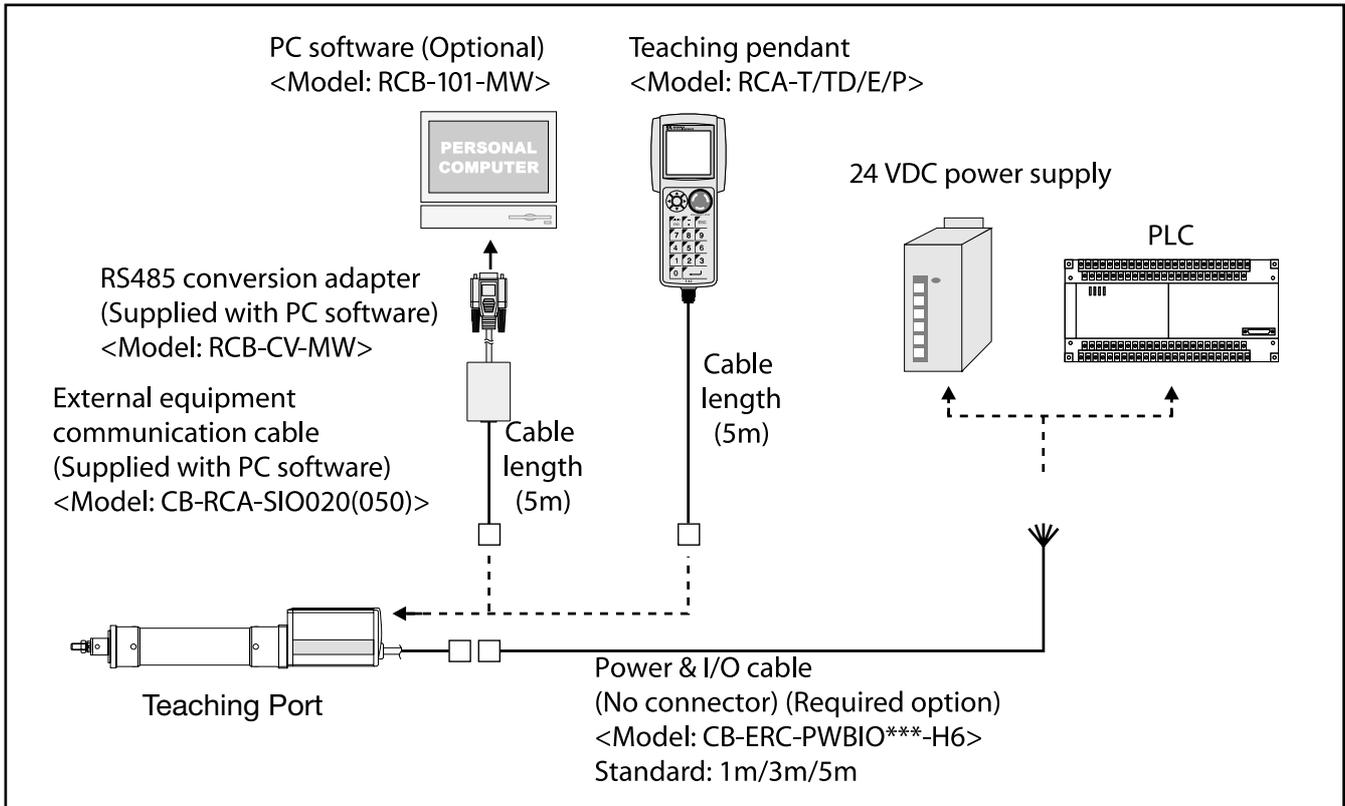
B: [Brake] A brake for preventing the slider (rod) from falling in a vertical application when the power is cut off or the servo is turned off.

FT: [Foot bracket] A bracket for affixing the rod type actuator from above using bolts (refer to page 23).

NM: [Reverse homing specification] Normally the home is set on the motor side. Enter this option to specify the home on the non-motor side.

# System Configuration Diagram

## Pause Input



## Basic Diagram

Name	Model	Remarks	Page
Teaching Pendant (high function type)	RCA-T	Position data input, actuator test operation, etc.	P28
Teaching Pendant (with deadman switch)	RCA-TD	RCA-T with a deadman switch	
Teaching Pendant (simple type)	RCA-E	Economical version of RCA-T	
Data Setting Unit	RCA-P	Used exclusively for data input (cannot be used for actuator operation)	
PC Software	RCB-101-MW	Position data input, actuator test operation, etc.	P30
Power & I/O Cable (connectors on both ends)	CB-ERC-PWBIO***-H6	Power & I/O cable for use with an insulated PIO terminal block	
Insulated PIO Terminal Block	RCB-TU-PIO-A	Vertical mounting specification	P10
	RCB-TU-PIO-B	Horizontal mounting specification	
SIO Converter	RCB-TU-SIO-A	Vertical mounting specification	P10
	RCB-TU-SIO-B	Horizontal mounting specification	

## Precautions for Use

The enclosure of the ERC Series is not dustproof or splash-proof.  
If your ERC actuator will be used in an environment subject to water, oil or significant dust, please contact your IAI sales representative.

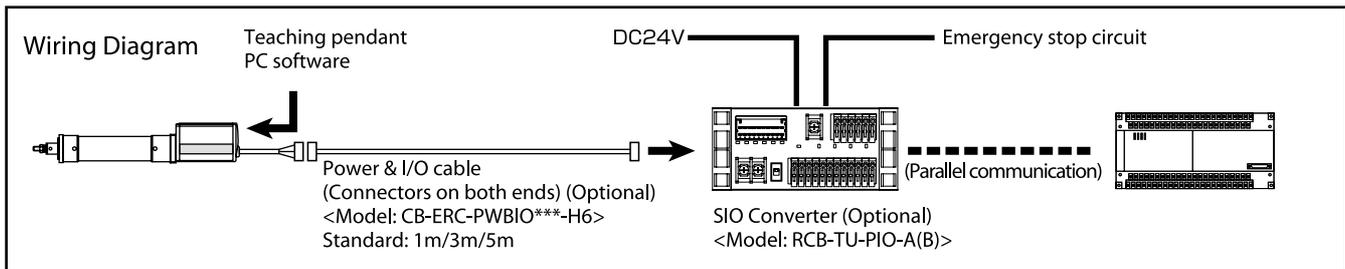
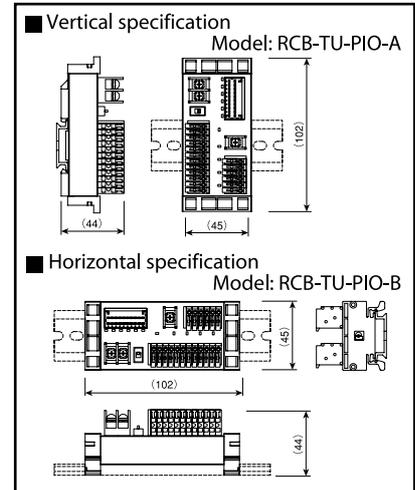
### Insulated PIO Terminal Block

A terminal block for facilitating wiring with the PLC  
 When this terminal block is used, the power & I/O cable must be of the optional specification with connectors on both ends.

Features •The I/O ports are nonpolar, so they accept a PLC of either the NPN or PNP I/O specification.

•This terminal block is equipped with I/O signal monitor LEDs that can be used to check the ON/OFF status of each signal.

Specifications	Item	Specification
	Power supply voltage	DC24V±10%
	Operating temperature, humidity	0~55°C, 85%RH or less (non-condensing)
Input	Number of input points	6 points
	Input voltage	±24V ±10%
	Input current	7mA/point (bipolar)
	Allowable leak current	1mA/point (app. 2mA in normal temp.)
	Operating voltage (with respect to GND)	Input ON: ±16V or more (4.5mA)/ OFF: ±5V or less (1.3mA)
Output	Number of output points	4 points
	Rated load voltage	±24V
	Maximum current	±60mA/point
	Residual voltage	2V or less/60mA
	Short/overcurrent protection	Fuse (27Ω 0.1W)



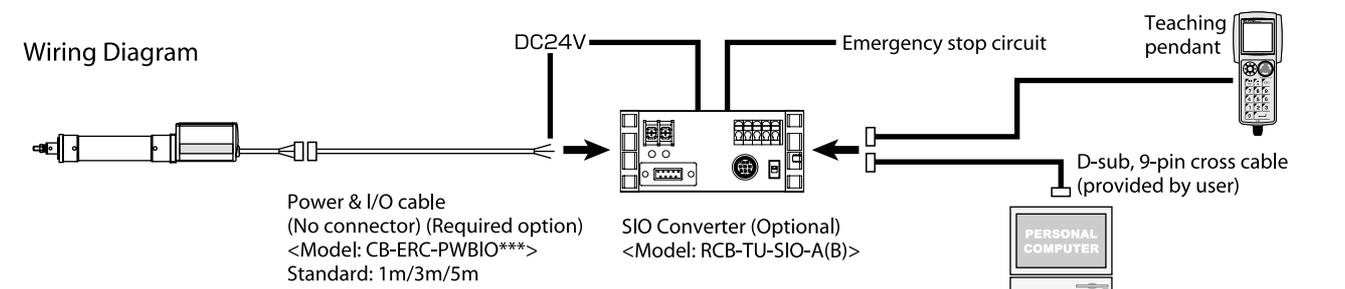
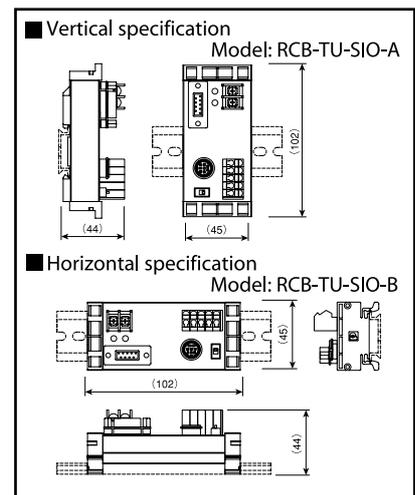
### SIO Converter

This converter connects the serial communication lines (SGA, SGB) of the power & I/O cable, allowing for RS232 communication using a D-sub, 9-pin cross cable for PC connection.

Features •The connection end of the teaching pendant or PC cable can be set in a desired position away from the actuator.

•Multiple axes can be connected and operated from the PC via serial communication (refer to page 21 for details).

Specifications	Item	Specification
	Power supply voltage	DC24V±10%
	Operating temperature, humidity	0~55°C, 85%RH
	Terminal resistor	120Ω



# Points to Note

## Notes on Catalog Specifications <Common to all models>

### Speed

"Speed" refers to the specified speed at which the actuator slider (or rod) will move. The slider accelerates from a stationary state, and once the specified speed is reached it will maintain that speed until immediately before the target position (specified position), where it will begin decelerating to a stop at the target position.

<Caution>

- ① The maximum speed of the ERC Series will vary according to the weight of the load placed on the slider (rod). Select an appropriate model by referring to "Correlation Diagrams of Speed and Load Capacity" on pages 13 and 14.
- ② The time needed to reach the specified speed will vary according to the acceleration (deceleration).
- ③ If the travel distance is short, the specified speed may not be reached.
- ④ As for the SA6 slider type with a 600mm stroke or RA54 rod type with a 300mm stroke, the maximum speed will drop to avoid reaching a dangerous speed. (Check the maximum speed for the applicable stroke in the corresponding dimensional drawing.)
- ⑤ When calculating the travel time, consider acceleration, deceleration and stabilization periods in addition to the travel time at the specified speed.
- ⑥ Speed can be set in increments of 1mm/sec in position data.

### Acceleration/Deceleration

"Acceleration" refers to the rate of change of speed when the speed rises from zero (stationary state) to the specified speed.  
 "Deceleration" refers to the rate of change of speed when the specified speed drops to zero (stationary state).  
 In the programs, both are specified in "G" (0.3G = 2940 mm/sec<sup>2</sup>).

<Caution>

- ① Increasing the acceleration (deceleration) will shorten the duration the actuator accelerates (decelerates) and decrease the travel time. However, doing so will also cause rapid acceleration (deceleration), resulting in increased shock.
- ② The rated acceleration is 0.3G for the slider type (or 0.2G if the lead is 3 or 4mm or in the case of a vertical application), and 0.2G for the rod type in both horizontal and vertical applications. (The load capacity is set based on the rated acceleration.)
- ③ If the ERC Series is operated at an acceleration (deceleration) exceeding the rated acceleration, its life may be significantly reduced or breakdown may occur. Be sure to use an acceleration/deceleration setting not exceeding the rated acceleration, or use a single-axis robot of the high-acceleration/deceleration type. (The ISPA Series supports the maximum acceleration of 1G). Note that increasing the acceleration (deceleration) will decrease the load capacity from the level corresponding to the rated acceleration.

### Positioning Repeatability

"Positioning repeatability" refers to the positioning accuracy of repeated movements to a pre-stored position. This is not the same as "absolute positioning accuracy," so exercise caution.

### Home

The home is set on the motor side for the standard specification, or on the non-motor side for the reverse homing specification.

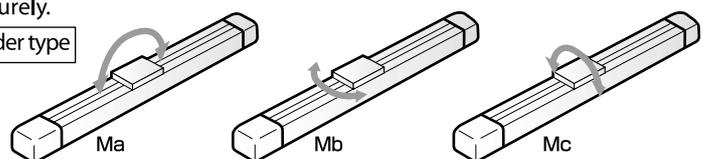
<Caution>

- ① An actuator with an incremental encoder always requires homing each time the power is reconnected.
- ② During homing the slider (or rod) will move to the mechanical end before reversing, so be careful to prevent contact with surrounding parts.

### Allowable Load Moment (Slider SA6, SA7)

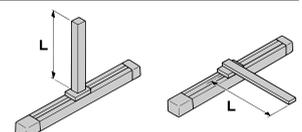
Each allowable load moment is calculated by assuming the life of the guide as 5,000 km. Exercise caution, because applying a moment exceeding the specified value will cause the guide to end its life prematurely.

Directions of load moment for slider type



### Overhung Load Length

When each model is used with an overhung load exceeding the allowable length, vibration or stabilization delay may result. Therefore, be sure to keep the overhung load length within the allowable value.



# Correlation Diagrams-Push Force & Current-Limiting Value

## Correlation Diagrams of Push Force & Current-Limiting Value

## Push & Hold Operation

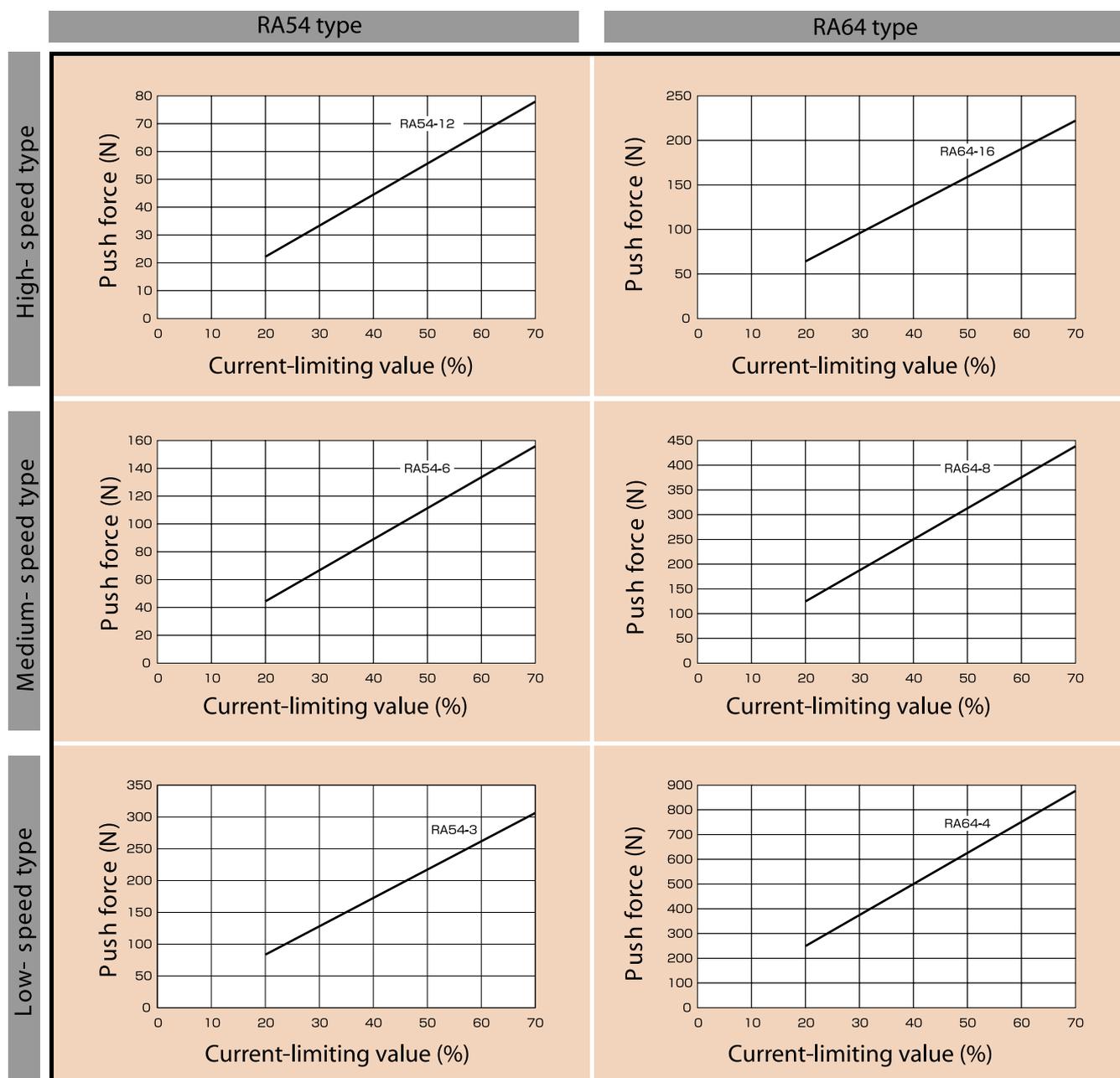
The push force used in push & hold operations can be changed freely by changing the controller's current-limiting value.

The maximum push force will vary according to the model. Confirm the required push force from the graphs below and select a type that meets your purpose.



### Precautions for Use

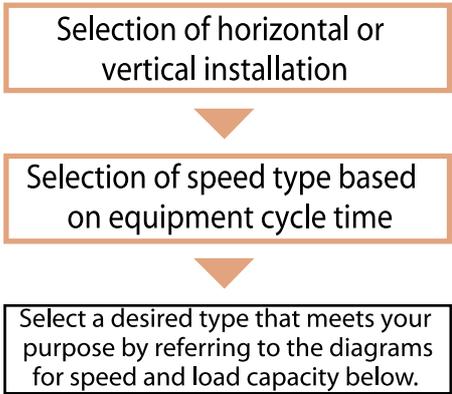
- The relationships of push force and current-limiting value are provided for reference only. The actual figures may vary slightly.
- If the current-limiting value is under 20%, the push force may become subject to fluctuation. Therefore, set the current-limiting value to 20% or more.



\* The figure after the type code indicates the lead.

# Correlation Diagrams - Speed & Load Capacity

ERC Slider Type



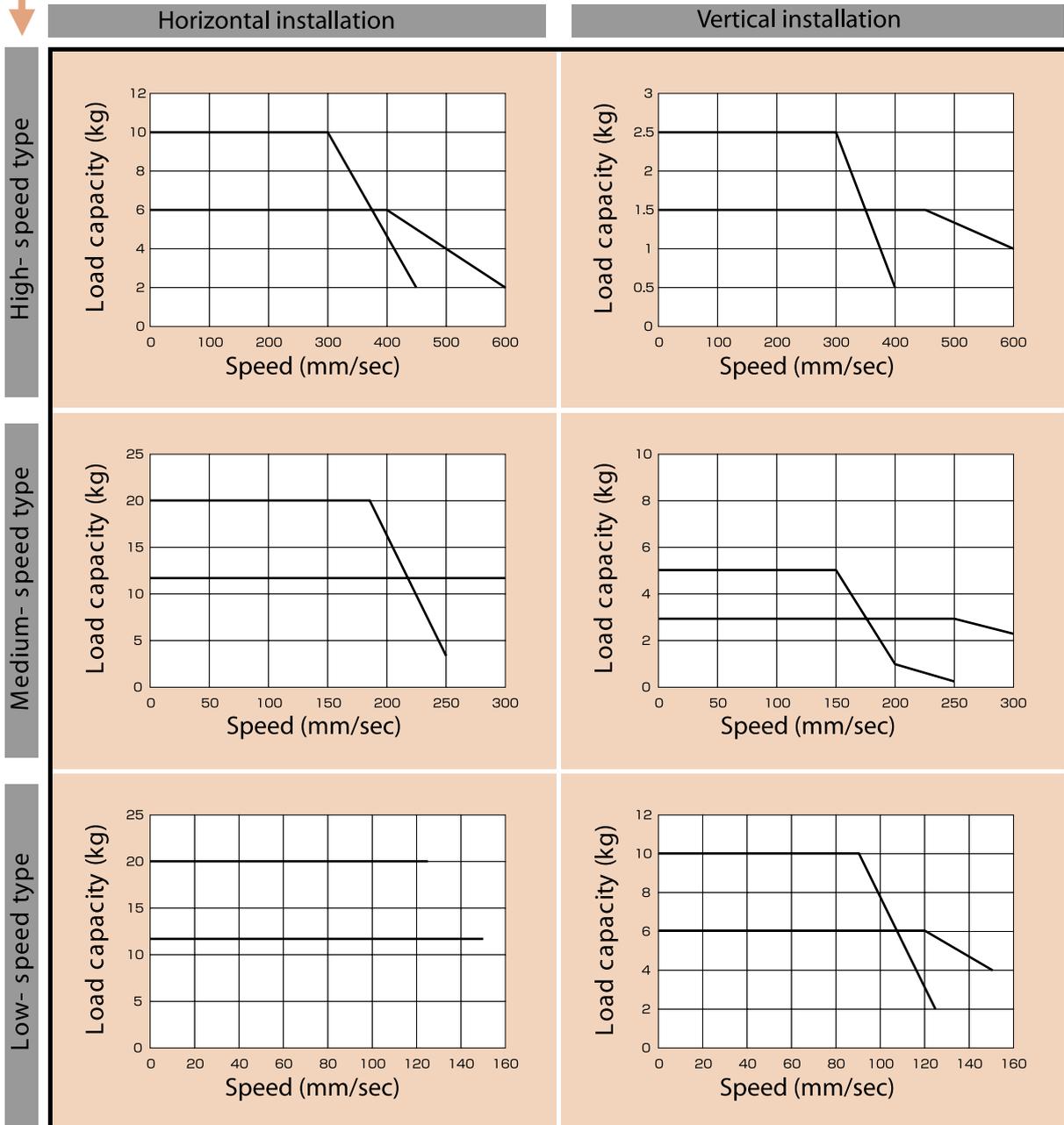
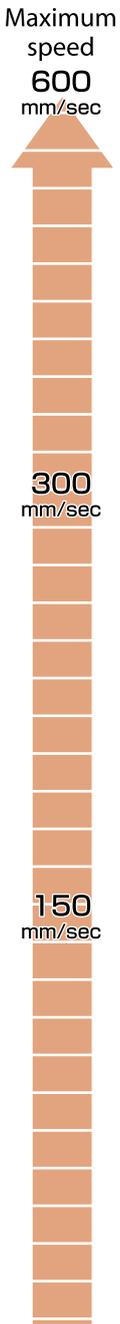
**⚠ Precautions for Use**

- If you are using the slider type and the load on the slider will extend considerably from the center, give consideration to the load moments and overhung load length.

**Load moments**  
 $M_a, M_b$  and  $M_c$  must be within the specified range of load moment.

**Overhung load length**  
 The specified value applies when the load's center of gravity is  $L/2$ . If the load extends in the direction of  $M_a, M_b$  or  $M_c$ , keep within the specified range.

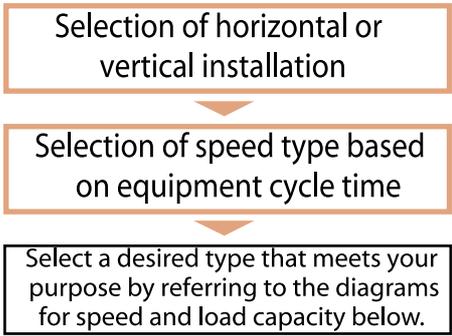
- Take note that with the SA6 type with a 600mm stroke, the maximum speed will be limited to avoid reaching a dangerous speed.  
 600mm stroke (lead 12: 515mm/sec, lead 6: 255 mm/sec, lead 3: 125mm/sec)



\* The figure after the type code indicates the lead.

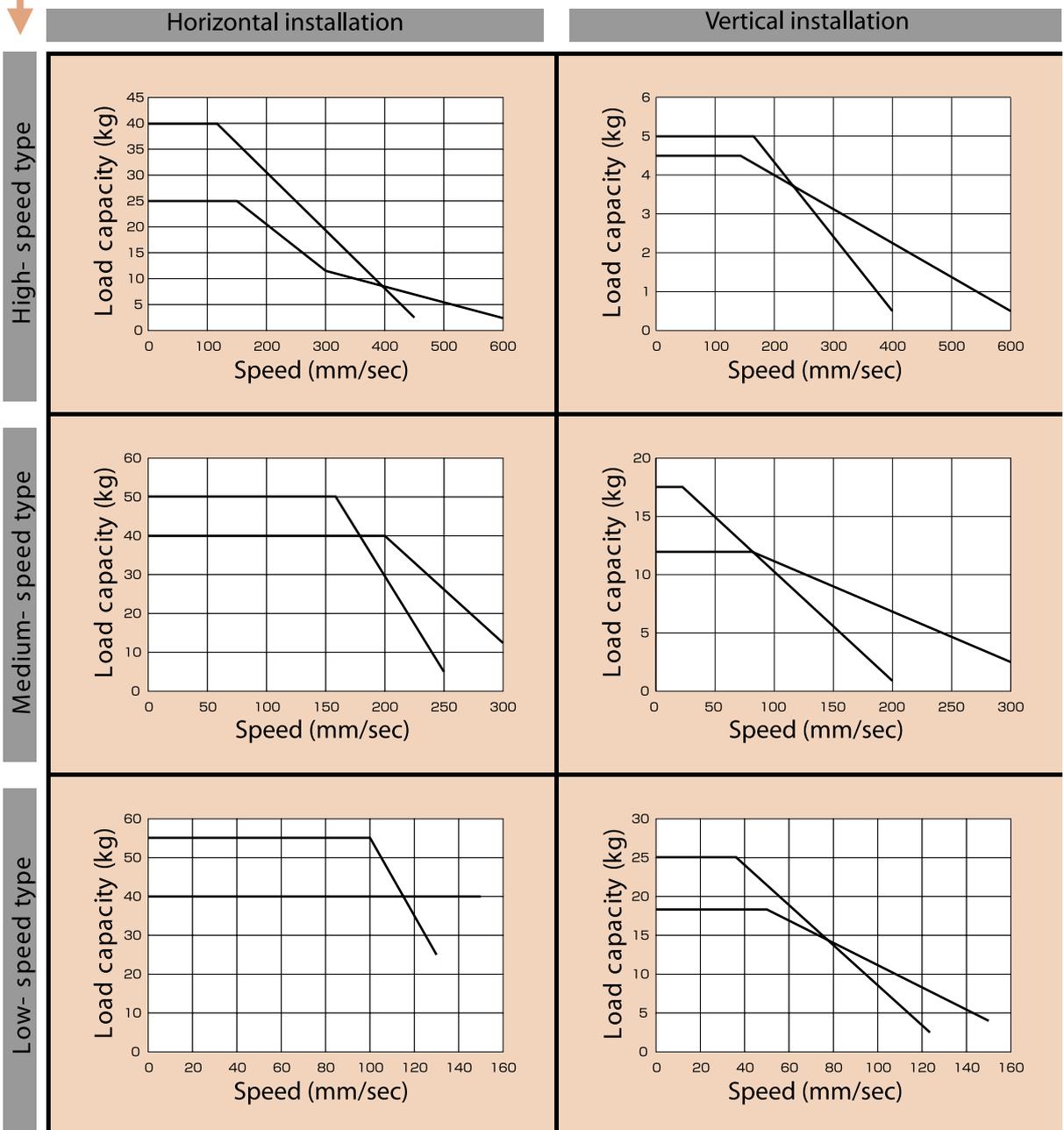
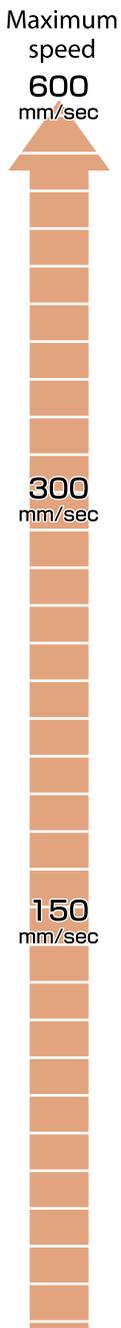
# Correlation Diagrams - Speed & Load Capacity

ERC Rod Type, Standard



**⚠ Precautions for Use**

- The rod type only considers external forces from the rod's direction of movement. If the rod will receive external forces from the vertical direction or rotary direction, it is highly recommended that you purchase a guide separately.
- Note that with the RA54 type with a 300mm stroke, the maximum speed will be limited to avoid reaching a dangerous speed.  
300mm stroke (lead 12: 500mm/sec, lead 6: 250mm/sec, lead 3: 125mm/sec)



\* The figure after the type code indicates the lead.

# ERC-SA6 Robo Cylinder Slider Type: Actuator Width 58mm, Pulse Motor, Straight Shape



Type	Slider (58mm)	Stroke	50~600mm	Load capacity	12kg (hor.)/6kg (vert.)			
Model specification items(Example)	ERC	SA6	I	PM	12	600	S	NM

\* Refer to page 8 for the details of model specification items.

### Model/Specification

Model	Encoder type	Motor (W)	Lead (mm)	Stroke (in 50mm increments) (mm)	Speed (Note 1) (mm/s)	Load capacity (Note 2)		Maximum push force (N)	Positioning repeatability (mm)
						Horizontal (kg)	Vertical (kg)		
ERC-SA6-I-PM-12-★-★-★-△-□	Incremental	Pulse motor	12	50~600	10~600	6~2	1.5~1	-	±0.05
ERC-SA6-I-PM-6-★-★-★-△-□			5~300		12	3~2.5	-		
ERC-SA6-I-PM-3-★-★-★-△-□			1~150		12	6~4	-		

### Options

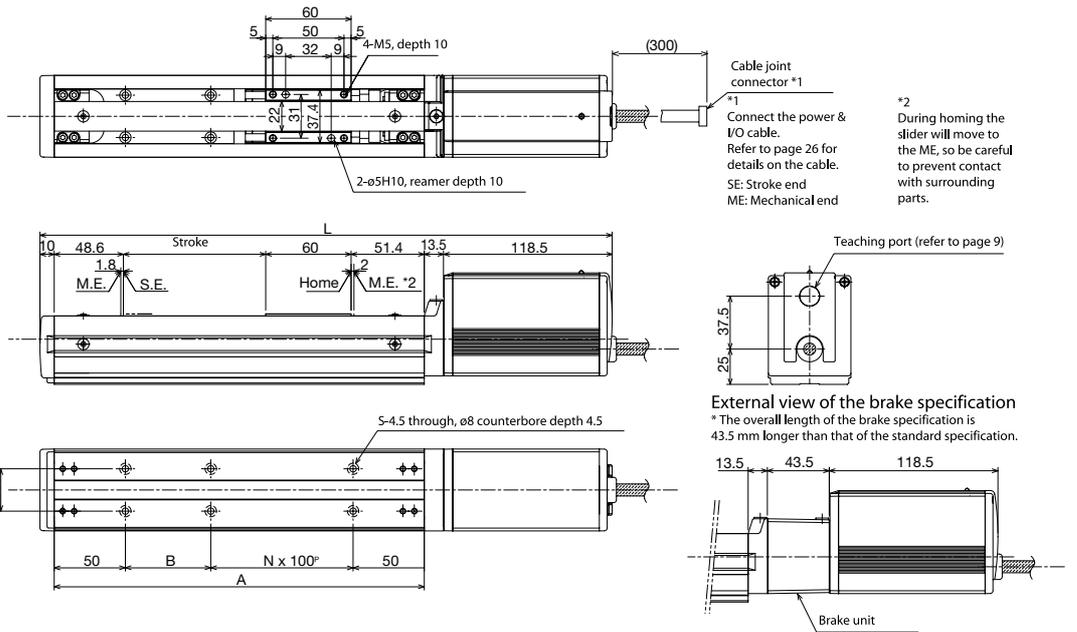
Model	Code	Page
Brake	B	→P27
Reverse homing specification	NM	→P27

### Common Specification \* Refer to page 8 for the details of common specification items.

Drive system	Ball screw ø10mm, rolled C10
Backlash	0.1mm or less
Cuide	Integrated with base
Allowable load moment	Ma: 8.9 Nm Mb: 12.7 Nm Mc: 18.6 Nm
Overhung load length	Ma direction: 150mm or less, Mb/Mc directions: 150mm or less
Base	Material: Aluminum with white alumite treatment
Cable length (Note3)	N: No cable, P: 1m, S: 3m, M: 5m, X□□: Length specification, W□□: Connectors on both ends

### Dimensions

\* With the reverse homing specification, the dimension on the motor side (distance from the mechanical end to the home) and that on the non-motor side are reversed.



### Dimensions, Weight and Maximum Speed by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	55	600
L	352	402	452	502	552	602	652	702	752	802	852	902
A	210	260	310	360	410	460	510	560	610	660	710	760
B	10	60	10	60	10	60	10	60	10	60	10	60
N	1	1	2	2	3	3	4	4	5	5	6	6
S	6	6	9	8	10	10	12	12	14	14	16	16
Weight (kg)	1.9	2.0	2.1	2.3	2.4	2.6	2.7	2.8	3.0	3.1	3.3	3.4
Maximum Lead	12											515
Speed Lead 6												300
Speed Lead 3												150

### Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Compatible encoder type	Program operation	Positioner operation	Pulse-train control	Power supply voltage	Page
Built-in	1 axis	Incremental	×	○	×	DC24V	P23

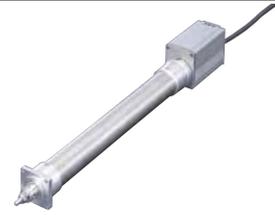
**Caution**

(Note1) A longer stroke will result in a lower maximum speed to prevent the ball screw from reaching a dangerous speed. (Refer to the above table for the maximum speed at a given stroke).  
 (Note2) Load capacity at the rated acceleration. (Refer to page 11).  
 (Note3) The maximum cable length is 10m. Specify the desired length in meters (e.g., X08 = 8m).

\* Refer to page 11 for the other points to note



# ERC-RA54 Robo Cylinder Slider Type: Flange Width 54mm, Pulse Motor, Straight Shape



Type	Rod (58mm) no guide	Stroke	50~300mm	Load capacity	40kg (hor./8kg (vert.))			
Model specification items (Example)	Series	Type	Encoder type	Motor	Lead	Stroke	Cable length	Option
	ERC	RA54	I	PM	12	300	S	B

\* Refer to page 8 for the details of model specification items.

### Model/Specification

Model	Encoder type	Motor (W)	Lead (mm)	Stroke (in 50mm increments) (mm)	Speed (Note 1) (mm/s)	Load capacity (Note 2)		Maximum push force (N)	Positioning repeatability (mm)
						Horizontal (kg)	Vertical (kg)		
ERC-RA54-I-PM-12-★ ★ ★ -△ □	Incremental	Pulse motor	12	50~300	10~600	25~2.5	4.5~0.5	78	±0.05
ERC-RA54-I-PM-6-★ ★ ★ -△ □			6		5~300	40~12	12~2.5	157	
ERC-RA54-I-PM-3-★ ★ ★ -△ □			3		1~150	40	18~4	304	

### Options

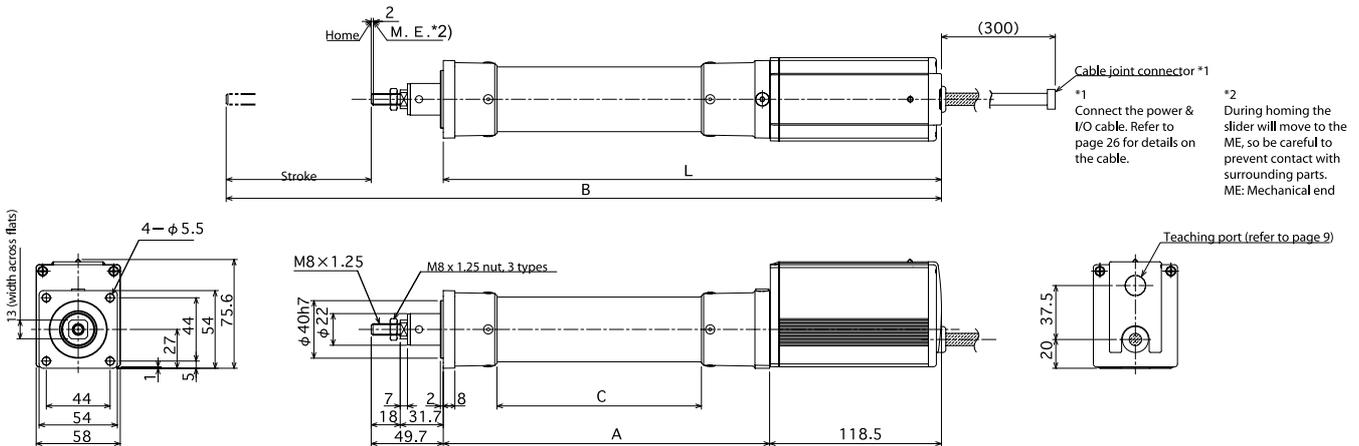
Model	Code	Page
Brake	B	→P27
Foot bracket	FT	→P27
Reversed-origin specification	NM	→P27

### Common Specification

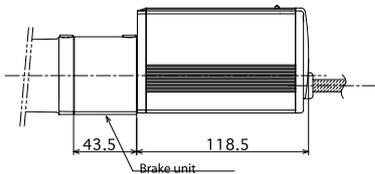
\* Refer to page 8 for the details of common specification items.

Drive system	Ball screw ø10mm, rolled C10
Backlash	0.1mm or less
Guide	No guide
Rod diameter	ø22mm dedicated SUS pipe
Rod non-rotation accuracy	±1.5°
Actuator	Pipe (ø45 SUS), flange (aluminum die-cast), motor cover (extruded aluminum)
Cable length (Note3)	N: No cable, P: 1m, S: 3m, M: 5m, X□□: Length specification, W□□: Connectors on both ends

### Dimensions



External view of the brake specification  
\* The overall length of the brake specification is 43.5 mm longer than that of the standard specification.



### Dimensions, Weight and Maximum Speed by Stroke

Stroke	50	100	150	200	250	300
L	293.5	343.5	393.5	443.5	493.5	543.5
A	175	225	275	325	375	425
B	293.2	493.2	593.2	693.2	793.2	893.2
C	91	141	191	241	291	341
Weight (kg)	1.6	1.7	1.8	2.0	2.1	2.2
Maximum Speed (mm/s)	Lead 12	600				500
	Lead 6	300				250
	Lead 3	150				125

### Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Compatible encoder type	Program operation	Positioner operation	Pulse-train control	Power supply voltage	Page
Built-in	1 axis	Incremental	×	○	×	DC24V	P23

**Caution**

(Note1) A longer stroke will result in a lower maximum speed to prevent the ball screw from reaching a dangerous speed. (Refer to the above table for the maximum speed at a given stroke).  
 (Note2) Load capacity at the rated acceleration. (Refer to page 11).  
 (Note3) The maximum cable length is 10m. Specify the desired length in meters (e.g., X08 = 8m).

\* Refer to page 11 for the other points to note

# ERC-RA64

Robo Cylinder Slider Type: Flange Width 64mm, Pulse Motor, Straight Shape



Type	Rod (68mm) no guide	Stroke	50~300mm	Load capacity	55kg (hor.)/25kg (vert.)			
Model specification items (Example)	Series	Type	Encoder type	Motor	Lead	Stroke	Cable length	Option
	ERC	RA64	I	PM	16	300	S	B

\* Refer to page 8 for the details of model specification items.

### Model/Specification

Model	Encoder type	Motor (W)	Lead (mm)	Stroke (in 50mm increments) (mm)	Speed (Note 1) (mm/s)	Load capacity (Note 2)		Maximum push force (N)	Positioning repeatability (mm)
						Horizontal (kg)	Vertical (kg)		
ERC-RA64-I-PM-16-★-★-★-△-□	Incremental	Pulse motor	16	50~300	10~450(400)	40~2	6~0.5	220	±0.05
ERC-RA64-I-PM-8-★-★-★-△-□			8		2~250(200)	50~3.5	17.5~1	441	
ERC-RA64-I-PM-4-★-★-★-△-□			4		1~125	50~25	25~2	873	

### Options

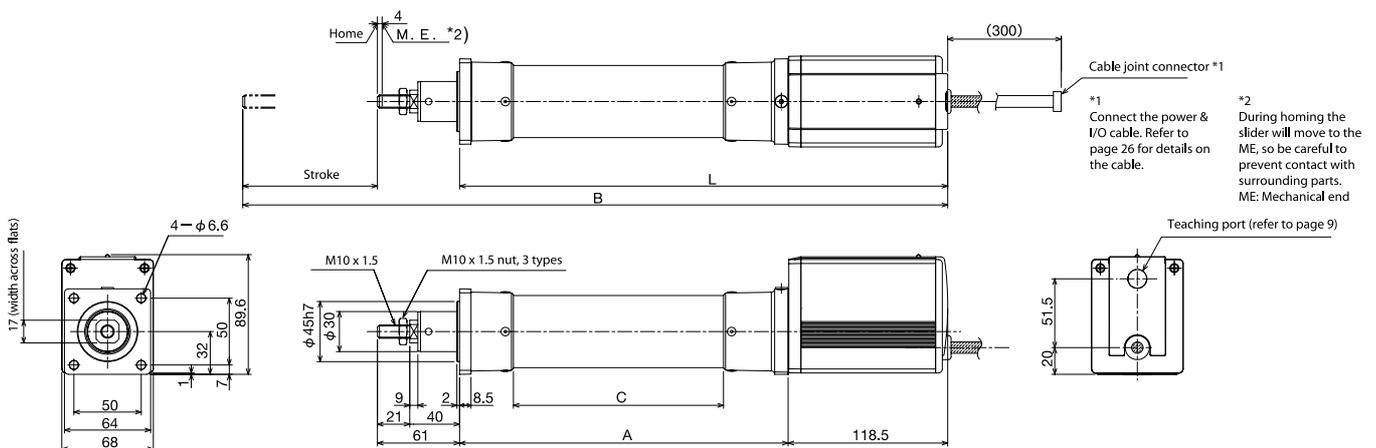
Model	Code	Page
Brake	B	→P27
Foot bracket	FT	→P27
Reversed-origin specification	NM	→P27

### Common Specification

\* Refer to page 8 for the details of common specification items.

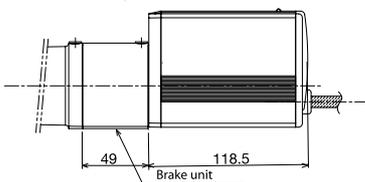
Drive system	Ball screw ø12mm, rolled C10
Backlash	0.1mm or less
Guide	No guide
Rod diameter	ø30mm dedicated SUS pipe
Rod non-rotation accuracy	±1.5°
Actuator	Pipe (ø55 SUS), flange (aluminum die-cast), motor cover (extruded aluminum)
Cable length (Note 3)	N: No cable, P: 1m, S: 3m, M: 5m, X□□: Length specification, W□□: Connectors on both ends

### Dimensions



External view of the brake specification

\* The overall length of the brake specification is 43.5 mm longer than that of the standard specification.



### Dimensions, Weight and Maximum Speed by Stroke

Stroke	50	100	150	200	250	300
L	312.5	362.5	412.5	462.5	512.5	562.5
A	194	244	294	344	394	444
B	423.5	523.5	623.5	723.5	823.5	923.5
C	106	156	206	256	306	356
Weight (kg)	2.7	2.9	3.0	3.2	3.3	3.5
Maximum Speed (mm/s)	450(400)					
	250(200)					
	125					

### Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Compatible encoder type	Program operation	Positioner operation	Pulse-train control	Power supply voltage	Page
Built-in	1 axis	Incremental	×	○	×	DC24V	P23



(Note 1) The figures in parentheses apply to a vertical application.

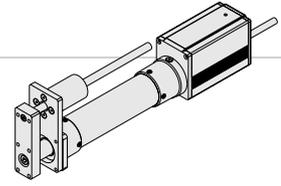
(Note 2) Load capacity at the rated acceleration (refer to page 11).

(Note 3) The maximum cable length is 10m. Specify the desired length in meters (e.g., X08 = 8m).

\* Refer to page 11 for the other points to note

# ERC-RA54GS

Robo Cylinder Slider Type: Flange Width 54 mm, Pulse Motor, Straight Shape, Parallel Single Guide



Type	Rod (58mm)	Stroke	50~300mm	Load capacity	40kg (hor.)/18kg (vert.)
------	------------	--------	----------	---------------	--------------------------

Model specification items (Example)	Series	Type	Encoder type	Motor	Lead	Stroke	Cable length	Option
	ERC	RA54GS	I	PM	12	300	S	FT

\* Refer to page 8 for the details of model specification items.

### Model/Specification

Model	Encoder type	Motor (W)	Lead (mm)	Stroke (in 50mm increments) (mm)	Speed (Note 1) (mm/s)	Load capacity (Note 2)		Maximum push force (N)	Positioning repeatability (mm)
						Horizontal (kg)	Vertical (kg)		
ERC-RA64-I-PM-16-★ ★ ★-△-□	Incremental	Pulse motor	12	50~300	10~600	25~2.5	4.5~0.5	78	±0.05
ERC-RA64-I-PM-8-★ ★ ★-△-□			6		5~300	40~12	12~2.5	157	
ERC-RA64-I-PM-4-★ ★ ★-△-□			3		1~150	40	18~4	304	

### Options

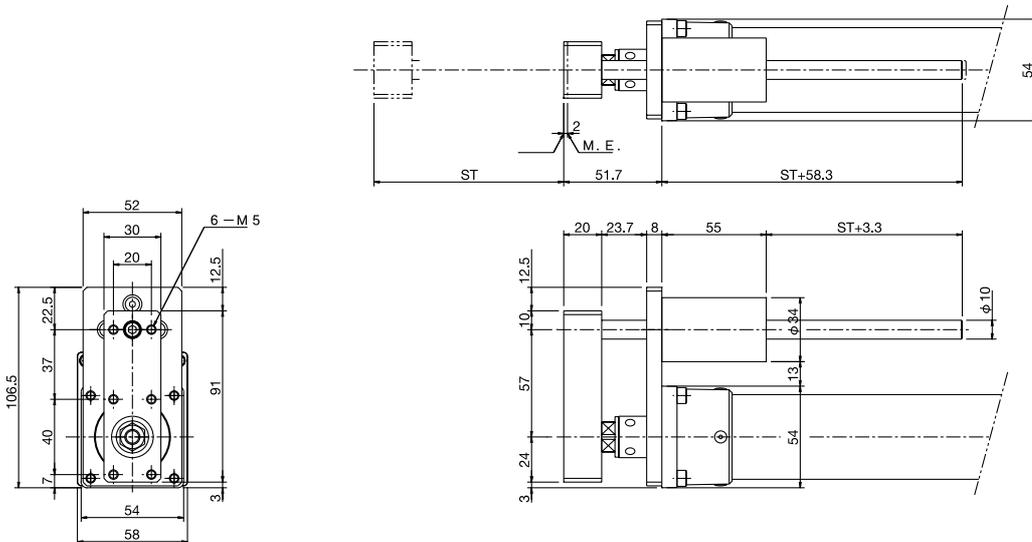
Model	Code	Page
Foot bracket	FT	→P27

### Common Specification

\* Refer to page 8 for the details of common specification items.

Drive system	Ball screw $\phi$ 12mm, rolled C10
Backlash	0.1mm or less
Guide	Single guide $\phi$ 10 mm
Rod diameter	$\phi$ 30mm dedicated SUS pipe
Rod non-rotation accuracy	$\pm$ 0.05°
Actuator	Pipe ( $\phi$ 55 SUS), flange (aluminum die-cast), motor cover (extruded aluminum)
Cable length (Note 3)	N: No cable, P: 1m, S: 3m, M: 5m, X□□: Length specification, W□□: Connectors on both ends

### Dimensions



### Weight and Maximum Speed by Stroke

Stroke	50	100	150	200	250	300
Weight/Guide (kg)	0.2	0.2	0.3	0.3	0.3	0.4
Weight/Full (kg)	1.8	1.9	2.1	2.3	2.4	2.6
Maximum Speed (mm/s)	600		300		150	
Lead 16	500		250		125	
Lead 8	300		150		75	
Lead 4	150		75		37.5	

### Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Compatible encoder type	Program operation	Positioner operation	Pulse-train control	Power supply voltage	Page
Built-in	1 axis	Incremental	×	○	×	DC24V	P23

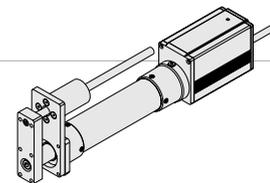


(Note 1) The figures in parentheses apply to a vertical application.  
 (Note 2) Load capacity at the rated acceleration (refer to page 11).  
 (Note 3) The maximum cable length is 10m. Specify the desired length in meters (e.g., X08 = 8m).

\* Refer to page 11 for the other points to note

# ERC-RA64GS

Robo Cylinder Slider Type: Flange Width 64 mm, Pulse Motor, Straight Shape, Parallel Single Guide



Type	Rod (68mm)	Stroke	50~300mm	Load capacity	55kg (hor.)/25kg (vert.)			
Model specification items (Example)	Series	Type	Encoder type	Motor	Lead	Stroke	Cable length	Option
	ERC	RA64GS	I	PM	8	300	S	FT

\* Refer to page 8 for the details of model specification items.

### Model/Specification

Model	Encoder type	Motor (W)	Lead (mm)	Stroke (in 50mm increments) (mm)	Speed (Note 1) (mm/s)	Load capacity (Note 2)		Maximum push force (N)	Positioning repeatability (mm)
						Horizontal (kg)	Vertical (kg)		
ERC-RA64-I-PM-16-★ ★ ★ -△-□	Incremental	Pulse motor	16	50~300	0~450(400)	40~2	6~0.5	220	±0.05
ERC-RA64-I-PM-8-★ ★ ★ -△-□			8		2~250(200)	50~3.5	17.5~1	441	
ERC-RA64-I-PM-4-★ ★ ★ -△-□			4		1~125	50~25	25~2	873	

### Options

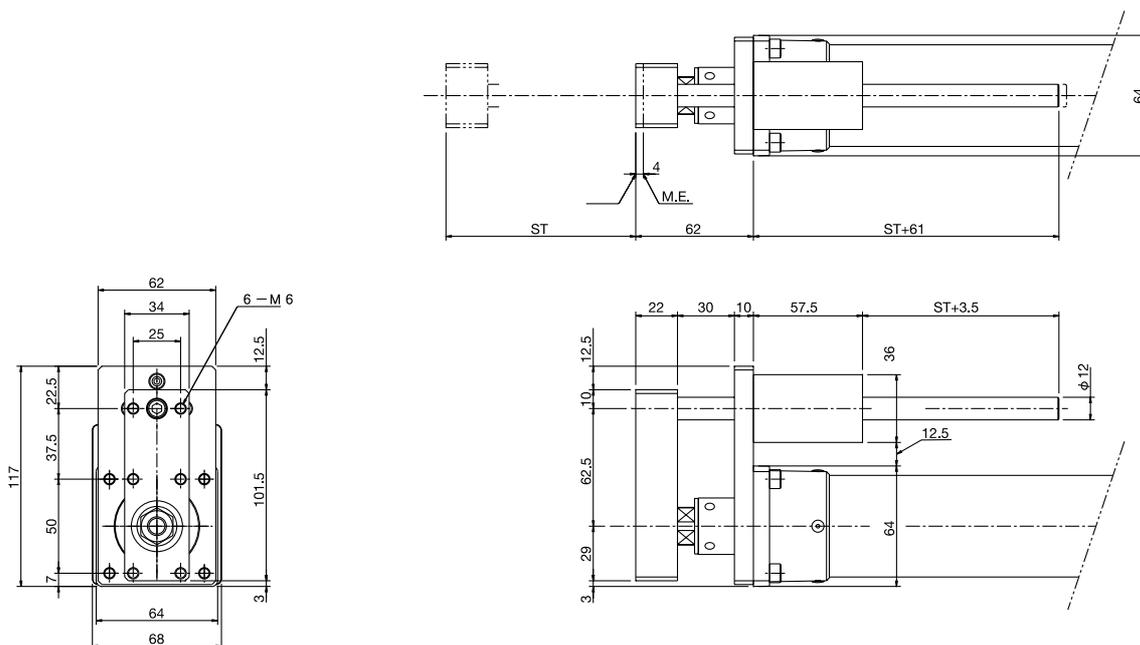
Model	Code	Page
Foot bracket	FT	→P27

### Common Specification

\* Refer to page 8 for the details of common specification items.

Drive system	Ball screw ø12mm, rolled C10
Backlash	0.1mm or less
Guide	Double guide ø 12 mm
Rod diameter	ø30mm dedicated SUS pipe
Rod non-rotation accuracy	±0.05°
Actuator	Pipe (ø55 SUS), flange (aluminum die-cast), motor cover (extruded aluminum)
Cable length (Note3)	N: No cable, P: 1m, S: 3m, M: 5m, X□□: Length specification, W□□: Connectors on both ends

### Dimensions



### Weight and Maximum Speed by Stroke

Stroke	50	100	150	200	250	300
Weight/Guide (kg)	0.5	0.6	0.7	0.8	0.9	1.0
Weight/Full (kg)	3.2	3.5	3.7	4.0	4.2	4.5
Maximum Speed (mm/s)	Lead 16					
	450(400)					
	Lead 8					
250(200)						
Lead 4						
125						

### Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Compatible encoder type	Program operation	Positioner operation	Pulse-train control	Power supply voltage	Page
Built-in	1 axis	Incremental	×	○	×	DC24V	P23

(Note1) The figures in parentheses apply to a vertical application.

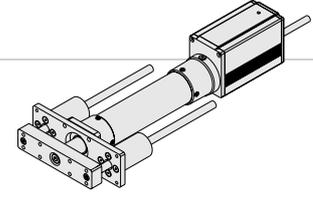
(Note2) Load capacity at the rated acceleration (refer to page 11).

(Note3) The maximum cable length is 10m. Specify the desired length in meters (e.g., X08 = 8m).

\* Refer to page 11 for the other points to note

# ERC-RA54GD

Robo Cylinder Slider Type: Flange Width 159 mm, Pulse Motor, Straight Shape, Parallel Single Guide



Type	Rod (58mm)	Stroke	50~300mm	Load capacity	40kg (hor.)/18kg (vert.)
------	------------	--------	----------	---------------	--------------------------

Model specification items (Example)	Series	Type	Encoder type	Motor	Lead	Stroke	Cable length	Option
ERC-RA54GD-I-				PM	6	300	S	FT

\* Refer to page 8 for the details of model specification items.

### Model/Specification

Model	Encoder type	Motor (W)	Lead (mm)	Stroke (in 50mm increments (mm))	Speed (Note 1) (mm/s)	Load capacity (Note 2)		Maximum push force (N)	Positioning repeatability (mm)
						Horizontal (kg)	Vertical (kg)		
ERC-RA64-I-PM-16-★ ★ ★ -△-□	Incremental	Pulse motor	12	50~300	10~600	25~2.5	4.5~0.5	78	±0.05
ERC-RA64-I-PM-8-★ ★ ★ -△-□			6		5~300	40~12	12~2.5	157	
ERC-RA64-I-PM-4-★ ★ ★ -△-□			3		1~150	40	18~4	304	

### Options

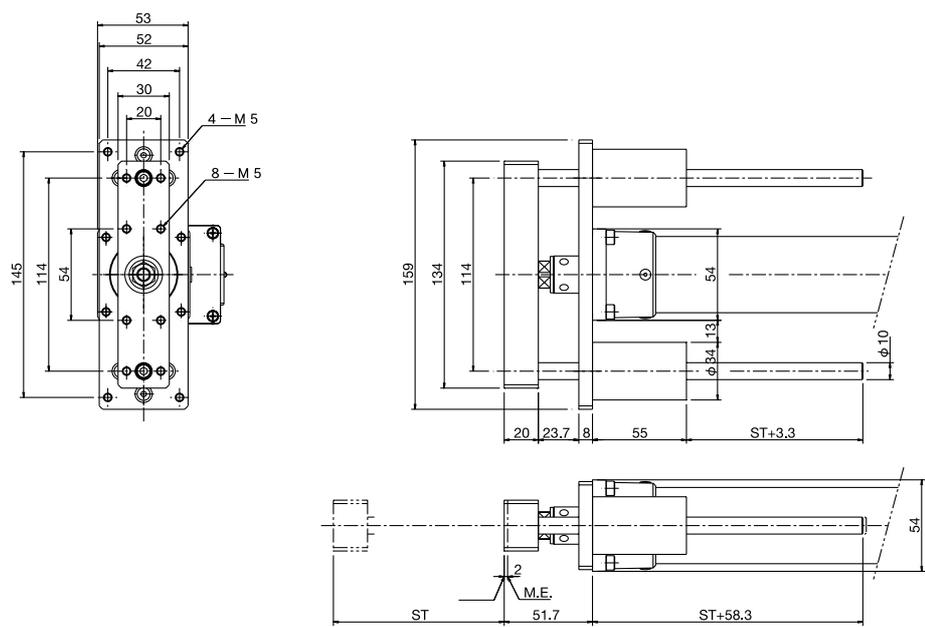
Model	Code	Page
Foot bracket	FT	→P27

### Common Specification

\* Refer to page 8 for the details of common specification items.

Drive system	Ball screw ø12mm, rolled C10
Backlash	0.1mm or less
Guide	Double guide ø 10 mm
Rod diameter	ø30mm dedicated SUS pipe
Rod non-rotation accuracy	±0.05°
Actuator	Pipe (ø55 SUS), flange (aluminum die-cast), motor cover (extruded aluminum)
Cable length (Note 3)	N: No cable, P: 1m, S: 3m, M: 5m, X□□: Length specification, W□□: Connectors on both ends

### Dimensions



### Weight and Maximum Speed by Stroke

Stroke	50	100	150	200	250	300
Weight/Guide (kg)	0.4	0.4	0.5	0.6	0.6	0.7
Weight/Full (kg)	2.0	2.1	2.3	2.6	2.7	2.9
Maximum Speed (mm/s)	600		300		150	
Lead	16		8		4	
	500		250		125	

### Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Compatible encoder type	Program operation	Positioner operation	Pulse-train control	Power supply voltage	Page
Built-in	1 axis	Incremental	×	○	×	DC24V	P23

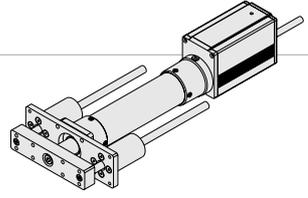


(Note 1) The figures in parentheses apply to a vertical application.  
 (Note 2) Load capacity at the rated acceleration (refer to page 11).  
 (Note 3) The maximum cable length is 10m. Specify the desired length in meters (e.g., X08 = 8m).

\* Refer to page 11 for the other points to note

# ERC-RA64GD

Robo Cylinder Slider Type: Flange Width 170 mm, Pulse Motor, Straight Shape, Parallel Double Guide



Type	Rod (68mm)	Stroke	50~300mm	Load capacity	55kg (hor.)/25kg (vert.)
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Model specification items (Example)	Series	Type	Encoder type	Motor	Lead	Stroke	Cable length	Option
ERC-RA64GD-I-				PM	8	300	S	FT

\* Refer to page 8 for the details of model specification items.

## Model/Specification

Model	Encoder type	Motor (W)	Lead (mm)	Stroke (in 50mm increments) (mm)	Speed (Note 1) (mm/s)	Load capacity (Note 2)		Maximum push force (N)	Positioning repeatability (mm)
						Horizontal (kg)	Vertical (kg)		
ERC-RA64-I-PM-16-★-★-△-□	Incremental	Pulse motor	16	50~300	10~450(400)	40~2	6~0.5	220	±0.05
ERC-RA64-I-PM-8-★-★-△-□			8		2~250(200)	50~3.5	17.5~1	441	
ERC-RA64-I-PM-4-★-★-△-□			4		1~125	50~25	25~2	873	

## Options

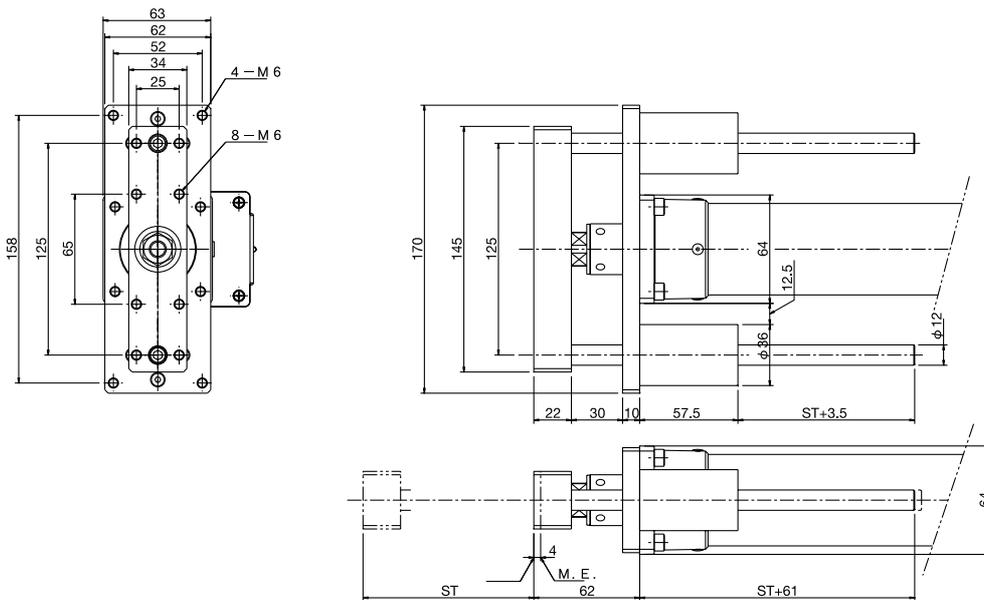
Model	Code	Page
Foot bracket	FT	→P27

## Common Specification

\* Refer to page 8 for the details of common specification items.

Drive system	Ball screw $\phi$ 12mm, rolled C10
Backlash	0.1mm or less
Guide	Double guide $\phi$ 12 mm
Rod diameter	$\phi$ 30mm dedicated SUS pipe
Rod non-rotation accuracy	$\pm$ 0.05°
Actuator	Pipe ( $\phi$ 55 SUS), flange (aluminum die-cast), motor cover (extruded aluminum)
Cable length (Note3)	N: No cable, P: 1m, S: 3m, M: 5m, X□□: Length specification, W□□: Connectors on both ends

## Dimensions



## Weight and Maximum Speed by Stroke

Stroke	50	100	150	200	250	300
Weight/Guide (kg)	0.5	0.6	0.7	0.8	0.9	1.0
Weight/Full (kg)	3.2	3.5	3.7	4.0	4.2	4.5
Maximum Speed (mm/s)	Lead 16 450(400)					
	Lead 8 250(200)					
	Lead 4 125					

## Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Compatible encoder type	Program operation	Positioner operation	Pulse-train control	Power supply voltage	Page
Built-in	1 axis	Incremental	×	○	×	DC24V	P23

(Note1) The figures in parentheses apply to a vertical application.

(Note2) Load capacity at the rated acceleration (refer to page 11).

(Note3) The maximum cable length is 10m. Specify the desired length in meters (e.g., X08 = 8m).

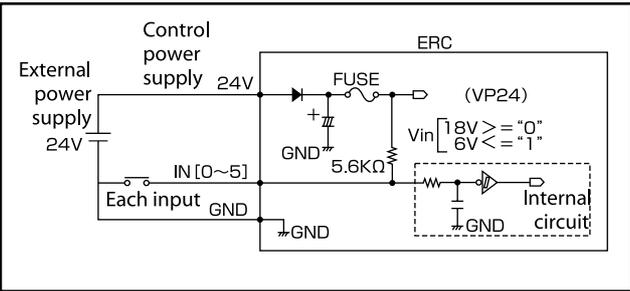
\* Refer to page 11 for the other points to note

# Explanation of Controller

## 1 I/O Wiring Diagrams

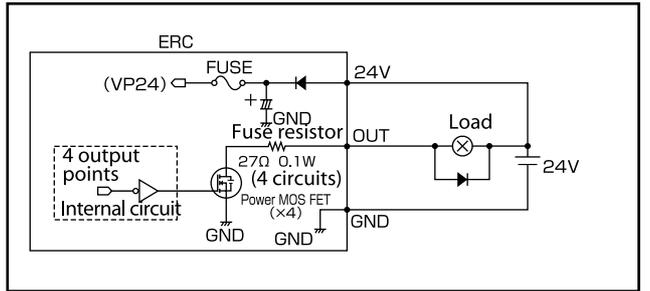
■ Input Specifications (Not insulated from the ERC actuator)

Specification item	Description
Number of input points	6 points
Input voltage	DC24V 10%
Input current	4mA/point
Leak current	1mA or less/point
Operating voltage (with respect to GND) Input	ON: Min6V (3.5mA) OFF: Max18V (1mA)



■ Output Specifications (Not insulated from the ERC actuator)

Specification item	Description
Number of input points	4 points
Rated load voltage	DC24V
Maximum current	60mA/point
Residual voltage	2V or less
Short/reverse-voltage protection	Fuse resistor (27W,0.1W)



## 2 I/O Signal Table

Pin No.	Category	Wire color	Signal abbreviation	Signal name
1A	SIO	Orange (red 1)	SGA	Serial communication
1B		Orange (black 1)	SGB	Serial communication
2A	Signal	Light blue (red 1)	EMS1	Emergency stop
2B	Signal	Light blue (black 1)	EMS2	Emergency stop
3A	24V	White (red 1)	24V	Positive side of the main power supply
3B	0V	White (black 1)	BKR	Brake release
4A	24V	Yellow (red 1)	MPI	Motor drive power supply, 24V
4B	0V	Yellow (black 1)	GND	Power supply, 0V
5A	24V	Pink (red 1)	MPI	Motor drive power supply, 24V
5B	0V	Pink (black 1)	GND	Power supply, 0V
6A	Input	Orange (red 2)	PC1	Command position number 1
6B		Orange (black 2)	PC2	Command position number 2
7A		Light blue (red 2)	PC4	Command position number 4
7B		Light blue (black 2)	HOME	Home
8A		White (red 2)	CSTR	Start
8B		White (black 2)	*STP	Pause
9A	Output	Yellow (red 2)	PEND	Position complete
9B		Yellow (black 2)	HEND	Home complete
10A		Pink (red 2)	ZONE	Zone
10B		Pink (black 2)	*ALM	Alarm

(Note) The signals indicated by \* (ALM and STP) use the negative logic, so they remain ON in normal conditions of use.

### 3 Explanation of Signal Names

Category	Signal name	Signal abbreviation	Function overview
SIO	Serial communication	SGA SGB	Used to establish serial communication (refer to page 21).
24V 0V	Emergency stop	EMS1 EMS2	Wiring for enabling the emergency stop switch on the teaching pendant (refer to page 22). (Allowable current: 60 mA)
	Brake release	BKR	Connect to 0V to forcibly release the brake (150 mA is required).
Input	Command position number	PC1 PC2 PC4	The target position number is specified using a three-bit binary signal. (Example) Position 3 Input to PC1 and PC2. Position 7 Input to PC1, PC2 and PC4.
	Origin return	HOME	Signal to begin origin return operation.
	Start	CSTR	This signal inputs a command position number. When the Start signal turns ON, the actuator will start moving to the specified position.
	Pause	*STP	The actuator will decelerate to a stop at a fall of this signal (ON → OFF).
Output	Position complete	PEND	This signal will turn ON when the actuator enters the specified positioning width after moving to the target position and completing positioning.
	Origin return complete	HEND	It is used to determine that origin return has been completed.
	Zone	ZONE	This signal will turn ON when the actuator enters the zone signal range set by the applicable parameters.
	Alarm	*ALM	It is synchronized with the LED on top of the motor cover. (A green lamp illuminates in normal conditions of use, and a red lamp will come on when an alarm generates)

(Note) The signals indicated by \* (ALM and STP) use the negative logic, so they remain ON in normal conditions of use.

### 4 Specification Table

Specification item	Description	
Control method	Weak field-magnet vector control (patent pending)	
Positioning command	Position number specification	
Position number	Maximum 8 points	
Backup memory	Position number data and parameters are saved in the nonvolatile memory The serial EEPROM can be rewritten 100,000 times	
PIO	6 dedicated inputs / 4 dedicated outputs	
Electromagnetic brake	Built-in circuit, 24VDC±10%, 0.15A or less	
Two-color LED indicator	Two-color LED indicator Servo ON (green), Alarm/motor drive-power cutoff (red)	
I/F power supply	I/F power supply, common with the control power supply (not insulated)	
Serial communication	RS485 1channel (terminated externally)	
Absolute function	None	
Forced release of electromagnetic brake	Connect to 0V to forcibly release the brake	
Cable length	I/F cables: 10m or less	
	SIO connector communication cable: 5m or less	
Insulation strength	DC500V 10MΩ	
EMC	EN55011 Class A Group 1 (3m)	
Power supply voltage	24V± 10%	
Current	2A or less	
Environment	Operating temperature	0~40 °C
	Operating humidity	85% RH or less (non-condensing)
	Operating environment	Not subject to corrosive gases
Protection class	IP20	

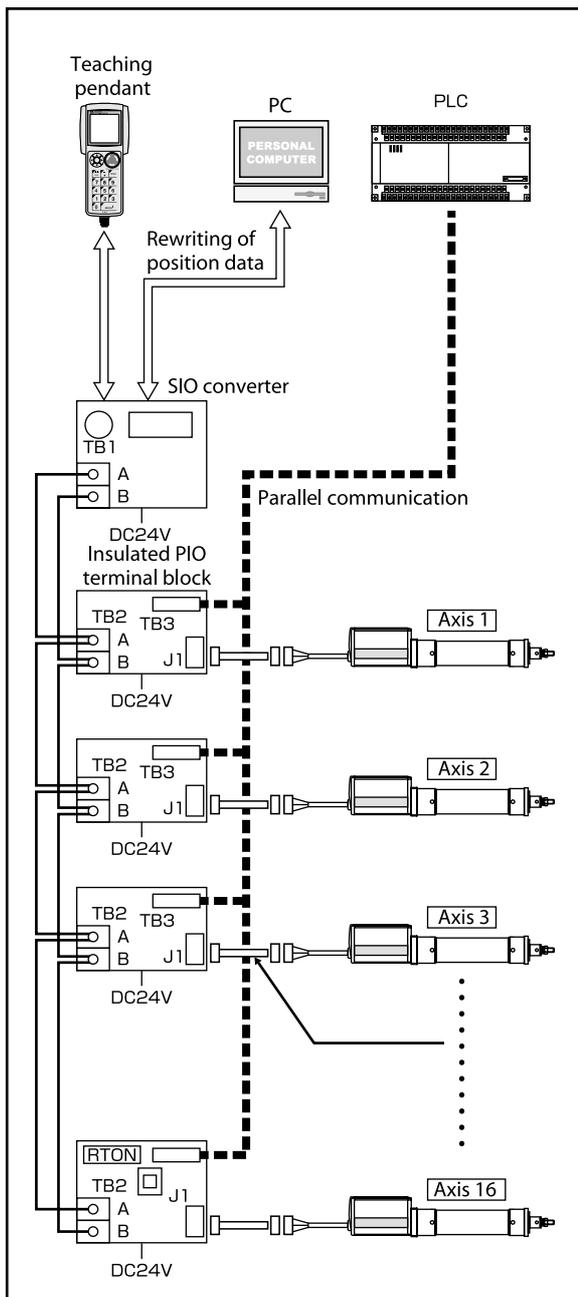
# Connection for Multiple Axes Control via Serial Communication

By using the optional insulated PIO terminal block or SIO converter, position data for multiple axes can be rewritten from a single SIO converter or multiple axes can be operated from the PC via serial communication.

## Basic specifications

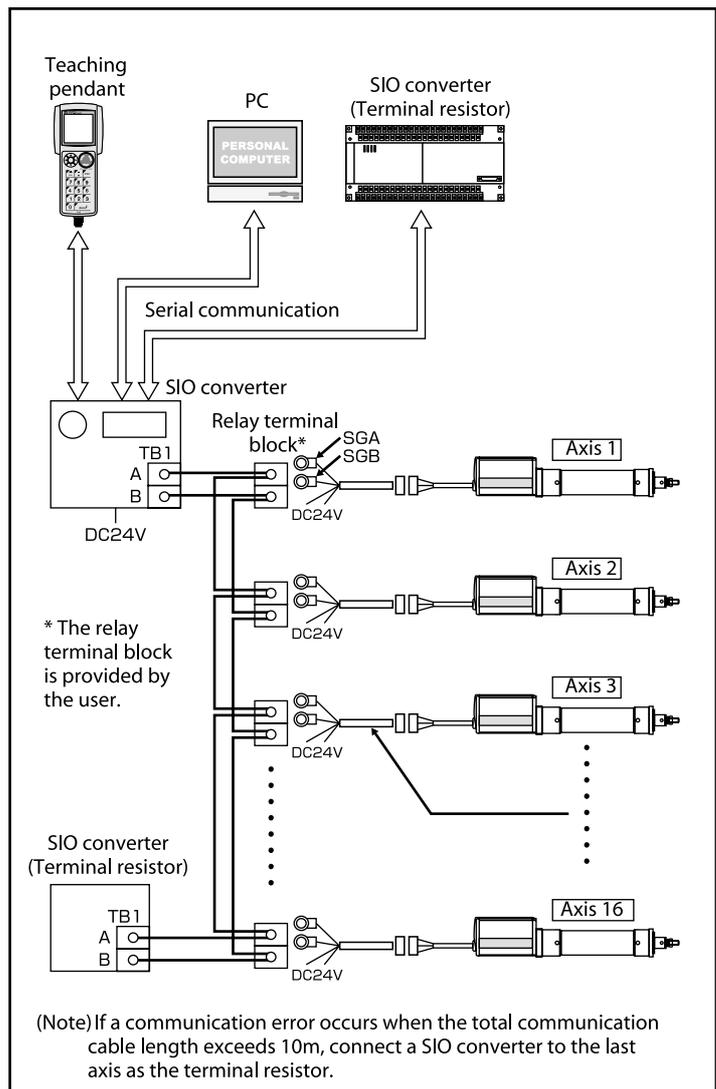
Specification item	Description
Maximum number of axes that can be connected	16 axes
Maximum cable length	100 m or less
Terminal resistor	120 Ω (built into the insulated PIO terminal blocks/SIO converter) Required when the length of the serial communication cable exceeds 10m

1. Perform automatic operation using PIO and rewrite position data for multiple axes from a single point (SIO converter)



(Note) For the last axis only, set the terminal-resistor connection switch to the [RTON] side.

2. Operate multiple axes automatically from the PC, etc., only via serial communication without using parallel I/O



(Note) If a communication error occurs when the total communication cable length exceeds 10m, connect a SIO converter to the last axis as the terminal resistor.

(Note) The user must provide the serial communication program.

# Multiple Axes Control via Profibus-Gateway

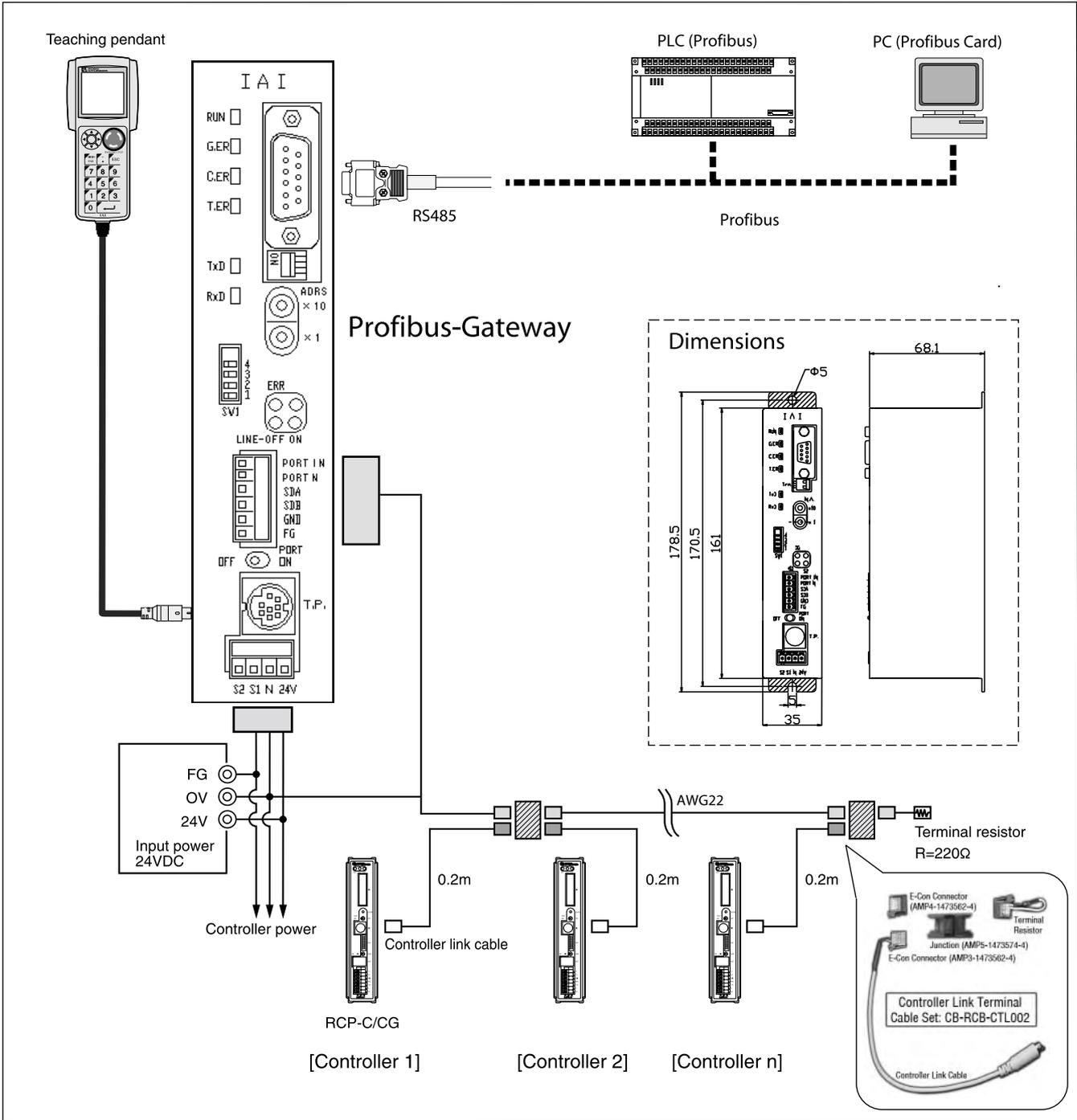
The following explains how to connect multiple controllers using a PC or PLC with Profibus module as the host

Basic specifications

Specification item	Description
Maximum number of axes that can be connected	16 axes
Maximum cable length	100 m or less
Terminal resistor	220 Ω

Provide a communication path via profibus connection and be sure to provide a terminal resistor at the end

Connection Example with Profibus-Gateway

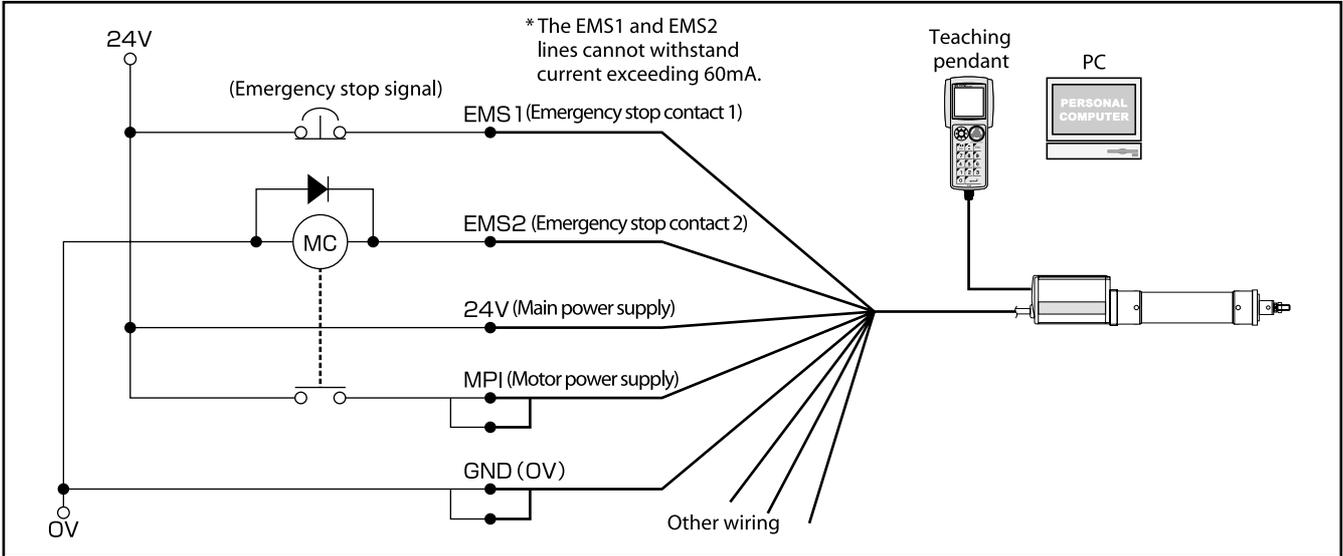


# Emergency Stop Circuit

The ERC Series has no built-in emergency stop circuit, so the user must provide an emergency stop circuit based on the logic specified below. (The circuit shown below has been simplified for clarification purposes. Refine the ready circuit, etc., in accordance with the specifications of your system.)

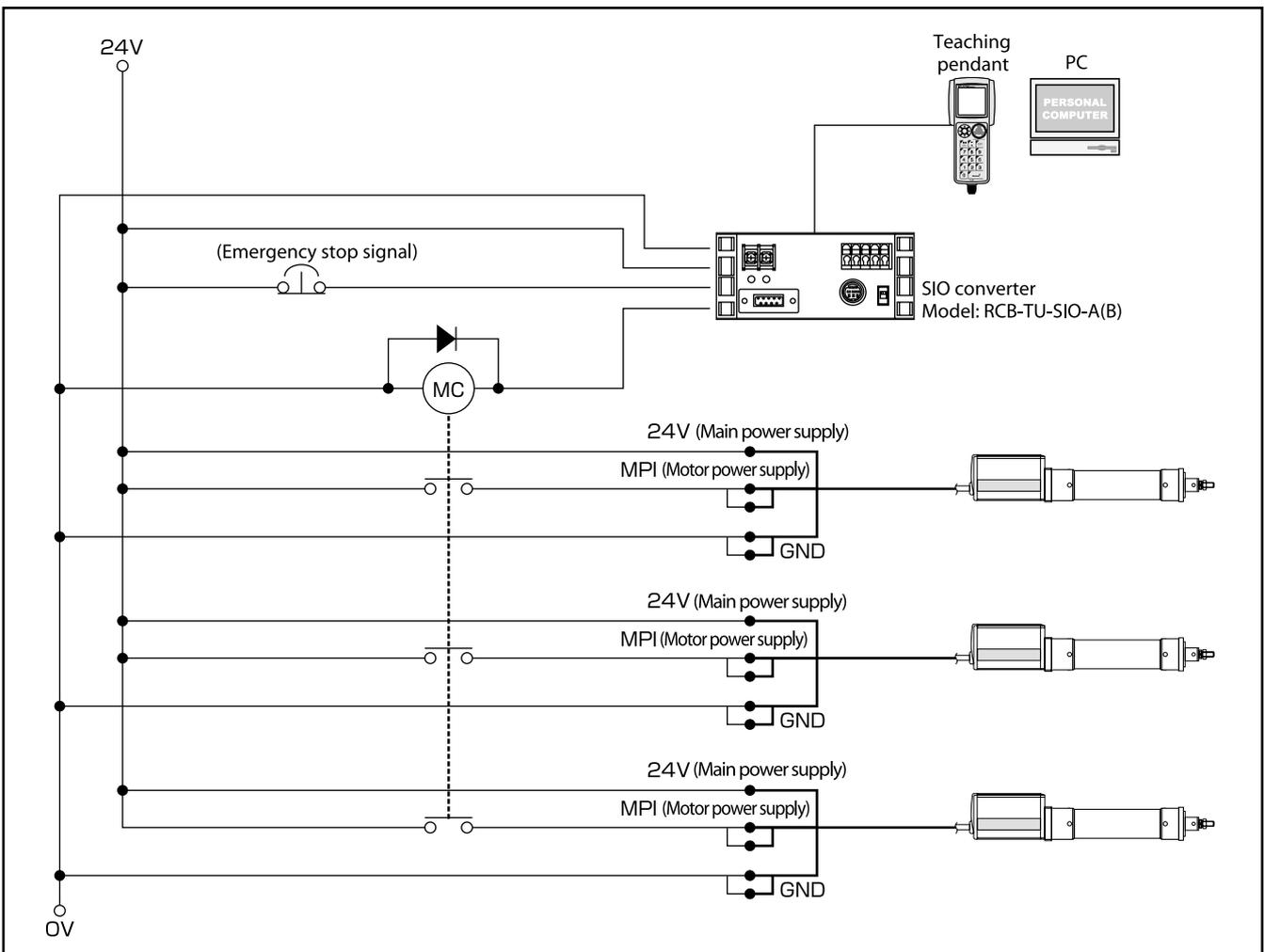
## Single Axis

To build an emergency stop circuit for a system comprised of a single axis, operate the relay using the contacts provided by EMS1 and EMS2 in the power & I/O cable to cut off the MPI (motor power supply).



## Multiple Axes

To build an emergency stop circuit for a system comprised of multiple axes, operate the relay using the contacts provided by EMG1 and EMG2 on the SIO converter to cut off the MPI (motor power supply) of each axis.



# Actuator Options

## Brake

**Model B**

**Explanation** This brake is used with the ERC installed vertically in order to prevent the load attached to the slider or rod from falling due to dead weight when the servo or power is turned off.

## Reverse Homing Specification

**Model NM**

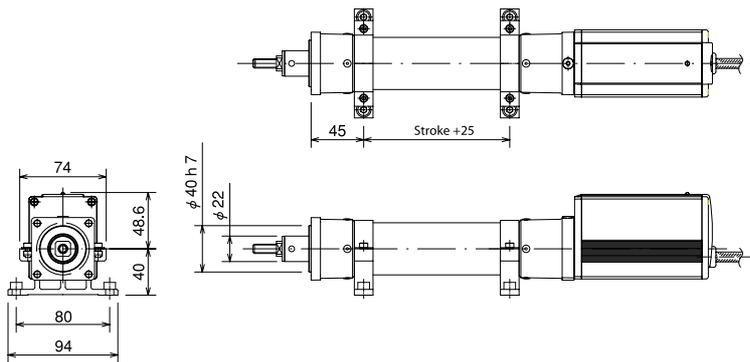
**Explanation** Normally the home is set on the motor side. Specify this option if the home must be set on the non-motor side due to the equipment structure.

## Foot Bracket

**Model FT**

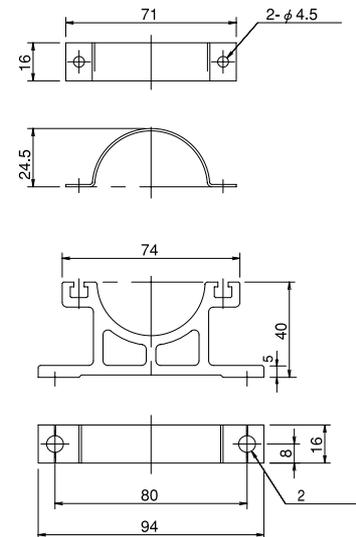
**Explanation** This bracket is used to affix the actuator from above using bolts. Install foot brackets at the front and rear ends of the actuator pipe. (If foot brackets are ordered, the actuator will be shipped with the brackets installed.)

External view of RA54 foot bracket.

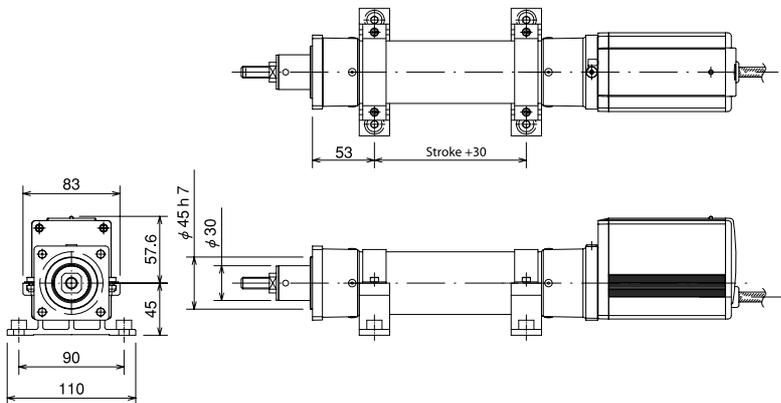


\* The mounting bolts (M6) are provided by the user.

External dimensions of RA54 foot bracket

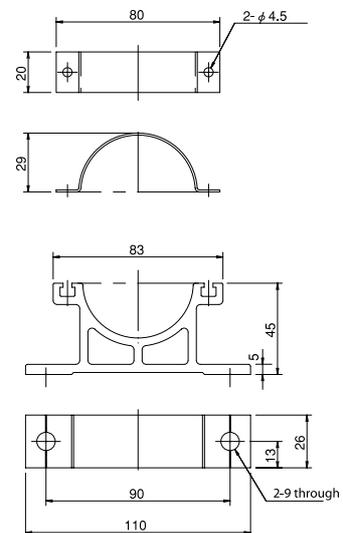


External view of RA64 foot bracket.



\* The mounting bolts (M8) are provided by the user.

External dimensions of RA64 foot bracket



# Controller Options

## Teaching pendant

**Model**

### RCA-T RCA-TD

A product older than Ver. 1.61 cannot be used with the ERC.  
(The customer's existing product can be sent to IAI for a version upgrade.)

**Features**

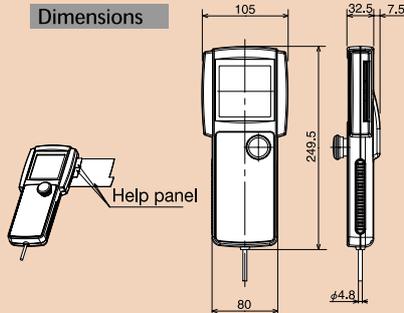
- A teaching pendant that provides all of the functions needed for test adjustment, such as position data input, test operation and monitoring of the current axis position and I/O signals.
- The interactive-type panel ensures easy operation. All you need is to enter values in the required fields, so you won't need the operation manual for basic operations.
- The built-in help panel allows you to quickly check the desired operating procedure whenever necessary.

**Specification**

Specification item	Description
Operating temperature, humidity	Temperature: 0~40°C, humidity: 85%RH or less
Weight	Approx. 550g (including cable)
Cable length	5m
Display	21 characters x 16 lines, LCD



**Dimensions**



## Simple Teaching Pendant

**Model**

### RCA-E

A product older than Ver. 1.63 cannot be used with the ERC.  
(The customer's existing product can be sent to IAI for a version upgrade.)

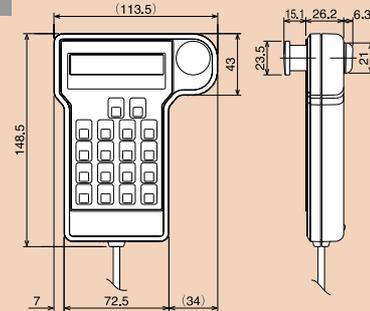
**Features**

- A highly cost-effective teaching pendant that provides the same functions as the RCA-T at a significantly lower price.
- The unit size has been reduced through the use of a two-line display.

**Specification**

Specification item	Description
Operating temperature, humidity	Temperature: 0~40°C, humidity: 85%RH or less
Weight	Approx. 400g (including cable)
Cable length	5m
Display	16 characters x 2 lines, LCD

**Dimensions**



## Data Setting Unit

**Model**

### RCA-P

A product older than Ver. 1.63 cannot be used with the ERC.  
(The customer's existing product can be sent to IAI for a version upgrade.)

\* Operations involving axis movement cannot be performed.

**Features**

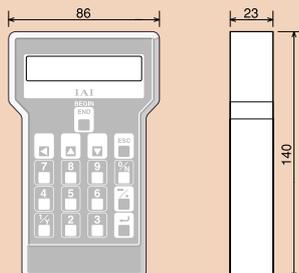
An affordable data setting unit offering edit functions, except for operations involving axis movement.

- Edit functions:
- Position data input
  - Confirmation of current axis position
  - I/O signal monitoring, etc.

**Specification**

Specification item	Description
Operating temperature, humidity	Temperature: 0~40°C, humidity: 85%RH or less
Weight	Approx. 360g (including cable)
Cable length	5m
Display	16 characters x 2 lines, LCD

**Dimensions**



## PC Software

**Model**

### RCB-101-MW (DOS/V, Windows version)

[Content] Floppy disk, PC communication cable (5m)

**Features**

- A support software for position data input and test operation.
- This software significantly improves the equipment debugging operations by offering wide-ranging functions such as jogging, inching, step operation and continuous operation, and also by allowing easy operation via a large PC screen.

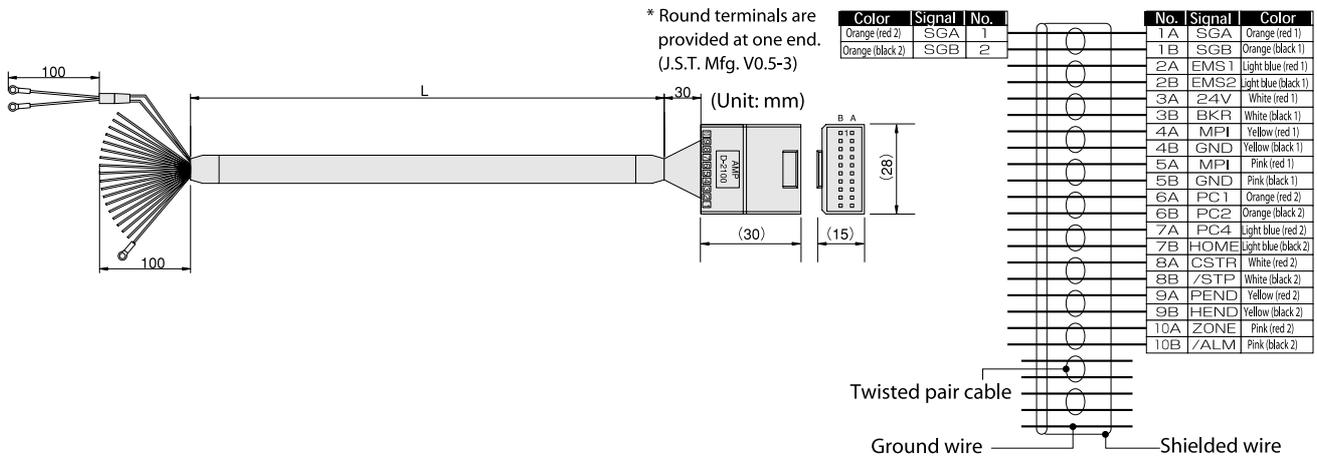


\*If you are using RCA-101-MW, the software can be used with the ERC after a proper version upgrade. The shape of RCB-101-MW's RS485 conversion adapter has changed from that of the adapter used with RCA-101-MW, but functionality remains the same.

# Cables and Service Parts

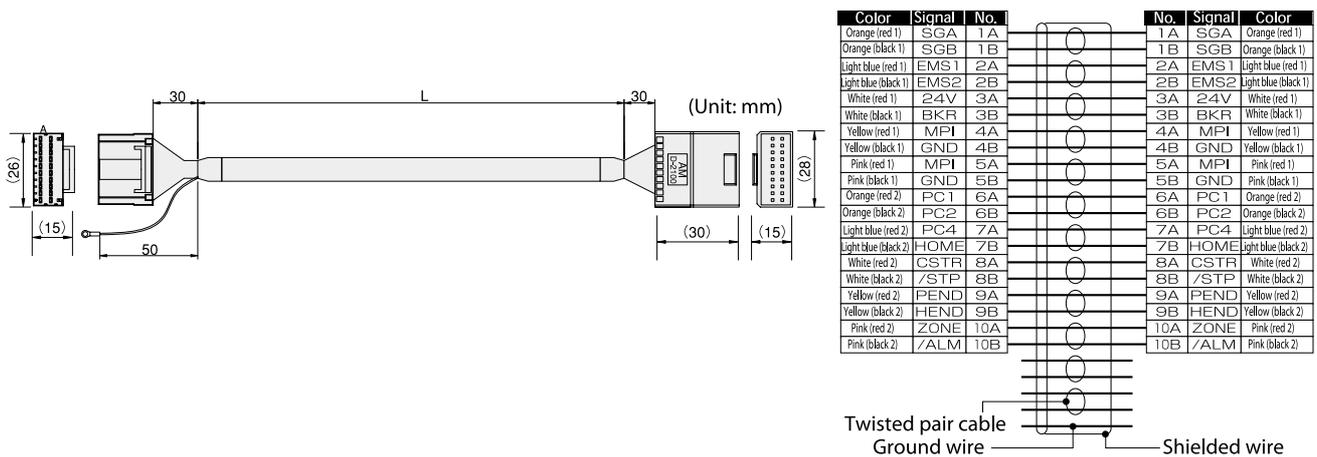
## Power & I/O Cable

Model **CB-ERC-PWBIO** □□□



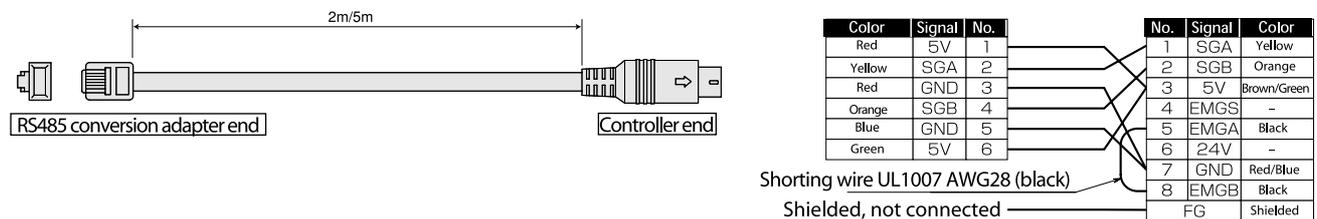
## Power & I/O Cable (Connectors on both ends)

Model **CB-ERC-PWBIO** □□□-H6



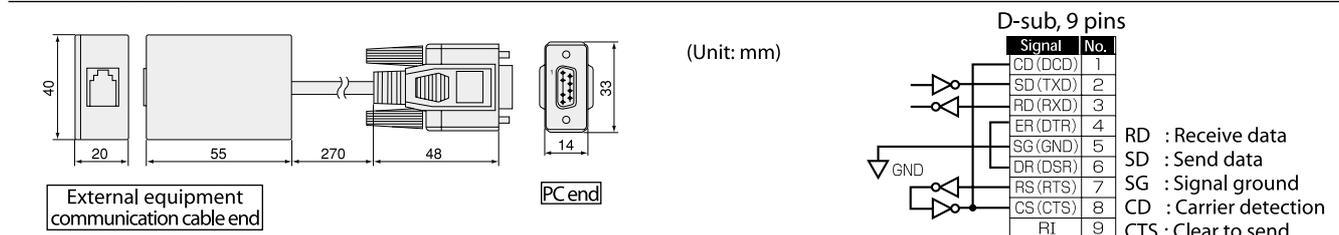
## External Equipment Communication Cable

Model **CB-RCA-SIO020(050)**



## RS485 Conversion Adapter

Model **RCB-CV-MW**



ERC Series  
Catalogue No.0205-E

The information contained in this catalog is subject to change without notice for the purpose of product improvement



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