

# RCA2-RA2AR

Robo Cylinder, Mini Rod Type, Side-mounted Motor Type, Actuator Width 18mm, 24V Servo Motor, Ball Screw Specification

Model Specification Items	<b>RCA2-RA2AR-I-5</b>	<b>A3</b>		
	Series — Type — Encoder type — Motor type — Lead — Stroke	Applicable controller	Cable length	Options
	I: Incremental *The Simple absolute encoder is also considered type "I".	A3:ASEP MSEP	N: None P: 1m S: 3m M: 5m X□□: Custom Length	See Options below. *Be sure to specify which side the motor is to be mounted (ML/MR).

\* See page Pre-47 for details on the model descriptions.



Pictured: Left-mounted motor model (ML).

Technical References Appendix P.5

- POINT**  
Notes on selection
- (1) The load capacity is based on operation at an acceleration of 0.3G. This value is the upper limit for the acceleration.
  - (2) The horizontal payload is the value when used in combination with an external guide. Please note that if an external force is applied to the rod in a direction other than the proper direction the rod travels, the detent may get damaged.
  - (3) Take note that, since there is no brake, the slider may come down when the power is turned off if the actuator is used vertically.
  - (4) See page A-71 for details on push motion.

### Actuator Specifications

#### Leads and Payloads

Model number	Motor output (W)	Feed screw	Lead (mm)	Max. Load Capacity		Rated thrust (N)	Positioning Repeatability (mm)	Stroke (mm)
				Horizontal (kg)	Vertical (kg)			
RCA2-RA2AR-I-5-4-①-A3-②-③	5	Ball screw	4	0.5	0.25	21.4	±0.02	25~100 (every 25mm)
RCA2-RA2AR-I-5-2-①-A3-②-③			2	1	0.5	42.3		
RCA2-RA2AR-I-5-1-①-A3-②-③			1	2	1	85.5		

#### Stroke and Maximum Speed

Lead	Stroke	25 (mm)	50~100 (mm)
		Ball screw	4
	2	100	
	1	50	

Code explanation ① Stroke ② Cable length ③ Options \*See page A-71 for details on push motion. (Unit: mm/s)

#### ① Stroke

① Stroke (mm)	Standard price
25	—
50	—
75	—
100	—

#### ② Cable Length

Type	Cable symbol	Standard price
Standard (Robot Cables)	P (1m)	—
	S (3m)	—
	M (5m)	—
Special length	X06 (6m) ~ X10 (10m)	—
	X11 (11m) ~ X15 (15m)	—
	X16 (16m) ~ X20 (20m)	—

\* The standard cable for the RCA2 is the robot cable.  
\* See page A-59 for cables for maintenance.

#### ③ Options

Name	Option code	See page	Standard price
Side-mounted motor to the left	ML	→ A-52	—
Side-mounted motor to the right	MR	→ A-52	—
Side-mounted motor to the top	MT	→ A-52	—
Non-motor end specification	NM	→ A-52	—

#### Actuator Specifications

Item	Description
Drive System	Ball screw, ø4mm, rolled C10
Lost Motion	0.1mm or less
Base	Material: Aluminum, white alumite treated
Rod non-rotation preciseness	±3.0 deg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)
Service life	5,000km

Dimensional Drawings

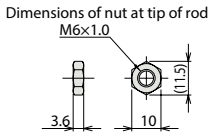
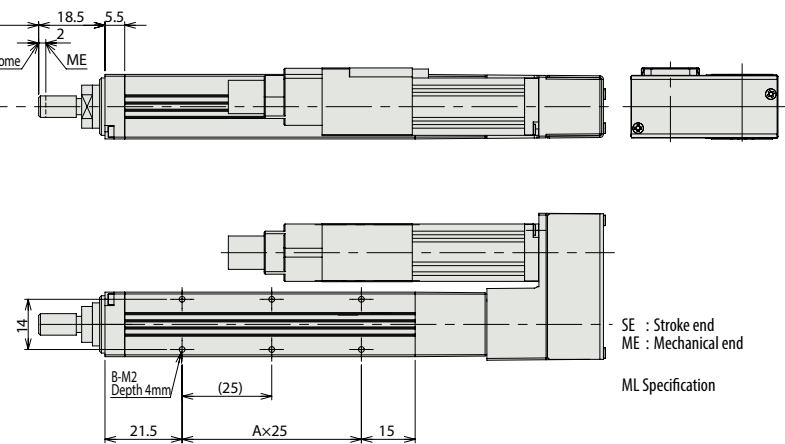
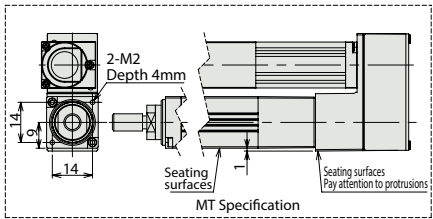
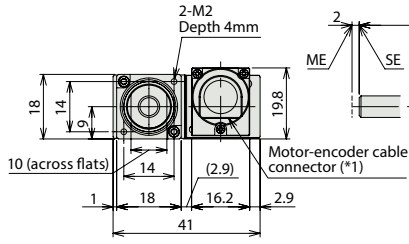
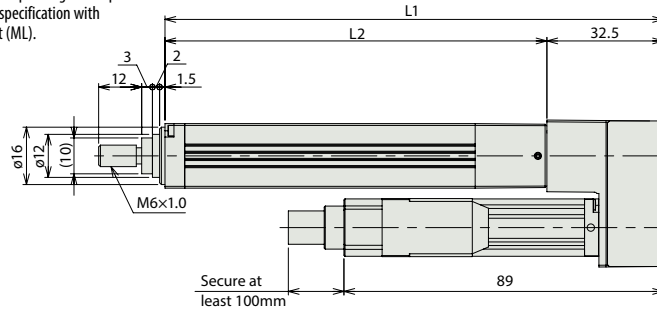
CAD drawings can be downloaded from the website. [www.intelligentactuator.com](http://www.intelligentactuator.com)



- (\*1) Connect the motor-encoder integrated cable here.
- (\*2) During home return, be careful to avoid interference from peripheral objects because the slider travels until the mechanical end.
- (\*3) The orientation of the nut varies depending on the product.  
\*The drawing below shows the specification with motor side-mounted to the left (ML).

For Special Orders Appendix P.15

**Note:**  
Do not apply any external force on the rod from any direction other than the direction of the rod's motion. If a force is exerted on the rod in a perpendicular or rotational direction, the detent may become damaged.



**■ Dimensions and Weight by Stroke**

Stroke	25	50	75	100
L1	114	139	164	189
L2	81.5	106.5	131.5	156.5
A	1	2	3	4
B	4	6	8	10
Weight (kg)	0.21	0.22	0.24	0.25

Applicable Controllers

RCA2 series actuators can be operated with the controllers indicated below. Select the type according to your intended application.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page
Solenoid valve type		ASEP-C-5SI-①-2-0	Simple controller operable with the same signal as a solenoid valve	3 points	DC24V	1A rated 2A max.	—	→ P547
Solenoid valve multi-axis type PIO specification		MSEP-C-②-③-④-2-0	Positioner type based on PIO control, allowing up to 8 axes to be connected					→ P563
Solenoid valve multi-axis type Network specification		MSEP-C-②-③-④-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points			—	→ P563

\*① indicates I/O type (NP/PN). \*② indicates number of axes (1 to 8). \*③④ indicates field network specification symbol.

- Slider Type
- Mini
- Standard
- Controllers Integrated
- Rod Type
- Mini
- Standard
- Controllers Integrated
- Table/Arm/Flat Type
- Mini
- Standard
- Gripper/Rotary Type
- Linear Servo Type
- Clean-room Type
- Splash-Proof Type
- Pulse Motor
- Servo Motor (24V)
- Servo Motor (200V)
- Linear Servo Motor