

# RCA-A4R

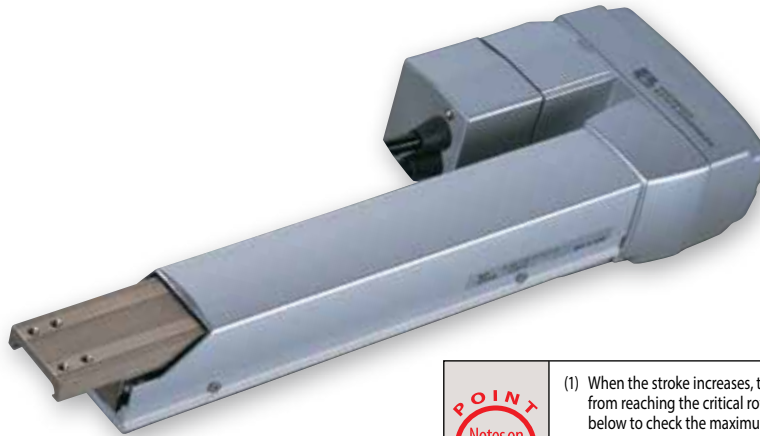
Robo Cylinder, Arm Type, Actuator Width 40mm, 24V Servo Motor, Side-mounted Motor

Model Specification Items	<b>RCA</b> — <b>A4R</b>	—	—	<b>20</b>	—	—	—	—	—	—
	Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options	
	I: Incremental A: Absolute	20:20W Servo motor	10: 10mm 5: 5mm	50: 50mm 200: 200mm (50mm pitch increments)	A1: ACON ASEL A3: AMEC ASEP MSEP	N: None P: 1m S: 3m M: 5m X□□: Custom length R□□: Robot cable	See options below. * Be sure to specify which side the motor is to be mounted (MB/MR/ML)			

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



Power-saving



Technical References Appendix P.5

- POINT** Notes on selection
- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
  - (2) The load capacity is based on operation at an acceleration of 0.2G. This is the upper limit of the acceleration.
  - (3) See page A-71 for details on push motion.

## Actuator Specifications

### Leads and Payloads

Model number	Motor output (W)	Lead (mm)	Max. Load Capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-A4R-①-20-10-②-③-④-B-⑤	20	10	—	2.5	39.2	50~200 (every 50mm)
RCA-A4R-①-20-5-②-③-④-B-⑤		5	—	4.5		

### Stroke and Maximum Speed

Stroke Lead	50~200 (every 50mm)
	10
5	165

Code explanation ① Encoder ② Stroke ③ Applicable Controller ④ Cable Length ⑤ Options \*See page A-71 for details on push motion. (Unit: mm/s)

### ① Encoder Type/② Stroke

② Stroke (mm)	Standard price	
	① Encoder Type	
	Incremental	Absolute
	I	A
50	—	—
100	—	—
150	—	—
200	—	—

### ④ Cable Length

Type	Cable symbol	Standard Price
Standard	P (1m)	—
	S (3m)	—
	M (5m)	—
Special length	X06 (6m) ~ X10 (10m)	—
	X11 (11m) ~ X15 (15m)	—
	X16 (16m) ~ X20 (20m)	—
Robot Cable	R01 (1m) ~ R03 (3m)	—
	R04 (4m) ~ R05 (5m)	—
	R06 (6m) ~ R10 (10m)	—
	R11 (11m) ~ R15 (15m)	—
	R16 (16m) ~ R20 (20m)	—

\* See page A-59 for cables for maintenance.

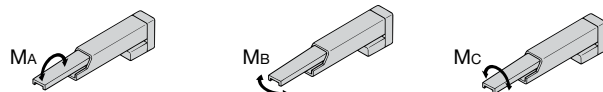
### ⑤ Options

Name	Option code	See page	Standard price
Brake	B	→ A-42	—
Power-saving specification	LA	→ A-52	—
Bottom-mounted motor	MB	→ A-52	—
Right-mounted motor	MR	→ A-52	—
Left-mounted motor	ML	→ A-52	—
Non-motor end specification	NM	→ A-52	—

### Actuator Specifications

Item	Description
Drive System	Ball screw, ø8mm, rolled C10 (ball screw speed reduced by 1/2 by timing belt)
Positioning repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum, white alumite treated
Allowable dynamic moment	Ma: 2.7 N·m, Mb: 3.1 N·m, Mc: 2.9 N·m
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

Directions of allowable load moments



Dimensional Drawings

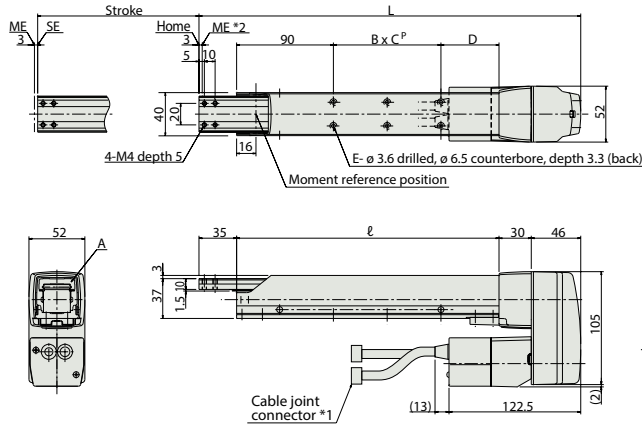
CAD drawings can be downloaded from the website. [www.intelligentactuator.com](http://www.intelligentactuator.com)

For Special Orders Appendix P.15

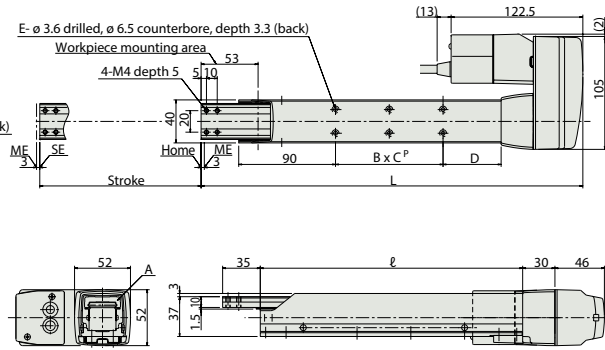


- (\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
- (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.
- ME : Mechanical end SE : Stroke end

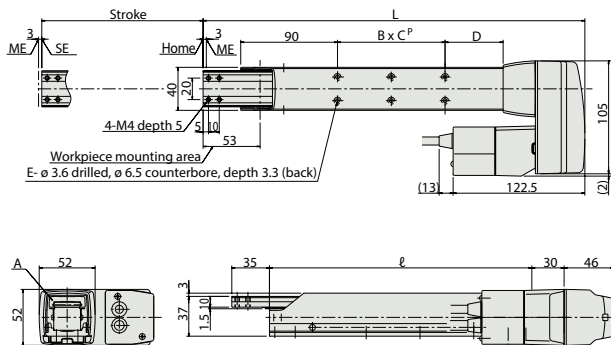
Bottom-mounted motor (option code: MB)



Right-mounted motor (option code: MR)



Left-mounted motor (option code: ML)



Dimensions and Weight by Stroke

Stroke	50	100	150	200
L	255	305	355	405
ℓ	144	194	244	294
B x C <sup>P</sup>	1x19	1x50	2x50	2x50
D	35	54	54	104
E	4	4	6	6
Weight (kg)	1.7	1.8	2.0	2.1

Applicable Controllers

RCA series actuators can be operated with the controllers indicated below. Select the type according to your intended application. ACON-CY also can be used.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Solenoid Valve Type		AMEC-C-20I-2-1	Easy-to-use controller, even for beginners	3 points	AC100V	2.4A rated	—	→ P537
		ASEP-C-20I-2-0	Simple controller operable with the same signal as a solenoid valve					→ P547
Solenoid valve multi-axis type PIO specification		MSEP-C-20I-2-0	Positioner type based on PIO control, allowing up to 8 axes to be connected	256 points	DC24V	(Standard) 1.3A rated 4.4A max.	—	→ P563
Solenoid valve multi-axis type Network specification		MSEP-C-20V-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected					→ P631
Positioner type		ACON-C-20I-2-0	Positioning is possible for up to 512 points	512 points	DC24V	(Power-saving) 1.3A rated 2.5A max.	—	→ P631
Safety-Compliant Positioner Type		ACON-CG-20I-2-0						
Pulse Train Input Type (Differential Line Driver)		ACON-PL-20I-2-0	Pulse train input type with differential line driver support	(—)	DC24V	(Power-saving) 1.3A rated 2.5A max.	—	→ P631
Pulse Train Input Type (Open Collector)		ACON-PO-20I-2-0	Pulse train input type with open collector support					
Serial Communication Type		ACON-SE-20I-N-0-0	Dedicated Serial Communication	64 points	DC24V	(Power-saving) 1.3A rated 2.5A max.	—	→ P631
Program Control Type		ASEL-CS-1-20I-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points	DC24V	(Power-saving) 1.3A rated 2.5A max.	—	→ P675

\* This is for the single-axis ASEL.  
\* I indicates I/O type (NP/PN).

\* I indicates encoder type (I: incremental, A: absolute)  
\* V indicates number of axes (1 to 8).

\* Enter the code "LA" in I when the power-saving option is specified.  
\* V 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