

RCA-A4R

ROBO Cylinder Arm Type Side-Mounted Motor 40mm Width 24V Servo Motor Ball Screw

■ Configuration: **RCA** — **A4R** — — **20** — — — — —

Series — Type — Encoder — Motor — Lead — Stroke — Compatible Controllers — Cable Length — Option

I : Incremental 20 : 20W servo motor 10 : 10mm 50 : 50mm 200 : 200mm (50mm pitch increments)
 A : Absolute motor 5 : 5mm

A1: ACON RACON ASEL A3: AMEC ASEP
 N : None P : 1m S : 3m M : 5m X : Custom R : Robot cable

* See Options below * Be sure to specify which side the motor is to be mounted (ML/MR).
 * ASEL can only be used as the absolute encoder. Simple absolute encoders are considered incremental.

* See page Pre-35 for an explanation of the naming convention.

Power-saving



Technical References P. A-5

- 4 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.

Actuator Specifications

■ Lead and Load Capacity

Model	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 (50mm increments)
RCA-A4R-①-20-5-②-③-④-B-⑤		5	-	4.5	78.4	

Legend: ① Encoder ② Stroke ③ Compatible controller ④ Cable length ⑤ Options (Unit: mm/s)

■ Stroke and Maximum Speed

Lead	Stroke	
	50 ~ 200 (50mm increments)	50 ~ 200 (50mm increments)
10	330	
5	165	

Encoder & Stroke List

② Stroke (mm)	Standard Price	
	① Encoder	
	Incremental	Absolute
50	-	-
100	-	-
150	-	-
200	-	-

④ Cable List

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

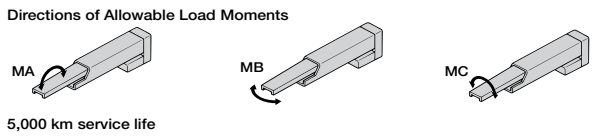
* See page A-39 for cables for maintenance.

⑤ Option List

Name	Option Code	See Page	Standard Price
Brake (standard)	B	→ A-25	-
Power-saving	LA	→ A-32	
Bottom-mounted motor	MB	→ A-33	
Right-mounted motor	MR	→ A-33	
Left-mounted motor	ML	→ A-33	
Reversed-home	NM	→ A-33	

Actuator Specifications

Item	Description
Drive System	Ball screw ø8mm C10 grade (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 Load Moment	Ma: 2.7 N-m Mb: 3.1 N-m Mc: 2.9 N-m
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)



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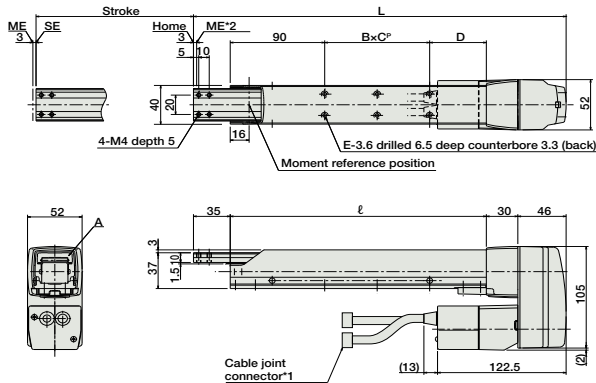
- Slider Type
- Mini
- Standard
- Controllers Integrated
- Rod Type
- Mini
- Standard
- Controllers Integrated
- Table/Arm /Flat Type
- Mini
- Standard
- Gripper/ Rotary Type
- Linear Servo Type
- Cleanroom Type
- Splash Proof
- Controllers
- PMEC /AMEC
- PSEP /ASEP
- ROBO NET
- ERC2
- PCON
- ACON
- SCON
- PSEL
- ASEL
- SSEL
- XSEL
- Pulse Motor
- Servo Motor (24V)
- Servo Motor (200V)
- Linear Servo Motor

Dimensions

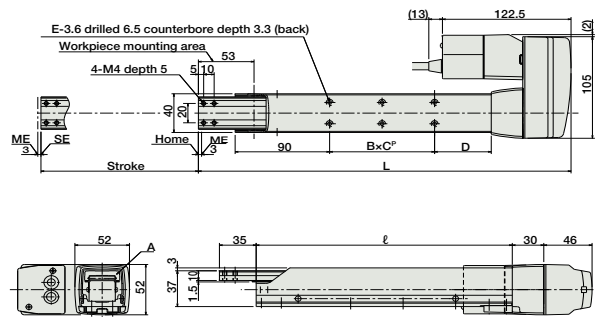
For Special Orders P. A-9

- *1 The motor-encoder cable is connected here. See page A-39 for details on cables.
 - *2 When homing, the rod moves to the ME; therefore, please watch for any interference with the surrounding objects.
- ME: Mechanical end SE: Stroke end

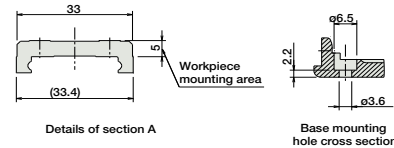
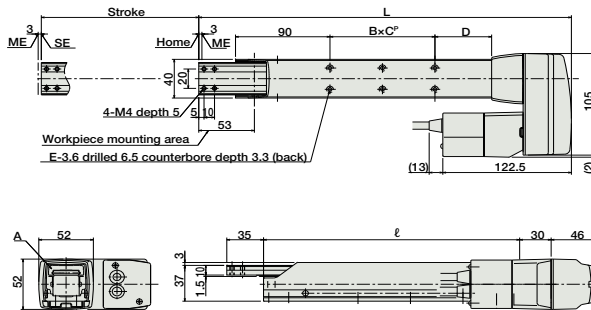
Bottom-mounted motor (option code: MB)



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
BxC*	1x19	1x50	2x50	2x50
D	35	54	54	104
E	4	4	6	6
Weight (kg)	1.7	1.8	2.0	2.1

③ Compatible Controllers

The RCA series actuators can operate with the controllers below. Select the controller according to your usage.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	Standard Price	See Page
Solenoid Valve Type		AMEC-C-20②-NP-2-1	Easy-to-use controller, even for beginners	3 points	AC100V	2.4A rated	-	→ P477
		ASEP-C-20②-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types. No homing necessary with simple absolute type.					→ P487
Splash-Proof Solenoid Valve Type		ASEP-CW-20②-NP-2-0						
Positioner Type		ACON-C-20②-NP-2-0	Positioning is possible for up to 512 points	512 points	DC24V	1.3A rated 4.4A peak	-	→ P535
Safety-Compliant Positioner Type		ACON-CG-20②-NP-2-0						
Pulse Train Input Type (Differential Line Driver)		ACON-PL-20②-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	1.3A rated 4.4A peak	-	→ P535
Pulse Train Input Type (Open Collector)		ACON-PO-20②-NP-2-0	Pulse train input type with open collector support					
Serial Communication Type		ACON-SE-20②-N-0-0	Dedicated to serial communication	64 points				
Field Network Type		RACON-20②	Dedicated to field network	768 points				→ P503
Program Control Type		ASEL-C-1-20①②-NP-2-0	Programmed operation is possible. Operation is possible on up to 2 axes	1500 points				→ P567

* This is for the single-axis ASEL.
 * ① is a placeholder for the encoder type (I: incremental, A: absolute).
 * ② is a placeholder for the code "LA", if the power-saving option is specified.

- Slider Type
- Mini
- Standard
- Controllers Integrated
- Rod Type
- Mini
- Standard
- Controllers Integrated
- Table/Arm /Flat Type
- Mini
- Standard
- Gripper/ Rotary Type
- Linear Servo Type
- Cleanroom Type
- Splash Proof
- Controllers
- PMEC /AMEC
- PSEP /ASEP
- ROBO NET
- ERC2
- PCON
- ACON
- SCON
- PSEL
- ASEL
- SSEL
- XSEL
- Pulse Motor
- Servo Motor (24V)
- Servo Motor (200V)
- Linear Servo Motor