

RCA-A5R

ROBO Cylinder, Arm Type, Actuator Width 52mm, 24V Servo Motor, Reverse-mounted Motor Specification

Model Description: **RCA** — **A5R** — — **20** — — — **A1** — —

Series — Type — Encoder type — Motor type — Lead — Stroke — Compatible Controllers — Cable length — Option

I: Incremental specification
A: Absolute specification

20: Servo motor 20W
12: 12mm
6: 6mm
50: 50mm to 200: 200mm (Set steps every 50mm)

A1: ACON ASEL

N : None
P : 1m
S : 3m
M : 5m
X□□: Length
R□□: Robot cable

B : Brake (standard)
LA : Power saving
NM : Reversed-home specification
MB : Bottom reverse-mounted motor
MR : Right reverse-mounted motor
ML : Left reverse-mounted motor

See preceding section for model descriptions.

Power saving



Technical Reference P. 451

POINT
Notes on selection

(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 maximum acceleration.

Actuator Specification Table

Leads and Payloads

Model	Motor output (W)	Lead (mm)	Maximum payload		Rated thrust (N)	Stroke (mm)
			Horizontal(kg)	Vertical(kg)		
RCA-A5R-①-20-12-②-A1-③-B-④	20	12	-	2	33.3	50 to 200 (every 50mm)
RCA-A5R-①-20-6-②-A1-③-B-④		6	-	4		

Stroke and Maximum Speed

Lead	Stroke	50 to 200 (every 50mm)
		12
6	200	200

Legend: ① Encoder type ② Stroke ③ Cable length ④ Option

(Unit = mm/s)

Price List by ① Encoder Type/② Stroke

② Stroke (mm)	Type code	
	A5R	
	① Encoder type	
	Incremental	Absolute
50	I	A
100	-	-
150	-	-
200	-	-

③ Cable Length Price List

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

*See P384 for maintenance cables.

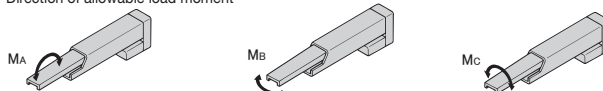
④ Option Price List

Title	Option code	See page	Standard price
Brake (standard)	B	→P437	-
Power saving	LA	→P442	-
Reversed-home specification	NM	→P442	-
Bottom reverse-mounted motor	MB	→P444	-
Right reverse-mounted motor	MR	→P444	-
Left reverse-mounted motor	ML	→P444	-

Actuator Specification

Item	Description
Drive System	Ball screw φ8mm, rolled C10 (ball screw speed reduced to half by means of timing belt)
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Base	Aluminum with white alumite treatment
Allowable load moment	Ma: 4.5N·m, Mb: 5.4N·m, Mc: 4.1N·m
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)
Service life	5000km

Direction of allowable load moment



Dimensional Drawings

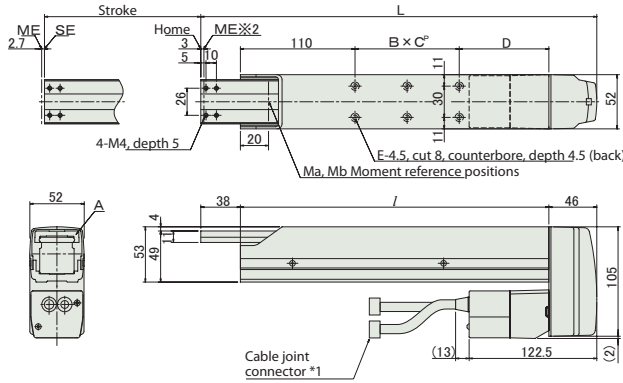
CAD drawings can be downloaded from the website. www.intelligentactuator.com

Information on special orders  P. 454

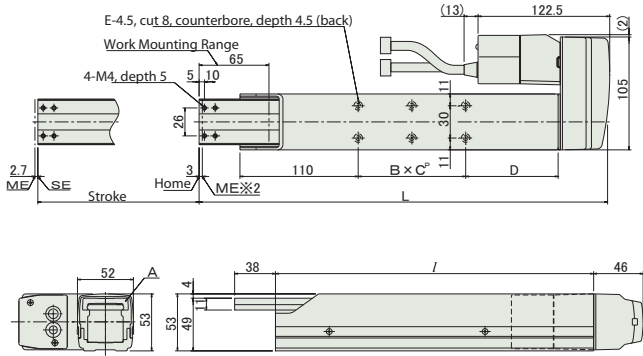


*1 Connect the motor/encoder cables. See P384 for cable details.
 *2 The rod moves to the ME during home return. Pay attention to prevent contact between the rod and the surrounding parts.
 ME: Mechanical End SE: Stroke End

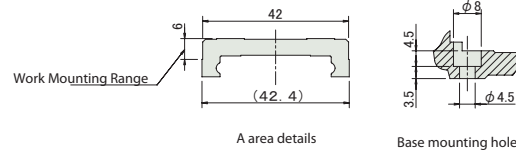
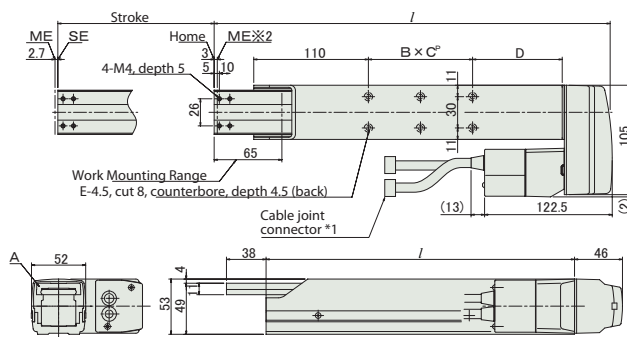
Reverse-mounted Motor, Bottom (Option code: MB)



Reverse-mounted Motor, Right (Option code: MR)



Reverse-mounted Motor, Left (Option code: ML)











■ Dimensions and Weight by Stroke

Stroke	50	100	150	200
L	280	330	380	430
l	196	246	296	346
BxC*	1x30	1x50	2x50	2x50
D	56	86	86	136
E	4	4	6	6
Weight(kg)	2.2	2.4	2.6	2.8

Note: The motor must be reversed at right or left if the stroke is 50. The standard reversing specification is not available with a 50 stroke.

Compatible Controllers

RCA series actuators can be operated using the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Max. positioning points	Input power	Power-supply capacity	Standard price	See page	
Positioner type		ACON-C-20I-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Rating 1.3A Peak 3.7A	-	→P375	
Safety category compatible positioner type		ACON-CG-20I-NP-2-0					-		
Solenoid valve type		ACON-CY-20I-NP-2-0	Same as solenoid valve controlled operation enabled	3 points			-		
Pulse series input type (differential line driver specification)		ACON-PL-20I-NP-2-0	Differential line driver compatible pulse series input type	(-)			-		
Pulse series input type (open collector specification)		ACON-PO-20I-NP-2-0	Open collector compatible pulse series input type				-		
Serial communication type		ACON-SE-20I-N-0-0	Serial communications special type	64 points			-		
Field network type		RACON-20	Field network dedicated type	768 points			-		→P343
Program control type		ASEL-C-1-20I-NP-2-0	Programmable type. Can be operated for up to 2 axes.	1500 points			-		→P405

*ASEL is for uniaxial specification.
 *⓪ indicates an encoder type (I: Incremental, A: Absolute)

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/flat
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Built-in (Direct)
- Reverse-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10W
- Servo Motor 20W
- Servo Motor 30W
- Servo Motor 60W
- Servo Motor 100W
- Servo Motor 150W
- Servo Motor 750W