

# RCA-SA4C

ROBO Cylinder Slider Type 40mm Width 24V Servo Motor Coupled

■ Configuration: **RCA** — **SA4C** —  — **20** —  —  —  —  —

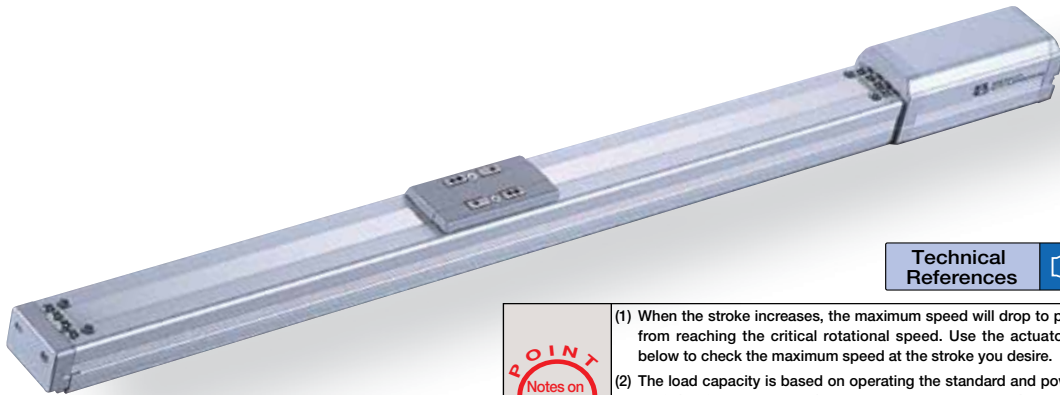
Series — Type — Encoder — Motor — Lead — Stroke — Compatible Controllers — Cable Length — Option

I: Incremental A: Absolute      20: 20W Servo motor      10: 10mm 5: 5mm 2.5: 2.5mm      50: 50mm 400: 400mm (50mm pitch increments)      A1: ACON RACON ASEL A3: AMEC ASEPE      N: None P: 1m S: 3m M: 5m X : Custom Length R : Robot Cable

\* See page Pre-35 for explanation of each code that makes up the configuration name.

See Options below

**For High Acceleration/Deceleration** **Power-saving**  
(excluding the 2.5-mm lead model)



Technical References P. A-5

- POINT** Notes on Selection
- 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.
  - The load capacity is based on operating the standard and power-saving models at 0.3G (0.2G for 3mm-lead), and the high acceleration/deceleration model at 1G (excluding the 2.5mm-lead model). (Even when the acceleration/deceleration is dropped, the maximum load capacity values shown in the table below are the upper limits.)

## 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-SA4C-①-20-10-②-③-④-⑤	20	10	4	1	19.6	50 ~ 400 (50mm increments)
RCA-SA4C-①-20-5-②-③-④-⑤		5	6	2.5	39.2	
RCA-SA4C-①-20-2.5-②-③-④-⑤		2.5	8	4.5	78.4	

### Stroke and Maximum Speed

Stroke Lead	50 ~ 400 (50mm increments)	
	10	665
5	330	
2.5	165	

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

### Encoder & Stroke List

② Stroke (mm)	Standard Price	
	① Encoder Type	
	Incremental	Absolute
50	I	A
100	-	-
150	-	-
200	-	-
250	-	-
300	-	-
350	-	-
400	-	-

### ④ Cable List

Type	Cable Symbol	Standard Price
Standard	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	B	→ A-25	—
Foot bracket	FT	→ A-29	—
For High Acceleration/Deceleration	HA	→ A-32	—
Home sensor	HS	→ A-32	—
Power-saving	LA	→ A-32	—
Reversed-home	NM	→ A-33	—
Slider Roller	SR	→ A-36	—
Slider spacer	SS	→ A-36	—

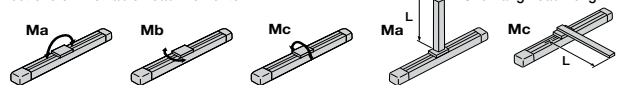
\* The high-acceleration/deceleration option and the Slider Roller option cannot be used together.  
\* The 2.5mm-lead model cannot be used with the high-acceleration/deceleration option.  
\* The high-acceleration/deceleration option and the power saving option cannot be used together.

### Actuator Specifications

Item	Description
Drive System	Ball screw Ø8mm C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum (white alumite treated)
Allowable Static Moment	Ma: 6.9N·m Mb: 9.9N·m Mc: 17.0N·m
Allowable Dynamic Moment (*)	Ma: 2.7N·m Mb: 3.9N·m Mc: 6.8N·m
Overhang Load Length	Ma direction: 120mm or less Mb-Mc direction: 120mm or less
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)

(\*) Based on 5,000km travel life.

Directions of Allowable Load Moments



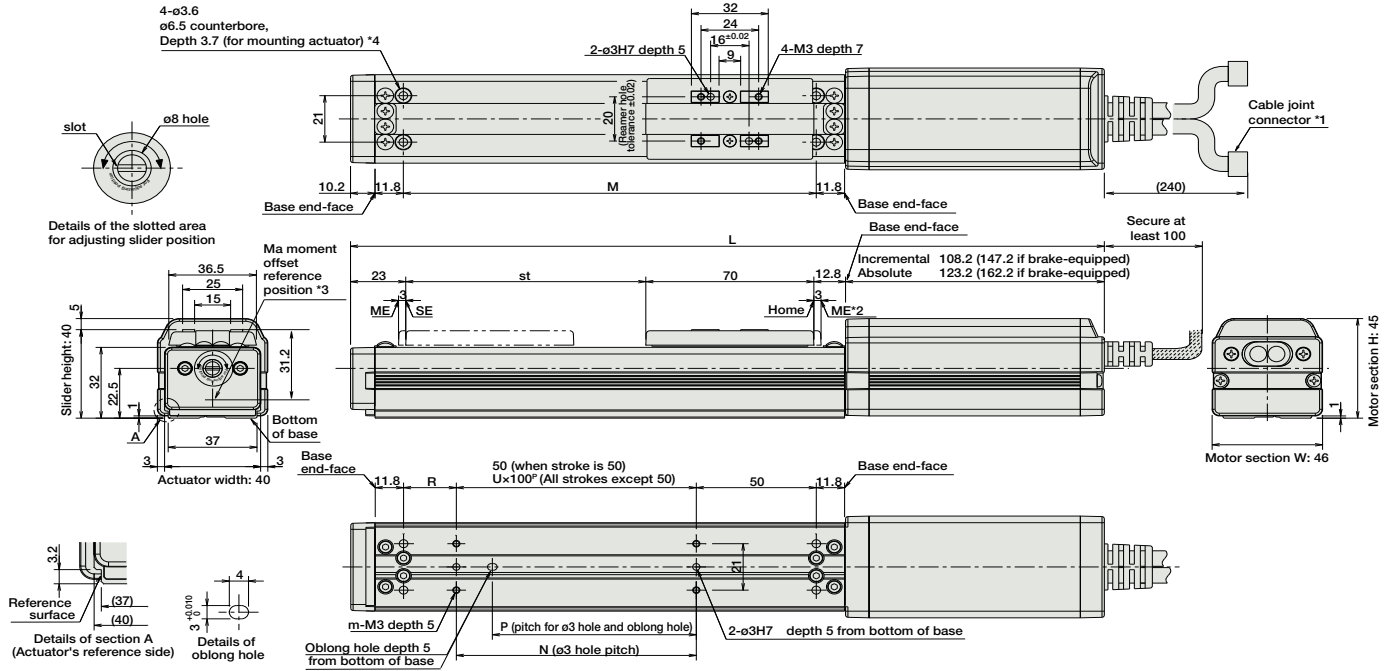
Dimensions

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

For Special Orders P. A-9



- \* 1 A motor-encoder cable is connected here. See page A-39 for details on cables.
- \* 2 When homing, the slider moves to the ME; therefore, please watch for any interference with the surrounding objects.  
ME: Mechanical end  
SE: Stroke end
- \* 3 Reference position for calculating the moment Ma.
- \* 4 If the actuator is secured using only the mounting holes provided on the top surface of the base, the base may twist to cause abnormal sliding of the slider, or may produce abnormal noise. Therefore, when using the mounting holes on the top surface of the base, keep the stroke at 200mm or less.



■ Dimensions/Weight by Stroke \* Brake-equipped models are heavier by 0.3kg.

L	Stroke	Stroke								
		No Brake	50	100	150	200	250	300	350	400
Incremental	No Brake	264	314	364	414	464	514	564	614	
	With Brake	303	353	403	453	503	553	603	653	
Absolute	No Brake	279	329	379	429	479	529	579	629	
	With Brake	318	368	418	468	518	568	618	668	
M		122	172	222	272	322	372	422	472	
N		50	100	100	200	200	300	300	400	
P		35	85	85	185	185	285	285	385	
R		22	22	72	22	72	22	72	22	
U		-	1	1	2	2	3	3	4	
m		4	4	4	6	6	8	8	10	
Weight (kg)		0.7	0.8	0.9	1	1.1	1.2	1.3	1.4	

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-20①②-NP-2-1	Easy-to-use controller, even for beginners	3 points	DC24V	2.4A rated  (Standard) 1.3A rated 4.4A max.  (Power-saving) 1.3A rated 2.5A max.	-	→ P477				
		ASEP-C-20①②-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types. No homing necessary with simple absolute type.									
Splash-Proof Solenoid Valve Type		ASEP-CW-20①②-NP-2-0										
Positioner Type		ACON-C-20①②-NP-2-0	Positioning is possible for up to 512 points	512 points								
Safety-Compliant Positioner Type		ACON-CG-20①②-NP-2-0										
Pulse Train Input Type (Differential Line Driver)		ACON-PL-20①②-NP-2-0	Pulse train input type with differential line driver support	(-)								→ P535
Pulse Train Input Type (Open Collector)		ACON-PO-20①②-NP-2-0	Pulse train input type with open collector support									
Serial Communication Type		ACON-SE-20①②-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 Can operate 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 "HA" or "LA", when the high-acceleration/deceleration option or the energy-saving option is selected.