RCA2-SA4C

ROBO Cylinder, Slider Type, Actuator Width 40mm, Servo Motor, Coupled

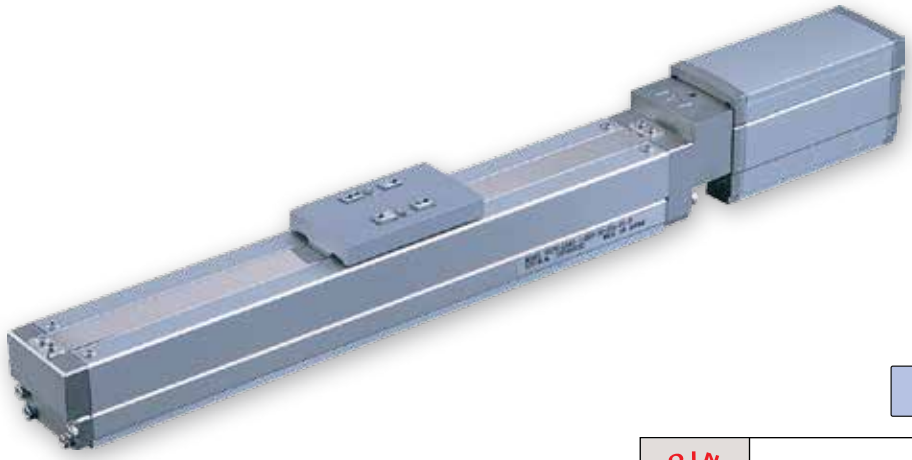
Model Specification Items: **RCA2** — **SA4C** — **I** — **20** — □ — □ — □ — □ — □

- Series: RCA2
- Type: SA4C
- Encoder type: I: Incremental; * The Simple absolute encoder is also considered type "I".
- Motor type: 20P: 20W Servo motor
- Lead: 10: 10mm; 5: 5mm; 2.5: 2.5mm
- Stroke: 50: 50mm ~ 500: 500mm (50mm pitch increments)
- Applicable controller: A1: ACON, ASEL, A3: AMEC, ASEP, MSEP
- Cable length: N: None; P: 1m; S: 3m; M: 5m; X□□: Custom length
- Options: See Options below.

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

CE RoHS

Power-saving



Technical References — Appendix P.5

POINT Notes on selection

(1) The load capacity is based on operation at an acceleration of 0.3G (0.2G for 2.5mm-lead model and when using vertically). These values are the upper limits for the acceleration.
(2) See page A-71 for details on push motion.

Actuator Specifications

■ Leads and Payloads

Model number	Motor output (W)	Lead (mm)	Max. Load Capacity Horizontal (kg)	Max. Load Capacity Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCA2-SA4C-I-20-10-①-②-③-④	20	10	2	1	34	50~500 (every 50mm)
RCA2-SA4C-I-20-5-①-②-③-④		5	4	1.5	68	
RCA2-SA4C-I-20-2.5-①-②-③-④		2.5	6	3	136	

■ Stroke and Maximum Speed

Lead \ Stroke	50~500 (every 50mm)
10	500
5	250
2.5	125

(Unit: mm/s)

Code explanation ① Stroke ② Applicable Controller ③ Cable length ④ Options *See page A-71 for details on push motion.

①Stroke

①Stroke (mm)	Standard price	
	With cover (standard)	Without cover (option)
50	—	—
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—
350	—	—
400	—	—
450	—	—
500	—	—

③Cable 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.

④Options

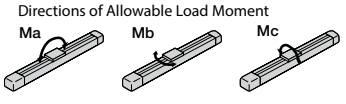
Name	Option code	See page	Standard price
Brake	**B**	→ A-42	—
Optional cable exit direction (top)	**CJT**	→ A-42	—
Optional cable exit direction (right)	**CJR**	→ A-42	—
Optional cable exit direction (left)	**CJL**	→ A-42	—
Optional cable exit direction (bottom)	**CJB**	→ A-42	—
Power-saving	**LA**	→ A-52	—
No cover	**NCO**	→ A-52	—
Non-motor end specification	**NM**	→ A-52	—

Actuator Specifications

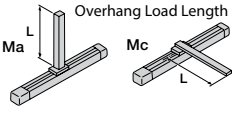
Item	Description
Drive System	Ball screw, ø8mm, rolled C10
Positioning repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum, special alumite treated
Allowable static moment	Ma: 6.8 N·m, Mb: 9.7 N·m, Mc: 13.3 N·m
Allowable dynamic moment (*)	Ma: 3.04 N·m, Mb: 4.31 N·m, Mc: 5.00 N·m
Allowable overhang	120mm or less in Ma, Mb and Mc directions
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

(*) Based on 5,000km of traveling life

Directions of Allowable Load Moment



Overhang Load Length

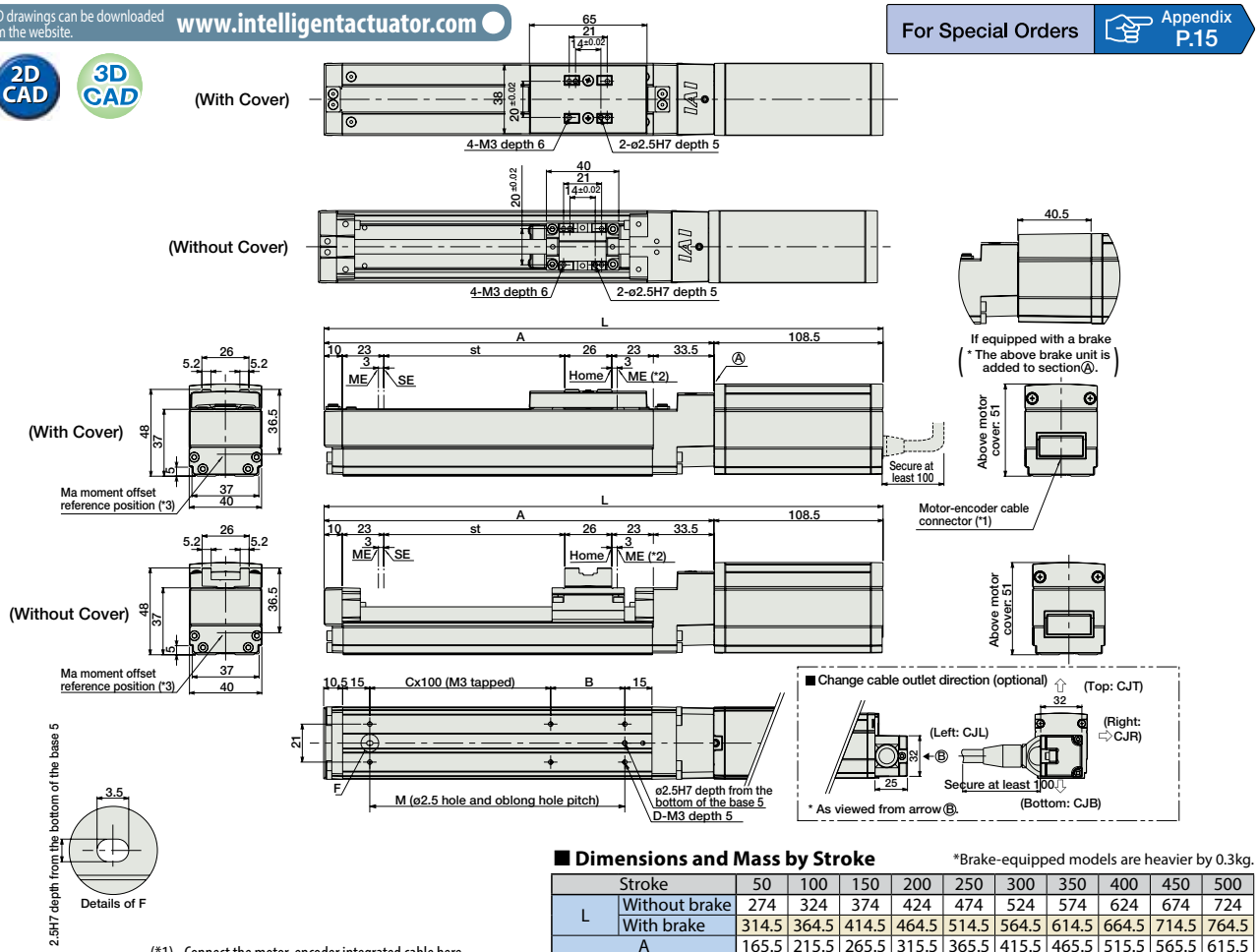


Dimensional Drawings

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

For Special Orders Appendix P.15

2D CAD 3D CAD



(*1) Connect the motor-encoder integrated cable 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
(*3) Reference position for calculating the Ma moment

■ Dimensions and Mass by Stroke

*Brake-equipped models are heavier by 0.3kg.

Stroke		50	100	150	200	250	300	350	400	450	500
L	Without brake	274	324	374	424	474	524	574	624	674	724
	With brake	314.5	364.5	414.5	464.5	514.5	564.5	614.5	664.5	714.5	764.5
A		165.5	215.5	265.5	315.5	365.5	415.5	465.5	515.5	565.5	615.5
B		91	41	91	41	91	41	91	41	91	41
C		0	1	1	2	2	3	3	4	4	5
D		4	6	6	8	8	10	10	12	12	14
M		91	141	191	241	291	341	391	441	491	541
Weight (kg)	With cover	0.9	1	1.1	1.1	1.2	1.3	1.4	1.5	1.5	1.6
	Without cover	0.8	0.9	1	1	1.1	1.2	1.3	1.3	1.4	1.5

②Applicable 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		AMEC-C-20SI①-Ⓘ-2-1	Easy-to-use controller, even for beginners	3 points	AC100V	2.4A rated	—	→ P537
		ASEP-C-20SI①-Ⓘ-2-0	Simple controller operable with the same signal as a solenoid valve		DC24V	(Standard) 1.7A rated 5.1A max. (Power-saving) 1.7A rated 3.4A max.	—	→ P547
Solenoid valve multi-axis type PIO specification		MSEP-C-Ⓘ-~~-Ⓘ-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-Ⓘ-~~-Ⓥ-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points				
Positioner type		ACON-C-20SI①-Ⓘ-2-0	Positioning is possible for up to 512 points	512 points			—	→ P631
Safety-Compliant Positioner Type		ACON-CG-20SI①-Ⓘ-2-0					—	
Pulse Train Input Type (Differential Line Driver)		ACON-PL-20SI①-Ⓘ-2-0	Pulse train input type with differential line driver support	(—)			—	
Pulse Train Input Type (Open Collector)		ACON-PO-20SI①-Ⓘ-2-0	Pulse train input type with open collector support				—	
Serial Communication Type		ACON-SE-20SI①-N-0-0	Dedicated Serial Communication	64 points			—	
Program Control Type		ASEL-CS-1-20SI①-Ⓘ-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			—	→ P675

* This is for the single-axis ASEL. * Enter the code "LA" in ① when the power-saving specification is specified. * Ⓘ indicates I/O type (NP/PN).
* Ⓝ indicates number of axes (1 to 8). * Ⓥ indicates field network specification symbol.