RCA-SS4D

ROBO Cylinder Slider Type 40mm Width 24V Servo Motor
Motor Built-In (Direct-Coupled) Steel Base

■ Configuration: RCA — SS4D — I — 20 — ☐ — ☐ — ☐ — ☐ — ☐ — ☐

Series	Type	Encoder	Motor	Lead	Stroke	Compatible Controllers	Cable Length	Option
RCA	SS4D	I: Incremental * Simple absolute encoder models are labeled as "I".	20: 20W Servo motor	10:10mm 5: 5mm 2.5:2.5mm	50: 50mm 〜 300:300mm (50mm pitch increments)	A1: ACON RACON ASEL A3: AMEC ASEP	N : None P : 1m S : 3m M : 5m X ☐☐: Custom Length R ☐☐:Robot Cable	See Options below

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

Power-saving

Technical References P. A-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 0.3G (0.2G for the 2.5mm-lead model, or when used vertically).
These values are the upper limits for the acceleration.

Actuator Specifications

■ Lead and Load Capacity

Model	Motor Output (W)	Lead (mm)	Max. Load Capacity Horizontal (kg)	Max. Load Capacity Vertical (kg)	Rated Thrust (N)	Stroke (mm)
RCA-SS4D-I-20-10-①-②-③-④	20	10	4	1	19.6	50 〜 300 (50mm increments)
RCA-SS4D-I-20-5-①-②-③-④		5	6	2.5	39.2	
RCA-SS4D-I-20-2.5-①-②-③-④		2.5	8	4.5	78.4	

Legend ① Stroke ② Compatible controller ③ Cable length ④ Options

■ Stroke and Maximum Speed

Lead \ Stroke	50 〜 300 (50mm increments)
10	665
5	330
2.5	165

(Unit: mm/s)

① Stroke List

Stroke (mm)	Standard Price
50	–
100	–
150	–
200	–
250	–
300	–

③ 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)	—
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-39 for cables for maintenance.

④ Option List

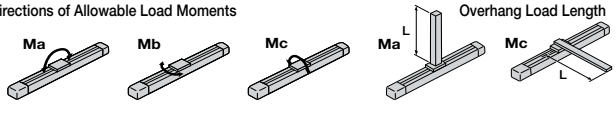
Name	Option Code	See Page	Standard Price
Brake (Cable exiting end)	BE	→ A-25	—
Brake (Cable exiting left)	BL	→ A-25	—
Brake (Cable exiting right)	BR	→ A-25	—
Power-saving	LA	→ A-32	—
Reversed-home	NM	→ A-33	—

Actuator Specifications

Item	Description
Drive System	Ball screw Ø8mm C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Special alloy steel
Allowable Static Moment	Ma: 6.9 N·m Mb: 9.9 N·m Mc: 17.0 N·m
Allowable Dynamic Moment (*)	Ma: 2.7 N·m Mb: 3.9 N·m Mc: 6.8 N·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



Overhang Load Length

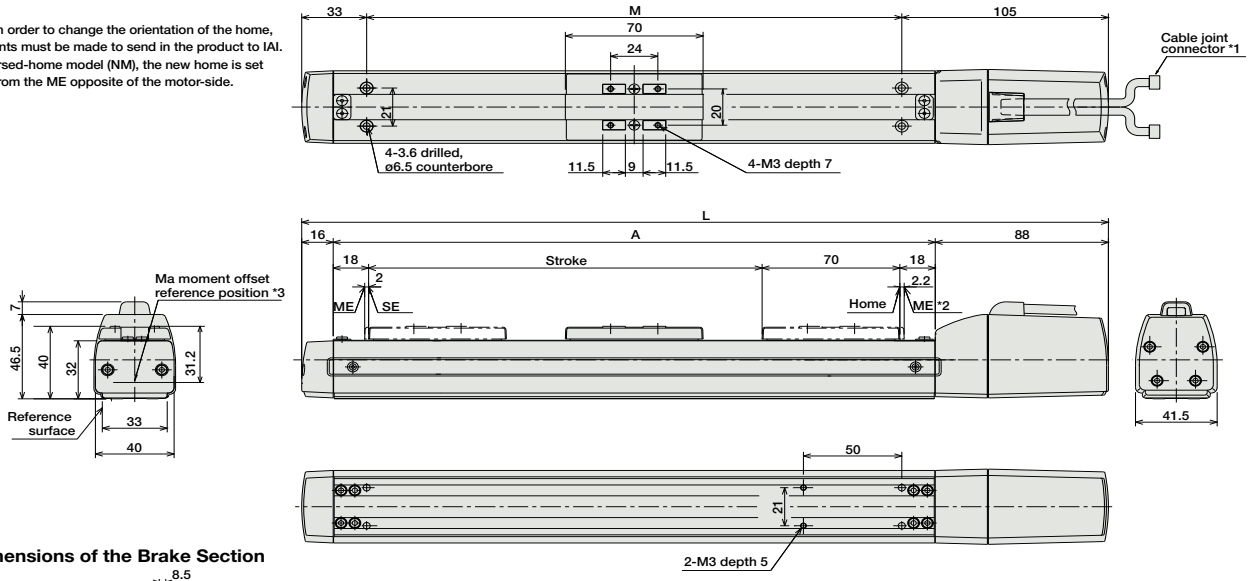
Dimensions

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

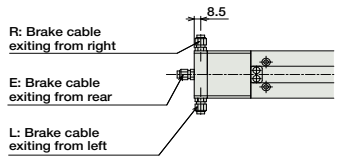
For Special Orders P. A-9

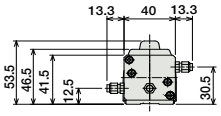
2D CAD

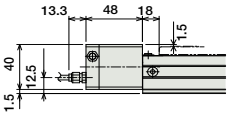
* Note that in order to change the orientation of the home, arrangements must be made to send in the product to IAI.
* In the reversed-home model (NM), the new home is set 2.2mm in from the ME opposite of the motor-side.



Dimensions of the Brake Section







* Adding a brake increases the actuator's overall length (L) by 32mm (45.3mm with the cable coming out its end), and its weight by 0.2kg.

*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.

■ Dimensions/Weight by Stroke

Stroke	50	100	150	200	250	300
L	260	310	360	410	460	510
A	156	206	256	306	356	406
M	122	172	222	272	322	372
Weight (kg)	1.1	1.2	1.3	1.4	1.5	1.6

② 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-20I②-NP-2-1	Easy-to-use controller, even for beginners	3 points	AC100V	2.4A rated	–	→ P477
		ASEP-C-20I②-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types. No homing necessary with simple absolute type.		DC24V	(Standard) 1.3A rated 4.4A max. (Power-saving) 1.3A rated 2.5A max.	–	→ P487
Splash-Proof Solenoid Valve Type		ASEP-CW-20I②-NP-2-0					–	
Positioner Type		ACON-C-20I②-NP-2-0	Positioning is possible for up to 512 points	512 points			–	→ P535
Safety-Compliant Positioner Type		ACON-CG-20I②-NP-2-0					–	
Pulse Train Input Type (Differential Line Driver)		ACON-PL-20I②-NP-2-0	Pulse train input type with differential line driver support	(–)			–	
Pulse Train Input Type (Open Collector)		ACON-PO-20I②-NP-2-0	Pulse train input type with open collector support				–	
Serial Communication Type		ACON-SE-20I②-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-1-20I②-NP-2-0	Programmed operation is possible Can operate up to 2 axes	1500 points			–	→ P567

* This is for the single-axis ASEL.
* ② is a placeholder for the code "LA" when the power-saving option is specified.