

RCS2-SA4D

ROBO Cylinder Slider Type 40mm Width 200V Servo Motor
Motor Built-In (Direct Coupled)

■ Configuration:	RCS2	SA4D		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 300: 300mm (50mm pitch increments)	T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q	N : None P : 1m S : 3m M : 5m X □ : Custom Length R □ : Robot Cable	BE : Brake (Cable exiting end) BL : Brake (Cable exiting left) BR : Brake (Cable exiting right) NM: Reversed-home	

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

Technical
References

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- (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	Rated Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)	
RCS2-SA4D-①-20-10-②-③-④-⑤	20	10	4	1	19.6
RCS2-SA4D-①-20-5-②-③-④-⑤		5	6	2.5	39.2
RCS2-SA4D-①-20-2.5-②-③-④-⑤		2.5	8	4.5	78.4

Stroke and Maximum Speed

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

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

Encoder & Stroke List

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

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)	—
Robot Cable	R01 (1m) ~ R03 (3m)	—
	R04 (4m) ~ R05 (5m)	—
	R06 (6m) ~ R10 (10m)	—
	R11 (11m) ~ R15 (15m)	—
	R16 (16m) ~ R20 (20m)	—

* For cables for maintenance, see page A-39.

⑤ Option List

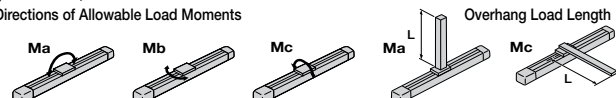
Name	Option Code	See Page	Standard Price
Brake (Cable exiting end)	BE	→ A-25	—
Brake (Cable exiting left)	BL	→ A-25	—
Brake (Cable exiting right)	BR	→ A-25	—
Reversed-home	NM	→ A-33	—

Actuator Specifications

Item	Description
Drive System	Ball screw Ø8mm C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: 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



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RCS2-SA4D

Dimensions

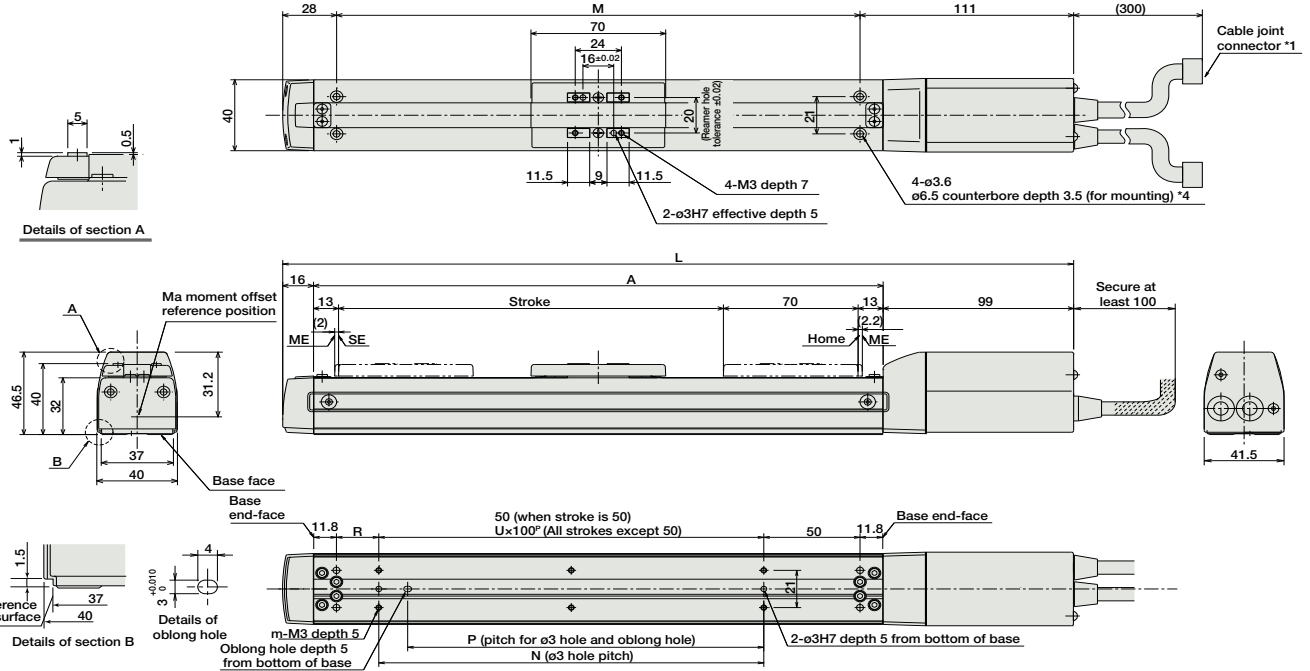
CAD drawings can be downloaded from IAI website. www.intelligentactuator.com

2D
CAD

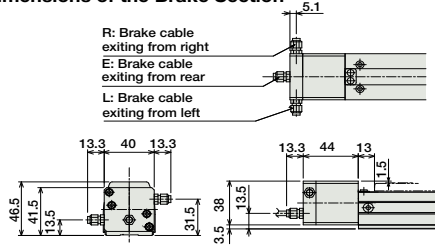
- *1 A motor-encoder cable is connected here. See page A-39 for details on cables.
 *2 When homing, the slider moves to the ME; therefore, please watch for any interference with the surrounding objects.
 ME: Mechanical end SE: Stroke end
 *3 Reference position for calculating the moment Ma.

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- *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 of the Brake Section



* Adding a brake increases the actuator's overall length (L) by 28mm (41.3mm with the cable coming out its end), and its weight by 0.2kg.

■ Dimensions/Weight by Stroke

Stroke	50	100	150	200	250	300
L	261	311	361	411	461	511
A	146	196	246	296	346	396
M	122	172	222	272	322	372
N	50	100	100	200	200	300
P	35	85	85	185	185	285
R	22	22	72	22	72	22
U	—	1	1	2	2	3
m	4	4	4	6	6	8
Weight (kg)	0.8	0.9	1.0	1.1	1.2	1.3

③ Compatible Controllers

The RCS2 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
Positioner Mode		SCON-C-20①-NP-2-②	Positioning is possible for up to 512 points	512 points	Single-Phase AC 100V Single-Phase AC 200V 3-Phase AC 200V (XSEL-P/Q only)	360VA max. * When operating a 150W single-axis model	—	→ P547
Solenoid Valve Mode			Operable with same controls as solenoid valve.	7 points				
Serial Communication Type			Dedicated to serial communication	64 points				
Pulse Train Input Control Type			Dedicated to Pulse Train Input	(—)				
Program Control 1-2 Axis Type		SSEL-C-1-20①-NP-2-②	Programmed operation is possible Can operate up to 2 axes	20000 points			—	→ P577
Program Control 1-6 Axis Type		XSEL-③-1-20①-N1-EEE-2-④	Programmed operation is possible Can operate up to 6 axes	20000 points				

* For SSEL and XSEL, only applicable to the single-axis model.

* ① is a placeholder for the encoder type (I: incremental, A: absolute).

* ② is a placeholder for the power supply voltage (1: 100V, 2: single-phase 200V, 3: 3-phase 200V).

* ③ is a placeholder for the XSEL type name (J, K, P, or Q).

* ④ is a placeholder for the power supply voltage (1: 100V, 2: single-phase 200V, 3: 3-phase 200V).