

RCS2-SA5C

ROBO Cylinder Slider Type 52mm Width 200V Servo Motor Coupled

■ Configuration: **RCS2** — **SA5C** — — **20** — — — — —

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

I : Incremental
A : Absolute

20: 20W Servo motor

12: 12mm
6: 6mm
3: 3mm

50: 50mm
500: 500mm (50mm pitch increments)

T1: XSEL-J/K
T2: SCON
SSEL
XSEL-P/Q

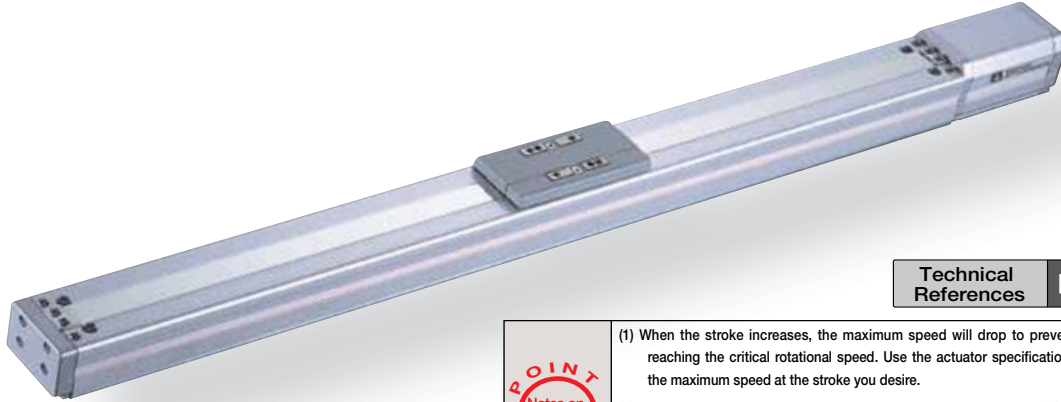
N : None
P : 1m
S : 3m
M : 5m
X : Custom Length
R : Robot Cable

See Options below

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

For High Acceleration/Deceleration

(excluding the 3-mm lead model)



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 of standard model at 0.3G (0.2G for 3mm-lead), and operation of the high acceleration/deceleration model at 0.8G (excluding the 3mm-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)		
RCS2-SA5C-①-20-12-②-③-④-⑤	20	12	4	1	16.7	50 ~ 500 (50mm increments)
RCS2-SA5C-①-20-6-②-③-④-⑤		6	8	2	33.3	
RCS2-SA5C-①-20-3-②-③-④-⑤		3	12	4	65.7	

Stroke and Maximum Speed

Stroke Lead	50 ~ 450 (50mm increments)	500 (mm)
	12	800
6	400	380
3	200	190

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
50	I	A
100	-	-
150	-	-
200	-	-
250	-	-
300	-	-
350	-	-
400	-	-
450	-	-
500	-	-

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)	—

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

⑤ Option List

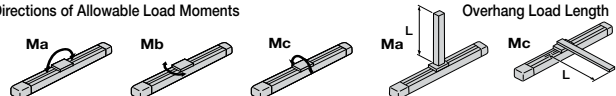
Name	Option Code	See Page	Standard Price
Brake	B	→ A-25	—
Foot bracket	FT	→ A-29	—
For High Acceleration/Deceleration	HA	→ A-32	—
Home sensor	HS	→ A-32	—
Reversed-home	NM	→ A-33	—
Slider Roller	SR	→ A-36	—

* The high-acceleration/deceleration option and the slider roller option cannot be used together.
* The high acceleration/deceleration option cannot be used on the 3mm-lead model.

Actuator Specifications

Item	Description
Drive System	Ball screw Ø10mm C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum (white alumite treated)
Allowable Static Moment	Ma: 18.6N·m Mb: 26.6N·m Mc: 47.5N·m
Allowable Dynamic Moment (*)	Ma: 4.9N·m Mb: 6.8N·m Mc: 11.7N·m
Overhang Load Length	Ma direction: 150mm or less Mb-Mc direction: 150mm 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

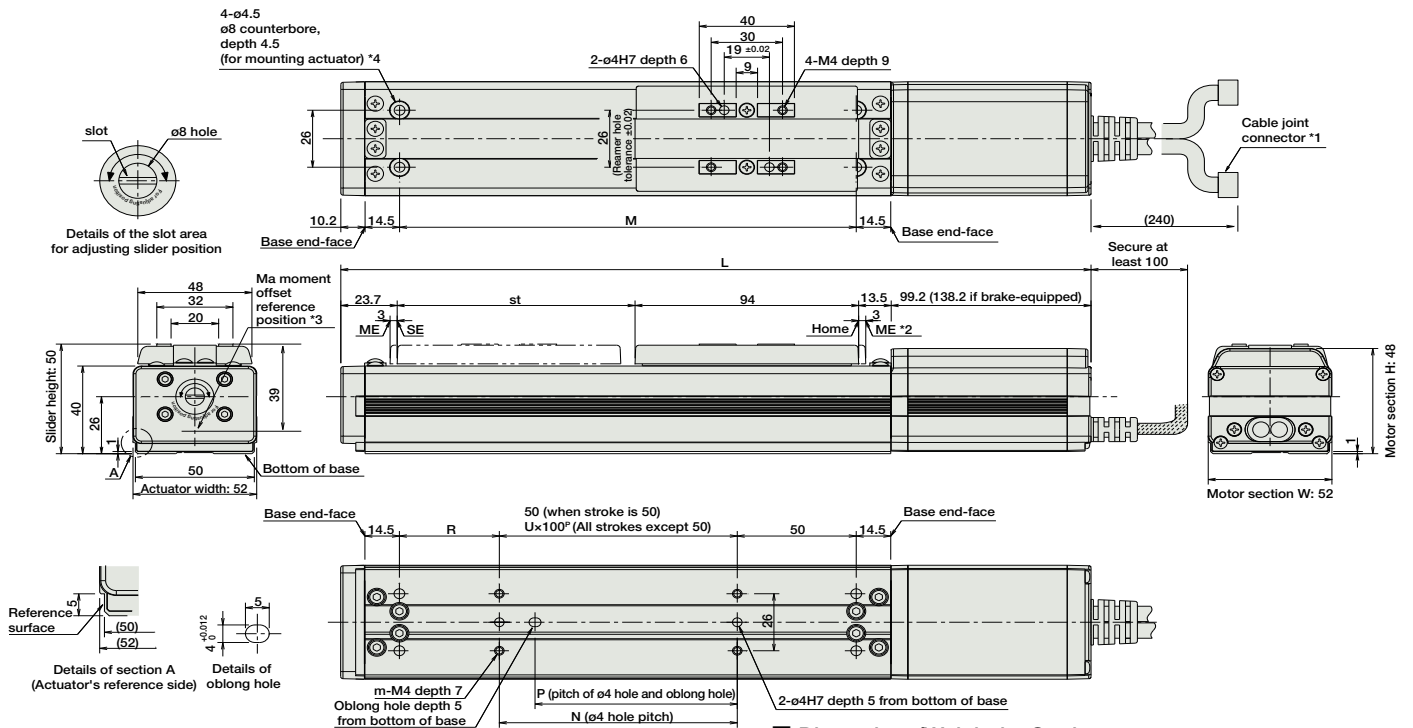
CAD drawings can be downloaded from IAI website. www.intelligentactuator.com

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 300mm or less.



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

Stroke	50	100	150	200	250	300	350	400	450	500	
L	No Brake	280.4	330.4	380.4	430.4	480.4	530.4	580.4	630.4	680.4	730.4
	With Brake	319.4	369.4	419.4	469.4	519.4	569.4	619.4	669.4	719.4	769.4
M	142	192	242	292	342	392	442	492	542	592	
N	50	100	100	200	200	300	300	400	400	500	
P	35	85	85	185	185	285	285	385	385	485	
R	42	42	92	42	92	42	92	42	92	42	
U	-	1	1	2	2	3	3	4	4	5	
m	4	4	4	6	6	8	8	10	10	12	
Weight (kg)	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2	2.1	2.2	

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-20①②-NP-2-③	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-1-20①②-NP-2-③	Programmed operation is possible Can operate up to 2 axes	20000 points			—	→ P577
Program Control 1-6 Axis Type		XSEL-④-1-20①②-N1-EEE-2-⑤	Programmed operation is possible Can operate up to 6 axes	20000 points			—	→ P587

* 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 code "HA" when the high acceleration/deceleration option is specified.
 * ③ is a placeholder for the power supply voltage (1: single-phase 100V, 2: single phase 200V).
 * ④ is a placeholder for the XSEL type name (J, K, P, Q).
 * ⑤ is a placeholder for the power supply voltage type (1: 100V, 2: single-phase 200V, 3: 3-phase 200V).

- Slider Type
- Mini
- Standard
- Controllers Integrated
- Rod Type
- Mini
- Standard
- Controllers Integrated
- Table/Arm/Flat Type
- Mini
- Standard
- Gripper/Rotary Type
- Linear Servo Type
- Cleanroom Type
- Splash-Proof
- Controllers
- PMEC /AMEC
- PSEP /ASEP
- ROBO NET
- ERC2
- PCON
- ACON
- SCON
- PSEL
- ASEL
- SSEL
- XSEL
- Pulse Motor
- Servo Motor (24V)
- Servo Motor (200V)
- Linear Servo Motor