

# RCA-SS5D

ROBO Cylinder Slider Type 52mm Width 24V Servo Motor  
Motor Built-In (Direct-Coupled) Steel Base

■ Configuration: **RCA** — **SS5D** — **I** — **20** — [ ] — [ ] — [ ] — [ ] — [ ]

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

I: Incremental  
\* Simple absolute encoder models are labeled as "I".

20: 20W Servo motor

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

50: 50mm  
5  
500: 500mm (50mm pitch increments)

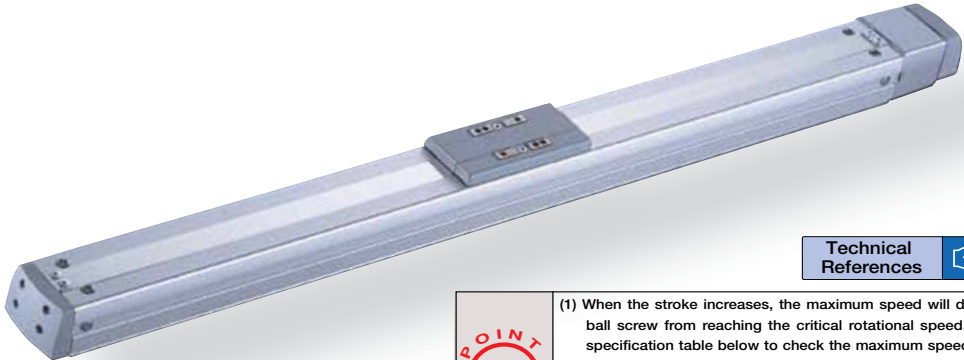
A1: ACON  
RACON  
ASEL  
A3: AMEC  
ASEP

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

- 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 3mm-lead model). These values are the upper limits for the acceleration.

Actuator Specifications						
Lead and Load Capacity				Stroke and Maximum Speed		
Model	Motor Output (W)	Lead (mm)	Max. Load Capacity	Rated Thrust (N)	Stroke (mm)	Stroke / Lead
			Horizontal (kg) / Vertical (kg)			50 ~ 450 (50mm increments) / 500 (mm)
RCA-SS5D-I-20-12-[1]-[2]-[3]-[4]	20	12	4 / 1	16.7	50 ~ 500 (50mm increments)	12 / 800 / 760
RCA-SS5D-I-20-6-[1]-[2]-[3]-[4]		6	8 / 2	33.3		6 / 400 / 380
RCA-SS5D-I-20-3-[1]-[2]-[3]-[4]		3	12 / 4	65.7		3 / 200 / 190

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

① Stroke List

Stroke (mm)	Standard Price
50	-
100	-
150	-
200	-
250	-
300	-
350	-
400	-
450	-
500	-

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)	-
	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.

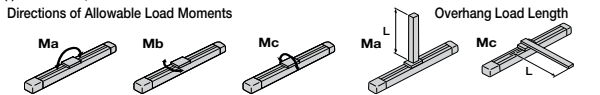
④ Option List

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	-
Slider Roller	SR	→ A-36	-

Actuator Specifications

Item	Description
Drive System	Ball screw Ø10mm C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Special alloy steel
Allowable Static Moment	Ma: 18.6 N·m Mb: 26.6 N·m Mc: 47.5 N·m
Allowable Dynamic Moment (*)	Ma: 4.9 N·m Mb: 6.8 N·m Mc: 11.7 N·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)

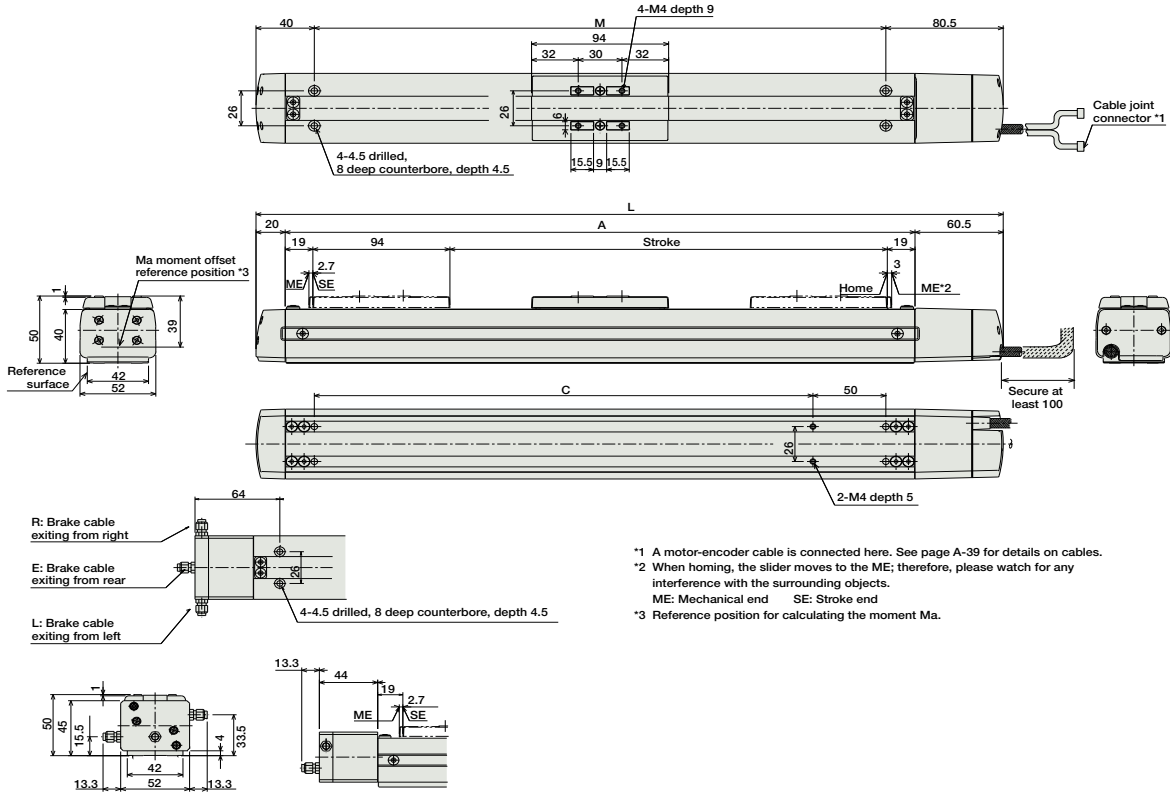
(\*) Based on 5,000km travel life.



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Dimensions

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.

\* Adding a brake will increase the actuator's overall length (L) by 24mm (37.3mm with the cable coming out from the end), and its weight by 0.3kg.

■ Dimensions/Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500
L	262.5	312.5	362.5	412.5	462.5	512.5	562.5	612.5	662.5	712.5
A	182	232	282	332	382	432	482	532	582	632
M	142	192	242	292	342	392	442	492	542	592
C	92	142	192	242	292	342	392	442	492	542
Weight (kg)	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3

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-20②-NP-2-1	Easy-to-use controller, even for beginners	3 points	AC100V	2.4A rated	-	→ P477
		ASEP-C-20②-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types. No homing necessary with simple absolute type.					→ P487
Splash-Proof Solenoid Valve Type		ASEP-CW-20②-NP-2-0						
Positioner Type		ACON-C-20②-NP-2-0	Positioning is possible for up to 512 points	512 points	DC24V	(Standard) 1.3A rated 4.4A max.  (Power-saving) 1.3A rated 2.5A max.	-	
Safety-Compliant Positioner Type		ACON-CG-20②-NP-2-0						
Pulse Train Input Type (Differential Line Driver)		ACON-PL-20②-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	(Standard) 1.3A rated 4.4A max.  (Power-saving) 1.3A rated 2.5A max.	-	→ P535
Pulse Train Input Type (Open Collector)		ACON-PO-20②-NP-2-0	Pulse train input type with open collector support					
Serial Communication Type		ACON-SE-20②-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-1-20②-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.

- 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