RCA-SS6D

ROBO Cylinder, Slider Type, 5 Actuator Width 8mm, 24V Servo Motor, Motor Built-in (Direct-Coupled), Steel Base

Model Specification Items

RCA	SS6D	I	30	□	□	□	□	□
Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
		I: Incremental * The Simple absolute encoder is also considered type "I".	30: 30W Servo motor	12: 12mm 6: 6mm 3: 3mm	50: 50mm ~ 600: 600mm (50mm pitch increments)	A1: ACON ASEL A3: AMEC ASEP MSEP	N: None P: 1m S: 3m M: 5m X□□: Custom length R□□: Robot cable	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) When the stroke increases, the maximum 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.
(3) 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)
RCA-SS6D-I-30-12-①-②-③-④	30	12	6	1.5	24.2	50~600 (every 50mm)
RCA-SS6D-I-30-6-①-②-③-④		6	12	3	48.4	
RCA-SS6D-I-30-3-①-②-③-④		3	18	6	96.8	

Stroke and Maximum Speed

Lead \ Stroke	50~450 (every 50mm)	500 (mm)	550 (mm)	600 (mm)
12	800	760	640	540
6	400	380	320	270
3	200	190	160	135

(Unit: mm/s)

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

① Stroke

① Stroke (mm)	Standard price
50	—
100	—
150	—
200	—
250	—
300	—
350	—
400	—
450	—
500	—
550	—
600	—

③ Cable Length

Type	Cable symbol	Standard Price
Standard	**P** (1m)	—
	S (3m)	—
	M (5m)	—
Special length	**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-59 for cables for maintenance.

④ Options

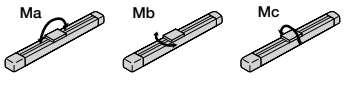
Name	Option code	See page	Standard price
Brake (cable exiting end)	**BE**	→ A-42	—
Brake (cable exiting left)	**BL**	→ A-42	—
Brake (cable exiting right)	**BR**	→ A-42	—
Power-saving	**LA**	→ A-52	—
Non-motor end specification	**NM**	→ A-52	—
Slider roller specification	**SR**	→ A-55	—

Actuator Specifications

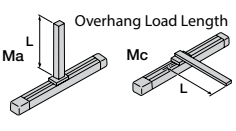
Item	Description
Drive System	Ball screw, ø10mm, rolled C10
Positioning repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Special alloy steel
Allowable static moment	Ma: 38.3 N·m, Mb: 54.7 N·m, Mc: 81.0 N·m
Allowable dynamic moment (*)	Ma: 8.9 N·m, Mb: 12.7 N·m, Mc: 18.6 N·m
Allowable overhang	220mm 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



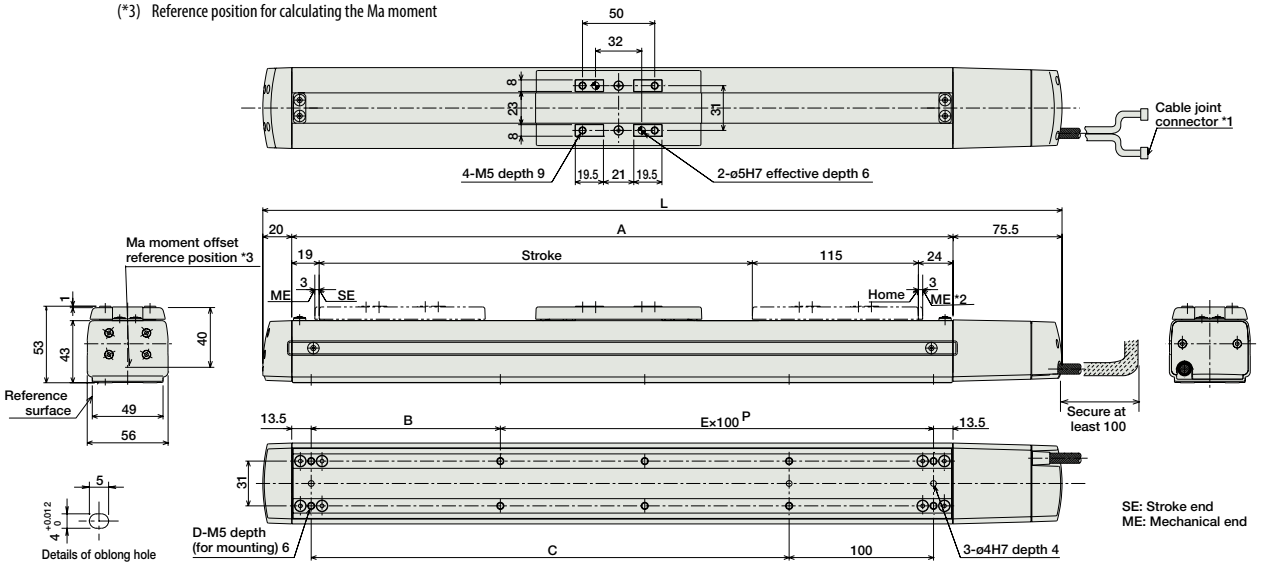
Dimensional Drawings

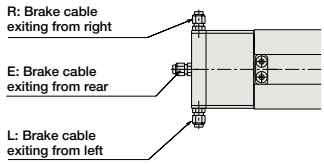
CAD drawings can be downloaded from the website. www.intelligentactuator.com

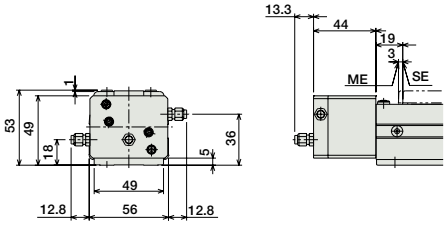
For Special Orders Appendix P.15

2D CAD

(*1) Connect the motor and encoder cables 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







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

■ Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600
L	303.5	353.5	403.5	453.5	503.5	553.5	603.5	653.5	703.5	753.5	803.5	853.5
A	208	258	308	358	408	458	508	558	608	658	708	758
B	81	131	81	131	81	131	81	131	81	131	81	131
C	81	131	181	231	281	331	381	431	481	531	581	631
D	6	6	8	8	10	10	12	12	14	14	16	16
E	1	1	2	2	3	3	4	4	5	5	6	6
P	66	116	166	216	266	316	366	416	466	516	566	616
Weight (kg)	2.4	2.6	2.8	3.0	3.2	3.4	3.6	3.8	4.0	4.2	4.4	4.7

②Applicable Controllers

RCA 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-30Ⅰ-Ⅱ-2-1	Easy-to-use controller, even for beginners	3 points	AC100V	2.4A rated	—	→ P537
		ASEP-C-30Ⅰ-Ⅱ-2-0	Simple controller operable with the same signal as a solenoid valve		DC24V	(Standard) 1.3A rated 4.4A max. (Power-saving) 1.3A rated 2.2A max.	—	→ P547
Solenoid valve multi-axis type PIO specification		MSEP-C-Ⅲ-~~-Ⅱ-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-Ⅲ-~~-Ⅳ-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points				
Positioner type		ACON-C-30Ⅰ-Ⅱ-2-0	Positioning is possible for up to 512 points	512 points			—	→ P631
Safety-Compliant Positioner Type		ACON-CG-30Ⅰ-Ⅱ-2-0					—	
Pulse Train Input Type (Differential Line Driver)		ACON-PL-30Ⅰ-Ⅱ-2-0	Pulse train input type with differential line driver support	(—)			—	
Pulse Train Input Type (Open Collector)		ACON-PO-30Ⅰ-Ⅱ-2-0	Pulse train input type with open collector support				—	
Serial Communication Type		ACON-SE-30Ⅰ-N-0-0	Dedicated Serial Communication	64 points			—	
Program Control Type		ASEL-CS-1-30Ⅰ-Ⅱ-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 Ⅰ when the power-saving specification is specified. * Ⅱ indicates I/O type (NP/PN).
* Ⅲ indicates number of axes (1 to 8). * Ⅳ indicates field network specification symbol.