RCP6(S)-SA4C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 40 mm | 24V Stepper Motor

■ Model Specification Items

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controller/I/O Type	Cable Length	Options
RCP6: Separate Controller RCP6S: Built-in Controller	SA4C	WA: Battery-less Absolute	35P: Stepper Motor 35□ Size	16:16mm 10:10mm 5: 5mm 2.5:2.5mm	50: 50mm ~ 500: 500mm (50mm increments)	[RCP6] P3: PCON MCON MSEL [RCP6S] SE: SIO Type	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Please refer to the options table below.

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.10 for more information about the model specification items.

CE RoHS

Horizontal | Vertical | Side | Ceiling

*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.

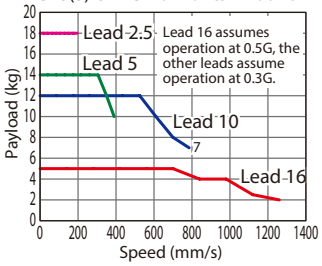
POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
(3) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.

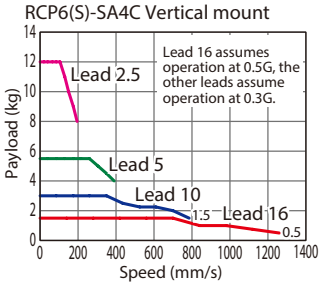
■ Correlation Diagrams of Speed and Payload

High-output enabled with PCON/MCON/MSEL connected.

RCP6(S)-SA4C Horizontal mount



RCP6(S)-SA4C Vertical mount



Actuator Specifications

■ Lead and Payload

Model Number	Lead (mm)	Connected Controller	Max. Payload Horizontal (kg)	Max. Payload Vertical (kg)	Stroke (mm)
RCP6(S)-SA4C-WA-35P-16-①-②-③-④	16	High-output Enabled	7	1.5	50~500 (The increment of stroke is 50mm)
RCP6(S)-SA4C-WA-35P-10-①-②-③-④	10	High-output Enabled	12	3	
RCP6(S)-SA4C-WA-35P-5-①-②-③-④	5	High-output Enabled	14	5.5	
RCP6(S)-SA4C-WA-35P-2.5-①-②-③-④	2.5	High-output Enabled	18	12	

■ Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~400 (Every 50mm)	450 (mm)	500 (mm)
16	High-output Enabled	1,260	1,060	875
10	High-output Enabled	785	675	555
5	High-output Enabled	390	330	275
2.5	High-output Enabled	195	165	135

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

① Stroke

Stroke (mm)	RCP6	RCP6S	Stroke (mm)	RCP6	RCP6S
50	○	○	**300**	○	○
100	○	○	**350**	○	○
150	○	○	**400**	○	○
200	○	○	**450**	○	○
250	○	○	**500**	○	○

③ Cable Length

Cable Type	Cable Code	RCP6	RCP6S
Standard	**P** (1m)	○	○
	S (3m)	○	○
	M (5m)	○	○
Specified 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)	○	○

* Please refer to P.144 for more information regarding the maintenance cables.

④ Options

Name	Option Code	Reference Page
Brake	**B**	See P.105
Cable exit direction (Top)	**CJT**	See P.105
Cable exit direction (Right)	**CJR**	See P.105
Cable exit direction (Left)	**CJL**	See P.105
Cable exit direction (Bottom)	**CJB**	See P.105
High-precision specification *	**HPR**	See P.108
Non-motor end specification	**NM**	See P.110

* Positioning repeatability is ±5μm for high-precision specification (HPR). High-precision specification option cannot be selected for lead 16.
# When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ8mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 13.0N•m, Mb: 18.6N•m, Mc: 25.3N•m
Dynamic allowable moment (*2)	Ma: 5.0N•m, Mb: 7.1N•m, Mc: 9.7N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

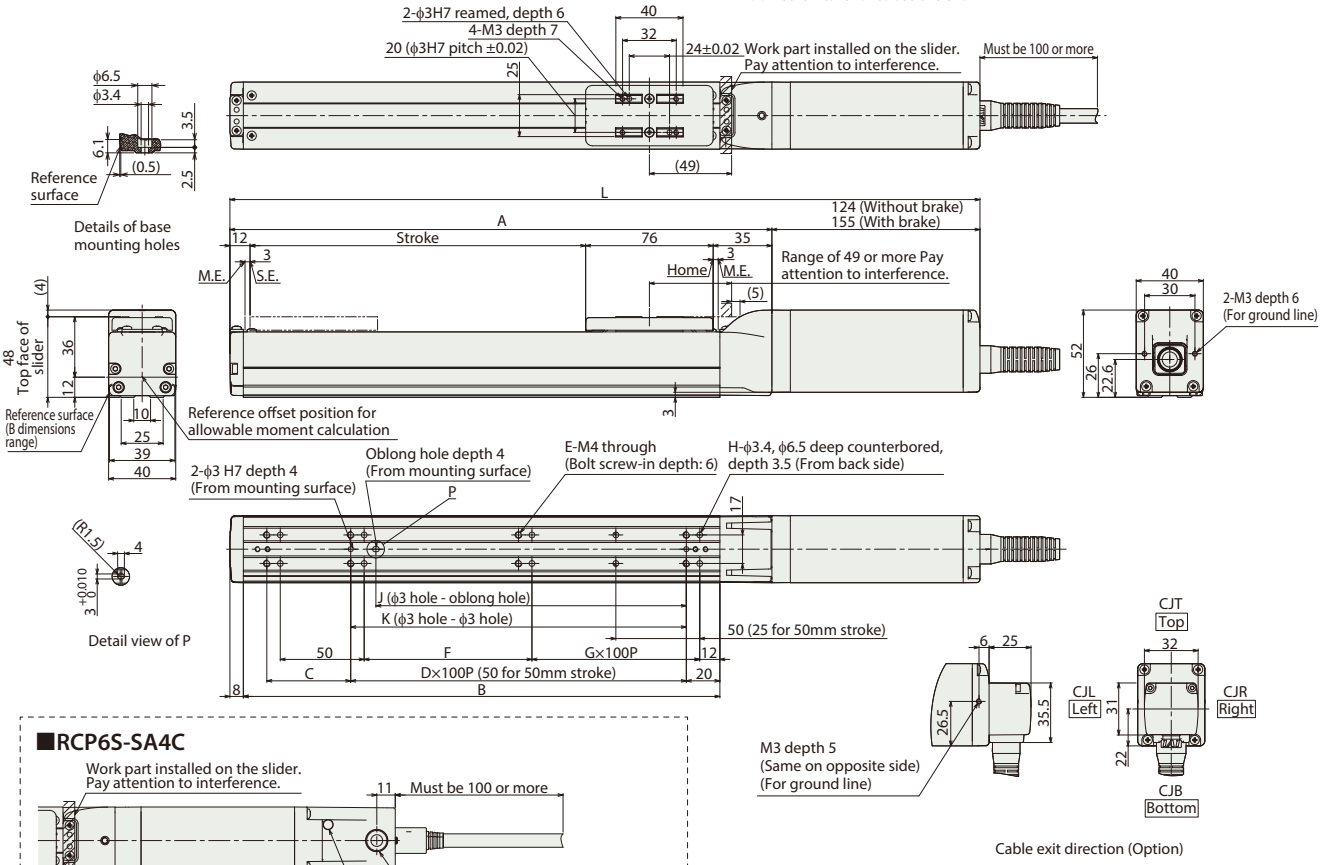
* Reference for overhang load length: Ma: 150mm or less, Mb, Mc: 150mm or less

(*1) Values in [ ] are for high-precision (for lead 2.5/5/10) specification.
(*2) Assumes a standard rated life of 5,000km. The service life will vary depending on operation and installation conditions.
Please refer to our website for more information regarding the directions of the allowable moment and overhang load length.

Dimensions

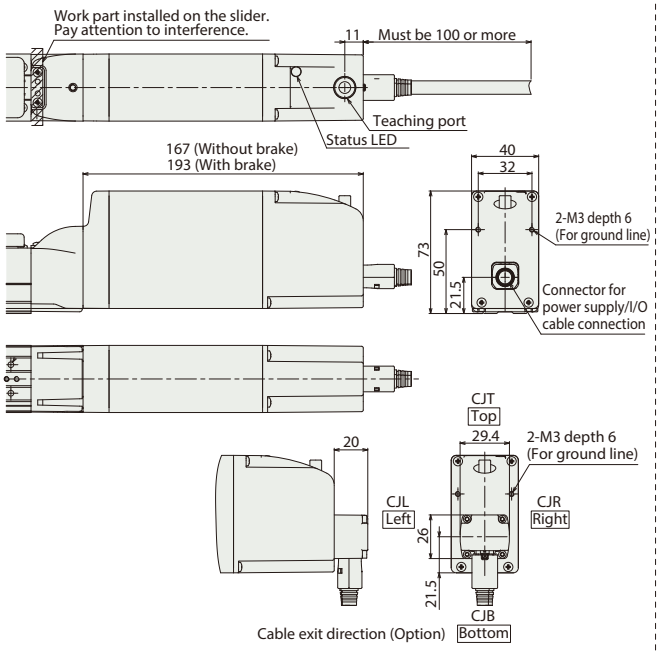
CAD drawings can be downloaded from our website.
www.intelligentactuator.com

*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



Cable exit direction (Option)

■RCP6S-SA4C



Cable exit direction (Option)

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500
L	RCP6	w/o brake	297	347	397	447	497	547	597	647	697	747
		w/ brake	328	378	428	478	528	578	628	678	728	778
	RCP6S	w/o brake	340	390	440	490	540	590	640	690	740	790
		w/ brake	366	416	466	516	566	616	666	716	766	816
A			173	223	273	323	373	423	473	523	573	623
B			134	184	234	284	334	384	434	484	534	584
C			50	50	100	50	100	50	100	50	100	50
D			-	1	1	2	2	3	3	4	4	5
E			6	6	6	8	8	10	10	12	12	14
F			50	100	50	100	50	100	50	100	50	100
G			0	0	1	1	2	2	3	3	4	4
H			8	8	10	10	12	12	14	14	16	16
J			35	85	85	185	185	285	285	385	385	485
K			50	100	100	200	200	300	300	400	400	500
Mass (kg)	RCP6	w/o brake	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.7	1.8	1.9
		w/ brake	1.3	1.4	1.5	1.5	1.6	1.7	1.8	1.9	2.0	2.1
	RCP6S	w/o brake	1.3	1.4	1.5	1.6	1.7	1.8	1.8	1.9	2.0	2.1
		w/ brake	1.5	1.6	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3

② Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.147 for more information about the built-in controller of RCP6S series.

Name	External view	Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network *Option	Maximum number of positioning points	Reference page
PCON-CB/CGB		1	DC24V	● *Option	● *Option	-	DeviceNet, MECHATROLINK, CC-Link, EtherCAT, PROFIBUS, EtherNet/IP, CompoNet, PROFINET	512 (768 for network spec.)	Please see P.131
MCON-C/CG		4		This model is network-compatible only.			Note: · The type of compatible networks will vary depending on the controller. Please refer to reference page for more information.	256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●		30,000	Please see the MSEL-PC/PG catalog.

* Please select "high-output specification" as an option for the MCON. With the MCON, operation is possible only when the high-output specification is selected.