RCP6(S)-WSA10R

±10μm Standard | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 100* 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	WSA10R	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. *Please make sure to specify either ML or MR when ordering the side-mounted motor type.

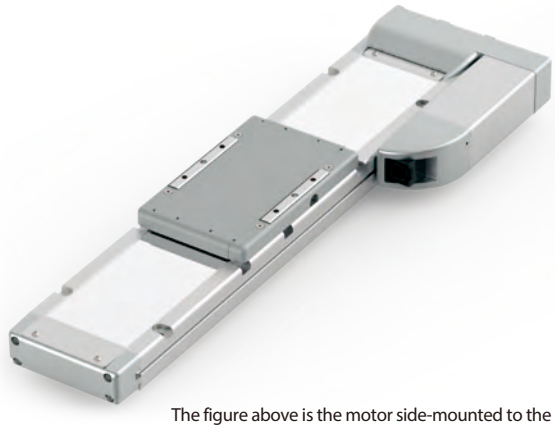
* Body width does not include the width of the side-mounted motor.

* 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.



The figure above is the motor side-mounted to the left (ML).

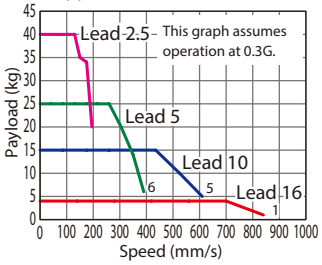
POINT Selection Notes

(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.

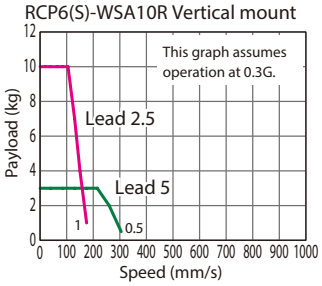
Correlation Diagrams of Speed and Payload

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

RCP6(S)-WSA10R Horizontal mount



RCP6(S)-WSA10R 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)-WSA10R-WA-35P-16-①-②-③-④	16	High-output Enabled	4	-	50~500 (The increment of stroke is 50mm)
RCP6(S)-WSA10R-WA-35P-10-①-②-③-④	10	High-output Enabled	15	-	
RCP6(S)-WSA10R-WA-35P-5-①-②-③-④	5	High-output Enabled	28	3	
RCP6(S)-WSA10R-WA-35P-2.5-①-②-③-④	2.5	High-output Enabled	40	10	

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

Stroke and Max. Speed

(Unit: mm/s)

Lead (mm)	Connected Controller	50~300 (Every 50mm)	350 (mm)	400 (mm)	450 (mm)	500 (mm)
16	High-output Enabled	840			775	660
10	High-output Enabled	610		590	490	415
5	High-output Enabled	390 <305>	355 <305>	290	245	205
2.5	High-output Enabled	195 <175>	175	145	120	100

Values in brackets < > are for vertical use.

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 (Outside)	**CJO**	See P.105
Motor side-mounted to the left	**ML**	See P.109
Motor side-mounted to the right	**MR**	See P.109
Non-motor end specification	**NM**	See P.110

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	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Static allowable moment	Ma: 271N•m, Mb: 271N•m, Mc: 553N•m
Dynamic allowable moment (*1)	Ma: 65.4N•m, Mb: 65.4N•m, Mc: 134N•m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

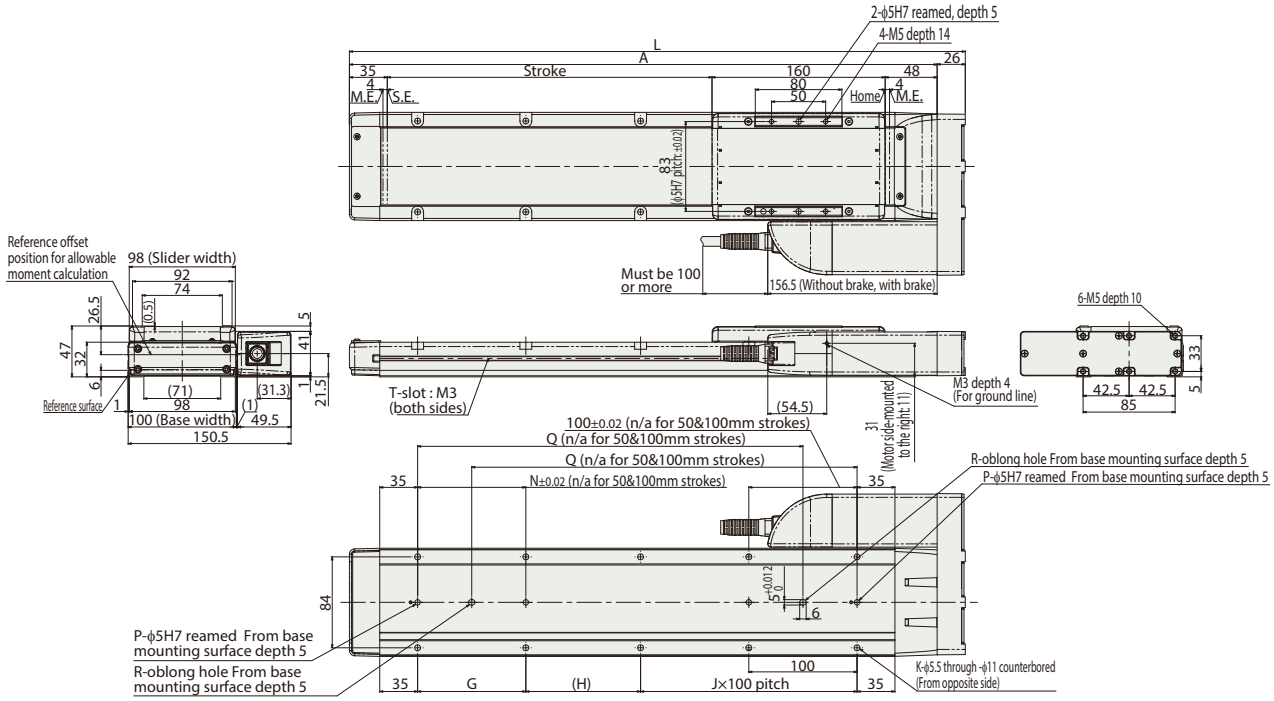
* Reference for overhang load length: Ma: 500mm or less, Mb, Mc: 500mm or less

(*1) 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.

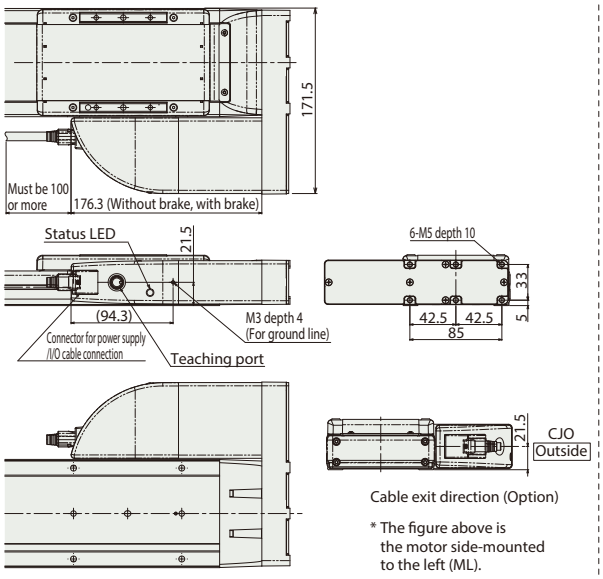
Dimensions

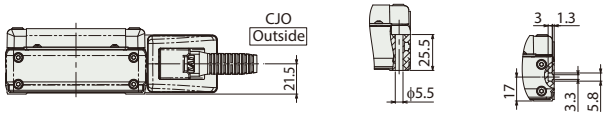
CAD drawings can be downloaded from our website.
www.intelligentactuator.com

*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



■RCP6S-WSA10R





* The figure above is the motor side-mounted to the left (ML).

■ Dimensions and Mass by Stroke

Stroke			50	100	150	200	250	300	350	400	450	500
L			319	369	419	469	519	569	619	669	719	769
A			293	343	393	443	493	543	593	643	693	743
G			-	-	100	100	100	100	100	100	100	100
H			156	206	56	106	56	106	56	106	56	106
J			0	0	1	1	2	2	3	3	4	4
K			4	4	8	8	10	10	12	12	14	14
N			-	-	100	100	100	100	100	100	100	100
P			1	1	2	2	2	2	2	2	2	2
Q			-	-	206	256	306	356	406	456	506	556
R			0	0	1	1	1	1	1	1	1	1
Mass (kg)	RCP6	w/o brake	2.9	3.2	3.4	3.6	3.9	4.1	4.4	4.6	4.8	5.1
		w/ brake	3.0	3.2	3.5	3.7	3.9	4.2	4.4	4.7	4.9	5.2
	RCP6S	w/o brake	3.0	3.3	3.5	3.8	4.0	4.3	4.5	4.7	5.0	5.2
		w/ brake	3.1	3.4	3.6	3.8	4.1	4.3	4.6	4.8	5.0	5.3

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				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network *Option		
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.				256	Please see the MCON catalog.
MSEL-PC/PG		4	Single-phase 100~230VAC	-	-	●		30,000	Please see the MSEL-PC/PG catalog.

Note:
· The type of compatible networks will vary depending on the controller.
Please refer to reference page for more information.

* 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.