

RCP4-SA5R

ROBO Cylinder, Slider Type, Side-mounted Motor Type, Actuator Width 52mm, 24-V Pulse Motor

Model
Specification
Items

RCP4 — SA5R

Series — Type

I

Encoder type

42P

Motor type

I: Incremental
specification

42P: Pulse motor,
size 42□

20: 20mm

12: 12mm

6: 6mm

3: 3mm

50: 50mm

800: 800mm

(every 50mm)

P3: PCON / MSEL

P5: PCON / RSEL

N: None

P: 1m

S: 3m

M: 5m

X□□: Specified length

R□□: Robot cable

Refer to the options
table below.

* Be sure to specify
either "ML" or "MR"
as the motor side-
mounted direction.



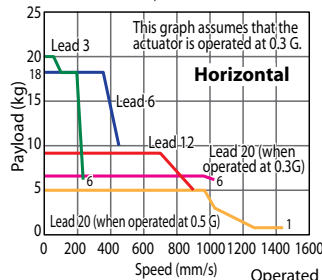
The "Motor side-mounted to the left (ML)" option is selected for the actuator shown above.

POINT
Notes on
selection

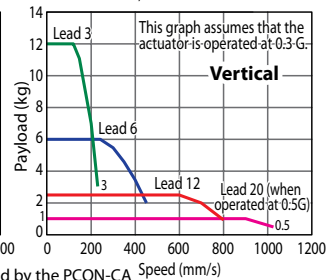
- (1) The maximum payload is the value when operated at 0.3G (0.2G with some models) acceleration. The upper limit of acceleration is 1 G (*). Note that raising the acceleration causes the payload to drop.
(*) The specific value varies depending on the connected controller and actuator lead. For details, refer to "Selection References" on P. 37 to 40.
- (2) Take note that the maximum payload and maximum speed vary depending on the controller connected to the RCP4. (Refer to the actuator specifications below.)

Correlation Diagrams of Speed and Payload

RCP4-SA5R Horizontal, PCON-CA connected

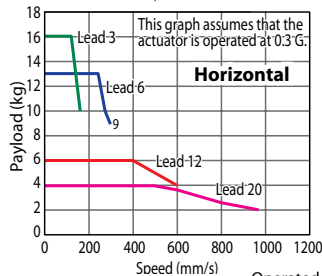


RCP4-SA5R Vertical, PCON-CA connected

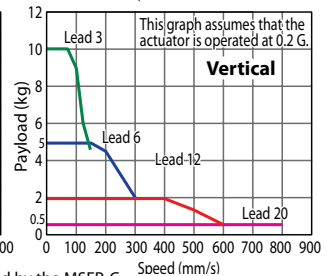


* PCON-CA is a previous model. The current model is PCON-CB.

RCP4-SA5R Horizontal, MSEP connected



RCP4-SA5R Vertical, MSEP connected



Actuator Specifications

* PCON-CA is a previous model. The current model is PCON-CB.

Leads and Payloads

Model number	Lead (mm)	Connected controller	Maximum payload		Stroke (mm)
			Horizontal (kg)	Vertical (kg)	
RCP4-SA5R-I-42P-20-①-P3-②-③	20	PCON-CA	6.5	1	50~800 (every 50mm)
		MSEP-C	4	0.5 (*)	
RCP4-SA5R-I-42P-12-①-P3-②-③	12	PCON-CA	9	2.5	
		MSEP-C	6	2	
RCP4-SA5R-I-42P-6-①-P3-②-③	6	PCON-CA	18	6	
		MSEP-C	13	5	
RCP4-SA5R-I-42P-3-①-P3-②-③	3	PCON-CA	20	12	
		MSEP-C	16	10	

Code explanation ① Stroke ② Cable length ③ Options (*) When operated at 0.2 G

Stroke and Maximum Speed

Lead (mm)	Connected controller	50~450 (every 50mm)	500 (mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
20	PCON-CA	1440 <1120>	1225 <1120>	1045	900	785	690	610	
	MSEP-C		960 <800>		900 <800>	785	690	610	
12	PCON-CA	900 <800>	795	665	570	490	425	375	330
	MSEP-C		600		570	490	425	375	330
6	PCON-CA	450	395	335	285	245	215	185	165
	MSEP-C		300		285	245	215	185	165
3	PCON-CA	225	195	165	140	120	105	90	80
	MSEP-C		150		140	120	105	90	80

The values in < > apply when the actuator is used vertically.

(unit: mm/s)

① Stroke

Stroke (mm)	Standard price	Stroke (mm)	Standard price
50	—	450	—
100	—	500	—
150	—	550	—
200	—	600	—
250	—	650	—
300	—	700	—
350	—	750	—
400	—	800	—

② Cable Length

Type	Cable symbol	Standard price
Standard type	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)	—
		—

③ Options *

Name	Option code	See page	Standard price
Brake	B	P8	—
Optional cable exit direction (top)	CJT	P8	—
Optional cable exit direction (outside)	CJO	P8	—
Optional cable exit direction (bottom)	CJB	P8	—
Motor side-mounted to the left (standard)	ML	P8	—
Motor side-mounted to the right	MR	P8	—
Non-motor end specification	NM	P8	—
Slider roller specification	SR	P8	—

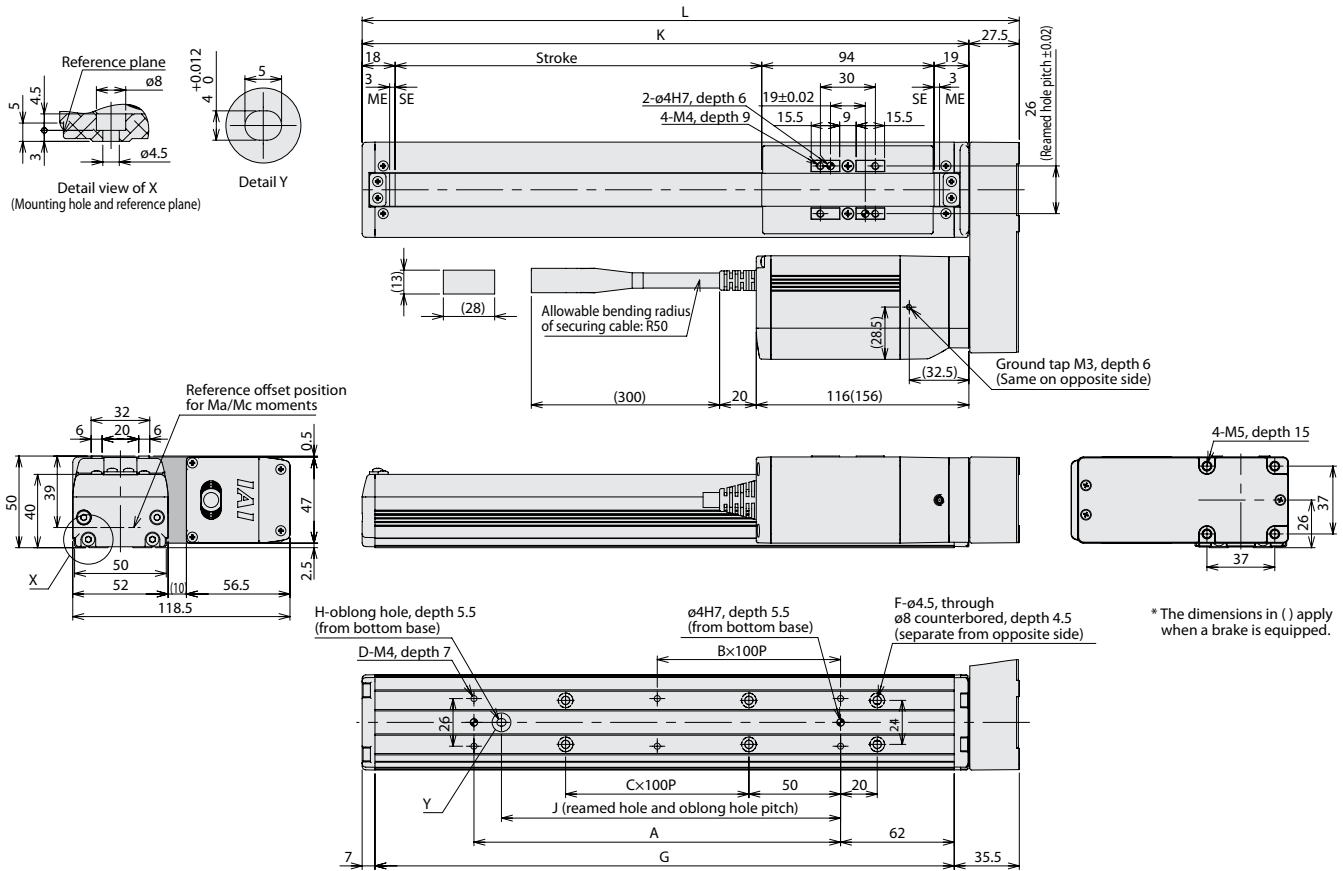
Actuator Specifications

Item	Description
Drive system	Ball screw Ø10mm, rolled C10
Positioning repeatability (*1)	±0.02mm [±0.03mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Guide	Linear guide
Dynamic allowable moment (*2)	Ma: 4.9 N·m, Mb: 6.8 N·m, Mc: 11.7 N·m
Allowable overhang	150mm or less in Ma, Mb and Mc directions
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

(*1) The value at lead 20 is shown in []. (*2) Based on 5,000km of traveling life.



- *1 Connect the motor and encoder cables.
- *2 During home return, be careful to avoid interference from peripheral objects because the slider travels until the mechanical end.



* The dimensions in () apply when a brake is equipped.

■ Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	208.5	258.5	308.5	358.5	408.5	458.5	508.5	558.5	608.5	658.5	708.5	758.5	808.5	858.5	908.5	958.5
A	73	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
B	0	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7
C	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	8
D	4	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18
F	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18
G	166	216	266	316	366	416	466	516	566	616	666	716	766	816	866	916
H	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
J	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
K	181	231	281	331	381	431	481	531	581	631	681	731	781	831	881	931
Mass (kg)	Without brake	1.7	1.9	2.0	2.2	2.3	2.5	2.6	2.8	2.9	3.0	3.2	3.3	3.5	3.6	3.9
	With brake	2.0	2.1	2.3	2.4	2.5	2.7	2.8	3.0	3.1	3.3	3.4	3.6	3.7	3.9	4.1

Applicable Controller

* Controller for RCP4 series is PCON, MSEL, RCON or RSEL.
Please refer our Controller General Catalog and/or contact IAI.