

RCP4-SA7R

ROBO Cylinder, Slider Type, Side-mounted Motor Type, Actuator Width 73mm, 24-V Pulse Motor

Model Specification Items

RCP4 — **SA7R** — **I** — **56P** — — — — —

Series — Type — Encoder type — Motor type — Lead — Stroke — Applicable controller — Cable length — Options

I: Incremental specification 56P: Pulse motor, size 56□ 24: 24mm 16: 16mm 8: 8mm 4: 4mm 50: 50mm 800: 800mm (every 50mm) P3: PCON / MSEL P5: RCON / 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.

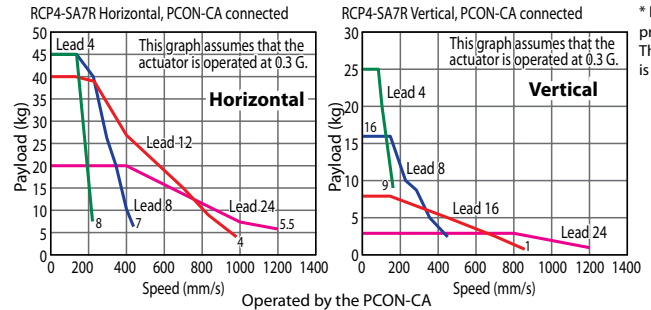


The "Motor side-mounted to the left (ML)" option is selected for the actuator shown above.

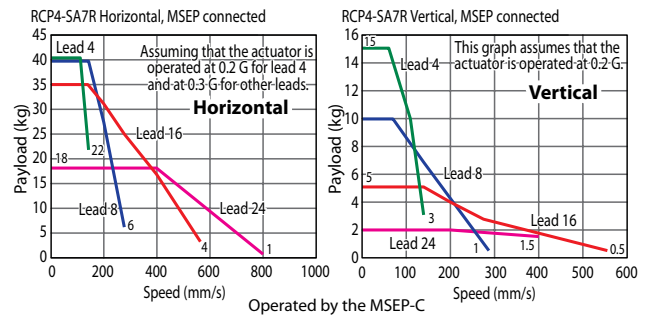


- The maximum payload is the value when operated at 0.3G (0.2G with some models) acceleration. The upper limit of acceleration is 1 G (*). Note that raising the acceleration causes the payload to drop. (*The specific value varies depending on the connected controller and actuator lead. For details, refer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



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



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-SA7R-I-56P-24-①-P3-②-③	24	PCON-CA	20	3	50~800 (every 50mm)
		MSEP-C	18	2 (*)	
RCP4-SA7R-I-56P-16-①-P3-②-③	16	PCON-CA	40	8	
		MSEP-C	35	5 (*)	
RCP4-SA7R-I-56P-8-①-P3-②-③	8	PCON-CA	45	16	
		MSEP-C	40	10 (*)	
RCP4-SA7R-I-56P-4-①-P3-②-③	4	PCON-CA	45	25	
		MSEP-C	40 (*)	15 (*)	

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)	
24	PCON-CA	1000							890	790
	MSEP-C	800<600>							790<600>	
16	PCON-CA	840<700>			750<700>		655	580	515	
	MSEP-C	560							515	
8	PCON-CA	490		430	375	325	290	255		
	MSEP-C	280							255	
4	PCON-CA	210			185	160	145	125		
	MSEP-C	140							125	

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	—

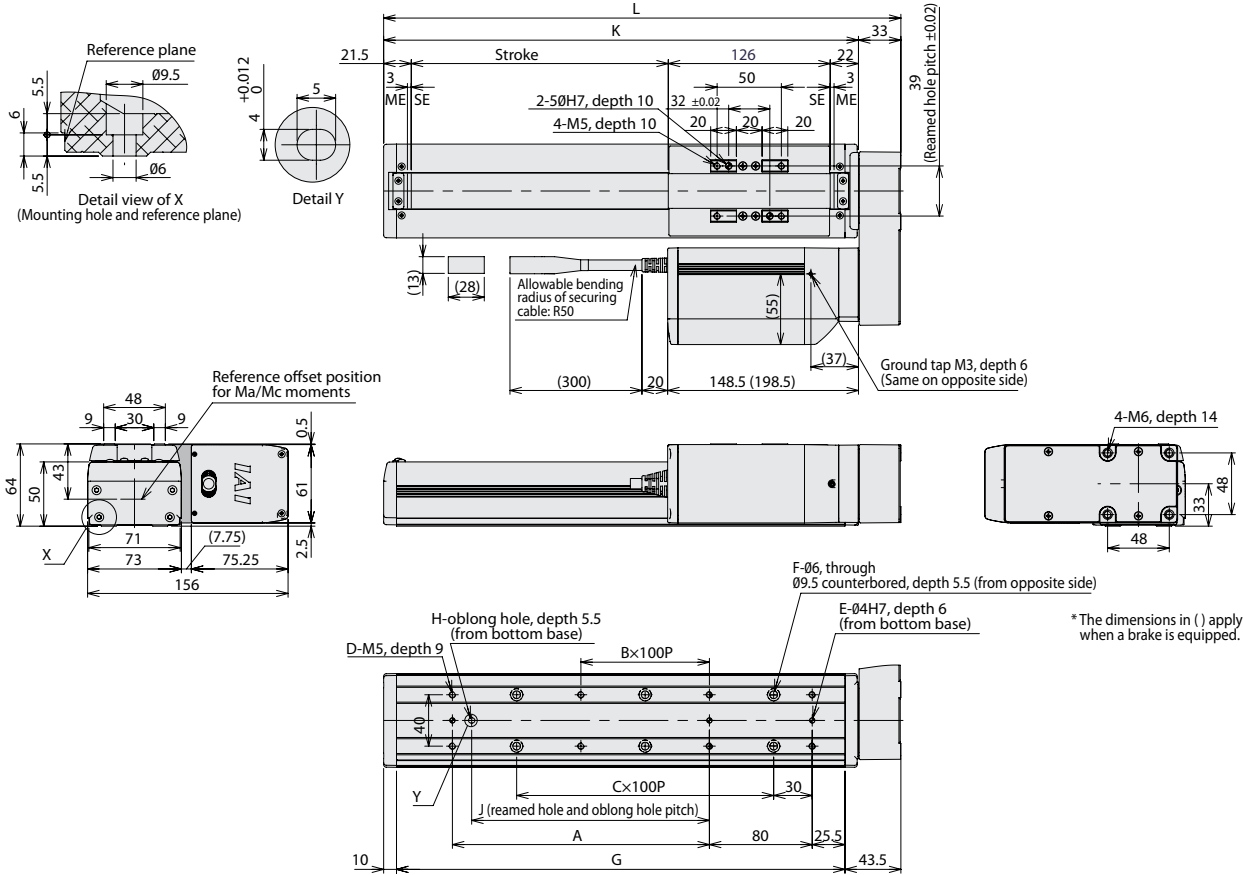
Actuator Specifications

Item	Description
Drive system	Ball screw #12mm, 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: 13.9 N·m, Mb: 19.9 N·m, Mc: 38.3 N·m
Allowable overhang	230mm 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 24 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.



■ Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	252.5	302.5	352.5	402.5	452.5	502.5	552.5	602.5	652.5	702.5	752.5	802.5	852.5	902.5	952.5	1002.5
A	0	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	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
D	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18
G	199	249	299	349	399	449	499	549	599	649	699	749	799	849	899	949
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	219.5	269.5	319.5	369.5	419.5	469.5	519.5	569.5	619.5	669.5	719.5	769.5	819.5	869.5	919.5	969.5
Mass (kg)	Without brake	3.8	4.0	4.3	4.5	4.8	5.0	5.3	5.5	5.7	6.0	6.2	6.5	6.7	7.0	7.4
	With brake	4.3	4.5	4.8	5.0	5.3	5.5	5.8	6.0	6.2	6.5	6.7	7.0	7.2	7.5	8.0

Applicable Controller

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