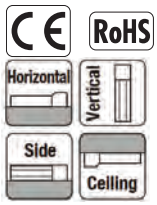
RCP5-SA4R ROBO Cylinder, Slider Type, Side-mounted Motor Type, Actuator Width 40mm, 24V Pulse Motor

■Model Specification Items

RCP5	SA4R	WA	35P	☐	☐	☐	P3	☐	☐
Series	Type	Encoder type	Motor type	Lead	Stroke		Applicable controllers	Cable length	Options
		WA: Battery-less absolute specification	35P: Pulse motor, size 35☐	16: 16mm 10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm ~ 500: 500mm (Every 50mm)		P3: PCON-CA MSEP MSEL	N: No cable P: 1m S: 3m M: 5m X☐☐: Specified length R☐☐: Robot cable	Please refer to the options table below.

*Controller is not included.



* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to P.59 for details.

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

POINT Note on selection

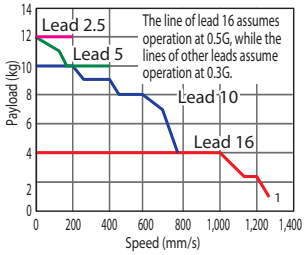
(1) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration. Please refer to the "Selection Guidelines" (RCP5 Payload by Speed/Acceleration Table) on P. 61.

(2) Please refer to P. 59 for push-motion operation.

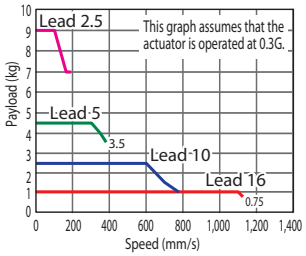
■Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON-CA, MSEP, MSEL connected

RCP5-SA4R, Horizontal mount

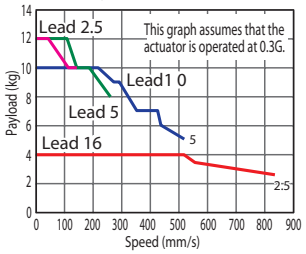


RCP5-SA4R, Vertical mount

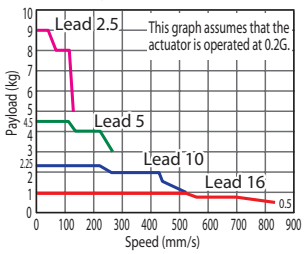


(2) High-output disabled with PCON-CA, MSEP connected

RCP5-SA4R, Horizontal mount



RCP5-SA4R, Vertical mount



Actuator Specifications

■Lead and Payload

Model number	Lead (mm)	Connected controller	Maximum payload Horizontal (kg)	Maximum payload Vertical (kg)	Stroke (mm)
RCP5-SA4R-WA-35P-16-①-P3-②-③	16	High-output enabled	4	1	50~500 (Every 50mm)
		High-output disabled			
RCP5-SA4R-WA-35P-10-①-P3-②-③	10	High-output enabled	10	2.25	
		High-output disabled			
RCP5-SA4R-WA-35P-5-①-P3-②-③	5	High-output enabled	12	4.5	
		High-output disabled			
RCP5-SA4R-WA-35P-2.5-①-P3-②-③	2.5	High-output enabled	12	9	
		High-output disabled			

Legend: ① Stroke ② Cable length ③ Options *Please refer to P. 59 for push-motion operation.

■Stroke and Maximum 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
	High-output disabled	840		
10	High-output enabled	785	675	555
	High-output disabled	525		
5	High-output enabled	390	330	275
	High-output disabled	260		
2.5	High-output enabled	195	165	135
	High-output disabled	130		

① Stroke

Stroke (mm)	Standard price	Stroke (mm)	Standard price
50	-	**300**	-
100	-	**350**	-
150	-	**400**	-
200	-	**450**	-
250	-	**500**	-

② Cable Length

Type	Cable code	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)	-

*Please refer to P. 89 for maintenance cables.

③ Options

Name	Option code	Reference page	Standard price
Brake	**B**	→P. 11	-
Cable exit direction (Top)	**CJT**	→P. 11	-
Cable exit direction (Outside)	**CJO**	→P. 11	-
Cable exit direction (Bottom)	**CJB**	→P. 11	-
Motor side-mounted to the left (Standard)	**ML**	→P. 11	-
Motor side-mounted to the right	**MR**	→P. 11	-
Slider roller specification	**SR**	→P. 11	-
Non-motor end specification	**NM**	→P. 11	-

Actuator Specifications

Item	Description
Drive system	Ball screw Ø8mm, rolled C10
Positioning repeatability	±0.02mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Dynamic allowable moment (*1)	Ma: 4.98N•m, Mb: 7.11N•m, Mc: 9.68N•m
Static allowable moment	Ma: 8.6N•m, Mb: 12.2N•m, Mc: 16.7N•m
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

•Reference for overhang load length/Ma: 120mm or less, Mb, Mc: 120mm or less

(*1) Assumes a standard rated life of 5,000km.

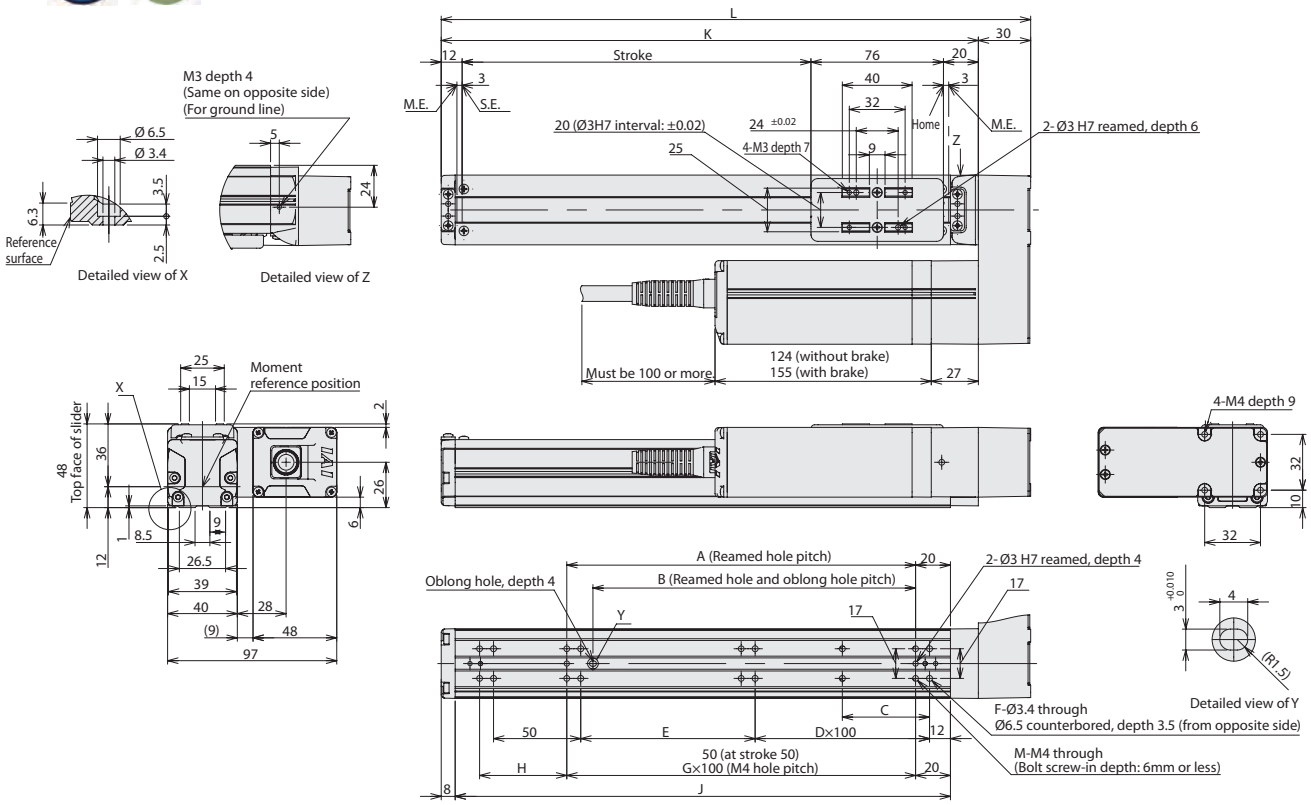
(*) The operational life will vary depending on operation and installation conditions. Please refer to the general catalog for details on operational life, allowable moment direction, and overhang load length.

Dimensions

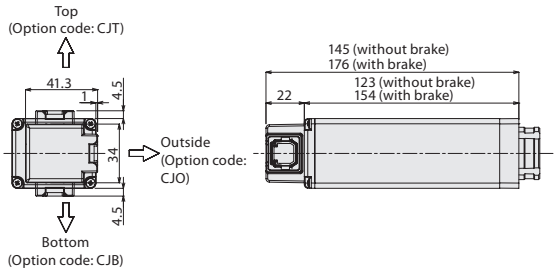
CAD drawings can be downloaded from our website. www.intelligentactuator.com

2D CAD 3D CAD

*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 ME.
ME: Mechanical end
SE: Stroke end
*2 Please see P. 48 for slider roller specification (SR).



■Cable Exit Direction (Option)



*The figure above is for 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		188	238	288	338	388	438	488	538	588	638
A		50	100	100	200	200	300	300	400	400	500
B		35	85	85	185	185	285	285	385	385	485
C		25	50	50	50	50	50	50	50	50	50
D		0	0	1	1	2	2	3	3	4	4
E		50	100	50	100	50	100	50	100	50	100
F		8	8	10	10	12	12	14	14	16	16
G		-	1	1	2	2	3	3	4	4	5
H		50	50	100	50	100	50	100	50	100	50
J		134	184	234	284	334	384	434	484	534	584
K		158	208	258	308	358	408	458	508	558	608
M		6	6	6	8	8	10	10	12	12	14
Mass (kg)	Without brake	1.3	1.4	1.5	1.6	1.6	1.7	1.8	1.9	2.0	2.1
	With brake	1.5	1.6	1.7	1.8	1.8	1.9	2.0	2.1	2.2	2.3

Applicable Controllers

The RCP5 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Model number	Max. number of controlled axes	Maximum number of positioning points	Input power	Standard price	Reference page
Positioner type (High-output specification)		PCON-CA-35PWAI-Ⓘ-2-0	1	512 points	DC24V	-	→P. 69
Pulse train type (High-output specification)		PCON-CA-35PWAI-PLⓋ-2-0				-	
Network type (High-output specification)		PCON-CA-35PWAI-ⒾⅢ-0-0		768 points		-	
Solenoid valve multi-axis type (PIO specification)		MSEP-Ⓥ-Ⅱ-~Ⓘ-2-0	C: 8 (4 when high-output enabled)	3 points		-	→P. 77
Solenoid valve multi-axis type (Network specification)		MSEP-Ⓥ-Ⅱ-~Ⅲ-0-0	LC: 6 (3 when high-output enabled)	256 points			
Program control multi-axis type		MSEL-PC-1-35PWAI-Ⓘ-2-4	4	30,000 points	Single-phase AC 100V~230V	-	→P. 87
Program control multi-axis type (w/network board)		MSEL-PC-1-35PWAI-Ⅲ-0-4					
Program control multi-axis type (Safety category compliant spec.)		MSEL-PG-1-35PWAI-Ⓘ-2-4					
Program control multi-axis type (Safety category compliant spec. w/network board)		MSEL-PG-1-35PWAI-Ⅲ-0-4					

*Above MSEL models are for single-axis specification
*Ⓘ I/O type (NP/PN)
*Ⅱ Number of axes
*Ⅲ Field network specification code
*Ⓥ C or LC
*Ⓥ N (NPN specification) or P (PNP specification) code
*The high output enabled operation is only available when the "High-output setting specs" is selected in the MSEP-C/LC.