RCP2W-SA16C ROBO Cylinder, Water-Proof Slider Type, Actuator Width 158mm, Pulse Motor, Coupled
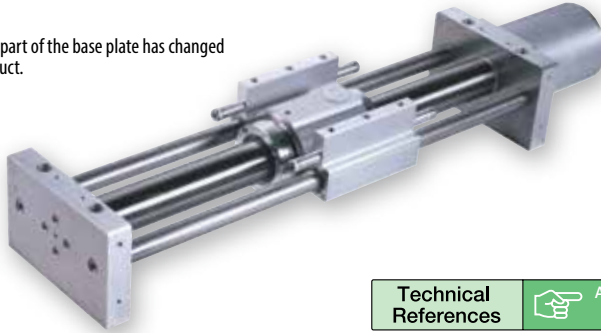
Model Specification Items

RCP2W	—	SA16C	—	I	—	86P	—	☐	—	☐	—	P4	—	☐	—	☐
Series		Type		Encoder type		Motor type		Lead		Stroke		Applicable controller		Cable length		Options

- Encoder type — I: Incremental
- Motor type — 86P: Pulse motor, 56☐ High Output
- Lead — 8 : 8mm, 4 : 4mm
- Stroke — 50: 50mm ～ 600: 600mm (50mm pitch increments)
- Applicable controller — P4: PCON-CFA
- Cable length — N: None, P: 1m, S: 3m, M:5m, X☐☐: Custom Length, R☐☐: Robot cable
- Options — CO : With cover, NM: Non-motor end

* See page Pre-47 for details on the model descriptions.

* Please note that a part of the base plate has changed on the actual product.
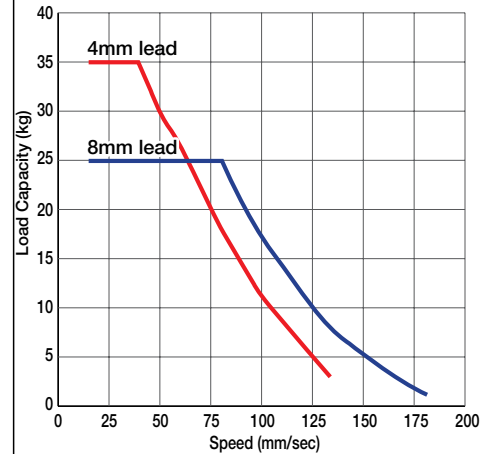
Technical References ☞ Appendix **P.5**

■ Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.

P O I N T Notes on selection

(1) The actuator is limited to being installed horizontally. Please note that it cannot be horizontally wall mounted, vertically mounted, or ceiling mounted. (The same goes for storage.)
(2) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed.
Use the actuator specification table below to check the maximum speed at the stroke you desire.
(3) Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds.
Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.
(4) The load capacity is based on operation at an acceleration of 0.2G. 0.2G is the upper limit for the acceleration.
(5) Push motion operation is not supported by this actuator.
(6) The cable joint connector is not splash-proof; secure it in a place that is not prone to water spills.

Actuator Specifications

■ Lead and Payload   (Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model number	Lead (mm)	Max. Load Capacity (Note 1) Horizontal (kg)	Max. Load Capacity (Note 1) Vertical (kg)	Stroke (mm)
RCP2W-SA16C-I-86P-8-①-P4-②-③	8	~25	Not Allowed	50~600 (every 50mm)
RCP2W-SA16C-I-86P-4-①-P4-②-③	4	~35		

Code explanation ① Stroke ③ Cable length ④ Options *Push motion operation is not supported by this actuator.

■ Stroke and Maximum Speed

Lead \ Stroke	50~600 (every 50mm)
8	180
4	133

(Unit: mm/s)

① Stroke

① Stroke (mm)	Standard price Without cover	Standard price With cover
50	—	—
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—
350	—	—
400	—	—
450	—	—
500	—	—
550	—	—
600	—	—

③ Options

Name	Option code	See page	Standard price
With cover	CO	→ A-43	—
Non-motor end specification	NM	→ A-52	—

② Cable Length

Type	Cable symbol	Standard Price
Standard	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)	—

* See page A-59 for cables for maintenance.

Actuator Specifications

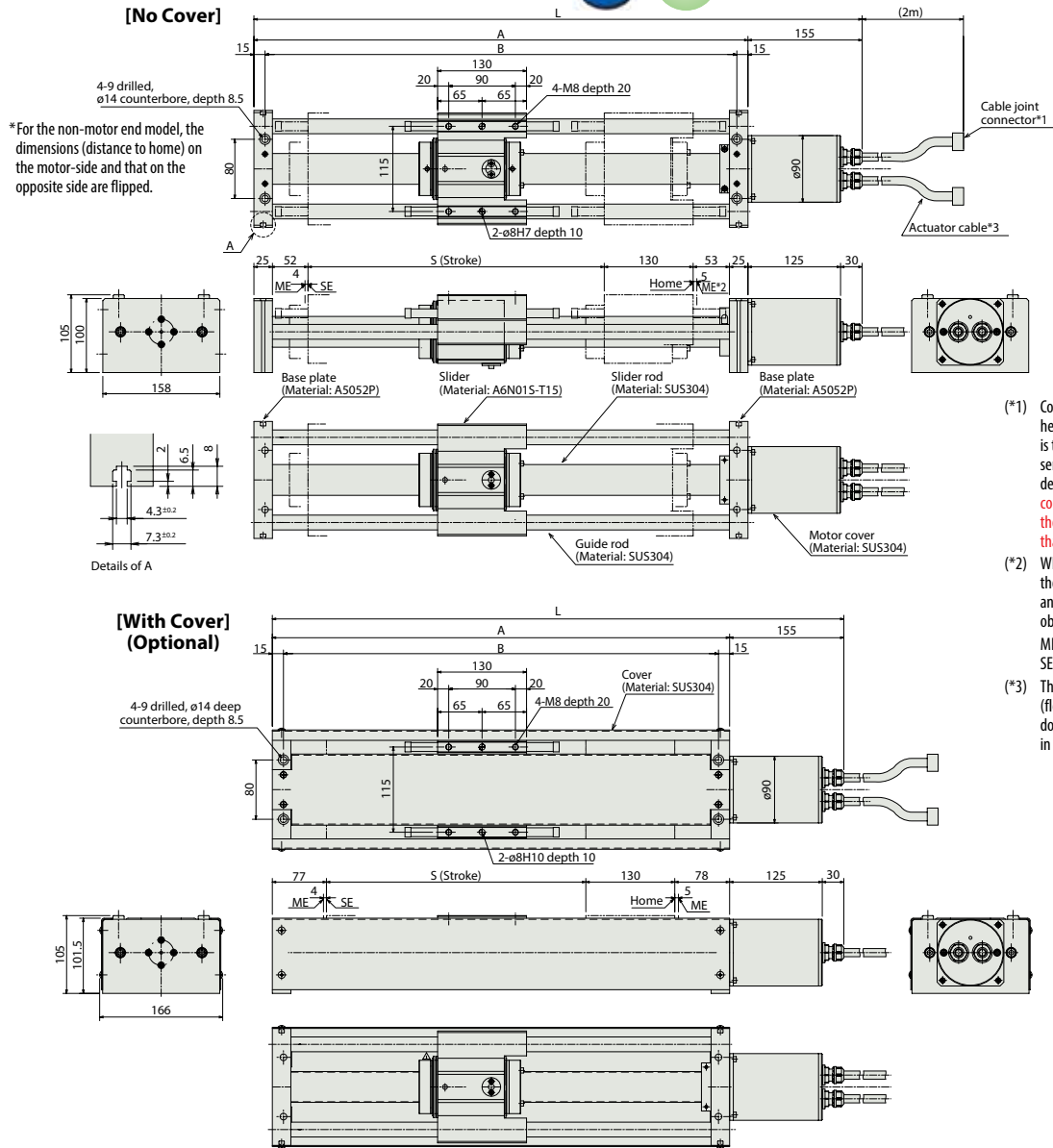| Item	Description
Drive System	Ball screw, ø12mm, rolled C10
Positioning repeatability	±0.08mm
Lost Motion	0.7mm or less
Guide	ø20 Non-lubricated linear sliding guide
Allowable static load moment	20.0N•m
Allowable overhang	Ma direction 200mm or less
Protective structure	IP67
Ambient operating temperature/humidity	0 to 40℃, 85% RH max. (Non-condensing)

Note

A dynamic moment isn't applicable for the SA16C for structural reasons.
When an object is to be mounted on the slider, please fix it in a manner so that no moment load is applied in the direction Mb or Mc, and so that the load is distributed evenly.

RCP2W ROBO Cylinder

Slider Type
Mini
Standard
Controllers Integrated
Rod Type
Mini
Standard
Controllers Integrated
Table/ Arm/ Flat Type
Mini
Standard
Gripper/ Rotary Type
Linear Servo Type
Clean- room Type
Splash- Proof Type
Pulse Motor
Servo Motor (24V)
Servo Motor (200V)
Linear Servo Motor

Dimensional Drawings

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

2D CAD **3D CAD**

For Special Orders ☞ Appendix P.15

[No Cover]

4-9 drilled, ø14 counterbore, depth 8.5

*For the non-motor end model, the dimensions (distance to home) on the motor-side and that on the opposite side are flipped.

L
A
B
(2m)
155
15
130
90
20
65 65
20
4-M8 depth 20
15
80
115
ø90
Cable joint connector*1
2-ø8H7 depth 10
Actuator cable*3

105
100
158

25 52
4
ME SE
S (Stroke)
130 53 25 125 30
5
Home ME*2

Base plate (Material: A5052P)
Slider (Material: A6N01S-T15)
Slider rod (Material: SUS304)
Base plate (Material: A5052P)

2
6.5
8
4.3±0.2
7.3±0.2
Details of A

Guide rod (Material: SUS304)
Motor cover (Material: SUS304)

(*1) Connect the motor and encoder cables here. Please note that the motor cable is the same as the one in the RCP2 series, but that the encoder cable is a dedicated type. *The cable joint connector is not splash-proof; therefore, please secure it in a place that is not prone to water spills.

(*2) When homing, the slider moves to the ME; therefore, please watch for any interference with the surrounding objects.
ME: Mechanical end
SE: Stroke end

(*3) The actuator cable is not a robot cable (flex resistant cable); therefore, please don't use it for movable parts such as in a cable track.

[With Cover] (Optional)

L
A
B
155
15
130
90
20
65 65
20
4-M8 depth 20
15
Cover (Material: SUS304)
4-9 drilled, ø14 deep counterbore, depth 8.5
80
115
ø90
2-ø8H10 depth 10

105
101.5
166

77
4
ME SE
S (Stroke)
130 78 125 30
5
Home ME

■ Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600
L	490	540	590	640	690	740	790	840	890	940	990	1040
A	335	385	435	485	535	585	635	685	735	785	835	885
B	305	355	405	455	505	555	605	655	705	755	805	855
S	50	100	150	200	250	300	350	400	450	500	550	600
Weight without cover (kg)	9	9.4	9.9	10.4	10.9	11.3	11.8	12.3	12.7	13.2	13.7	15.1
Weight with cover (kg)	10.5	11.1	11.8	12.5	13.2	13.8	14.6	15.3	15.9	16.6	17.3	18.9

■ Applicable Controllers

The controller for the RCP2W-SA16C type is a dedicated controller.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page
Positioner Type		PCON-CFA-86PI-①-2-0	Positioning is possible for up to 512 points	512 points	DC24V	6A max.	—	→ P607

* ① indicates I/O type.

Note: • Please note that the encoder cable is a dedicated CFA-type cable. (See page A-59.)
  • Note that a simple absolute unit cannot be used.