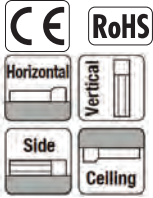


# RCP5-SA4C

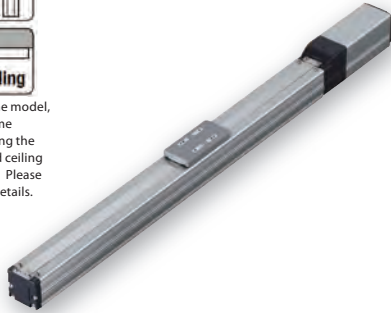
ROBO Cylinder, Slider Type, Motor Unit Coupled, Actuator Width 40mm, 24V Pulse Motor

| Model         | RCP5   | SA4C | WA                                      | 35P                        |  |                                     |                                |   |  |
|---------------|--------|------|---|----------------------------|--|-------------------------------------|--------------------------------|---|--|
| Specification | Series | Type | Encoder type                            | Motor type                 | Lead   | Stroke                              | Applicable controllers         | Cable length  | Options                                  |
| Items         |        |      | WA: Battery-less absolute specification | 35P: Pulse motor, size 35□ | 16: 16mm<br>10: 10mm<br>5: 5mm<br>2.5: 2.5mm | 50: 50mm<br>500: 500mm (Every 50mm) | P3: PCON/MSEL<br>P5: RCON/RSEL | N: No cable<br>P: 1m<br>S: 3m<br>M: 5m<br>X□: Specified length<br>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.

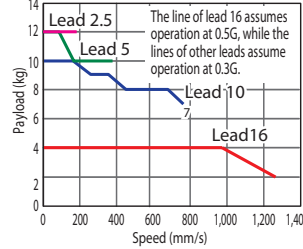


- (1) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration. Please refer to the "Selection Guidelines" (RCP5 Payload by Speed/Acceleration Table) on P. 61.
- (2) Please refer to P. 59 for push-motion operation.

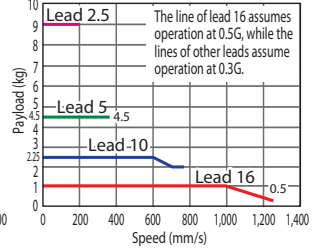
## Correlation Diagrams of Speed and Payload

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

RCP5-SA4C, Horizontal mount



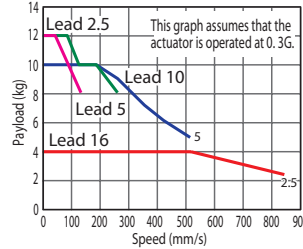
RCP5-SA4C, Vertical mount



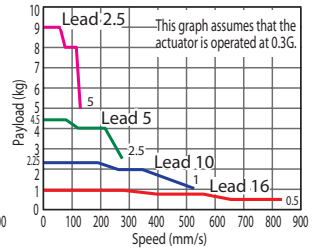
\* PCON-CA is a previous model. Current model is PCON-CB.

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

RCP5-SA4C, Horizontal mount



RCP5-SA4C, Vertical mount



## Actuator Specifications

### Lead and Payload

| Model number                  | Lead (mm) | Connected controller | Maximum payload |               | Stroke (mm)            |
|-------------------------------|-----------|----------------------|-----------------|---------------|------------------------|
|                               |           |                      | Horizontal (kg) | Vertical (kg) |                        |
| RCP5-SA4C-WA-35P-16-①-P3-②-③  | 16        | High-output enabled  | 4               | 1             | 50~500<br>(Every 50mm) |
|                               |           | High-output disabled |                 |               |                        |
| RCP5-SA4C-WA-35P-10-①-P3-②-③  | 10        | High-output enabled  | 10              | 2.25          |                        |
|                               |           | High-output disabled |                 |               |                        |
| RCP5-SA4C-WA-35P-5-①-P3-②-③   | 5         | High-output enabled  | 12              | 4.5           |                        |
|                               |           | High-output disabled |                 |               |                        |
| RCP5-SA4C-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) | -              |
|                | X21 (21m) ~X25 (25m) | -              |
| Robot cable    | R01 (1m) ~R03 (3m)   | -              |
|                | R04 (4m) ~R05 (5m)   | -              |
|                | R06 (6m) ~R10 (10m)  | -              |
|                | R11 (11m) ~R15 (15m) | -              |
|                | R16 (16m) ~R20 (20m) | -              |
|                | R21 (21m) ~R25 (25m) | -              |

\*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 (Right)  | CJR         | →P. 11         | -              |
| Cable exit direction (Left)   | CJL         | →P. 11         | -              |
| Cable exit direction (Bottom) | CJB         | →P. 11         | -              |
| Slider roller specification   | SR          | →P. 11         | -              |
| Non-motor end specification   | NM          | →P. 11         | -              |

\* Please contact IAI for current available options.

## 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.

(\*2) 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](http://www.intelligentactuator.com)

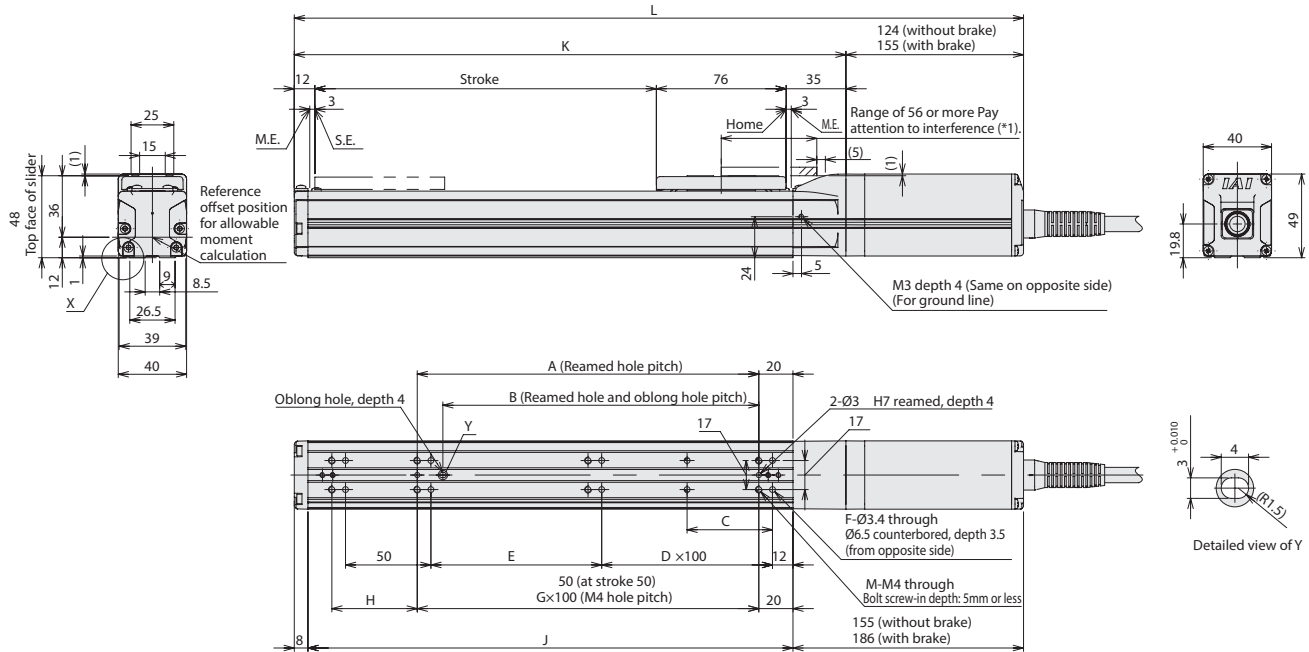
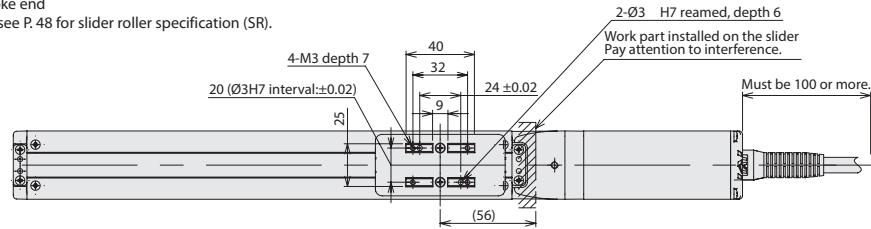
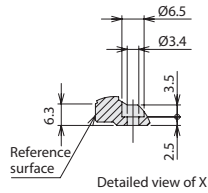


\*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the ME.

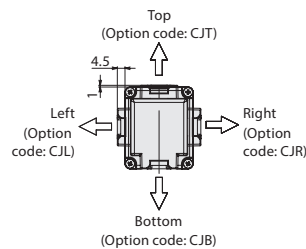
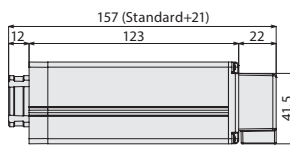
ME: Mechanical end

SE: Stroke end

\*2 Please see P.48 for slider roller specification (SR).



### ■ Cable Exit Direction (Option)



### ■ Dimensions and Mass by Stroke

| Stroke    | 50            | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 |
|-----------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| L         | Without brake | 297 | 347 | 397 | 447 | 497 | 547 | 597 | 647 | 747 |
|           | With brake    | 328 | 378 | 428 | 478 | 528 | 578 | 628 | 678 | 778 |
| 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         | 0             | 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         | 173           | 223 | 273 | 323 | 373 | 423 | 473 | 523 | 573 | 623 |
| M         | 6             | 6   | 6   | 8   | 8   | 10  | 10  | 12  | 12  | 14  |
| Mass (kg) | Without brake | 1.0 | 1.1 | 1.2 | 1.3 | 1.3 | 1.4 | 1.5 | 1.6 | 1.7 |
|           | With brake    | 1.2 | 1.3 | 1.4 | 1.5 | 1.5 | 1.6 | 1.7 | 1.8 | 2.0 |

## Applicable Controllers

\* Controller for RCP6 series is PCON, MSEL, RCON or RSEL.  
Please refer our Controller General Catalog and/or contact IAI.