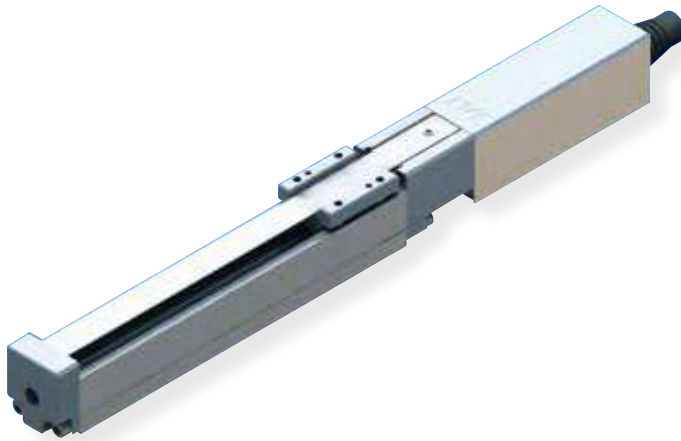


# RCP3-SA2BC

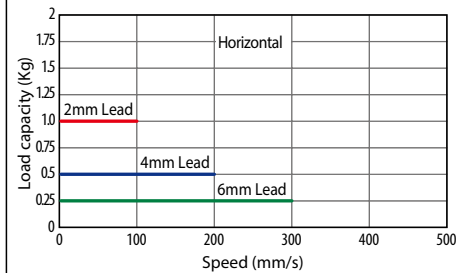
ROBO Cylinder Mini Slider Type Motor Unit Coupling Type Actuator Width 28mm Pulse Motor Lead Screw Specification

| Model Description | RCP3   | SA2BC | I                                                                                          | 20P                      |                                                                |                                     |                                      |                                                                  |                                 |
|-------------------|--------|-------|--------------------------------------------------------------------------------------------|--------------------------|----------------------------------------------------------------|-------------------------------------|--------------------------------------|------------------------------------------------------------------|---------------------------------|
|                   | Series | Type  | Encoder type                                                                               | Motor type               | Lead                                                           | Stroke                              | Compatible controllers               | Cable length                                                     | Option                          |
|                   |        |       | I: Incremental specification<br>* Model number is "I" when used with simple absolute unit. | 20P: Pulse motor 20□size | 6S: Lead screw 6mm<br>4S: Lead screw 4mm<br>2S: Lead screw 2mm | 25: 25mm<br>150: 150mm (every 25mm) | P3: PCON<br>MSEL<br>P5: RCON<br>RSEL | N: None<br>P: 1 m<br>S: 3 m<br>M: 5 m<br>X□□: Length Designation | NM: Reversed-home specification |

\* See page 14 for details on the model descriptions.



■ **Correlation Diagrams of Speed and Load Capacity**  
With the RCP3 series, due to the characteristics of the pulse motor, load capacity decreases as the speed increases. Use the chart below to confirm that the desired speed and load capacity requirements are met.



- POINT**  
Notes on selection
- (1) The payload is the value when operated at 0.2G acceleration. The acceleration upper limit is the value indicated above.
  - (2) Cannot be used in the horizontal orientation with the slider facing to the side or in the vertical orientation.
  - (3) Service life decreases significantly if used in a dusty environment.

Actuator Specifications Table

## Leads and Payloads

| Model                       | Feed screw | Lead (mm) | Maximum payload |               | Positioning repeatability (mm) | Stroke (mm)            |
|-----------------------------|------------|-----------|-----------------|---------------|--------------------------------|------------------------|
|                             |            |           | Horizontal (kg) | Vertical (kg) |                                |                        |
| RCP3-SA2BC-I-20P-6S-①-②-③-④ | Lead screw | 6         | 0.25            | —             | ±0.05                          | 25 to 150 (every 25mm) |
| RCP3-SA2BC-I-20P-4S-①-②-③-④ |            | 4         | 0.5             | —             |                                |                        |
| RCP3-SA2BC-I-20P-2S-①-②-③-④ |            | 2         | 1               | —             |                                |                        |

Legend ① Stroke ② Compatible Controllers ③ Cable length ④ Option

## Stroke and Maximum Speed

| Stroke     |   | 25 (mm) | 50~100 (mm) | 75~150 (mm) |
|------------|---|---------|-------------|-------------|
| Lead       |   |         |             |             |
| Lead screw | 6 | 180     | 280         | 300         |
|            | 4 | 180     | 200         |             |
|            | 2 | 100     |             |             |

(unit: mm/s)

### ① Stroke list

| ① Stroke (mm) | Standard price |
|---------------|----------------|
| 25            | —              |
| 50            | —              |
| 75            | —              |
| 100           | —              |
| 125           | —              |
| 150           | —              |

### ③ Cable Length

| Type                        | Cable symbol          | Standard price |
|-----------------------------|-----------------------|----------------|
| Standard type (Robot cable) | P (1m)                | —              |
|                             | S (3m)                | —              |
|                             | M (5m)                | —              |
| Special length              | X06 (6m) ~ X10 (10m)  | —              |
|                             | X11 (11m) ~ X15 (15m) | —              |
|                             | X16 (16m) ~ X20 (20m) | —              |
|                             |                       | —              |

\* The standard cable for the RCP3 is the robot cable.

### ④ Options

| Title                       | Option code | See page | Standard price |
|-----------------------------|-------------|----------|----------------|
| Reversed-home specification | NM          | —        | —              |

### Actuator Specifications

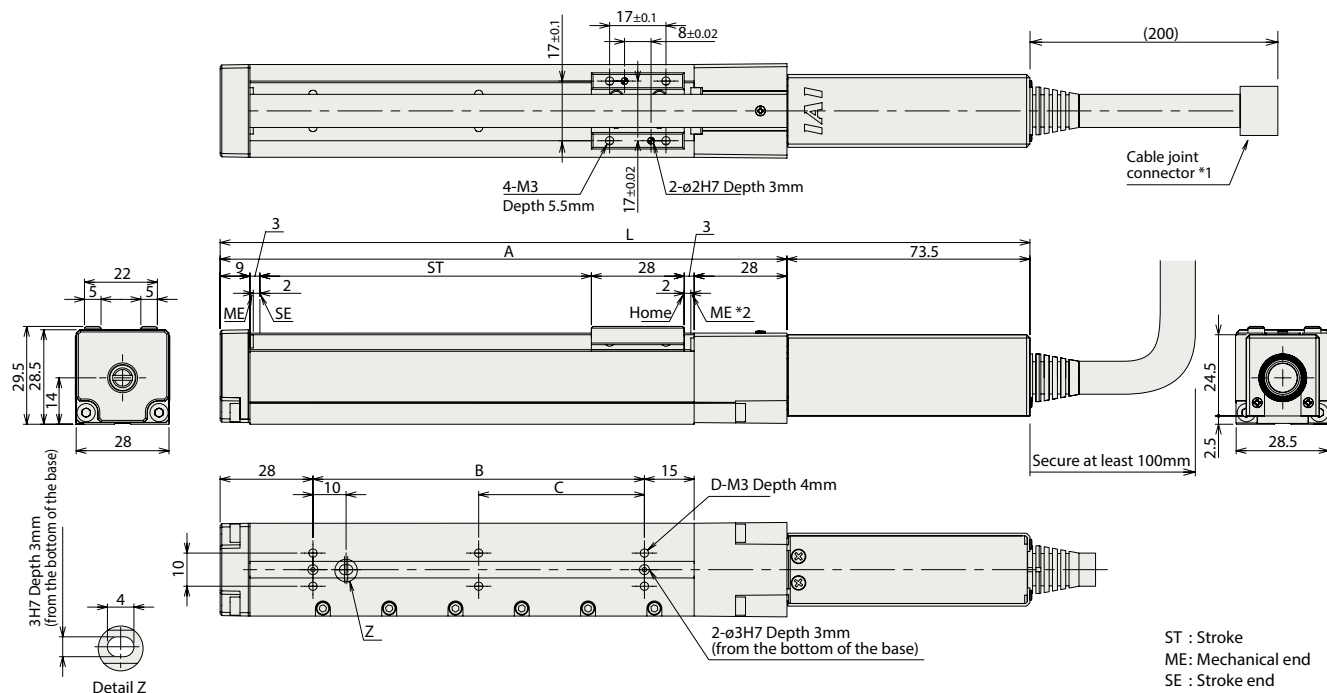
| Item                                    | Description                                |
|-----------------------------------------|--------------------------------------------|
| Drive System                            | Lead screw, ø6mm, rolled C10               |
| Lost motion                             | 0.3mm or less (initial value)              |
| Base                                    | Material: Aluminum, white alumite treated  |
| Guide                                   | Slide guide                                |
| Ambient operating temperature, humidity | 0 to 40°C, 85% RH or less (Non-condensing) |
| Service life                            | 10 million cycles                          |

## Dimensional Drawings

CAD drawings can be downloaded from the website. [www.intelligentactuator.com](http://www.intelligentactuator.com)



- \*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 Weight by Stroke

| Stroke    | 25    | 50    | 75    | 100   | 125   | 150   |
|-----------|-------|-------|-------|-------|-------|-------|
| L         | 169.5 | 194.5 | 219.5 | 244.5 | 269.5 | 294.5 |
| A         | 96    | 121   | 146   | 171   | 196   | 221   |
| B         | 25    | 50    | 75    | 100   | 125   | 150   |
| C         | 0     | 0     | 0     | 50    | 62.5  | 75    |
| D         | 4     | 4     | 4     | 6     | 6     | 6     |
| Mass (kg) | 0.3   | 0.32  | 0.35  | 0.37  | 0.4   | 0.42  |

## Applicable Controllers

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

| Name             | External view                                                                       | Max. number of connectable axes | Power supply voltage       | Control method |               |         |                   |    |     |    |    |    |     |    |    |     |     |     | Maximum number of positioning points         | Reference page                          |
|------------------|-------------------------------------------------------------------------------------|---------------------------------|----------------------------|----------------|---------------|---------|-------------------|----|-----|----|----|----|-----|----|----|-----|-----|-----|----------------------------------------------|-----------------------------------------|
|                  |                                                                                     |                                 |                            | Positioner     | Pulse-train   | Program | Network option *1 |    |     |    |    |    |     |    |    |     |     |     |                                              |                                         |
|                  |                                                                                     |                                 |                            |                |               |         | DV                | CC | CIE | PR | CN | ML | ML3 | EC | EP | PRT | SSN | ECM |                                              |                                         |
| MSEL-PC/PG       |  | 4                               | Single phase 100VAC/230VAC | -              | -             | ●       | ●                 | ●  | -   | ●  | -  | -  | -   | ●  | ●  | ●   | -   | -   | 30000                                        | Please contact IAI for more information |
| PCON-CB/CGB      |  | 1                               | 24VDC                      | ●<br>* Option  | ●<br>* Option | -       | ●                 | ●  | ●   | ●  | ●  | ●  | ●   | ●  | ●  | ●   | -   | -   | 512<br>(768 for network spec.)               |                                         |
| PCON-CYB/PLB/POB |  | 1                               |                            | ●<br>* Option  | ●<br>* Option | -       | -                 | -  | -   | -  | -  | -  | -   | -  | -  | -   | -   | -   | 64                                           |                                         |
| RCON             |  | 16<br>(ML3,SSN,ECM=8)           |                            | -              | -             | -       | ●                 | ●  | ●   | ●  | -  | -  | ●   | ●  | ●  | ●   | ●   | ●   | 128<br>(No position data for ML3, SSN, ECM), |                                         |
| RSEL             |  | 8                               |                            | -              | -             | ●       | ●                 | ●  | ●   | ●  | -  | -  | -   | ●  | ●  | ●   | -   | -   | 36000                                        |                                         |

\*1 For network abbreviations such as DV and CC, please contact IAI.

More controller info is available in the General Controller Catalog PDF.

