

RCA2-SA3C

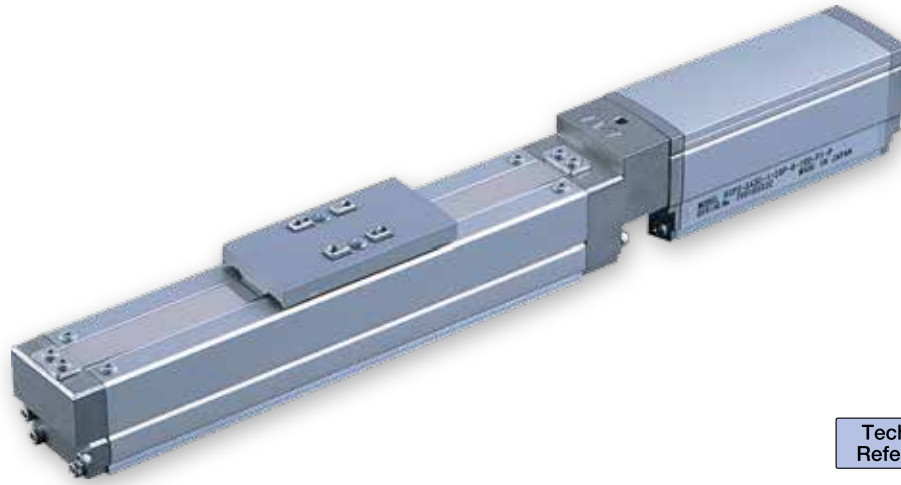
ROBO Cylinder, Slider Type, Actuator Width 32mm, Servo Motor, Coupled

| | | |
|---------------------------|---|--|
| Model Specification Items | RCA2 — SA3C — I — 10 — <input type="checkbox"/> — <input type="checkbox"/> — <input type="checkbox"/> — <input type="checkbox"/> — <input type="checkbox"/> | Series — Type — Encoder type — Motor type — Lead — Stroke — Applicable controller — Cable length — Options |
| | I: Incremental * The Simple absolute encoder is also considered type "I". | 10P: 10W Servo motor |
| | 6 : 6mm 4 : 4mm 2 : 2mm | 50: 50mm 300: 300mm (50mm pitch increments) |
| | A1: ACON ASEL A3: AMEC ASEP MSEP | N: None P: 1m S: 3m M: 5m X <input type="checkbox"/> : Custom length |
| | See Options below. | |

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



Power-saving



Technical References Appendix P.5

POINT Notes on selection

- (1) The load capacity is based on operation at an acceleration of 0.3G (0.2G for 2mm-lead model and when using vertically). These values are the upper limits for the acceleration.
- (2) See page A-71 for details on push motion.

Actuator Specifications

Leads and Payloads

| Model number | Motor output (W) | Lead (mm) | Max. Load Capacity | | Rated thrust (N) | Stroke (mm) |
|--------------------------|------------------|-----------|--------------------|---------------|------------------|---------------------|
| | | | Horizontal (kg) | Vertical (kg) | | |
| RCA2-SA3C-I-10-6-①-②-③-④ | 10 | 6 | 1 | 0.5 | 28 | 50~300 (every 50mm) |
| RCA2-SA3C-I-10-4-①-②-③-④ | | 4 | 2 | 1 | 43 | |
| RCA2-SA3C-I-10-2-①-②-③-④ | | 2 | 3 | 1.5 | 85 | |

Stroke and Maximum Speed

| Stroke / Lead | 50~300 (every 50mm) | |
|---------------|---------------------|---------------------|
| | Stroke | 50~300 (every 50mm) |
| 6 | 300 | |
| 4 | 200 | |
| 2 | 100 | |

Code explanation ① Stroke ② Applicable Controller ③ Cable length ④ Options *See page A-71 for details on push motion. (Unit: mm/s)

① Stroke

| ① Stroke (mm) | Standard price | |
|---------------|-----------------------|------------------------|
| | With cover (standard) | Without cover (option) |
| 50 | — | — |
| 100 | — | — |
| 150 | — | — |
| 200 | — | — |
| 250 | — | — |
| 300 | — | — |

③ Cable Length

| Type | Cable symbol | Standard price |
|-------------------------|-----------------------|----------------|
| Standard (Robot Cables) | 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 RCA2 is the robot cable.
* See page A-59 for cables for maintenance.

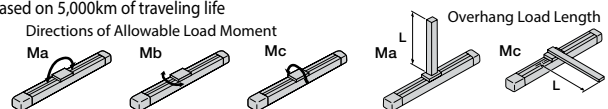
④ Options

| Name | Option code | See page | Standard price |
|--|-------------|----------|----------------|
| Brake | B | → A-42 | — |
| Optional cable exit direction (top) | CJT | → A-42 | — |
| Optional cable exit direction (right) | CJR | → A-42 | — |
| Optional cable exit direction (left) | CJL | → A-42 | — |
| Optional cable exit direction (bottom) | CJB | → A-42 | — |
| Power-saving | LA | → A-52 | — |
| No cover | NCO | → A-52 | — |
| Non-motor end specification | NM | → A-52 | — |

Actuator Specifications

| Item | Description |
|---|---|
| Drive System | Ball screw, ø6mm, rolled C10 |
| Positioning repeatability | ±0.02mm |
| Lost Motion | 0.1mm or less |
| Base | Material: Aluminum, special alumite treated |
| Allowable static moment | Ma: 5.0 N·m, Mb: 7.1 N·m, Mc: 7.9 N·m |
| Allowable dynamic moment (*) | Ma: 1.96 N·m, Mb: 2.84 N·m, Mc: 3.14 N·m |
| Allowable overhang | 100mm or less in Ma, Mb and Mc directions |
| Ambient operating temperature, humidity | 0 to 40°C, 85% RH or less (Non-condensing) |

(*) Based on 5,000km of traveling life



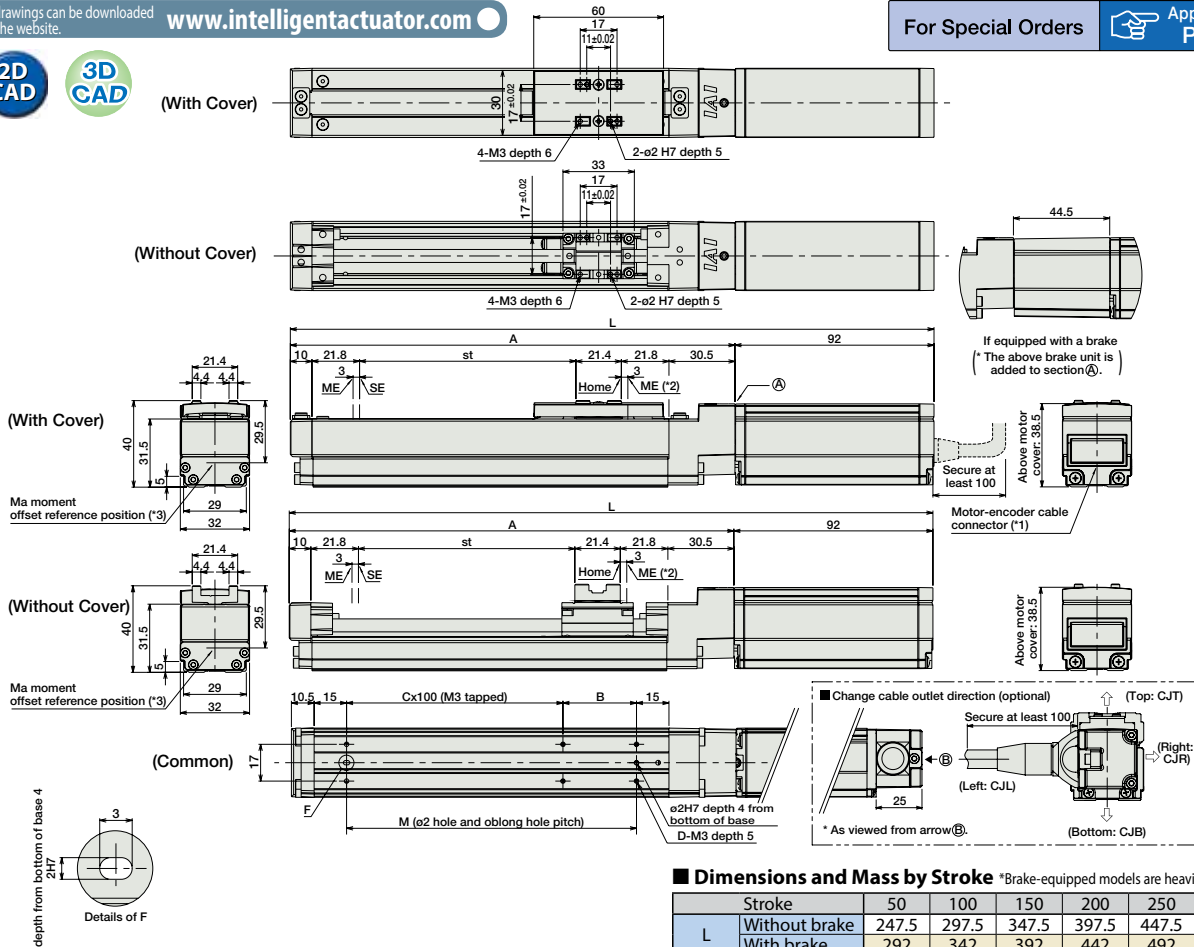
Dimensional Drawings

CAD drawings can be downloaded from the website.

www.intelligentactuator.com

For Special Orders

Appendix P.15



- (*1) Connect the motor-encoder integrated cable here. See page A-59 for details on cables.
- (*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.
ME: Mechanical end
SE: Stroke end
- (*3) Reference position for calculating the Ma moment

■ Dimensions and Mass by Stroke *Brake-equipped models are heavier by 0.2kg.

| Stroke | Stroke | | | | | | |
|-------------|---------------|-------|-------|-------|-------|-------|-------|
| | 50 | 100 | 150 | 200 | 250 | 300 | |
| L | Without brake | 247.5 | 297.5 | 347.5 | 397.5 | 447.5 | 497.5 |
| | With brake | 292 | 342 | 392 | 442 | 492 | 542 |
| A | 155.5 | 205.5 | 255.5 | 305.5 | 355.5 | 405.5 | |
| B | 84 | 34 | 84 | 34 | 84 | 34 | |
| C | 0 | 1 | 1 | 2 | 2 | 3 | |
| D | 4 | 6 | 6 | 8 | 8 | 10 | |
| M | 84 | 134 | 184 | 234 | 284 | 334 | |
| Weight (kg) | With cover | 0.6 | 0.6 | 0.7 | 0.8 | 0.8 | 0.9 |
| | Without cover | 0.5 | 0.6 | 0.6 | 0.7 | 0.7 | 0.8 |

② Applicable Controllers

RCA2 series actuators can be operated with the controllers indicated below. Select the type according to your intended application.

| Name | External view | Model number | Features | Maximum number of positioning points | Input power | Power-supply capacity | Standard price | Reference page |
|--|---------------|----------------------|---|--------------------------------------|-------------|-------------------------------------|----------------|----------------|
| Solenoid Valve Type | | AMEC-C-10I①-②-2-1 | Easy-to-use controller, even for beginners | 3 points | AC100V | 2.4A rated | — | → P537 |
| | | ASEP-C-10I①-②-2-0 | Simple controller operable with the same signal as a solenoid valve | | | | | → P547 |
| Solenoid valve multi-axis type PIO specification | | MSEP-C-③-④-⑤-2-0 | Positioner type based on PIO control, allowing up to 8 axes to be connected | 256 points | DC24V | (Standard) 1.3A rated 4.4A max. | — | → P563 |
| Solenoid valve multi-axis type Network specification | | MSEP-C-③-④-⑤-0-0 | Field network-ready positioner type, allowing up to 8 axes to be connected | | | | | → P631 |
| Positioner type | | ACON-C-10I①-②-2-0 | Positioning is possible for up to 512 points | 512 points | DC24V | (Power-saving) 1.3A rated 2.5A max. | — | — |
| Safety-Compliant Positioner Type | | ACON-CG-10I①-②-2-0 | | | | | | |
| Pulse Train Input Type (Differential Line Driver) | | ACON-PL-10I①-②-2-0 | Pulse train input type with differential line driver support | (—) | DC24V | (Power-saving) 1.3A rated 2.5A max. | — | → P631 |
| Pulse Train Input Type (Open Collector) | | ACON-PO-10I①-②-2-0 | Pulse train input type with open collector support | | | | | → P675 |
| Serial Communication Type | | ACON-SE-10I①-N-0-0 | Dedicated Serial Communication | 64 points | DC24V | (Power-saving) 1.3A rated 2.5A max. | — | — |
| Program Control Type | | ASEL-CS-1-10I①-②-2-0 | Programmed operation is possible. Can operate up to 2 axes | 1,500 points | DC24V | (Power-saving) 1.3A rated 2.5A max. | — | → P675 |

* This is for the single-axis ASEL. * Enter the code "LA" in ① when the power-saving specification is specified. * ① indicates I/O type (NP/PN). * ③ indicates number of axes (1 to 8). * ④ indicates field network specification symbol.

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