

RCA-A6R

Robo Cylinder, Arm Type, Actuator Width 58mm, 24V Servo Motor, Side-mounted Motor

| | | | | | | | | | |
|---------------------------|--------|------|-------------------------------|---------------------|--------------------|--|--|--|---|
| Model Specification Items | RCA | A6R | | 30 | | | | | |
| | Series | Type | Encoder type | Motor type | Lead | Stroke | Applicable controller | Cable length | Options |
| | | | I: Incremental A: Absolute | 30: 30W Servo motor | 12: 12mm 6: 6mm | 50: 50mm 200: 200mm (50mm pitch increments) | A1: ACON ASEL A3: AMEC ASEP MSEP | N: None P: 1m S: 3m M: 5m X□: Custom length R□: Robot cable | See options below. * Be sure to specify which side the motor is to be mounted (MB/MR/ML) |

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



Power-saving



Technical References Appendix P.5

- POINT** Notes on selection
- (1) 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.
 - (2) The load capacity is based on operation at an acceleration of 0.2G. This is the upper limit of the acceleration.
 - (3) 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) | | |
| RCA-A6R-①-30-12-②-③-④-B-⑤ | 30 | 12 | — | 3 | 48.4 | 50~200 (every 50mm) |
| RCA-A6R-①-30-6-②-③-④-B-⑤ | | 6 | — | 6 | 96.8 | |

Stroke and Maximum Speed

| Stroke Lead | 50~200 (every 50mm) | |
|-------------|---------------------|-----|
| | 12 | 400 |
| 6 | 200 | |

Code explanation ① Encoder ② Stroke ③ Applicable Controller ④ Cable Length ⑤ Options *See page A-71 for details on push motion. (Unit: mm/s)

① Encoder Type/② Stroke

| ② Stroke (mm) | Standard price | |
|---------------|----------------|----------|
| | ① Encoder Type | |
| | Incremental | Absolute |
| 50 | I | A |
| 100 | — | — |
| 150 | — | — |
| 200 | — | — |

④ 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.

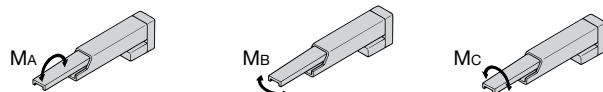
⑤ Options

| Name | Option code | See page | Standard price |
|-----------------------------|-------------|----------|----------------|
| Brake | B | → A-42 | — |
| Power-saving specification | LA | → A-52 | — |
| Bottom-mounted motor | MB | → A-52 | — |
| Right-mounted motor | MR | → A-52 | — |
| Left-mounted motor | ML | → A-52 | — |
| Non-motor end specification | NM | → A-52 | — |

Actuator Specifications

| Item | Description |
|---|--|
| Drive System | Ball screw, ø10mm, rolled C10 (ball screw speed reduced by 1/2 by timing belt) |
| Positioning repeatability | ±0.02mm |
| Lost Motion | 0.1mm or less |
| Base | Material: Aluminum, white alumite treated |
| Allowable dynamic moment | Ma: 8.1 N·m, Mb: 10.0 N·m, Mc: 6.5 N·m |
| Ambient operating temperature, humidity | 0 to 40°C, 85% RH or less (Non-condensing) |

Directions of allowable load moments



Dimensional Drawings

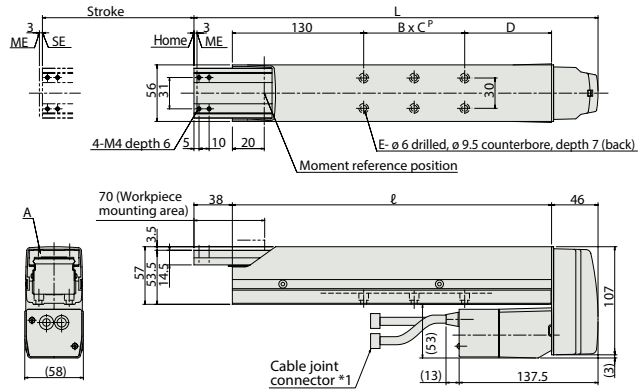
CAD drawings can be downloaded from the website. www.intelligentactuator.com

For Special Orders Appendix P.15

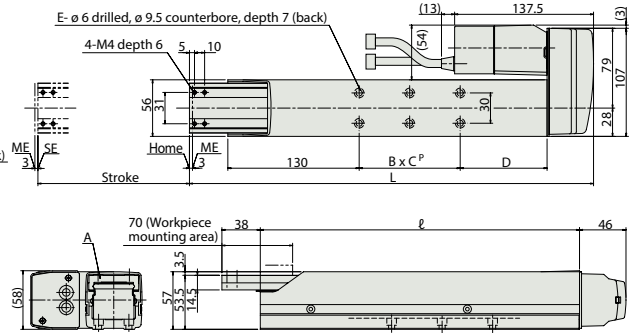


(*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
 (*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.
 ME: Mechanical end SE: Stroke end

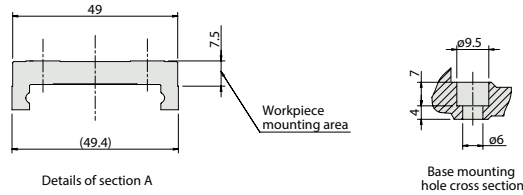
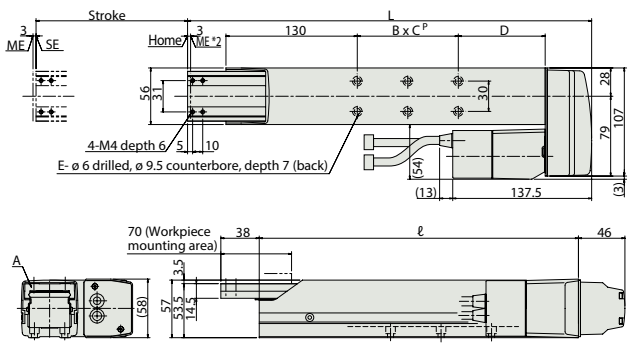
Bottom-mounted motor (option code: MB)



Right-mounted motor (option code: MR)



Left-mounted motor (option code: ML)



■ Dimensions and Weight by Stroke

| Stroke | 50 | 100 | 150 | 200 |
|--------------------|------|------|------|------|
| L | 300 | 350 | 400 | 450 |
| ℓ | 216 | 266 | 316 | 366 |
| B x C ^P | 1×30 | 1×50 | 2×50 | 2×50 |
| D | 56 | 86 | 86 | 136 |
| E | 4 | 4 | 6 | 6 |
| Weight (kg) | 3.0 | 3.3 | 3.6 | 3.9 |

Note: The 50mm stroke model is only available with a right- or left-mounted motor. Please note that there is no 50mm stroke configuration for the standard model.

③ Applicable Controllers

RCA series actuators can be operated with the controllers indicated below. Select the type according to your intended application. ACON-CY also can be used.

| 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-30I(Ⓜ)(Ⓜ)-2-1 | Easy-to-use controller, even for beginners | 3 points | AC100V | 2.4A rated | — | → P537 |
| | | ASEP-C-30I(Ⓜ)(Ⓜ)-2-0 | Simple controller operable with the same signal as a solenoid valve | | | | | → P547 |
| Solenoid valve multi-axis type PIO specification | | MSEP-C-Ⓜ(Ⓜ)(Ⓜ)-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-Ⓜ(Ⓜ)(Ⓜ)-0-0 | Field network-ready positioner type, allowing up to 8 axes to be connected | | | | | → P631 |
| Positioner type | | ACON-C-30I(Ⓜ)(Ⓜ)-2-0 | Positioning is possible for up to 512 points | 512 points | DC24V | (Power-saving) 1.3A rated 2.2A max. | — | → P631 |
| Safety-Compliant Positioner Type | | ACON-CG-30I(Ⓜ)(Ⓜ)-2-0 | | | | | | |
| Pulse Train Input Type (Differential Line Driver) | | ACON-PL-30I(Ⓜ)(Ⓜ)-2-0 | Pulse train input type with differential line driver support | (—) | DC24V | (Power-saving) 1.3A rated 2.2A max. | — | → P631 |
| Pulse Train Input Type (Open Collector) | | ACON-PO-30I(Ⓜ)(Ⓜ)-2-0 | Pulse train input type with open collector support | | | | | |
| Serial Communication Type | | ACON-SE-30I(Ⓜ)-N-0-0 | Dedicated Serial Communication | 64 points | DC24V | (Power-saving) 1.3A rated 2.2A max. | — | → P631 |
| Program Control Type | | ASEL-CS-1-30I(Ⓜ)(Ⓜ)-2-0 | Programmed operation is possible. Can operate up to 2 axes | 1,500 points | DC24V | (Power-saving) 1.3A rated 2.2A max. | — | → P675 |

* This is for the single-axis ASEL. * Ⓜ indicates I/O type (NP/PN). * Ⓜ indicates encoder type (I: incremental, A: absolute). * Ⓜ indicates number of axes (1 to 8). * Enter the code "LA" in Ⓜ when the power-saving option is specified. * Ⓜ 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