

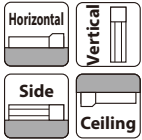
RCP6(S)-RA7C

Battery-less
AbsoluteMotor
Unit TypeCoupled
MotorBody Width
70
mm24V
Stepper
MotorModel
Specification
Items

| Series | Type | Encoder Type | Motor Type | Lead | Stroke | Applicable Controller/I/O Type | Cable Length | Options |
|---|------|------------------------------|-----------------------------------|--|--|---|---|---|
| RCP6: Separate Controller RCP6S: Built-in Controller | RA7C | WA: Battery-less Absolute | 56P: Stepper Motor 56□ Size | 24: 24mm 16: 16mm 8: 8mm 4: 4mm | 50: 50mm 300: 300mm (50mm increments) | [RCP6] P3: PCON MCON MSEL [RCP6S] SE: SIO Type | N : None P : 1m S : 3m M : 5m X□□ : Specified Length R□□ : Robot Cable | Please refer to the options table below. |

* RCP6 does not include a controller. RCP6S includes a built-in controller.

* Please refer to P.11 for more information about the model specification items.



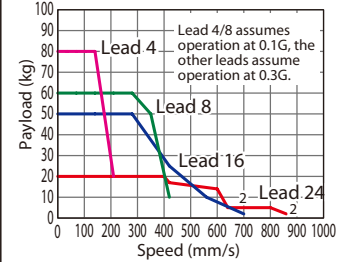
*Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.



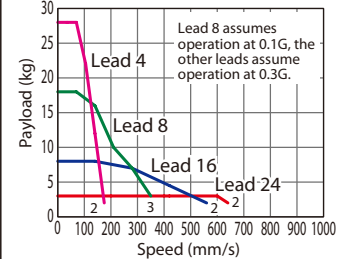
- (1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
- (2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (RCP6 Tables of Payload by Speed/Acceleration) on P.115 for more details.
- (3) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.
- (4) When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
- (5) Depending on the ambient operational temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 4/8/16. Please refer to P.130 for more information.

Correlation Diagrams of Speed and Payload

High-output enabled with
PCON/MCON/MSEL connected.
RCP6(S)-RA7C Horizontal mount



RCP6(S)-RA7C Vertical mount



Actuator Specifications

Lead and Payload

| Model Number | Lead (mm) | Connected Controller | Max. Payload | | Stroke (mm) |
|--------------------------------|-----------|----------------------|-----------------|---------------|---|
| | | | Horizontal (kg) | Vertical (kg) | |
| RCP6(S)-RA7C-WA-56P-24-①-②-③-④ | 24 | High-output Enabled | 20 | 3 | 50~300 (The increment of stroke is 50mm) |
| RCP6(S)-RA7C-WA-56P-16-①-②-③-④ | 16 | High-output Enabled | 50 | 8 | |
| RCP6(S)-RA7C-WA-56P-8-①-②-③-④ | 8 | High-output Enabled | 60 | 18 | |
| RCP6(S)-RA7C-WA-56P-4-①-②-③-④ | 4 | High-output Enabled | 80 | 28 | |

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

Stroke and Max. Speed

(Unit: mm/s)

| Lead (mm) | Connected Controller | 50~300 (Every 50mm) |
|-----------|----------------------|------------------------|
| 24 | High-output Enabled | 860 <640> |
| 16 | High-output Enabled | 700 <560> |
| 8 | High-output Enabled | 420 <350> |
| 4 | High-output Enabled | 210 <175> |

Values in brackets < > are for vertical use.

① Stroke

| Stroke (mm) | RCP6 | RCP6S | Stroke (mm) | RCP6 | RCP6S |
|-------------|------|-------|-------------|------|-------|
| 50 | ○ | ○ | 200 | ○ | ○ |
| 100 | ○ | ○ | 250 | ○ | ○ |
| 150 | ○ | ○ | 300 | ○ | ○ |

④ Options

| Name | Option Code | Reference Page |
|-------------------------------|-------------|----------------|
| Brake | B | See P.105 |
| Cable exit direction (Top) | CJT | See P.105 |
| Cable exit direction (Right) | CJR | See P.105 |
| Cable exit direction (Left) | CJL | See P.105 |
| Cable exit direction (Bottom) | CJB | See P.105 |
| Flange | FL | See P.106 |
| Foot bracket | FT | See P.107 |
| Tip adapter (Internal thread) | NFA | See P.109 |
| Non-motor end specification | NM | See P.110 |
| T-slot nut bar | NTB | See P.110 |

When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

③ Cable Length

| Cable Type | Cable Code | RCP6 | RCP6S |
|------------------|----------------------|------|-------|
| Standard | P (1m) | ○ | ○ |
| | S (3m) | ○ | ○ |
| | M (5m) | ○ | ○ |
| | X06 (6m) ~X10 (10m) | ○ | ○ |
| Specified Length | X11 (11m) ~X15 (15m) | ○ | ○ |
| | X16 (16m) ~X20 (20m) | ○ | ○ |
| | R01 (1m) ~R03 (3m) | ○ | ○ |
| | R04 (4m) ~R05 (5m) | ○ | ○ |
| Robot Cable | R06 (6m) ~R10 (10m) | ○ | ○ |
| | R11 (11m) ~R15 (15m) | ○ | ○ |
| | R16 (16m) ~R20 (20m) | ○ | ○ |
| | | ○ | ○ |

* Please refer to P.144 for more information regarding the maintenance cables.

Actuator Specifications

| Item | Description |
|---|--|
| Drive system | Ball screw φ12mm, rolled C10 |
| Positioning repeatability | ±0.01mm |
| Lost motion | 0.1mm or less |
| Rod | φ30mm Material: Aluminum with hard alumite treatment |
| Static allowable torque on rod tip | 2.5N·m |
| Max. angular displacement on rod tip (*1) | ±0.8 deg. |
| Ambient operating temp. & humidity | 0~40°C, 85% RH or less (Non-condensing) |

(*1) This is the displacement angle of the rod tip (initial reference value) when the rod is fully retracted and the static allowable torque is applied at the rod tip.

