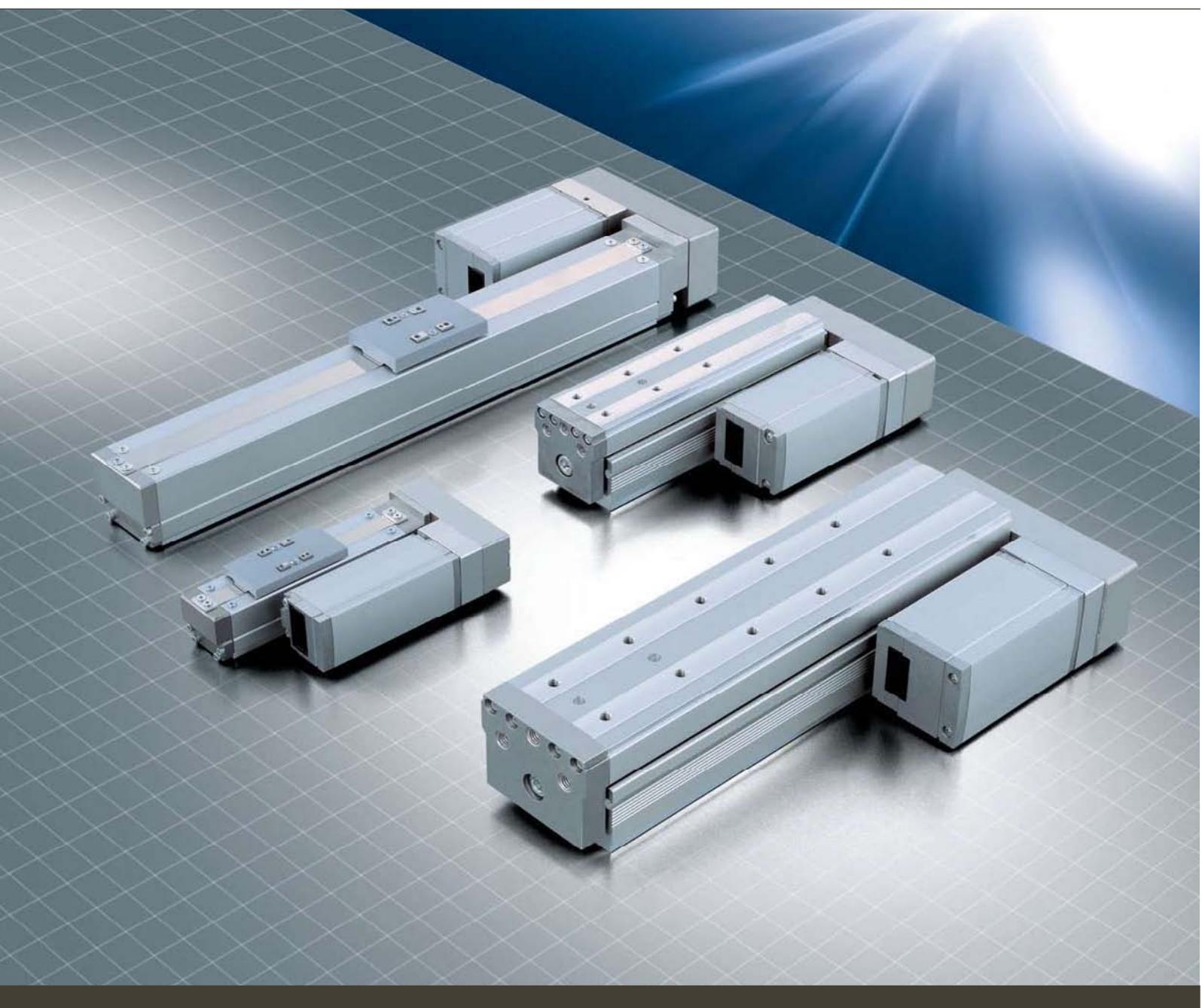
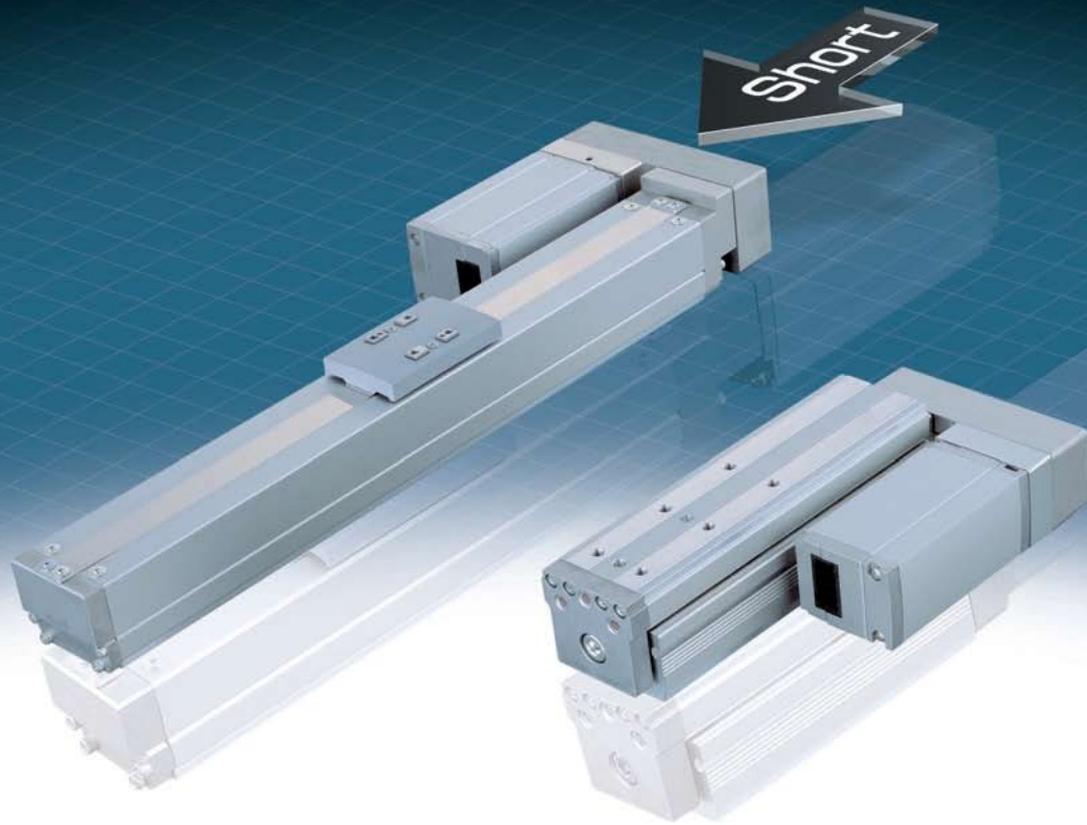


RoboCylinder
Motor-reversing Specification

RCP3/RCA2





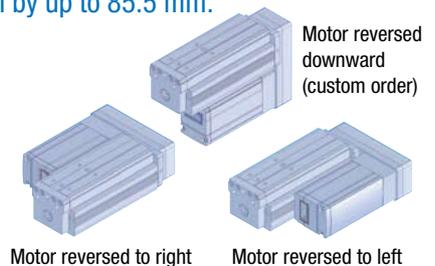
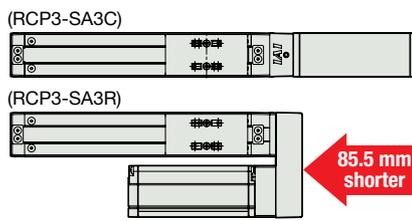
Significantly Shorter Overall Length by Reversing the Motor Space-saving, Affordably Priced ROBO Cylinder RCP3/RCA2 Series

Space-saving The motor-reversing structure shortens the overall length by up to 85.5 mm.

1

The motor-reversing structure shortens the overall length by up to 85.5 mm and thereby reduces the actuator footprint. The motor-reversing direction can be selected from among the three options: right, left and downward*

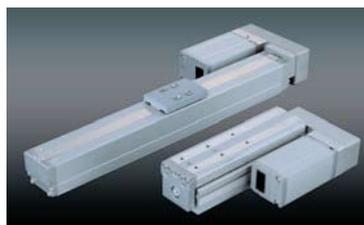
*The downward-reversing specification is available as a customer order.



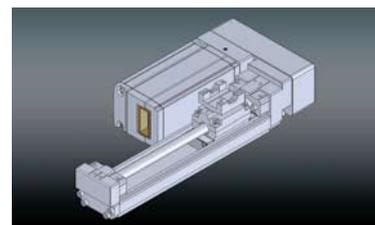
Affordably Priced The motor-reversing structure helps realize an affordable price.

2

The RCP3/RCA2 series, complete with the guide, ball screw, servo motor, and motor-reversing structure, is available at an affordable price. The slider type is also available without cover to further reduce the cost as an option.



Slider type/table type

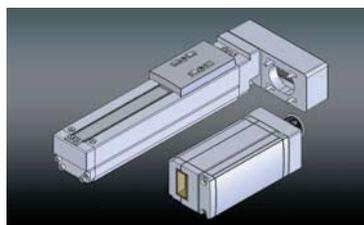


No cover type

Easy to Use The unitized motor design increases maintainability.

3

The unitized motor is easy to replace, which leads to significant improvement in maintainability.



Model Name Specifications

The model names of RCP3/RCA3 actuators consist of the items specified below.

For the details of each item, refer to the applicable explanation provided below. Although these items are common to all models, the selection ranges may vary depending on the model. For details, check the page explaining each actuator type.

Slider Type

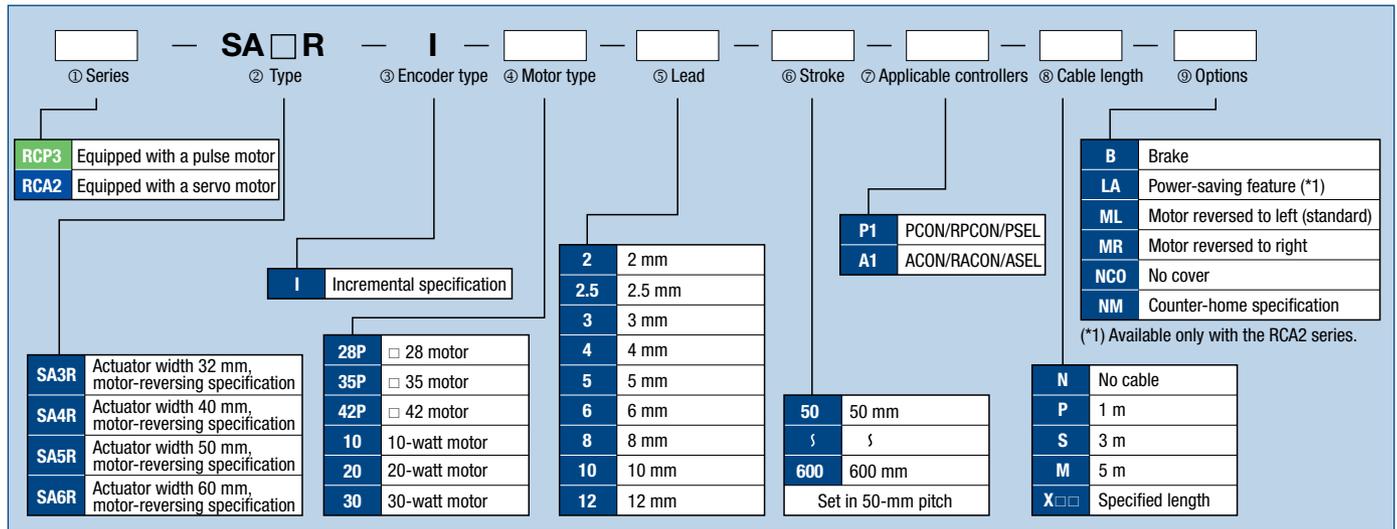
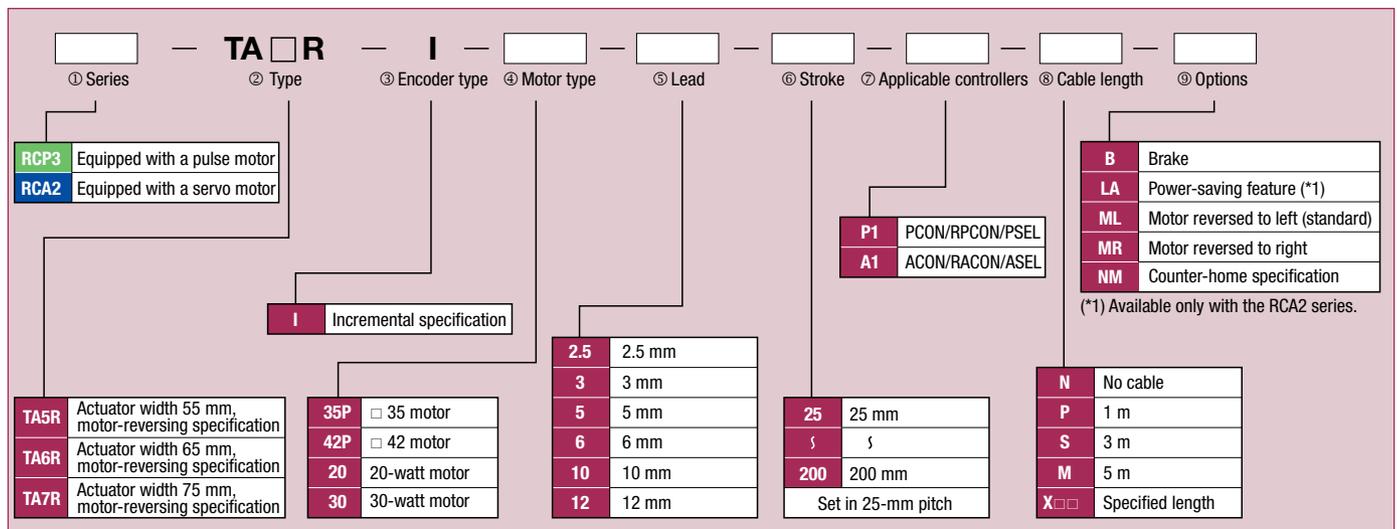


Table Type



① Series

The name of each series is indicated.

② Type

The shape (slider, table, etc.), material (aluminum, steel, etc.), size (actuator width) and motor coupling method are indicated.

SA3R

S: Slider type / **T**: Table type

A: Made of aluminum

3: Actuator width 32 mm / **4**: Actuator width 40 mm / **5**: Actuator width 50 mm (slider type)/55 mm (table type) /

6: Actuator width 60 mm (slider type)/65 mm (table type) / **7**: Actuator width 75 mm

C: Coupling specification / **R**: Motor-reversing specification

③ Encoder type

Whether the encoder installed in the actuator is of "A: Absolute specification" or "I: Incremental specification" is specified.

④ Motor type

The type of the motor installed in the actuator is indicated.

⑤ Lead

To be specific, the size of the pulse motor is indicated for the RCP3 series, while the motor wattage is indicated for the RCA2 series.

⑥ Stroke

The operating range of the actuator is indicated.

⑦ Applicable controllers

The settable controller type is indicated.

⑧ Cable length

The length of the (integrated) motor/encoder cable connecting the actuator and controller is indicated.

⑨ Options

The standard motor/encoder cable for RCP2/RCA2 is a robot cable.

Each option to be installed in the actuator is indicated.

The energy-saving feature is available only with the RCA2 series.

The standard motor-reversing direction is left (ML), but the actuator can also be designed so that the motor reverses to right (MR).

(Specify "ML" even when the standard reversing direction (left) need not be changed.)

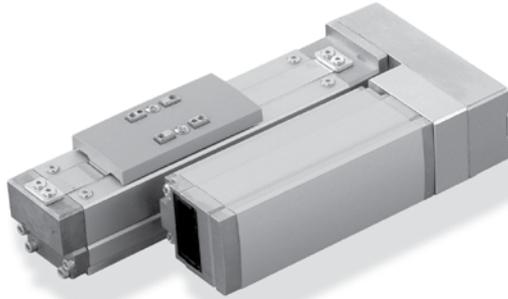
If you are selecting two or more options, specify them in an alphabetical order.

RCP3-SA3R

ROBO Cylinder, Slider Type, Actuator Width 32 mm, Pulse Motor, Motor-reversing Specification

| | | | | | | | | | |
|---------------------------|--------|------|------------------------------|----------------------------|-------------------------------|--|------------------------|--|--|
| Model Name Specifications | RCP3 | SA3R | I | 28P | □ | □ | P1 | □ | □ |
| | Series | Type | Encoder type | Motor type | Lead | Stroke | Applicable controllers | Cable length | Options |
| | | | I: Incremental specification | 28P: Pulse motor □ 28 size | 6: 6 mm 4: 4 mm 2: 2 mm | 50: 50 mm 300: 300 mm (Set in 50-mm pitch) | P1: PCON PSEL | N: None P: 1 m S: 3 m M: 5 m X□□: Specified length | B: With brake ML: Motor reversed to left (standard) MR: Motor reversed to right NCO: No cover NM: Counter-home specification |

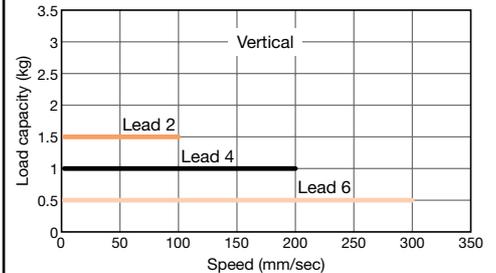
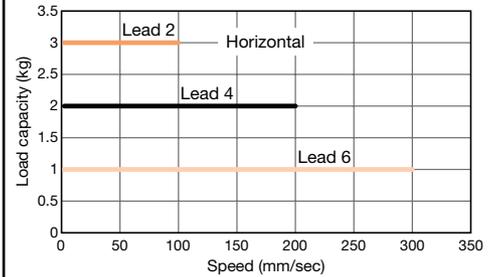
*For details on the items comprising the model name, refer to P. 2.



- Since the RCP3 series uses a pulse motor, its load capacity drops as the speed increases. Use the correlation diagrams of speed and load capacity provided on the right to check the load capacity achieved at the desired speed.
- The load capacities are based on operation at an acceleration of 0.3 G (or 0.2 G when the lead is 2 or the actuator is used vertically). The acceleration cannot be increased beyond this level.

Correlation Diagrams of Speed and Load Capacity

Due to the characteristics of the pulse motor installed inside, the RCP3 series allows the load capacity to drop as the speed increases. Use the graphs below to check if the desired speed and load capacity can be satisfied.



Actuator Specifications

Strokes and Maximum Speeds

| Model | Lead (mm) | Maximum load capacity | | Maximum push force (N) | Stroke (mm) |
|----------------------------|-----------|-----------------------|---------------|------------------------|----------------------------------|
| | | Horizontal (kg) | Vertical (kg) | | |
| RCP3-SA3R-I-28P-6-①-P1-②-③ | 6 | 1 | 0.5 | 15 | 50 ~ 300 (Set in 50-mm pitch) |
| RCP3-SA3R-I-28P-4-①-P1-②-③ | 4 | 2 | 1 | 22 | |
| RCP3-SA3R-I-28P-2-①-P1-②-③ | 2 | 3 | 1.5 | 44 | |

Explanation of codes: ① Stroke ② Cable length ③ Options

Strokes and Maximum Speeds

| Stroke (mm) | 50 ~ 300 (Set in 50-mm pitch) |
|-------------|----------------------------------|
| 6 | 300 |
| 4 | 200 |
| 2 | 100 |

(Unit: mm/sec)

① Price List by Stroke (Standard Prices)

| ① Stroke (mm) | Type code | |
|---------------|-----------------------|---------------------|
| | SA3R | |
| | Encoder type | |
| | Incremental | |
| | Actuator cover | |
| | With cover (standard) | No cover (optional) |
| 50 | — | — |
| 100 | — | — |
| 150 | — | — |
| 200 | — | — |
| 250 | — | — |
| 300 | — | — |

② Price List by Cable Length (Standard Prices)

| Type | Model | 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 is an integrated motor/encoder cable, which is also a robot cable.
*Refer to P. 34 for the cables sold separately for maintenance purposes.

③ Price List of Options (Standard Prices)

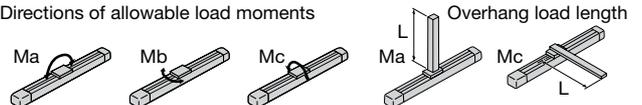
| Name | Option code | Reference page | Standard price |
|-----------------------------------|-------------|----------------|----------------|
| With brake | B | — | — |
| Motor reversed to left (standard) | ML | — | Free of charge |
| Motor reversed to right | MR | — | Free of charge |
| No cover | NCO | — | See above. |
| Counter-home specification | NM | — | Free of charge |

Actuator Specifications

| Item | Description |
|--------------------------------------|---|
| Drive method | Ball screw, φ6 mm, rolled C10 |
| Positioning repeatability | ±0.05mm |
| Lost motion | 0.1 mm or less |
| Base | Material: Aluminum with dedicated alumite treatment |
| Dynamic allowable load moment (*1) | Ma: 1.96N·m Mb: 2.84N·m Mc: 3.14N·m |
| Overhang load length | 100 mm or less |
| Surrounding air temperature/humidity | 0 to 40°C, 85%RH or below (non-condensing) |
| Traveling life | 5000km |

(*1) Refer to the RCP3/RCA2 Coupling Specification catalog for the moment load calculation.

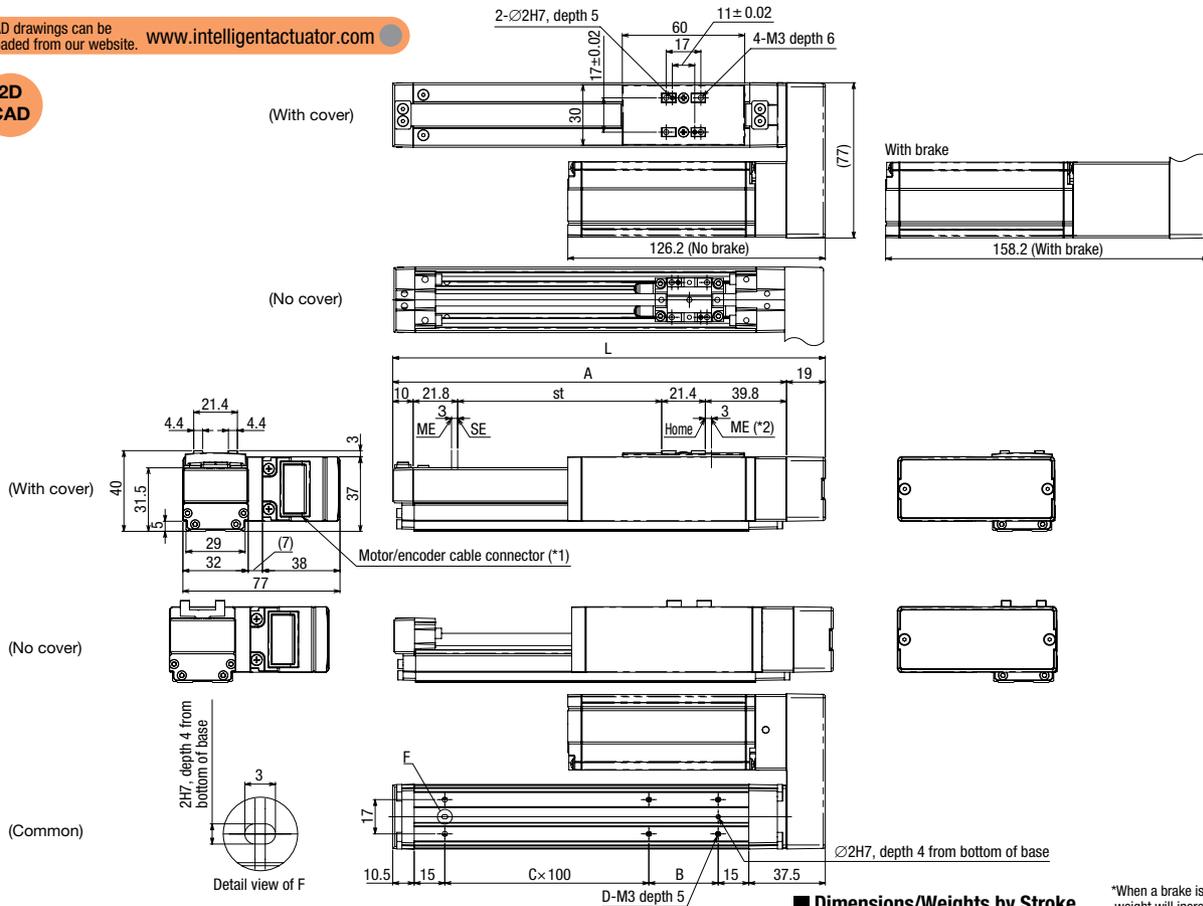
Directions of allowable load moments



Dimensions

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

2D CAD



*When a brake is equipped, the weight will increase by 0.2 kg

Dimensions/Weights by Stroke

| Stroke (mm) | 50 | 100 | 150 | 200 | 250 | 300 | |
|-------------|------------|-----|-----|-----|-----|-----|-----|
| L | 162 | 212 | 262 | 312 | 362 | 412 | |
| A | 143 | 193 | 243 | 293 | 343 | 393 | |
| B | 84 | 34 | 84 | 34 | 84 | 34 | |
| C | 0 | 1 | 1 | 2 | 2 | 3 | |
| D | 4 | 6 | 6 | 8 | 8 | 10 | |
| Weight (kg) | With cover | 0.8 | 0.8 | 0.9 | 1.0 | 1.0 | 1.1 |
| | No cover | 0.7 | 0.8 | 0.8 | 0.9 | 0.9 | 1.0 |

(*1) An integrated motor/encoder cable is provided. (Refer to P. 34.)

(*2) The slider will move to the ME after home return, so pay attention to possible contact with surrounding structures/parts.

ME: Mechanical end
SE: Stroke end

Controllers

Applicable Controllers

RCP3-series actuators can be operated with any of the following controllers. Select a controller type appropriate for your specific application.

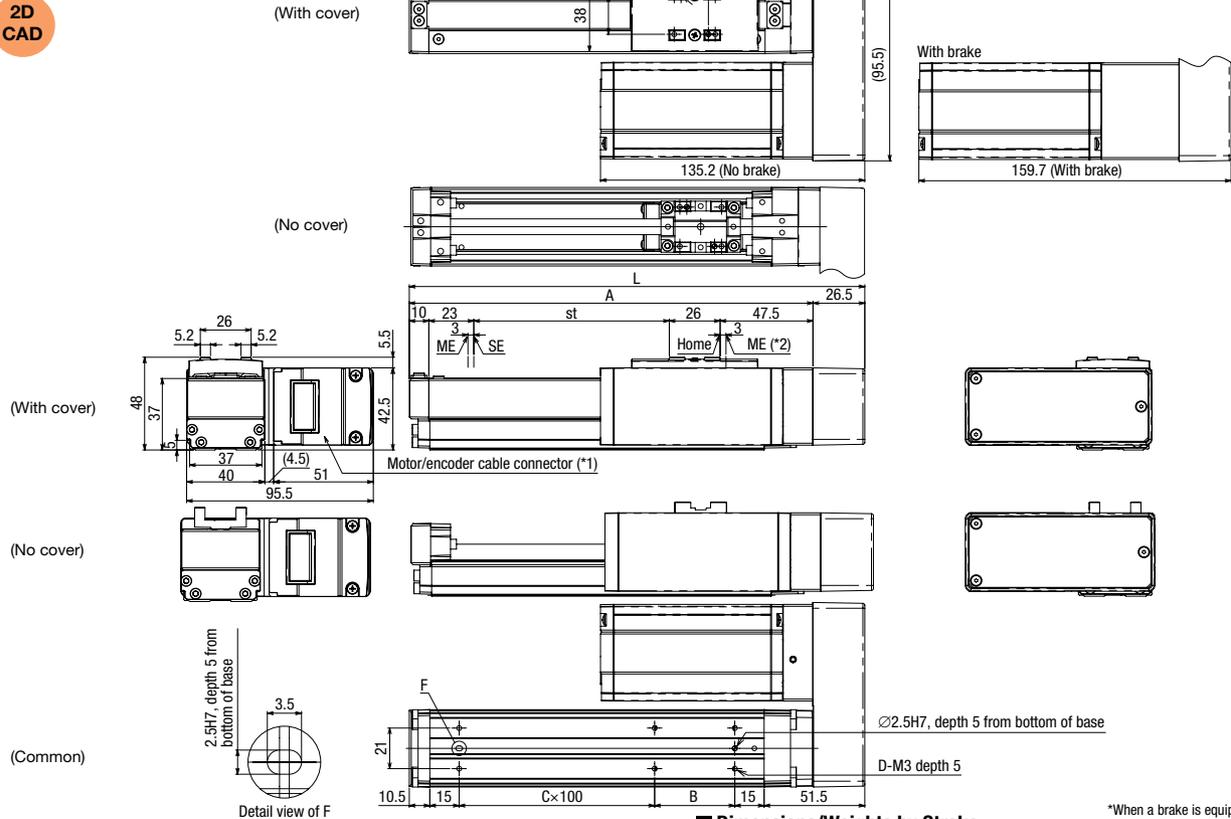
| Name | Appearance | Model | Feature | Maximum number of positioning points | Power-supply voltage | Power-supply capacity | Standard price | Reference page |
|---|------------|----------------------|--|--------------------------------------|----------------------|-----------------------|----------------|----------------|
| Positioner type | | PCON-C-28PI-NP-2-0 | Up to 512 positioning points are supported | 512 | DC24V | 2 A max. | — | →P31 |
| Positioner type conforming to safety category | | PCON-CG-28PI-NP-2-0 | | | | | | |
| Solenoid valve type | | PCON-CY-28PI-NP-2-0 | Operable with the same control you use when operating a solenoid valve | 3 | | | | |
| Pulse-train input type (differential line driver specification) | | PCON-PL-28PI-NP-2-0 | Pulse-train input type supporting differential line driver | (-) | | | | |
| Pulse-train input type (open collector specification) | | PCON-PO-28PI-NP-2-0 | Pulse-train input type supporting open collector | | | | | |
| Serial communication type | | PCON-SE-28PI-N-0-0 | Dedicated serial communication type | 64 | | | | |
| Field network type | | RPCON-28P | Dedicated field network type | 768 | | | | |
| Program control type | | PSEL-C-1-28PI-NP-2-0 | Up to 2 axes can be operated using programs | 1500 | | | | |

*With PSEL controllers, the above information applies to the 1-axis specification.

Dimensions

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

2D CAD



*When a brake is equipped, the weight will increase by 0.3 kg

Dimensions/Weights by Stroke

| Stroke (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | |
|-------------|------------|-------|-------|-------|-------|-------|-------|-------|-----|
| L | 183 | 233 | 283 | 333 | 383 | 433 | 483 | 533 | |
| A | 156.5 | 206.5 | 256.5 | 306.5 | 356.5 | 406.5 | 456.5 | 506.5 | |
| B | 91 | 41 | 91 | 41 | 91 | 41 | 91 | 41 | |
| C | 0 | 1 | 1 | 2 | 2 | 3 | 3 | 4 | |
| D | 4 | 6 | 6 | 8 | 8 | 10 | 10 | 12 | |
| Weight (kg) | With cover | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 1.7 | 1.8 |
| | No cover | 1.1 | 1.1 | 1.2 | 1.3 | 1.4 | 1.4 | 1.5 | 1.6 |

- (*1) An integrated motor/encoder cable is provided. (Refer to P. 34.)
 (*2) The slider will move to the ME after home return, so pay attention to possible contact with surrounding structures/parts.
 ME: Mechanical end
 SE: Stroke end

Controllers

Applicable Controllers

RCP3-series actuators can be operated with any of the following controllers. Select a controller type appropriate for your specific application.

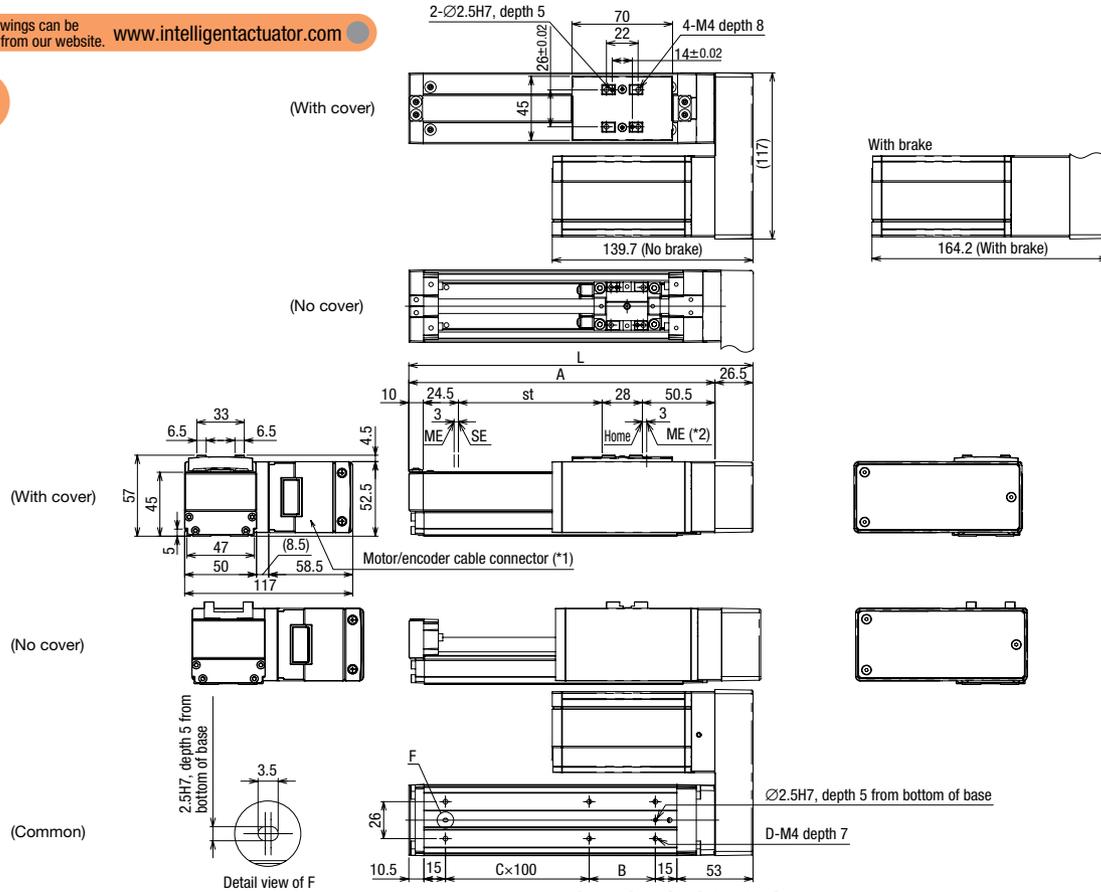
| Name | Appearance | Model | Feature | Maximum number of positioning points | Power-supply voltage | Power-supply capacity | Standard price | Reference page |
|---|------------|----------------------|--|--------------------------------------|----------------------|-----------------------|----------------|----------------|
| Positioner type | | PCON-C-35PI-NP-2-0 | Up to 512 positioning points are supported | 512 | DC24V | 2 A max. | — | →P31 |
| Positioner type conforming to safety category | | PCON-CG-35PI-NP-2-0 | | | | | | |
| Solenoid valve type | | PCON-CY-35PI-NP-2-0 | Operable with the same control you use when operating a solenoid valve | 3 | | | | |
| Pulse-train input type (differential line driver specification) | | PCON-PL-35PI-NP-2-0 | Pulse-train input type supporting differential line driver | (-) | | | | |
| Pulse-train input type (open collector specification) | | PCON-PO-35PI-NP-2-0 | Pulse-train input type supporting open collector | | | | | |
| Serial communication type | | PCON-SE-35PI-N-0-0 | Dedicated serial communication type | 64 | | | | |
| Field network type | | RPCON-35P | Dedicated field network type | 768 | | | | |
| Program control type | | PSEL-C-1-35PI-NP-2-0 | Up to 2 axes can be operated using programs | 1500 | | | | |

*With PSEL controllers, the above information applies to the 1-axis specification.

Dimensions

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

2D
CAD



Dimensions/Weights by Stroke

*When a brake is equipped, the weight will increase by 0.4 kg

| Stroke (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 |
|-------------|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L | 189.5 | 239.5 | 289.5 | 339.5 | 389.5 | 439.5 | 489.5 | 539.5 | 589.5 | 639.5 |
| A | 163 | 213 | 263 | 313 | 363 | 413 | 463 | 513 | 563 | 613 |
| B | 96 | 46 | 96 | 46 | 96 | 46 | 96 | 46 | 96 | 46 |
| C | 0 | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 5 |
| D | 4 | 6 | 6 | 8 | 8 | 10 | 10 | 12 | 12 | 14 |
| Weight (kg) | With cover | 1.7 | 1.8 | 1.9 | 2.1 | 2.2 | 2.3 | 2.5 | 2.6 | 2.8 |
| | No cover | 1.6 | 1.7 | 1.8 | 1.9 | 2.0 | 2.1 | 2.3 | 2.4 | 2.6 |

- (*1) An integrated motor/encoder cable is provided. (Refer to P. 34.)
- (*2) The slider will move to the ME after home return, so pay attention to possible contact with surrounding structures/parts.
- ME: Mechanical end
- SE: Stroke end

Controllers

Applicable Controllers

RCP3-series actuators can be operated with any of the following controllers. Select a controller type appropriate for your specific application.

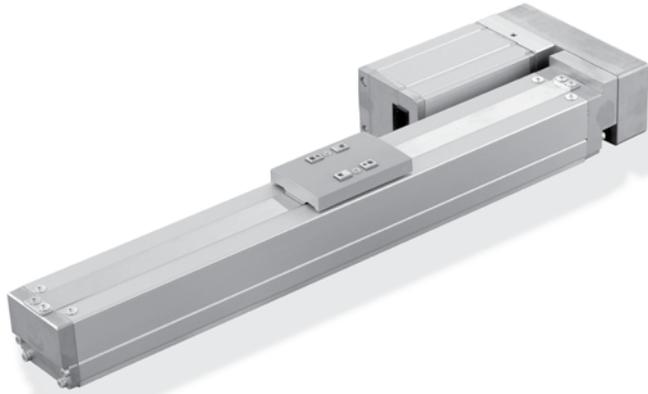
| Name | Appearance | Model | Feature | Maximum number of positioning points | Power-supply voltage | Power-supply capacity | Standard price | Reference page |
|---|------------|----------------------|--|--------------------------------------|----------------------|-----------------------|----------------|----------------|
| Positioner type | | PCON-C-42PI-NP-2-0 | Up to 512 positioning points are supported | 512 | DC24V | 2 A max. | — | →P31 |
| Positioner type conforming to safety category | | PCON-CG-42PI-NP-2-0 | | | | | | |
| Solenoid valve type | | PCON-CY-42PI-NP-2-0 | Operable with the same control you use when operating a solenoid valve | 3 | | | | |
| Pulse-train input type (differential line driver specification) | | PCON-PL-42PI-NP-2-0 | Pulse-train input type supporting differential line driver | (-) | | | | |
| Pulse-train input type (open collector specification) | | PCON-PO-42PI-NP-2-0 | Pulse-train input type supporting open collector | | | | | |
| Serial communication type | | PCON-SE-42PI-N-0-0 | Dedicated serial communication type | 64 | | | | |
| Field network type | | RPCON-42P | Dedicated field network type | 768 | | | | |
| Program control type | | PSEL-C-1-42PI-NP-2-0 | Up to 2 axes can be operated using programs | 1500 | | | | |

*With PSEL controllers, the above information applies to the 1-axis specification.

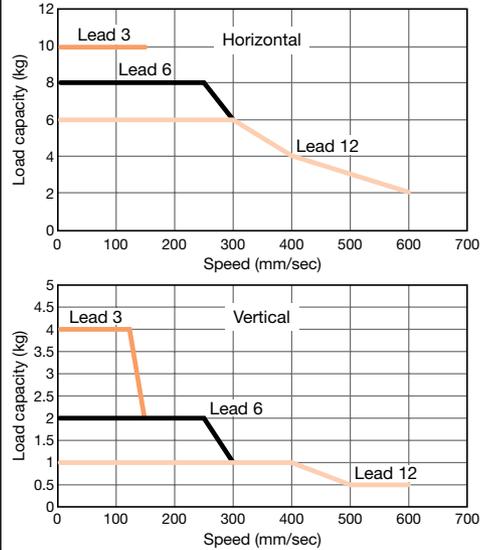
RCP3-SA6R ROBO Cylinder, Slider Type, Actuator Width 60 mm, Pulse Motor, Motor-reversing Specification

| | | | | | | | | | |
|----------------|------------------------------|----------------------------|---------------------------------|--|------------------|---------------------------------------|---|--------------------------------|---------|
| Model Name | RCP3 | SA6R | I | 42P | | | P1 | | |
| Specifications | Series | Type | Encoder type | Motor type | Lead | Stroke | Applicable controllers | Cable length | Options |
| | I: Incremental specification | 42P: Pulse motor □ 42 size | 12: 12 mm 6: 6 mm 3: 3 mm | 50: 50 mm 600: 600 mm (Set in 50-mm pitch) | P1: PCON PSEL | N: None P: 1 m S: 3 m M: 5 m | B: With brake ML: Motor reversed to left (standard) MR: Motor reversed to right NCO: No cover X□□: Specified length | NM: Counter-home specification | |

*For details on the items comprising the model name, refer to P. 2.



Correlation Diagrams of Speed and Load Capacity
 Due to the characteristics of the pulse motor installed inside, the RCP3 series allows the load capacity to drop as the speed increases. Use the graphs below to check if the desired speed and load capacity can be satisfied.



- As the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a dangerous speed. Use the actuator specification table below to check the maximum speed achieved at the desired stroke.
- Since the RCP3 series uses a pulse motor, its load capacity drops as the speed increases. Use the correlation diagrams of speed and load capacity provided on the right to check the load capacity achieved at the desired speed.
- The load capacities are based on operation at an acceleration of 0.3 G (or 0.2 G when the lead is 3 or the actuator is used vertically). The acceleration cannot be increased beyond this level.

Actuator Specifications

Strokes and Maximum Speeds

| Model | Lead (mm) | Maximum load capacity | | Maximum push force (N) | Stroke (mm) |
|-----------------------------|-----------|-----------------------|---------------|------------------------|----------------------------------|
| | | Horizontal (kg) | Vertical (kg) | | |
| RCP3-SA6R-I-42P-12-①-P1-②-③ | 12 | ~6 | ~1 | 47 | 50 ~ 600 (Set in 50-mm pitch) |
| RCP3-SA6R-I-42P-6-①-P1-②-③ | 6 | ~8 | ~2 | 95 | |
| RCP3-SA6R-I-42P-3-①-P1-②-③ | 3 | 10 | ~4 | 189 | |

Explanation of codes: ① Stroke ② Cable length ③ Options

Strokes and Maximum Speeds

| Stroke (mm) Lead (mm) | 50 ~ 550 (Set in 50-mm pitch) | | 600 |
|--------------------------|----------------------------------|-----|-----|
| | 12 | 600 | 540 |
| 6 | 300 | 270 | |
| 3 | 150 | 135 | |

(Unit: mm/sec)

① Price List by Stroke (Standard Prices)

| ① Stroke (mm) | Type code | |
|----------------|-----------------------|---------------------|
| | SA6R | |
| | Encoder type | |
| | Incremental | |
| Actuator cover | | |
| | With cover (standard) | No cover (optional) |
| 50 | — | — |
| 100 | — | — |
| 150 | — | — |
| 200 | — | — |
| 250 | — | — |
| 300 | — | — |
| 350 | — | — |
| 400 | — | — |
| 450 | — | — |
| 500 | — | — |
| 550 | — | — |
| 600 | — | — |

② Price List by Cable Length (Standard Prices)

| Type | Model | 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) | — |

*Refer to P. 34 for the cables sold separately for maintenance purposes.

③ Price List of Options (Standard Prices)

| Name | Option code | Reference page | Standard price |
|-----------------------------------|-------------|----------------|----------------|
| With brake | B | — | — |
| Motor reversed to left (standard) | ML | — | Free of charge |
| Motor reversed to right | MR | — | Free of charge |
| No cover | NCO | — | See above. |
| Counter-home specification | NM | — | Free of charge |

Actuator Specifications

| Item | Description |
|--------------------------------------|---|
| Drive method | Ball screw, φ10 mm, rolled C10 |
| Positioning repeatability | ±0.05mm |
| Lost motion | 0.1 mm or less |
| Base | Material: Aluminum with dedicated alumite treatment |
| Dynamic allowable load moment (*1) | Ma: 4.31N·m Mb: 6.17N·m Mc: 10.98N·m |
| Overhang load length | 150 mm or less |
| Surrounding air temperature/humidity | 0 to 40°C, 85%RH or below (non-condensing) |
| Traveling life | 5000km |

(*1) Refer to the RCP3/RCA2 Coupling Specification catalog for the moment load calculation.

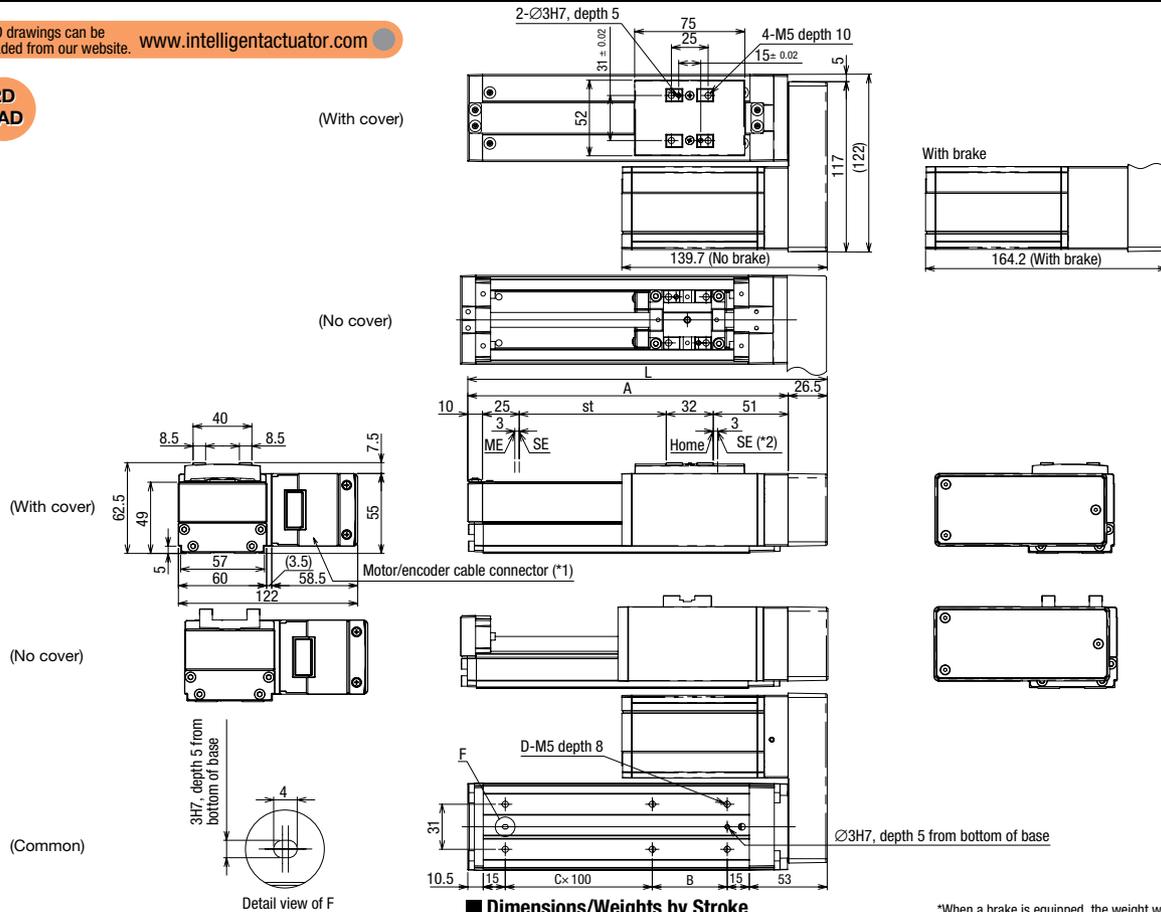
Directions of allowable load moments



Dimensions

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

2D CAD



Dimensions/Weights by Stroke

*When a brake is equipped, the weight will increase by 0.4 kg

| Stroke (mm) | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 |
|-------------|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L | 194.5 | 244.5 | 294.5 | 344.5 | 394.5 | 444.5 | 494.5 | 544.5 | 594.5 | 644.5 | 694.5 | 744.5 |
| A | 168 | 218 | 268 | 318 | 368 | 418 | 468 | 518 | 568 | 618 | 668 | 718 |
| B | 101 | 51 | 101 | 51 | 101 | 51 | 101 | 51 | 101 | 51 | 101 | 51 |
| C | 0 | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 5 | 6 |
| D | 4 | 6 | 6 | 8 | 8 | 10 | 10 | 12 | 12 | 14 | 14 | 16 |
| Weight (kg) | With cover | 1.9 | 2.1 | 2.3 | 2.4 | 2.6 | 2.8 | 3.0 | 3.1 | 3.3 | 3.5 | 3.6 |
| | No cover | 1.8 | 2.0 | 2.1 | 2.3 | 2.4 | 2.6 | 2.7 | 2.9 | 3.0 | 3.1 | 3.3 |

(*1) An integrated motor/encoder cable is provided. (Refer to P. 34.)

(*2) The slider will move to the ME after home return, so pay attention to possible contact with surrounding structures/parts.

ME: Mechanical end

SE: Stroke end

Controllers

Applicable Controllers

RCP3-series actuators can be operated with any of the following controllers. Select a controller type appropriate for your specific application.

| Name | Appearance | Model | Feature | Maximum number of positioning points | Power-supply voltage | Power-supply capacity | Standard price | Reference page |
|---|------------|----------------------|--|--------------------------------------|----------------------|-----------------------|----------------|----------------|
| Positioner type | | PCON-C-42PI-NP-2-0 | Up to 512 positioning points are supported | 512 | DC24V | 2 A max. | — | →P31 |
| Positioner type conforming to safety category | | PCON-CG-42PI-NP-2-0 | | | | | | |
| Solenoid valve type | | PCON-CY-42PI-NP-2-0 | Operable with the same control you use when operating a solenoid valve | 3 | DC24V | 2 A max. | — | →P31 |
| Pulse-train input type (differential line driver specification) | | PCON-PL-42PI-NP-2-0 | Pulse-train input type supporting differential line driver | (-) | | | | |
| Pulse-train input type (open collector specification) | | PCON-PO-42PI-NP-2-0 | Pulse-train input type supporting open collector | | | | | |
| Serial communication type | | PCON-SE-42PI-N-0-0 | Dedicated serial communication type | 64 | DC24V | 2 A max. | — | →P31 |
| Field network type | | RPCON-42P | Dedicated field network type | 768 | | | | |
| Program control type | | PSEL-C-1-42PI-NP-2-0 | Up to 2 axes can be operated using programs | 1500 | DC24V | 2 A max. | — | →P31 |

*With PSEL controllers, the above information applies to the 1-axis specification.

RCP3-TA5R

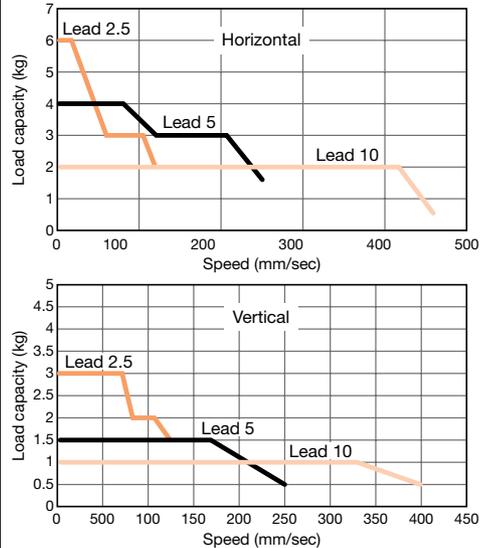
ROBO Cylinder, Table Type, Actuator Width 55 mm, Pulse Motor, Motor-reversing Specification

| | | | | | | | | | | | | | | | | | |
|----------------|------------------------------|---|----------------------------|---|-------------------------------------|---|--|---|------------------|---|---------------------------------------|---|------------------------|---|---|---|---------|
| Model Name | RCP3 | - | TA5R | - | I | - | 35P | - | | - | | - | P1 | - | | - | |
| Specifications | Series | - | Type | - | Encoder type | - | Motor type | - | Lead | - | Stroke | - | Applicable controllers | - | Cable length | - | Options |
| | I: Incremental specification | | 35P: Pulse motor □ 35 size | | 10: 10 mm 5: 5 mm 2.5: 2.5 mm | | 25: 25 mm 5: 5 mm 100: 100 mm (Set in 25-mm pitch) | | P1: PCON PSEL | | N: None P: 1 m S: 3 m M: 5 m | | X□□: Specified length | | B: With brake ML: Motor reversed to left (standard) MR: Motor reversed to right NM: Counter-home specification | | |

*For details on the items comprising the model name, refer to P. 2.



Correlation Diagrams of Speed and Load Capacity
Due to the characteristics of the pulse motor installed inside, the RCP3 series allows the load capacity to drop as the speed increases. Use the graphs below to check if the desired speed and load capacity can be satisfied.



- POINT Selection note**
- Since the RCP3 series uses a pulse motor, its load capacity drops as the speed increases. Use the correlation diagrams of speed and load capacity provided on the right to check the load capacity achieved at the desired speed.
 - Take note that the maximum speed varies depending on whether the actuator is used horizontally or vertically.
 - The load capacities are based on operation at an acceleration of 0.3 G (or 0.2 G when the lead is 2.5 or the actuator is used vertically). The acceleration cannot be increased beyond this level.

Actuator Specifications

Strokes and Maximum Speeds

| Model | Lead (mm) | Maximum load capacity | | Maximum push force (N) | Stroke (mm) |
|------------------------------|-----------|-----------------------|---------------|------------------------|-------------------------------|
| | | Horizontal (kg) | Vertical (kg) | | |
| RCP3-TA5R-I-35P-10-①-P1-②-③ | 10 | ~2 | ~1 | 34 | 25 ~ 100 (Set in 25-mm pitch) |
| RCP3-TA5R-I-35P-5-①-P1-②-③ | 5 | ~4 | ~1.5 | 68 | |
| RCP3-TA5R-I-35P-2.5-①-P1-②-③ | 2.5 | ~6 | ~3 | 136 | |

Explanation of codes: ① Stroke ② Cable length ③ Options

Strokes and Maximum Speeds

| Stroke (mm) Lead (mm) | 25 ~ 100 (Set in 25-mm pitch) | |
|--------------------------|-------------------------------|-----------|
| | 10 | 465 <400> |
| 5 | 250 | |
| 2.5 | 125 | |

*The value in <> applies when the actuator is used vertically. (Unit: mm/sec)

① Price List by Stroke (Standard Prices)

| ① Stroke (mm) | Type code | |
|---------------|-----------|--------------|
| | TA5R | Encoder type |
| 25 | — | Incremental |
| 50 | — | — |
| 75 | — | — |
| 100 | — | — |

② Price List by Cable Length (Standard Prices)

| Type | Model | 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) | — |
| | — | — |

*Refer to P. 34 for the cables sold separately for maintenance purposes.

③ Price List of Options (Standard Prices)

| Name | Option code | Reference page | Standard price |
|-----------------------------------|-------------|----------------|----------------|
| With brake | B | — | — |
| Motor reversed to left (standard) | ML | — | Free of charge |
| Motor reversed to right | MR | — | Free of charge |
| Counter-home specification | NM | — | Free of charge |

Actuator Specifications

| Item | Description |
|--------------------------------------|---|
| Drive method | Ball screw, φ8 mm, rolled C10 |
| Positioning repeatability | ±0.05mm |
| Lost motion | 0.1 mm or less |
| Base | Material: Aluminum with dedicated alumite treatment |
| Dynamic allowable load moment (*1) | Ma: 6.57N·m Mb: 9.32N·m Mc: 14.32N·m |
| Overhang load length | Within the range of the applicable load moment |
| Surrounding air temperature/humidity | 0 to 40°C, 85%RH or below (non-condensing) |
| Traveling life | 5000km |

(*1) Refer to the RCP3/RCA2 Coupling Specification catalog for the moment load calculation.

Directions of allowable load moments

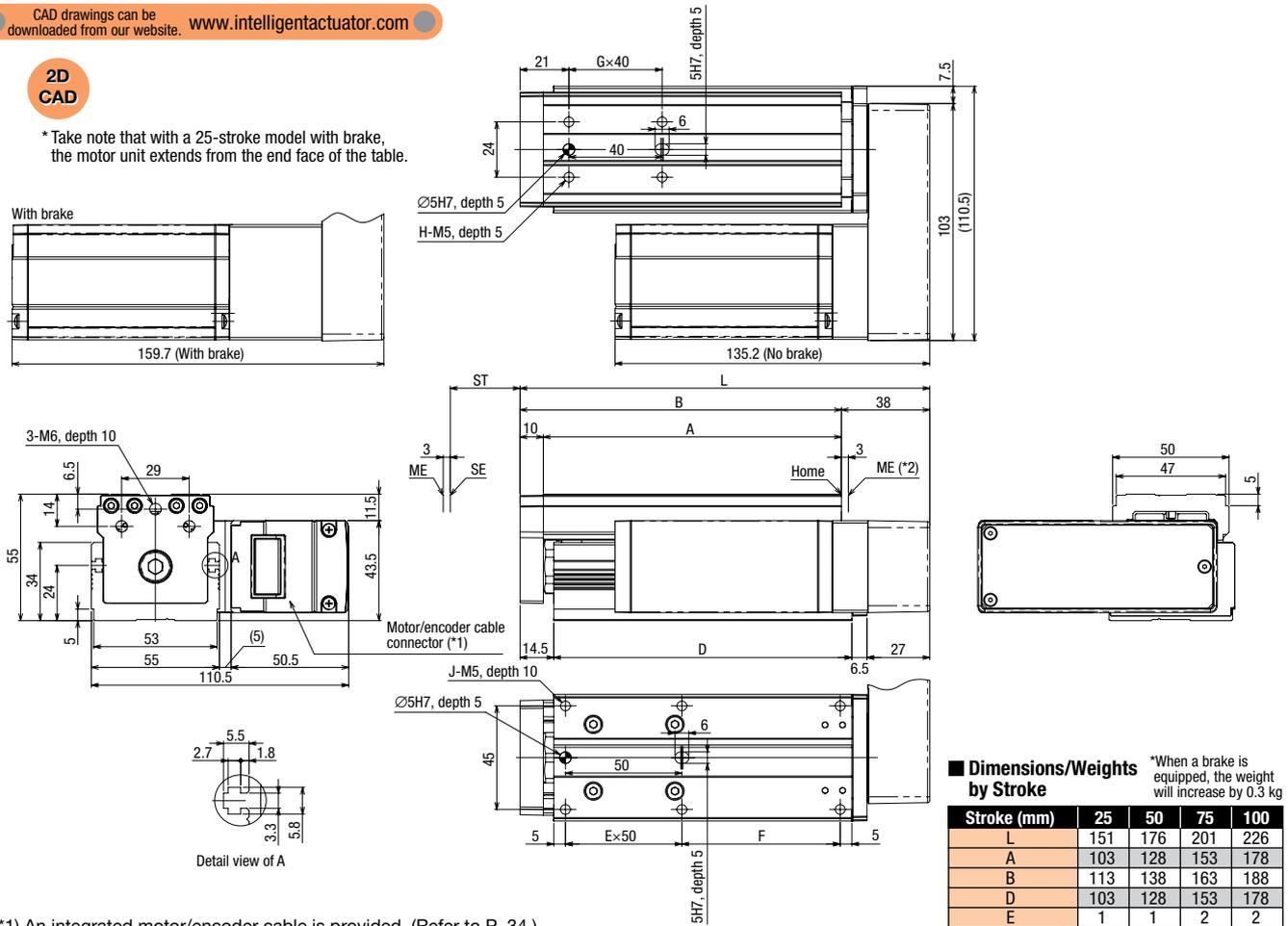


Dimensions

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

2D CAD

* Take note that with a 25-stroke model with brake, the motor unit extends from the end face of the table.



- (*1) An integrated motor/encoder cable is provided. (Refer to P. 34.)
- (*2) The slider will move to the ME after home return, so pay attention to possible contact with surrounding structures/parts.
ME: Mechanical end
SE: Stroke end

Dimensions/Weights by Stroke

*When a brake is equipped, the weight will increase by 0.3 kg

| Stroke (mm) | 25 | 50 | 75 | 100 |
|-------------|-----|-----|-----|-----|
| L | 151 | 176 | 201 | 226 |
| A | 103 | 128 | 153 | 178 |
| B | 113 | 138 | 163 | 188 |
| D | 103 | 128 | 153 | 178 |
| E | 1 | 1 | 2 | 2 |
| F | 43 | 68 | 43 | 68 |
| G | 1 | 1 | 2 | 2 |
| H | 4 | 4 | 6 | 6 |
| J | 6 | 6 | 8 | 8 |
| Weight (kg) | 1.4 | 1.6 | 1.7 | 1.9 |

Controllers

Applicable Controllers

RCP3-series actuators can be operated with any of the following controllers. Select a controller type appropriate for your specific application.

| Name | Appearance | Model | Feature | Maximum number of positioning points | Power-supply voltage | Power-supply capacity | Standard price | Reference page |
|---|------------|----------------------|--|--------------------------------------|----------------------|-----------------------|----------------|----------------|
| Positioner type | | PCON-C-35PI-NP-2-0 | Up to 512 positioning points are supported | 512 | DC24V | 2 A max. | — | →P31 |
| Positioner type conforming to safety category | | PCON-CG-35PI-NP-2-0 | | | | | | |
| Solenoid valve type | | PCON-CY-35PI-NP-2-0 | Operable with the same control you use when operating a solenoid valve | 3 | | | | |
| Pulse-train input type (differential line driver specification) | | PCON-PL-35PI-NP-2-0 | Pulse-train input type supporting differential line driver | (-) | | | | |
| Pulse-train input type (open collector specification) | | PCON-PO-35PI-NP-2-0 | Pulse-train input type supporting open collector | | | | | |
| Serial communication type | | PCON-SE-35PI-N-0-0 | Dedicated serial communication type | 64 | | | | |
| Field network type | | RPCON-35P | Dedicated field network type | 768 | | | | |
| Program control type | | PSEL-C-1-35PI-NP-2-0 | Up to 2 axes can be operated using programs | 1500 | | | | |

*With PSEL controllers, the above information applies to the 1-axis specification.

RCP3-TA6R

ROBO Cylinder, Table Type, Actuator Width 65 mm, Pulse Motor, Motor-reversing Specification

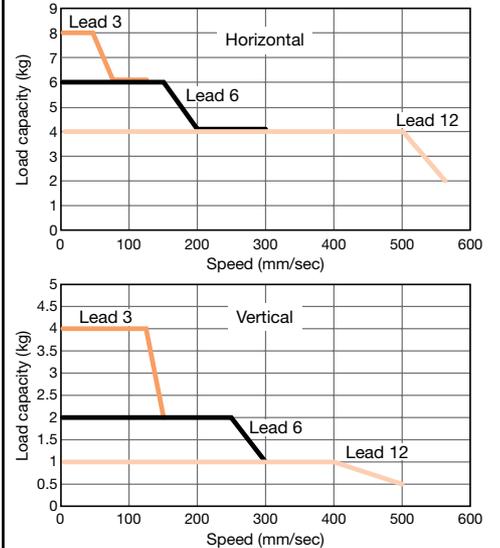
| | | | | | | | | | | | | | | | | | |
|----------------|------------------------------|---|----------------------------|---|---------------------------------|---|--|---|------------------|---|---------------------------------------|---|---|---|--------------|---|---------|
| Model Name | RCP3 | - | TA6R | - | I | - | 42P | - | | - | | - | P1 | - | | - | |
| Specifications | Series | - | Type | - | Encoder type | - | Motor type | - | Lead | - | Stroke | - | Applicable controllers | - | Cable length | - | Options |
| | I: Incremental specification | | 42P: Pulse motor □ 42 size | | 12: 12 mm 6: 6 mm 3: 3 mm | | 25: 25 mm 150: 150 mm (Set in 25-mm pitch) | | P1: PCON PSEL | | N: None P: 1 m S: 3 m M: 5 m | | B: With brake ML: Motor reversed to left (standard) MR: Motor reversed to right NM: Counter-home specification | | | | |

*For details on the items comprising the model name, refer to P. 2.

X□□: Specified length



Correlation Diagrams of Speed and Load Capacity
Due to the characteristics of the pulse motor installed inside, the RCP3 series allows the load capacity to drop as the speed increases. Use the graphs below to check if the desired speed and load capacity can be satisfied.



- POINT**
Selection note
- Since the RCP3 series uses a pulse motor, its load capacity drops as the speed increases. Use the correlation diagrams of speed and load capacity provided on the right to check the load capacity achieved at the desired speed.
 - Take note that the maximum speed varies depending on whether the actuator is used horizontally or vertically.
 - The load capacities are based on operation at an acceleration of 0.3 G (or 0.2 G when the lead is 3 or the actuator is used vertically). The acceleration cannot be increased beyond this level.

Actuator Specifications

Strokes and Maximum Speeds

| Model | Lead (mm) | Maximum load capacity | | Maximum push force (N) | Stroke (mm) |
|-----------------------------|-----------|-----------------------|---------------|------------------------|----------------------------------|
| | | Horizontal (kg) | Vertical (kg) | | |
| RCP3-TA6R-I-42P-12-①-P1-②-③ | 12 | ~4 | ~1 | 47 | 25 ~ 150 (Set in 25-mm pitch) |
| RCP3-TA6R-I-42P-6-①-P1-②-③ | 6 | ~6 | ~2 | 95 | |
| RCP3-TA6R-I-42P-3-①-P1-②-③ | 3 | ~8 | ~4 | 189 | |

Explanation of codes: ① Stroke ② Cable length ③ Options

Strokes and Maximum Speeds

| Stroke (mm) Lead (mm) | 25 ~ 150 (Set in 25-mm pitch) | |
|--------------------------|----------------------------------|----------------------------------|
| | Stroke (mm) | 25 ~ 150 (Set in 25-mm pitch) |
| 12 | 560 | <500> |
| 6 | 300 | |
| 3 | 150 | |

*The value in <> applies when the actuator is used vertically. (Unit: mm/sec)

① Price List by Stroke (Standard Prices)

| ① Stroke (mm) | Type code | |
|---------------|-----------|--------------|
| | TA6R | Encoder type |
| 25 | — | Incremental |
| 50 | — | — |
| 75 | — | — |
| 100 | — | — |
| 125 | — | — |
| 150 | — | — |

② Price List by Cable Length (Standard Prices)

| Type | Model | 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) | — |

*Refer to P. 34 for the cables sold separately for maintenance purposes.

③ Price List of Options (Standard Prices)

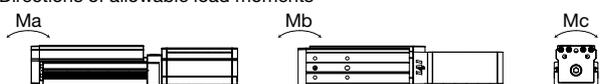
| Name | Option code | Reference page | Standard price |
|-----------------------------------|-------------|----------------|----------------|
| With brake | B | — | — |
| Motor reversed to left (standard) | ML | — | Free of charge |
| Motor reversed to right | MR | — | Free of charge |
| Counter-home specification | NM | — | Free of charge |

Actuator Specifications

| Item | Description |
|--------------------------------------|---|
| Drive method | Ball screw, φ10 mm, rolled C10 |
| Positioning repeatability | ±0.05mm |
| Lost motion | 0.1 mm or less |
| Base | Material: Aluminum with dedicated alumite treatment |
| Dynamic allowable load moment (*1) | Ma: 7.26N·m Mb: 10.3N·m Mc: 18.25N·m |
| Overhang load length | Within the range of the applicable load moment |
| Surrounding air temperature/humidity | 0 to 40°C, 85%RH or below (non-condensing) |
| Traveling life | 5000km |

(*1) Refer to the RCP3/RCA2 Coupling Specification catalog for the moment load calculation.

Directions of allowable load moments

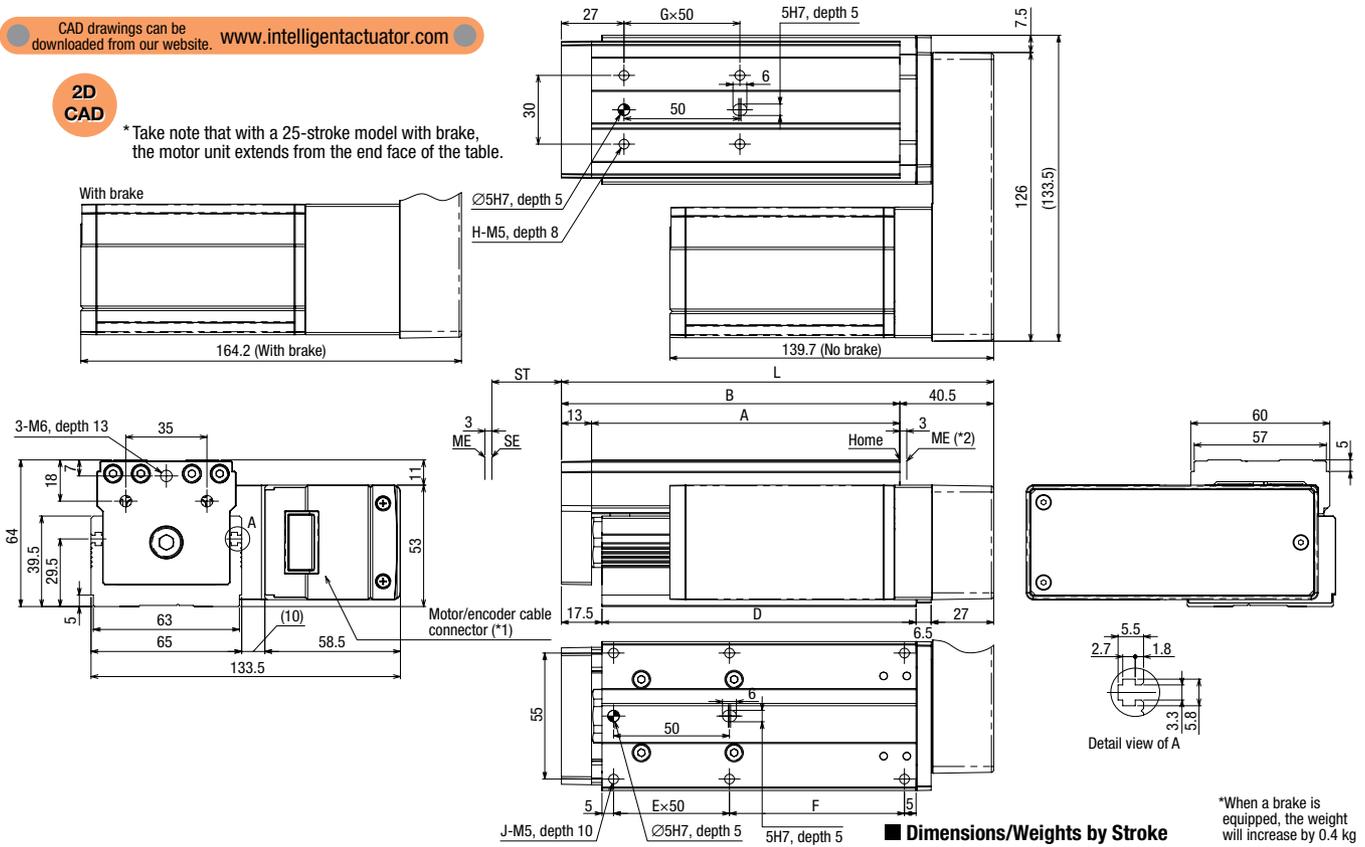


Dimensions

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

2D CAD

*Take note that with a 25-stroke model with brake, the motor unit extends from the end face of the table.



- (*1) An integrated motor/encoder cable is provided. (Refer to P. 34.)
 - (*2) The slider will move to the ME after home return, so pay attention to possible contact with surrounding structures/parts.
- ME: Mechanical end
SE: Stroke end

Dimensions/Weights by Stroke

| Stroke (mm) | 25 | 50 | 75 | 100 | 125 | 150 |
|-------------|-------|-------|-------|-------|-------|-------|
| L | 161.5 | 186.5 | 211.5 | 236.5 | 261.5 | 286.5 |
| A | 108 | 133 | 158 | 183 | 208 | 233 |
| B | 121 | 146 | 171 | 196 | 221 | 246 |
| D | 110.5 | 135.5 | 160.5 | 185.5 | 210.5 | 235.5 |
| E | 1 | 1 | 2 | 2 | 3 | 3 |
| F | 50.5 | 75.5 | 50.5 | 75.5 | 50.5 | 75.5 |
| G | 1 | 1 | 2 | 2 | 3 | 3 |
| H | 4 | 4 | 6 | 6 | 8 | 8 |
| J | 6 | 6 | 8 | 8 | 10 | 10 |
| Weight (kg) | 2.1 | 2.3 | 2.5 | 2.7 | 2.9 | 3.1 |

*When a brake is equipped, the weight will increase by 0.4 kg

Controllers

Applicable Controllers

RCP3-series actuators can be operated with any of the following controllers. Select a controller type appropriate for your specific application.

| Name | Appearance | Model | Feature | Maximum number of positioning points | Power-supply voltage | Power-supply capacity | Standard price | Reference page |
|---|------------|----------------------|--|--------------------------------------|----------------------|-----------------------|----------------|----------------|
| Positioner type | | PCON-C-42PI-NP-2-0 | Up to 512 positioning points are supported | 512 | DC24V | 2 A max. | — | →P31 |
| Positioner type conforming to safety category | | PCON-CG-42PI-NP-2-0 | | | | | | |
| Solenoid valve type | | PCON-CY-42PI-NP-2-0 | Operable with the same control you use when operating a solenoid valve | 3 | | | | |
| Pulse-train input type (differential line driver specification) | | PCON-PL-42PI-NP-2-0 | Pulse-train input type supporting differential line driver | (-) | | | | |
| Pulse-train input type (open collector specification) | | PCON-PO-42PI-NP-2-0 | Pulse-train input type supporting open collector | | | | | |
| Serial communication type | | PCON-SE-42PI-N-0-0 | Dedicated serial communication type | 64 | | | | |
| Field network type | | RPCON-42P | Dedicated field network type | 768 | | | | |
| Program control type | | PSEL-C-1-42PI-NP-2-0 | Up to 2 axes can be operated using programs | 1500 | | | | |

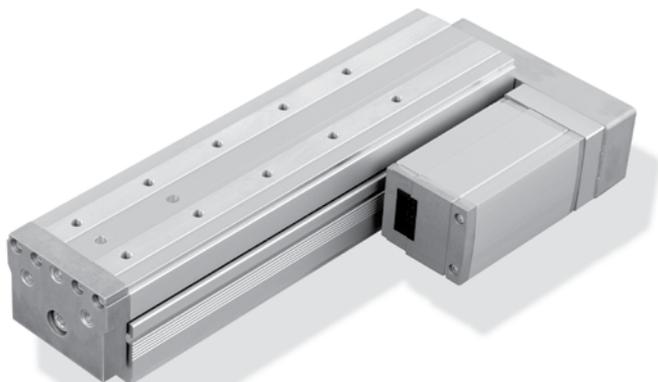
*With PSEL controllers, the above information applies to the 1-axis specification.

RCP3-TA7R

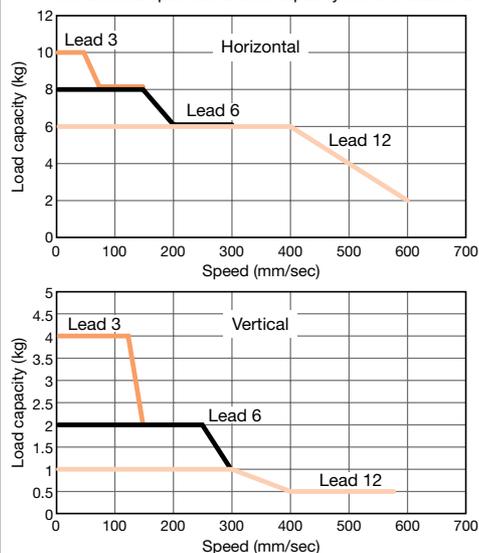
ROBO Cylinder, Table Type, Actuator Width 75 mm, Pulse Motor, Motor-reversing Specification

| | | | | | | | | | | | | | | | | | |
|----------------|------------------------------|---|----------------------------|---|---------------------------------|---|---|---|------------------|---|---------------------------------------|---|---|---|--------------|---|---------|
| Model Name | RCP3 | - | TA7R | - | I | - | 42P | - | | - | | - | P1 | - | | - | |
| Specifications | Series | - | Type | - | Encoder type | - | Motor type | - | Lead | - | Stroke | - | Applicable controllers | - | Cable length | - | Options |
| | I: Incremental specification | | 42P: Pulse motor □ 42 size | | 12: 12 mm 6: 6 mm 3: 3 mm | | 25: 25 mm 200: 200 mm (Set in 25-mm pitch) | | P1: PCON PSEL | | N: None P: 1 m S: 3 m M: 5 m | | B: With brake ML: Motor reversed to left (standard) MR: Motor reversed to right NM: Counter-home specification | | | | |

*For details on the items comprising the model name, refer to P. 2.



Correlation Diagrams of Speed and Load Capacity
Due to the characteristics of the pulse motor installed inside, the RCP3 series allows the load capacity to drop as the speed increases. Use the graphs below to check if the desired speed and load capacity can be satisfied.



- Since the RCP3 series uses a pulse motor, its load capacity drops as the speed increases. Use the correlation diagrams of speed and load capacity provided on the right to check the load capacity achieved at the desired speed.
- Take note that the maximum speed varies depending on whether the actuator is used horizontally or vertically.
- The load capacities are based on operation at an acceleration of 0.3 G (or 0.2 G when the lead is 3 or the actuator is used vertically). The acceleration cannot be increased beyond this level.

Actuator Specifications

Strokes and Maximum Speeds

| Model | Lead (mm) | Maximum load capacity | | Maximum push force (N) | Stroke (mm) |
|-----------------------------|-----------|-----------------------|---------------|------------------------|-------------------------------|
| | | Horizontal (kg) | Vertical (kg) | | |
| RCP3-TA7R-I-42P-12-①-P1-②-③ | 12 | ~6 | ~1 | 47 | 25 ~ 200 (Set in 25-mm pitch) |
| RCP3-TA7R-I-42P-6-①-P1-②-③ | 6 | ~8 | ~2 | 95 | |
| RCP3-TA7R-I-42P-3-①-P1-②-③ | 3 | ~10 | ~4 | 189 | |

Explanation of codes: ① Stroke ② Cable length ③ Options

Strokes and Maximum Speeds

| Stroke (mm) Lead (mm) | 25 ~ 200 (Set in 25-mm pitch) | |
|--------------------------|-------------------------------|-------------|
| | Stroke (mm) | Stroke (mm) |
| 12 | 600 | <580> |
| 6 | 300 | |
| 3 | 150 | |

*The value in <> applies when the actuator is used vertically. (Unit: mm/sec)

① Price List by Stroke (Standard Prices)

| ① Stroke (mm) | Type code | |
|---------------|-----------|--------------|
| | TA7R | Encoder type |
| 25 | — | Incremental |
| 50 | — | — |
| 75 | — | — |
| 100 | — | — |
| 125 | — | — |
| 150 | — | — |
| 175 | — | — |
| 200 | — | — |

② Price List by Cable Length (Standard Prices)

| Type | Model | 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) | — |
| | — | — |

*Refer to P. 34 for the cables sold separately for maintenance purposes.

③ Price List of Options (Standard Prices)

| Name | Option code | Reference page | Standard price |
|-----------------------------------|-------------|----------------|----------------|
| With brake | B | — | — |
| Motor reversed to left (standard) | ML | — | Free of charge |
| Motor reversed to right | MR | — | Free of charge |
| Counter-home specification | NM | — | Free of charge |

Actuator Specifications

| Item | Description |
|--------------------------------------|---|
| Drive method | Ball screw, $\phi 10$ mm, rolled C10 |
| Positioning repeatability | ± 0.05 mm |
| Lost motion | 0.1 mm or less |
| Base | Material: Aluminum with dedicated alumite treatment |
| Dynamic allowable load moment (*1) | Ma: 9.91 N·m Mb: 14.13 N·m Mc: 28.65 N·m |
| Overhang load length | Within the range of the applicable load moment |
| Surrounding air temperature/humidity | 0 to 40°C, 85%RH or below (non-condensing) |
| Traveling life | 5000 km |

(*1) Refer to the RCP3/RCA2 Coupling Specification catalog for the moment load calculation.

Directions of allowable load moments

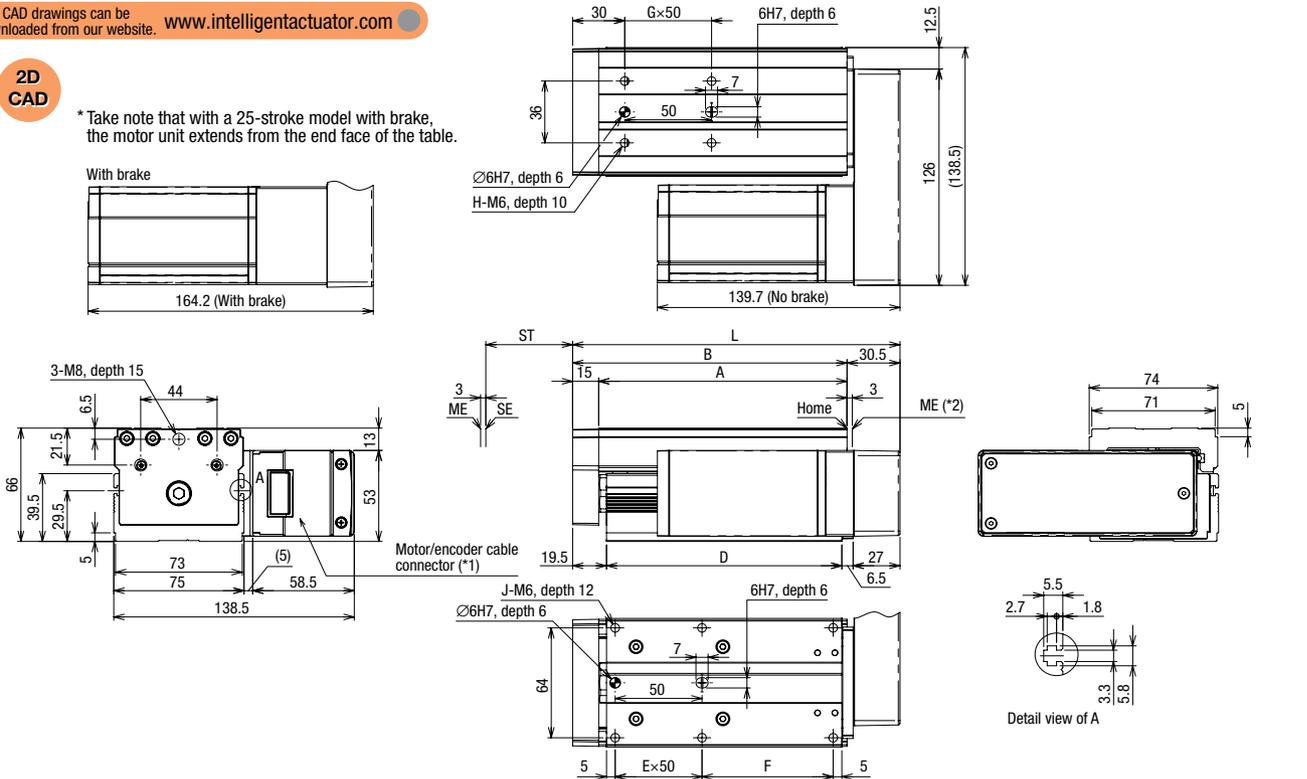


Dimensions

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

2D CAD

* Take note that with a 25-stroke model with brake, the motor unit extends from the end face of the table.



■ Dimensions/Weights by Stroke

*When a brake is equipped, the weight will increase by 0.4 kg

| Stroke (mm) | 25 | 50 | 75 | 100 | 125 | 150 | 175 | 200 |
|-------------|-------|-------|-------|-------|-------|-------|-------|-------|
| L | 163.5 | 188.5 | 213.5 | 238.5 | 263.5 | 288.5 | 313.5 | 338.5 |
| A | 118 | 143 | 168 | 193 | 218 | 243 | 268 | 293 |
| B | 133 | 158 | 183 | 208 | 233 | 258 | 283 | 308 |
| D | 110.5 | 135.5 | 160.5 | 185.5 | 210.5 | 235.5 | 260.5 | 285.5 |
| E | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 |
| F | 50.5 | 75.5 | 50.5 | 75.5 | 50.5 | 75.5 | 50.5 | 75.5 |
| G | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 |
| H | 4 | 4 | 6 | 6 | 8 | 8 | 10 | 10 |
| J | 6 | 6 | 8 | 8 | 10 | 10 | 12 | 12 |
| Weight (kg) | 2.4 | 2.6 | 2.8 | 3.1 | 3.3 | 3.5 | 3.7 | 3.9 |

(*1) An integrated motor/encoder cable is provided. (Refer to P. 34.)

(*2) The slider will move to the ME after home return, so pay attention to possible contact with surrounding structures/parts.

ME: Mechanical end

SE: Stroke end

Controllers

Applicable Controllers

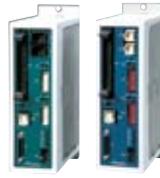
RCP3-series actuators can be operated with any of the following controllers. Select a controller type appropriate for your specific application.

| Name | Appearance | Model | Feature | Maximum number of positioning points | Power-supply voltage | Power-supply capacity | Standard price | Reference page |
|---|------------|----------------------|--|--------------------------------------|----------------------|-----------------------|----------------|----------------|
| Positioner type | | PCON-C-42PI-NP-2-0 | Up to 512 positioning points are supported | 512 | DC24V | 2 A max. | — | →P31 |
| Positioner type conforming to safety category | | PCON-CG-42PI-NP-2-0 | | | | | | |
| Solenoid valve type | | PCON-CY-42PI-NP-2-0 | Operable with the same control you use when operating a solenoid valve | 3 | | | | |
| Pulse-train input type (differential line driver specification) | | PCON-PL-42PI-NP-2-0 | Pulse-train input type supporting differential line driver | (-) | | | | |
| Pulse-train input type (open collector specification) | | PCON-PO-42PI-NP-2-0 | Pulse-train input type supporting open collector | | | | | |
| Serial communication type | | PCON-SE-42PI-N-0-0 | Dedicated serial communication type | 64 | | | | |
| Field network type | | RPCON-42P | Dedicated field network type | 768 | | | | |
| Program control type | | PSEL-C-1-42PI-NP-2-0 | Up to 2 axes can be operated using programs | 1500 | | | | |

*With PSEL controllers, the above information applies to the 1-axis specification.

RCP3/RCA2 Controllers

Model List/Prices

| Model | PCON/ACON | | | | | RPCON PACON (ROBONET) | PSEL/ASEL |
|-------------------|---|---|---|---|--|---|---|
| | C | CG | CY | PL/PO | SE | | |
| Name | Positioner type | Safety category type | Solenoid valve type | Pulse-train control type | Serial communication type | Field network type | Program type |
| Appearance |  |  |  |  |  |  |  |
| Feature | Positioner controller supporting up to 512 positioning points | Specification conforming to safety category | Operable with the same control you use when operating an air cylinder | Freely controllable using pulse trains | Dedicated controller for serial communication | Operable via DeviceNet, CC-Link or Profibus | Capable of operating an actuator via programs using the built-in sequence function |
| Price | - | - | - | - | - | - (*1) | - (*2) |

(*1) A gateway unit (sold separately) is required for RPCON/ACON controllers.

(*2) 1-axis specification.

Model

[PCON/ACON Controllers]

PCON/ACON - [] - [] - [] - [] - [] - [] - []

Type Motor/encoder type I/O type I/O cable length Power-supply voltage Simple absolute unit

| | | | | | |
|---|--------------------------------------|--|---|----------------|---|
| C Positioner type | 28PI RCP3-SA3R | NP NPN specification (standard) PN PNP specification N No I/O (SE type) | 0 No cable (SE type) 2 2 m 3 3 m 5 5 m | 0 DC24V | ABU Simple absolute unit used None Simple absolute unit not used |
| CG Safety category type | 35PI RCP3-SA4R/TA5R | | | | |
| CY Solenoid valve type | 42PI RCP3-SA5R/SA6R/TA6R/TA7R | | | | |
| PL Pulse-train control type (differential receiver type) | 10I RCA2-SA3R | | | | |
| PO Pulse-train control type (open collector type) | 20SI RCA2-SA4R/TA5R | | | | |
| SE Serial communication type | 20I RCA2-SA5R/TA6R | | | | |
| | 30I RCA2-SA6R/TA7R | | | | |

[RPCON Controllers]

RPCON/RACON - [] - []

Motor type Simple absolute unit

| | |
|-------------------------------------|---|
| 28P RCP3-SA3R | ABU Simple absolute unit used None Simple absolute unit not used |
| 35P RCP3-SA4R/TA5R | |
| 42P RCP3-SA5R/SA6R/TA6R/TA7R | |
| 10 RCA2-SA3R | |
| 20S RCA2-SA4R/TA5R | |
| 20 RCA2-SA5R/TA6R | |
| 30 RCA2-SA6R/TA7R | |

*To use a RPCON controller, you need a gateway unit to connect the controller to a network. For details, refer to the ROBONET catalog.

[PSEL Controllers]

PSEL/ASEL - **C** - [] - [] - [] - [] - [] - [] - []

Number of connected axes Motor/encoder type (axis 1) Motor/encoder type (axis 2) I/O type I/O cable length Power-supply voltage

| | |
|----------|----------------------|
| 1 | 1-axis specification |
| 2 | 2-axis specification |

*If the controller is of 1-axis specification, the information of the second axis need not be specified.

| | |
|--|--|
| 28PI RCP3-SA3R | 10I RCA2-SA3R |
| | 10IB RCA2-SA3R with brake |
| 35PI RCP3-SA4R/TA5R | 20SI RCA2-SA4R/TA5R |
| 35PIB RCP3-SA4R/TA5R with brake | 20SIB RCA2-SA4R/TA5R with brake |
| 42PI RCP3-SA5R/SA6R/TA6R/TA7R | 20I RCA2-SA5R/TA6R |
| 42PIB RCP3-SA5R/SA6R/TA6R/TA7R with brake | 20IB RCA2-SA5R/TA6R with brake |
| | 30I RCA2-SA6R/TA7R |
| | 30IB RCA2-SA6R/TA7R with brake |

| | |
|-----------|------------------------------|
| NP | NPN specification (standard) |
| PN | PNP specification |

| | |
|----------|----------|
| 0 | No cable |
| 2 | 2 m |
| 3 | 3 m |
| 5 | 5 m |

0 DC24V

Specification Table

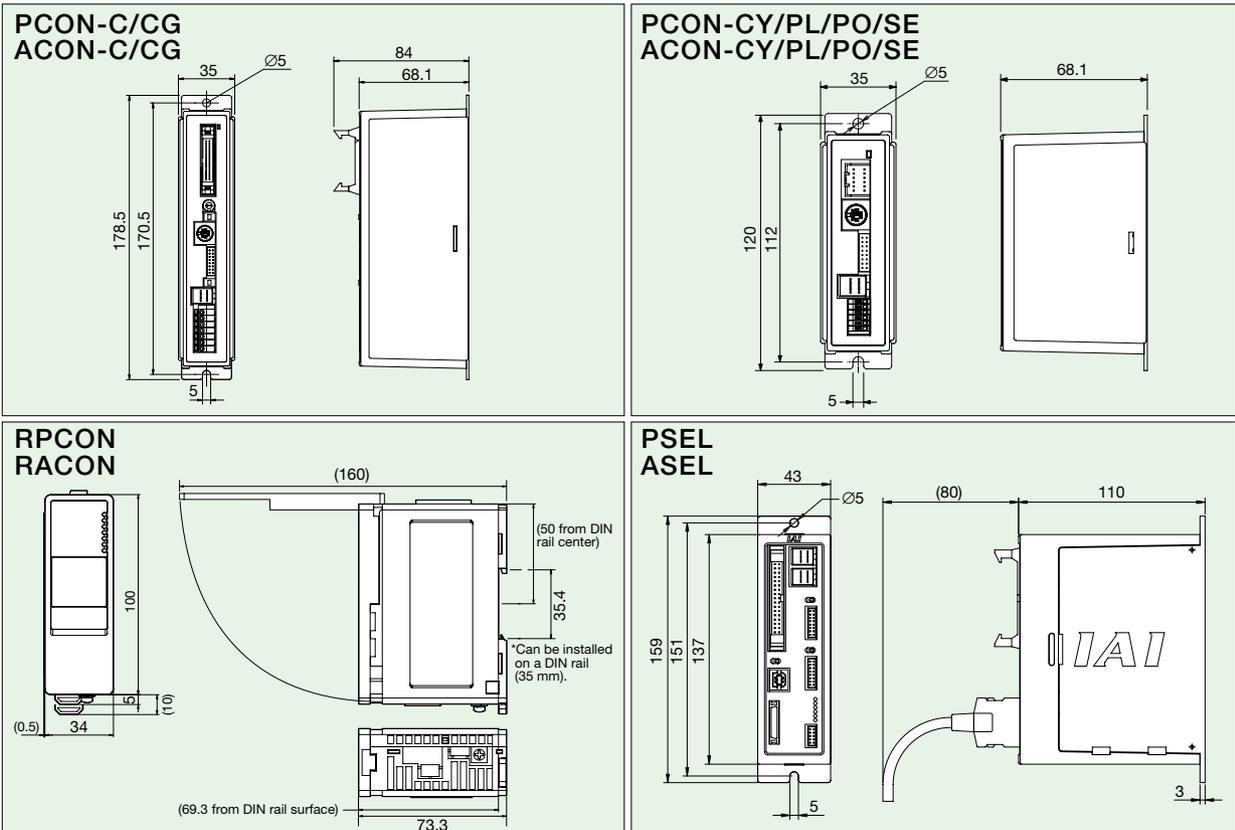
| Item | Specification | | | | | | | |
|--|--|-----------------------|--|--------------------------------|----------------|--|---------------------------|-------------------------------------|
| | PCON/ACON | | | | | RPCON/RACON (ROBONET) | PSEL/ASEL | |
| Controller type | C | CG | CY | PL | PO | SE | | |
| Maximum number of controlled axes | 1 axis | | | | | Up to 16 axes can be linked and operated | 2 axes | |
| Operation method | Positioner type | | Solenoid valve | Pulse-train input type | | Serial communication type | Field network | Program |
| Number of positioning points | 512 | | 3 | - | | 64 | 768 | 1500 |
| I/O connector | 40-pin connector | | 12-pin connector | 14-pin connector | | - | - | 34-pin connector |
| Number of I/O points | 16 input points/ 16 output points | | 4 input points/ 6 output points | 4 input points/4 output points | | - | - | 24 input points/ 8 output points |
| Serial communication | RS485 (Modbus RTU) | | | | | | RS232 | |
| Peripheral communication cable | CB-PAC-PIO□□□ | | CB-PACY-PIO□□□ | CB-PACPU-PIO□□□ | | CB-RCB-CTL002 | - | CB-DS-PIO□□□ |
| Command-pulse input method | - | | | Differential line driver | Open collector | - | | - |
| Maximum input pulse frequency | - | | | 200 kpps | 60 kpps | - | | - |
| Position detection method | Incremental encoder | | | | | | | |
| Motor/encoder cable | CB-PCS-MPA□□□(PCON)/CB-ACS-MPA□□□(ACON) (up to 20 m) | | | | | | | |
| Input power supply | DC24V±10% | | | | | | | |
| Power-supply capacity | RCP3 (all models) | | 2 A max. | | | 2 A max. (*1) | 5.5 A max. | |
| | RCA2 | SA5 TA6 (20W) | 1.3 A rated / 4.4 A max. (standard specification) 1.3 A rated / 2.5 A max. (power-saving specification) | | | (*2) | (*3) | |
| | | SA3, SA6 TA7 (30W) | 1.3 A rated / 4.0 A max. (standard specification) 1.3 A rated / 2.2 A max. (power-saving specification) | | | (*2) | (*3) | |
| | | SA4, TA5 (20W) | 1.3 A rated / 5.1 A max. (standard specification) 1.3 A rated / 3.4 A max. (power-saving specification) | | | (*2) | (*3) | |
| Withstand voltage | DC500V 1 MΩ | | | | | | 500 VDC, 10 MΩ or more | |
| Surrounding air temperature/ humidity and environment | 0 to 40°C, 10 to 95% (non-condensing); not subject to corrosive gasses | | | | | | | |
| Protection degree | IP20 | | | | | | | |
| Weight | Approx. 300 g | | Approx. 130 g | | | Approx. 200 g | Approx. 450 g | |

(*1) The current consumed during operation is the sum of (2 A x Number of controllers used) and the current consumption of the gateway unit (approx. 0.6 A).

(*2) The required power-supply capacity of a RACON controller is the sum of (Power-supply capacity of ACON x Number of controllers used) and the current consumption of the gateway unit (approx. 0.6 A).

(*3) The required power-supply capacity of an ASEL controller is the sum of (Power-supply capacity of ACON x Number of controllers used) and the control power-supply current (approx. 1.2 A).

External Dimensions



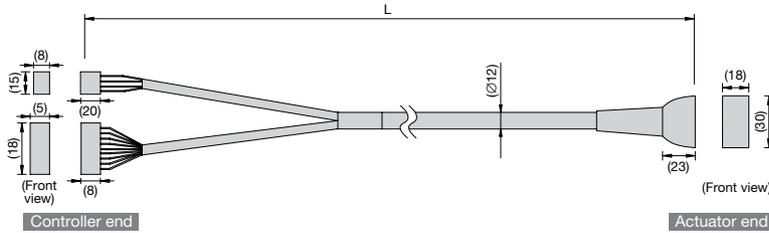
Maintenance Parts

[Motor/Encoder Cables]

RCP3 Motor/Encoder Cables

Model **CB-PCS-MPA**

*Indicate a desired cable length (L) up to 20 m in
Example) 080 = 8 m

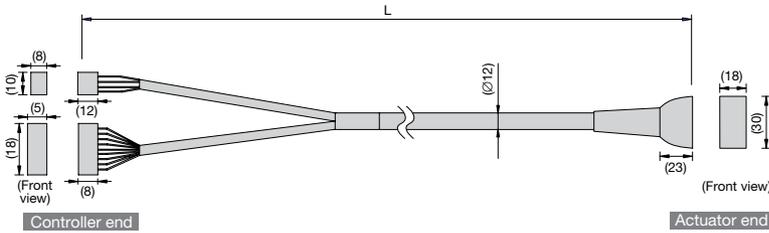


| Signal | Pin number | (Cable color) | Pin number | Signal |
|--------|------------|-------------------------------|------------|--------|
| A | B1 | Black | A1 | A |
| VMM | A2 | White | B1 | VMM |
| /A | A1 | Red | A2 | /A |
| B | B3 | Green | B2 | B |
| VMM | B2 | Yellow | A3 | VMM |
| /B | A3 | Brown | B3 | /B |
| | | | A4 | NC |
| | | | B4 | NC |
| | | | A5 | BK+ |
| | | | B5 | BK- |
| BK+ | 14 | Pink (red dot) | A6 | LS+ |
| BK- | 13 | Pink (blue dot) | B6 | LS- |
| LS+ | 16 | White (red dot) | A7 | A+ |
| LS- | 15 | White (blue dot) | B7 | A- |
| A+ | 12 | Orange (red dot) | A8 | B+ |
| A- | 11 | Orange (blue dot) | B8 | B- |
| B+ | 10 | Gray (red dot) | A9 | NC |
| B- | 9 | Gray (blue dot) | B9 | VPS |
| NC | 8 | | A10 | VCC |
| VPS | 7 | Orange (continuous blue dots) | B10 | GND |
| VCC | 6 | Gray (continuous red dots) | A11 | NC |
| GND | 5 | Gray (continuous blue dots) | B11 | FG |
| NC | 4 | | | |
| FG | 1 | Shield | | |

RCA2 Motor/Encoder Cables

Model **CB-ACS-MPA**

*Indicate a desired cable length (L) up to 20 m in
Example) 080 = 8 m



| Signal | Pin number | (Cable color) | Pin number | Signal |
|--------|------------|-------------------------------|------------|--------|
| U | 1 | Red | A1 | U |
| V | 2 | Yellow | B1 | V |
| W | 3 | Black | A2 | W |
| | | | B2 | NC |
| | | | A3 | NC |
| | | | B3 | NC |
| | | | A4 | BK+ |
| | | | B4 | BK- |
| | | | A5 | LS+ |
| | | | B5 | LS- |
| | | | A6 | A+ |
| | | | B6 | A- |
| | | | A7 | B+ |
| | | | B7 | B- |
| | | | A8 | Z+ |
| | | | B8 | Z- |
| | | | A9 | - |
| | | | B9 | /PS |
| /PS | 7 | Orange (continuous blue dots) | A10 | VCC |
| VCC | 6 | Gray (continuous red dots) | B10 | GND |
| GND | 5 | Gray (continuous blue dots) | A11 | NC |
| NC | 4 | | B11 | FG |
| FG | 1 | Shield | | |

[Motor Units]

| Axis type | | | Motor Units | | | |
|-----------|-------------|------|-------------|----------------|-------------|----------------|
| | | | No brake | | With brake | |
| | | | Model | Standard price | Model | Standard price |
| RCP3 | Slider type | SA3R | RCP3-MU1B | - | RCP3-MU1B-B | - |
| | | SA4R | RCP3-MU2B | - | RCP3-MU2B-B | - |
| | | SA5R | RCP3-MU3B | - | RCP3-MU3B-B | - |
| | Table type | SA6R | RCP3-MU3B | - | RCP3-MU3B-B | - |
| | | TA5R | RCP3-MU2B | - | RCP3-MU2B-B | - |
| | | TA6R | RCP3-MU3B | - | RCP3-MU3B-B | - |
| RCA2 | Slider type | SA3R | RCA2-MU1B | - | RCA2-MU1B-B | - |
| | | SA4R | RCA2-MU2B | - | RCA2-MU2B-B | - |
| | | SA5R | RCA2-MU3B | - | RCA2-MU3B-B | - |
| | Table type | SA6R | RCA2-MU4B | - | RCA2-MU4B-B | - |
| | | TA5R | RCA2-MU2B | - | RCA2-MU2B-B | - |
| | | TA6R | RCA2-MU3B | - | RCA2-MU3B-B | - |
| | | TA7R | RCA2-MU4B | - | RCA2-MU4B-B | - |

**RCP3 & RCA2 AR Series
Catalogue No. 0808-E**

The information contained in this catalog is
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