

RCP2-RTB/RTBL

ROBO Cylinder Rotary Medium Vertical Type 50mm Width Pulse Motor

■ Configuration: **RCP2** — — **I** — **28P** — — — — —

Series — Type — Encoder — Motor — Deceleration Ratio — Oscillation Angle — Compatible Controllers — Cable Length — Option

RTB : 330-degree rotation
RTBL: Multi-rotational

I: Incremental absolute encoder is also considered type "I".

28P : 28 □ size Pulse motor

20: 1/20 deceleration ratio
30: 1/30 deceleration ratio

330: 330degrees (RTB only)
360: 360degrees (RTBL only)

P1: PCON
RPCON
PSEL
P3: PMEC
PSEP

N : None
P : 1m
S : 3m
M : 5m
X □ : Custom
R □ : Robot cable

NM : Reversed-rotation
SA: Shaft adapter
TA : Table adapter

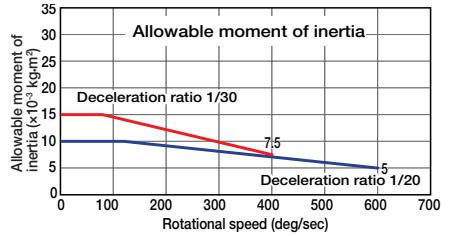
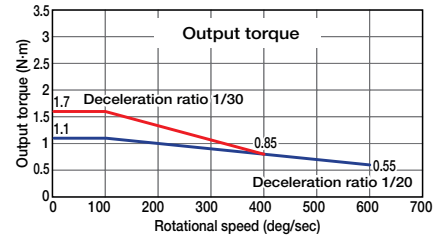
* See page Pre-35 for an explanation of the naming convention.



Technical References P. A-5

- POINT** Notes on Selection
- The output torque decreases as the rotational speed increases. Check the output torque graph on the right to see whether the speed required for your desired motion is supported.
 - The allowable moment of inertia of the rotated work piece varies with the rotational speed. Check the Allowable Moment of Inertia graph on the right to see if the moment of inertia required for your desired motion is within the allowable range.
 - The rated acceleration while moving is 0.3G.

■ Speed vs. Load Capacity
Due to the characteristics of the Pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



| Actuator Specifications | | | | | Deceleration Ratio and Max. Speed | |
|------------------------------|--------------------|-------------------|--|-------------------------|-----------------------------------|---------------|
| ■ Lead and Load Capacity | | | | | Stroke | |
| Model | Deceleration Ratio | Max. Torque (N·m) | Allowable Moment of Inertia (kg·m ²) | Oscillation Angle (deg) | Deceleration Ratio | 330/360 (deg) |
| RCP2-RTB-I-28P-20-330-①-②-③ | 1/20 | 1.1 | 0.01 | 330 | 1/20 | 600 |
| RCP2-RTB-I-28P-30-330-①-②-③ | 1/30 | 1.7 | 0.015 | | 1/30 | 400 |
| RCP2-RTBL-I-28P-20-360-①-②-③ | 1/20 | 1.1 | 0.01 | 360 | | |
| RCP2-RTBL-I-28P-30-360-①-②-③ | 1/30 | 1.7 | 0.015 | | | |

Legend: ① Compatible controller ② Cable length ③ Options

(Unit: degrees/s)

| Stroke List | | |
|-------------|-------------------------|----------------|
| Type | Oscillation Angle (deg) | Standard Price |
| RTB | 330 | - |
| RTBL | 360 | - |

| ② Cable List | | |
|-----------------|-----------------------|----------------|
| Type | Cable Symbol | Standard Price |
| Standard Type | P (1m) | - |
| | S (3m) | - |
| | M (5m) | - |
| Special Lengths | 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-39 for cables for maintenance.

| ③ Option List | | | |
|-----------------------|-------------|----------|----------------|
| Name | Option Code | See Page | Standard Price |
| Reversed-rotation (*) | NM | → A-33 | - |
| Shaft adapter | SA | → A-35 | - |
| Table adapter | TA | → A-37 | - |

* Reversed-rotation option can be selected on the multi-rotational model only.

| Actuator Specifications | |
|----------------------------------|---|
| Item | Description |
| Drive System | Hypoid gear |
| Positioning Repeatability | ±0.01 degrees |
| Homing Accuracy | ±0.01 degrees |
| Lost Motion | ±0.1 degrees |
| Allowable Thrust Load | 50N |
| Allowable Load Moment | 3.9 N·m |
| Weight | 0.86kg |
| Ambient Operating Temp./Humidity | 0 ~ 40°C, 85% RH or less (non-condensing) |

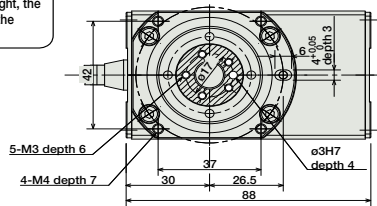
357

RCP2-RTB/RTBL

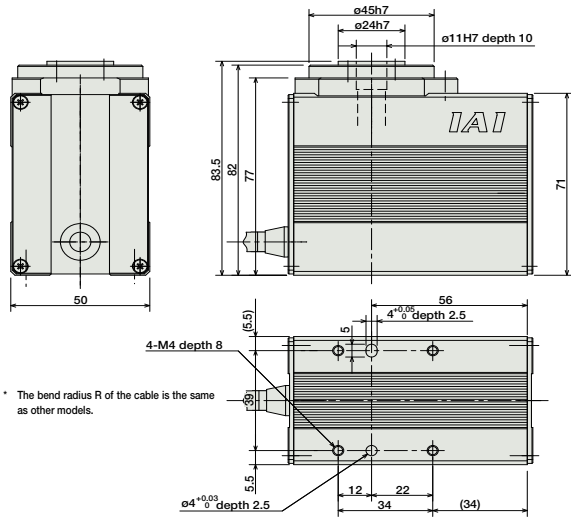
Dimensions

For Special Orders P. A-9

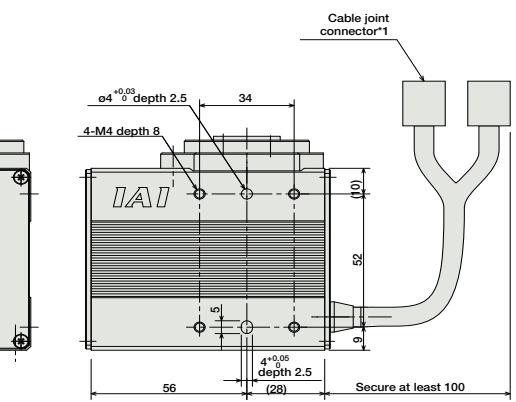
Note:
* In the drawing on the right, the shaded area indicates the rotating part.



Note:
The position in the drawing on the left is the home position. When homing, the actuator rotates to the left past the home position by 1 degree. Therefore please watch for any interference with the surrounding objects. The range of motion is 330 degrees clockwise, as viewed from above.



* The bend radius R of the cable is the same as other models.



*1 The motor-encoder cable is connected here. See page A-39 for details on cables.

Weight (kg) 0.86

① Compatible Controllers

The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage.

| Name | External View | Model | Description | Max. Positioning Points | Input Voltage | Power Supply Capacity | Standard Price | See Page |
|---|---------------|----------------------|---|-------------------------|------------------|-----------------------|----------------|----------|
| Solenoid Valve Type | | PMEC-C-28PI-NP-2-① | Easy-to-use controller, even for beginners | 3 points | AC100V AC200V | See P481 | - | → P477 |
| | | PSEP-C-28PI-NP-2-0 | Operable with same signal as solenoid valve. Supports both single and double solenoid types. No homing necessary with simple absolute type. | | | | - | → P487 |
| Splash-Proof Solenoid Valve Type | | PSEP-CW-28PI-NP-2-0 | | | | | - | |
| Positioner Type | | PCON-C-28PI-NP-2-0 | Positioning is possible for up to 512 points | 512 points | DC24V | 2A max. | - | → P525 |
| Safety-Compliant Positioner Type | | PCON-CG-28PI-NP-2-0 | | | | | - | |
| Pulse Train Input Type (Differential Line Driver) | | PCON-PL-28PI-NP-2-0 | Pulse train input type with differential line driver support | (-) | DC24V | 2A max. | - | → P525 |
| Pulse Train Input Type (Open Collector) | | PCON-PO-28PI-NP-2-0 | Pulse train input type with open collector support | | | | - | |
| Serial Communication Type | | PCON-SE-28PI-N-0-0 | Dedicated to serial communication | 64 points | | | - | |
| Field Network Type | | RPCON-28P | Dedicated to field network | 768 points | | | - | → P503 |
| Program Control Type | | PSEL-C-1-28PI-NP-2-0 | Programmed operation is possible. Operation is possible on up to 2 axes | 1500 points | | | - | → P557 |

* This is for the single-axis PSEL.
* ① is a placeholder for the power supply voltage (1: 100V, 2: 100~240V).

- Slider Type
- Mini
- Standard
- Controllers Integrated
- Rod Type
- Mini
- Standard
- Controllers Integrated
- Table/Arm /Flat Type
- Mini
- Standard
- Gripper/ Rotary Type
- Linear Servo Type
- Cleanroom Type
- Splash-Proof
- Controllers
- PMEC /AMEC
- PSEP /ASEP
- ROBO NET
- ERC2
- PCON
- ACON
- SCON
- PSEL
- ASEL
- SSEL
- XSEL
- Pulse Motor
- Servo Motor (24V)
- Servo Motor (200V)
- Linear Servo Motor



RCP2-RTB/RTBL **358**