P2-RTB/RTBL

Model Specification Items RCP2 ı Type — Encoder type — Motor type — Deceleration Ratio — Oscillation Angle -

RTB: 330-deg |: Incremental * The Simple absolute rotation encoder is also RTBL: Multiple rotation

28P: Pulse motor, 20: 1/20 considered type "I".

- 28P -

deceleration ratio 30: 1/30 deceleration

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

P1: PCON-PL/PO/SE **PSEL** P3: PCON-CA PMEC/PSEP

MSEP

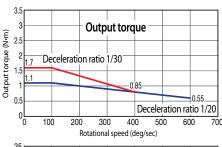
N: None P: 1m S: 3m

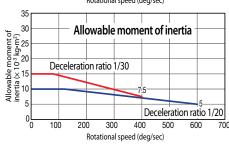
Applicable controller — Cable length — Options

NM: Non-motor end SA: Shaft adapter TA: Table adapter M:5m X□□: Custom length R□□: Robot cable

■ 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.





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

OIN selectio

- (1) 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.
- (2) 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.

References

- (3) The rated acceleration while moving is 0.3G.
- (4) Please note that the PMEC/PSEP controllers cannot be used when performing infinite rotation with the multiple rotation type.

Actuator Specifications

■ Leads and Payload

Model number	Deceleration Ratio	Max. Torque (N·m)	Allowable Movement of Inertia (kg · m²)	Oscillation Angle (deg)	
RCP2-RTB-I-28P-20-330-①-②-③	1/20	1.1	0.01	330	
RCP2-RTB-I-28P-30-330-①-②-③	1/30	1.7	0.015	330	
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	300	
Code explanation	le Length	③ Options			

■ Deceleration Ratio and Max. Speed

	•		
Stroke Deceleration ratio	330/360 (deg)		
1/20	600		
1/30	400		
#1 5 1 / C			

(Unit: degrees/s)

Stroke		
Туре	Oscillation Angle (deg)	Standard price
RTB	330	_
RTBL	360	_

②Cable Length

Туре	Cable symbol	Standard Price
	P (1m)	_
Standard	S (3m)	_
	M (5m)	_
	X06 (6m) ~ X10 (10m)	_
Special length	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.

③ Options

Name	Option code	See page	Standard price
Reversed-rotation	NM	→ A-52	_
Shaft adapter	SA	→ A-54	_
Table adapter	TA	→ A-56	

Actuator Specifications

Actuator Specifications			
ltem	Description		
Drive System	Hypoid gear		
Positioning repeatability	±0.01 degrees		
Homing accuracy	±0.01 degrees (RTB) / ±0.05 (RTBL)		
Lost motion	±0.1 degrees		
Allowable thrust load	50N		
Allowable load moment	3.9 N·m		
Weight	0.86kg		
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)		

Cable joint

connector *1

Dimensional Drawings

CAD drawings can be downloaded www.intelligentactuator.com

For Special Orders





CAD

 In the 2D drawing below, the shaded area indicates the rotating part. 5-M3 depth 6 ø3H7 depth 4 4-M4 depth 7

Note: The position shown in the top view of the drawing is the home position for both the standard The position shown in the top view of the drawing is the nome position for both the standard type and reversed rotation type (Option "-NM"). Looking from above, the standard type will rotate counter clockwise during homing, and it then moves clockwise afterward. The reverse rotation type will move clockwise during homing and then moves counter clockwise afterward. Please be aware that the homing direction cannot be changed after shipment. Please refer to the Appendix for the details.

> (*1) Connect the motor and encoder cables here. See page A-59 for details on cables.

ø45h7 ø4 ^{+0.03} depth 2.5 ø11H7 depth 10 []A][$\Pi A \Pi$ 83.5 7 4 ^{+0.05} depth 2.5 56 4 +0.05 depth 2.5 (5.5)Secure at least 100 4-M4 depth 8

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

ø4 ^{+0.03} depth 2.5

Weight (kg) 0.86

①Applicable Controllers

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
C.L. MAL T	PMEC-C-28PI-①-2-⑪	Easy-to-use controller, even for beginners	AC100V AC200V		Refer to P541	_	→ P537	
Solenoid Valve Type		PSEP-C-28PI-①-2-0	Simple controller operable with the same signal as a solenoid valve	3 points		Refer to P555	_	→ P547
Solenoid valve multi-axis type PIO specification	him	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected		Refer to			
Solenoid valve multi-axis type Network specification		MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points		P572	_	→ P563
Positioner type High-output specification	1	PCON-CA-28PI-①-2-0	Equipped with a high-output driver Positioner type based on PIO control	512 points	- DC24V	Refer to P618	_	→ P607
Pulse-train type High-output specification		PCON-CA-28PI-PL□-2-0	Equipped with a high-output driver Pulse-train input type	(—)			_	
Field network type High-output specification		PCON-CA-28PI-①-0-0	Equipped with a high-output driver Supporting 7 major field networks	768 points			_	
Pulse Train Input Type (Differential Line Driver)		PCON-PL-28PI-①-2-0	Pulse train input type with differential line driver support	- (—)	_	_		
Pulse Train Input Type (Open Collector)		PCON-PO-28PI-①-2-0	Pulse train input type with open collector support		-	Refer to P628	_	→ P623
Serial Communication Type	Ĩ	PCON-SE-28PI-N-0-0	Dedicated Serial Communication	64 points			_	
Program Control Type		PSEL-CS-1-28PI-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points		Refer to P671	_	→ P665