RCP3-TA4C

ROBO Cylinder, Mini Table Type, Motor Unit Coupled Type, Actuator Width 40mm, Pulse Motor, Ball Screw Specification

Model Specification Items	RCP3	— TA4C	— I	— 28P	— □	— □	— □	— □	— □
	Series	— Type	— Encoder type	— Motor type	— Lead	— Stroke	— Applicable controller	— Cable length	— Options
			I: Incremental * The Simple absolute encoder is also considered type "I".	28P: Pulse motor, 28□ size	6 : 6mm 4 : 4mm 2 : 2mm	20: 20mm ~ 100: 100mm (10mm pitch increments)	P1: PCON-PL/PO/SE PSEL P3: PCON-CA PMEC/PSEP MSEP	N: None P: 1m S: 3m M: 5m X□□:Custom Length	See Options below.

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

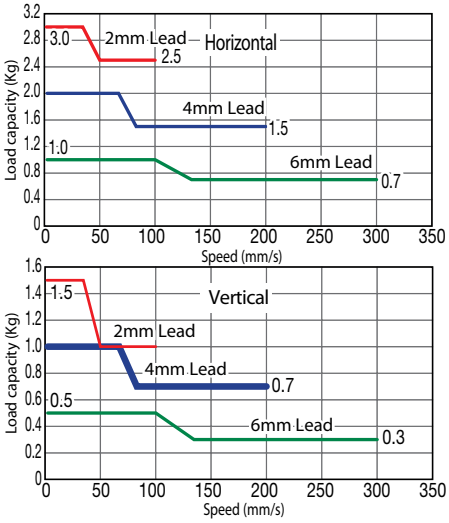
Technical References → Appendix P.5

POINT — Notes on selection

(1) The payload is the value when operated with acceleration of 0.3G (or 0.2G in the case of 2mm-lead and vertical usage). The upper limit for acceleration is 0.3G (or 0.2G in the case of 2mm-lead and vertical usage).
(2) See page A-71 for details on push motion.

■ Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the RCP3 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



Actuator Specifications

■ Leads and Payloads

(Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model number	Feed Screw	Lead (mm)	Max. Load Capacity (Note 1) Horizontal (kg)	Max. Load Capacity (Note 1) Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCP3-TA4C-I-28P-6-①-②-③-④	Ball screw	6	~1	~0.5	25	20~100 (every 10mm)
RCP3-TA4C-I-28P-4-①-②-③-④		4	~2	~1	37	
RCP3-TA4C-I-28P-2-①-②-③-④		2	~3	~1.5	75	

■ Stroke and Maximum Speed

Lead \ Stroke	20~100 (mm)
Ball screw 6	300
Ball screw 4	200
Ball screw 2	100

(Unit: mm/s)

Code explanation ① Stroke ② Applicable Controller ③ Cable length ④ Options *See page A-71 for details on push motion.

① Stroke

①Stroke (mm)	Standard price
20	—
30	—
40	—
50	—
60	—
70	—
80	—
90	—
100	—

③ Cable Length

Type	Cable symbol	Standard price
Standard (Robot Cables)	**P** (1m)	—
	S (3m)	—
	M (5m)	—
Special length	**X06** (6m) ~ **X10** (10m)	—
	X11 (11m) ~ **X15** (15m)	—
	X16 (16m) ~ **X20** (20m)	—

* The standard cable for the RCP3 is the robot cable.
* See page A-59 for cables for maintenance.

④ Options

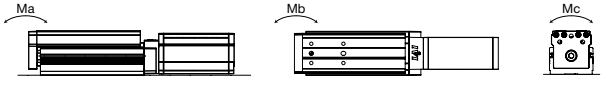
Name	Option code	See page	Standard price
Brake	**B**	→ A-42	—
Cable exit direction (top)	**CJT**	→ A-42	—
Cable exit direction (right)	**CJR**	→ A-42	—
Cable exit direction (left)	**CJL**	→ A-42	—
Cable exit direction (bottom)	**CJB**	→ A-42	—
Non-motor end specification	**NM**	→ A-52	—

Actuator Specifications

Item	Description
Drive System	Ball screw, ø6mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum, white alumite treated
Allowable static moment (*)	Ma: 4.2 N·m, Mb: 6 N·m, Mc: 8.2 N·m
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

(*) Based on 5,000km of traveling life

Directions of allowable load moments

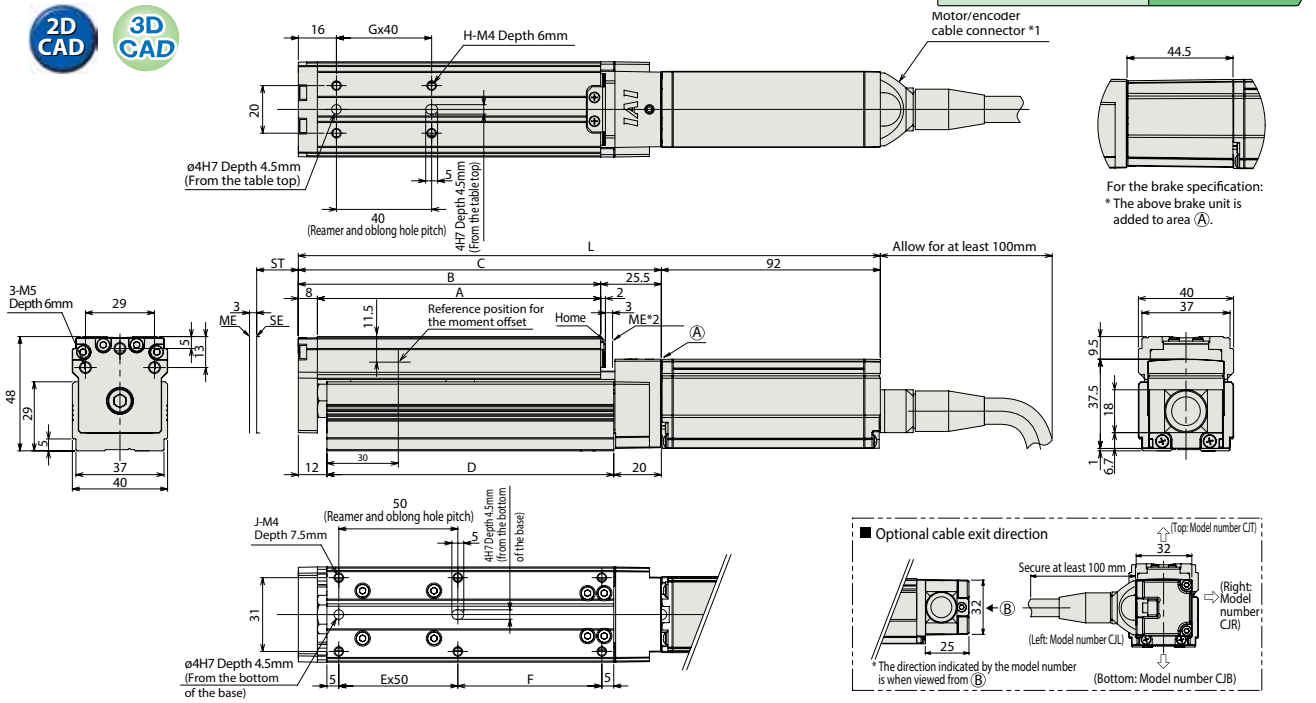


Dimensional Drawings

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

For Special Orders Appendix P.15

2D CAD 3D CAD



(*1) Connect the motor-encoder integrated cable 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.

ST : Stroke
ME: Mechanical end
SE : Stroke end

Dimensions and Weight by Stroke

*Brake-equipped models are heavier by 0.2kg.

Stroke	20	30	40	50	60	70	80	90	100
L Without brake	214.5	224.5	234.5	244.5	254.5	264.5	274.5	284.5	294.5
L With brake	259	269	279	289	299	309	319	329	339
A	89	99	109	119	129	139	149	159	169
B	97	107	117	127	137	147	157	167	177
C	122.5	132.5	142.5	152.5	162.5	172.5	182.5	192.5	202.5
D	90.5	100.5	110.5	120.5	130.5	140.5	150.5	160.5	170.5
E	1	1	1	1	2	2	2	2	2
F	30.5	40.5	50.5	60.5	20.5	30.5	40.5	50.5	60.5
G	1	1	1	1	2	2	2	2	2
H	4	4	4	4	6	6	6	6	6
J	6	6	6	6	8	8	8	8	8
Weight (kg)	0.7	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.9

②Applicable Controllers

RCP3 series actuators can be operated with the controllers indicated below. Select the type according to your intended application.

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

* This is for the single-axis PSEL. * Ⓘ indicates I/O type (NP/PN). * ⓘⅈ indicates power supply voltage (1: 100V / 2: 100~240V).
* ⓘⅈ indicates number of axes (1 to 8). * Ⓥ indicates field network specification symbol. * ☐ indicates N (NPN specification) or P (PNP specification) symbol.