RCP3-TA5C ROBO Cylinder Table Type Motor Unit Coupled 55mm Width Pulse Motor Ball Screw

■ Configuration:

RCP3 –	TA5C	I	– 35P	□	–	□	–	□	–	□	–	□
Series	Type	Encoder	Motor	Lead		Stroke		Compatible Controllers		Cable Length		Option

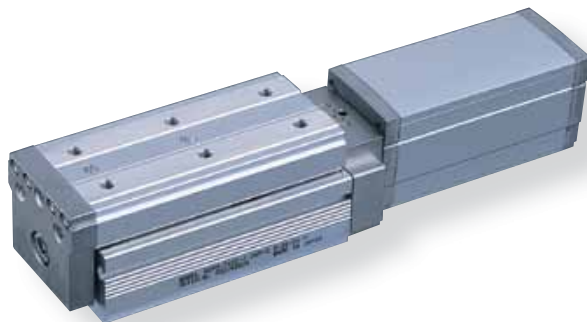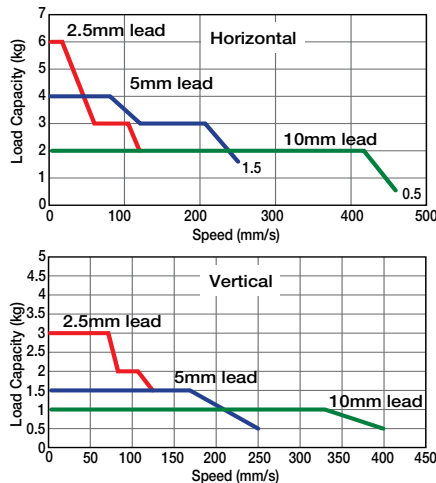| Encoder	Motor	Lead	Stroke	Compatible Controllers	Cable Length	Option
I: Incremental * The simple absolute encoder is also considered type "I".	35P: Pulse motor 35□ size	10: 10mm 5: 5mm 2.5: 2.5mm	25: 25mm 〜 100: 100mm (25mm pitch increments)	P1: PCON RPCON PSEL P3: PMEC PSEP	N : None P : 1m S : 3m M : 5m X□□ : Custom	See Options below

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

■ 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.

Technical References ☞ P. A-5

POINT / Notes on Selection

(1) Since the RCP3 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.

(2) Please note that the maximum speed is different when used horizontally versus vertically.

(3) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 2.5mm-lead model, or when used vertically). This is the upper limit of the acceleration.

■ Actuator Specifications

■ Lead and Load Capacity

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

Model	Lead (mm)	Max. Load Capacity (Note 1)		Maximum Push Force (N) (Note 2)	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
RCP3-TA5C-I-35P-10-①-②-③-④	10	〜 2	〜 1	34	25〜100 (25mm increments)
RCP3-TA5C-I-35P-5-①-②-③-④	5	〜 4	〜 1.5	68	
RCP3-TA5C-I-35P-2.5-①-②-③-④	2.5	〜 6	〜 3	136	

Legend ① Stroke ② Compatible controller ③ Cable length ④ Options

(Note 2) See page A-66 for pushing force graphs.

■ Stroke and Maximum Speed

Stroke / Lead	25 〜 100 (25mm increments)
10	465 <400>
5	250
2.5	125

(Unit: mm/s)

① Stroke List

Stroke (mm)	Standard Price
25	–
50	–
75	–
100	–

③ Cable List

Type	Cable Symbol	Standard Price
Standard (Robot Cables)	**P** (1m)	–
	S (3m)	–
	M (5m)	–
Special Lengths	**X06** (6m) 〜 **X10** (10m)	–
	X11 (11m) 〜 **X15** (15m)	–
	X16 (16m) 〜 **X20** (20m)	–

* The standard cable is the motor-encoder integrated robot cable.
* See page A-39 for cables for maintenance.

④ Option List

Name	Option Code	Standard Price	Standard Price
Brake	B	→ A-25	–
Cable exit direction (Top)	CJT	→ A-25	–
Cable exit direction (Right)	CJR	→ A-25	–
Cable exit direction (Left)	CJL	→ A-25	–
Cable exit direction (Bottom)	CJB	→ A-25	–
Reversed-home	NM	→ A-33	–

■ Actuator Specifications

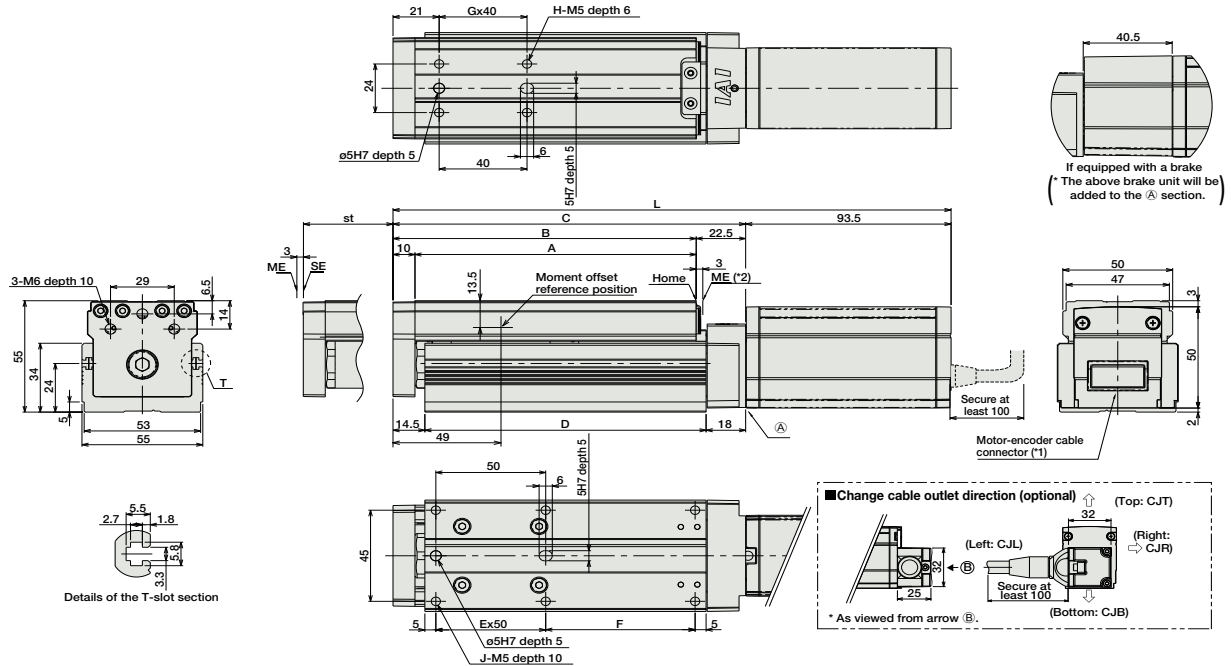| Item	Description
Drive System	Ball screw ø8mm C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Material: Aluminum (special alumite treated)
Allowable Static Moment	Ma: 25.5 N·m Mb: 36.5 N·m Mc: 56.1 N·m
Allowable Dynamic Moment (*)	Ma: 6.57 N·m Mb: 9.32 N·m Mc: 14.32 N·m
Overhang Load Length	Within the load moment range
Ambient Operating Temp./Humidity	0〜40°C, 85% RH or less (non-condensing)

(*) Based on a 5,000km service life.

Directions of Allowable Load Moments

■ Dimensions

21 Gx40 H-M5 depth 6

24

ø5H7 depth 5

40 6

5H7 depth 5

40.5

If equipped with a brake
(* The above brake unit will be added to the ⒶA section.)

3-M6 depth 10 29 6.5
14
55 34
24 5
53
55
T

st C L 93.5
B 22.5
A
ME SE 10 Moment offset reference position Home ME (*2)
13.5 3 3

14.5 D 18 Ⓐ
49

50 47 3
50
2

Motor-encoder cable connector (*1)

2.7 5.5 1.8
5.8
3.3

Details of the T-slot section

50 6
45 5H7 depth 5

5 Ex50 F 5
ø5H7 depth 5
J-M5 depth 10

■Change cable outlet direction (optional) (Top: CJT) 32 (Right: CJR)
(Left: CJL)
25 Ⓑ Secure at least 100 (Bottom: CJB)
* As viewed from arrow Ⓑ.

Secure at least 100

(*1) The motor-encoder cable (integrated) is connected. (See page A-39 for details on cables.)
(*2) After homing, the slider moves to the ME; therefore, please watch for any interference with the surrounding objects.
ME: Mechanical end
SE: Stroke end

■ Dimensions/Weight by Stroke * Adding a brake will increase the actuator's weight by 0.3kg.

Stroke		25	50	75	100
L	No Brake	229	254	279	304
	Brake-Equipped	269.5	294.5	319.5	344.5
A		103	128	153	178
B		113	138	163	188
C		135.5	160.5	185.5	210.5
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)		1.2	1.4	1.5	1.7

② Compatible Controllers

The RCP3 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-35PI-NP-2-①	Easy-to-use controller, even for beginners	3 points	AC100V AC200V	See P481	–	→ P477
Solenoid Valve Type		PSEP-C-35PI-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types. No homing necessary with simple absolute type.	3 points	DC24V	2A max.	–	→ P487
Splash-Proof Solenoid Valve Type		PSEP-CW-35PI-NP-2-0					–	→ P487
Positioner Type		PCON-C-35PI-NP-2-0	Positioning is possible for up to 512 points	512 points			–	
Safety-Compliant Positioner Type		PCON-CG-35PI-NP-2-0		512 points			–	
Pulse Train Input Type (Differential Line Driver)		PCON-PL-35PI-NP-2-0	Pulse train input type with differential line driver support	(–)			–	→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-35PI-NP-2-0	Pulse train input type with open collector support				–	
Serial Communication Type		PCON-SE-35PI-N-0-0	Dedicated to serial communication	64 points			–	
Field Network Type		RPCON-35P	Dedicated to field network	768 points				→ P503
Program Control Type		PSEL-C-1-35PI-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).

IAI

RCP3-TA5C **274**

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