

RCP3-TA3C

ROBO Cylinder, Mini Table Type, Motor Unit Coupled Type, Actuator Width 36mm, Pulse Motor, Ball Screw Specification

Model Specification Items	RCP3	TA3C	I	20P					
Series									
Type									
Encoder type									
Motor type									
Lead									
Stroke									
Applicable controller									
Cable length									
Options									

I: Incremental
* The Simple absolute encoder is also considered type "I".

20P: Pulse motor, 20□ 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

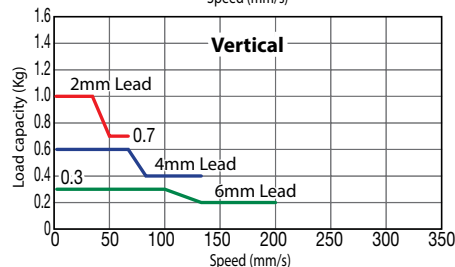
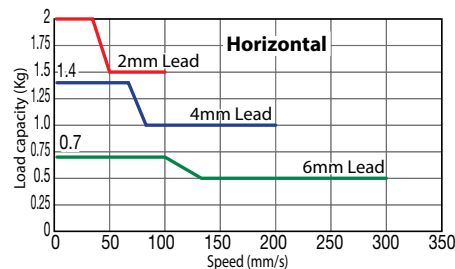
Appendix P.5



- 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).
- 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

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

Model number	Feed Screw	Lead (mm)	Max. Load Capacity (Note 1)	Rated thrust (N)	Stroke (mm)
RCP3-TA3C-I-20P-6-①-②-③-④	Ball screw	6	~0.7	~0.3	20~100 (every 10mm)
RCP3-TA3C-I-20P-4-①-②-③-④		4	~1.4	~0.6	
RCP3-TA3C-I-20P-2-①-②-③-④		2	~2	~1	

Stroke and Maximum Speed

(Unit: mm/s)

Stroke	20~100 (mm)
Lead	
6	300<200>
4	200<133>
2	100<67>

Code explanation ① Stroke ② Applicable Controller ③ Cable length ④ Options *See page A-71 for details on push motion. *The values enclosed in < > apply to vertical settings.

① Stroke

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

④ Options

Name	Option code	See page	Standard price
Brake	B	→ A-42	—
Non-motor end specification	NM	→ A-52	—

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.

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: 3.2 N·m, Mb: 4.6 N·m, Mc: 5.1 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

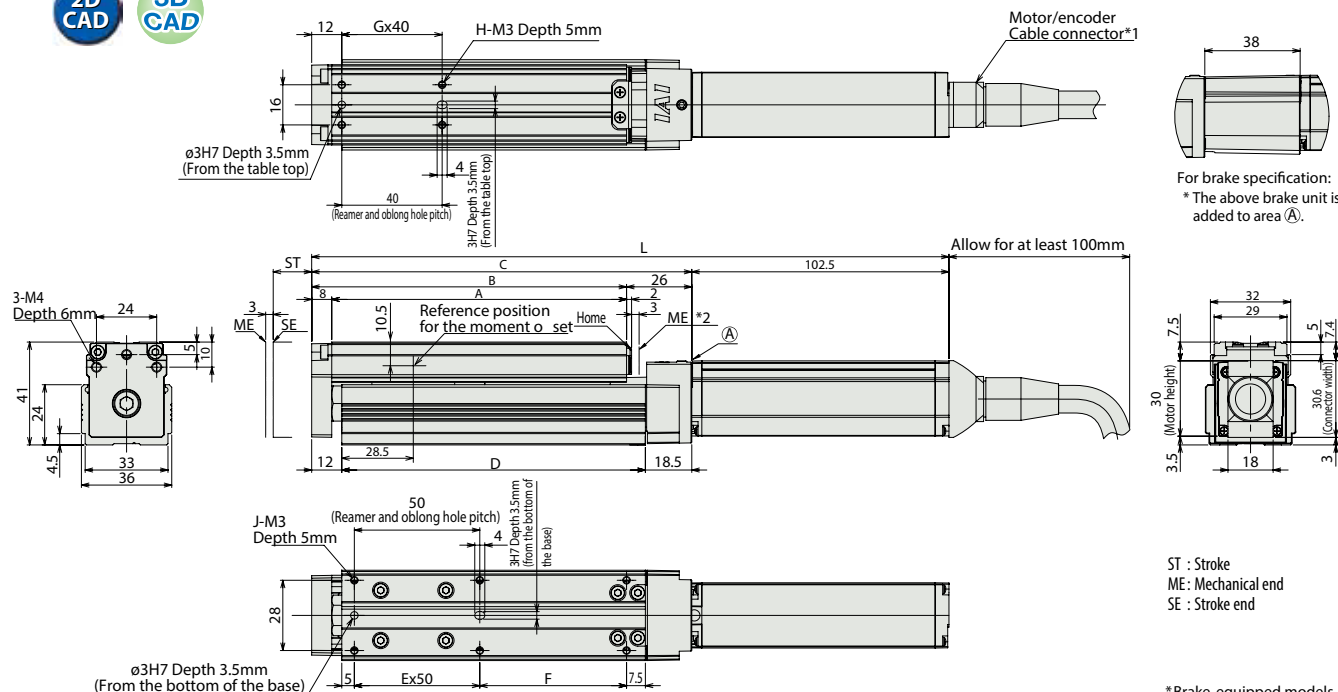
CAD drawings can be downloaded from the website.

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For Special Orders

Appendix P.15



(*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.








Dimensions and Weight by Stroke

*Brake-equipped models are heavier by 0.1 kg.

Stroke	20	30	40	50	60	70	80	90	100
L Without brake	224	234	244	254	264	274	284	294	304
L With brake	262	272	282	292	302	312	322	332	342
A	87.5	97.5	107.5	117.5	127.5	137.5	147.5	157.7	167.5
B	95.5	105.5	115.1	125.5	135.5	145.5	155.5	165.5	175.5
C	121.5	131.5	141.5	151.5	161.5	171.5	181.5	191.5	201.5
D	91	101	111	121	131	141	151	161	171
E	1	1	1	1	2	2	2	2	2
F	28.5	38.5	48.5	58.5	68.5	78.5	88.5	98.5	108.5
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)	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7

Applicable 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-20PI-①-2-②	Easy-to-use controller, even for beginners	3 points	AC100V AC200V	Refer to P541	—	→ P537	
		PSEP-C-20PI-①-2-0	Simple controller operable with the same signal as a solenoid valve			Refer to P555	—	→ P547	
Solenoid valve multi-axis type PIO specification		MSEP-C-③-④-①-2-0	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-③-④-④-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points					
Positioner type High-output specification		PCON-CA-20PI-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-20PI-PL□-2-0	Equipped with a high-output driver Pulse-train input type	(—)				—	
Field network type High-output specification		PCON-CA-20PI-④-0-0	Equipped with a high-output driver Supporting 7 major field networks	768 points				—	
Pulse Train Input Type (Differential Line Driver)		PCON-PL-20PI-①-2-0	Pulse train input type with differential line driver support	(—)		Refer to P628	—	→ P623	
Pulse Train Input Type (Open Collector)		PCON-PO-20PI-①-2-0	Pulse train input type with open collector support				—		
Serial Communication Type		PCON-SE-20PI-N-0-0	Dedicated Serial Communication	64 points			—		
Program Control Type		PSEL-CS-1-20PI-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points		Refer to P671	—	→ P665	

* This is for the single-axis PSEL.

* ① indicates I/O type (NP/PN).

* ② indicates power supply voltage (1: 100V / 2: 100~240V).

* ③ indicates number of axes (1 to 8). * ④ indicates field network specification symbol. * □ indicates N (NPN specification) or P (PNP specification) symbol.

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

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



RoHS

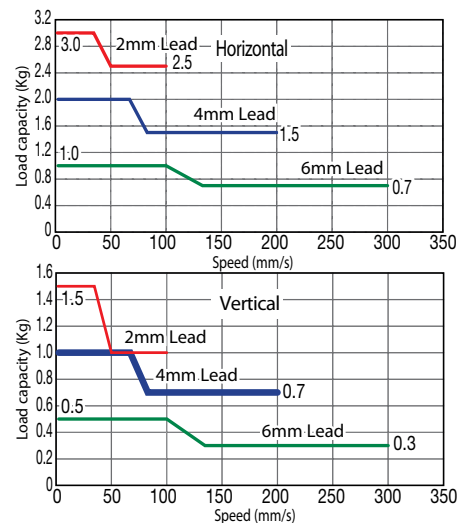


Technical References

Appendix P.5

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.



- (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.

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)	Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)	
RCP3-TA4C-I-28P-6-①-②-③-④	Ball screw	6	~1	~0.5	25
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
4		200
2		100

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

(Unit: mm/s)

① Stroke

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

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	—

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.

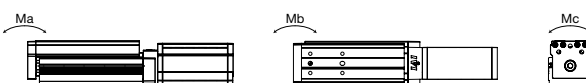
* See page A-59 for cables for maintenance.

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



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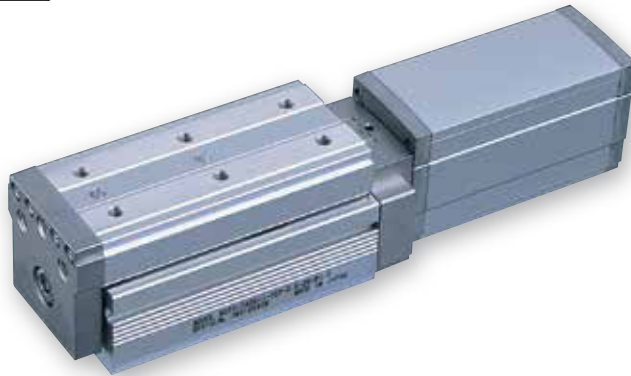
RCP3-TA4C

RCP3-TA5C

ROBO Cylinder, Table Type, Actuator Width 55mm, Pulse Motor, Coupled

Model Specification Items	RCP3	TA5C	I	35P					
Series		Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
			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-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

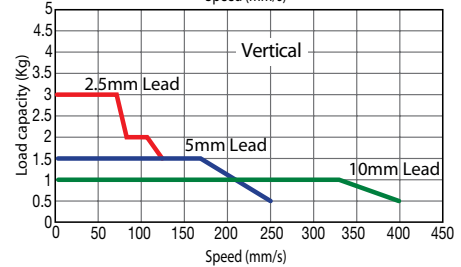
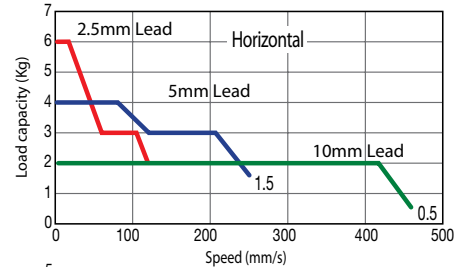
Appendix P.5



- (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.
- (4) 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	Lead (mm)	Max. Load Capacity (Note 1)	Rated thrust (N)	Stroke (mm)
		Horizontal (kg)	Vertical (kg)	
RCP3-TA5C-I-35P-10-①-②-③-④	10	~2	~1	34
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

Stroke and Maximum Speed

(Unit: mm/s)

Stroke Lead	25~100 (every 25mm)
10	465<400>
5	250
2.5	125

Code explanation ① Stroke ② Applicable Controller ③ Cable length ④ Options *See page A-71 for details on push motion. *The values enclosed in < > apply to vertical settings.

① Stroke

① Stroke (mm)	Standard price
25	—
50	—
75	—
100	—

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	—

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 is the motor-encoder integrated robot cable.

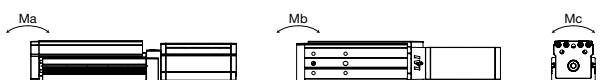
* See page A-59 for cables for maintenance.

Actuator Specifications

Item	Description
Drive System	Ball screw, ø8mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	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 temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

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

Directions of allowable load moments

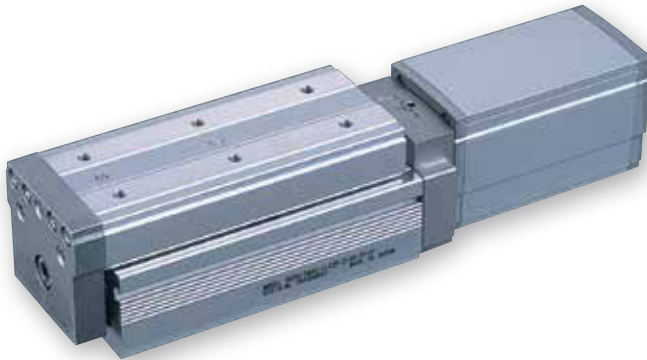


RCP3-TA6C

ROBO Cylinder, Table Type, Actuator Width 65mm, Pulse Motor, Coupled

Model Specification Items	RCP3	TA6C	I	42P					
Series		Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
			I: Incremental * The Simple absolute encoder is also considered type "I".	42P: Pulse motor, 42□ size	12: 12mm 6: 6mm 3: 3mm	25: 25mm 150: 150mm (25mm 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

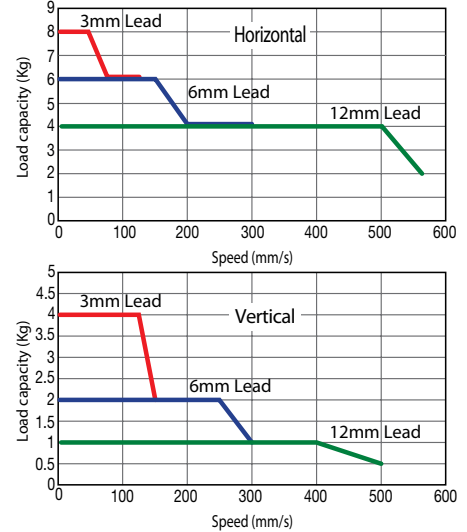
Appendix P.5



- (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 3mm-lead model, or when used vertically). This is the upper limit of the acceleration.
- (4) 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	Lead (mm)	Max. Load Capacity (Note 1)	Rated thrust (N)	Stroke (mm)
RCP3-TA6C-I-42P-12-①-②-③-④	12	~4 Horizontal (kg) ~1 Vertical (kg)	60	25~150 (every 25mm)
RCP3-TA6C-I-42P-6-①-②-③-④	6	~6 Horizontal (kg) ~2 Vertical (kg)	110	
RCP3-TA6C-I-42P-3-①-②-③-④	3	~8 Horizontal (kg) ~4 Vertical (kg)	189	

Stroke and Maximum Speed

(Unit: mm/s)

Stroke Lead	25~100 (every 25mm)
12	560<500>
6	300
3	150

Code explanation ① Stroke ② Applicable Controller ③ Cable length ④ Options *See page A-71 for details on push motion. *The values enclosed in < > apply to vertical settings.

① Stroke

① Stroke (mm)	Standard price
25	—
50	—
75	—
100	—
125	—
150	—

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	—

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 is the motor-encoder integrated robot cable.

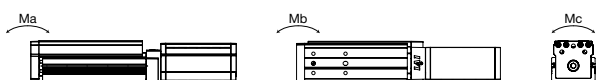
* See page A-59 for cables for maintenance.

Actuator Specifications

Item	Description
Drive System	Ball screw, ø10mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum, special alumite treated
Allowable static moment	Ma: 29.4 N·m, Mb: 42.0 N·m, Mc: 74.1 N·m
Allowable dynamic moment (*)	Ma: 7.26 N·m, Mb: 10.3 N·m, Mc: 18.25 N·m
Overhang load length	Within the load moment range
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



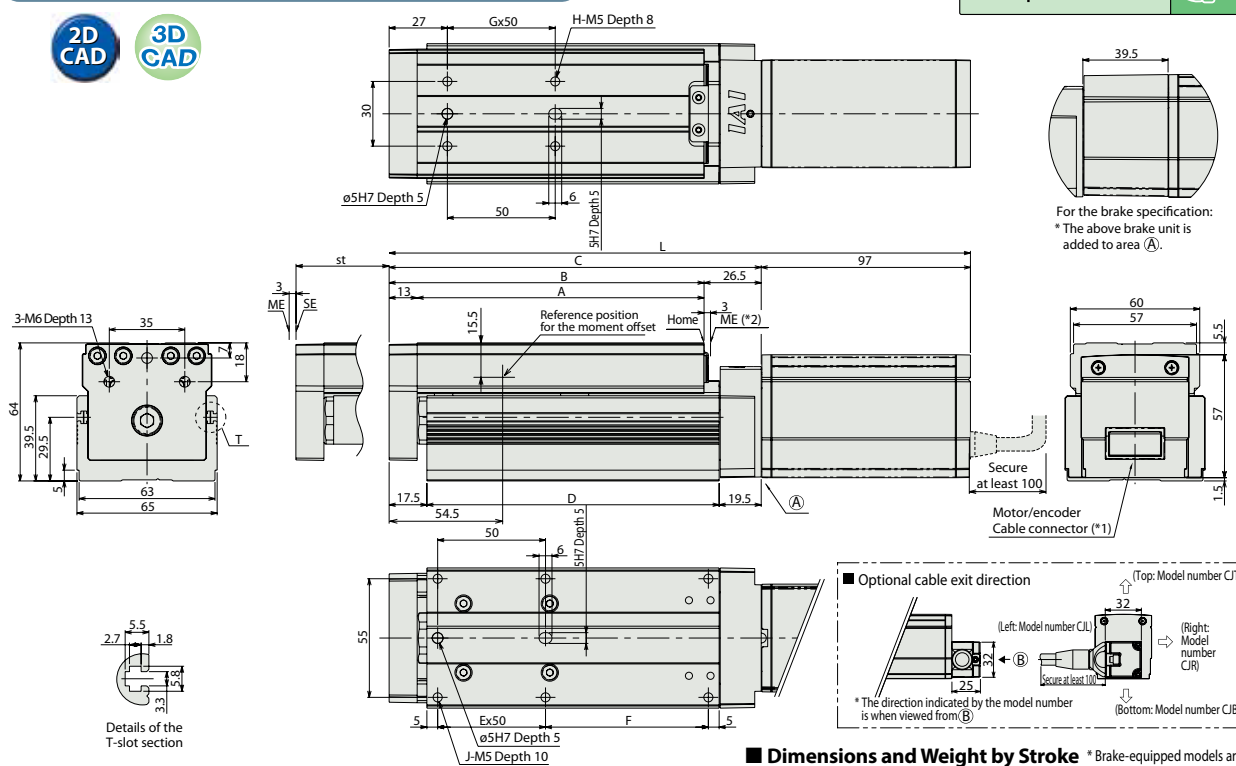
Dimensional Drawings

CAD drawings can be downloaded from the website.

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For Special Orders

Appendix
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

(*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.

ME : Mechanical end SE : Stroke end

② Applicable 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-42PI-①-2-②	Easy-to-use controller, even for beginners	3 points	AC100V AC200V	Refer to P541	—	→ P537
		PSEP-C-42PI-①-2-0	Simple controller operable with the same signal as a solenoid valve			Refer to P555	—	→ P547
Solenoid valve multi-axis type PIO specification		MSEP-C-③-④-①-2-0	Positioner type based on PIO control, allowing up to 8 axes to be connected	256 points	DC24V	Refer to P572	—	→ P563
Solenoid valve multi-axis type Network specification		MSEP-C-③-④-④-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected				—	→ P563
Positioner type High-output specification		PCON-CA-42PI-①-2-0	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-42PI-PL□-2-0	Equipped with a high-output driver Pulse-train input type	(—)			—	
Field network type High-output specification		PCON-CA-42PI-④-0-0	Equipped with a high-output driver Supporting 7 major field networks	768 points			—	
Pulse Train Input Type (Differential Line Driver)		PCON-PL-42PI-①-2-0	Pulse train input type with differential line driver support	(—)		Refer to P628	—	→ P623
Pulse Train Input Type (Open Collector)		PCON-PO-42PI-①-2-0	Pulse train input type with open collector support				—	
Serial Communication Type		PCON-SE-42PI-N-0-0	Dedicated Serial Communication	64 points			—	
Program Control Type		PSEL-CS-1-42PI-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points		Refer to P671	—	→ P665

* This is for the single-axis PSEL.

* ① indicates I/O type (NP/PN).

* Ⓜ indicates power supply voltage (1: 100V / 2: 100~240V).

* III indicates number of axes (1 to 8). * IV indicates field network specification symbol. * \square indicates N (NPN specification) or P (PNP specification) symbol.

RCP3-TA7C

ROBO Cylinder, Table Type, Actuator Width 75mm, Pulse Motor, Coupled

Model Specification Items	RCP3	TA7C	I	42P					
Series		Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
			I: Incremental * The Simple absolute encoder is also considered type "I".	42P: Pulse motor, 42□ size	12: 12mm 6: 6mm 3: 3mm	25: 25mm 200: 200mm (25mm 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

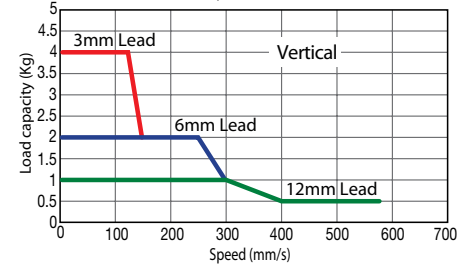
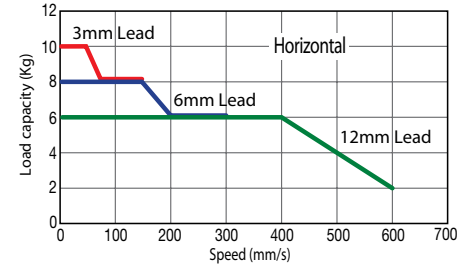
Appendix P.5



- (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 3mm-lead model, or when used vertically). This is the upper limit of the acceleration.
- (4) 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

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

Model number	Lead (mm)	Max. Load Capacity (Note 1)		Rated thrust (N)	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
RCP3-TA7C-I-42P-12-①-②-③-④	12	~6	~1	60	25~200 (every 25mm)
RCP3-TA7C-I-42P-6-①-②-③-④	6	~8	~2	110	
RCP3-TA7C-I-42P-3-①-②-③-④	3	~10	~4	189	

Stroke and Maximum Speed

(Unit: mm/s)

Stroke Lead	25~100 (every 25mm)
12	600<580>
6	300
3	150

Code explanation ① Stroke ② Applicable Controller ③ Cable length ④ Options *See page A-71 for details on push motion. *The values enclosed in < > apply to vertical settings.

① Stroke

① Stroke (mm)	Standard price
25	—
50	—
75	—
100	—
125	—
150	—
175	—
200	—

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	—

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 is the motor-encoder integrated robot cable.

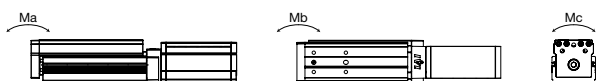
* See page A-59 for cables for maintenance.

Actuator Specifications

Item	Description
Drive System	Ball screw, ø10mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum, special alumite treated
Allowable static moment	Ma: 42.6 N·m, Mb: 60.8 N·m, Mc: 123.2 N·m
Allowable dynamic moment (*)	Ma: 9.91 N·m, Mb: 14.13 N·m, Mc: 28.65 N·m
Overhang load length	Within the load moment range
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

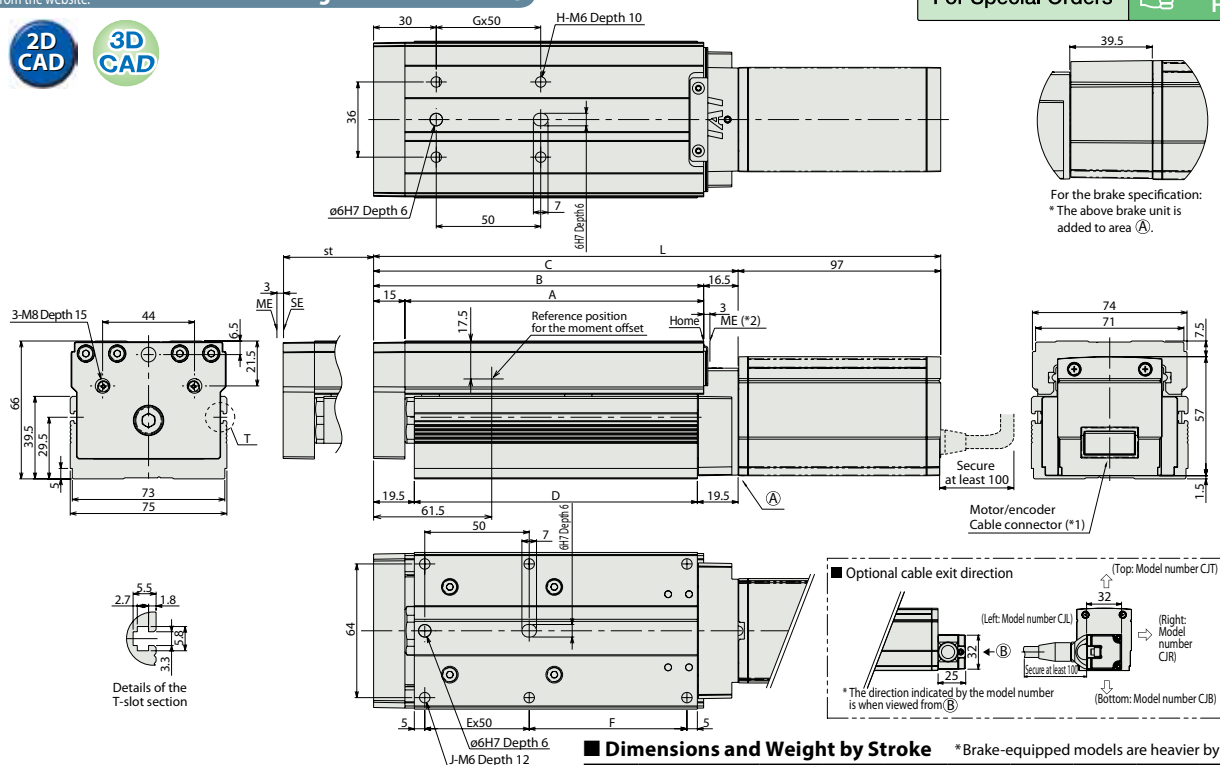


Dimensional Drawings

CAD drawings can be downloaded from the website.

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For Special Orders

Appendix
P15

■ Dimensions and Weight by Stroke

*Brake-equipped models are heavier by 0.4kg.

Stroke		25	50	75	100	125	150	175	200
L	Without brake	246.5	271.5	296.5	321.5	346.5	371.5	396.5	421.5
	With brake	286	311	336	361	386	411	436	461
	A	118	143	168	193	218	243	268	293
	B	133	158	183	208	233	258	283	308
	C	149.5	174.5	199.5	224.5	249.5	274.5	299.5	324.5
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)		2.1	2.3	2.5	2.8	3	3.2	3.4	3.6








(*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.

ME : Mechanical end SE : Stroke end

② Applicable 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-42PI-①-2-②	Easy-to-use controller, even for beginners	3 points	AC100V AC200V	Refer to P541	—	→ P537
		PSEP-C-42PI-①-2-0	Simple controller operable with the same signal as a solenoid valve			Refer to P555	—	→ P547
Solenoid valve multi-axis type PIO specification		MSEP-C-③-④-①-2-0	Positioner type based on PIO control, allowing up to 8 axes to be connected	256 points	DC24V	Refer to P572	—	→ P563
Solenoid valve multi-axis type Network specification		MSEP-C-③-④-④-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected					
Positioner type High-output specification		PCON-CA-42PI-①-2-0	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-42PI-PL□-2-0	Equipped with a high-output driver Pulse-train input type	(—)			—	
Field network type High-output specification		PCON-CA-42PI-④-0-0	Equipped with a high-output driver Supporting 7 major field networks	768 points			—	
Pulse Train Input Type (Differential Line Driver)		PCON-PL-42PI-①-2-0	Pulse train input type with differential line driver support	(—)		Refer to P628	—	→ P623
Pulse Train Input Type (Open Collector)		PCON-PO-42PI-①-2-0	Pulse train input type with open collector support				—	
Serial Communication Type		PCON-SE-42PI-N-0-0	Dedicated Serial Communication	64 points			—	
Program Control Type		PSEL-CS-1-42PI-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points		Refer to P671	—	→ P665

* This is for the single-axis PSEL.

* ① indicates I/O type (NP/PN).

* indicates power supply voltage (1: 100V / 2: 100~240V).

* III indicates number of axes (1 to 8). * IV indicates field network specification symbol. * \square indicates N (NPN specification) or P (PNP specification) symbol.

RCP3-TA3R

ROBO Cylinder, Mini Table Type, Side-Mounted Motor, Actuator Width 36mm, Pulse Motor, Ball Screw Specification

Model Specification Items	RCP3	TA3R	I	20P					
Series		Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
			I: Incremental * The Simple absolute encoder is also considered type "I".	20P: Pulse motor, 20□ 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. * Be sure to specify which side the motor is to be mounted (ML/MR).

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

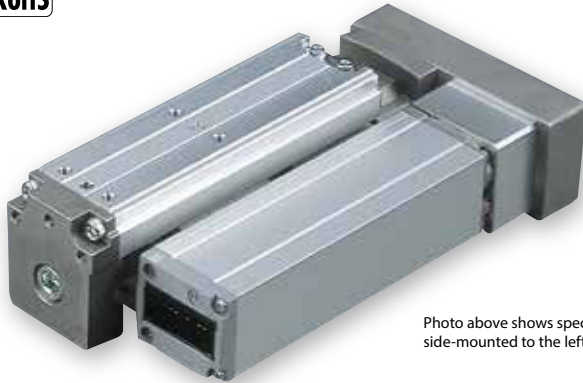


Photo above shows specification with motor side-mounted to the left (ML Option).

Technical References

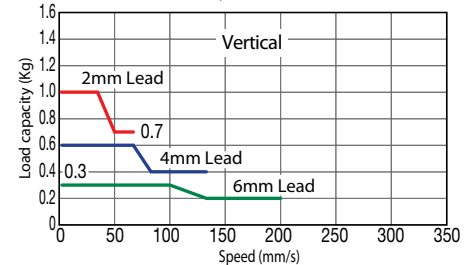
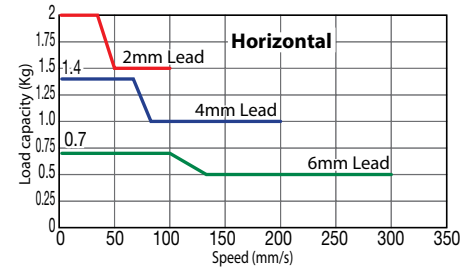
Appendix P.5



- 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).
- 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)	Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
RCP3-TA3R-I-20P-6-①-②-③-④	Ball screw	6	~0.7 Horizontal (kg) ~0.3 Vertical (kg)	15	±0.02	20~100 (every 10mm)
RCP3-TA3R-I-20P-4-①-②-③-④		4	~1.4 Horizontal (kg) ~0.6 Vertical (kg)	22		
RCP3-TA3R-I-20P-2-①-②-③-④		2	~2 Horizontal (kg) ~1 Vertical (kg)	45		

Stroke and Maximum Speed

(Unit: mm/s)

Lead	Stroke	20~100 (mm)
	Ball screw	
6		300<200>
4		200<133>
2		100<67>

Code explanation ① Stroke ② Applicable Controller ③ Cable length ④ Options *See page A-71 for details on push motion. *The values enclosed in < > apply to vertical settings.

① Stroke

① Stroke (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

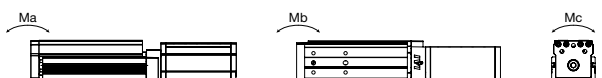
Name	Option code	See page	Standard price
Brake	B	→ A-42	—
Side-mounted motor to the left (standard)	ML	→ A-52	—
Side-mounted motor to the right	MR	→ A-52	—
Non-motor end specification	NM	→ A-52	—

Actuator Specifications

Item	Description
Drive System	Ball screw, ø6mm, rolled C10
Lost Motion	0.1mm or less
Base	Material: Aluminum, white alumite treated
Allowable dynamic moment (*)	Ma: 3.2 N·m, Mb: 4.6 N·m, Mc: 5.1 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.

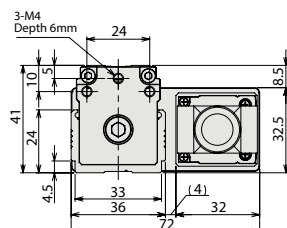
www.intelligentactuator.com



* The drawing below shows the specification with motor side-mounted to the left.

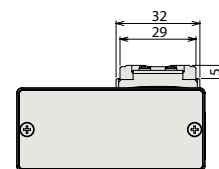
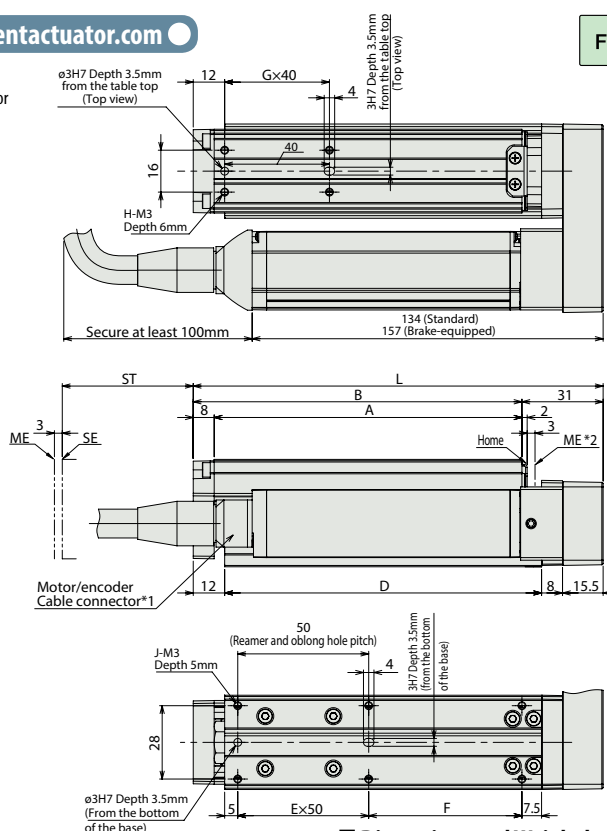


With the brake:
(see drawing on the right for dimensions)



The reference position for moment offset is the same as the position on the TA3C (P304).

(*)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 0.1kg.

Stroke	20	30	40	50	60	70	80	90	100
L	126.5	136.5	146.5	156.5	166.5	176.5	186.5	196.5	206.5
A	87.5	97.5	107.5	117.5	127.5	137.5	147.5	157.5	167.5
B	95.5	105.5	115.5	125.5	135.5	145.5	155.5	165.5	175.5
D	91	101	111	121	131	141	151	161	171
E	1	1	1	1	2	2	2	2	2
F	28.5	38.5	48.5	58.5	68.5	78.5	88.5	98.5	108.5
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)	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7

② Applicable 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-20PI-①-2-②	Easy-to-use controller, even for beginners	3 points	DC24V	AC100V AC200V	Refer to P541	—	→ P537
		PSEP-C-20PI-①-2-0	Simple controller operable with the same signal as a solenoid valve			Refer to P555	—	→ P547	
Solenoid valve multi-axis type PIO specification		MSEP-C-③-④-①-2-0	Positioner type based on PIO control, allowing up to 8 axes to be connected	256 points		Refer to P572	—	→ P563	
Solenoid valve multi-axis type Network specification		MSEP-C-③-④-④-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected						
Positioner type High-output specification		PCON-CA-20PI-①-2-0	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-20PI-PL□-2-0	Equipped with a high-output driver Pulse-train input type	(—)			—		
Field network type High-output specification		PCON-CA-20PI-④-0-0	Equipped with a high-output driver Supporting 7 major field networks	768 points			—		
Pulse Train Input Type (Differential Line Driver)		PCON-PL-20PI-①-2-0	Pulse train input type with differential line driver support	(—)		Refer to P628	—	→ P623	
Pulse Train Input Type (Open Collector)		PCON-PO-20PI-①-2-0	Pulse train input type with open collector support				—		
Serial Communication Type		PCON-SE-20PI-N-0-0	Dedicated Serial Communication	64 points			Refer to P671	—	→ P665
Program Control Type		PSEL-CS-1-20PI-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points					

* This is for the single-axis PSEL.

* ① indicates I/O type (NP/PN).

* ② indicates power supply voltage (1: 100V / 2: 100~240V).

* ③ indicates number of axes (1 to 8). * ④ indicates field network specification symbol. * □ indicates N (NPN specification) or P (PNP specification) symbol.

Slider Type

Mini

Standard

Controllers Integrated

Rod Type

Mini

Standard

Controllers Integrated

Table/ Arm/ Flat Type

Mini

Standard

Gripper/ Rotary Type

Linear Servo Type

Clean-room Type

Splash-Proof Type

Pulse Motor

Servo Motor (24V)

Servo Motor (200V)

Linear Servo Motor

RCP3-TA4R

ROBO Cylinder, Mini Table Type, Side-Mounted Motor, Actuator Width 40mm, Pulse Motor, Ball Screw Specification

Model Specification Items	RCP3	TA4R	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.
*Be sure to specify which side the motor is to be mounted (ML/MR).

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



Photo above shows specification with TA3R motor side-mounted to the left (ML).

Technical References

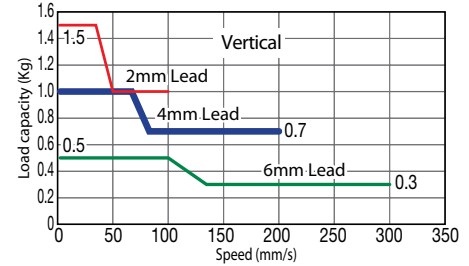
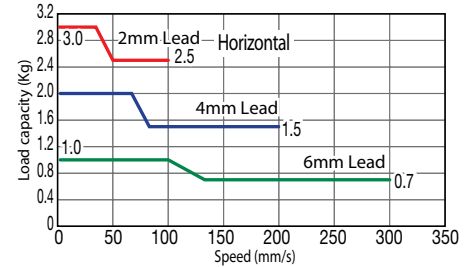
Appendix P.5



- 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).
- 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)	Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
RCP3-TA4R-I-28P-6-①-②-③-④	Ball screw	6	~1	~0.5	25	20~100 (every 10mm)
RCP3-TA4R-I-28P-4-①-②-③-④		4	~2	~1	37	
RCP3-TA4R-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
	4	200
	2	100

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

(Unit: mm/s)

① Stroke

① Stroke (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

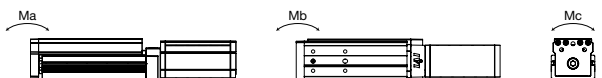
Name	Option code	See page	Standard price
Brake	B	→ A-42	—
Cable exit direction (top)	CJT	→ A-42	—
Cable exit direction (outside)	CJO	→ A-42	—
Cable exit direction (bottom)	CJB	→ A-42	—
Side-mounted motor to the left (standard)	ML	→ A-52	—
Side-mounted motor to the right	MR	→ A-52	—
Non-motor end specification	NM	→ A-52	—

Actuator Specifications

Item	Description
Drive System	Ball screw, ø6mm, rolled C10
Lost Motion	0.1mm or less
Base	Material: Aluminum, white alumite treated
Allowable dynamic 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



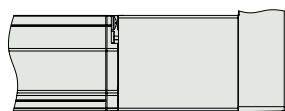
Dimensional Drawings

CAD drawings can be downloaded from the website.

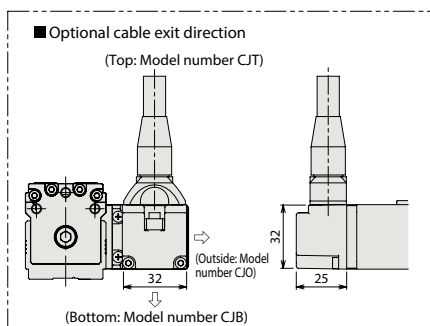
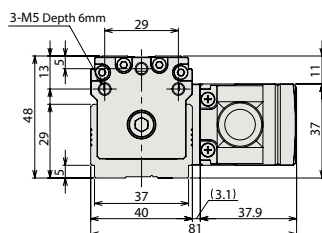
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* The drawing below shows the specification with motor side-mounted to the left.

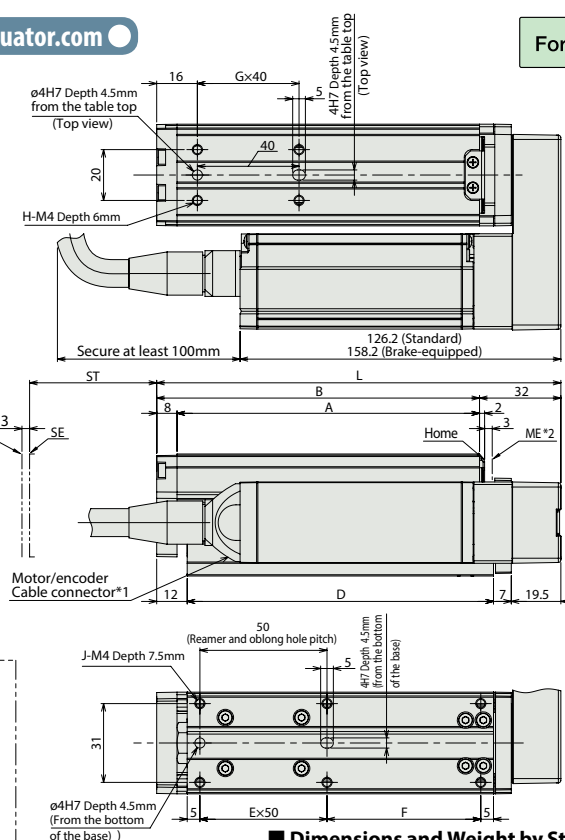


With the brake:
(see drawing on the right for dimensions)

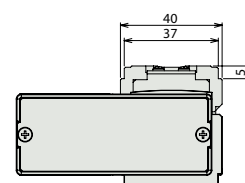


(*1) Connect the motor-encoder integrated cable here. See page A-59 for details on cables.

(*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.



The offset reference position of the moment is the same as TA4C (P306).










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	129	139	149	159	169	179	189	199	209
A	89	99	109	119	129	139	149	159	169
B	97	107	117	127	137	147	157	167	177
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	0.8	0.8	0.8	0.9	0.9	0.9	1.0	1.0

② Applicable 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-①-2-②	Easy-to-use controller, even for beginners	3 points	AC100V AC200V	Refer to P541	—	→ P537	
		PSEP-C-28PI-①-2-0	Simple controller operable with the same signal as a solenoid valve		Refer to P555	—	→ P547		
Solenoid valve multi-axis type PIO specification		MSEP-C-③-④-①-2-0	Positioner type based on PIO control, allowing up to 8 axes to be connected	256 points	DC24V	Refer to P572	—	→ P563	
Solenoid valve multi-axis type Network specification		MSEP-C-③-④-④-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected						
Positioner type High-output specification		PCON-CA-28PI-①-2-0	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-④-0-0	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	(—)		Refer to P628	—	→ P623	
Pulse Train Input Type (Open Collector)		PCON-PO-28PI-①-2-0	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-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			Refer to P671	—	→ P665

* This is for the single-axis PSEL.

* ① indicates I/O type (NP/PN).

* indicates power supply voltage (1: 100V / 2: 100~240V).

* III indicates number of axes (1 to 8). * IV indicates field network specification symbol. * \square indicates N (NPN specification) or P (PNP specification) symbol.

RCP3-TA5R

ROBO Cylinder, Table Type, Side-Mounted motor, Actuator Width 55mm, Pulse Motor, Side-mounted Motor

Model Specification Items	RCP3	TA5R	I	35P					
Series		Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
			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-PL/PO/SE PSEL P3: PCON-CA PMEC/PSEP MSEP	N: None P: 1m S: 3m M: 5m X□□: Custom Length	See Options below. *Be sure to specify which side the motor is to be mounted (ML/MR).

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



Technical References

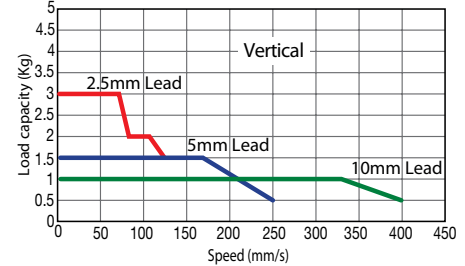
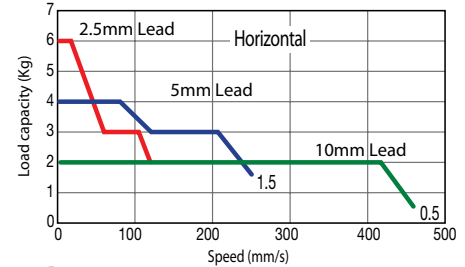
Appendix P.5



- (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.
- (4) 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

Model number	Lead (mm)	Max. Load Capacity		Rated thrust (N)	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
RCP3-TA5R-I-35P-10-①-②-③-④	10	~2	~1	34	25~200 (every 25mm)
RCP3-TA5R-I-35P-5-①-②-③-④	5	~4	~1.5	68	
RCP3-TA5R-I-35P-2.5-①-②-③-④	2.5	~6	~3	136	

Stroke and Maximum Speed

(Unit: mm/s)

Stroke Lead	25~100 (every 25mm)
10	465<400>
5	250
2.5	125

Code explanation ① Stroke ② Applicable Controller ③ Cable length ④ Options *See page A-71 for details on push motion. * The values enclosed in < > apply to vertical settings.

① Stroke

① Stroke (mm)	Standard price
25	—
50	—
75	—
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 is the motor-encoder integrated robot cable.

* See page A-59 for cables for maintenance.

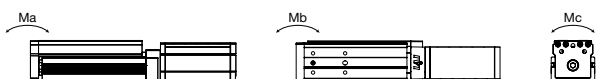
④ Options

Name	Option code	See page	Standard price
Brake	B	→ A-42	—
Cable exit direction (top)	CJT	→ A-42	—
Cable exit direction (outside)	CJO	→ A-42	—
Cable exit direction (bottom)	CJB	→ A-42	—
Left-mounted motor (standard)	ML	→ A-52	—
Right-mounted motor	MR	→ A-52	—
Non-motor end specification	NM	→ A-52	—

Actuator Specifications

Item	Description
Drive System	Ball screw, ø8mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	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 temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

Directions of allowable load moments



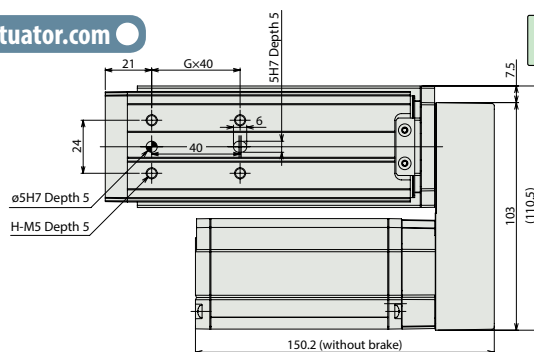
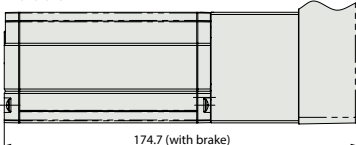
Dimensional Drawings

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



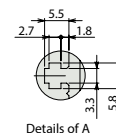
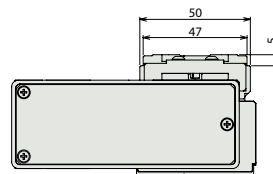
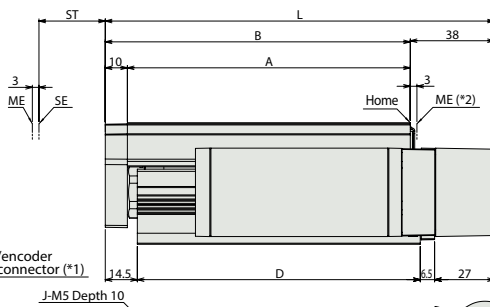
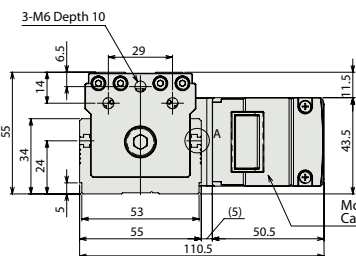
*Please note that, for 25mm-stroke model with brake, the motor unit protrudes from the end of the table.

With Brake



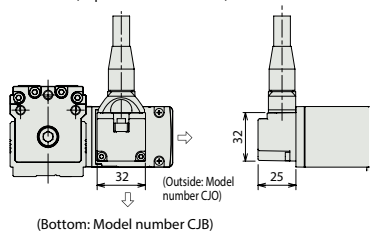
For Special Orders

Appendix P.15



Optional cable exit direction

(Top: Model number CJT)



The reference position for moment offset is the same as the position, on the TA5C (P308).

*Brake-equipped models are heavier by 0.3kg.

Dimensions and Weight by Stroke








Stroke	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

(*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.

ME: Mechanical end SE: Stroke end

Applicable 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-35PI-①-2-②	Easy-to-use controller, even for beginners	3 points	AC100V AC200V	Refer to P541	—	→ P537	
		PSEP-C-35PI-①-2-0	Simple controller operable with the same signal as a solenoid valve			Refer to P555	—	→ P547	
Solenoid valve multi-axis type PIO specification		MSEP-C-③-④-①-2-0	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-③-④-④-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points					
Positioner type High-output specification		PCON-CA-35PI-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-35PI-PL□-2-0	Equipped with a high-output driver Pulse-train input type	(—)				—	
Field network type High-output specification		PCON-CA-35PI-④-0-0	Equipped with a high-output driver Supporting 7 major field networks	768 points				—	
Pulse Train Input Type (Differential Line Driver)		PCON-PL-35PI-①-2-0	Pulse train input type with differential line driver support	(—)		Refer to P628	—	→ P623	
Pulse Train Input Type (Open Collector)		PCON-PO-35PI-①-2-0	Pulse train input type with open collector support				—		
Serial Communication Type		PCON-SE-35PI-N-0-0	Dedicated Serial Communication	64 points			Refer to P671		—
Program Control Type		PSEL-CS-1-35PI-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points					

* This is for the single-axis PSEL.

* ① indicates I/O type (NP/PN).

* ② indicates power supply voltage (1: 100V / 2: 100~240V).

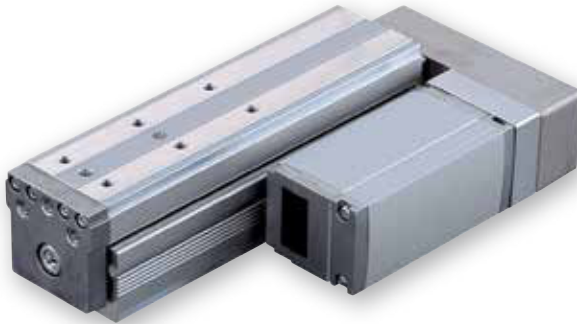
* ③ indicates number of axes (1 to 8). * ④ indicates field network specification symbol. * □ indicates N (NPN specification) or P (PNP specification) symbol.

RCP3-TA6R

ROBO Cylinder, Table Type, Actuator Width 65mm, Pulse Motor, Side-mounted Motor

Model Specification Items	RCP3	TA6R	I	42P					
Series		Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
			I: Incremental * The Simple absolute encoder is also considered type "I".	42P: Pulse motor, 42□ size	12: 12mm 6: 6mm 3: 3mm	25: 25mm 150: 150mm (25mm 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. * Be sure to specify which side the motor is to be mounted (ML/MR).

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



Technical References

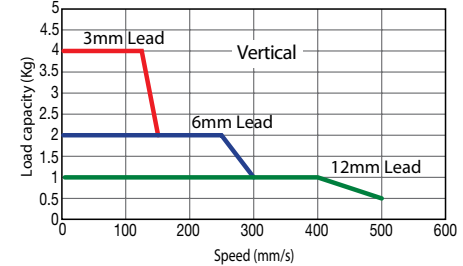
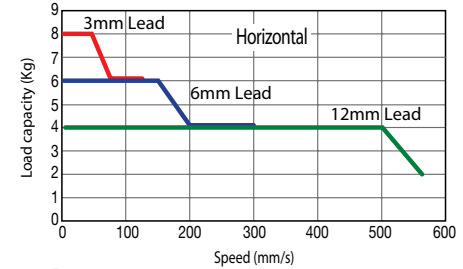
Appendix P.5



- (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 3mm-lead model, or when used vertically). This is the upper limit of the acceleration.
- (4) 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

Model number	Lead (mm)	Max. Load Capacity		Rated thrust (N)	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
RCP3-TA6R-I-42P-12-①-②-③-④	12	~4	~1	60	25~150 (every 25mm)
RCP3-TA6R-I-42P-6-①-②-③-④	6	~6	~2	110	
RCP3-TA6R-I-42P-3-①-②-③-④	3	~8	~4	189	

Code explanation ① Stroke ② Applicable Controller ③ Cable length ④ Options *See page A-71 for details on push motion. * The values enclosed in < > apply to vertical settings.

Stroke and Maximum Speed

(Unit: mm/s)

Stroke Lead	25~150 (every 25mm)
12	560<500>
6	300
3	150

① Stroke

① Stroke (mm)	Standard price
25	—
50	—
75	—
100	—
125	—
150	—

④ Options

Name	Option code	See page	Standard price
Brake	B	→ A-42	—
Cable exit direction (top)	CJT	→ A-42	—
Cable exit direction (outside)	CJO	→ A-42	—
Cable exit direction (bottom)	CJB	→ A-42	—
Left-mounted motor (standard)	ML	→ A-52	—
Right-mounted motor	MR	→ A-52	—
Non-motor end specification	NM	→ A-52	—

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 is the motor-encoder integrated robot cable.

* See page A-59 for cables for maintenance.

Actuator Specifications

Item	Description
Drive System	Ball screw, ø10mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum, special alumite treated
Allowable static moment	Ma: 29.4 N·m, Mb: 42.0 N·m, Mc: 74.1 N·m
Allowable dynamic moment	Ma: 7.26 N·m, Mb: 10.3 N·m, Mc: 18.25 N·m
Overhang load length	Within the load moment range
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

Directions of allowable load moments



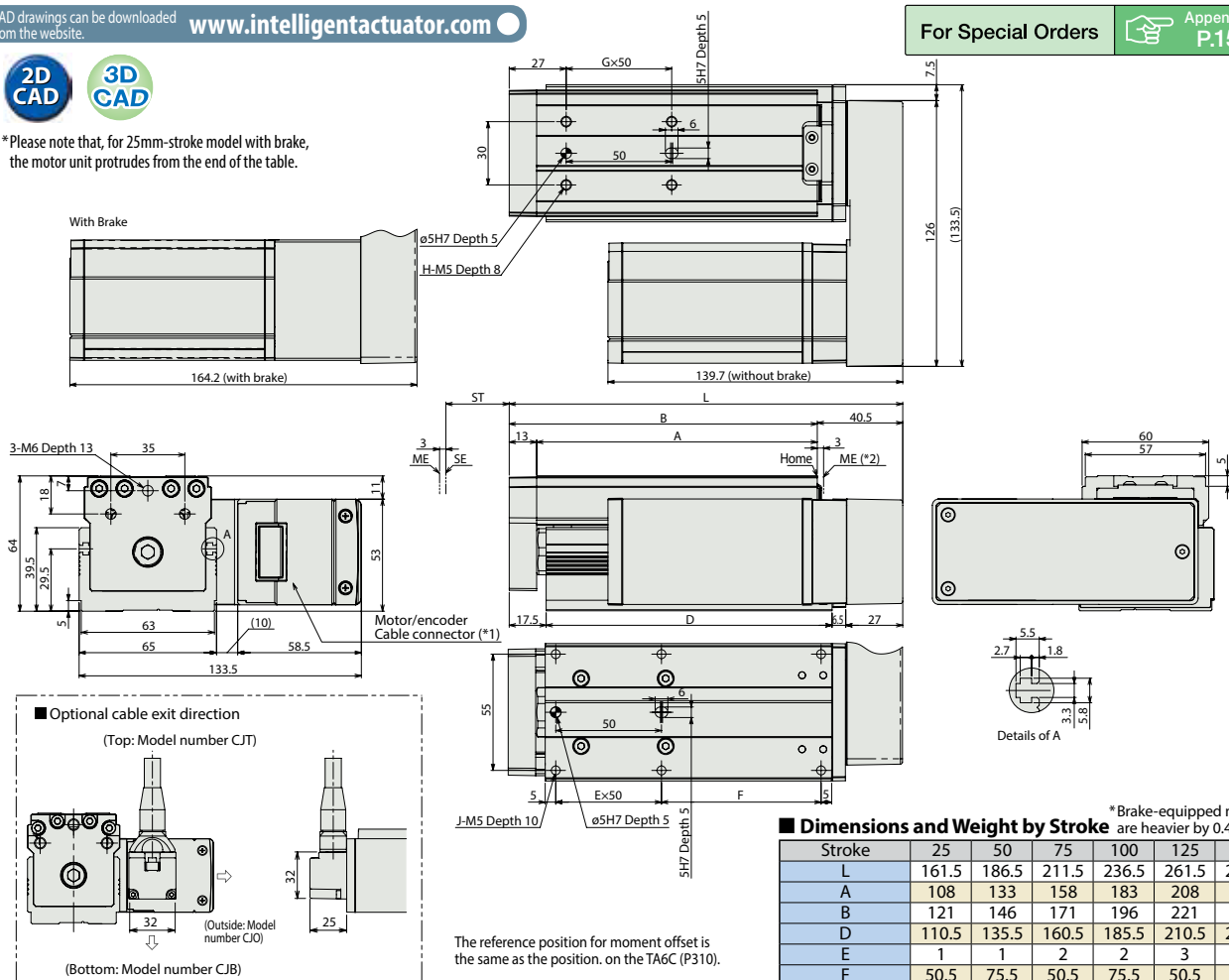
Dimensional Drawings

CAD drawings can be downloaded from the website.

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*Please note that, for 25mm-stroke model with brake, the motor unit protrudes from the end of the table.



(*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.

ME: Mechanical end SE: Stroke end








*Brake-equipped models are heavier by 0.4kg.

■ Dimensions and Weight by Stroke

Stroke	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

② Applicable 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-42PI-①-2-②	Easy-to-use controller, even for beginners	3 points	AC100V AC200V	Refer to P541	—	→ P537
		PSEP-C-42PI-①-2-0	Simple controller operable with the same signal as a solenoid valve			Refer to P555	—	→ P547
Solenoid valve multi-axis type PIO specification		MSEP-C-③-④-①-2-0	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-③-④-④-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points				
Positioner type High-output specification		PCON-CA-42PI-①-2-0	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-42PI-PL□-2-0	Equipped with a high-output driver Pulse-train input type	(—)			—	
Field network type High-output specification		PCON-CA-42PI-④-0-0	Equipped with a high-output driver Supporting 7 major field networks	768 points			—	
Pulse Train Input Type (Differential Line Driver)		PCON-PL-42PI-①-2-0	Pulse train input type with differential line driver support	(—)		Refer to P628	—	→ P623
Pulse Train Input Type (Open Collector)		PCON-PO-42PI-①-2-0	Pulse train input type with open collector support				—	
Serial Communication Type		PCON-SE-42PI-N-0-0	Dedicated Serial Communication	64 points			—	
Program Control Type		PSEL-CS-1-42PI-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points		Refer to P671	—	→ P665

* This is for the single-axis PSEL.

* ① indicates I/O type (NP/PN).

* Ⓜ indicates power supply voltage (1: 100V / 2: 100~240V).

* III indicates number of axes (1 to 8). * IV indicates field network specification symbol. * \square indicates N (NPN specification) or P (PNP specification) symbol.

RCP3-TA7R

ROBO Cylinder, Table Type, Actuator Width 75mm, Pulse Motor, Side-mounted Motor

Model Specification Items	RCP3	TA7R	I	42P	Lead	Stroke	Applicable controller	Cable length	Options
Series									
Type									
Encoder type									
Motor type									
I: Incremental * The Simple absolute encoder is also considered type "I".									
42P: Pulse motor, 42□ size									
Lead									
12: 12mm 6: 6mm 3: 3mm									
Stroke									
25: 25mm 200: 200mm (25mm pitch increments)									
Applicable controller									
P1: PCON-PL/PO/SE PSEL P3: PCON-CA PMEC/PSEP MSEP									
Cable length									
N: None P: 1m S: 3m M: 5m X□□: Custom Length									
Options									
See Options below. * Be sure to specify which side the motor is to be mounted (ML/MR).									

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



Technical References

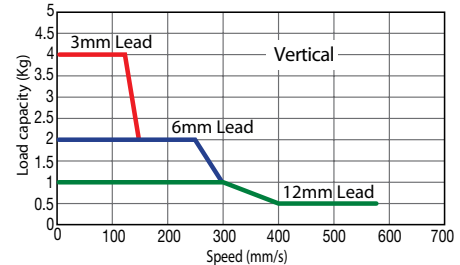
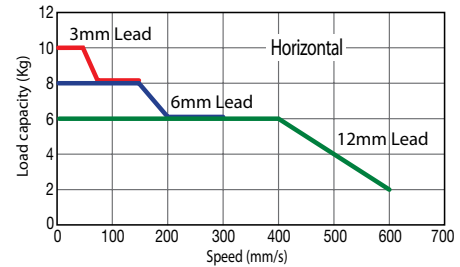
Appendix P.5



- (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 3mm-lead model, or when used vertically). This is the upper limit of the acceleration.
- (4) 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

Model number	Lead (mm)	Max. Load Capacity		Rated thrust (N)	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
RCP3-TA7R-I-42P-12-①-②-③-④	12	~6	~1	60	25~200 (every 25mm)
RCP3-TA7R-I-42P-6-①-②-③-④	6	~8	~2	110	
RCP3-TA7R-I-42P-3-①-②-③-④	3	~10	~4	189	

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

Stroke and Maximum Speed

(Unit: mm/s)

Stroke Lead	25~200 (every 25mm)
12	600<580>
6	300
3	150

* The values enclosed in < > apply to vertical settings.

① Stroke

① Stroke (mm)	Standard price
25	—
50	—
75	—
100	—
125	—
150	—
175	—
200	—

④ Options

Name	Option code	See page	Standard price
Brake	B	→ A-42	—
Cable exit direction (top)	CJT	→ A-42	—
Cable exit direction (outside)	CJO	→ A-42	—
Cable exit direction (bottom)	CJB	→ A-42	—
Left-mounted motor (standard)	ML	→ A-52	—
Right-mounted motor	MR	→ A-52	—
Non-motor end specification	NM	→ A-52	—

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)	—
		—

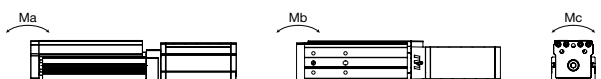
* The standard cable is the motor-encoder integrated robot cable.

* See page A-59 for cables for maintenance.

Actuator Specifications

Item	Description
Drive System	Ball screw, ø10mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum, special alumite treated
Allowable static moment	Ma: 42.6 N·m, Mb: 60.8 N·m, Mc: 123.2 N·m
Allowable dynamic moment (*)	Ma: 9.91 N·m, Mb: 14.13 N·m, Mc: 28.65 N·m
Overhang load length	Within the load moment range
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

Directions of allowable load moments



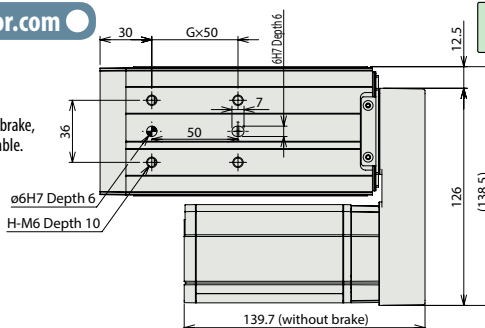
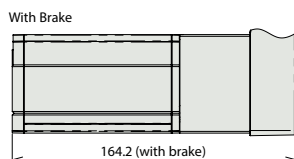
Dimensional Drawings

CAD drawings can be downloaded from the website.

www.intelligentactuator.com



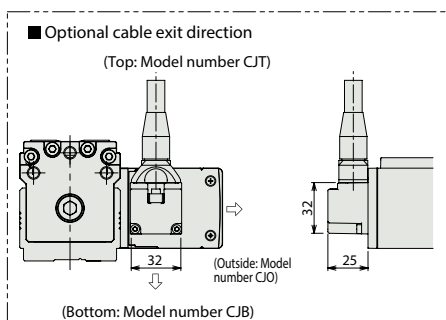
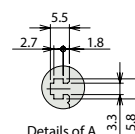
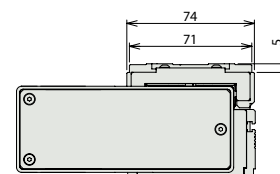
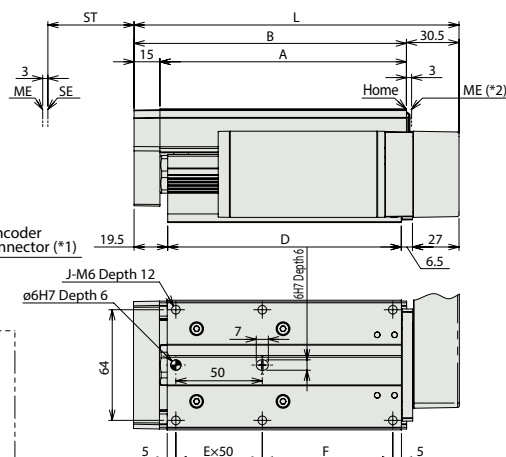
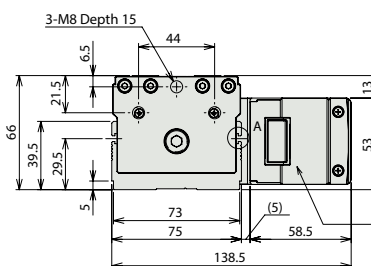
*Please note that, for 25mm-stroke model with brake, the motor unit protrudes from the end of the table.



For Special Orders



Appendix P.15



The reference position for moment offset is the same as the position on the TA7C (P312).

Dimensions and Weight by Stroke

*Brake-equipped models are heavier by 0.4kg.

Stroke	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) 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.

ME : Mechanical end SE : Stroke end

Applicable 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-42PI-①-2-②	Easy-to-use controller, even for beginners	3 points	AC100V AC200V	Refer to P541	—	→ P537
		PSEP-C-42PI-①-2-0	Simple controller operable with the same signal as a solenoid valve			Refer to P555	—	→ P547
Solenoid valve multi-axis type PIO specification		MSEP-C-③-④-①-2-0	Positioner type based on PIO control, allowing up to 8 axes to be connected	256 points	DC24V	Refer to P572	—	→ P563
Solenoid valve multi-axis type Network specification		MSEP-C-③-④-④-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected					
Positioner type High-output specification		PCON-CA-42PI-①-2-0	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-42PI-PL□-2-0	Equipped with a high-output driver Pulse-train input type	(—)			—	
Field network type High-output specification		PCON-CA-42PI-④-0-0	Equipped with a high-output driver Supporting 7 major field networks	768 points			—	
Pulse Train Input Type (Differential Line Driver)		PCON-PL-42PI-①-2-0	Pulse train input type with differential line driver support	(—)		Refer to P628	—	→ P623
Pulse Train Input Type (Open Collector)		PCON-PO-42PI-①-2-0	Pulse train input type with open collector support					
Serial Communication Type		PCON-SE-42PI-N-0-0	Dedicated Serial Communication	64 points			Refer to P671	
Program Control Type		PSEL-CS-1-42PI-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points				

* This is for the single-axis PSEL.

* ① indicates I/O type (NP/PN).

* ② indicates power supply voltage (1: 100V / 2: 100~240V).

* ③ indicates number of axes (1 to 8). * ④ indicates field network specification symbol. * □ indicates N (NPN specification) or P (PNP specification) symbol.