RCA2-RP3NA

Robo Cylinder, Mini Rod Type, Short-Length Tapped-Hole Mounting Type, Actuator Width 28mm, 24V Servo Motor, Ball Screw Specification/Lead Screw Specification

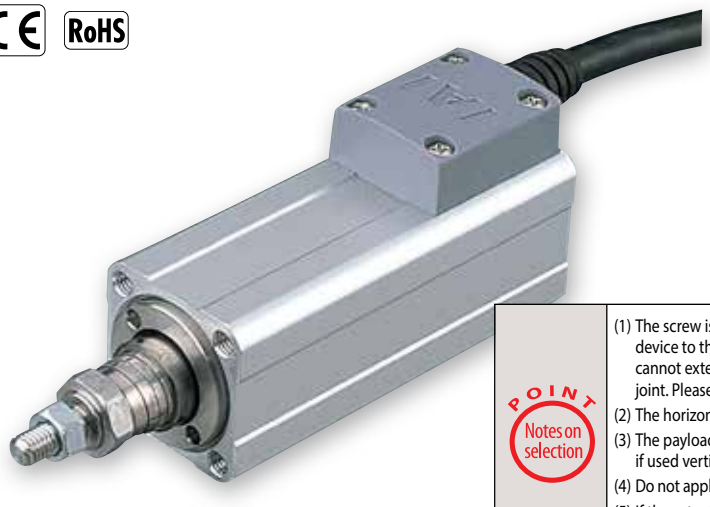
Model Specification Items: **RCA2** — **RP3NA** — **I** — **10** — □ — □ — □ — □ — □ — □

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
—	—	I: Incremental * The Simple absolute encoder is also considered type "I".	10: 10W Servo motor	4: Ball screw 4mm 2: Ball screw 2mm 1: Ball screw 1mm 4S: Lead screw 4mm 2S: Lead screw 2mm 1S: Lead screw 1mm	30: 30mm 50: 50mm	A1: ACON ASEL A3: AMEC ASEP 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.

CE RoHS

Power-saving



Technical References → Appendix P.5

POINT Notes on selection

(1) The screw is not equipped with an anti-rotation device, so please attach a guide or similar locking device to the tip of the screw prior to use. (If there is no anti-rotation device attached, the screw cannot extend or retract.) When connecting the anti-rotation device to the rod, do not use a floating joint. Please refer to page A-11 for the instruction details.
(2) The horizontal payload is the value when the actuator uses an external guide.
(3) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2G for lead 1, if used vertically and for lead screw specification). The acceleration limit is the value indicated above.
(4) Do not apply an external force on the rod in any direction other than the direction the rod is moving in.
(5) If the actuator is used vertically, pay attention to rod contact because the rod will come down when the power is turned off.
(6) See page A-71 for details on push motion.

Actuator Specifications

■ Leads and Payloads

Model number	Motor output (W)	Feed screw	Lead (mm)	Max. Load Capacity Horizontal (kg)	Max. Load Capacity Vertical (kg)	Rated thrust (N)	Positioning Repeatability (mm)	Stroke (mm)
RCA2-RP3NA-I-10-4-①-②-③-④	10	Ball screw	4	0.75	0.25	42.7	±0.02	30 50
RCA2-RP3NA-I-10-2-①-②-③-④			2	1.5	0.5	85.5		
RCA2-RP3NA-I-10-1-①-②-③-④			1	3	1	170.9		
RCA2-RP3NA-I-10-4S-①-②-③-④	10	Lead screw	4	0.25	0.125	25.1	±0.05	30 50
RCA2-RP3NA-I-10-2S-①-②-③-④			2	0.5	0.25	50.3		
RCA2-RP3NA-I-10-1S-①-②-③-④			1	1	0.5	100.5		

■ Stroke and Maximum Speed

Lead	Stroke	30 (mm)	50 (mm)
Ball screw	4	200	
	2	100	
	1	50	
Lead screw	4	200	
	2	100	
	1	50	

(Unit: mm/s)

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

①Stroke

Stroke (mm)	Standard price	
	Feed screw	
	Ball screw	Lead screw
30	—	—
50	—	—

③Cable 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 RCA2 is the robot cable.
* See page A-59 for cables for maintenance.

④Options

Name	Option code	See page	Standard price
Brake	**B**	→ A-42	—
Connector cable exits from the left	**K1**	→ A-51	—
Connector cable exits from the front	**K2**	→ A-51	—
Connector cable exits from the right	**K3**	→ A-51	—
Power-saving specification	**LA**	→ A-52	—

Actuator Specifications

Item		Description
Drive System		Ball screw/Lead screw, ø4mm, rolled C10
Lost Motion		Ball screw: 0.1mm or less Lead screw: 0.3mm or less (initial value)
Frame		Material: Aluminum, white alumite treated
Ambient operating temperature, humidity		0 to 40°C, 85% RH or less (Non-condensing)
Service life	Lead screw specification	Horizontal specification: 10 million cycles, Vertical specification: 5 million cycles
	Ball screw specification	5,000km or 50 million cycles

Dimensional Drawings

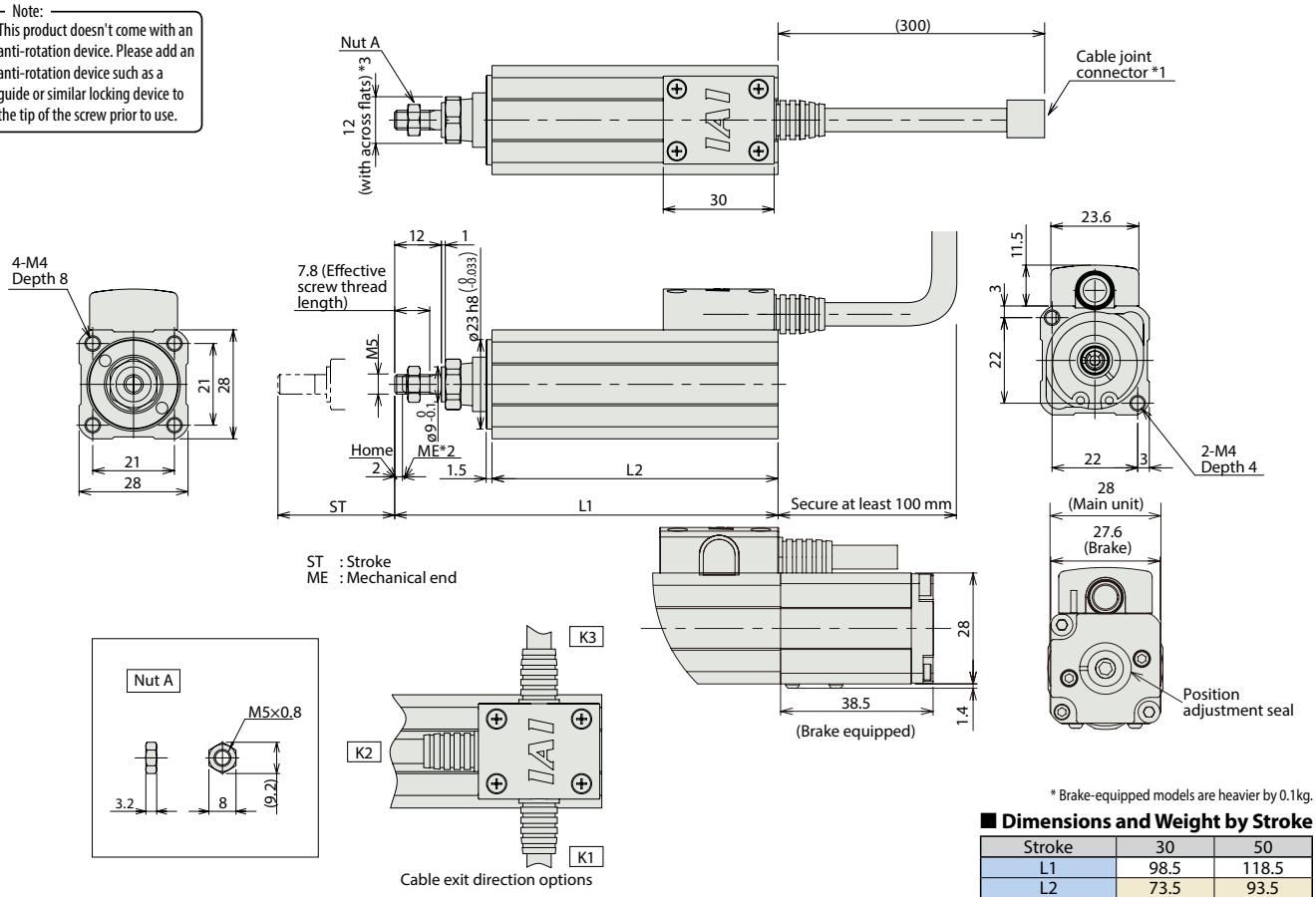
CAD drawings can be downloaded from the website. www.intelligentactuator.com

2D CAD 3D CAD

For Special Orders Appendix P.15

(*1) Connect the motor-encoder integrated cable here.
(*2) During home return, be careful to avoid interference from peripheral objects because the slider travels until the mechanical end.
(*3) The orientation of the nut varies depending on the product.

Note:
This product doesn't come with an anti-rotation device. Please add an anti-rotation device such as a guide or similar locking device to the tip of the screw prior to use.



* Brake-equipped models are heavier by 0.1kg.

■ Dimensions and Weight by Stroke

Stroke	30	50
L1	98.5	118.5
L2	73.5	93.5
Weight (kg)	0.2	0.22

②Applicable Controllers

RCA2 series actuators can be operated with the controllers indicated below. Select the type according to your intended application. * ACON-CY also can be used.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Solenoid Valve Type		AMEC-C-10I①-②-2-1	Easy-to-use controller, even for beginners	3 points	AC100V	2.4A rated	—	→ P537
		ASEP-C-10I①-②-2-0	Simple controller operable with the same signal as a solenoid valve		DC24V	(Standard) 1.3A rated 4.4A max. (Power-saving) 1.3A rated 2.5A max.	—	→ P547
Solenoid valve multi-axis type PIO specification		MSEP-C-③~~-②-2-0	Positioner type based on PIO control, allowing up to 8 axes to be connected				—	→ P563
Solenoid valve multi-axis type Network specification		MSEP-C-③~~-Ⅳ-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points				
Positioner type		ACON-C-10I①-②-2-0	Positioning is possible for up to 512 points	512 points			—	→ P631
Safety-Compliant Positioner Type		ACON-CG-10I①-②-2-0					—	
Pulse Train Input Type (Differential Line Driver)		ACON-PL-10I①-②-2-0	Pulse train input type with differential line driver support	(—)			—	
Pulse Train Input Type (Open Collector)		ACON-PO-10I①-②-2-0	Pulse train input type with open collector support				—	
Serial Communication Type		ACON-SE-10I①-N-0-0	Dedicated Serial Communication	64 points			—	
Program Control Type		ASEL-CS-1-10I①-②-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			—	→ P675

* This is for the single-axis ASEL. * Enter the code "LA" in ① when the power-saving specification is specified. * ② indicates I/O type (NP/PN).
* ③ indicates number of axes (1 to 8). * Ⅳ indicates field network specification symbol.