

RCA2-TCA3NA

Robo Cylinder, Mini Table Type, Short-Length Compact Type, Actuator Width 32mm, 24V Servo Motor, Ball Screw Specification/Lead Screw Specification

Model Specification Items	RCA2 — TCA3NA — I — 10 — <input type="checkbox"/> — <input type="checkbox"/> — <input type="checkbox"/> — <input type="checkbox"/> — <input type="checkbox"/>	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 <input type="checkbox"/> <input type="checkbox"/> : Custom Length	See options below.			

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



Power-saving

Technical References Appendix P.5



- (1) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2G for 1mm-Lead, if used vertically and for lead screw specification). The acceleration limit is the value indicated above.
- (2) If the actuator is used vertically, pay attention to rod contact because the rod will come down when the power is turned off.
- (3) 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) Vertical (kg)	Rated thrust (N)	Positioning Repeatability (mm)	Stroke (mm)
RCA2-TCA3NA-I-10-4- <input type="checkbox"/> - <input type="checkbox"/> - <input type="checkbox"/> - <input type="checkbox"/>	10	Ball screw	4	0.75 0.25	42.7	±0.02	30 50
RCA2-TCA3NA-I-10-2- <input type="checkbox"/> - <input type="checkbox"/> - <input type="checkbox"/> - <input type="checkbox"/>			2	1.5 0.5	85.5		
RCA2-TCA3NA-I-10-1- <input type="checkbox"/> - <input type="checkbox"/> - <input type="checkbox"/> - <input type="checkbox"/>			1	3 1	170.9		
RCA2-TCA3NA-I-10-4S- <input type="checkbox"/> - <input type="checkbox"/> - <input type="checkbox"/> - <input type="checkbox"/>	10	Lead screw	4	0.25 0.125	25.1	±0.05	30 50
RCA2-TCA3NA-I-10-2S- <input type="checkbox"/> - <input type="checkbox"/> - <input type="checkbox"/> - <input type="checkbox"/>			2	0.5 0.25	50.3		
RCA2-TCA3NA-I-10-1S- <input type="checkbox"/> - <input type="checkbox"/> - <input type="checkbox"/> - <input type="checkbox"/>			1	1 0.5	100.5		

Stroke and Maximum Speed

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

Code explanation Stroke Applicable controller Cable length Options *See page A-71 for details on push motion. (Unit: mm/s)

① Stroke

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

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 RCA2 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	—
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
Allowable dynamic moment (Note)	Ma: 9.9 N·m, Mb: 9.9 N·m, Mc: 3.3 N·m
Allowable static moment	Ma: 14.1 N·m, Mb: 14.1 N·m, Mc: 6.7 N·m
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)
Service life	Lead screw specification
	Ball screw specification

(Note) For cases when the guide service life has been set to 5,000km.
(*) For 1mm-lead: 3,000km or 50 million cycles.

Dimensional Drawings

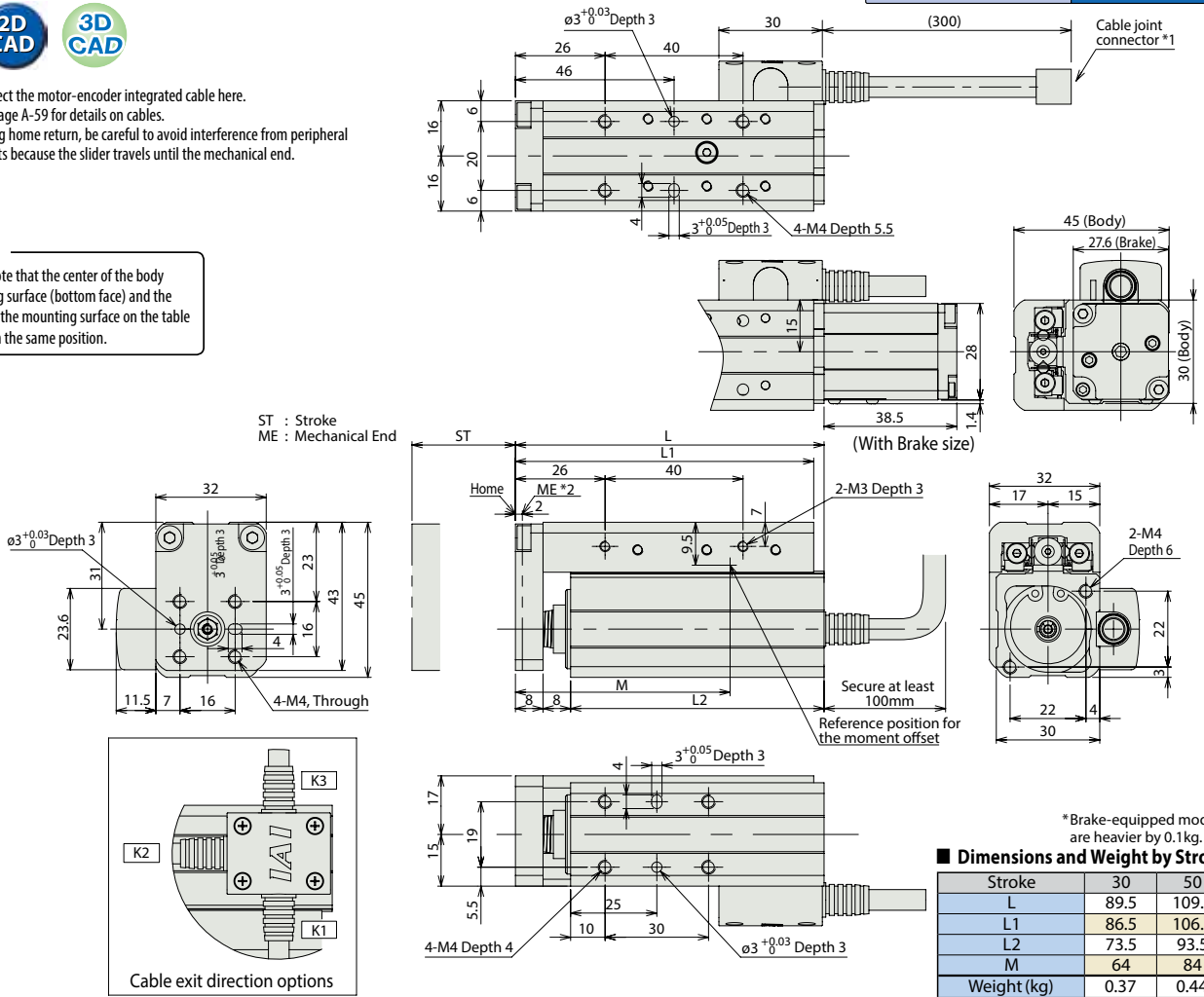
CAD drawings can be downloaded from the website. www.intelligentactuator.com



- (*1) Connect the motor-encoder integrated cable here. See page A-59 for details on cables.
- (*2) During home return, be careful to avoid interference from peripheral objects because the slider travels until the mechanical end.

Note:
Please note that the center of the body mounting surface (bottom face) and the center of the mounting surface on the table are not in the same position.

For Special Orders Appendix P.15



Applicable 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					→ P547
Solenoid valve multi-axis type PIO specification		MSEP-C-③-④-⑤-2-0	Positioner type based on PIO control, allowing up to 8 axes to be connected	256 points	DC24V	(Standard) 1.3A rated 4.4A max.	—	→ P563
Solenoid valve multi-axis type Network specification		MSEP-C-③-④-⑤-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected					
Positioner type		ACON-C-10I①-②-2-0	Positioning is possible for up to 512 points	512 points	DC24V	(Power-saving) 1.3A rated 2.5A max.	—	→ 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	(—)	DC24V	(Power-saving) 1.3A rated 2.5A max.	—	→ P631
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	DC24V	(Power-saving) 1.3A rated 2.5A max.	—	→ P675
Program Control Type		ASEL-CS-1-10I①-②-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points	DC24V	(Power-saving) 1.3A rated 2.5A max.	—	→ P675

* This is for the single-axis ASEL. * Enter the code "LA" in ① when the power-saving specification is specified. * ① indicates I/O type (NP/PN). * ③ indicates number of axes (1 to 8). * ④ indicates field network 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