

RCA2-TCA3NA

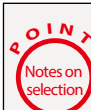
ROBO Cylinder Mini Rod Type Short-Length Compact Type Actuator Width 32 mm 24V Servo Motor
Ball Screw Specification/Lead Screw Specification

Model Description	RCA2	TCA3NA	I	10					
	Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible controllers	Cable length	Option
			I: Incremental specification * Model number is "I" when used with simple absolute unit.	10: Servo motor 10W	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	A3: ACON-CYB/PLB/POB A5: ACON-CB/CGB A6: RCON RSEL	N: None P: 1 m S: 3 m M: 5 m X□□: Length Designation	K2: Connector cable exits from the front LA: Power-saving specification

* See page 14 for details on the model descriptions.



Power-saving specification



- (1) 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.
- (2) If the actuator is used vertically, pay attention to rod contact because the rod will come down when the power is turned off.

Actuator Specifications Table

Leads and Payloads

Model	Motor output (W)	Feed screw	Lead (mm)	Maximum payload Horizontal (kg)	Maximum payload Vertical (kg)	Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
RCA2-TCA3NA-I-10-4-①-②-③-④	10	Ball screw	4	0.75	0.25	42.7	±0.02	30 50
RCA2-TCA3NA-I-10-2-①-②-③-④			2	1.5	0.5	85.5		
RCA2-TCA3NA-I-10-1-①-②-③-④			1	3	1	170.9		
RCA2-TCA3NA-I-10-4S-①-②-③-④	10	Lead screw	4	0.25	0.125	25.1	±0.05	30 50
RCA2-TCA3NA-I-10-2S-①-②-③-④			2	0.5	0.25	50.3		
RCA2-TCA3NA-I-10-1S-①-②-③-④			1	1	0.5	100.5		

Legend ① Stroke ② Compatible Controllers ③ Cable length ④ Option

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)

① Stroke list

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

④ Options

Title	Option code	See page	Standard price
Connector cable exits from the front	K2	—	—
Power-saving specification	LA	—	—

③ Cable Length

Type	Cable symbol	Standard price
Standard type (Robot cable)	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.

Actuator Specifications

Item	Description
Drive System	Ball screw/Lead screw, ø4mm, rolled C10
Lost motion	Ball screw: 0.1mm or less Lead screw: 0.3 mm or less
Frame	Material: Aluminum, white alumite treated
Dynamic allowable moment (see note)	Ma: 9.9 N·m Mb: 9.9 N·m Mc: 3.3 N·m
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)
Service life	Lead screw specification
	Ball screw specification
	Horizontal specification: 10 million cycles, Vertical specification: 5 million cycles
	5,000 km or 50 million cycles (*)

(Note) For cases when the guide service life has been set to 5,000km.

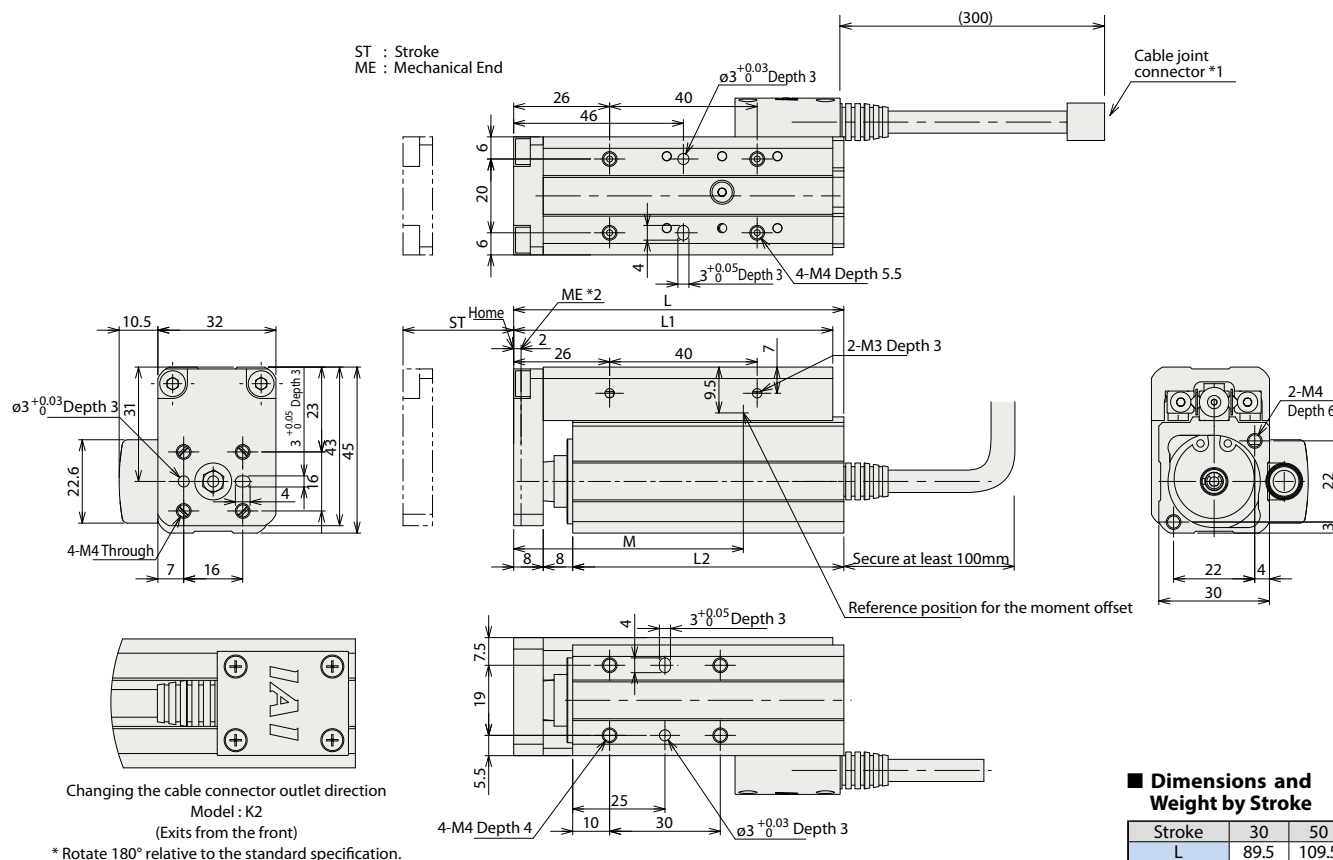
(*) For lead 1: 3,000 km or 50 million cycles

Dimensional Drawings

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



- *1 Connect the motor and encoder cables.
- *2 During home return, be careful to avoid interference from peripheral objects because the rod travels until the mechanical end.



■ Dimensions and Weight by Stroke

Stroke	30	50
L	89.5	109.5
L1	86.5	106.5
L2	73.5	93.5
M	64	84
Mass (kg)	0.37	0.44

Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Power supply voltage	Control method															Maximum number of positioning points	Reference page
				Positioner	Pulse-train	Program	Network option *1													
							DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM		
ACON-CB/CGB		1	24VDC	 * Option	 * Option	-										-	-	512 (768 for network spec.)	Please contact IAI for more information.	
ACON-CYB/PLB/POB		1		 * Option	 * Option	-	-	-	-	-	-	-	-	-	-	-	-	-		64
RCON		16 (ML3,SSN,ECM are 8)		-	-	-					-	-								128 (No position data for ML3, SSN, ECM),
RSEL		8		-	-					-	-	-					-	-		36000

*1 For network abbreviations such as DV and CC, please contact IAI.

More controller info is available in the General Controller Catalog PDF.

