

RCA-RA3R

ROBO Cylinder Rod Type ø32mm Diameter 24V Servo Motor Side-Mounted Motor

■ Configuration: **RCA** — **RA3R** — **I** — **20** — — — — —

Series — Type — Encoder — Motor — Lead — Stroke — Compatible Controllers — Cable Length — Option

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

20: 20W Servo Motor

Lead: 10 : 10mm
 5 : 5mm
 2.5 : 2.5mm

Stroke: 50 : 50mm
 200 : 200mm (50mm pitch increments)

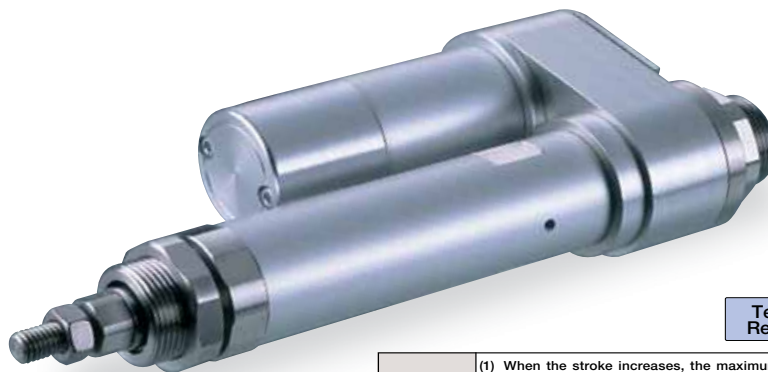
Compatible Controllers: A1 : ACON
 RACON
 ASEL
 A3 : AMEC
 ASEP

Cable Length: N : None
 P : 1m
 S : 3m
 M : 5m
 X : Custom
 R : Robot cable

Option: See Options below

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

Power-saving



Technical References P. A-5

- 4 POINT Notes on Selection**
- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
 - (2) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 2.5mm-lead model). This is the upper limit of the acceleration.
 - (3) The values for the horizontal load capacity assume the use of an external guide, so that there is no external force from any direction other than the forward/backward direction of the rod.

Actuator Specifications						Stroke and Maximum Speed	
■ Lead and Load Capacity						Stroke	
Model	Motor Output (W)	Lead (mm)	Max. Load Capacity		Rated Thrust (N)	Stroke (mm)	50 ~ 200 (50mm increments)
			Horizontal (kg)	Vertical (kg)			
RCA-RA3R-I-20-10- <input type="checkbox"/> - <input type="checkbox"/> - <input type="checkbox"/> - <input type="checkbox"/>	20	10	4.0	1.5	36.2	50~200 (50mm increments)	500
RCA-RA3R-I-20-5- <input type="checkbox"/> - <input type="checkbox"/> - <input type="checkbox"/> - <input type="checkbox"/>		5	9.0	3.0	72.4		250
RCA-RA3R-I-20-2.5- <input type="checkbox"/> - <input type="checkbox"/> - <input type="checkbox"/> - <input type="checkbox"/>		2.5	18.0	6.5	144.8		125

Legend Stroke Compatible controllers Cable length Options (Unit: mm/s)

① Stroke List

Stroke (mm)	Standard Price
50	-
100	-
150	-
200	-

③ Cable List

Type	Cable Symbol	Standard Price
Standard	P (1m)	-
	S (3m)	-
	M (5m)	-
Special Lengths	X06 (6m) ~ X10 (10m)	-
	X11 (11m) ~ X15 (15m)	-
	X16 (16m) ~ X20 (20m)	-
Robot Cable	R01 (1m) ~ R03 (3m)	-
	R04 (4m) ~ R05 (5m)	-
	R06 (6m) ~ R10 (10m)	-
	R11 (11m) ~ R15 (15m)	-
	R16 (16m) ~ R20 (20m)	-

* See page A-39 for cables for maintenance.

④ Option List

Name	Option Code	See Page	Standard Price
Brake	B	→ A-25	-
Foot bracket	FT	→ A-29	-
Flange bracket (front)	FL	→ A-27	-
Flange bracket (back)	FLR	→ A-28	-
Home sensor	HS	→ A-32	-
Power-saving	LA	→ A-32	-
Knuckle joint	NJ	→ A-34	-
Reversed-home	NM	→ A-33	-
Clevis Bracket	QR	→ A-34	-
Back-mounting plate	RP	→ A-35	-
Trunnion bracket (front)	TRF	→ A-38	-

* The home sensor (HS) cannot be used on the reversed-home models.

Actuator Specifications

Item	Description
Drive System	Ball screw ø8mm C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum (white alumite treated)
Rod Diameter	ø16mm
Non-rotating accuracy of rod	±1.0 deg
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)

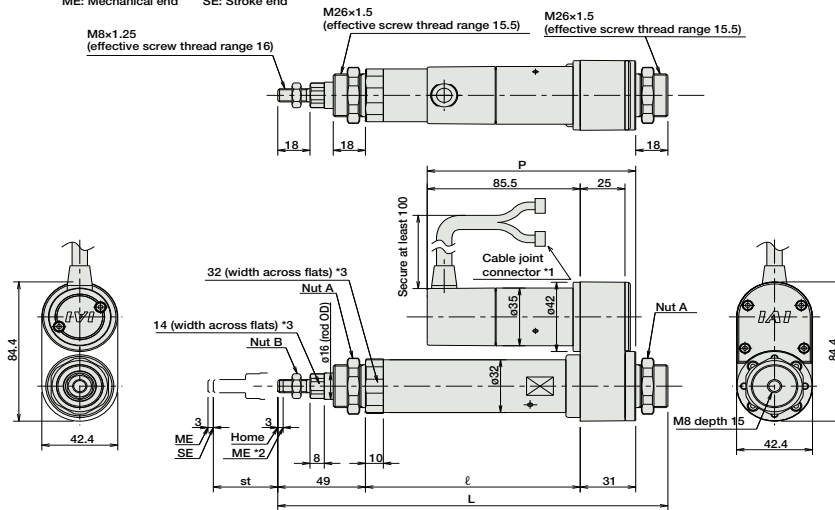
205 RCA-RA3R

Dimensions

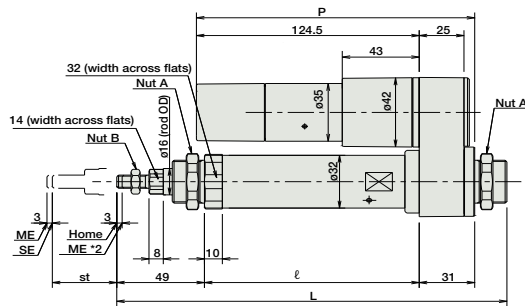
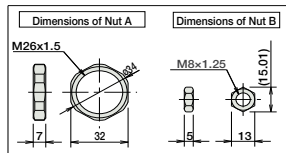
For Special Order P. A-9

- *1 A motor-encoder cable is connected here. See page A-39 for details on cables.
- *2 When homing, the rod moves to the ME; therefore, please watch for any interference with the surrounding objects.
ME: Mechanical end SE: Stroke end
- *3. The orientation of the bolt will vary depending on the product.

[No Brake]



[Brake-Equipped]



■ Dimensions/Weight by Stroke

RCA-RA3R (without brake)				
Stroke	50	100	150	200
L	218	268	318	368
r	120	170	220	270
P	116.5			
Weight (kg)	0.8	0.9	1.0	1.1
RCA-RA3R (with brake)				
Stroke	50	100	150	200
L	218	268	318	368
r	120	170	220	270
P	155.5			
Weight (kg)	1.0	1.1	1.2	1.3

② Compatible Controllers

The RCA 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		AMEC-C-20SI-① NP-2-1	Easy-to-use controller, even for beginners	3 points	AC100V	2.4A rated	-	→ P477
		ASEP-C-20SI-① NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types. No homing necessary with simple absolute type.					
Splash-Proof Solenoid Valve Type		ASEP-CW-20SI-① NP-2-0						→ P487
Positioner Type		ACON-C-20SI-① NP-2-0	Positioning is possible for up to 512 points	512 points	DC24V	1.7A rated 5.1A peak	-	→ P535
Safety-Compliant Positioner Type		ACON-CG-20SI-① NP-2-0						
Pulse Train Input Type (Differential Line Driver)		ACON-PL-20SI-① NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	1.7A rated 5.1A peak	-	→ P535
Pulse Train Input Type (Open Collector)		ACON-PO-20SI-① NP-2-0	Pulse train input type with open collector support					
Serial Communication Type		ACON-SE-20SI-① N-0-0	Dedicated to serial communication	64 points				
Field Network Type		RACON-20S ①	Dedicated to field network	768 points				→ P503
Program Control Type		ASEL-C-1-20SI-① NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points				→ P567

* This is for the single-axis ASEL.
* ① is a placeholder for the code "LA" if the power-saving option is specified.

- 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