

# RCA2-GD3N

ROBO Cylinder Mini Rod type Short Length Double-Guide Free Mount type Actuator Width 28mm 24V servo motor/Lead screw specification

■ Model Description **RCA2 – GD3N – I – 10 – [ ] – 30 – [ ] – [ ] – [ ]**

Series — Type — Encoder type — Motor type — Lead — Stroke — Compatible Controllers — Cable length — Option

I: Incremental specification  
10: Servo Motor 10W  
4S: Lead screw 4mm  
2S: Lead screw 2mm  
1S: Lead screw 1mm  
\* Model number is "I" when used with simple absolute unit.

A1: ACON  
RACON  
ASEL  
A3: ASEP

N: None  
P: 1m  
S: 3m  
M: 5m  
X[ ]: Length Designation

Following options Refer to price table

\*See page 11 for details on the model descriptions.



**POINT**  
Notes on selection

- (1) The horizontal payload is the value when used in combination with the guide so that a radial load and moment load are not applied to the rod.
- (2) See P99 for correlation diagrams of the tip load and service life when a guide is not installed.
- (3) The load capacity is the value when operated at 0.2G acceleration. Acceleration limit is value indicated above.

## Actuator Specification Table

### Leads and Payloads

Model	Motor output (W)	Feed screw	Lead (mm)	Maximum payload		Rated thrust (N)	Positioning Repeatability (mm)	Stroke (mm)
				Horizontal (kg)	Vertical (kg)			
RCA2-GS3N-I-10-4S-30-①-②-③	10	Lead screw	4	0.25	0.125	25.1	±0.05	30
RCA2-GS3N-I-10-2S-30-①-②-③			2	0.5	0.25	50.3		
RCA2-GS3N-I-10-1S-30-①-②-③			1	1	0.5	100.5		

Legend ① Compatible Controllers ② Cable length ③ Option

### Stroke and Maximum Speed

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

(Unit = mm/s)

### Price list (by stroke)

Stroke (mm)	Type code
	<b>GD3N</b>
	Encoder type
	Incremental
	Feed screw
Lead screw	
<b>30</b>	—

### (2) Cable length (price chart)

Type	Cable symbol	Standard price
Standard type (Robot cable)	<b>P</b> (1m)	—
	<b>S</b> (3m)	—
	<b>M</b> (5m)	—
Special length	<b>X06</b> (6m) to <b>X10</b> (10m)	—
	<b>X11</b> (11m) to <b>X15</b> (15m)	—
	<b>X16</b> (16m) to <b>X20</b> (20m)	—
		—

\* Robot type cable comes as standard with the RCA2 actuator.  
\* See page 113 for maintenance cables.

### (3) Option price list (standard price)

Title	Option code	See page	Standard price
Change the cable connector outlet direction	<b>K2</b>	→P42	—

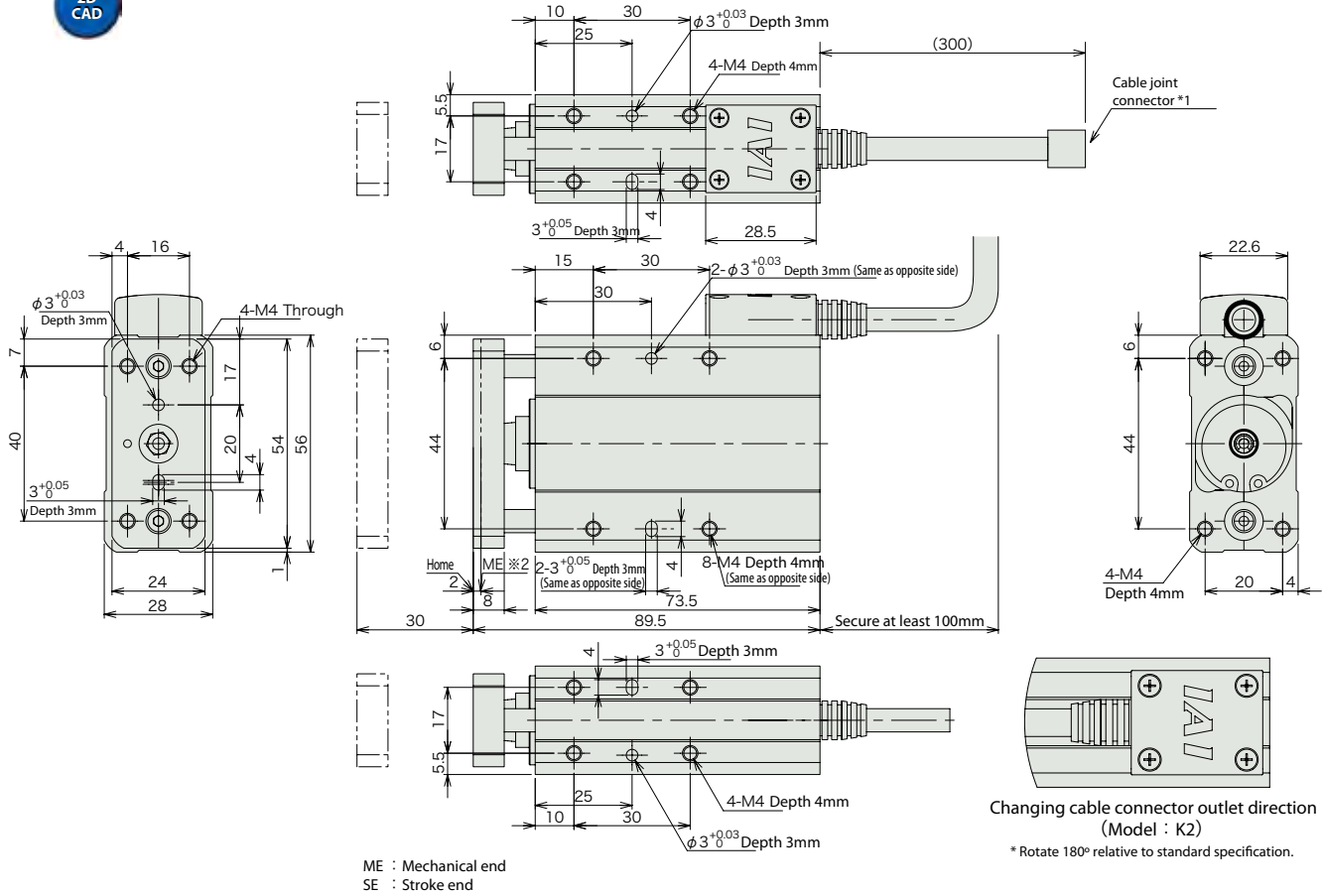
### Actuator Specification

Item	Description
Drive System	Lead screw, φ4mm, rolled C10
Backlash	0.3mm or less (initial value)
Frame	Material: Aluminum, white alumite treated
Ambient operating temperature, humidity	0 to 40 °C, 85% RH or less (no condensation)
Service life	Horizontal specification: 10 million cycles, Vertical specification: 5 million cycles

Dimensional Drawings

CAD drawings can be downloaded from the website. [www.intelligentactuator.com](http://www.intelligentactuator.com)

\*1 Connect the motor and encoder cables. See page 113 for cable details.  
\*2 During home return, be careful to avoid interference from peripheral objects because the slider travels until the mechanical end.



Dimensions and Weight by Stroke

Stroke	30
Mass (kg)	0.41

Compatible Controllers

RCA2 series actuators can be operated with the controllers indicated below. Select the type according to your intended application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference Page
Solenoid valve type		ASEP-C-10I-NP-2-0	Simple controller capable of operating with the same signal as the solenoid valve Supports the use of both the single solenoid and the double solenoid types Simple Absolute type makes the return to home unnecessary.	3 points	DC24V	See P109.	-	→P101
		ASEP-CW-10I-NP-2-0					-	
Positioner type		ACON-□-10I-NP-2-0 (Note 1)	Up to 512-points positioning possible By attaching a simple absolute unit (sold separately), the return to home becomes unnecessary.	512 points			-	See the ROBO Cylinder general catalog.
Program type		ASEL-C-1-10I-NP-2-0	Programmable type Capable of operating up to 2 axes Simple Absolute unit cannot be used.	1500 points			-	

(Note 1) ACON can be used with C/CG/CY/PL/PO/SE type. Also, ROBONET can be used.

Mini Slider type  
Mini Rod type  
Mini Table type  
Mini Linear Servo type  
Controller  
Compact  
Wide  
Flat  
Coupling  
Reverse-mounted

# RCA2-GD4N

ROBO Cylinder Mini Rod type Short Length Double-Guide Free Mount type Actuator Width 34mm 24V servo motor  
Ball screw specification/ Lead screw specification

<b>Model Description</b> <b>RCA2</b> — <b>GD4N</b> — <b>I</b> — <b>20</b> — <span style="border: 1px solid black; display: inline-block; width: 15px; height: 15px;"></span> — <b>30</b> — <span style="border: 1px solid black; display: inline-block; width: 15px; height: 15px;"></span> — <span style="border: 1px solid black; display: inline-block; width: 15px; height: 15px;"></span> — <span style="border: 1px solid black; display: inline-block; width: 15px; height: 15px;"></span>									
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.	20: Servo Motor 20W	6: Ball screw 6mm 4: Ball screw 4mm 2: Ball screw 2mm 6S: Lead screw 6mm 4S: Lead screw 4mm 2S: Lead screw 2mm	30: 30mm	A1: ACON RACON ASEL A3: ASEP	N: None P: 1m S: 3m M: 5m X□□: Length Designation	Following options Refer to price table	

\*See page 11 for details on the model descriptions.



- (1) The horizontal payload is the value when used in combination with the guide so that a radial load and moment load are not applied to the rod.
- (2) See P99 for correlation diagrams of the tip load and service life when a guide is not installed.
- (3) The load capacity is the value when operated at 0.2G acceleration. Acceleration limit is value indicated above.

## Actuator Specification Table

### Leads and Payloads

Model	Motor output (W)	Feed screw	Lead (mm)	Maximum payload		Rated thrust (N)	Positioning Repeatability (mm)	Stroke (mm)
				Horizontal (kg)	Vertical (kg)			
RCA2-GD4N-I-20-6-30-①-②-③	20	Ball screw	6	2	0.5	33.8	±0.02	30 (Fixed)
RCA2-GD4N-I-20-4-30-①-②-③			4	3	0.75	50.7		
RCA2-GD4N-I-20-2-30-①-②-③			2	6	1.5	101.5		
RCA2-GD4N-I-20-6S-30-①-②-③	20	Lead screw	6	0.25	0.125	19.9	±0.05	30 (Fixed)
RCA2-GD4N-I-20-4S-30-①-②-③			4	0.5	0.25	29.8		
RCA2-GD4N-I-20-2S-30-①-②-③			2	1	0.5	59.7		

Legend ① Compatible Controllers ② Cable length ③ Option

### Stroke and Maximum Speed

Lead	Stroke	
	6 (mm)	30 (mm)
Ball screw	6	270 <220>
	4	200
	2	100
Lead screw	6	220
	4	200
	2	100

\* < > Indicates Vertical Use (Unit = mm/s)

### Price list (by stroke)

Stroke (mm)	Type code	
	GD4N	
	Encoder type	
	Incremental	
	Feed screw	
30	Ball screw	Lead screw
	—	—

### (2) Cable length (price chart)

Type	Cable symbol	Standard price
Standard type (Robot cable)	P (1m)	—
	S (3m)	—
	M (5m)	—
Special length	X06 (6m) to X10 (10m)	—
	X11 (11m) to X15 (15m)	—
	X16 (16m) to X20 (20m)	—
		—

\* Robot type cable comes as standard with the RCA2 actuator.  
\* See page 113 for maintenance cables.

### (3) Option price list (standard price)

Title	Option code	See page	Standard price
Change the cable connector outlet direction	K2	→P44	—

### Actuator Specification

Item	Description
Drive System	Ball screw/ lead screw dia. 6mm, rolled C10
Backlash	Ball screw: 0.1mm or less/ Lead screw: 0.3mm or less
Frame	Material: Aluminum, white alumite treated
Ambient operating temperature, humidity	0 to 40 °C, 85% RH or less (no condensation)
Service life	Ball screw
	Lead screw

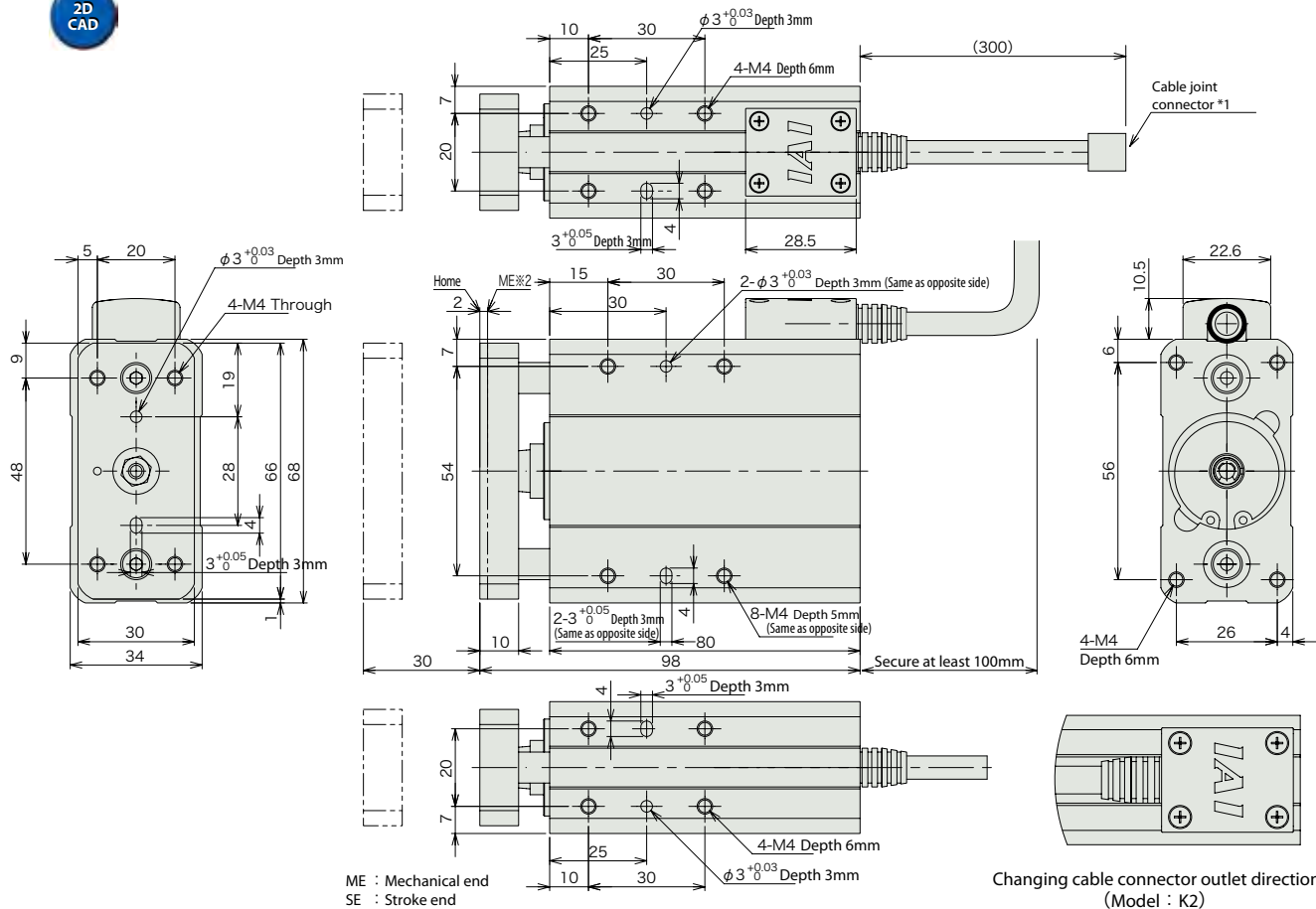
Dimensional Drawings

CAD drawings can be downloaded from the website. [www.intelligentactuator.com](http://www.intelligentactuator.com)



\*1 Connect the motor and encoder cables. See page 113 for cable details.

\*2 During home return, be careful to avoid interference from peripheral objects because the slider travels until the mechanical end.



Dimensions and Weight by Stroke

Stroke	30
Mass (kg)	0.64

Compatible Controllers

RCA2 series actuators can be operated with the controllers indicated below. Select the type according to your intended application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference Page	
Solenoid valve type		ASEP-C-20I-NP-2-0	Simple controller capable of operating with the same signal as the solenoid valve Supports the use of both the single solenoid and the double solenoid types Simple Absolute type makes the return to home unnecessary.	3 points	DC24V	See P109.	-	→P101	
		ASEP-CW-20I-NP-2-0					-		
Positioner type		ACON-□-20I-NP-2-0 (Note 1)	Up to 512-points positioning possible By attaching a simple absolute unit (sold separately), the return to home becomes unnecessary.	512 points			-	-	See the ROBO Cylinder general catalog.
Program type		ASEL-C-1-20I-NP-2-0	Programmable type Capable of operating up to 2 axes Simple Absolute unit cannot be used.	1500 points			-	-	

(Note 1) ACON can be used with C/CG/CY/PL/PO/SE type. Also, ROBONET can be used.

- Mini Slider type
- Mini Rod type
- Mini Table type
- Mini Linear Servo type
- Controller
- Compact
- Wide
- Flat
- Coupling
- Reverse-mounted

# RCA2-SD3N

ROBO Cylinder Mini Rod type Short Length Double-Guide Slide Unit type Actuator Width 60mm 24V servo motor Lead screw specification

■ Model Description		<b>RCA2</b>	<b>SD3N</b>	<b>I</b>	<b>10</b>				
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length		
		I: Incremental specification * Model number is "I" when used with simple absolute unit.	10: Servo Motor 10W	4S: Lead screw 4mm 2S: Lead screw 2mm 1S: Lead screw 1mm	25: 25mm 50: 50mm	A1: ACON RACON ASEL A3: ASEP	N: None P: 1m S: 3m M: 5m X□: Length Designation		

\*See page 11 for details on the model descriptions.



- (1) The horizontal payload is the value when used in combination with the guide so that a radial load and moment load are not applied to the rod. See P99 for correlation diagrams of the tip load and service life when a guide is not installed. See drawing (→P99).
- (2) The load capacity is the value when operated at 0.2G acceleration. Acceleration limit is value indicated above.
- (3) The vertical payload is the numeric value when the main unit is fixed and the side bracket is moved. Please note that the main unit cannot be moved in the case of vertical operation.

## Actuator Specification Table

### Leads and Payloads

Model	Motor output (W)	Feed screw	Lead (mm)	Maximum payload		Rated thrust (N)	Positioning Repeatability (mm)	Stroke (mm)
				Horizontal (kg)	Vertical (kg)			
RCA2-SD3N-I-10-4S-30-①-②-③	10	Lead screw	4	0.25	0.125	25.1	±0.05	25 50
RCA2-SD3N-I-10-2S-30-①-②-③			2	0.5	0.25	50.3		
RCA2-SD3N-I-10-1S-30-①-②-③			1	1	0.5	100.5		

Legend ① Compatible Controllers ② Cable length ③ Option

(\*1)When main unit side is fixed

(Unit = mm/s)

### Stroke and Maximum Speed

Lead screw	Stroke	
	Lead	25/50 (mm)
Lead screw	4	200
	2	100
	1	50

### Price list (by stroke)

(1) Stroke (mm)	Type code
	<b>SD3N</b>
	Encoder type
	Incremental
	Feed screw
Lead screw	
<b>25</b>	-
<b>50</b>	-

### (2) Cable length (price chart)

Type	Cable symbol	Standard price
Standard type (Robot cable)	<b>P</b> (1m)	-
	<b>S</b> (3m)	-
	<b>M</b> (5m)	-
Special length	<b>X06</b> (6m) to <b>X10</b> (10m)	-
	<b>X11</b> (11m) to <b>X15</b> (15m)	-
	<b>X16</b> (16m) to <b>X20</b> (20m)	-

\* Robot type cable comes as standard with the RCA2 actuator.

\* See page 113 for maintenance cables.

### Actuator Specification

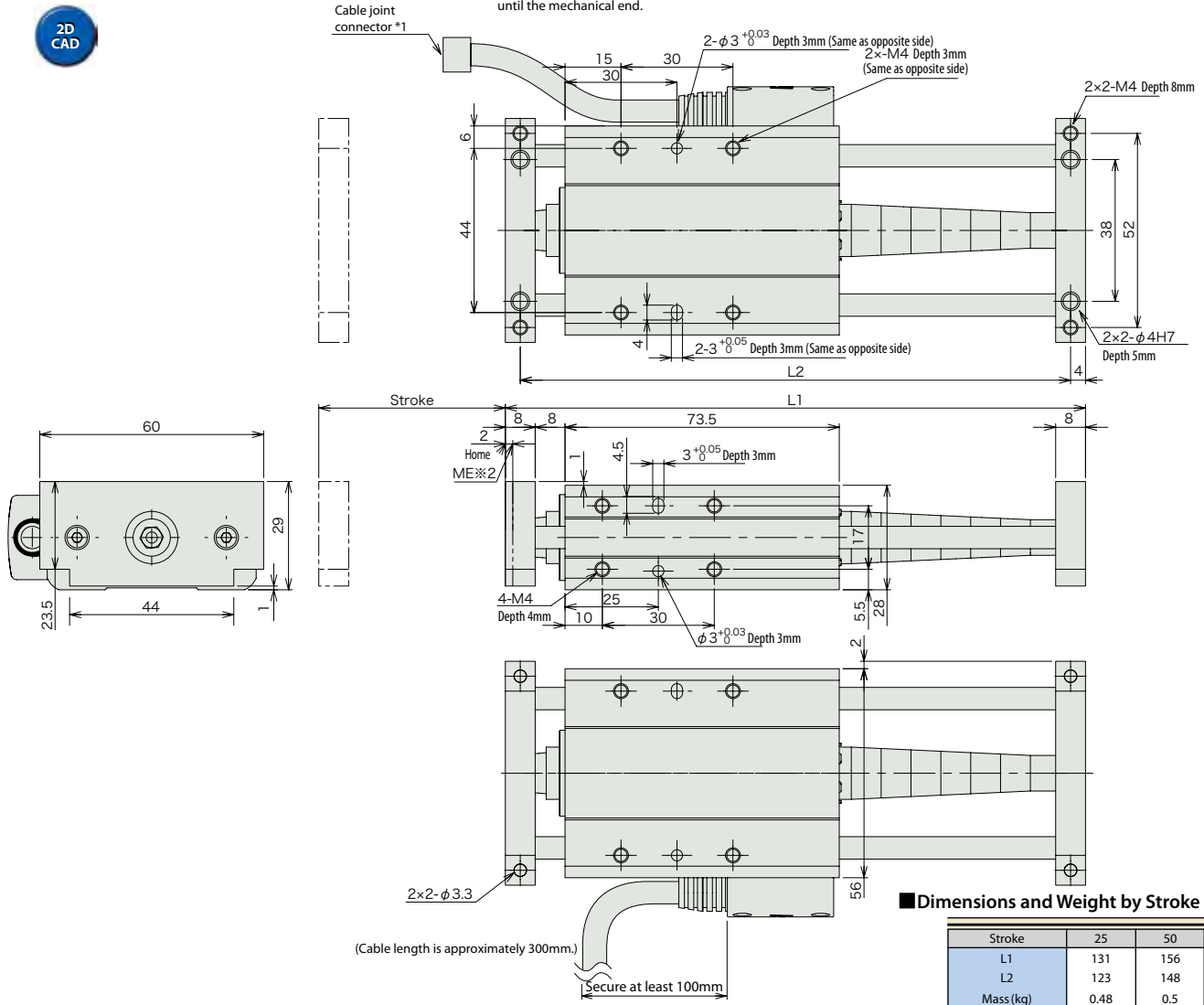
Item	Description
Drive System	Lead screw, φ4mm, rolled C10
Backlash	0.3mm or less (initial value)
Frame	Material: Aluminum, white alumite treated
Ambient operating temperature, humidity	0 to 40 °C, 85% RH or less (no condensation)
Service life	Horizontal specification: 10 million cycles Vertical specification: 5 million cycles

Dimensional Drawings

CAD drawings can be downloaded from the website. [www.intelligentactuator.com](http://www.intelligentactuator.com)



\*1 Connect the motor and encoder cables. See page 113 for cable details.  
 \*2 During home return, be careful to avoid interference from peripheral objects because the slider travels until the mechanical end.



■ Dimensions and Weight by Stroke

Stroke	25	50
L1	131	156
L2	123	148
Mass (kg)	0.48	0.5

Compatible Controllers

RCA2 series actuators can be operated with the controllers indicated below. Select the type according to your intended application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference Page
Solenoid valve type		ASEP-C-10I-NP-2-0	Simple controller capable of operating with the same signal as the solenoid valve. Supports the use of both the single solenoid and the double solenoid types. Simple Absolute type makes the return to home unnecessary.	3 points	DC24V	See P109.	-	→P101
		ASEP-CW-10I-NP-2-0					-	
Positioner type		ACON-□-10I-NP-2-0 (Note 1)	Up to 512-points positioning possible. By attaching a simple absolute unit (sold separately), the return to home becomes unnecessary.	512 points			-	See the ROBO Cylinder general catalog.
Program type		ASEL-C-1-10I-NP-2-0	Programmable type. Capable of operating up to 2 axes. Simple Absolute unit cannot be used.	1500 points			-	

(Note 1) ACON can be used with C/CG/CY/PL/PO/SE type. Also, ROBONET can be used.

- Mini Slider type
- Mini Rod type
- Mini Table type
- Mini Linear Servo type
- Controller
- Compact
- Wide
- Flat
- Coupling
- Reverse-mounted

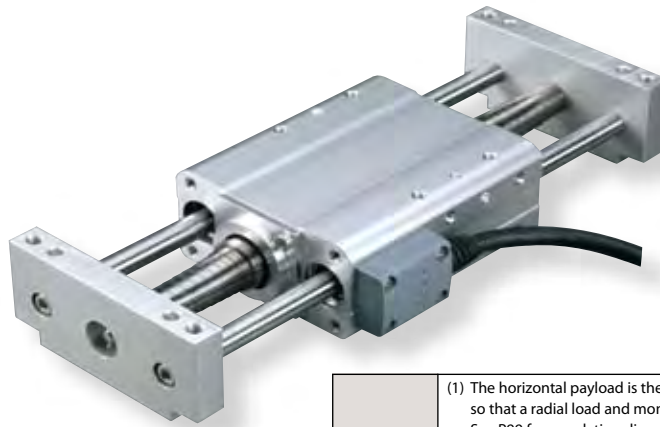
# RCA2-SD4N

ROBO Cylinder Mini Rod type Short Length Double-Guide Slide Unit type Actuator Width 72mm 24V servo motor  
Ball screw specification/ Lead screw specification

■ Model Description **RCA2 – SD4N – I – 20** – [ ] – [ ] – [ ] – [ ]

Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length
		I: Incremental specification * Model number is "I" when used with simple absolute unit.	20: Servo Motor 20W	6: Ball screw 6mm 4: Ball screw 4mm 2: Ball screw 2mm 6S: Lead screw 6mm 4S: Lead screw 4mm 2S: Lead screw 2mm	25: 25mm 50: 50mm 75: 75mm	A1: ACON RACON ASEL A3: ASEP	N: None P: 1m S: 3m M: 5m X□: Length Designation

\*See page 11 for details on the model descriptions.



**POINT**  
Notes on selection

- (1) The horizontal payload is the value when used in combination with the guide so that a radial load and moment load are not applied to the rod. See P99 for correlation diagrams of the tip load and service life when a guide is not installed. See drawing (→P99).
- (2) Value when operated with payload acceleration of 0.3G G.) Acceleration limit is value indicated above.
- (3) The vertical payload is the numeric value when the main unit is fixed and the side bracket is moved. Please note that the main unit cannot be moved in the case of vertical operation.

## Actuator Specification Table

### Leads and Payloads

Model	Motor output (W)	Feed screw	Lead (mm)	Maximum payload		Rated thrust (N)	Positioning Repeatability (mm)	Stroke (mm)
				Horizontal (kg)	Vertical (kg)			
RCA2-SD4N-I-20-6-①-②-③	20	Ball screw	6	2	0.5 (*1)	33.8	±0.02	25
RCA2-SD4N-I-20-4-①-②-③			4	3	0.75 (*1)	50.7		50
RCA2-SD4N-I-20-2-①-②-③			2	6	1.5 (*1)	101.5		75
RCA2-SD4N-I-20-6S-①-②-③	20	Lead screw	6	0.25	0.125 (*1)	19.9	±0.05	25
RCA2-SD4N-I-20-4S-①-②-③			4	0.5	0.25 (*1)	29.8		50
RCA2-SD4N-I-20-2S-①-②-③			2	1	0.5 (*1)	59.7		75

Legend ① Stroke ② Compatible Controllers ③ Cable length

(\*1) When main unit side is fixed

### Stroke and Maximum Speed

Lead	Stroke	25 (mm)	50 to 75 (mm)
		Ball screw	6
Ball screw	4	200	200
	2	100	100
	Lead screw	6	200
Lead screw	4	200	200
	2	100	100

\* < > Indicates Vertical Use

(Unit = mm/s)

### (1) Price list (by stroke)

(1) Stroke (mm)	Type code	
	SD4N	
	Encoder type	
	Incremental	
	Feed screw	
	Ball screw	Lead screw
25	-	-
50	-	-
75	-	-

### (2) Cable length (price chart)

Type	Cable symbol	Standard price
Standard type (Robot cable)	P (1m)	-
	S (3m)	-
	M (5m)	-
Special length	X06 (6m) to X10 (10m)	-
	X11 (11m) to X15 (15m)	-
	X16 (16m) to X20 (20m)	-

\* Robot type cable comes as standard with the RCA2 actuator.

\* See page 113 for maintenance cables.

### Actuator Specification

Item	Description	
Drive System	Ball screw/ lead screw dia. 6mm, rolled C10	
Backlash	Ball screw: 0.1mm or less/ Lead screw: 0.3mm or less	
Frame	Material: Aluminum, white alumite treated	
Ambient operating temperature, humidity	0 to 40 °C, 85% RH or less (no condensation)	
Service life	Ball screw	5,000km
	Lead screw	Horizontal specification: 10 million cycles, Vertical specification: 5 million cycles

