



24 VDC Servo Motor

RCA

with dedicated controllers
ACON and ASEL

Series	Type	Base	Width	Model	Price	
RCA series	Coupling type	Aluminum base	Width 40mm	RCA-SA4C	49	
			Width 52mm	RCA-SA5C	51	
			Width 58mm	RCA-SA6C	53	
	Built-in type	Aluminum base	Width 40mm	RCA-SA4D	55	
			Width 52mm	RCA-SA5D	57	
			Width 58mm	RCA-SA6D	59	
		Iron base	Width 40mm	RCA-SS4D	61	
			Width 52mm	RCA-SS5D	63	
			Width 58mm	RCA-SS6D	65	
	Slider	Motor reversing type	Aluminum base	Width 40mm	RCA-SA4R	67
Width 52mm				RCA-SA5R	69	
Width 58mm				RCA-SA6R	71	
RCA series	Standard type	Coupling type	ø 32mm	RCA-RA3C	125	
			ø 37mm	RCA-RA4C	127	
			ø 32mm	RCA-RA3D	129	
		Built-in type	ø 37mm	RCA-RA4D	131	
			ø 32mm	RCA-RA3R	133	
			ø 37mm	RCA-RA4R	135	
	Single-guide type	Coupling type	ø 32mm	RCA-RGS3C	137	
			ø 37mm	RCA-RGS4C	139	
			ø 32mm	RCA-RGS3D	141	
		Built-in type	ø 37mm	RCA-RGS4D	143	
			ø 32mm	RCA-RGD3C	145	
			ø 37mm	RCA-RGD4C	147	
Double-guide type	Coupling type	ø 32mm	RCA-RGD3D	149		
		ø 37mm	RCA-RGD4D	151		
		ø 32mm	RCA-RGD3D	151		
RCA series	Arm Type	Aluminum base	Width 40mm	RCA-A4R	189	
			Width 52mm	RCA-A5R	191	
			Width 58mm	RCA-A6R	193	
RCACR series	Coupling type	Aluminum base	Width 40mm	RCACR-SA4C	243	
			Width 52mm	RCACR-SA5C	245	
	Built-in type	Aluminum base	Width 58mm	RCACR-SA6C	247	
			Width 52mm	RCACR-SA5D	249	
RCAW series	Rod type	Coupling type	Width 32mm	RCAW-RA3C	279	
			Built-in type	Width 32mm	RCAW-RA3D	279
			Motor reversing type	Width 32mm	RCAW-RA3R	279
	Rod type	Coupling type	Width 37mm	RCAW-RA4C	281	
			Built-in type	Width 37mm	RCAW-RA4D	281
			Motor reversing type	Width 37mm	RCAW-RA4R	281

- Controller - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller

- 40 mm
- 52 mm
- 58 mm
- 60 mm
- 68 mm
- 73 mm
- 80 mm

- Servo Motor
- 20w
- 30w
- 60w
- 100w
- 150w



19(20) 103(104) 187(188)
229(230) 269(270)

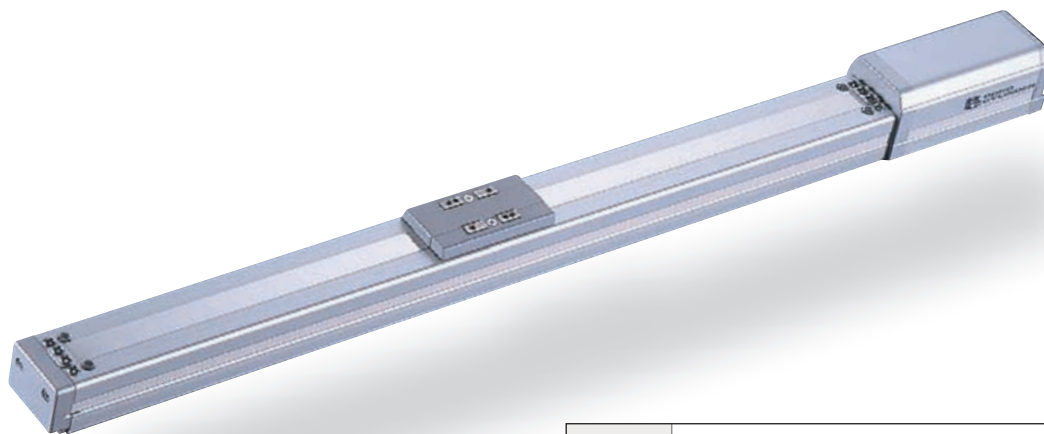
RCA-SA4C

ROBO Cylinder, Slider Type, Actuator Width 40mm, 24-V Servo Motor, Coupling Specification

Model Specification Items

RCA	SA4C	<input type="checkbox"/>	20	<input type="checkbox"/>	<input type="checkbox"/>	A1	<input type="checkbox"/>	<input type="checkbox"/>
Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
		I: Incremental specification A: Absolute specification	20: Servo motor 20W	10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm ?	A1: ACON ASEL	N: No cable P: 1m S: 3m M: 5m X <input type="checkbox"/> : Specified length R <input type="checkbox"/> : Robot cable	B: Brake FT: Foot bracket HS: Home check sensor NM: Reversed-home specification SR: Slider roller specification SS: Slider spacer

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 2.5). This is the maximum acceleration.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity (Note 1)	Rated thrust (N)	Stroke (mm)
			Horizontal (kg) Vertical (kg)		
RCA-SA4C-①-20-10-②-A1-③-④	20	10	4 1	19.6	50 ~ 400 (Set in 50-mm steps)
RCA-SA4C-①-20-5-②-A1-③-④		5	6 2.5	39.2	
RCA-SA4C-①-20-2.5-②-A1-③-④		2.5	8 4.5	78.4	

Explanation of numbers ① Encoder type ② Stroke ③ Cable length ④ Options

Stroke and Maximum Speed

Stroke / Lead	50 ~ 400
	(Set in 50-mm steps)
10	665
5	330
2.5	165

(Unit: mm/s)

Options

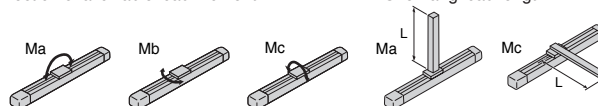
Name	Model	Page
Brake	B	P381
Foot bracket	FT	P383
Home sensor	HS	P385
Reversed-home specification	NM	P385
Slide roller specification	SR	P388
Slide spacer	SS	P388

Actuator Specifications

Item	Description
Drive method	Ball screw Ø8mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum with special alumite treatment
Allowable load moment	Ma: 2.7N·m Mb: 3.9N·m Mc: 6.8N·m
Overhang load length	Ma direction: 120mm or less, Mb/Mc directions: 120mm or less
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)

Direction of allowable load moment

Overhang load length



40 mm

52 mm

58 mm

60 mm

68 mm

73 mm

80 mm

Pulse Motor

20w

30w

60w

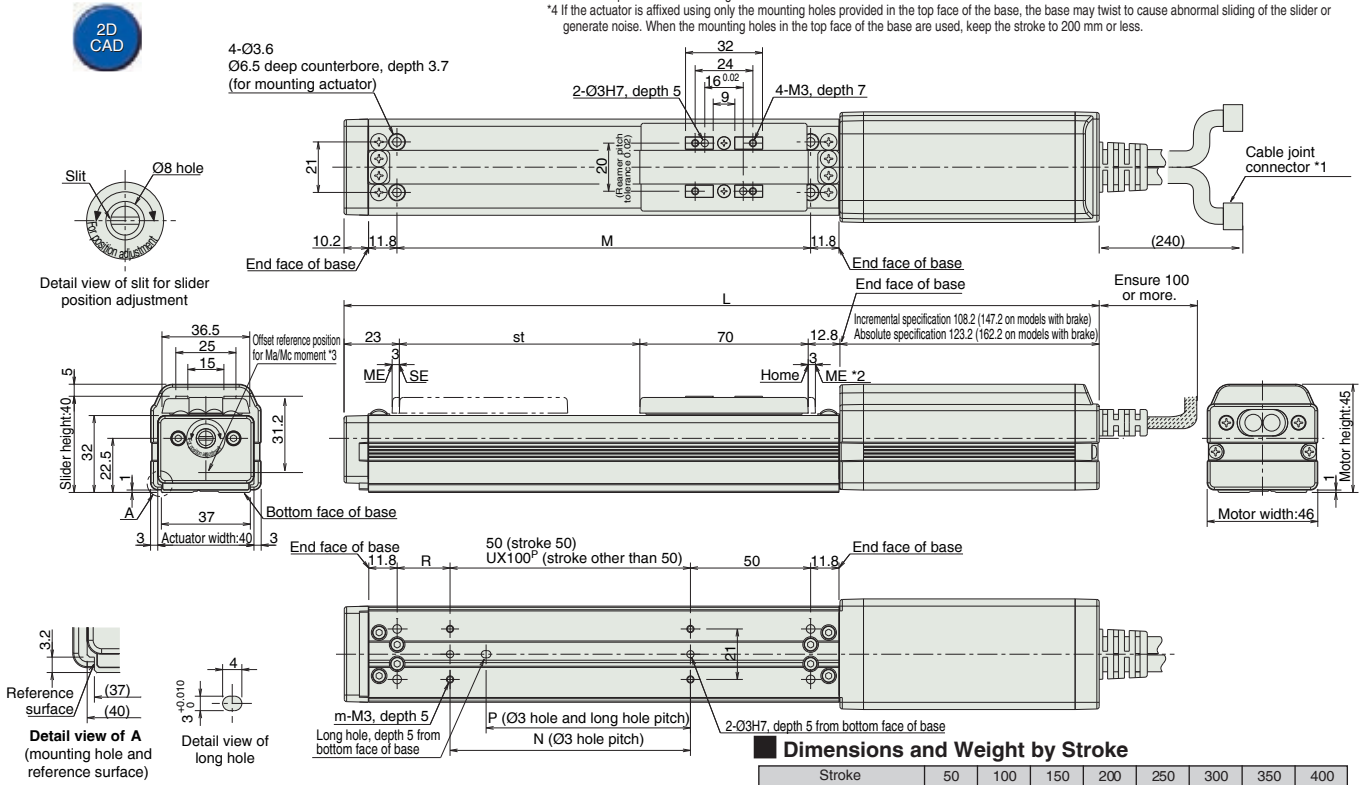
100w

150w

Dimensions

You can download CAD drawings from our website. www.robocylinder.de

- *1 Connect the motor/encoder cables. Refer to p. 324 for details on the cables.
- *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
ME: Mechanical end SE: Stroke end
- *3 Reference position for calculating Ma moment
- *4 If the actuator is affixed using only the mounting holes provided in the top face of the base, the base may twist to cause abnormal sliding of the slider or generate noise. When the mounting holes in the top face of the base are used, keep the stroke to 200 mm or less.



Dimensions and Weight by Stroke

		Stroke	50	100	150	200	250	300	350	400
L	Incremental	Without brake	264	314	364	414	464	514	564	614
		With brake	303	353	403	453	503	553	603	653
	Absolute	Without brake	279	329	379	429	479	529	579	629
		With brake	318	368	418	468	518	568	618	668
M			122	172	222	272	322	372	422	472
N			50	100	100	200	200	300	300	400
P			35	85	85	185	185	285	285	385
R			22	22	72	22	72	22	72	22
U			-	1	1	2	2	3	3	4
m			4	4	4	6	6	8	8	10
Weight (kg)			0.7	0.8	0.9	1	1.1	1.2	1.3	1.4

Controller

Applicable Controllers

RCA series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-20I-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	Rating: 1.3A Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-20I-NP-2-0					
Solenoid valve type		ACON-CY-20I-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-20I-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-20I-NP-2-0	Pulse-train input type supporting an open collector				
Serial communication type		ACON-SE-20I-NP-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-20①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points	→P345		

* The ASEL model name is based on a 1-axis specification.
*① indicates the encoder type (I: Incremental / A: Absolute).

- Controler - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller
- 40 mm
- 52 mm
- 58 mm
- 60 mm
- 68 mm
- 73 mm
- 80 mm
- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

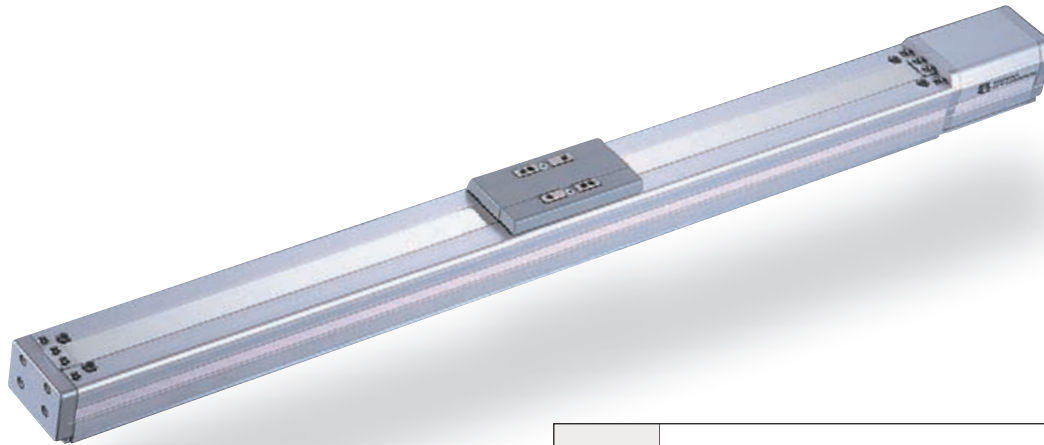
RCA-SA5C

ROBO Cylinder, Slider Type, Actuator Width 52mm, 24-V Servo Motor, Coupling Specification

Model Specification Items

RCA	SA5C	<input type="checkbox"/>	20	<input type="checkbox"/>	<input type="checkbox"/>	A1	<input type="checkbox"/>	<input type="checkbox"/>
Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
I: Incremental specification	20: Servo motor 20W	A: Absolute specification	12: 12mm 6: 6mm 3: 3mm	50: 50mm ?	500: 500mm (Set in 50-mm steps)	A1: ACON ASEL	N: No cable P: 1m S: 3m M: 5m X <input type="checkbox"/> : Specified length R <input type="checkbox"/> : Robot cable	B: Brake FT: Foot bracket HS: Home check sensor NM: Reversed-home specification SR: Slider roller specification

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). This is the maximum acceleration.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity (Note 1)		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-SA5C-①-20-12-②-A1-③-④	20	12	4	1	16.7	50 ~ 500 (Set in 50-mm steps)
RCA-SA5C-①-20-6-②-A1-③-④		6	6	2	33.3	
RCA-SA5C-①-20-3-②-A1-③-④		3	12	4	65.7	

Explanation of numbers ① Encoder type ② Stroke ③ Cable length ④ Options

Stroke and Maximum Speed

Lead	Stroke	
	50 ~ 450 (Set in 50-mm steps)	500 (mm)
12	800	760
6	400	380
3	200	190

(Unit: mm/s)

Options

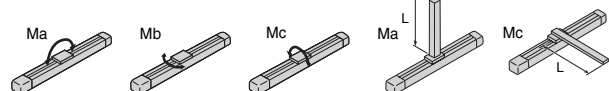
Name	Model	Page
Brake	B	P381
Foot bracket	FT	P383
Home sensor	HS	P385
Reversed-home specification	NM	P385
Slide roller specification	SR	P388

Actuator Specifications

Item	Description
Drive method	Ball screw Ø10mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum with special alumite treatment
Allowable load moment	Ma: 4.9N·m Mb: 6.8N·m Mc: 11.7N·m
Overhang load length	Ma direction: 150mm or less, Mb/Mc directions: 150mm or less
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)

Direction of allowable load moment

Overhang load length



40 mm

52 mm

58 mm

60 mm

68 mm

73 mm

80 mm

Pulse Motor

20w

30w

60w

100w

150w

Controller - Integrated Type

Slider Type

Rod Type

Arm / Flat Type

Gripper / Rotary Type

Cleanroom Type

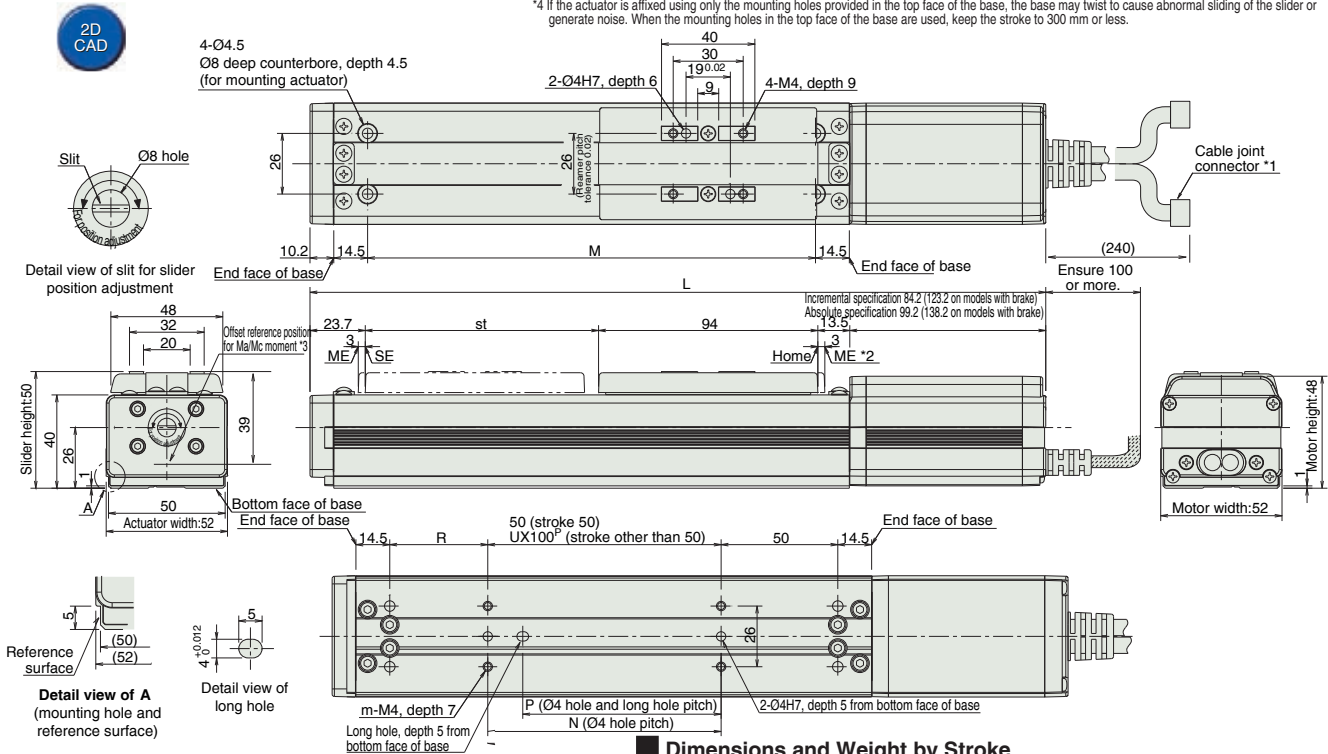
Splash Proof Type

Controller

Dimensions

You can download CAD drawings from our website. www.robocylinder.de

- *1 Connect the motor/encoder cables. Refer to p. 324 for details on the cables.
- *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts. ME: Mechanical end SE: Stroke end
- *3 Reference position for calculating Ma moment
- *4 If the actuator is affixed using only the mounting holes provided in the top face of the base, the base may twist to cause abnormal sliding of the slider or generate noise. When the mounting holes in the top face of the base are used, keep the stroke to 300 mm or less.



Dimensions and Weight by Stroke

L	Stroke	Stroke									
		50	100	150	200	250	300	350	400	450	500
Incremental	Without brake	265.4	315.4	365.4	415.4	465.4	515.4	565.4	615.4	665.4	715.4
	With brake	304.4	354.4	404.4	454.4	504.4	554.4	604.4	654.4	704.4	754.4
Absolute	Without brake	280.4	330.4	380.4	430.4	480.4	530.4	580.4	630.4	680.4	730.4
	With brake	319.4	369.4	419.4	469.4	519.4	569.4	619.4	669.4	719.4	769.4
M		142	192	242	292	342	392	442	492	542	592
N		50	100	100	200	200	300	300	400	400	500
P		35	85	85	185	185	285	285	385	385	485
R		92	42	92	42	92	42	92	42	92	42
U		-	1	1	2	2	3	3	4	4	5
m		4	4	4	6	6	8	8	10	10	12
Weight (kg)		1.3	1.4	1.5	1.6	1.7	1.8	1.9	2	2.1	2.2

Controller

Applicable Controllers

RCA series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-20I-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	Rating: 1.3A Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-20I-NP-2-0					
Solenoid valve type		ACON-CY-20I-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-20I-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-20I-NP-2-0	Pulse-train input type supporting an open collector				
Serial communication type		ACON-SE-20I-NP-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-20①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points	→P345		

* The ASEL model name is based on a 1-axis specification.
*① indicates the encoder type (I: Incremental / A: Absolute).

- Controller
- Splash Proof Type
- Cleanroom Type
- Gripper / Rotary Type
- Arm / Flat Type
- Rod Type
- Slider Type
- Integrated Type

- 40 mm
- 52 mm
- 58 mm
- 60 mm
- 68 mm
- 73 mm
- 80 mm

- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

RCA-SA6C

ROBO Cylinder, Slider Type, Actuator Width 58mm, 24-V Servo Motor, Coupling Specification

Model Specification Items

RCA	SA6C		30				A1		
Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options	
I: Incremental specification	30: Servo motor 30W	12: 12mm 6: 6mm 3: 3mm	50:50mm ?	600:600mm (Set in 50-mm steps)	A1: ACON ASEL	N: No cable P: 1m S: 3m M: 5m X□□: Specified length R□□: Robot cable	B: Brake FT: Foot bracket HS: Home check sensor NM: Reversed-home specification SR: Slider roller specification		

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). This is the maximum acceleration.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity (Note 1)	Rated thrust (N)	Stroke (mm)
			Horizontal (kg) / Vertical (kg)		
RCA-SA6C-①-30-12-②-A1-③-④	30	12	4 / 1.5	24.2	50 ~ 600 (Set in 50-mm steps)
RCA-SA6C-①-30-6-②-A1-③-④		6	6 / 3	48.4	
RCA-SA6C-①-30-3-②-A1-③-④		3	12 / 6	96.8	

Explanation of numbers ① Encoder type ② Stroke ③ Cable length ④ Options

Stroke and Maximum Speed

Stroke / Lead	50 ~ 450	500	550	600
	(Set in 50-mm steps)	(mm)	(mm)	(mm)
10	800	760	640	540
5	400	380	320	270
2.5	200	190	160	135

(Unit: mm/s)

Options

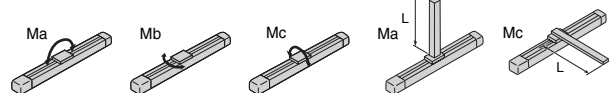
Name	Model	Page
Brake	B	P381
Foot bracket	FT	P383
Home sensor	HS	P385
Reversed-home specification	NM	P385
Slide roller specification	SR	P388

Actuator Specifications

Item	Description
Drive method	Ball screw Ø10mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum with special alumite treatment
Allowable load moment	Ma: 8.9N·m Mb: 12.7N·m Mc: 18.6N·m
Overhang load length	Ma direction: 220mm or less, Mb/Mc directions: 220mm or less
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)

Direction of allowable load moment

Overhang load length



40 mm

52 mm

58 mm

60 mm

68 mm

73 mm

80 mm

Pulse Motor

20w

30w

60w

100w

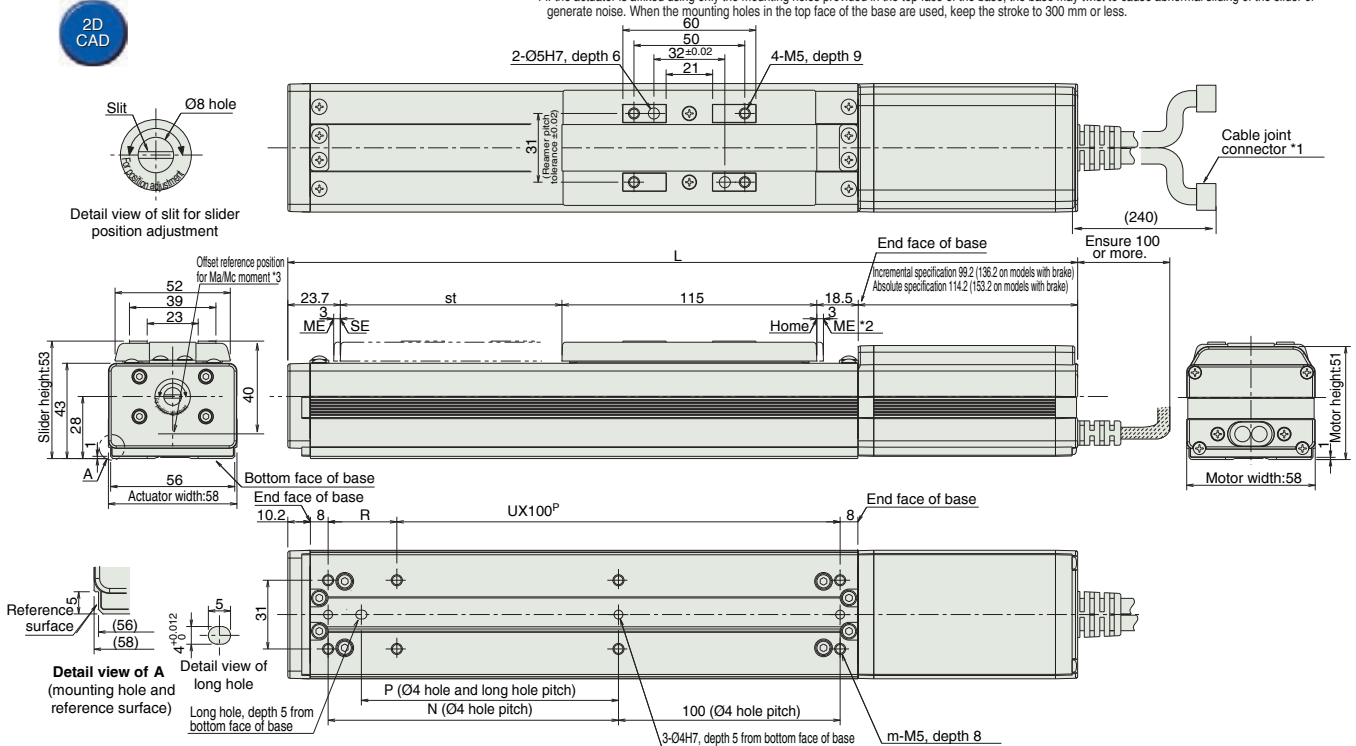
150w

Dimensions

You can download CAD drawings from our website. www.robocylinder.de



- *1 Connect the motor/encoder cables. Refer to p. 324 for details on the cables.
- *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
ME: Mechanical end SE: Stroke end
- *3 Reference position for calculating Ma/Mc moment
- *4 If the actuator is affixed using only the mounting holes provided in the top face of the base, the base may twist to cause abnormal sliding of the slider or generate noise. When the mounting holes in the top face of the base are used, keep the stroke to 300 mm or less.



Dimensions and Weight by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500	550	600	
L	Incremental	Without brake	306.4	356.4	406.4	456.4	506.4	556.4	606.4	656.4	706.4	756.4	806.4	856.4
		With brake	345.4	395.4	445.4	495.4	545.4	595.4	645.4	695.4	745.4	795.4	845.4	895.4
	Absolute	Without brake	321.4	371.4	421.4	471.4	521.4	571.4	621.4	671.4	721.4	771.4	821.4	871.4
		With brake	360.4	410.4	460.4	510.4	560.4	610.4	660.4	710.4	760.4	810.4	860.4	910.4
N		81	131	181	231	281	331	381	431	481	531	581	631	
P		66	116	166	216	266	316	366	416	466	516	566	616	
R		81	31	81	31	81	31	81	31	81	31	81	31	
U		1	2	2	3	3	4	4	5	5	6	6	7	
m		6	8	8	10	10	12	12	14	14	16	16	18	
Weight (kg)		1.4	1.6	1.8	2.0	2.2	2.4	2.6	2.8	3.0	3.2	3.4	3.6	

Controller

Applicable Controllers

RCA series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-30I-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	Rating: 1.3A Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-30I-NP-2-0					
Solenoid valve type		ACON-CY-30I-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-30I-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-30I-NP-2-0	Pulse-train input type supporting an open collector				
Serial communication type		ACON-SE-30I-NP-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-30 ① -NP-2-0	Programmable type capable of operating up to 2 axes	1500 points	→P345		

* The ASEL model name is based on a 1-axis specification.
*① indicates the encoder type (I: Incremental / A: Absolute).

- Controller
- Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- 40 mm
- 52 mm
- 58 mm
- 60 mm
- 68 mm
- 73 mm
- 80 mm
- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

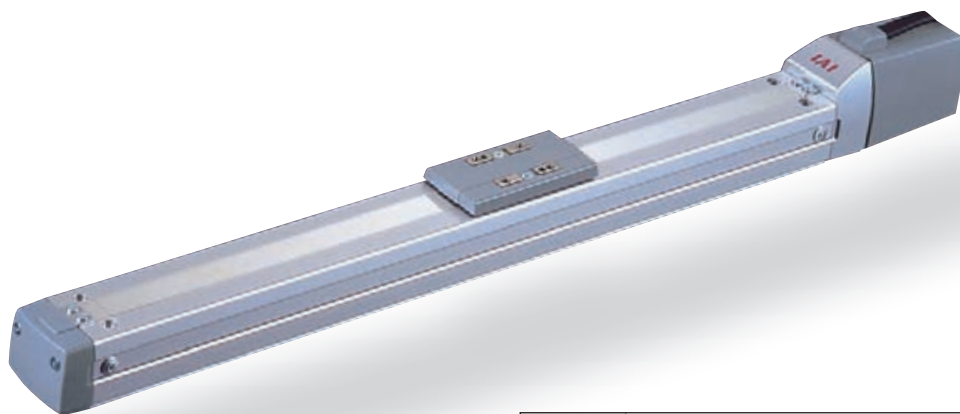
RCA-SA4D

ROBO Cylinder, Slider Type, Actuator Width 40mm, 24-V Servo Motor Built-In (Direct-Coupled) Motor Specification

Model Specification Items

RCA	SA4D	<input type="checkbox"/>	20	<input type="checkbox"/>	<input type="checkbox"/>	A1	<input type="checkbox"/>	<input type="checkbox"/>
Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
I: Incremental specification	20: Servo motor 20W	10: 10mm	5: 5mm 2.5: 2.5mm	50: 50mm ?:	300: 300mm (Set in 50-mm steps)	A1: ACON ASEL	N: No cable P: 1m S: 3m M: 5m X <input type="checkbox"/> : Specified length R <input type="checkbox"/> : Robot cable	BE: Brake (wire taken out from end) BL: Brake (wire taken out from left) BR: Brake (wire taken out from right) FT: Foot bracket NM: Reversed-home specification

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 2.5). This is the maximum acceleration.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity (Note 1)	Rated thrust (N)	Stroke (mm)
			Horizontal (kg) / Vertical (kg)		
RCA-SA4D-①-20-10-②-A1-③-④	20	10	4 / 1	19.6	50 ~ 300 (Set in 50-mm steps)
RCA-SA4D-①-20-5-②-A1-③-④		5	6 / 2.5	39.2	
RCA-SA4D-①-20-2.5-②-A1-③-④		2.5	8 / 4.5	78.4	

Explanation of numbers ① Encoder type ② Stroke ③ Cable length ④ Options

Stroke and Maximum Speed

Stroke / Lead	50 ~ 300 (Set in 50-mm steps)
	665
5	330
2.5	165

(Unit: mm/s)

Options

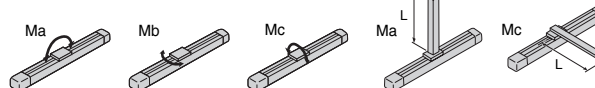
Name	Model	Page
Brake (Cable exiting the end)	BE	P381
Brake (Cable exiting the left)	BL	P381
Brake (Cable exiting the right)	BR	P381
Foot bracket	FT	P383
Reversed-home specification	NM	P385

Actuator Specifications

Item	Description
Drive method	Ball screw Ø8mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum with special alumite treatment
Allowable load moment	Ma: 2.7N·m Mb: 3.9N·m Mc: 6.8N·m
Overhang load length	Ma direction: 120mm or less, Mb/Mc directions: 120mm or less
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)

Direction of allowable load moment

Overhang load length



40 mm

52 mm

58 mm

60 mm

68 mm

73 mm

80 mm

Pulse Motor

20w

30w

60w

100w

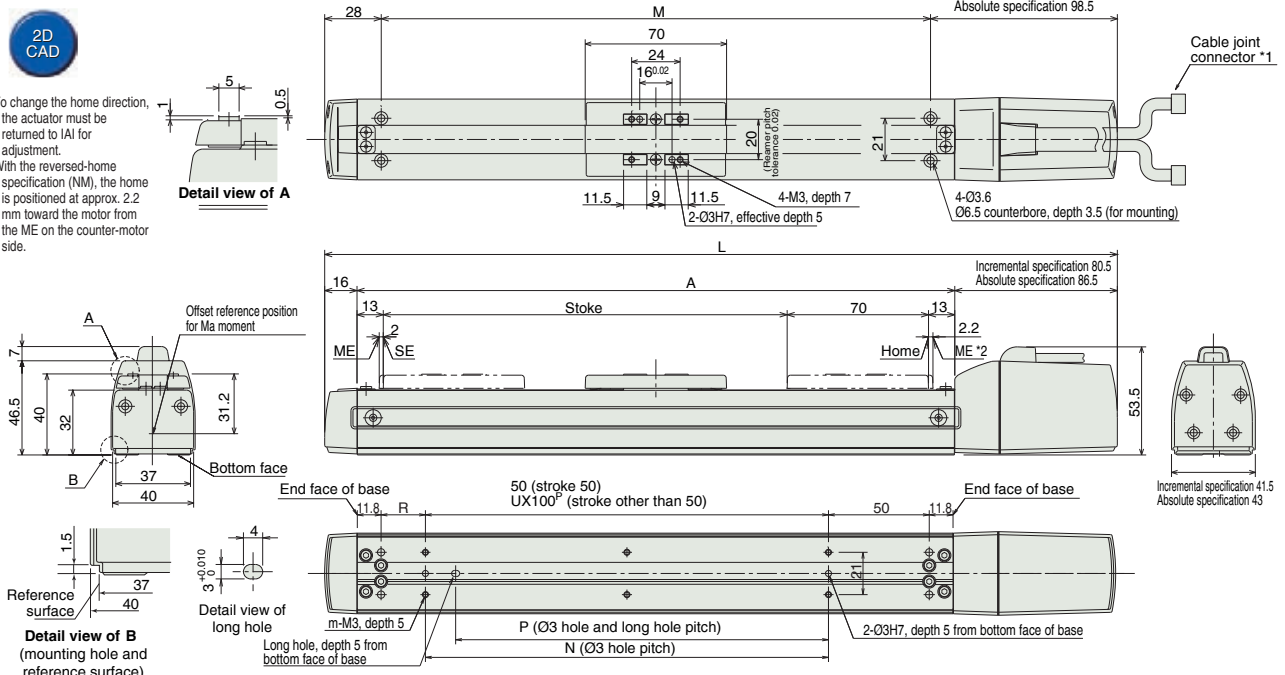
150w

Dimensions

You can download CAD drawings from our website. www.robocylinder.de



- * To change the home direction, the actuator must be returned to IAI for adjustment.
- * With the reversed-home specification (NM), the home is positioned at approx. 2.2 mm toward the motor from the ME on the counter-motor side.



- *1 Connect the motor/encoder cables. Refer to p. 324 for details on the cables.
- *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
ME: Mechanical end SE: Stroke end
- *3 Reference position for calculating Ma moment.
- *4 If the actuator is affixed using only the mounting holes provided in the top face of the base, the base may twist to cause abnormal sliding of the slider or generate noise. When the mounting holes in the top face of the base are used, keep the stroke to 200 mm or less.

Dimensions and Weight by Stroke

L	Stroke	50	100	150	200	250	300
		Incremental	242.5	292.5	342.5	392.5	442.5
	Absolute	248.5	298.5	348.5	398.5	448.5	498.5
	A	146	196	246	296	346	396
	M	122	172	222	272	322	372
	N	50	100	100	200	200	300
	P	35	85	85	185	185	285
	R	22	22	72	22	72	22
	U	-	1	1	2	2	3
	m	4	4	4	6	6	8
	Weight (kg)	0.6	0.7	0.8	0.9	1.0	1.1

* Models with brake have their overall length (L) extended by 28 mm (or 41.3 mm if the wire is taken out from the end) and weight increased by 0.2 kg.

Controller

Applicable Controllers

RCA series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page	
Positioner type		ACON-C-20I-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	Rating: 1.3A Peak: 5.1A	→P315	
Positioner type meeting safety category		ACON-CG-20I-NP-2-0						
Solenoid valve type		ACON-CY-20I-NP-2-0	Same control actions as those applicable to solenoid valves	3 points				
Pulse-train input type (differential line driver specification)		ACON-PL-20I-NP-2-0	Pulse-train input type supporting a differential line driver	(-)				
Pulse-train input type (open collector specification)		ACON-PO-20I-NP-2-0	Pulse-train input type supporting an open collector					
Serial communication type		ACON-SE-20I-NP-0-0	Dedicated serial communication type	64 points				
Program control type		ASEL-C-1-20 ①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points				→P345

* The ASEL model name is based on a 1-axis specification.
*① indicates the encoder type (I: Incremental / A: Absolute).

- Controller - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller
- 40 mm
- 52 mm
- 58 mm
- 60 mm
- 68 mm
- 73 mm
- 80 mm
- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

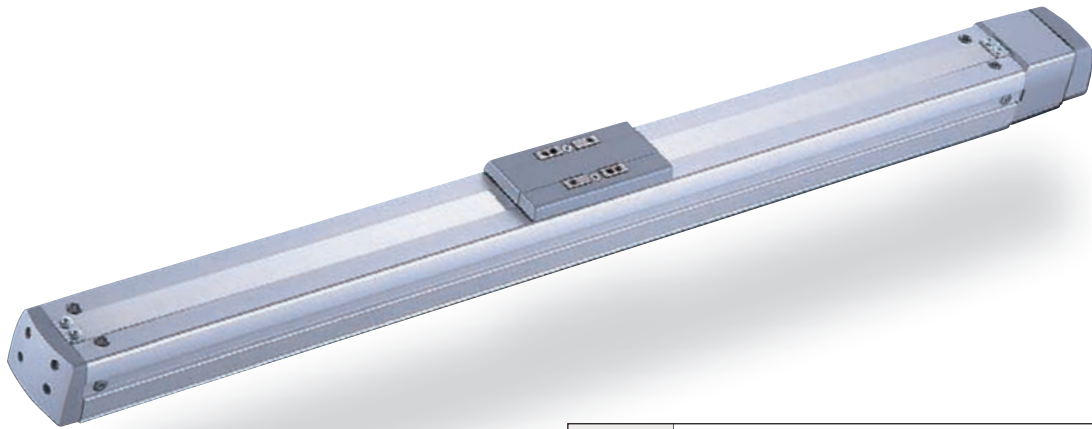
RCA-SA5D

ROBO Cylinder, Slider Type, Actuator Width 52mm, 24-V Servo Motor Built-In (Direct-Coupled) Motor Specification

Model Specification Items

RCA	SA5D	<input type="checkbox"/>	20	<input type="checkbox"/>	<input type="checkbox"/>	A1	<input type="checkbox"/>	<input type="checkbox"/>
Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
I: Incremental specification A: Absolute specification	20: Servo motor 20W	12: 12mm 6: 6mm 3: 3mm	50:50mm ?	500:500mm (Set in 50-mm steps)	A1: ACON ASEL	N: No cable P: 1m S: 3m M: 5m X <input type="checkbox"/> : Specified length R <input type="checkbox"/> : Robot cable	BE: Brake (wire taken out from end) BL: Brake (wire taken out from left) BR: Brake (wire taken out from right) FT: Foot bracket NM: Reversed-home specification SR: Slider roller specification	

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). This is the maximum acceleration.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity (Note 1)		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-SA5D-①-20-12-②-A1-③-④	20	12	4	1	16.7	50 ~ 500 (Set in 50-mm steps)
RCA-SA5D-①-20-6-②-A1-③-④		6	8	2	33.3	
RCA-SA5D-①-20-3-②-A1-③-④		3	12	4	65.7	

Explanation of numbers ① Encoder type ② Stroke ③ Cable length ④ Options

Stroke and Maximum Speed

Stroke / Lead	50 ~ 450 (Set in 50-mm steps)		500 (mm)
	12	800	760
6	400	380	
3	200	190	

(Unit: mm/s)

Options

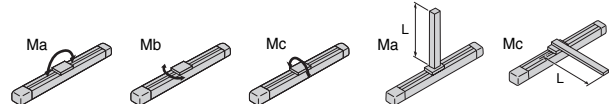
Name	Model	Page
Brake (Cable exiting the end)	BE	P381
Brake (Cable exiting the left)	BL	P381
Brake (Cable exiting the right)	BR	P381
Foot bracket	FT	P383
Reversed-home specification	NM	P385
Slide roller specification	SR	P388

Actuator Specifications

Item	Description
Drive method	Ball screw \varnothing 10mm, rolled C10
Positioning repeatability	± 0.02 mm
Backlash	0.1mm or less
Base	Material: Aluminum with special alumite treatment
Allowable load moment	Ma: 4.9N·m Mb: 6.8N·m Mc: 11.7N·m
Overhang load length	Ma direction: 150mm or less, Mb/Mc directions: 150mm or less
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)

Direction of allowable load moment

Overhang load length



40 mm

52 mm

58 mm

60 mm

68 mm

73 mm

80 mm

Pulse Motor

20w

30w

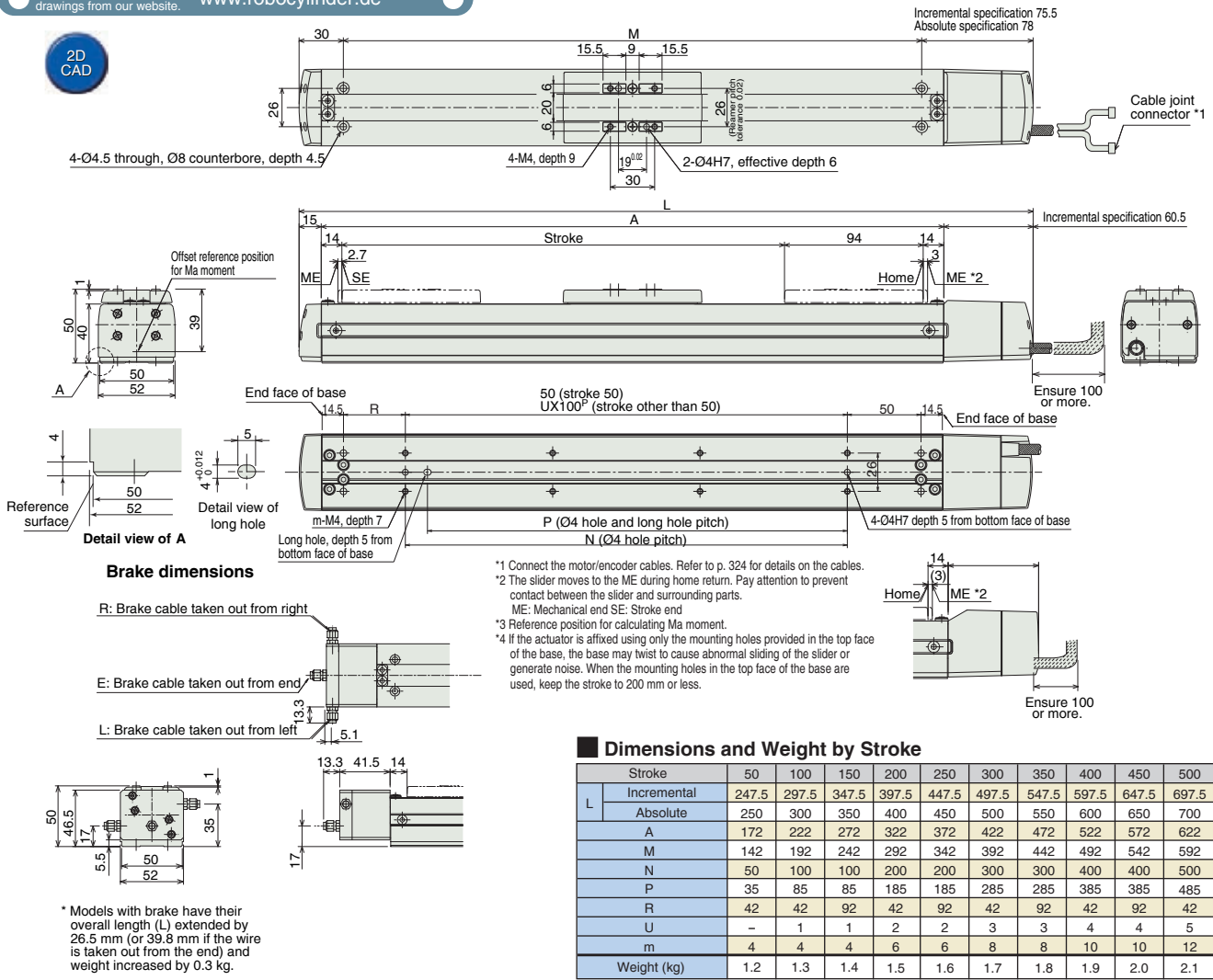
60w

100w

150w

Dimensions

You can download CAD drawings from our website. www.robocylinder.de



Controller

Applicable Controllers

RCA series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-20I-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	Rating: 1.3A Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-20I-NP-2-0					
Solenoid valve type		ACON-CY-20I-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-20I-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-20I-NP-2-0	Pulse-train input type supporting an open collector				
Serial communication type		ACON-SE-20I-NP-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-20①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points	→P345		

* The ASEL model name is based on a 1-axis specification.
*① indicates the encoder type (I: Incremental / A: Absolute).

- Controlled - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller
- 40 mm
- 52 mm
- 58 mm
- 60 mm
- 68 mm
- 73 mm
- 80 mm
- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

RCA-SA6D

ROBO Cylinder, Slider Type, Actuator Width 52mm, 24-V Servo Motor Built-In (Direct-Coupled) Motor Specification

Model Specification Items

RCA	SA6D		30				A1		
Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options	
I: Incremental specification	30: Servo motor 30W	12: 12mm 6: 6mm 3: 3mm	50:50mm ?	600:600mm (Set in 50-mm steps)	A1: ACON ASEL	N: No cable P: 1m S: 3m M: 5m X□□: Specified length R□□: Robot cable	BE: Brake (wire taken out from end) BL: Brake (wire taken out from left) BR: Brake (wire taken out from right) FT: Foot bracket NM: Reversed-home specification SR: Slider roller specification		

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). This is the maximum acceleration.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity (Note 1)		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-SA6D-①-30-12-②-A1-③-④	30	12	6	1.5	24.2	50 ~ 600 (Set in 50-mm steps)
RCA-SA6D-①-30-6-②-A1-③-④		6	12	3	48.4	
RCA-SA6D-①-30-3-②-A1-③-④		3	18	6	96.8	

Explanation of numbers ① Encoder type ② Stroke ③ Cable length ④ Options

Stroke and Maximum Speed

Stroke / Lead	50 ~ 450	500	550	600
	(Set in 50-mm steps)	(mm)	(mm)	(mm)
12	800	760	640	540
6	400	380	320	270
3	200	190	160	135

(Unit: mm/s)

Options

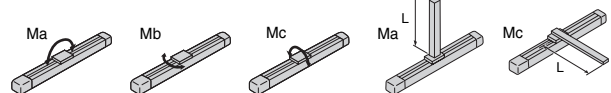
Name	Model	Page
Brake (Cable exiting the end)	BE	P381
Brake (Cable exiting the left)	BL	P381
Brake (Cable exiting the right)	BR	P381
Foot bracket	FT	P383
Reversed-home specification	NM	P385
Slide roller specification	SR	P388

Actuator Specifications

Item	Description
Drive method	Ball screw Ø10mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum with special alumite treatment
Allowable load moment	Ma: 8.9N·m Mb: 12.7N·m Mc: 18.6N·m
Overhang load length	Ma direction: 220mm or less, Mb/Mc directions: 220mm or less
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)

Direction of allowable load moment

Overhang load length



40 mm

52 mm

58 mm

60 mm

68 mm

73 mm

80 mm

Pulse Motor

20w

30w

60w

100w

150w

Controller - Integrated Type

Slider Type

Rod Type

Arm / Flat Type

Gripper / Rotary Type

Cleanroom Type

Splash Proof Type

Controller

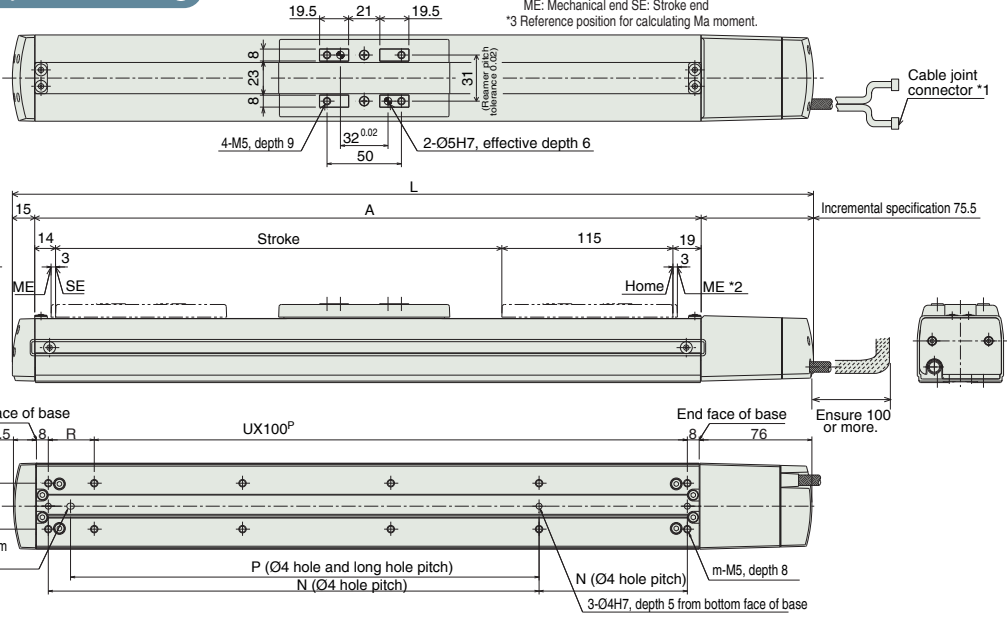
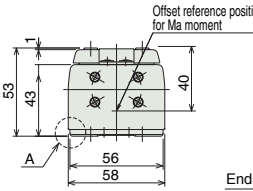
Dimensions

You can download CAD drawings from our website. www.robocylinder.de

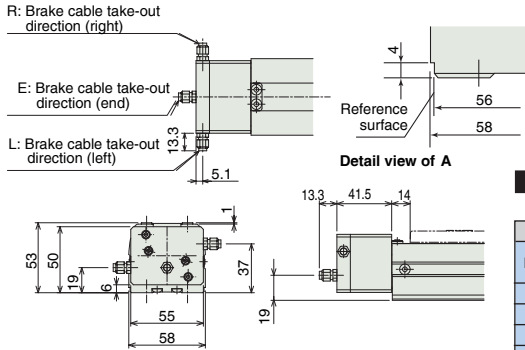


- To change the home direction, the actuator must be returned to IAI for adjustment.
- With the reversed-home specification (NM), the home is positioned at approx. 3 mm toward the motor from the ME on the counter-motor side.

- *1 Connect the motor/encoder cables. Refer to p. 324 for details on the cables.
- *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
ME: Mechanical end SE: Stroke end
- *3 Reference position for calculating Ma moment.



Brake dimensions



* Models with brake have their overall length (L) extended by 26.5 mm (or 39.8 mm if the wire is taken out from the end) and weight increased by 0.3 kg.

Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	
L	Incremental	288.5	348.5	388.5	438.5	488.5	538.5	588.5	638.5	688.5	738.5	788.5	838.5
	Absolute	292.5	342.5	392.5	442.5	492.5	542.5	592.5	642.5	692.5	742.5	792.5	842.5
A	198	248	298	348	398	448	498	548	598	648	698	748	
N	81	131	181	231	281	331	381	431	481	531	581	631	
P	66	116	166	216	266	316	366	416	466	516	566	616	
R	81	31	81	31	81	31	81	31	81	31	81	31	
U	1	2	2	3	3	4	4	5	5	6	6	7	
m	6	8	8	10	10	12	12	14	14	16	16	18	
Weight (kg)	1.3	1.5	1.7	1.9	2.1	2.3	2.5	2.7	2.9	3.1	3.3	3.5	

Controller

Applicable Controllers

RCA series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-30I-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	Rating: 1.3A Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-30I-NP-2-0					
Solenoid valve type		ACON-CY-30I-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-30I-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-30I-NP-2-0	Pulse-train input type supporting an open collector				
Serial communication type		ACON-SE-30I-NP-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-30 ① -NP-2-0	Programmable type capable of operating up to 2 axes	1500 points	→P345		

* The ASEL model name is based on a 1-axis specification.
*① indicates the encoder type (I: Incremental / A: Absolute).

- Controller - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller

- 40 mm
- 52 mm
- 58 mm
- 60 mm
- 68 mm
- 73 mm
- 80 mm

- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

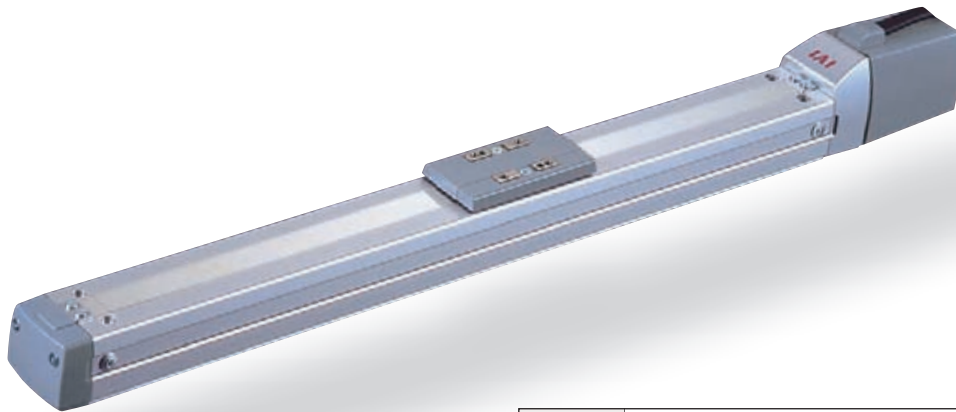
RCA-SS4D

ROBO Cylinder, Slider Type, Actuator Width 40mm, 24-V Servo Motor Built-In (Direct-Coupled) Motor Specification, Iron Base Type

Model Specification Items

RCA	SS4D	I	20			A1		
Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
		I: Incremental specification	20: Servo motor 20W	10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm ?	A1: ACON ASEL	N: No cable P: 1m S: 3m M: 5m X□: Specified length R□: Robot cable	BE: Brake (wire taken out from end) BL: Brake (wire taken out from left) BR: Brake (wire taken out from right) NM: Reversed-home specification

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 2.5). This is the maximum acceleration.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity (Note 1)		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-SS4D-I-20-10-①-A1-②-③	20	10	4	1	19.6	50 ~ 300 (Set in 50-mm steps)
RCA-SS4D-I-20-5-①-A1-②-③		5	6	2.5	39.2	
RCA-SS4D-I-20-2.5-①-A1-②-③		2.5	8	4.5	78.4	

Explanation of numbers ① Stroke ② Cable length ③ Options

Stroke and Maximum Speed

Stroke / Lead	50 ~ 300 (Set in 50-mm steps)	
	10	665
5	330	
2.5	165	

(Unit: mm/s)

Options

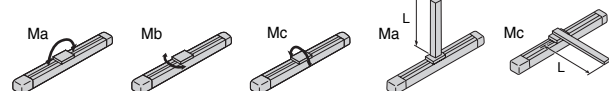
Name	Model	Page
Brake (Cable exiting the end)	BE	P381
Brake (Cable exiting the left)	BL	P381
Brake (Cable exiting the right)	BR	P381
Reversed-home specification	NM	P385

Actuator Specifications

Item	Description
Drive method	Ball screw Ø8mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material: Special alloy steel
Allowable load moment	Ma: 2.7N·m Mb: 3.9N·m Mc: 6.8N·m
Overhang load length	Ma direction: 120mm or less, Mb/Mc directions: 120mm or less
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)

Direction of allowable load moment

Overhang load length



40 mm

52 mm

58 mm

60 mm

68 mm

73 mm

80 mm

Pulse Motor

20w

30w

60w

100w

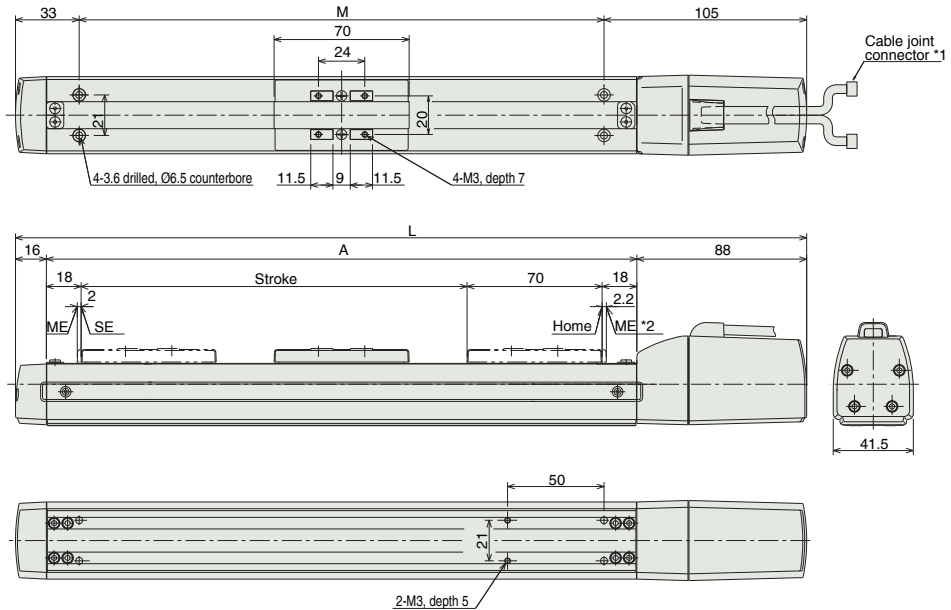
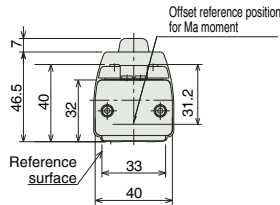
150w

Dimensions

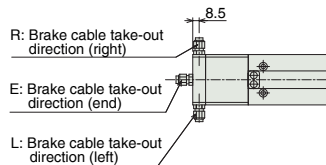
You can download CAD drawings from our website. www.robocylinder.de



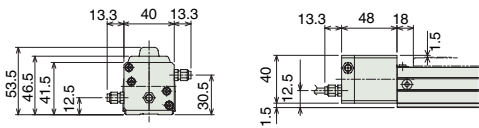
- * To change the home direction, the actuator must be returned to IAI for adjustment.
- * With the reversed-home specification (NM), the home is positioned at approx. 2.2 mm toward the motor from the ME on the counter-motor side.



Brake dimensions



- *1 Connect the motor/encoder cables. Refer to p. 324 for details on the cables.
- *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts. ME: Mechanical end SE: Stroke end
- *3 Reference position for calculating Ma moment.



* Models with brake have their overall length (L) extended by 32 mm (or 45.3 mm if the wire is taken out from the end) and weight increased by 0.2 kg.

Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300
L	260	310	360	410	460	510
A	156	206	256	306	356	406
M	122	172	222	272	322	372
Weight (kg)	1.1	1.2	1.3	1.4	1.5	1.6

Controller

Applicable Controllers

RCA series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-20I-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	Rating: 1.3A Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-20I-NP-2-0					
Solenoid valve type		ACON-CY-20I-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-20I-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-20I-NP-2-0	Pulse-train input type supporting an open collector				
Serial communication type		ACON-SE-20I-NP-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-20-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points	→P345		

* The ASEL model name is based on a 1-axis specification.

- Controller - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller
- 40 mm
- 52 mm
- 58 mm
- 60 mm
- 68 mm
- 73 mm
- 80 mm
- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

RCA-SS5D

ROBO Cylinder, Slider Type, Actuator Width 52mm, 24-V Servo Motor Built-In (Direct-Coupled) Motor Specification, Iron Base Type

Model Specification Items

RCA	SS5D	I	20			A1		
Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
		I: Incremental specification	20: Servo motor 20W	12: 12mm 6: 6mm 3: 3mm	50:50mm ?	A1: ACON ASEL	N: No cable P: 1m S: 3m M: 5m X□: Specified length R□: Robot cable	BE: Brake (wire taken out from end) BL: Brake (wire taken out from left) BR: Brake (wire taken out from right) NM: Reversed-home specification SR: Slider roller specification

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). This is the maximum acceleration.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity (Note 1)		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-SS5D-I-20-12-①-A1-②-③	20	12	4	1	16.7	50 ~ 500 (Set in 50-mm steps)
RCA-SS5D-I-20-6-①-A1-②-③		6	8	2	33.3	
RCA-SS5D-I-20-3-①-A1-②-③		3	12	4	65.7	

Explanation of numbers ① Stroke ② Cable length ③ Options

Stroke and Maximum Speed

Stroke / Lead	Stroke and Maximum Speed	
	50 ~ 450 (Set in 50-mm steps)	500 (mm)
12	800	760
6	400	380
3	200	190

(Unit: mm/s)

Options

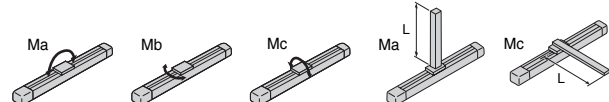
Name	Model	Page
Brake (Cable existing the end)	BE	P381
Brake (Cable existing the left)	BL	P381
Brake (Cable existing the right)	BR	P381
Reversed-home specification	NM	P385
Slide roller specification	SR	P388

Actuator Specifications

Item	Description
Drive method	Ball screw Ø10mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material: Special alloy steel
Allowable load moment	Ma: 4.9N·m Mb: 6.8N·m Mc: 11.7N·m
Overhang load length	Ma direction: 150mm or less, Mb/Mc directions: 150mm or less
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)

Direction of allowable load moment

Overhang load length



40 mm

52 mm

58 mm

60 mm

68 mm

73 mm

80 mm

Pulse Motor

20w

30w

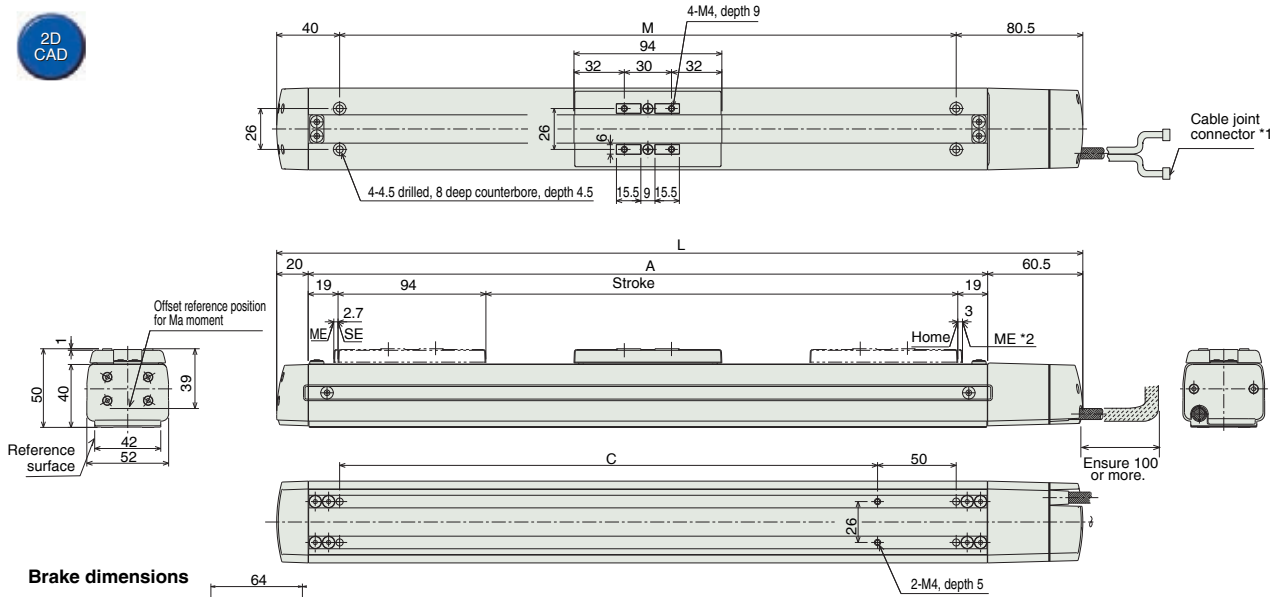
60w

100w

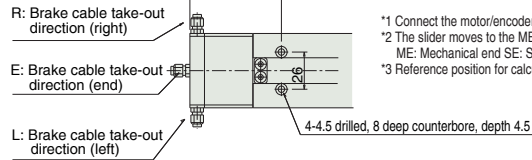
150w

Dimensions

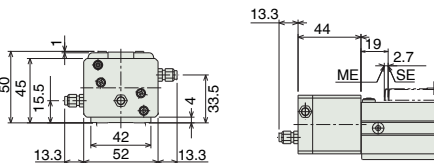
You can download CAD drawings from our website. www.robocylinder.de



Brake dimensions



- *1 Connect the motor/encoder cables. Refer to p. 324 for details on the cables.
- *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts. ME: Mechanical end SE: Stroke end
- *3 Reference position for calculating Ma moment.



* Models with brake have their overall length (L) extended by 24 mm (or 37.3 mm if the wire is taken out from the end) and weight increased by 0.3 kg.

Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500
L	262.5	312.5	362.5	412.5	462.5	512.5	562.5	612.5	662.5	712.5
A	182	232	282	332	382	432	482	532	582	632
M	142	192	242	292	342	392	442	492	542	592
C	92	142	192	242	292	342	392	442	492	542
Weight (kg)	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3

Controller

Applicable Controllers

RCA series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-20I-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	Rating: 1.3A Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-20I-NP-2-0					
Solenoid valve type		ACON-CY-20I-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-20I-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-20I-NP-2-0	Pulse-train input type supporting an open collector				
Serial communication type		ACON-SE-20I-NP-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-20-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points	→P345		

* The ASEL model name is based on a 1-axis specification.

- Controller - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller
- 40 mm
- 52 mm
- 58 mm
- 60 mm
- 68 mm
- 73 mm
- 80 mm
- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

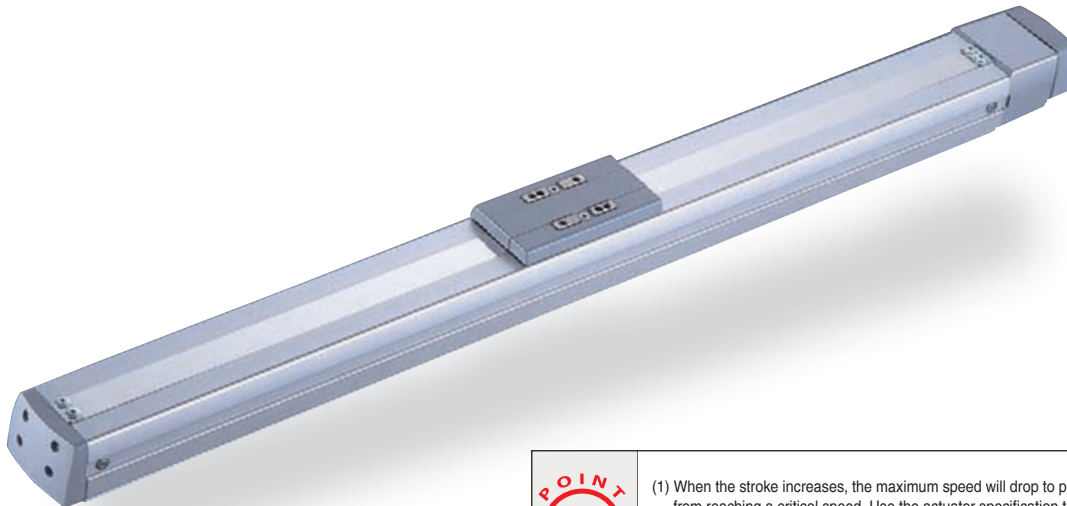
RCA-SS6D

ROBO Cylinder, Slider Type, Actuator Width 58mm, 24-V Servo Motor Built-In (Direct-Coupled) Motor Specification, Iron Base Type

Model Specification Items

RCA	SS6D	I	30			A1		
Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
		I: Incremental specification	30: Servo motor 30W	12: 12mm 6: 6mm 3: 3mm	50: 50mm ? 600: 600mm (Set in 50-mm steps)	A1: ACON ASEL	N: No cable P: 1m S: 3m M: 5m X□□: Specified length R□□: Robot cable	BE: Brake (wire taken out from end) BL: Brake (wire taken out from left) BR: Brake (wire taken out from right) NM: Reversed-home specification SR: Slider roller specification

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). This is the maximum acceleration.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity (Note 1)		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-SS6D-I-30-12-① - A1 - ② - ③	30	12	6	1.5	24.2	50 ~ 600 (Set in 50-mm steps)
RCA-SS6D-I-30-6-① - A1 - ② - ③		6	12	3	48.4	
RCA-SS6D-I-30-3-① - A1 - ② - ③		3	18	6	96.8	

Explanation of numbers ① Stroke ② Cable length ③ Options

Stroke and Maximum Speed

Stroke / Lead	Maximum Speed (mm/s)			
	50 ~ 450 (Set in 50-mm steps)	500 (mm)	550 (mm)	600 (mm)
12	800	760	640	540
6	400	380	320	270
3	200	190	160	135

(Unit: mm/s)

Options

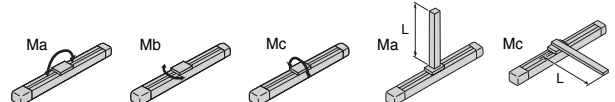
Name	Model	Page
Brake (Cable exiting the end)	BE	P381
Brake (Cable exiting the left)	BL	P381
Brake (Cable exiting the right)	BR	P381
Reversed-home specification	NM	P385
Slide roller specification	SR	P388

Actuator Specifications

Item	Description
Drive method	Ball screw Ø10mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material: Special alloy steel
Allowable load moment	Ma: 8.9N·m Mb: 12.7N·m Mc: 18.6N·m
Overhang load length	Ma direction: 220mm or less, Mb/Mc directions: 220mm or less
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)

Direction of allowable load moment

Overhang load length



40 mm

52 mm

58 mm

60 mm

68 mm

73 mm

80 mm

Pulse Motor

20w

30w

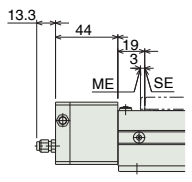
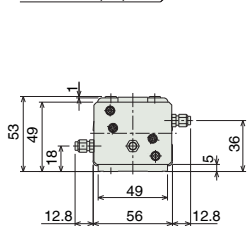
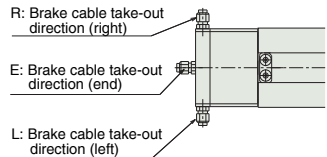
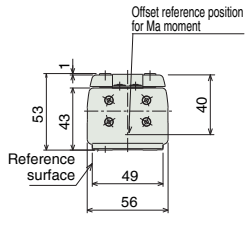
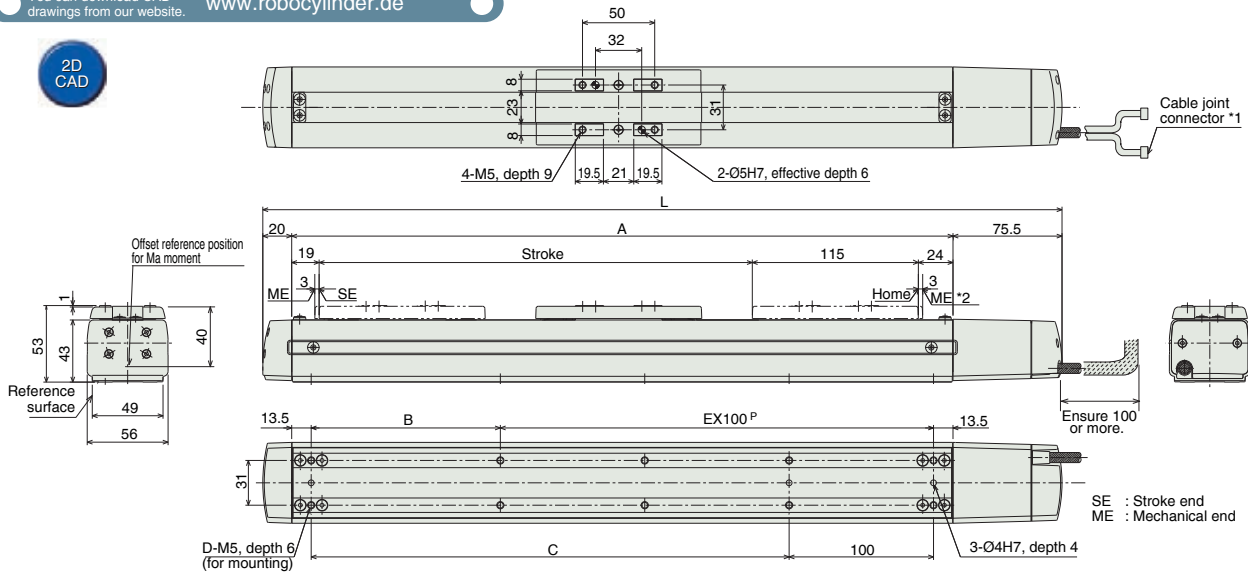
60w

100w

150w

Dimensions

You can download CAD drawings from our website. www.robocylinder.de



*1 Connect the motor/encoder cables. Refer to p. 324 for details on the cables.
 *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
 *3 Reference position for calculating Ma moment.

* Models with brake have their overall length (L) extended by 24 mm (or 37.3 mm if the wire is taken out from the end) and weight increased by 0.3 kg.

Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600
L	303.5	353.5	403.5	453.5	503.5	553.5	603.5	653.5	703.5	753.5	803.5	853.5
A	208	258	308	358	408	458	508	558	608	658	708	758
B	81	131	181	231	281	331	381	431	481	531	581	631
C	81	131	181	231	281	331	381	431	481	531	581	631
D	6	6	8	8	10	10	12	12	14	14	16	16
E	1	1	2	2	3	3	4	4	5	5	6	6
Weight (kg)	2.4	2.6	2.8	3.0	3.2	3.4	3.6	3.8	4.0	4.2	4.4	4.7

- Controller - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller

- 40 mm
- 52 mm
- 58 mm
- 60 mm
- 60 mm
- 68 mm
- 73 mm
- 80 mm

- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

Controller

Applicable Controllers

RCA series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-30I-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	Rating: 1.3A Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-30I-NP-2-0					
Solenoid valve type		ACON-CY-30I-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-30I-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-30I-NP-2-0	Pulse-train input type supporting an open collector				
Serial communication type		ACON-SE-30I-NP-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-30-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points	→P345		

* The ASEL model name is based on a 1-axis specification.

RCA-SA4R

ROBO Cylinder, Slider Type, Actuator Width 40mm, 24-V Servo Motor, Motor Reversing

Model Specification Items

RCA	SA4R		20				A1		
Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options	
I: Incremental specification A: Absolute specification	20: Servo motor 20W	10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm ?	400: 400mm (Set in 50-mm steps)	A1: ACON ASEL	N: No cable P: 1m S: 3m M: 5m X□: Specified length R□: Robot cable	B: Brake HS: Home check sensor NM: Reversed-home specification R: Opposite motor reversing direction SR: Slider roller specification SS: Slider spacer		

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 2.5). This is the maximum acceleration.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity (Note 1)		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-SA4R-①-20-10-②-A1-③-④	20	10	4	1	19.6	50 ~ 400 (Set in 50-mm steps)
RCA-SA4R-①-20-5-②-A1-③-④		5	6	2.5	39.2	
RCA-SA4R-①-20-2.5-②-A1-③-④		2.5	8	4.5	78.4	

Explanation of numbers ① Encoder type ② Stroke ③ Cable length ④ Options

Stroke and Maximum Speed

Stroke / Lead	50 ~ 400 (Set in 50-mm steps)	
	10	665
5	330	
2.5	165	

(Unit: mm/s)

Options

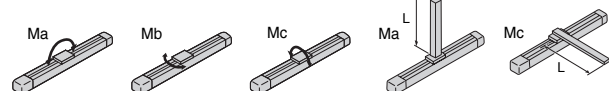
Name	Model	Page
Brake	B	P381
Home sensor	HS	P385
Reversed-home specification	NM	P385
Inverse motor-reversing direction	R	P387
Slide roller specification	SR	P388
Slide spacer	SS	P388

Actuator Specifications

Item	Description
Drive method	Ball screw Ø8mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum with special alumite treatment
Allowable load moment	Ma : 2.7N • m Mb : 3.9N • m Mc : 6.8N • m
Overhang load length	Ma direction: 120mm or less, Mb/Mc directions: 120mm or less
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)

Direction of allowable load moment

Overhang load length



40 mm

52 mm

58 mm

60 mm

68 mm

73 mm

80 mm

Pulse Motor

20w

30w

60w

100w

150w

RCA-SA5R

ROBO Cylinder, Slider Type, Actuator Width 52mm, 24-V Servo Motor, Motor Reversing

Model Specification Items **RCA** - **SA5R** - [] - **20** - [] - [] - **A1** - [] - []

Series - Type - Encoder type - Motor type - Lead - Stroke - Applicable controller - Cable length - Options

I: Incremental specification
A: Absolute specification

20: Servo motor 20W

12: 12mm
6: 6mm
3: 3mm

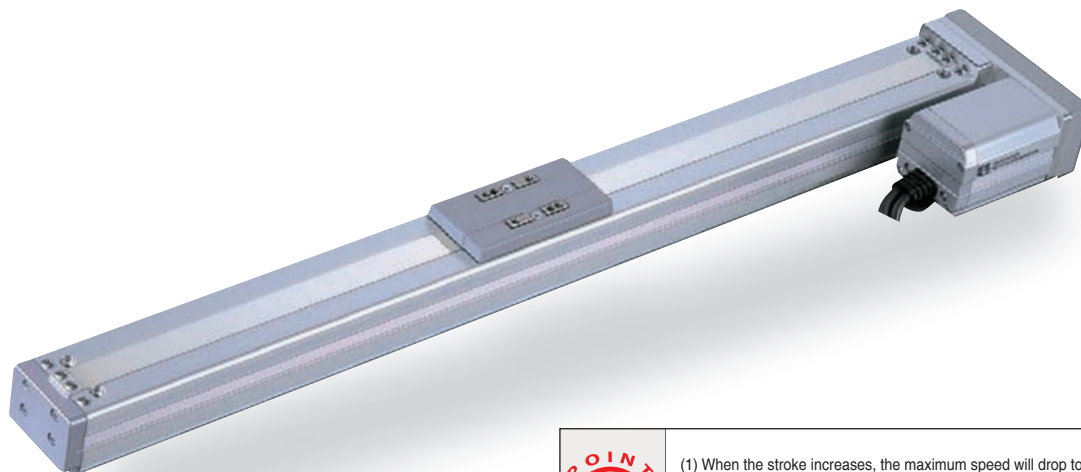
50:50mm
?
500:500mm (Set in 50-mm steps)

A1: ACON
ASEL

N: No cable
P: 1m
S: 3m
M: 5m
X□□: Specified length
R□□: Robot cable

B: Brake
HS: Home check sensor
NM: Reversed-home specification
R: Opposite motor reversing direction
SR: Slider roller specification

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). This is the maximum acceleration.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity (Note 1)		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-SA5R-①-20-12-②-A1-③-④	20	12	4	1	16.7	50 ~ 500 (Set in 50-mm steps)
RCA-SA5R-①-20-6-②-A1-③-④		6	8	2	33.3	
RCA-SA5R-①-20-3-②-A1-③-④		3	12	4	65.7	

Explanation of numbers ① Encoder type ② Stroke ③ Cable length ④ Options

Stroke and Maximum Speed

Stroke / Lead	Maximum Speed (mm/s)	
	50 ~ 450 (Set in 50-mm steps)	500 (mm)
12	800	760
6	400	380
3	200	190

(Unit: mm/s)

Options

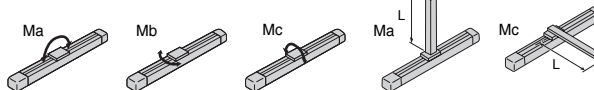
Name	Model	Page
Brake	B	P381
Home sensor	HS	P385
Reversed-home specification	NM	P385
Inverse motor-reversing direction	R	P387
Slide roller specification	SR	P388

Actuator Specifications

Item	Description
Drive method	Ball screw Ø10mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum with special alumite treatment
Allowable load moment	Ma: 4.9N • m Mb: 6.8N • m Mc: 11.7N • m
Overhang load length	Ma direction: 150mm or less, Mb/Mc directions: 150mm or less
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)

Direction of allowable load moment

Overhang load length



40 mm

52 mm

58 mm

60 mm

68 mm

73 mm

80 mm

Pulse Motor

20w

30w

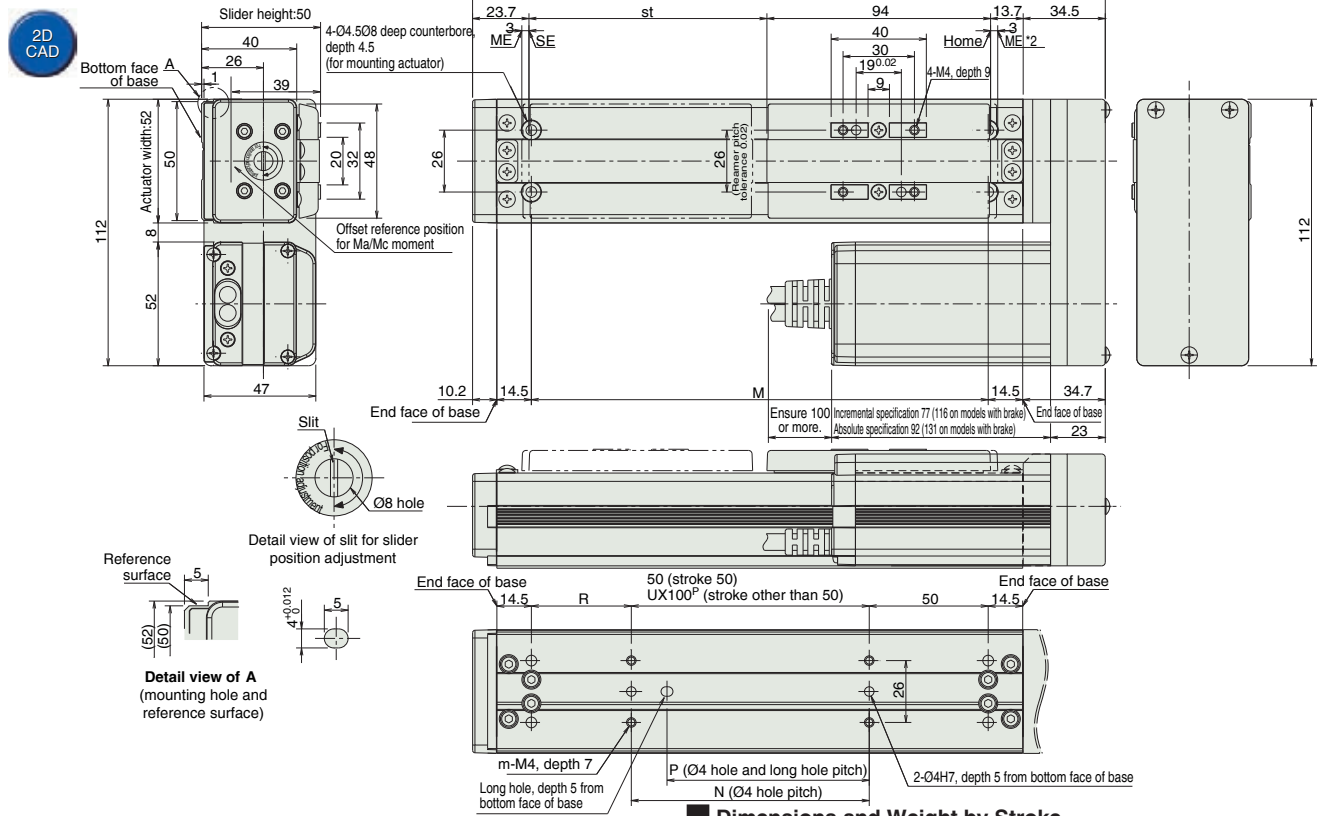
60w

100w

150w

Dimensions

You can download CAD drawings from our website. www.robocylinder.de



*1 Connect the motor/encoder cables. Refer to p. 324 for details on the cables.
 *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
 *3 Reference position for calculating Ma moment.
 *4 If the actuator is affixed using only the mounting holes provided in the top face of the base, the base may twist to cause abnormal sliding of the slider or generate noise. When the mounting holes in the top face of the base are used, keep the stroke to 200 mm or less.

Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500
L	215.9	265.9	315.9	365.9	415.9	465.9	515.9	565.9	615.9	665.9
M	142	192	242	292	342	392	442	492	542	592
N	50	100	100	200	200	300	300	400	400	500
P	35	85	85	185	185	285	285	385	385	485
R	42	42	92	42	92	42	92	42	92	42
U	-	1	1	2	2	3	3	4	4	5
m	4	4	4	6	6	8	8	10	10	12
Weight (kg)	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4

Controller

Applicable Controllers

RCA series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-20I-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	Rating: 1.3A Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-20I-NP-2-0					
Solenoid valve type		ACON-CY-20I-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-20I-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-20I-NP-2-0	Pulse-train input type supporting an open collector				
Serial communication type		ACON-SE-20I-NP-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-20①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points	→P345		

* The ASEL model name is based on a 1-axis specification.
 *① indicates the encoder type (I: Incremental / A: Absolute).

Controller Type
 Splash Proof Type
 Cleanroom Type
 Rotary Type
 Gripper Type
 Arm / Flat Type
 Rod Type
 Slider Type
 Integrated Type

40 mm
 52 mm
 58 mm
 60 mm
 68 mm
 73 mm
 80 mm

Pulse Motor
 20w
 30w
 60w
 100w
 150w

RCA-SA6R

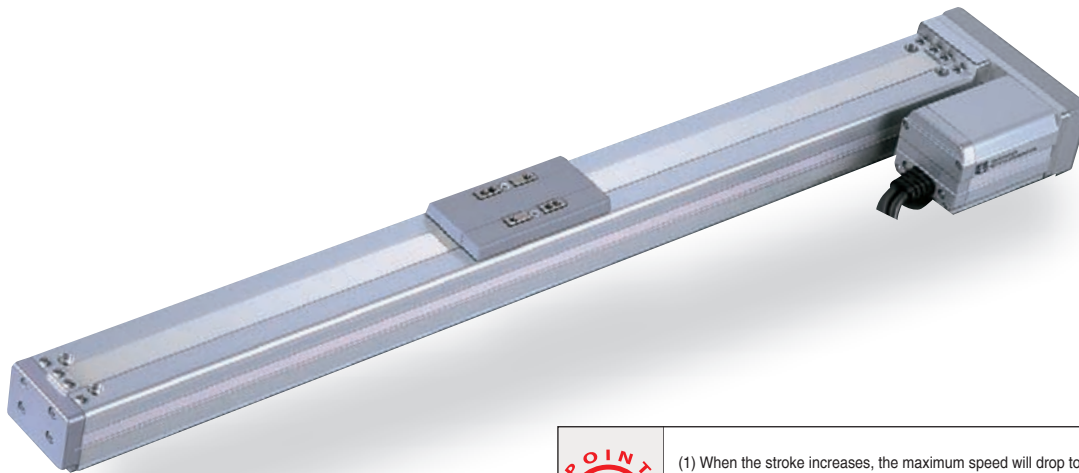
ROBO Cylinder, Slider Type, Actuator Width 58mm, 24-V Servo Motor, Motor Reversing

Model Specification Items **RCA** - **SA6R** - [] - **30** - [] - [] - **A1** - [] - []

Series — Type — Encoder type — Motor type — Lead — Stroke — Applicable controller — Cable length — Options

I: Incremental specification 30: Servo motor 12: 12mm 50:50mm A1 : ACON N : No cable B : Brake
 A: Absolute specification 30W 6: 6mm ? 600:600mm (Set in 50-mm steps) ASEL P : 1m HS : Home check sensor
 S : 3m NM : Reversed-home specification R : Opposite motor reversing direction
 M : 5m X□□ : Specified length SR : Slider roller specification
 R□□ : Robot cable

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). This is the maximum acceleration.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity (Note 1)		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-SA6R-①-30-12-②-A1-③-④	30	12	6	1.5	24.2	50 ~ 600 (Set in 50-mm steps)
RCA-SA6R-①-30-6-②-A1-③-④		6	12	3	48.4	
RCA-SA6R-①-30-3-②-A1-③-④		3	18	6	96.8	

Explanation of numbers ① Encoder type ② Stroke ③ Cable length ④ Options

Stroke and Maximum Speed

Stroke / Lead	Maximum Speed (mm/s)			
	50 ~ 450 (Set in 50-mm steps)	500 (mm)	550 (mm)	600 (mm)
12	800	760	640	540
6	400	380	320	270
3	200	190	160	135

(Unit: mm/s)

Options

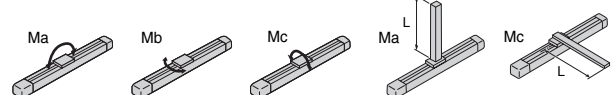
Name	Model	Page
Brake	B	P381
Home sensor	HS	P385
Reversed-home specification	NM	P385
Inverse motor-reversing direction	R	P387
Slide roller specification	SR	P388

Actuator Specifications

Item	Description
Drive method	Ball screw Ø10mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum with special alumite treatment
Allowable load moment	Ma : 8.9N·m Mb : 12.7N·m Mc : 18.6N·m
Overhang load length	Ma direction: 220mm or less, Mb/Mc directions: 220mm or less
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)

Direction of allowable load moment

Overhang load length



40 mm

52 mm

58 mm

60 mm

68 mm

73 mm

80 mm

Pulse Motor

20w

30w

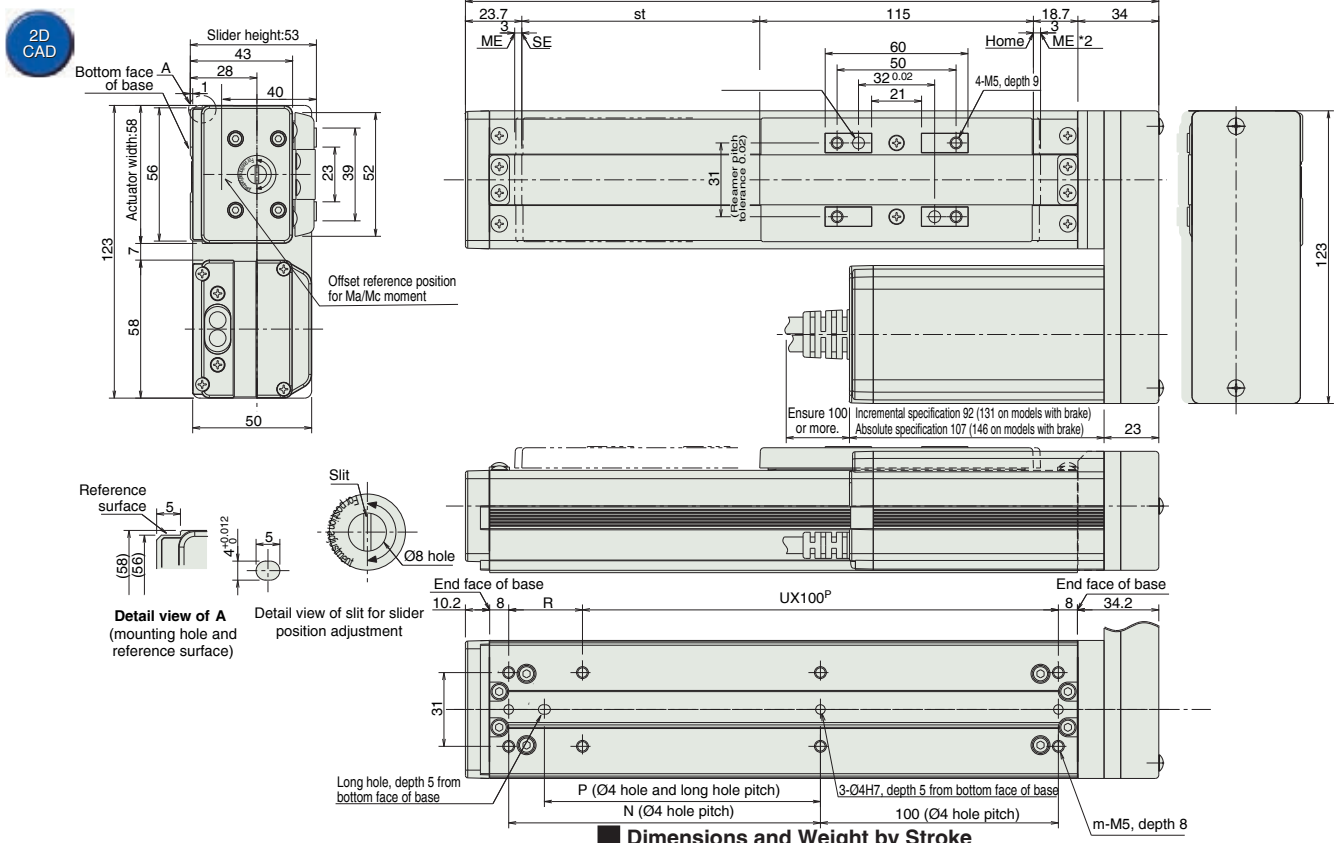
60w

100w

150w

Dimensions

You can download CAD drawings from our website. www.robocylinder.de



Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600
L	241.4	291.4	341.4	391.4	441.4	491.4	541.4	591.4	641.4	691.4	741.4	791.4
N	81	131	181	231	281	331	381	431	481	531	581	631
P	66	116	166	216	266	316	366	416	466	516	566	616
R	81	31	81	31	81	31	81	31	81	31	81	31
U	1	2	2	3	3	4	4	5	5	6	6	7
m	6	8	8	10	10	12	12	14	14	16	16	18
Weight (kg)	1.7	1.9	2.1	2.3	2.5	2.7	2.9	3.1	3.3	3.5	3.7	3.9

*1 Connect the motor/encoder cables. Refer to p. 324 for details on the cables.
 *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
 *3 Reference position for calculating Ma moment.
 *4 If the actuator is affixed using only the mounting holes provided in the top face of the base, the base may twist to cause abnormal sliding of the slider or generate noise. When the mounting holes in the top face of the base are used, keep the stroke to 200 mm or less.

Controller

Applicable Controllers

RCA series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-30I-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	Rating: 1.3A Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-30I-NP-2-0					
Solenoid valve type		ACON-CY-30I-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-30I-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-30I-NP-2-0	Pulse-train input type supporting an open collector				
Serial communication type		ACON-SE-30I-NP-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-30①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points	→P345		

* The ASEL model name is based on a 1-axis specification.
 *① indicates the encoder type (I: Incremental / A: Absolute).

- Controller - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller
- 40 mm
- 52 mm
- 58 mm
- 60 mm
- 68 mm
- 73 mm
- 80 mm
- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

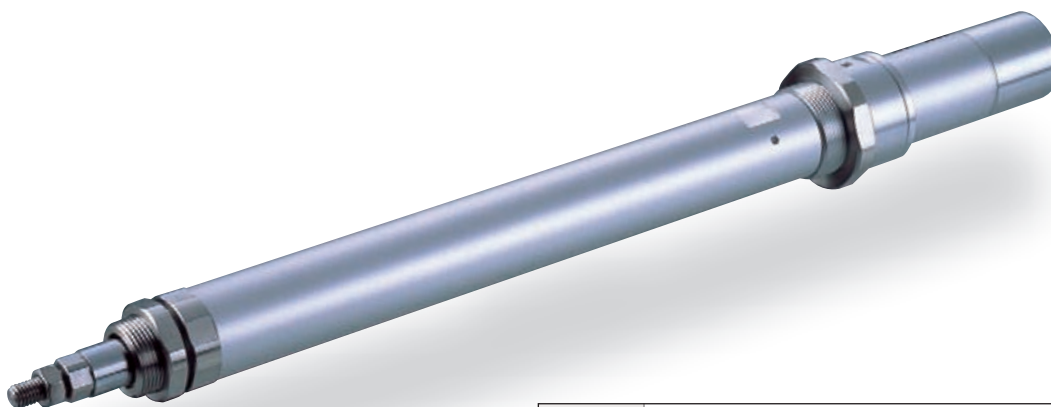
RCA-RA3C

ROBO Cylinder, Rod Type, Actuator Diameter Ø32mm, 24-V Servo Motor
Coupling Specification

Model Specification Items

RCA	RA3C	I	20			A1		
Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
		I: Incremental specification	20: Servo motor 20W	10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm ?	A1: ACON ASEL	N: No cable P: 1m S: 3m M: 5m X□: Specified length R□: Robot cable	Refer to the options table below.

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 2.5). The maximum acceleration is 0.3 G (or 0.2 G if the lead is 2.5).
- (3) The horizontal load capacity assumes use of an external guide and absence of external force applied from any direction other than the moving direction of the rod.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-RA3C-I-20-10-① - A1-② - ③	20	10	4.0	1.5	36.2	50 ~ 200 (Set in 50-mm steps)
RCA-RA3C-I-20-5-① - A1-② - ③		5	9.0	3.0	72.4	
RCA-RA3C-I-20-2.5-① - A1-② - ③		2.5	18.0	6.5	144.8	

Explanation of numbers ① Stroke ② Cable length ③ Options

Stroke and Maximum Speed

Stroke / Lead	50 ~ 200 (Set in 50-mm steps)
	10
5	250
2.5	125

(Unit: mm/s)

Options

Name	Model	Page
Brake	B	P381
Foot bracket	FT	P384
Flange	FL	P382
Home sensor	HS	P385
Knuckle joint	NJ	P385
Reversed-home specification	NM	P385
Front trunnion	TRF	P388
Rear trunnion	TRR	P389

Actuator Specifications

Item	Description
Drive method	Ball screw Ø8mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.05mm or less
Base	Material: Aluminum with white alumite treatment
Rod diameter	Ø16mm
Rod non-rotation accuracy	±1.0°
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)

Dimensions

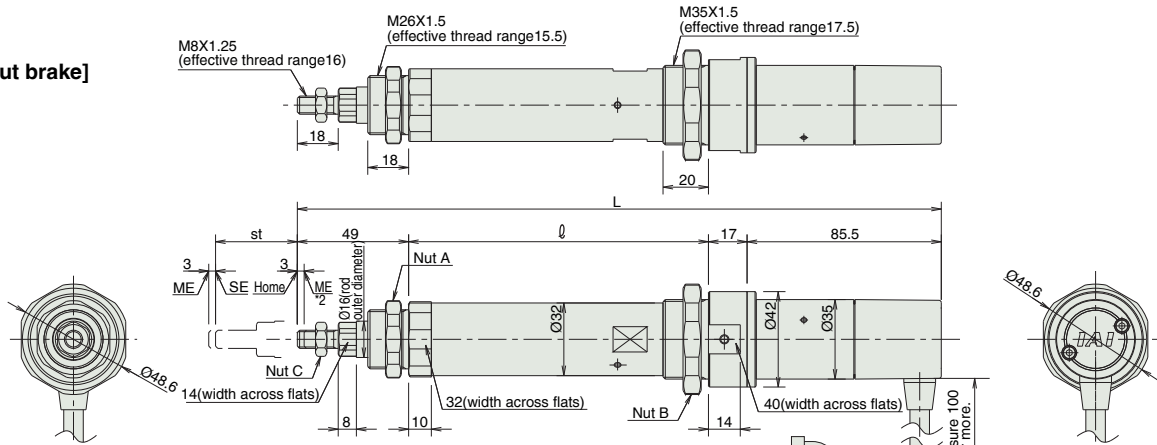
You can download CAD drawings from our website.

www.robocylinder.de

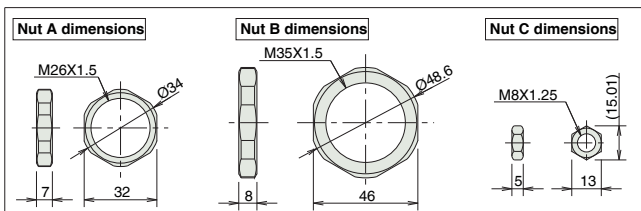
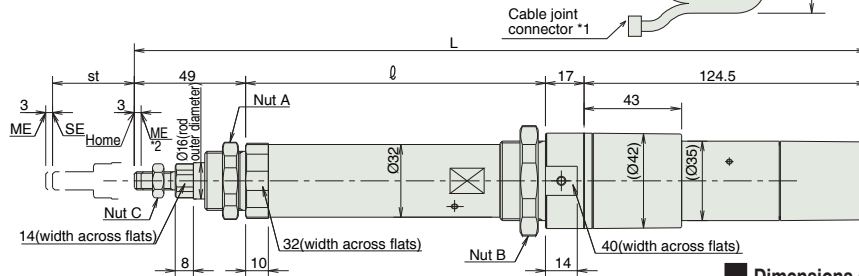


- *1 Connect the motor/encoder cables. Refer to p. 324 for details on the cables.
 - *2 The rod moves to the ME during home return. Pay attention to prevent contact between the rod and surrounding parts.
- ME: Mechanical end
SE: Stroke end

[Without brake]



[With brake]



Dimensions and Weight by Stroke

RCA-RA3C (without brake)				
Stroke	50	100	150	200
L	283.5	333.5	383.5	433.5
Ø	132	182	232	282
Weight (kg)	0.7	0.8	0.9	1.0

RCA-RA3C (with brake)				
Stroke	50	100	150	200
L	322.5	372.5	422.5	472.5
Ø	132	182	232	282
Weight (kg)	0.9	1.0	1.1	1.2

Controller

Applicable Controllers

RCA series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-20S-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	Rating: 1.7A, Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-20S-NP-2-0					
Solenoid valve type		ACON-CY-20S-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-20S-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-20S-NP-2-0	Pulse-train input type supporting an open collector				
Serial communication type		ACON-SE-20S-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-20S-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points	→P345		

* The ASEL model name is based on a 1-axis specification.

- Controlled - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller
- 25 mm
- 32 mm
- 35 mm
- 37 mm
- 45 mm
- 55 mm
- 64 mm
- 75 mm
- 100 mm
- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

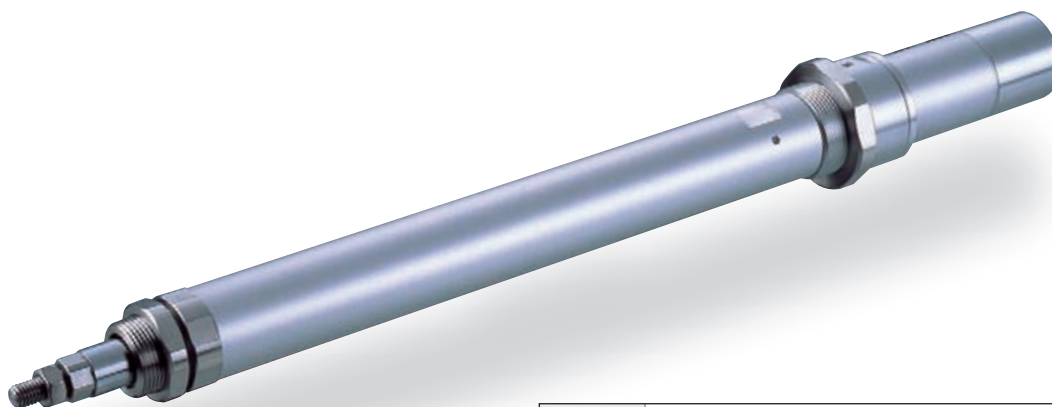
RCA-RA4C

ROBO Cylinder, Rod Type, Actuator Diameter Ø37mm, 24-V Servo Motor Coupling Specification

Model Specification Items

RCA	RA4C	I				A1		
Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
		I: Incremental specification	20: Servo motor 20W	12: 12mm 6: 6mm 3: 3mm	50:50mm ?	A1: ACON ASEL	N: No cable P: 1m S: 3m M: 5m X□□: Specified length R□□: Robot cable	Refer to the options table below.
		A: Absolute specification	30: Servo motor 30W		300:300mm (Set in 50-mm steps)			

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). This is the maximum acceleration.
- (3) The horizontal load capacity assumes use of an external guide and absence of external force applied from any direction other than the moving direction of the rod.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-RA4C-①-20-12-②-A1-③-④	20	12	3.0	1.0	18.9	50 ~ 300 (Set in 50-mm steps)
RCA-RA4C-①-20-6-②-A1-③-④		6	6.0	2.0	37.7	
RCA-RA4C-①-20-3-②-A1-③-④		3	12.0	4.0	75.4	
RCA-RA4C-①-30-12-②-A1-③-④	30	12	4.0	1.5	28.3	
RCA-RA4C-①-30-6-②-A1-③-④		6	9.0	3.0	56.6	
RCA-RA4C-①-30-3-②-A1-③-④		3	18.0	6.5	113.1	

Explanation of numbers ① Encoder type ② Stroke ③ Cable length ④ Options

Stroke and Maximum Speed

Stroke / Lead	50 ~ 300 (Set in 50-mm steps)	
	Stroke	50 ~ 300
12	600	
6	300	
3	150	

(Unit: mm/s)

Options

Name	Model	Page
Brake	B	P381
Foot bracket	FT	P384
Flange	FL	P382
Home sensor	HS	P385
Knuckle joint	NJ	P385
Reversed-home specification	NM	P385
Front trunnion	TRF	P388
Rear trunnion	TRR	P389

Actuator Specifications

Item	Description
Drive method	Ball screw Ø10mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.05mm or less
Base	Material: Aluminum with white alumite treatment
Rod diameter	Ø20mm
Rod non-rotation accuracy	±1.0°
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)

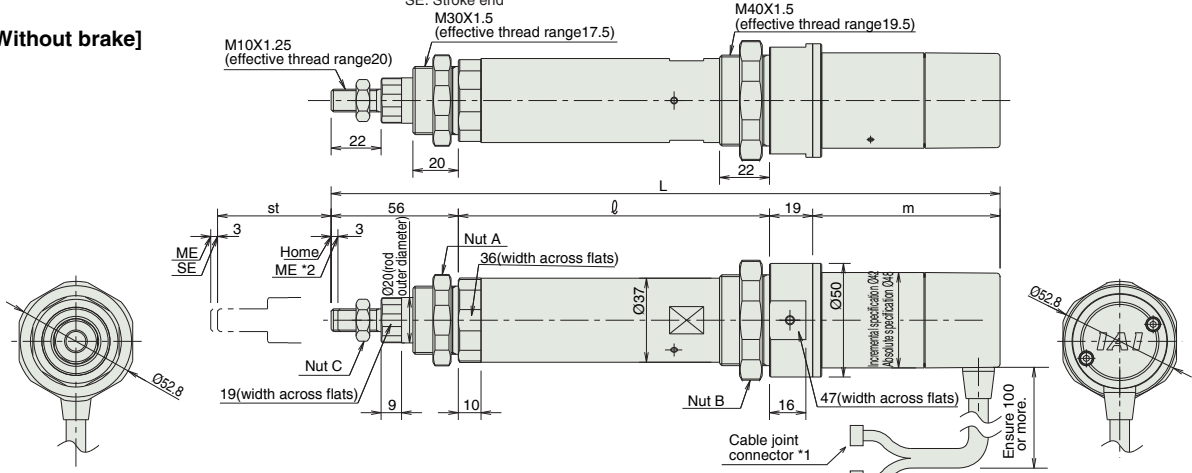
- 25 mm
- 32 mm
- 35 mm
- 37 mm
- 45 mm
- 55 mm
- 64 mm
- 75 mm
- 100 mm
- 150w

Dimensions

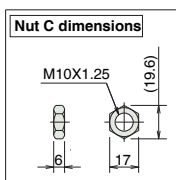
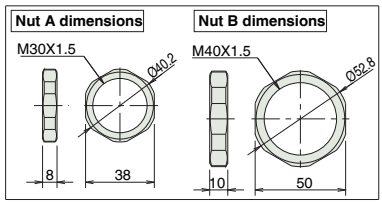
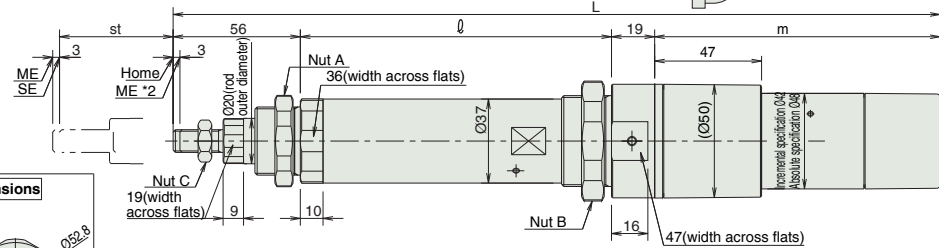
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[Without brake]



[With brake]



Dimensions and Weight by Stroke

RCA-RA4C (without brake)

Stroke	RCA-RA4C (without brake)						
	50	100	150	200	250	300	
L	20W Incremental	279.5	329.5	379.5	429.5	479.5	529.5
	20W Absolute	292.5	342.5	392.5	442.5	492.5	542.5
L	30W Incremental	294.5	344.5	394.5	444.5	494.5	544.5
	30W Absolute	307.5	357.5	407.5	457.5	507.5	557.5
Q	Incremental	137	187	237	287	337	387
	Absolute			67.5	80.5	82.5	95.5
m	20W Incremental			67.5	80.5	82.5	95.5
	20W Absolute						
m	30W Incremental						
	30W Absolute						
Weight (kg)	1.1	1.2	1.4	1.5	1.7	1.8	

RCA-RA4C (with brake)

Stroke	RCA-RA4C (with brake)						
	50	100	150	200	250	300	
L	20W Incremental	322.5	372.5	422.5	472.5	522.5	572.5
	20W Absolute	335.5	385.5	435.5	485.5	535.5	585.5
L	30W Incremental	337.5	387.5	437.5	487.5	537.5	587.5
	30W Absolute	350.5	400.5	450.5	500.5	550.5	600.5
Q	Incremental	137	187	237	287	337	387
	Absolute				110.5	123.5	125.5
m	20W Incremental				110.5	123.5	125.5
	20W Absolute						
m	30W Incremental						
	30W Absolute						
Weight (kg)	1.3	1.4	1.6	1.7	1.9	2.0	

Controller

Applicable Controllers

RCA series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-20I-NP-2-0 ACON-C-30I-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	20W Rating: 1.3A, Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-20I-NP-2-0 ACON-CG-30I-NP-2-0					
Solenoid valve type		ACON-CY-20I-NP-2-0 ACON-CY-30I-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-20I-NP-2-0 ACON-PL-30I-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-20I-NP-2-0 ACON-PO-30I-NP-2-0	Pulse-train input type supporting an open collector				
Serial communication type		ACON-SE-20I-0-0 ACON-SE-30I-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-20①-NP-2-0 ASEL-C-1-30①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points		→P345	

* The ASEL model name is based on a 1-axis specification.
* ① indicates the encoder type (I: Incremental / A: Absolute).

- Controler - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller
- 25 mm
- 32 mm
- 35 mm
- 37 mm
- 45 mm
- 55 mm
- 64 mm
- 75 mm
- 100 mm
- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

RCA-RA3D

ROBO Cylinder, Rod Type, Actuator Diameter Ø32mm, 24-V Servo Motor Built-In (Direct-Coupled) Motor Specification

Model Specification Items

RCA	RA3D	I	20			A1		
Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
		I: Incremental specification	20: Servo motor 20W	10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm 200: 200mm (Set in 50-mm steps)	A1: ACON ASEL	N: No cable P: 1m S: 3m M: 5m X□: Specified length R□: Robot cable	Refer to the options table below.

* Refer to p. 31 of the front matter for details on the model specification items.



- POINT Selection Points**
- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 2.5). The maximum acceleration is 0.3 G (or 0.2 G if the lead is 2.5).
 - (3) The horizontal load capacity assumes use of an external guide and absence of external force applied from any direction other than the moving direction of the rod.
 - (4) Take note that the built-in motor specification does not come with brake.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-RA3D-I-20-10-① - A1-② - ③	20	10	4.0	1.5	36.2	50 ~ 200 (Set in 50-mm steps)
RCA-RA3D-I-20-5-① - A1-② - ③		5	9.0	3.0	72.4	
RCA-RA3D-I-20-2.5-① - A1-② - ③		2.5	18.0	6.5	144.8	

Explanation of numbers ① Stroke ② Cable length ③ Options

Stroke and Maximum Speed

Stroke / Lead	50 ~ 200 (Set in 50-mm steps)	
	Stroke	50 ~ 200 (Set in 50-mm steps)
10		500
5		250
2.5		125

(Unit: mm/s)

Options

Name	Model	Page
Foot bracket	FT	P384
Flange	FL	P382
Home sensor	HS	P385
Knuckle joint	NJ	P385
Reversed-home specification	NM	P385
Front trunnion	TRF	P388
Rear trunnion	TRR	P389

Actuator Specifications

Item	Description
Drive method	Ball screw Ø8mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.05mm or less
Base	Material: Aluminum with white alumite treatment
Rod diameter	Ø16mm
Rod non-rotation accuracy	±1.0°
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)

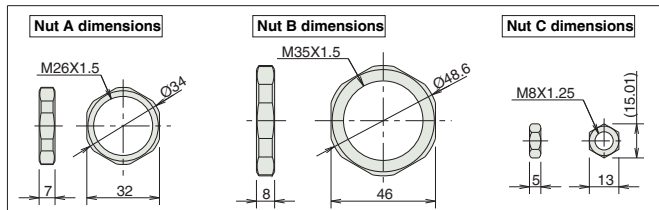
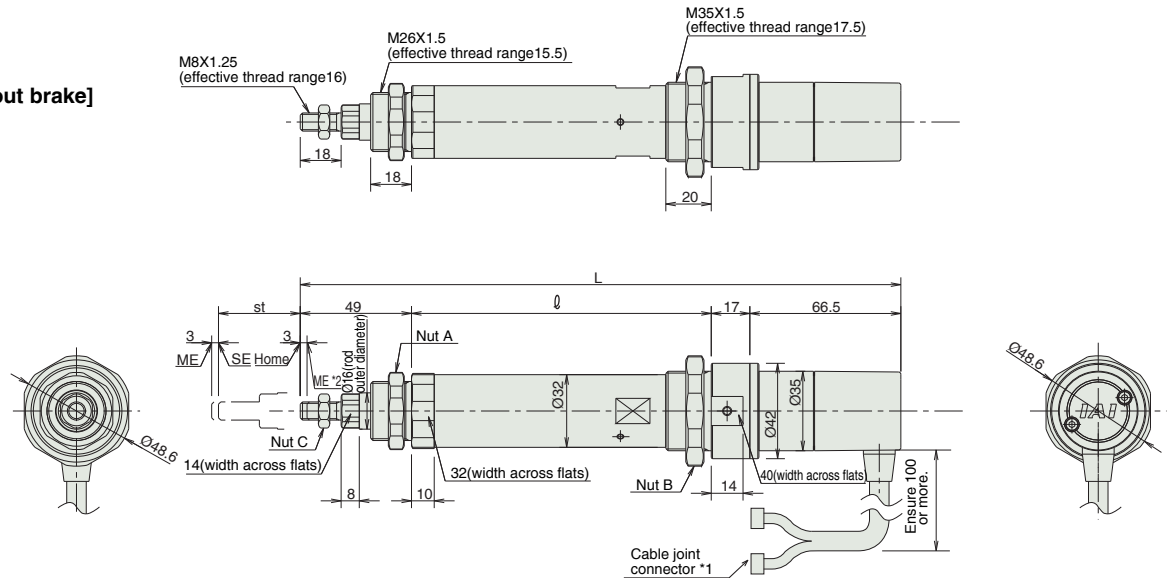
Dimensions

You can download CAD drawings from our website. www.robocylinder.de



*1 Connect the motor/encoder cables. Refer to p. 324 for details on the cables.
 *2 The rod moves to the ME during home return. Pay attention to prevent contact between the rod and surrounding parts.
 ME: Mechanical end
 SE: Stroke end

[Without brake]



Dimensions and Weight by Stroke
 RCA-RA3D (without brake)

Stroke	50	100	150	200
L	264.5	314.5	364.5	414.5
Ø	132	182	232	282
Weight (kg)	0.7	0.8	0.9	1.0

The RCA-RA3D type is not available with a brake.

Controller

Applicable Controllers

RCA series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-20S-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	Rating: 1.7A, Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-20S-NP-2-0					
Solenoid valve type		ACON-CY-20S-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-20S-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-20S-NP-2-0	Pulse-train input type supporting an open collector				
Serial communication type		ACON-SE-20S-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-20S-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points	→P345		

* The ASEL model name is based on a 1-axis specification.

- Controller - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller
- 25 mm
- 32 mm
- 35 mm
- 37 mm
- 45 mm
- 55 mm
- 64 mm
- 75 mm
- 100 mm
- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

RCA-RA4D

ROBO Cylinder, Rod Type, Actuator Diameter Ø37mm, 24-V Servo Motor Built-In (Direct-Coupled) Motor Specification

Model Specification Items

RCA	RA4D	I				A1		
Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
		I: Incremental specification	20: Servo motor 20W	12: 12mm 6: 6mm 3: 3mm	50:50mm ?	A1: ACON ASEL	N: No cable P: 1m S: 3m M: 5m X□□: Specified length R□□: Robot cable	Refer to the options table below.
		A: Absolute specification	30: Servo motor 30W		300:300mm (Set in 50-mm steps)			

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). The maximum acceleration is 0.3 G (or 0.2 G if the lead is 2.5).
- (3) The horizontal load capacity assumes use of an external guide and absence of external force applied from any direction other than the moving direction of the rod.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-RA4D-①-20-12-②-A1-③-④	20	12	3.0	1.0	18.9	50 ~ 300 (Set in 50-mm steps)
RCA-RA4D-①-20-6-②-A1-③-④		6	6.0	2.0	37.7	
RCA-RA4D-①-20-3-②-A1-③-④		3	12.0	4.0	75.4	
RCA-RA4D-①-30-12-②-A1-③-④	30	12	4.0	1.5	28.3	
RCA-RA4D-①-30-6-②-A1-③-④		6	9.0	3.0	56.6	
RCA-RA4D-①-30-3-②-A1-③-④		3	18.0	6.5	113.1	

Stroke and Maximum Speed

Stroke / Lead	50 ~ 300 (Set in 50-mm steps)	
	Stroke	50 ~ 300
12	600	
6	300	
3	150	

(Unit: mm/s)

Explanation of numbers ① Encoder type ② Stroke ③ Cable length ④ Options

Options

Name	Model	Page
Foot bracket	FT	P384
Flange	FL	P382
Home sensor	HS	P385
Knuckle joint	NJ	P385
Reversed-home specification	NM	P385
Front trunnion	TRF	P388
Rear trunnion	TRR	P389

Actuator Specifications

Item	Description
Drive method	Ball screw Ø10mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.05mm or less
Base	Material: Aluminum with white alumite treatment
Rod diameter	Ø20mm
Rod non-rotation accuracy	±1.0°
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)

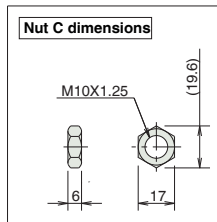
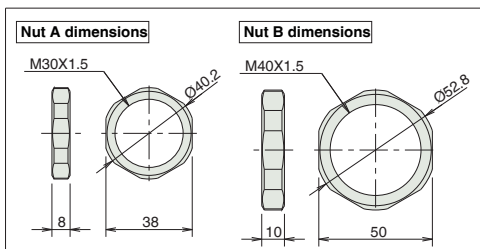
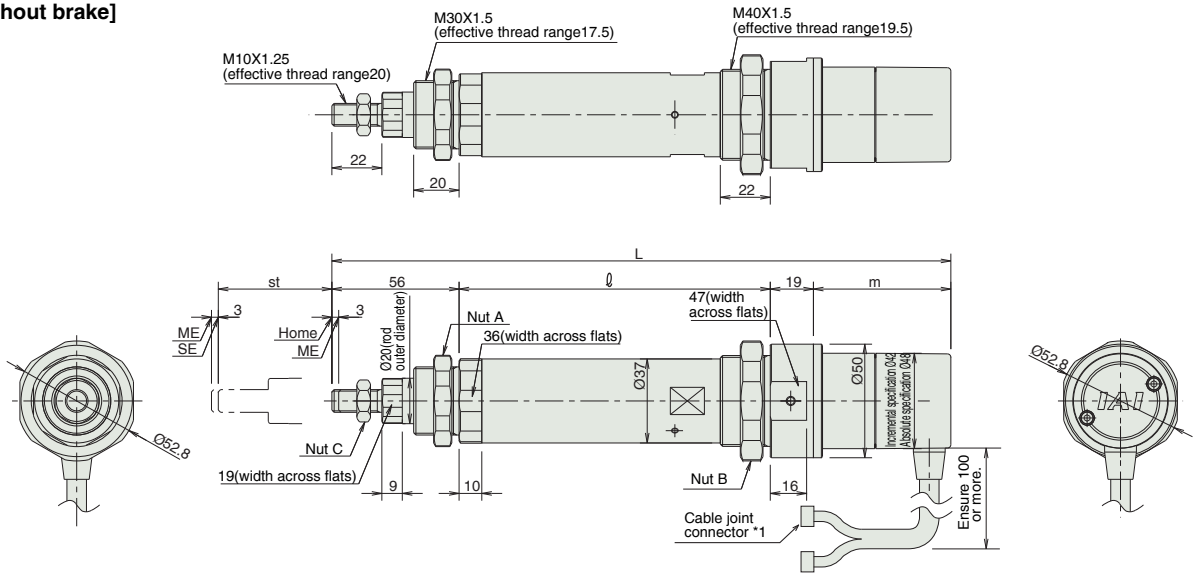
- 25 mm
- 32 mm
- 35 mm
- 37 mm
- 45 mm
- 55 mm
- 64 mm
- 75 mm
- 100 mm
- 150w

Dimensions

You can download CAD drawings from our website. www.robocylinder.de



[Without brake]



Dimensions and Weight by Stroke

RCA-RA4D (without brake)

Stroke	50	100	150	200	250	300		
L	20W	Incremental	257.5	307.5	357.5	407.5	457.5	507.5
		Absolute	270.5	320.5	370.5	420.5	470.5	520.5
	30W	Incremental	272.5	322.5	372.5	422.5	472.5	522.5
		Absolute	285.5	335.5	385.5	435.5	485.5	535.5
	Q		137	187	237	287	337	387
	m	20W	Incremental	45.5				
Absolute			58.5					
30W		Incremental	60.5					
		Absolute	73.5					
Weight (kg)	1.1	1.2	1.3	1.5	1.6	1.8		

The RCA-RA3D type is not available with a brake.

- Controller - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller

- 25 mm
- 32 mm
- 35 mm
- 37 mm
- 45 mm
- 55 mm
- 64 mm
- 75 mm
- 100 mm
- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

Controller

Applicable Controllers

RCA series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-20I-NP-2-0 ACON-C-30I-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	20W Rating: 1.3A, Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-20I-NP-2-0 ACON-CG-30I-NP-2-0					
Solenoid valve type		ACON-CY-20I-NP-2-0 ACON-CY-30I-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-20I-NP-2-0 ACON-PL-30I-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-20I-NP-2-0 ACON-PO-30I-NP-2-0	Pulse-train input type supporting an open collector				
Serial communication type		ACON-SE-20I-0-0 ACON-SE-30I-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-20①-NP-2-0 ASEL-C-1-30①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points	→P345		

* The ASEL model name is based on a 1-axis specification.
 * ① indicates the encoder type (I: Incremental / A: Absolute).

RCA-RA3R

ROBO Cylinder, Rod Type, Actuator Diameter Ø32mm, 24-V Servo Motor
Motor Reversing Specification

Model Specification Items

RCA	RA3R	I	20			A1		
Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
		I: Incremental specification	20: Servo motor 20W	10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm 200: 200mm (Set in 50-mm steps)	A1: ACON ASEL	N: No cable P: 1m S: 3m M: 5m X□: Specified length R□: Robot cable	Refer to the options table below.

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 2.5). The maximum acceleration is 0.3 G (or 0.2 G if the lead is 2.5).
- (3) The horizontal load capacity assumes use of an external guide and absence of external force applied from any direction other than the moving direction of the rod.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-RA3R-I-20-10-① - A1-② - ③	20	10	4.0	1.5	36.2	50 ~ 200 (Set in 50-mm steps)
RCA-RA3R-I-20-5-① - A1-② - ③		5	9.0	3.0	72.4	
RCA-RA3R-I-20-2.5-① - A1-② - ③		2.5	18.0	6.5	144.8	

Explanation of numbers ① Stroke ② Cable length ③ Options

Stroke and Maximum Speed

Stroke / Lead	50 ~ 200 (Set in 50-mm steps)	
	Stroke	Maximum Speed (mm/s)
10	500	500
5	250	250
2.5	125	125

(Unit: mm/s)

Options

Name	Model	Page
Brake	B	P381
Rear mounting plate	RP	P387
Foot bracket	FT	P384
Flange	FL	P382
Home sensor	HS	P385
Knuckle joint	NJ	P385
Reversed-home specification	NM	P385
Clevis	QR	P386
Front trunnion	TRR	P389

Actuator Specifications

Item	Description
Drive method	Ball screw Ø8mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.05mm or less
Base	Material: Aluminum with white alumite treatment
Rod diameter	Ø16mm
Rod non-rotation accuracy	±1.0°
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)

- Controller - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller
- 25 mm
- 32 mm
- 35 mm
- 37 mm
- 45 mm
- 55 mm
- 64 mm
- 75 mm
- 100 mm
- 150w

Dimensions

You can download CAD drawings from our website.

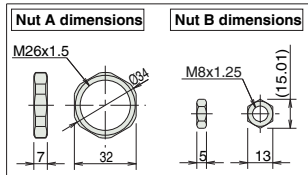
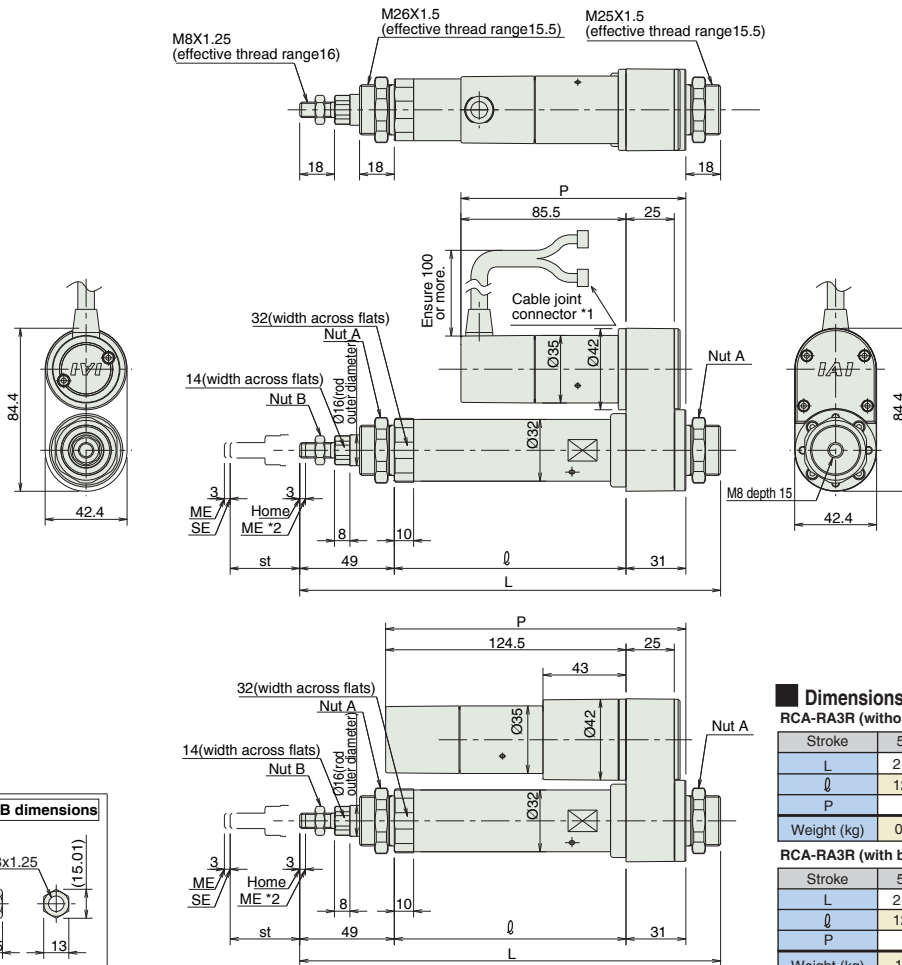
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- *1 Connect the motor/encoder cables. Refer to p. 324 for details on the cables.
 - *2 The rod moves to the ME during home return. Pay attention to prevent contact between the rod and surrounding parts.
- ME: Mechanical end
SE: Stroke end

[Without brake]

[With brake]



Dimensions and Weight by Stroke

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

Controller

Applicable Controllers

RCA series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-20S-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	Rating: 1.7A, Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-20S-NP-2-0					
Solenoid valve type		ACON-CY-20S-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-20S-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-20S-NP-2-0	Pulse-train input type supporting an open collector				
Serial communication type		ACON-SE-20S-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-20S-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points	→P345		

* The ASEL model name is based on a 1-axis specification.

- Controller - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller
- 25 mm
- 32 mm
- 35 mm
- 37 mm
- 45 mm
- 55 mm
- 64 mm
- 75 mm
- 100 mm
- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

RCA-RA4R

ROBO Cylinder, Rod Type, Actuator Diameter Ø37mm, 24-V Servo Motor
Motor Reversing Specification

Model Specification Items

RCA	RA4R	I				A1		
Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
		I: Incremental specification A: Absolute specification	20: Servo motor 30: Servo motor	12: 12mm 6: 6mm 3: 3mm	50:50mm ? 300:300mm (Set in 50-mm steps)	A1: ACON ASEL	N: No cable P: 1m S: 3m M: 5m X□□: Specified length R□□: Robot cable	Refer to the options table below.

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). The maximum acceleration is 0.3 G (or 0.2 G if the lead is 3).
- (3) The horizontal load capacity assumes use of an external guide and absence of external force applied from any direction other than the moving direction of the rod.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-RA4R-①-20-12-②-A1-③-④	20	12	3.0	1.0	18.9	50 ~ 300 (Set in 50-mm steps)
RCA-RA4R-①-20-6-②-A1-③-④		6	6.0	2.0	37.7	
RCA-RA4R-①-20-3-②-A1-③-④		3	12.0	4.0	75.4	
RCA-RA4R-①-30-12-②-A1-③-④	30	12	4.0	1.5	28.3	
RCA-RA4R-①-30-6-②-A1-③-④		6	9.0	3.0	56.6	
RCA-RA4R-①-30-3-②-A1-③-④		3	18.0	6.5	113.1	

Stroke and Maximum Speed

Stroke / Lead	50 ~ 300 (Set in 50-mm steps)	
	Stroke	50 ~ 300
12	600	
6	300	
3	150	

(Unit: mm/s)

Explanation of numbers ① Encoder type ② Stroke ③ Cable length ④ Options

Options

Name	Model	Page
Brake	B	P381
Rear mounting plate	RP	P387
Foot bracket	FT	P384
Flange	FL	P382
Home sensor	HS	P385
Knuckle joint	NJ	P385
Reversed-home specification	NM	P385
Clevis	QR	P386
Front trunnion	TRR	P389

Actuator Specifications

Item	Description
Drive method	Ball screw Ø10mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.05mm or less
Base	Material: Aluminum with white alumite treatment
Rod diameter	Ø20mm
Rod non-rotation accuracy	±1.0°
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)

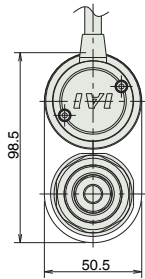
- Controller - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller
- 25 mm
- 32 mm
- 35 mm
- 37 mm
- 45 mm
- 55 mm
- 64 mm
- 75 mm
- 100 mm
- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

Dimensions

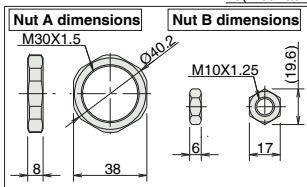
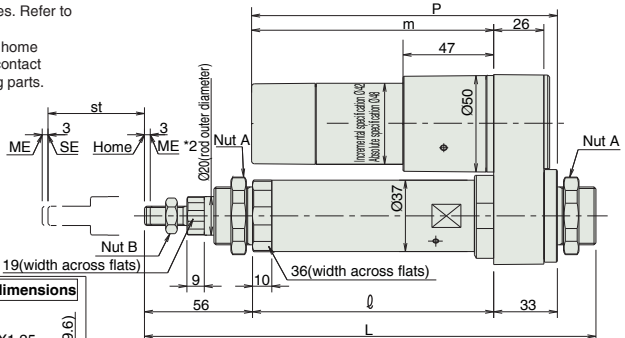
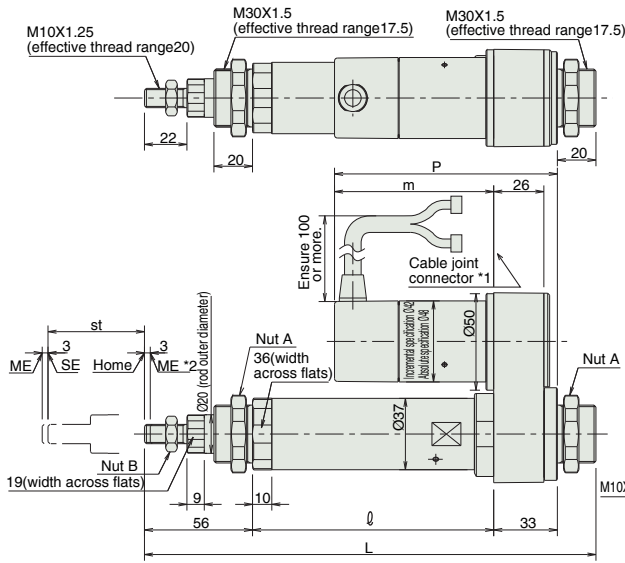
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[Without brake]



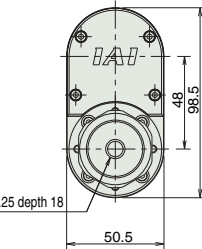
[With brake]



Dimensions and Weight by Stroke

RCA-RA4R (without brake)

Stroke	50	100	150	200	250	300	
L	20W Incremental	234	284	334	384	434	484
	20W Absolute	234	284	334	384	434	484
L	30W Incremental	234	284	334	384	434	484
	30W Absolute	234	284	334	384	434	484
Ø	125	175	225	275	325	375	
m	20W Incremental	67.5					
	20W Absolute	80.5					
m	30W Incremental	82.5					
	30W Absolute	95.5					
P	20W Incremental	100.5					
	20W Absolute	113.5					
P	30W Incremental	115.5					
	30W Absolute	128.5					
Weight (kg)	1.2	1.4	1.5	1.7	1.8	2.0	



RCA-RA4R (with brake)

Stroke	50	100	150	200	250	300	
L	20W Incremental	234	284	334	384	434	484
	20W Absolute	234	284	334	384	434	484
L	30W Incremental	234	284	334	384	434	484
	30W Absolute	234	284	334	384	434	484
Ø	125	175	225	275	325	375	
m	20W Incremental	110.5					
	20W Absolute	123.5					
m	30W Incremental	125.5					
	30W Absolute	138.5					
P	20W Incremental	143.5					
	20W Absolute	156.5					
P	30W Incremental	158.5					
	30W Absolute	171.5					
Weight (kg)	1.4	1.6	1.7	1.9	2.0	2.2	

Controller

Applicable Controllers

RCA series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-20I-NP-2-0 ACON-C-30I-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	20W Rating: 1.3A, Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-20I-NP-2-0 ACON-CG-30I-NP-2-0					
Solenoid valve type		ACON-CY-20I-NP-2-0 ACON-CY-30I-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-20I-NP-2-0 ACON-PL-30I-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-20I-NP-2-0 ACON-PO-30I-NP-2-0	Pulse-train input type supporting an open collector	(-)			
Serial communication type		ACON-SE-20I-0-0 ACON-SE-30I-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-20①-NP-2-0 ASEL-C-1-30①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points		→P345	

* The ASEL model name is based on a 1-axis specification.
* ① indicates the encoder type (I: Incremental / A: Absolute).

- Controller - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller
- 25 mm
- 32 mm
- 35 mm
- 37 mm
- 45 mm
- 55 mm
- 64 mm
- 75 mm
- 100 mm
- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

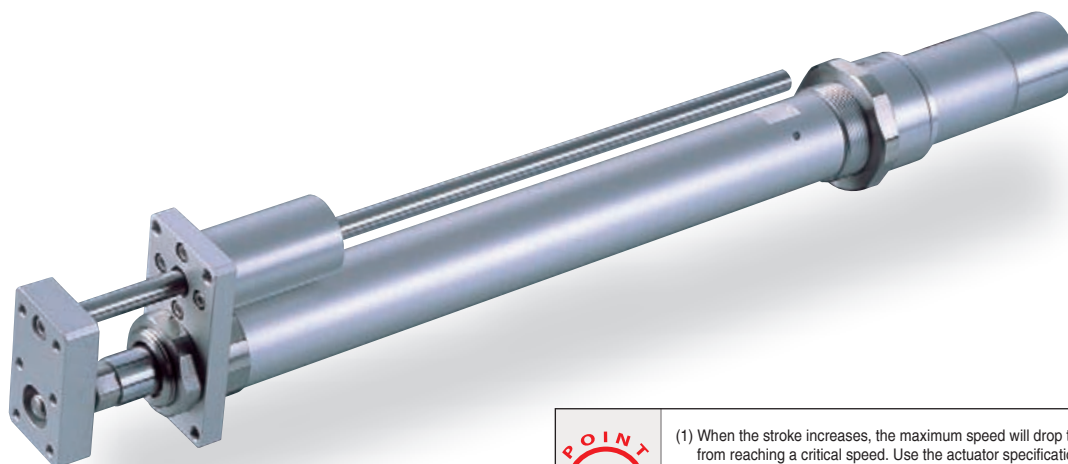
RCA-RGS3C

ROBO Cylinder, Rod Type with Single Guide, Actuator Diameter Ø32mm, 24-V Servo Motor
Coupling Specification

Model Specification Items

RCA	-RGS3C	-I	-20	<input type="checkbox"/>	<input type="checkbox"/>	A1	<input type="checkbox"/>	<input type="checkbox"/>
Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
I: Incremental specification	20: Servo motor	10: 10mm 5: 5mm 2.5: 2.5mm	20W	10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm 200: 200mm (Set in 50-mm steps)	A1: ACON ASEL	N: No cable P: 1m S: 3m M: 5m X <input type="checkbox"/> : Specified length R <input type="checkbox"/> : Robot cable	Refer to the options table below.

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 2.5). This is the maximum acceleration.
- (3) The horizontal load capacity assumes use of an external guide.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-RGS3C-I-20-10-①-A1-②-③	20	10	4.0	1.2	36.2	50 ~ 200 (Set in 50-mm steps)
RCA-RGS3C-I-20-5-①-A1-②-③		5	9.0	2.7	72.4	
RCA-RGS3C-I-20-2.5-①-A1-②-③		2.5	18.0	6.2	144.8	

Explanation of numbers ① Stroke ② Cable length ③ Options

Stroke and Maximum Speed

Lead	Stroke	50 ~ 200 (Set in 50-mm steps)
	10	500
5	250	250
2.5	125	125

(Unit: mm/s)

Options

Name	Model	Page
Brake	B	P381
Foot bracket	FT	P383
Home sensor	HS	P385
Reversed-home specification	NM	P385
Rear trunnion	TRR	P389

Actuator Specifications

Item	Description
Drive method	Ball screw Ø8mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.05mm or less
Guide	Single guide, guide rod diameter Ø8mm, ball bush type
Rod diameter	Ø16mm
Rod non-rotation accuracy	±0.05°
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)

- 25 mm
- 32 mm
- 35 mm
- 37 mm
- 45 mm
- 55 mm
- 64 mm
- 75 mm
- 100 mm

- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

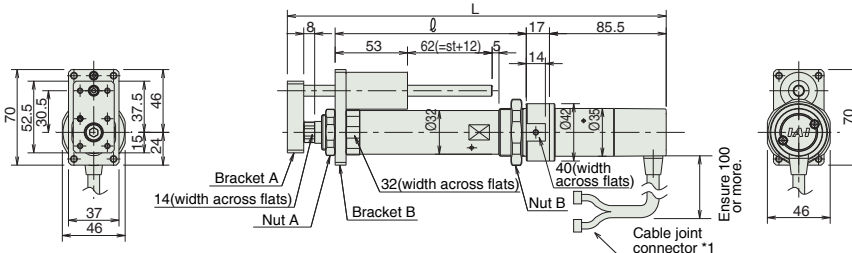
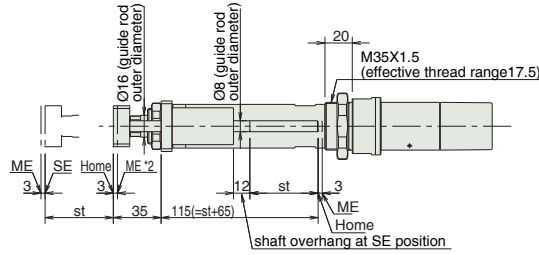
Dimensions

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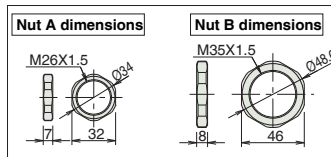
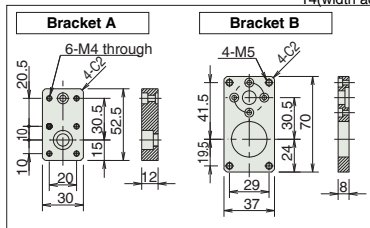
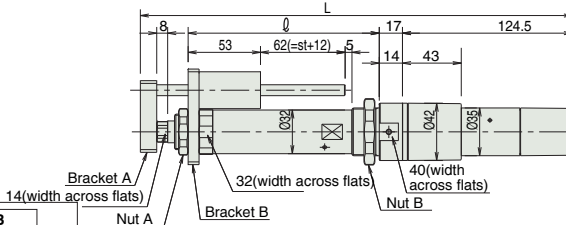


- *1 Connect the motor/encoder cables. Refer to p. 324 for details on the cables.
 - *2 The rod moves to the ME during home return. Pay attention to prevent contact between the rod and surrounding parts.
- ME: Mechanical end
SE: Stroke end

[Without brake]



[With brake]



Dimensions and Weight by Stroke

RCA-RGS3C (without brake)				
Stroke	50	100	150	200
L	277.5	327.5	377.5	427.5
∅	140	190	240	290
Weight (kg)	0.9	1.1	1.2	1.3
RCA-RGS3C (with brake)				
Stroke	50	100	150	200
L	316.5	366.5	416.5	466.5
∅	140	190	240	290
Weight (kg)	1.1	1.3	1.4	1.5

Controller

Applicable Controllers

RCA series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-205-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	Rating: 1.7A, Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-205-NP-2-0					
Solenoid valve type		ACON-CY-205-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-205-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-205-NP-2-0	Pulse-train input type supporting an open collector				
Serial communication type		ACON-SE-205-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-205-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points	→P345		

* The ASEL model name is based on a 1-axis specification.

- Controller - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller
- 25 mm
- 32 mm
- 35 mm
- 37 mm
- 45 mm
- 55 mm
- 64 mm
- 75 mm
- 100 mm
- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

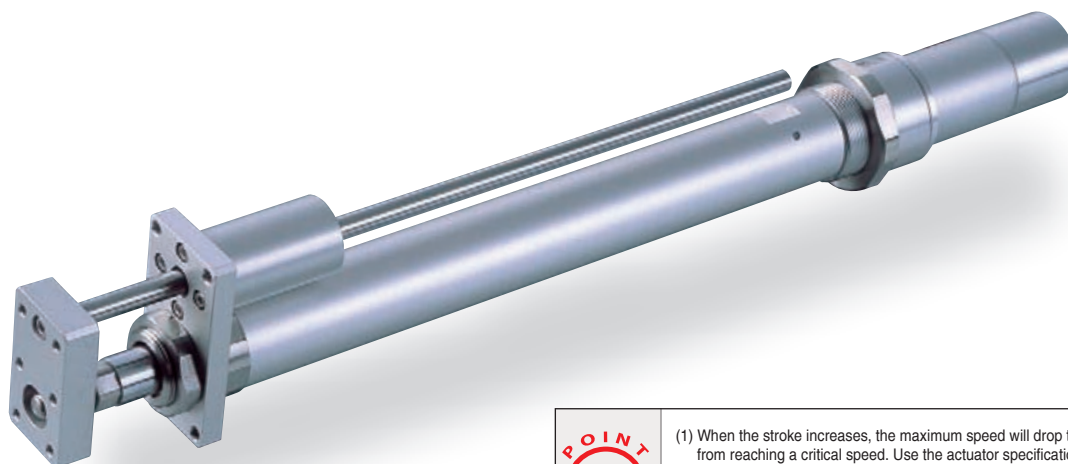
RCA-RGS4C

ROBO Cylinder, Rod Type with Single Guide, Actuator Diameter Ø37mm, 24-V Servo Motor
Coupling Specification

Model Specification Items

RCA	-RGS4C	-I	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A1	<input type="checkbox"/>	<input type="checkbox"/>
Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
I: Incremental specification	20: Servo motor 20W	12: 12mm	6: 6mm	50:50mm	A1: ACON ASEL	N: No cable		Refer to the options table below.
A: Absolute specification	30: Servo motor 30W	3: 3mm	300:300mm (Set in 50-mm steps)	?		P: 1m		
						S: 3m		
						M: 5m		
						X□□: Specified length		
						R□□: Robot cable		

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). This is the maximum acceleration.
- (3) The horizontal load capacity assumes use of an external guide.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-RGS4C-①-20-12-②-A1-③-④	20	12	3.0	0.5	18.9	50 ~ 300 (Set in 50-mm steps)
RCA-RGS4C-①-20-6-②-A1-③-④		6	6.0	1.5	37.7	
RCA-RGS4C-①-20-3-②-A1-③-④		3	12.0	3.5	75.4	
RCA-RGS4C-①-30-12-②-A1-③-④	30	12	4.0	1.0	28.3	
RCA-RGS4C-①-30-6-②-A1-③-④		6	9.0	2.5	56.6	
RCA-RGS4C-①-30-3-②-A1-③-④		3	18.0	6.0	113.1	

Stroke and Maximum Speed

Stroke / Lead	50 ~ 300 (Set in 50-mm steps)	
	Stroke	50 ~ 300
12	600	
6	300	
3	150	

(Unit: mm/s)

Explanation of numbers ① Encoder type ② Stroke ③ Cable length ④ Options

Options

Name	Model	Page
Brake	B	P381
Foot bracket	FT	P383
Home sensor	HS	P385
Reversed-home specification	NM	P385
Rear trunnion	TRR	P389

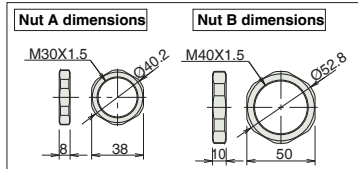
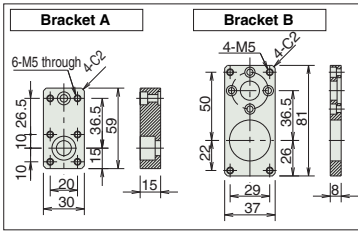
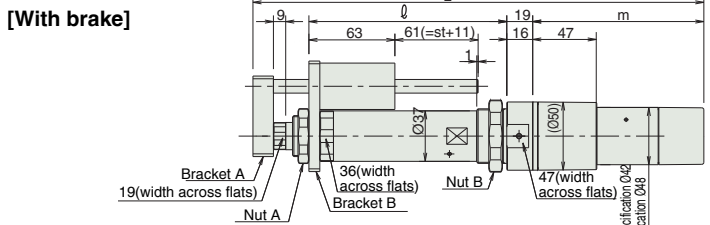
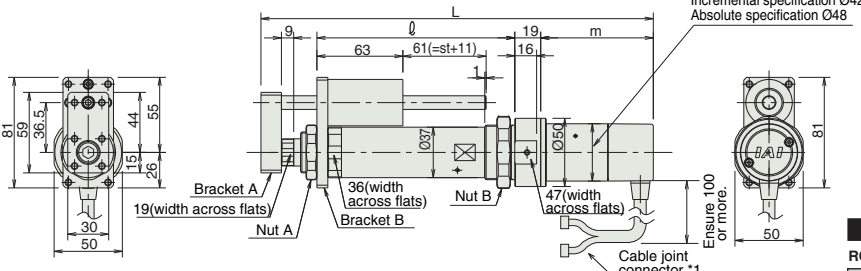
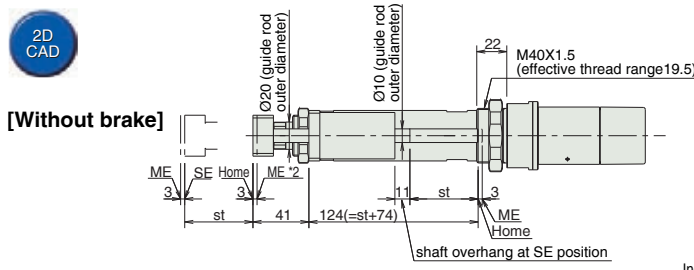
Actuator Specifications

Item	Description
Drive method	Ball screw Ø10mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.05mm or less
Guide	Single guide, guide rod diameter Ø10mm, ball bush type
Rod diameter	Ø20mm
Rod non-rotation accuracy	±0.05°
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)

- Controller - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller
- 25 mm
- 32 mm
- 35 mm
- 37 mm
- 45 mm
- 55 mm
- 64 mm
- 75 mm
- 100 mm
- 150w

Dimensions

You can download CAD drawings from our website. www.robocylinder.de



*1 Connect the motor/encoder cables. Refer to p. 324 for details on the cables.
 *2 The rod moves to the ME during home return. Pay attention to prevent contact between the rod and surrounding parts.
 ME: Mechanical end
 SE: Stroke end

Dimensions and Weight by Stroke

RCA-RGS4C (without brake)

Stroke	50	100	150	200	250	300	
L	Incremental	272.5	322.5	372.5	422.5	472.5	522.5
	Absolute	285.5	335.5	385.5	435.5	485.5	535.5
30W	Incremental	287.5	337.5	387.5	437.5	487.5	537.5
	Absolute	300.5	350.5	400.5	450.5	500.5	550.5
Ø	145	195	245	295	345	395	
m	Incremental	67.5					
	Absolute	80.5					
30W	Incremental	82.5					
	Absolute	95.5					
Weight (kg)	1.5	1.6	1.8	2.0	2.2	2.4	

RCA-RGS4C (with brake)

Stroke	50	100	150	200	250	300	
L	Incremental	315.5	365.5	415.5	465.5	515.5	565.5
	Absolute	328.5	378.5	428.5	478.5	528.5	578.5
30W	Incremental	330.5	380.5	430.5	480.5	530.5	580.5
	Absolute	343.5	393.5	443.5	493.5	543.5	593.5
Ø	145	195	245	295	345	395	
m	Incremental	110.5					
	Absolute	123.5					
30W	Incremental	125.5					
	Absolute	138.5					
Weight (kg)	1.7	1.8	2.0	2.2	2.4	2.6	

Controller

Applicable Controllers

RCA series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-20I-NP-2-0 ACON-C-30I-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	20W Rating: 1.3A, Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-20I-NP-2-0 ACON-CG-30I-NP-2-0					
Solenoid valve type		ACON-CY-20I-NP-2-0 ACON-CY-30I-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-20I-NP-2-0 ACON-PL-30I-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-20I-NP-2-0 ACON-PO-30I-NP-2-0	Pulse-train input type supporting an open collector				
Serial communication type		ACON-SE-20I-0-0 ACON-SE-30I-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-20①-NP-2-0 ASEL-C-1-30①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points	→P345		

* The ASEL model name is based on a 1-axis specification.
 * ① indicates the encoder type (I: Incremental / A: Absolute).

- Controler - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller
- 25 mm
- 32 mm
- 35 mm
- 37 mm
- 45 mm
- 55 mm
- 64 mm
- 75 mm
- 100 mm
- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

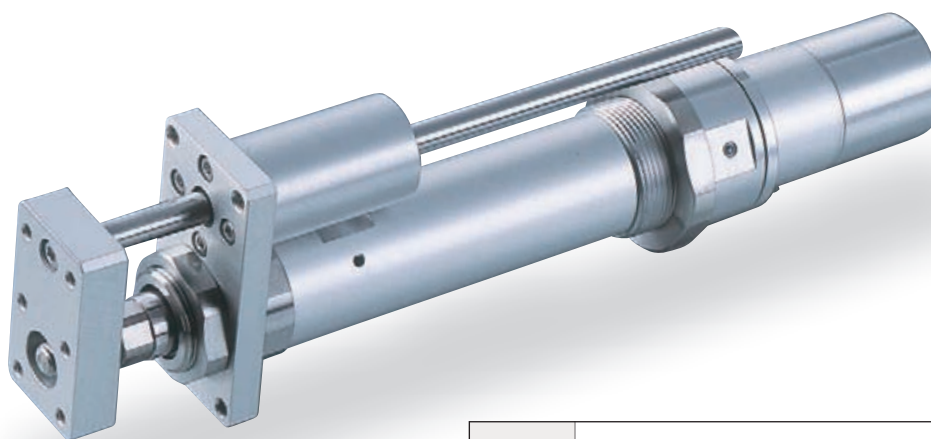
RCA-RGS3D

ROBO Cylinder, Rod Type with Single Guide, Actuator Diameter Ø32mm, 24-V Servo Motor Built-In Specification

Model Specification Items

RCA	-RGS3D-	I	-20			A1		
Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
		I: Incremental specification	20: Servo motor 20W	10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm 200: 200mm (Set in 50-mm steps)	A1: ACON ASEL	N: No cable P: 1m S: 3m M: 5m X□: Specified length R□: Robot cable	Refer to the options table below.

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 2.5). This is the maximum acceleration.
- (3) The horizontal load capacity assumes use of an external guide.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-RGS3D-I-20-10-①-A1-②-③	20	10	4.0	1.2	36.2	50 ~ 200 (Set in 50-mm steps)
RCA-RGS3D-I-20-5-①-A1-②-③		5	9.0	2.7	72.4	
RCA-RGS3D-I-20-2.5-①-A1-②-③		2.5	18.0	6.2	144.8	

Explanation of numbers ① Stroke ② Cable length ③ Options

Stroke and Maximum Speed

Lead	Stroke	50 ~ 200 (Set in 50-mm steps)
	10	500
5	250	250
2.5	125	125

(Unit: mm/s)

Options

Name	Model	Page
Foot bracket	FT	P384
Home sensor	HS	P385
Reversed-home specification	NM	P385
Rear trunnion	TRR	P389

Actuator Specifications

Item	Description
Drive method	Ball screw Ø8mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.05mm or less
Guide	Single guide, guide rod diameter Ø8mm, ball bush type
Rod diameter	Ø16mm
Rod non-rotation accuracy	±0.05°
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)

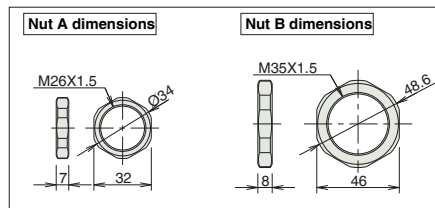
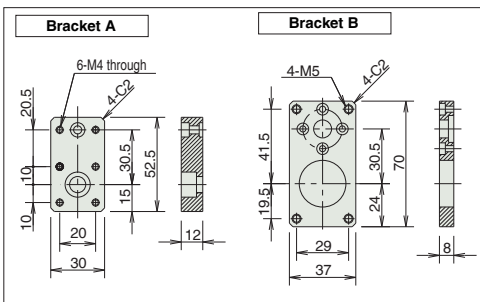
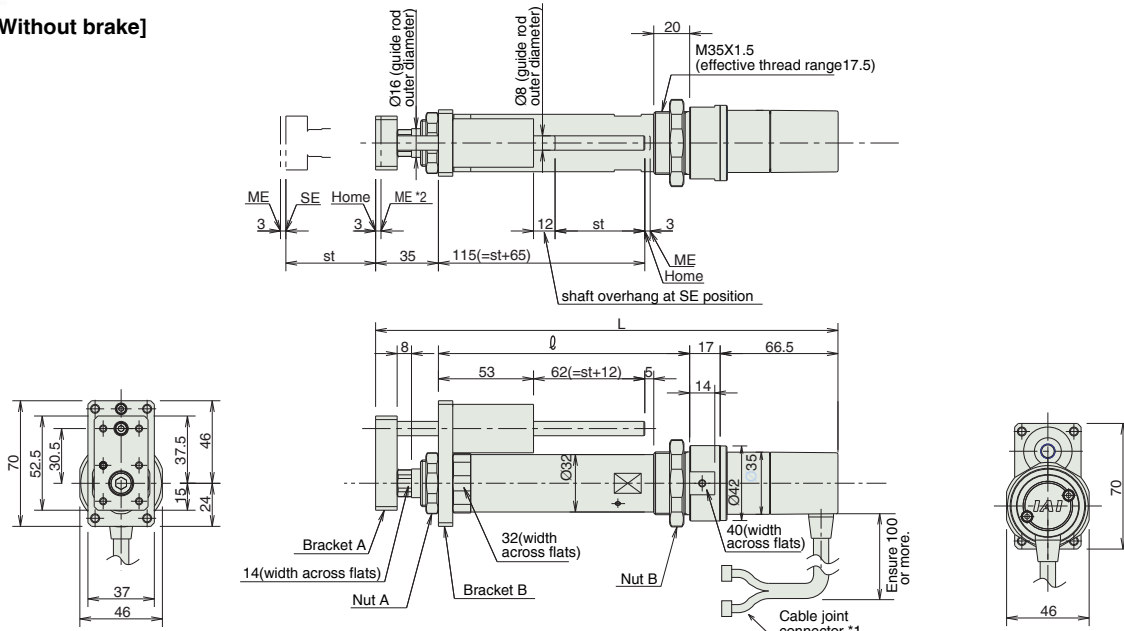
Dimensions

You can download CAD drawings from our website. www.robocylinder.de



[Without brake]

- *1 Connect the motor/encoder cables. Refer to p. 324 for details on the cables.
 - *2 The rod moves to the ME during home return. Pay attention to prevent contact between the rod and surrounding parts.
- ME: Mechanical end
SE: Stroke end



Dimensions and Weight by Stroke
RCA-RGS3D (without brake)

Stroke	50	100	150	200
L	258.5	308.5	358.5	408.5
Ø	140	190	240	290
Weight (kg)	0.9	1.1	1.2	1.3

The RCA-RA3D type is not available with a brake.

Controller

Applicable Controllers

RCA series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-20S-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	Rating: 1.7A, Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-20S-NP-2-0					
Solenoid valve type		ACON-CY-20S-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-20S-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-20S-NP-2-0	Pulse-train input type supporting an open collector				
Serial communication type		ACON-SE-20S-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-20S-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points			

* The ASEL model name is based on a 1-axis specification.

- Controller - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller
- 25 mm
- 32 mm
- 35 mm
- 37 mm
- 45 mm
- 55 mm
- 64 mm
- 75 mm
- 100 mm
- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

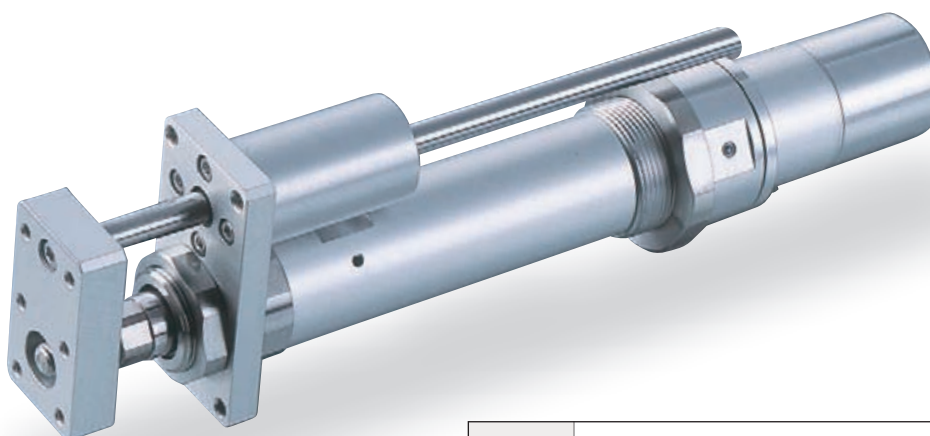
RCA-RGS4D

ROBO Cylinder, Rod Type with Single Guide, Actuator Diameter Ø37mm, 24-V Servo Motor Built-In Specification

Model Specification Items

RCA	-RGS4D-	I				A1		
Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
I: Incremental specification	20: Servo motor 20W	12: 12mm	6: 6mm	50: 50mm	A1: ACON ASEL	N: No cable		Refer to the options table below.
A: Absolute specification	30: Servo motor 30W	?	3: 3mm	300: 300mm (Set in 50-mm steps)		P: 1m		
						S: 3m		
						M: 5m		
						X□□: Specified length		
						R□□: Robot cable		

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). This is the maximum acceleration.
- (3) The horizontal load capacity assumes use of an external guide.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-RGS4D-①-20-12-②-A1-③-④	20	12	3.0	0.5	18.9	50 ~ 300 (Set in 50-mm steps)
RCA-RGS4D-①-20-6-②-A1-③-④		6	6.0	1.5	37.7	
RCA-RGS4D-①-20-3-②-A1-③-④		3	12.0	3.5	75.4	
RCA-RGS4D-①-30-12-②-A1-③-④	30	12	4.0	1.0	28.3	
RCA-RGS4D-①-30-6-②-A1-③-④		6	9.0	2.5	56.6	
RCA-RGS4D-①-30-3-②-A1-③-④		3	18.0	6.0	113.1	

Stroke and Maximum Speed

Stroke / Lead	50 ~ 300 (Set in 50-mm steps)	
	Stroke	50 ~ 300
12	600	
6	300	
3	150	

(Unit: mm/s)

Explanation of numbers ① Encoder type ② Stroke ③ Cable length ④ Options

Options

Name	Model	Page
Foot bracket	FT	P384
Home sensor	HS	P385
Reversed-home specification	NM	P385
Rear trunnion	TRR	P389

Actuator Specifications

Item	Description
Drive method	Ball screw Ø10mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.05mm or less
Guide	Single guide, guide rod diameter Ø10mm, ball bush type
Rod diameter	Ø20mm
Rod non-rotation accuracy	±0.05°
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)

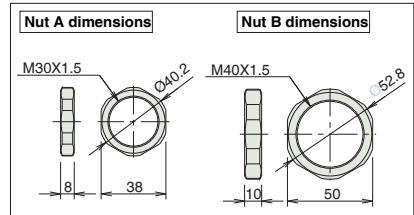
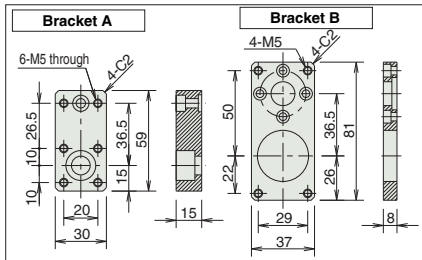
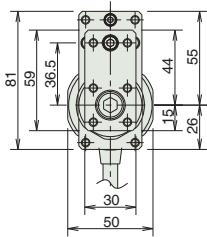
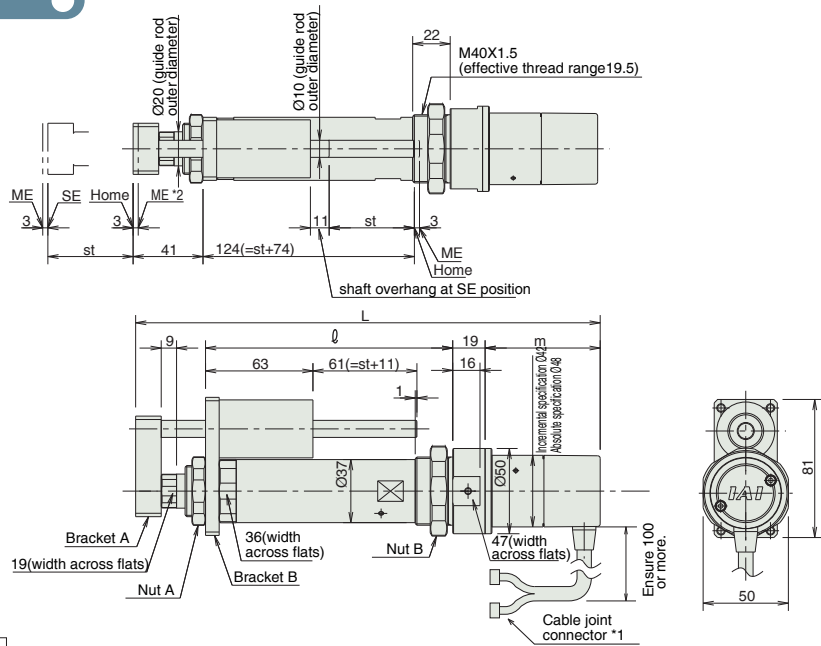
Dimensions

You can download CAD drawings from our website. www.robocylinder.de



[Without brake]

- *1 Connect the motor/encoder cables. Refer to p. 324 for details on the cables.
- *2 The rod moves to the ME during home return. Pay attention to prevent contact between the rod and surrounding parts.
ME: Mechanical end
SE: Stroke end



Dimensions and Weight by Stroke

RCA-RGS4D (without brake)		Stroke	50	100	150	200	250	300	
L	20W	Incremental	250.5	300.5	350.5	400.5	450.5	500.5	
		Absolute	263.5	313.5	363.5	413.5	463.5	513.5	
	30W	Incremental	265.5	315.5	365.5	415.5	465.5	515.5	
		Absolute	278.5	328.5	378.5	428.5	478.5	528.5	
			Q	145	195	245	295	345	395
	m	20W	Incremental	45.5					
Absolute			58.5						
30W		Incremental	60.5						
		Absolute	73.5						
Weight (kg)			1.3	1.5	1.7	1.9	2.1	2.3	

The RCA-RA3D type is not available with a brake.

Controller

Applicable Controllers

RCA series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-20I-NP-2-0 ACON-C-30I-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	20W Rating: 1.3A, Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-20I-NP-2-0 ACON-CG-30I-NP-2-0					
Solenoid valve type		ACON-CY-20I-NP-2-0 ACON-CY-30I-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-20I-NP-2-0 ACON-PL-30I-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-20I-NP-2-0 ACON-PO-30I-NP-2-0	Pulse-train input type supporting an open collector	(-)			
Serial communication type		ACON-SE-20-0-0 ACON-SE-30I-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-20①-NP-2-0 ASEL-C-1-30①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points			→P345

* The ASEL model name is based on a 1-axis specification.
* ① indicates the encoder type (I: Incremental / A: Absolute).

- Controller
- Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller
- 25 mm
- 32 mm
- 35 mm
- 37 mm
- 45 mm
- 55 mm
- 64 mm
- 75 mm
- 100 mm
- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

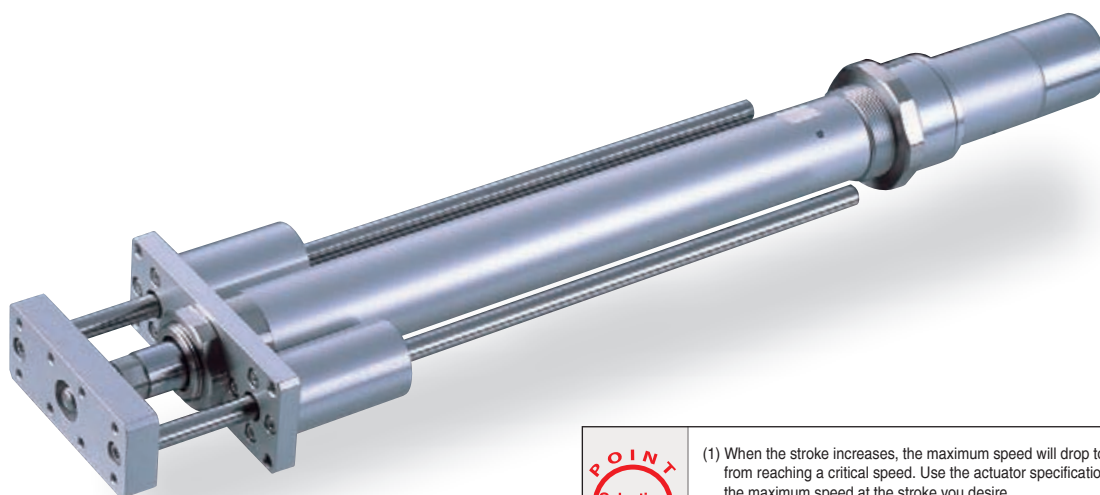
RCA-RGD3C

ROBO Cylinder, Rod Type with Double Guide, Actuator Diameter Ø32mm, 24-V Servo Motor Coupling Specification

Model Specification Items

RCA	- RGD3C	- I	- 20	<input type="checkbox"/>	<input type="checkbox"/>	A1	<input type="checkbox"/>	<input type="checkbox"/>
Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
		I: Incremental specification	20: Servo motor 20W	10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm 200: 200mm (Set in 50-mm steps)	A1: ACON ASEL	N: No cable P: 1m S: 3m M: 5m X <input type="checkbox"/> : Specified length R <input type="checkbox"/> : Robot cable	Refer to the options table below.

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 2.5). This is the maximum acceleration.
- (3) The horizontal load capacity assumes use of an external guide.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-RGD3C-I-20-10-①-A1-②-③	20	10	4.0	1.2	36.2	50 ~ 200 (Set in 50-mm steps)
RCA-RGD3C-I-20-5-①-A1-②-③		5	9.0	2.7	72.4	
RCA-RGD3C-I-20-2.5-①-A1-②-③		2.5	18.0	6.2	144.8	

Explanation of numbers ① Stroke ② Cable length ③ Options

Stroke and Maximum Speed

Stroke / Lead	50 ~ 200 (Set in 50-mm steps)	
	Stroke	Maximum Speed
10	500	
5	250	
2.5	125	

(Unit: mm/s)

Options

Name	Model	Page
Brake	B	P381
Foot bracket	FT	P383
Home sensor	HS	P385
Reversed-home specification	NM	P385
Rear trunnion	TRR	P389

Actuator Specifications

Item	Description
Drive method	Ball screw Ø8mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.05mm or less
Guide	Double guide, guide rod diameter Ø8mm, ball bush type
Rod diameter	Ø16mm
Rod non-rotation accuracy	±0.05°
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)

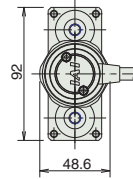
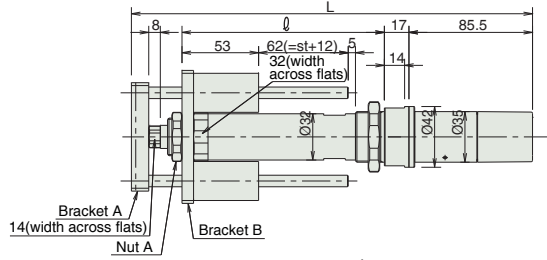
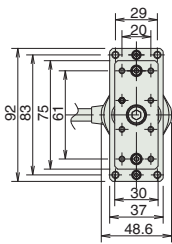
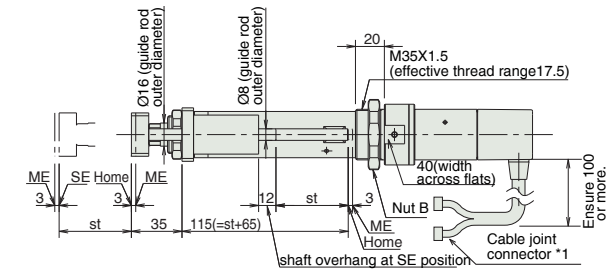
Dimensions

You can download CAD drawings from our website. www.robocylinder.de

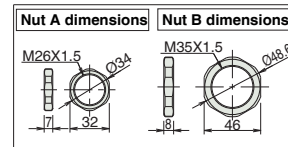
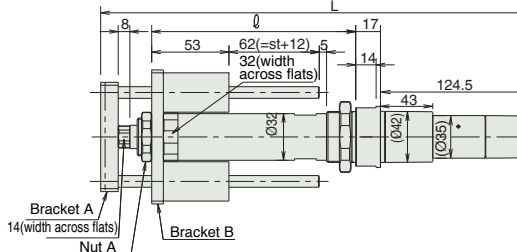
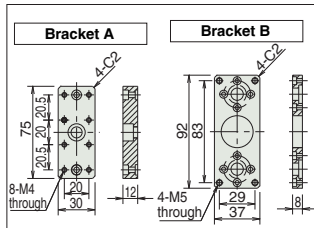


- *1 Connect the motor/encoder cables. Refer to p. 324 for details on the cables.
- *2 The rod moves to the ME during home return. Pay attention to prevent contact between the rod and surrounding parts.
ME: Mechanical end
SE: Stroke end

[Without brake]



[With brake]



Dimensions and Weight by Stroke

RCA-RGD3C (without brake)				
Stroke	50	100	150	200
L	277.5	327.5	377.5	427.5
Ø	140	190	240	290
Weight (kg)	1.1	1.2	1.4	1.5
RCA-RGD3C (with brake)				
Stroke	50	100	150	200
L	316.5	366.5	416.5	466.5
Weight (kg)	1.3	1.4	1.6	1.7

Controller

Applicable Controllers

RCA series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-20S-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	Rating: 1.7A, Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-20S-NP-2-0					
Solenoid valve type		ACON-CY-20S-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-20S-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-20S-NP-2-0	Pulse-train input type supporting an open collector				
Serial communication type		ACON-SE-20IS-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-20S-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points	→P345		

* The ASEL model name is based on a 1-axis specification.

- Controller - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller
- 25 mm
- 32 mm
- 35 mm
- 37 mm
- 45 mm
- 55 mm
- 64 mm
- 75 mm
- 100 mm
- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

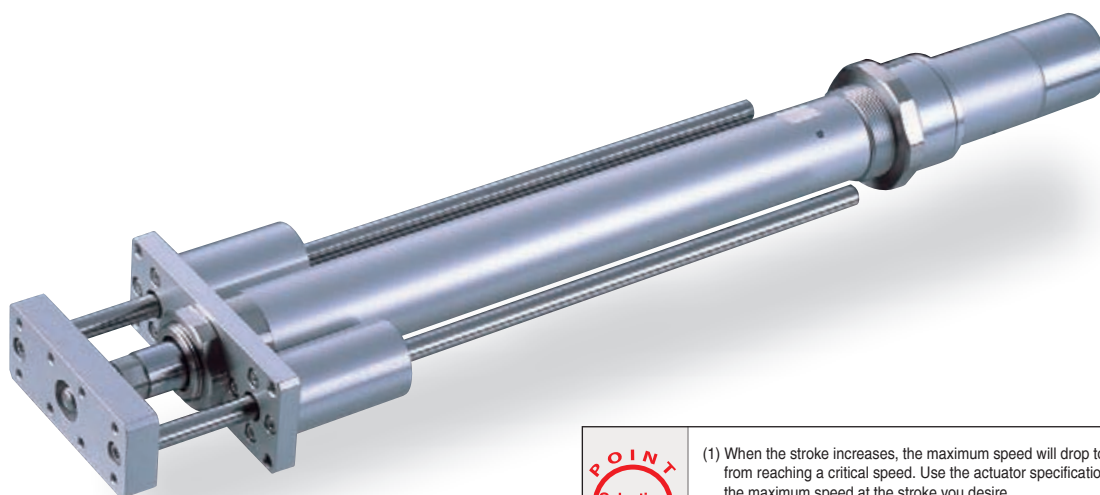
RCA-RGD4C

ROBO Cylinder, Rod Type with Double Guide, Actuator Diameter Ø37mm, 24-V Servo Motor Coupling Specification

Model Specification Items

RCA	- RGD4C	- I	-	-	-	-	-	A1	-	-	-
Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options	Refer to the options table below.		
I: Incremental specification	20: Servo motor 20W	12: 12mm	6: 6mm	3: 3mm	50: 50mm	A1: ACON ASEL	N: No cable P: 1m S: 3m M: 5m X□□: Specified length R□□: Robot cable				
A: Absolute specification	30: Servo motor 30W	300: 300mm (Set in 50-mm steps)									

* Refer to p. 31 of the front matter for details on the model specification items.



- POINT Selection Points**
- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). This is the maximum acceleration.
 - (3) The horizontal load capacity assumes use of an external guide.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-RGD4C-①-20-12-②-A1-③-④	20	12	3.0	0.5	18.9	50 ~ 300 (Set in 50-mm steps)
RCA-RGD4C-①-20-6-②-A1-③-④		6	6.0	1.5	37.7	
RCA-RGD4C-①-20-3-②-A1-③-④		3	12.0	3.5	75.4	
RCA-RGD4C-①-30-12-②-A1-③-④	30	12	4.0	1.0	28.3	
RCA-RGD4C-①-30-6-②-A1-③-④		6	9.0	2.5	56.6	
RCA-RGD4C-①-30-3-②-A1-③-④		3	18.0	6.0	113.1	

Explanation of numbers ① Encoder type ② Stroke ③ Cable length ④ Options

Stroke and Maximum Speed

Stroke / Lead	50 ~ 300 (Set in 50-mm steps)	
	Stroke	50 ~ 300
12	600	
6	300	
3	150	

(Unit: mm/s)

Options

Name	Model	Page
Brake	B	P381
Foot bracket	FT	P383
Home sensor	HS	P385
Reversed-home specification	NM	P385
Rear trunnion	TRR	P389

Actuator Specifications

Item	Description
Drive method	Ball screw Ø10mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.05mm or less
Guide	Double guide, guide rod diameter Ø10mm, ball bush type
Rod diameter	Ø20mm
Rod non-rotation accuracy	±0.05°
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)

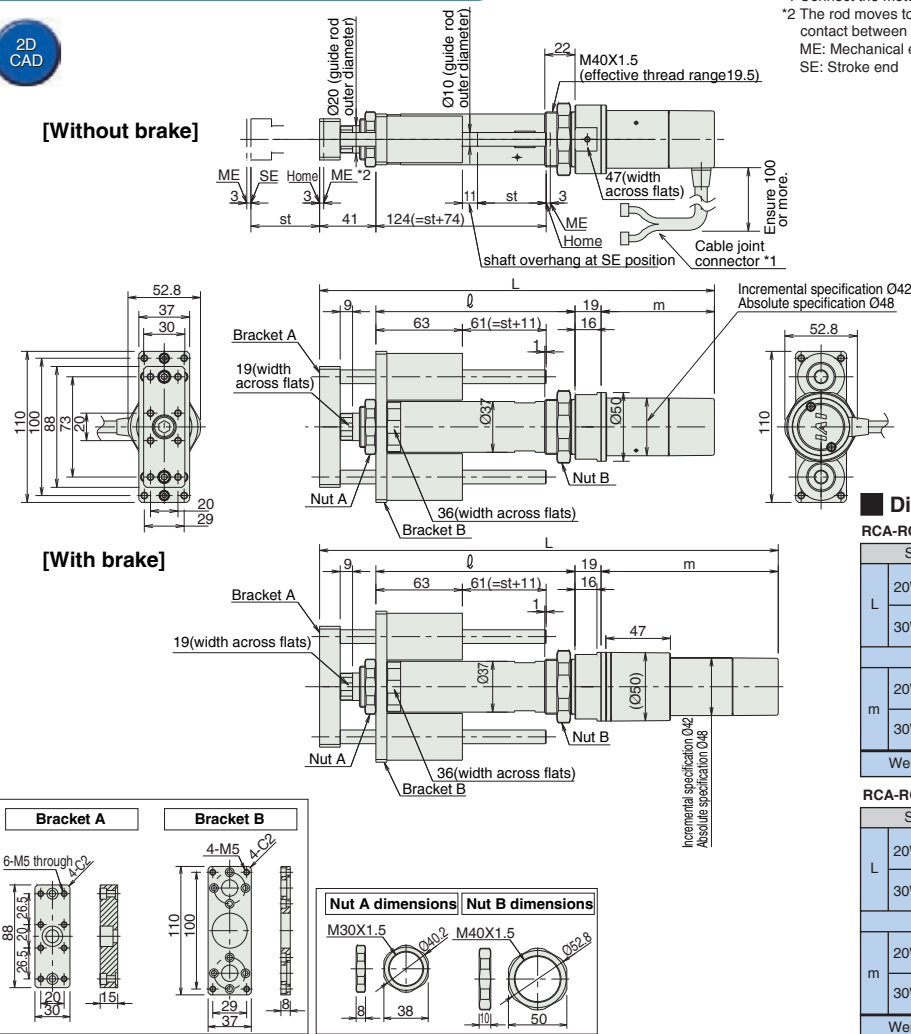
- 25 mm
- 32 mm
- 35 mm
- 37 mm
- 45 mm
- 55 mm
- 64 mm
- 75 mm
- 100 mm
- 150w

Dimensions

You can download CAD drawings from our website. www.robocylinder.de



*1 Connect the motor/encoder cables. Refer to p. 324 for details on the cables.
 *2 The rod moves to the ME during home return. Pay attention to prevent contact between the rod and surrounding parts.
 ME: Mechanical end
 SE: Stroke end



Dimensions and Weight by Stroke

RCA-RGD4C (without brake)

Stroke	50	100	150	200	250	300	
L	20W Incremental	272.5	322.5	372.5	422.5	472.5	522.5
	20W Absolute	285.5	335.5	385.5	435.5	485.5	535.5
	30W Absolute	287.5	337.5	387.5	437.5	487.5	537.5
m	20W Incremental	145	195	245	295	345	395
	20W Absolute	67.5					
	30W Absolute	80.5					
Weight (kg)	20W Incremental	1.8	2.0	2.2	2.4	2.6	2.8
	20W Absolute	82.5					
	30W Absolute	95.5					

RCA-RGD4C (with brake)

Stroke	50	100	150	200	250	300	
L	20W Incremental	315.5	365.5	415.5	465.5	515.5	565.5
	20W Absolute	328.5	378.5	428.5	478.5	528.5	578.5
	30W Absolute	330.5	380.5	430.5	480.5	530.5	580.5
m	20W Incremental	145	195	245	295	345	395
	20W Absolute	110.5					
	30W Absolute	123.5					
Weight (kg)	20W Incremental	2.0	2.2	2.4	2.6	2.8	3.0
	20W Absolute	125.5					
	30W Absolute	138.5					

Controller

Applicable Controllers

RCA series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-20I-NP-2-0 ACON-C-30I-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	20W Rating: 1.3A, Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-20I-NP-2-0 ACON-CG-30I-NP-2-0					
Solenoid valve type		ACON-CY-20I-NP-2-0 ACON-CY-30I-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-20I-NP-2-0 ACON-PL-30I-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-20I-NP-2-0 ACON-PO-30I-NP-2-0	Pulse-train input type supporting an open collector				
Serial communication type		ACON-SE-20I-0-0 ACON-SE-30I-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-20①-NP-2-0 ASEL-C-1-30①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points		→P345	

* The ASEL model name is based on a 1-axis specification.
 * ① indicates the encoder type (I: Incremental / A: Absolute).

- Controller - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller
- 25 mm
- 32 mm
- 35 mm
- 37 mm
- 45 mm
- 55 mm
- 64 mm
- 75 mm
- 100 mm
- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

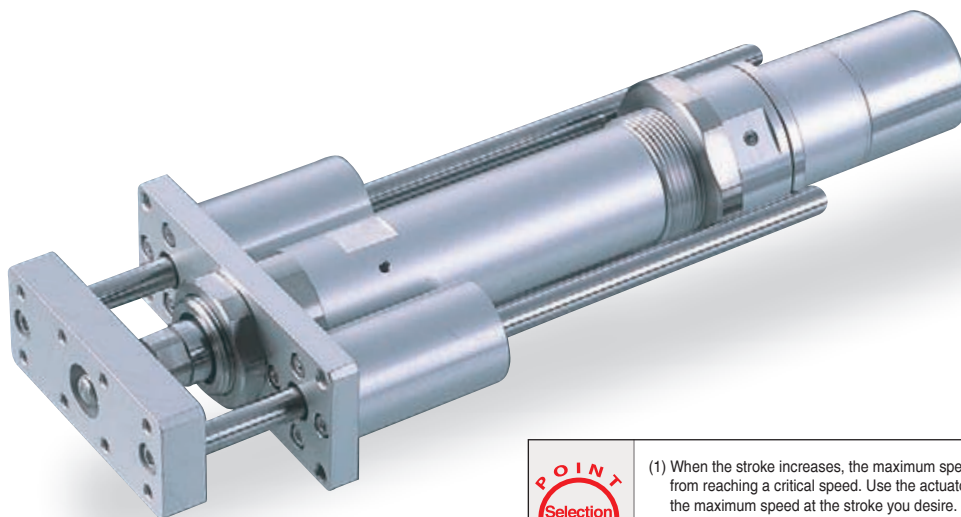
RCA-RGD3D

ROBO Cylinder, Rod Type with Double Guide, Actuator Diameter Ø32mm, 24-V Servo Motor Built-In Specification

Model Specification Items

RCA	- RGD3D	I	- 20			A1		
Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
		I: Incremental specification	20: Servo motor 20W	10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm 200: 200mm (Set in 50-mm steps)	A1: ACON ASEL	N: No cable P: 1m S: 3m M: 5m X□□: Specified length R□□: Robot cable	Refer to the options table below.

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 2.5). This is the maximum acceleration.
- (3) The horizontal load capacity assumes use of an external guide.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-RGD3D-I-20-10-①-A1-②-③	20	10	4.0	1.2	36.2	50 ~ 200 (Set in 50-mm steps)
RCA-RGD3D-I-20-5-①-A1-②-③		5	9.0	2.7	72.4	
RCA-RGD3D-I-20-2.5-①-A1-②-③		2.5	18.0	6.2	144.8	

Explanation of numbers ① Stroke ② Cable length ③ Options

Stroke and Maximum Speed

Lead	Stroke	50 ~ 200 (Set in 50-mm steps)
	10	500
5	250	
2.5	125	

(Unit: mm/s)

Options

Name	Model	Page
Foot bracket	FT	P384
Home sensor	HS	P385
Reversed-home specification	NM	P385
Rear trunnion	TRR	P389

Actuator Specifications

Item	Description
Drive method	Ball screw Ø8mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.05mm or less
Guide	Double guide, guide rod diameter Ø8mm, ball bush type
Rod diameter	Ø16mm
Rod non-rotation accuracy	±0.05°
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)

- 25 mm
- 32 mm
- 35 mm
- 37 mm
- 45 mm
- 55 mm
- 64 mm
- 75 mm
- 100 mm

- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

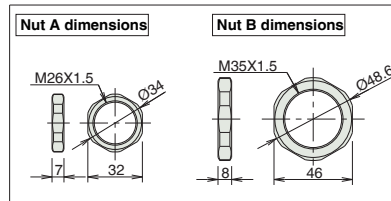
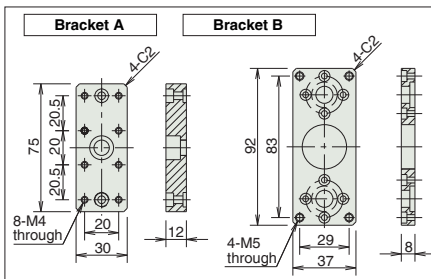
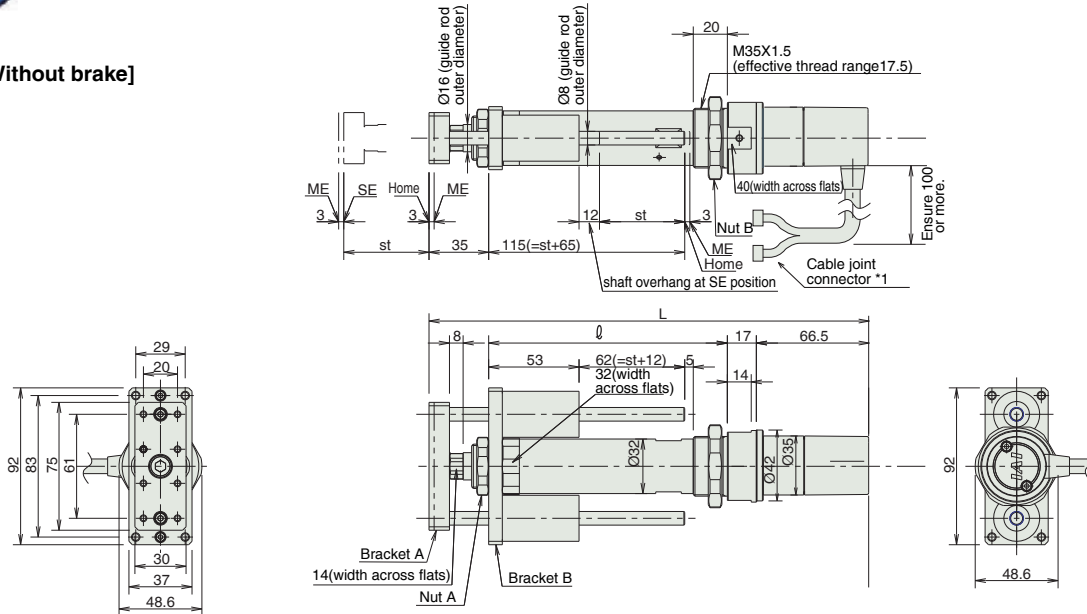
Dimensions

You can download CAD drawings from our website. www.robocylinder.de



- *1 Connect the motor/encoder cables. Refer to p. 324 for details on the cables.
 - *2 The rod moves to the ME during home return. Pay attention to prevent contact between the rod and surrounding parts.
- ME: Mechanical end
SE: Stroke end

[Without brake]



Dimensions and Weight by Stroke

RCA-RGD3D (without brake)

Stroke	50	100	150	200
L	258.5	308.5	358.5	408.5
Ø	140	190	240	290
Weight (kg)	1.1	1.2	1.4	1.5

The RCA-RA3D type is not available with a brake.

Controller

Applicable Controllers

RCA series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-205-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	Rating: 1.7A, Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-205-NP-2-0					
Solenoid valve type		ACON-CY-205-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-205-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-205-NP-2-0	Pulse-train input type supporting an open collector				
Serial communication type		ACON-SE-205-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-205-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points	→P345		

* The ASEL model name is based on a 1-axis specification.

- Controlled - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller
- 25 mm
- 32 mm
- 35 mm
- 37 mm
- 45 mm
- 55 mm
- 64 mm
- 75 mm
- 100 mm
- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

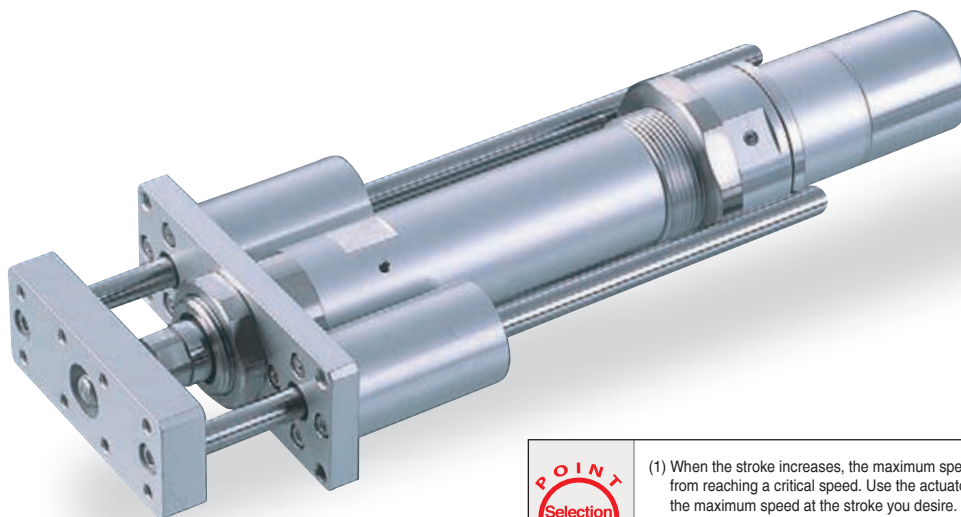
RCA-RGD4D

ROBO Cylinder, Rod Type with Double Guide, Actuator Diameter Ø37mm, 24-V Servo Motor Built-In Specification

Model Specification Items

RCA	RGD4D	I				A1		
Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
		I: Incremental specification	20: Servo motor 20W	12: 12mm 6: 6mm 3: 3mm	50: 50mm ?	A1: ACON ASEL	N: No cable P: 1m S: 3m M: 5m X□□: Specified length R□□: Robot cable	Refer to the options table below.
		A: Absolute specification	30: Servo motor 30W		300: 300mm (Set in 50-mm steps)			

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). This is the maximum acceleration.
- (3) The horizontal load capacity assumes use of an external guide.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-RGD4D-①-20-12-②-A1-③-④	20	12	3.0	0.5	18.9	50 ~ 300 (Set in 50-mm steps)
RCA-RGD4D-①-20-6-②-A1-③-④		6	6.0	1.5	37.7	
RCA-RGD4D-①-20-3-②-A1-③-④		3	12.0	3.5	75.4	
RCA-RGD4D-①-30-12-②-A1-③-④	30	12	4.0	1.0	28.3	
RCA-RGD4D-①-30-6-②-A1-③-④		6	9.0	2.5	56.6	
RCA-RGD4D-①-30-3-②-A1-③-④		3	18.0	6.0	113.1	

Stroke and Maximum Speed

Stroke / Lead	50 ~ 300 (Set in 50-mm steps)	
	Stroke	50 ~ 300
12	600	
6	300	
3	150	

(Unit: mm/s)

Explanation of numbers ① Encoder type ② Stroke ③ Cable length ④ Options

Options

Name	Model	Page
Foot bracket	FT	P384
Home sensor	HS	P385
Reversed-home specification	NM	P385
Rear trunnion	TRR	P389

Actuator Specifications

Item	Description
Drive method	Ball screw Ø10mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.05mm or less
Guide	Double guide, guide rod diameter Ø10mm, ball bush type
Rod diameter	Ø20mm
Rod non-rotation accuracy	±0.05°
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)

- 25 mm
- 32 mm
- 35 mm
- 37 mm
- 45 mm
- 55 mm
- 64 mm
- 75 mm
- 100 mm
- 150w

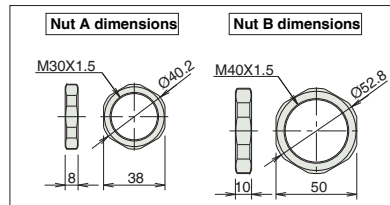
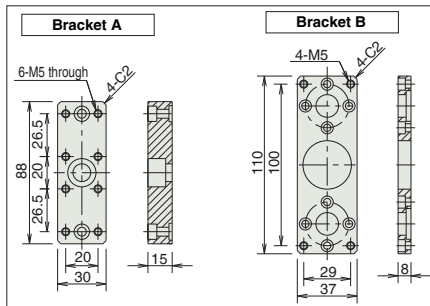
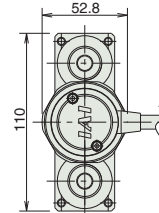
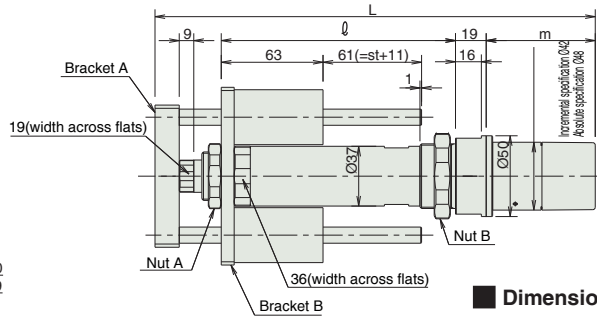
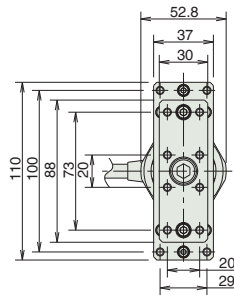
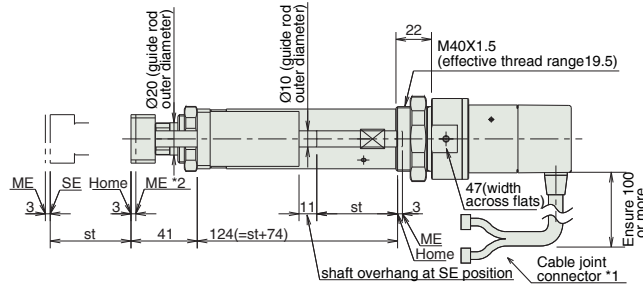
Dimensions

You can download CAD drawings from our website. www.robocylinder.de



*1 Connect the motor/encoder cables. Refer to p. 324 for details on the cables.
 *2 The rod moves to the ME during home return. Pay attention to prevent contact between the rod and surrounding parts.
 ME: Mechanical end
 SE: Stroke end

[Without brake]



Dimensions and Weight by Stroke

RCA-RGD4D (without brake)		Stroke	50	100	150	200	250	300
L	20W	Incremental	250.5	300.5	350.5	400.5	450.5	500.5
		Absolute	263.5	313.5	363.5	413.5	463.5	513.5
	30W	Incremental	265.5	315.5	365.5	415.5	465.5	515.5
		Absolute	278.5	328.5	378.5	428.5	478.5	528.5
		Ø	145	195	245	295	345	395
m	20W	Incremental	45.5					
		Absolute	58.5					
	30W	Incremental	60.5					
		Absolute	73.5					
Weight (kg)			1.6	1.8	2.1	2.3	2.5	2.7

The RCA-RA3D type is not available with a brake.

Controller

Applicable Controllers

RCA series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-20I-NP-2-0 ACON-C-30I-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	20W Rating: 1.3A, Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-20I-NP-2-0 ACON-CG-30I-NP-2-0					
Solenoid valve type		ACON-CY-20I-NP-2-0 ACON-CY-30I-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-20I-NP-2-0 ACON-PL-30I-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-20I-NP-2-0 ACON-PO-30I-NP-2-0	Pulse-train input type supporting an open collector				
Serial communication type		ACON-SE-20I-0-0 ACON-SE-30I-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-20①-NP-2-0 ASEL-C-1-30①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points			→P345

* The ASEL model name is based on a 1-axis specification.
 * ① indicates the encoder type (I: Incremental / A: Absolute).

- Controller - Integrated type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller
- 25 mm
- 32 mm
- 35 mm
- 37 mm
- 45 mm
- 55 mm
- 64 mm
- 75 mm
- 100 mm
- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

RCA-A4R

ROBO Cylinder, Arm Type, Actuator Width 40mm, 24-V Servo Motor
Motor Reversing Specification

Model Specification Items

RCA	A4R	<input type="checkbox"/>	20	<input type="checkbox"/>	<input type="checkbox"/>	A1	<input type="checkbox"/>	<input type="checkbox"/>
Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
		I: Incremental specification A: Absolute specification	20: Servo motor 20W	10: 10mm 5: 5mm	50:50mm ? 200:200mm (Set in 50-mm steps)	A1 : ACON ASEL	N : No cable P : 1m S : 3m M : 5m X□□ : Specified length R□□ : Robot cable	B: Brake (standard) NM: Reversed-home specification MR: Motor reversing on right ML: Motor reversing on left

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.2 G. This is the maximum acceleration.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-A4R-①-20-10-②-A1-③-④	20	10	-	2.5	39.2	50 ~ 200 (Set in 50-mm steps)
RCA-A4R-①-20-5-②-A1-③-④		5	-	4.5	78.4	

Explanation of numbers ① Encoder type ② Stroke ③ Cable length ④ Options

Stroke and Maximum Speed

Stroke / Lead	50 ~ 200 (Set in 50-mm steps)	
	10	5
10	330	165
5		

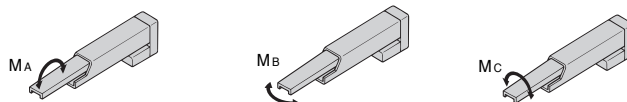
(Unit: mm/s)

Options

Name	Model	Page
Brake	B	P381
Reversed-home specification	NM	P385
Motor reversing on right	MR	P190
Motor reversing on left	ML	P190

Actuator Specifications

Item	Description
Drive method	Ball screw Ø8mm, rolled C10 (Ball screw speed reduced to half by means of timing belt)
Positioning repeatability	±.02mm
Backlash	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable load moment	Ma : 2.7N • m Mb : 3.1N • m Mc : 2.9N • m
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)



40 mm

52 mm

55 mm

58 mm

Pulse Motor

20w

30w

60w

100w

150w

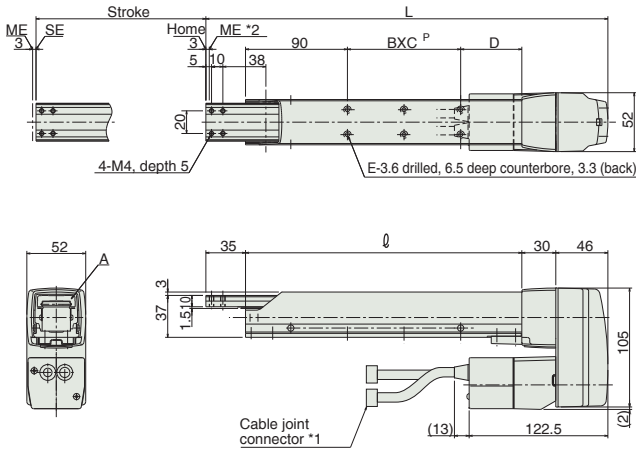
Dimensions

You can download CAD drawings from our website. www.robocylinder.de

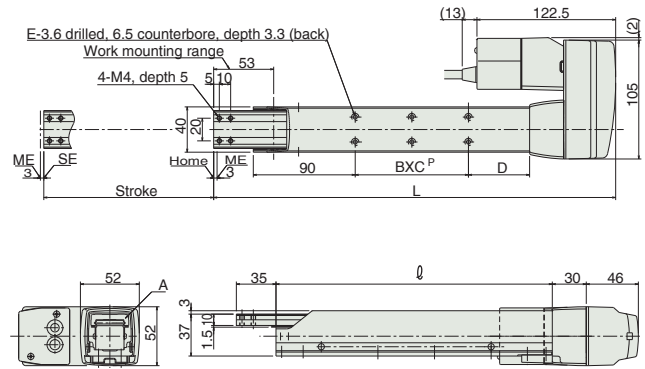
*1 Connect the motor/encoder cables. Refer to p. 324 for details on the cables.
*2 The rod moves to the ME during home return. Pay attention to prevent contact between the rod and surrounding parts.
ME: Mechanical end SE: Stroke end



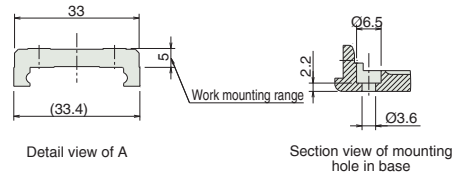
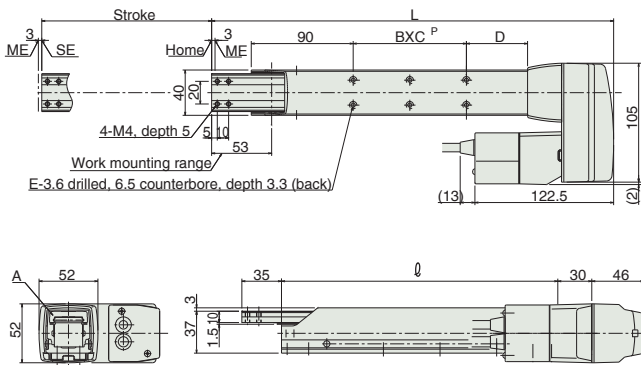
Standard motor reversing specification (Option code: Blank)



Motor reversing on right (Option code: MR)



Motor reversing on left (Option code: ML)



Dimensions and Weight by Stroke

Stroke	50	100	150	200
L	255	305	355	405
∅	144	194	244	294
BxC ^P	1x19	1x50	2x50	2x50
D	35	54	54	104
E	4	4	6	6
Weight (kg)	1.7	1.8	2.0	2.1

Controller

Applicable Controllers

RCA series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-20I-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	Rating: 1.3A Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-20I-NP-2-0					
Solenoid valve type		ACON-CY-20I-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-20I-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-20I-NP-2-0	Pulse-train input type supporting an open collector				
Serial communication type		ACON-SE-20I-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-20①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points	→P345		

* The ASEL model name is based on a 1-axis specification.
*① indicates the encoder type (I: Incremental / A: Absolute).

Controller - Integrated Type
Slider Type
Rod Type
Arm / Flat Type
Gripper / Rotary Type
Cleanroom Type
Splash Proof Type
Controller

40 mm
52 mm
55 mm
58 mm

Pulse Motor
20w
30w
60w
100w
150w

RCA-A5R

ROBO Cylinder, Arm Type, Actuator Width 52mm, 24-V Servo Motor
Motor Reversing Specification

Model Specification Items

RCA	A5R	<input type="checkbox"/>	20	<input type="checkbox"/>	<input type="checkbox"/>	A1	<input type="checkbox"/>	<input type="checkbox"/>
Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
		I: Incremental specification A: Absolute specification	20: Servo motor 20W	12: 12mm 6: 6mm	50:50mm ? 200:200mm (Set in 50-mm steps)	A1: ACON ASEL	N: No cable P: 1m S: 3m M: 5m X□□: Specified length R□□: Robot cable	B: Brake (standard) NM: Reversed-home specification MR: Motor reversing on right ML: Motor reversing on left

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.2 G. This is the maximum acceleration.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-A5R-①-20-12-②-A1-③-④	20	12	-	2	33.3	50 ~ 200 (Set in 50-mm steps)
RCA-A5R-①-20-6-②-A1-③-④		6	-	4		

Explanation of numbers ① Encoder type ② Stroke ③ Cable length ④ Options

Stroke and Maximum Speed

Stroke / Lead	50 ~ 200 (Set in 50-mm steps)	
	Stroke	50 ~ 200 (Set in 50-mm steps)
12		400
6		200

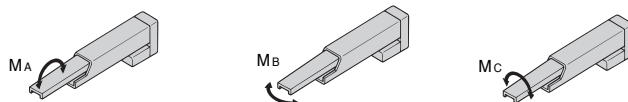
(Unit: mm/s)

Options

Name	Model	Page
Brake	B	P381
Reversed-home specification	NM	P385
Motor reversing on right	MR	P192
Motor reversing on left	ML	P192

Actuator Specifications

Item	Description
Drive method	Ball screw Ø8mm, rolled C10 (Ball screw speed reduced to half by means of timing belt)
Positioning repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable load moment	Ma : 4.5N • m Mb : 5.4N • m Mc : 4.1N • m
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)



- 40 mm
- 52 mm
- 55 mm
- 58 mm

- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

- Controller - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller

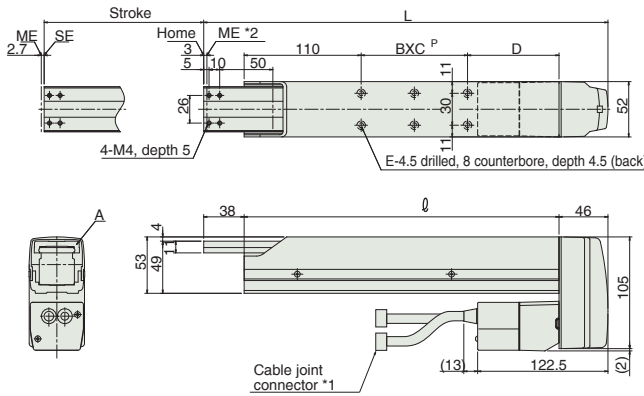
Dimensions

You can download CAD drawings from our website. www.robocylinder.de

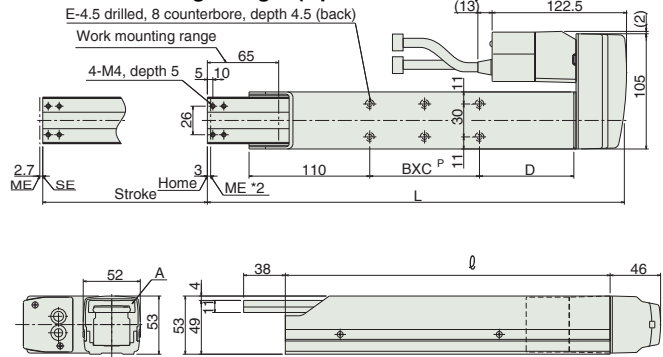


*1 Connect the motor/encoder cables. Refer to p. 324 for details on the cables.
*2 The rod moves to the ME during home return. Pay attention to prevent contact between the rod and surrounding parts.
ME: Mechanical end SE: Stroke end

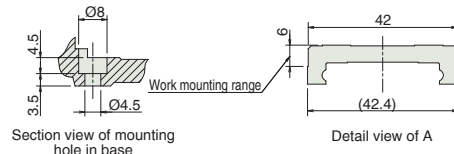
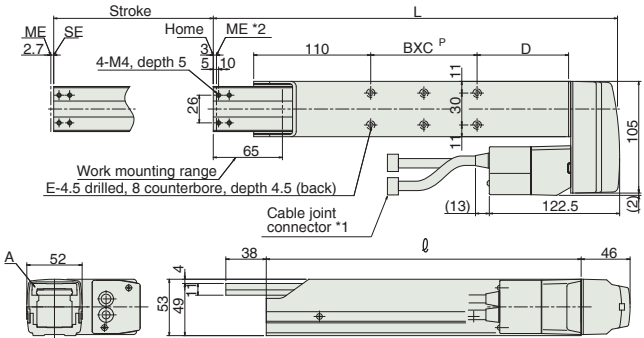
Standard motor reversing specification (Option code: Blank)



Motor reversing on right (Option code: MR)



Motor reversing on left (Option code: ML)



Dimensions and Weight by Stroke

Stroke	50	100	150	200
L	280	330	380	430
∅	196	246	296	346
BxC ^P	1x30	1x50	2x50	2x50
D	56	86	86	136
E	4	4	6	6
Weight (kg)	2.2	2.4	2.6	2.8

Note
The motor must be reversed at right or left if the stroke is 50. The standard reversing specification is not available with a 50 stroke.

Controller

Applicable Controllers

RCA series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-20I-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	Rating: 1.3A Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-20I-NP-2-0					
Solenoid valve type		ACON-CY-20I-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-20I-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-20I-NP-2-0	Pulse-train input type supporting an open collector				
Serial communication type		ACON-SE-20I-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-20①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points	→P345		

* The ASEL model name is based on a 1-axis specification.
*① indicates the encoder type (I: Incremental / A: Absolute).

- Controler - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller
- 40 mm
- 52 mm
- 55 mm
- 58 mm
- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

RCA-A6R

ROBO Cylinder, Arm Type, Actuator Width 58mm, 24-V Servo Motor
Motor Reversing Specification

Model Specification Items

RCA	A6R	<input type="checkbox"/>	30	<input type="checkbox"/>	<input type="checkbox"/>	A1	<input type="checkbox"/>	<input type="checkbox"/>
Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
		I: Incremental specification A: Absolute specification	30: Servo motor 30W	12: 12mm 6: 6mm	50:50mm ? 200:200mm (Set in 50-mm steps)	A1: ACON ASEL	N: No cable P: 1m S: 3m M: 5m X□□: Specified length R□□: Robot cable	B: Brake (standard) NM: Reversed-home specification MR: Motor reversing on right ML: Motor reversing on left

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.2 G. This is the maximum acceleration.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-A6R-①-30-12-②-A1-③-④	30	12	-	3	48.4	50 ~ 200 (Set in 50-mm steps)
RCA-A6R-①-30-6-②-A1-③-④		6	-	6		

Explanation of numbers ① Encoder type ② Stroke ③ Cable length ④ Options

Stroke and Maximum Speed

Stroke / Lead	50 ~ 200 (Set in 50-mm steps)	
	12	6
12	400	200
6	400	200

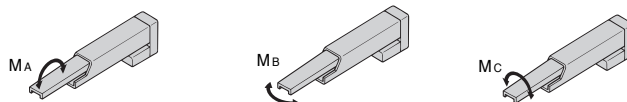
(Unit: mm/s)

Options

Name	Model	Page
Brake	B	P381
Reversed-home specification	NM	P385
Motor reversing on right	MR	P194
Motor reversing on left	ML	P194

Actuator Specifications

Item	Description
Drive method	Ball screw Ø10mm, rolled C10 (Ball screw speed reduced to half by means of timing belt)
Positioning repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable load moment	Ma : 8.1N • m Mb : 10.0N • m Mc : 6.5N • m
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)



- Controller - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller
- 40 mm
- 52 mm
- 55 mm
- 58 mm
- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

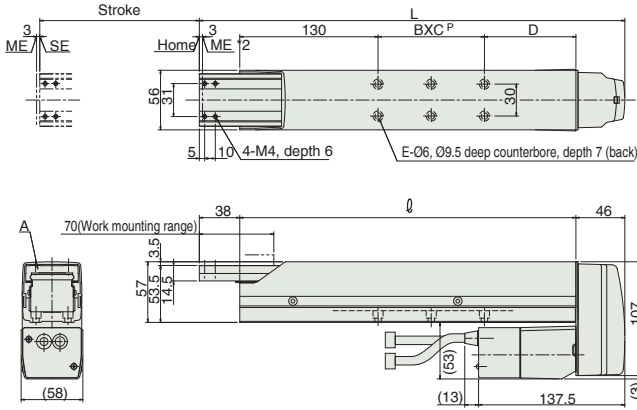
Dimensions

You can download CAD drawings from our website. www.robocylinder.de

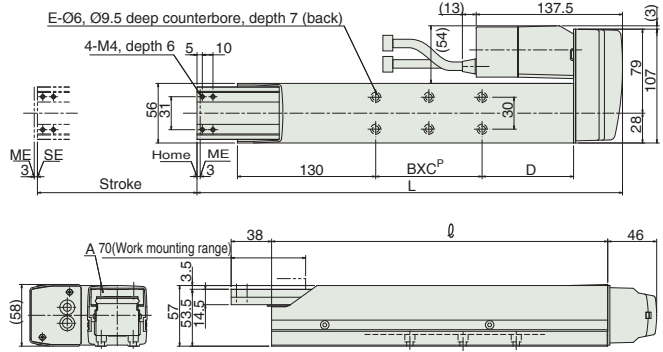


*1 Connect the motor/encoder cables. Refer to p. 324 for details on the cables.
*2 The rod moves to the ME during home return. Pay attention to prevent contact between the rod and surrounding parts.
ME: Mechanical end SE: Stroke end

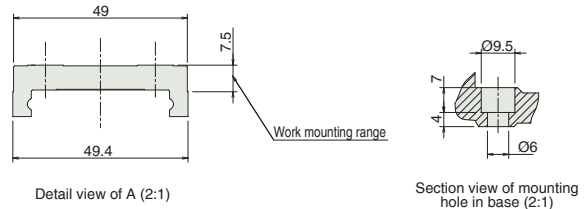
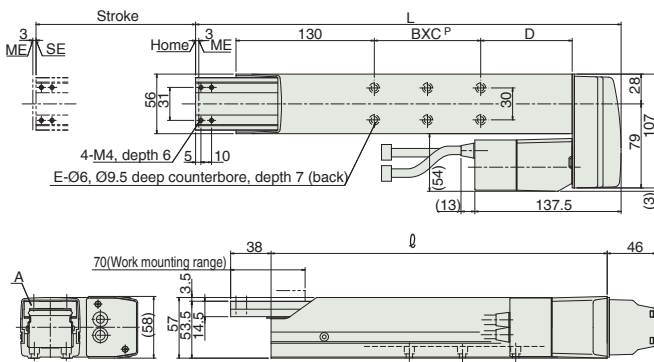
Standard motor reversing specification (Option code: Blank)



Motor reversing on right (Option code: MR)



Motor reversing on left (Option code: ML)



Dimensions and Weight by Stroke

Stroke	50	100	150	200
L	300	350	400	450
∅	216	266	316	366
BxC ^P	1x30	1x50	2x50	2x50
D	56	86	86	136
E	4	4	6	6
Weight (kg)	3.0	3.3	3.6	3.9

Controller

Applicable Controllers

RCA series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-30I-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	Rating: 1.3A Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-30I-NP-2-0					
Solenoid valve type		ACON-CY-30I-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-30I-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-30I-NP-2-0	Pulse-train input type supporting an open collector				
Serial communication type		ACON-SE-30I-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-30①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points	→P345		

* The ASEL model name is based on a 1-axis specification.
*① indicates the encoder type (I: Incremental / A: Absolute).

- Controller - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller
- 40 mm
- 52 mm
- 55 mm
- 58 mm
- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

RCACR-SA4C

Cleanroom Type ROBO Cylinder, Slider Type, Actuator Width 40mm, 24-V Servo Motor Coupling Specification

Model Specification Items **RCACR-SA4C** - [] - **20** - [] - [] - **A1** - [] - []

Series — Type — Encoder type — Motor type — Lead — Stroke — Applicable controller — Cable length — Options

I: Incremental specification 20: Servo motor 20W 10: 10mm 5: 5mm 50:50mm ? 400:400mm (Set in 50-mm steps) A1 : ACON ASEL N : No cable P : 1m S : 3m M : 5m X□ : Specified length R□ : Robot cable B : Brake FT : Foot bracket HS : Home check sensor NM : Reversed-home specification SS : Slider spacer VR : Suction joint on opposite side

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 2.5). This is the maximum acceleration.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCACR-SA4C-①-20-10-②-A1-③-④	20	10	4	1	19.6	50 ~ 400 (Set in 50-mm steps)
RCACR-SA4C-①-20-5-②-A1-③-④		5	6	2.5	39.2	
RCACR-SA4C-①-20-2.5-②-A1-③-④		2.5	8	4.5	78.4	

Explanation of numbers ① Encoder type ② Stroke ③ Cable length ④ Options

Stroke, Maximum Speed and Suction Volume

Stroke / Lead	50 ~ 400	Suction volume (N l/mm)
	(Set in 50-mm steps)	
10	665	50
5	330	30
2.5	165	15

(Unit: mm/s)

Options

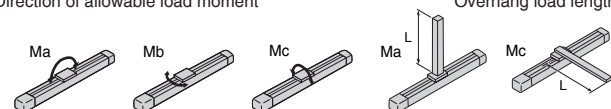
Name	Model	Page
Brake	B	P381
Foot bracket	FT	P383
Home sensor	HS	P385
Reversed-home specification	NM	P385
Slide spacer	SS	P388
Vacuum joint on opposite side	VR	P389

Actuator Specifications

Item	Description
Drive method	Ball screw Ø8mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.05mm or less
Base	Material: Aluminum with white alumite treatment
Allowable load moment	Ma : 2.7N • m Mb : 3.9N • m Mc : 6.8N • m
Overhang load length	Ma direction: 120mm or less, Mb • Mc directions: 120mm or less
Grease	Low-dust-raising grease (both ball screw and guide)
Cleanliness class	Class 10 (0.1µm)
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)

Direction of allowable load moment

Overhang load length



40 mm

52 mm

58 mm

60 mm

73 mm

80 mm

Pulse Motor

20w

30w

60w

100w

150w

Controller - Integrated Type

Slider Type

Rod Type

Arm / Flat Type

Gripper / Rotary Type

Cleanroom Type

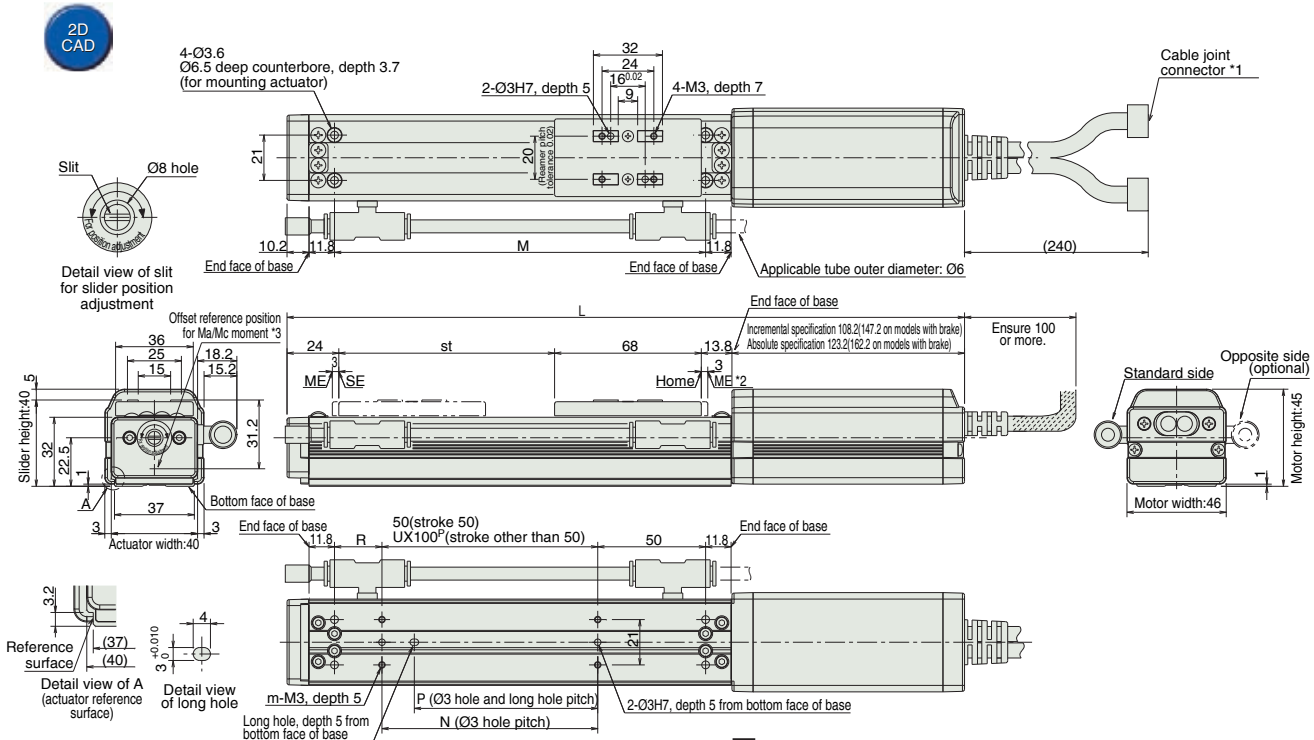
Splash Proof Type

Controller

- Controler - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller

Dimensions

You can download CAD drawings from our website. www.robocylinder.de



*1 Connect the motor/encoder cables. Refer to p. 324 for details on the cables.
 *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
 ME: Mechanical end SE: Stroke end
 *3 Reference position for calculating Ma moment
 *4 If the actuator is affixed using only the mounting holes provided in the top face of the base, the base may twist to cause abnormal sliding of the slider or generate noise. When the mounting holes in the top face of the base are used, keep the stroke to 300 mm or less.

Dimensions and Weight by Stroke

Stroke		50	100	150	200	250	300	350	400	
L	Incremental	Without brake	264	314	364	414	464	514	564	614
		With brake	303	353	403	453	503	553	603	653
	Absolute	Without brake	279	329	379	429	479	529	579	629
		With brake	318	368	418	468	518	568	618	668
M		122	172	222	272	322	372	422	472	
N		50	100	100	200	200	300	300	400	
P		35	85	85	185	185	285	285	385	
R		22	22	72	22	72	22	72	22	
U		-	1	1	2	2	3	3	4	
m		4	4	4	6	6	8	8	10	
Weight (kg)		0.7	0.8	0.9	1	1.1	1.2	1.3	1.4	

Controller

Applicable Controllers

RCA series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-20I-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	Rating: 1.3A, Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-20I-NP-2-0					
Solenoid valve type		ACON-CY-20I-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-20I-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-20I-NP-2-0	Pulse-train input type supporting an open collector				
Serial communication type		ACON-SE-20I-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-20①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points	→P345		

* The ASEL model name is based on a 1-axis specification.
 *① indicates the encoder type (I: Incremental / A: Absolute).

- 40 mm
- 52 mm
- 58 mm
- 60 mm
- 73 mm
- 80 mm

- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

RCACR-SA5C

Cleanroom Type ROBO Cylinder, Slider Type, Actuator Width 52mm, 24-V Servo Motor Coupling Specification

Model Specification Items **RCACR** - **SA5C** - [] - **20** - [] - [] - **A1** - [] - []

Series — Type — Encoder type — Motor type — Lead — Stroke — Applicable controller — Cable length — Options

I: Incremental specification
A: Absolute specification

20: Servo motor 20W

12: 12mm
6: 6mm
3: 3mm

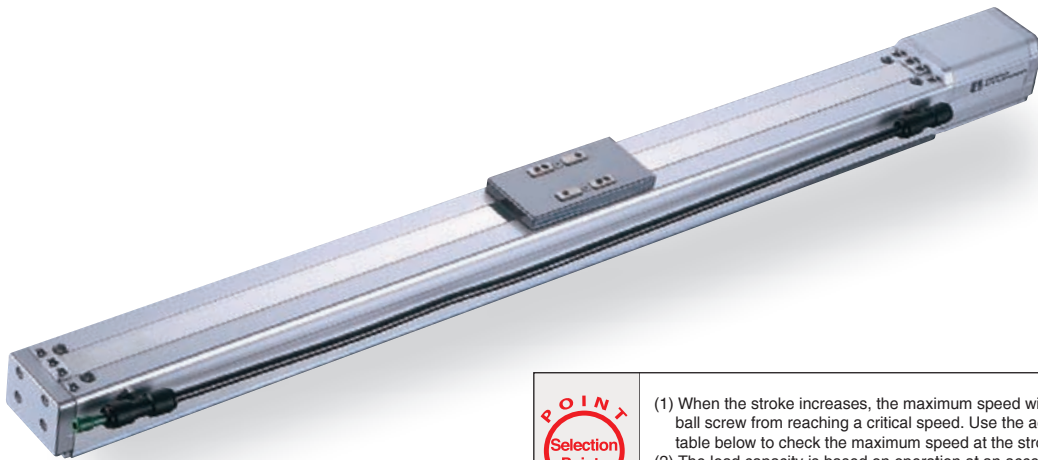
50: 50mm
500: 500mm (Set in 50-mm steps)

A1 : ACON
ASEL

N : No cable
P : 1m
S : 3m
M : 5m
X [] : Specified length
R [] : Robot cable

B : Brake
FT : Foot bracket
HS : Home check sensor
NM : Reversed-home specification
VR : Suction joint on opposite side

* Refer to p. 31 of the front matter for details on the model specification items.



- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). This is the maximum acceleration.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCACR-SA5C-①-20-12-②-A1-③-④	20	12	4	1	16.7	50 ~ 500 (Set in 50-mm steps)
RCACR-SA5C-①-20-6-②-A1-③-④		6	8	2	33.3	
RCACR-SA5C-①-20-3-②-A1-③-④		3	12	4	65.7	

Explanation of numbers ① Encoder type ② Stroke ③ Cable length ④ Options

Stroke, Maximum Speed and Suction Volume

Stroke / Lead	50 ~ 450	500	Suction volume (N l/mm)
	(Set in 50-mm steps)	(mm)	
12	800	760	50
6	400	380	30
3	200	190	15

(Unit: mm/s)

Options

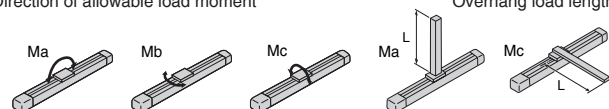
Name	Model	Page
Brake	B	P381
Foot bracket	FT	P383
Home sensor	HS	P385
Reversed-home specification	NM	P385
Vacuum joint on opposite side	VR	P389

Actuator Specifications

Item	Description
Drive method	Ball screw \varnothing 10mm, rolled C10
Positioning repeatability	\pm 0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable load moment	Ma : 4.9N • m Mb : 6.8N • m Mc : 11.7N • m
Overhang load length	Ma direction: 150mm or less, Mb • Mc directions: 150mm or less
Grease	Low-dust-raising grease (both ball screw and guide)
Cleanliness class	Class 10 (0.1 μ m)
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)

Direction of allowable load moment

Overhang load length



40 mm

52 mm

58 mm

60 mm

73 mm

80 mm

Pulse Motor

20w

30w

60w

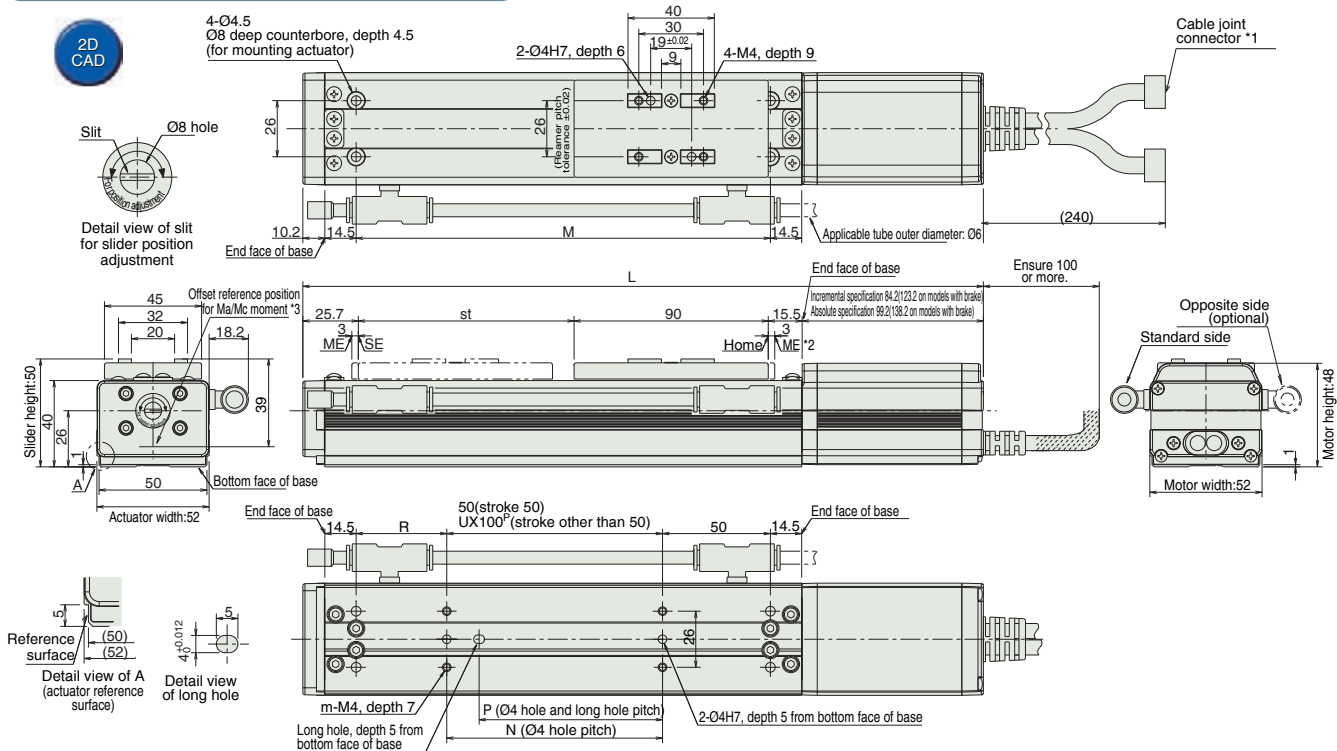
100w

150w

- Controler - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller

Dimensions

You can download CAD drawings from our website. www.robocylinder.de



Dimensions and Weight by Stroke

L	Stroke	Stroke									
		50	100	150	200	250	300	350	400	450	500
Incremental	Without brake	265.4	315.4	365.4	415.4	465.4	515.4	565.4	615.4	665.4	715.4
	With brake	304.4	354.4	404.4	454.4	504.4	554.4	604.4	654.4	704.4	754.4
Absolute	Without brake	280.4	330.4	380.4	430.4	480.4	530.4	580.4	630.4	680.4	730.4
	With brake	319.4	369.4	419.4	469.4	519.4	569.4	619.4	669.4	719.4	769.4
M		142	192	242	292	342	392	442	492	542	592
N		50	100	100	200	200	300	300	400	400	500
P		35	85	85	185	185	285	285	385	385	485
R		42	72	92	42	92	42	92	42	92	42
U		-	1	1	2	2	3	3	4	4	5
m		4	4	4	6	6	8	8	10	10	12
Weight (kg)		1.3	1.4	1.5	1.6	1.7	1.8	1.9	2	2.1	2.2

- 40 mm
- 52 mm
- 58 mm
- 60 mm
- 73 mm
- 80 mm

- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

*1 Connect the motor/encoder cables. Refer to p. 324 for details on the cables.
 *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
 ME: Mechanical end SE: Stroke end
 *3 Reference position for calculating Ma moment
 *4 If the actuator is affixed using only the mounting holes provided in the top face of the base, the base may twist to cause abnormal sliding of the slider or generate noise. When the mounting holes in the top face of the base are used, keep the stroke to 300 mm or less.

Controller

Applicable Controllers

RCACR series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-20I-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	Rating: 1.3A, Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-20I-NP-2-0					
Solenoid valve type		ACON-CY-20I-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-20I-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-20I-NP-2-0	Pulse-train input type supporting an open collector				
Serial communication type		ACON-SE-20I-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-20①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points		→P345	

* The ASEL model name is based on a 1-axis specification.
 *① indicates the encoder type (I: Incremental / A: Absolute).

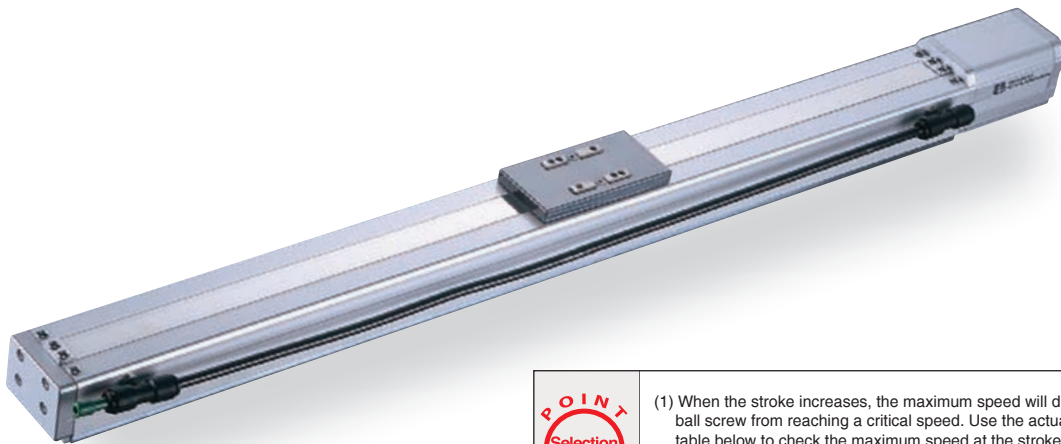
RCACR-SA6C

Cleanroom Type ROBO Cylinder, Slider Type, Actuator Width 58mm, 24-V Servo Motor Coupling Specification

Model Specification Items **RCACR** - **SA6C** - [] - **30** - [] - [] - **A1** - [] - []

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
I: Incremental specification A: Absolute specification	30: Servo motor 30W	12: 12mm 6: 6mm 3: 3mm		50: 50mm ?	600: 600mm (Set in 50-mm steps)	A1: ACON ASEL	N: No cable P: 1m S: 3m M: 5m X□: Specified length R□: Robot cable	B: Brake FT: Foot bracket HS: Home check sensor NM: Reversed-home specification VR: Suction joint on opposite side

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). This is the maximum acceleration.
- (3) Class 10 cleanliness is based on the horizontal specification.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCACR-SA6C-①-30-12-②-A1-③-④	30	12	6	1.5	24.2	50 - 600 (Set in 50-mm steps)
RCACR-SA6C-①-30-6-②-A1-③-④		6	12	3	48.4	
RCACR-SA6C-①-30-3-②-A1-③-④		3	18	6	96.8	

Explanation of numbers ① Encoder type ② Stroke ③ Cable length ④ Options

Stroke, Maximum Speed and Suction Volume

Stroke / Lead	Stroke				Suction volume (N l/mm)
	50 ~ 450 (Set in 50-mm steps)	500 (mm)	550 (mm)	600 (mm)	
10	800	760	640	540	50
5	400	380	320	270	30
2.5	200	190	160	135	15

(Unit: mm/s)

Options

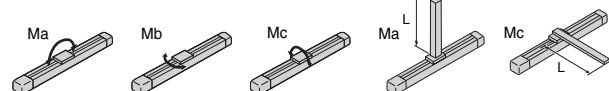
Name	Model	Page
Brake	B	P381
Foot bracket	FT	P383
Home sensor	HS	P385
Reversed-home specification	NM	P385
Vacuum joint on opposite side	VR	P389

Actuator Specifications

Item	Description
Drive method	Ball screw \varnothing 10mm, rolled C10
Positioning repeatability	\pm 0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable load moment	Ma : 8.9N • m Mb : 12.7N • m Mc : 18.6N • m
Overhang load length	Ma direction: 220mm or less, Mb • Mc directions: 220mm or less
Grease	Low-dust-raising grease (both ball screw and guide)
Cleanliness class	Class 10 (0.1 μ m)
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)

Direction of allowable load moment

Overhang load length



40 mm

52 mm

58 mm

60 mm

73 mm

80 mm

Pulse Motor

20w

30w

60w

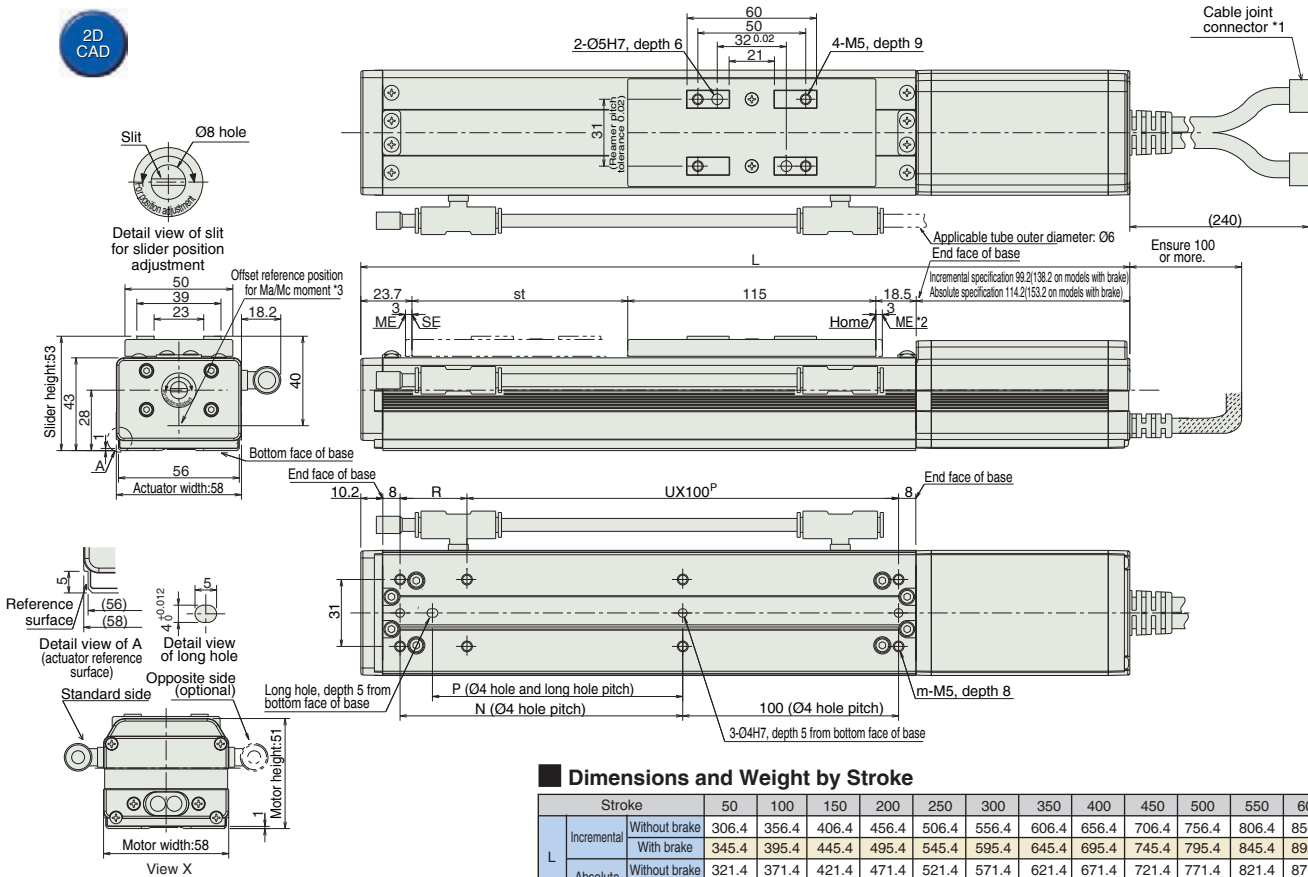
100w

150w

Dimensions

You can download CAD drawings from our website. www.robocylinder.de

2D CAD



Dimensions and Weight by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500	550	600	
L	Incremental	Without brake	306.4	356.4	406.4	456.4	506.4	556.4	606.4	656.4	706.4	756.4	806.4	856.4
		With brake	345.4	395.4	445.4	495.4	545.4	595.4	645.4	695.4	745.4	795.4	845.4	895.4
	Absolute	Without brake	321.4	371.4	421.4	471.4	521.4	571.4	621.4	671.4	721.4	771.4	821.4	871.4
		With brake	360.4	410.4	460.4	510.4	560.4	610.4	660.4	710.4	760.4	810.4	860.4	910.4
N		81	131	181	231	281	331	381	431	481	531	581	631	
P		66	116	166	216	266	316	366	416	466	516	566	616	
R		81	31	81	31	81	31	81	31	81	31	81	31	
U		1	2	2	3	3	4	4	5	5	6	6	7	
m		6	8	8	10	10	12	12	14	14	16	16	18	
Weight (kg)		1.4	1.6	1.8	2	2.2	2.4	2.6	2.8	3	3.2	3.4	3.6	

*1 Connect the motor/encoder cables. Refer to p. 324 for details on the cables.
 *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
 ME: Mechanical end SE: Stroke end
 *3 Reference position for calculating Ma moment

Controller

Applicable Controllers

RCA series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-30I-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	Rating: 1.3A, Peak: 4.2A	→P315
Positioner type meeting safety category		ACON-CG-30I-NP-2-0					
Solenoid valve type		ACON-CY-30I-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-30I-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-30I-NP-2-0	Pulse-train input type supporting an open collector				
Serial communication type		ACON-SE-30I-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-30①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points		→P345	

* The ASEL model name is based on a 1-axis specification.
 *① indicates the encoder type (I: Incremental / A: Absolute).

- Controller - Integral Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller

- 40 mm
- 52 mm
- 58 mm
- 60 mm
- 73 mm
- 80 mm

- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

RCACR-SA5D

Cleanroom Type ROBO Cylinder, Slider Type, Actuator Width 52mm, 24-V Servo Motor Built-In (Direct-Coupled) Motor Specification

Model Specification Items **RCACR-SA5D** - [] - **20** - [] - [] - **A1** - [] - []

Series — Type — Encoder type — Motor type — Lead — Stroke — Applicable controller — Cable length — Options

I: Incremental specification
A: Absolute specification

20: Servo motor 20W

12: 12mm
6: 6mm
3: 3mm

50: 50mm
500: 500mm (Set in 50-mm steps)

A1: ACON
ASEL

N: No cable
P: 1m
S: 3m
M: 5m
X []: Specified length
R []: Robot cable

BE: Brake (wire taken out from end)
BL: Brake (wire taken out from left)
BR: Brake (wire taken out from right)
NM: Reversed-home specification
VR: Suction joint on opposite side

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). This is the maximum acceleration.
- (3) Class 10 cleanliness is based on the horizontal specification.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity Horizontal (kg) / Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCACR-SA5D-①-20-12-②-A1-③-④	20	12	4 / 1	16.7	50 ~ 500 (Set in 50-mm steps)
RCACR-SA5D-①-20-6-②-A1-③-④		6	8 / 2	33.3	
RCACR-SA5D-①-20-3-②-A1-③-④		3	12 / 4	65.7	

Explanation of numbers ① Encoder type ② Stroke ③ Cable length ④ Options

Stroke, Maximum Speed and Suction Volume

Stroke Lead	Stroke (mm)			Suction volume (N l/mm)
	50 ~ 450 (Set in 50-mm steps)	500 (mm)		
10	800	760		50
5	400	380		30
2.5	200	190		15

(Unit: mm/s)

Options

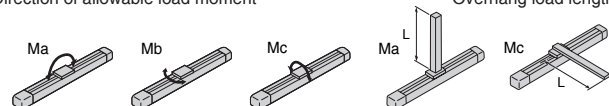
Name	Model	Page
Brake (Cable existing the end)	BE	P381
Brake (Cable existing the left)	BL	P381
Brake (Cable existing the right)	BR	P381
Reversed-home specification	NM	P385
Vacuum joint on opposite side	VR	P389

Actuator Specifications

Item	Description
Drive method	Ball screw \varnothing 10mm, rolled C10
Positioning repeatability	\pm 0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable load moment	Ma : 4.9N • m Mb : 6.8N • m Mc : 11.7N • m
Overhang load length	Ma direction: 150mm or less, Mb • Mc directions: 150mm or less
Grease	Low-dust-raising grease (both ball screw and guide)
Cleanliness class	Class 10 (0.1 μ m)
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)

Direction of allowable load moment

Overhang load length



40 mm

52 mm

58 mm

60 mm

73 mm

80 mm

Pulse Motor

20w

30w

60w

100w

150w

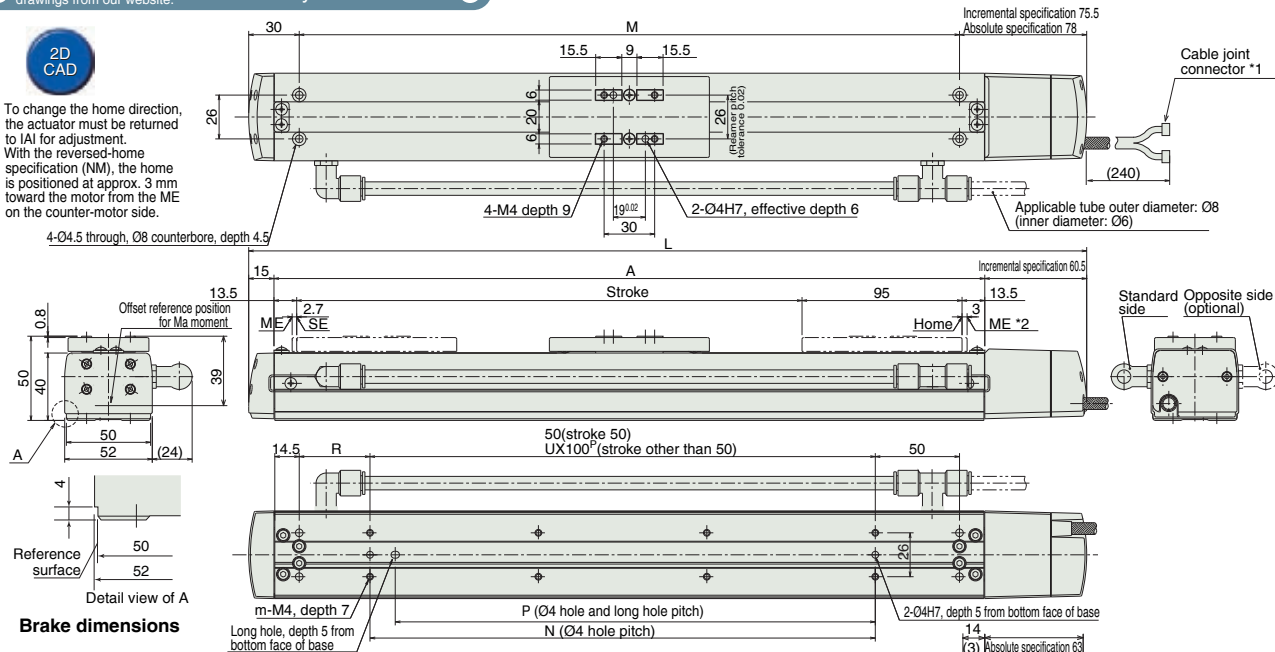
- Controller - Integral Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller

Dimensions

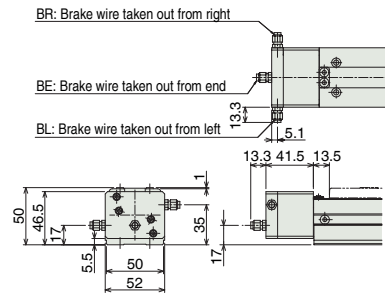
You can download CAD drawings from our website. www.robocylinder.de



- * To change the home direction, the actuator must be returned to IAI for adjustment.
- * With the reversed-home specification (NM), the home is positioned at approx. 3 mm toward the motor from the ME on the counter-motor side.



Brake dimensions



* Models with brake have their overall length (L) extended by 26.5 mm (or 39.8 mm if the wire is taken out from the end) and weight increased by 0.3 kg.

Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	
L	Incremental	247.5	297.5	347.5	397.5	447.5	497.5	547.5	597.5	647.5	697.5
	Absolute	250	300	350	400	450	500	550	600	650	700
A	172	222	272	322	372	422	472	522	572	622	
M	142	192	242	292	342	392	442	492	542	592	
N	50	100	100	200	200	300	300	400	400	500	
P	35	85	85	185	185	285	285	385	385	485	
R	92	42	92	42	92	42	92	42	92	42	
U	-	1	1	2	2	3	3	4	4	5	
m	4	4	4	6	6	8	8	10	10	12	
Weight (kg)	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	

- 40 mm
- 52 mm
- 58 mm
- 60 mm
- 73 mm
- 80 mm

¹ Connect the motor/encoder cables. Refer to p. 324 for details on the cables.
² The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
 ME: Mechanical end SE: Stroke end
³ Reference position for calculating Ma moment

Controller

Applicable Controllers

RCACR series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-20I-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	Rating: 1.3A, Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-20I-NP-2-0					
Solenoid valve type		ACON-CY-20I-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-20I-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-20I-NP-2-0	Pulse-train input type supporting an open collector				
Serial communication type		ACON-SE-20I-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-20①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points	→P345		

* The ASEL model name is based on a 1-axis specification.
 *① indicates the encoder type (I: Incremental / A: Absolute).

- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

RCACR-SA6D

Cleanroom Type ROBO Cylinder, Slider Type, Actuator Width 58mm, 24-V Servo Motor Built-In (Direct-Coupled) Motor Specification

Model Specification Items **RCACR-SA6D** - [] - **30** - [] - [] - **A1** - [] - []

Series — Type — Encoder type — Motor type — Lead — Stroke — Applicable controller — Cable length — Options

I: Incremental specification
A: Absolute specification

30: Servo motor 30W

12: 12mm
6: 6mm
3: 3mm

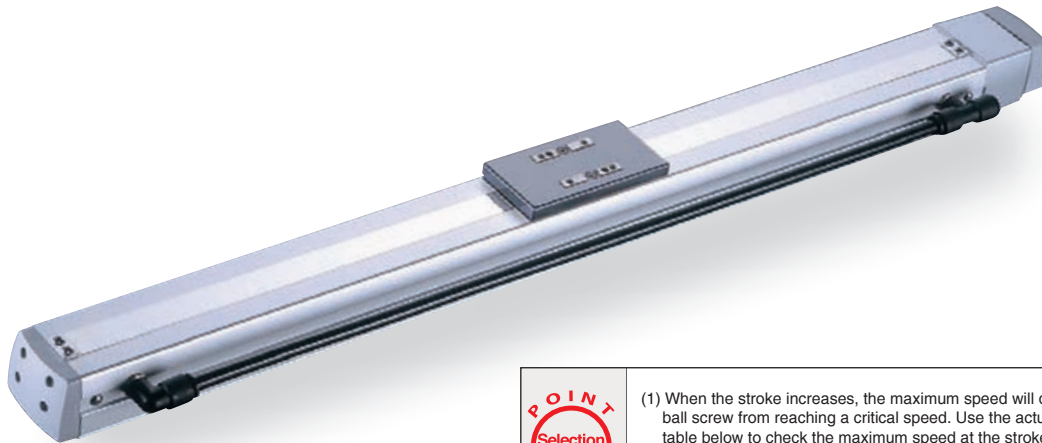
50: 50mm
600: 600mm (Set in 50-mm steps)

A1 : ACON
ASEL

N : No cable
P : 1m
S : 3m
M : 5m
X [] : Specified length
R [] : Robot cable

BE : Brake (wire taken out from end)
BL : Brake (wire taken out from left)
BR : Brake (wire taken out from right)
NM: Reversed-home specification
VR : Suction joint on opposite side

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). This is the maximum acceleration.
- (3) Class 10 cleanliness is based on the horizontal specification.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity Horizontal (kg) / Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCACR-SA6D-①-30-12-②-A1-③-④	30	12	6 / 1.5	24.2	50 - 600 (Set in 50-mm steps)
RCACR-SA6D-①-30-6-②-A1-③-④		6	12 / 3	48.4	
RCACR-SA6D-①-30-3-②-A1-③-④		3	18 / 6	96.8	

Explanation of numbers ① Encoder type ② Stroke ③ Cable length ④ Options

Stroke, Maximum Speed and Suction Volume

Stroke / Lead	Stroke (mm)				Suction volume (N l/mm)
	50 ~ 450 (Set in 50-mm steps)	500 (mm)	550 (mm)	600 (mm)	
12	800	760	640	540	50
6	400	380	320	270	30
3	200	190	160	135	15

(Unit: mm/s)

Options

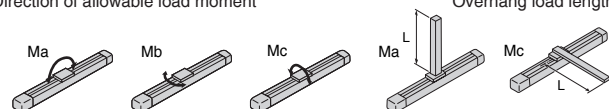
Name	Model	Page
Brake (Cable exiting the end)	BE	P381
Brake (Cable exiting the left)	BL	P381
Brake (Cable exiting the right)	BR	P381
Reversed-home specification	NM	P385
Vacuum joint on opposite side	VR	P389

Actuator Specifications

Item	Description
Drive method	Ball screw \varnothing 10mm, rolled C10
Positioning repeatability	\pm 0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable load moment	Ma : 8.9N • m Mb : 12.7N • m Mc : 18.6N • m
Overhang load length	Ma direction: 220mm or less, Mb • Mc directions: 220mm or less
Grease	Low-dust-raising grease (both ball screw and guide)
Cleanliness class	Class 10 (0.1 μ m)
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)

Direction of allowable load moment

Overhang load length



40 mm

52 mm

58 mm

60 mm

73 mm

80 mm

Pulse Motor

20w

30w

60w

100w

150w

RCAW-RA3C/RA3D/RA3R

ROBO Cylinder, Splash-Proof Rod Type, Actuator Diameter Ø32mm, 24-V Servo Motor
Coupling Specification//Built-In Specification/Motor Reversing Specification

Model Specification Items **RCAW** — — **I** — **20** — — — **A1** — —

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
RA3C: Coupling Specification	I: Incremental specification	20: Servo motor specification	20W	10: 10mm 5: 5mm 2.5: 2.5mm	50: 50mm ?	A1: ACON ASEL	N : No cable P : 1m S : 3m M : 5m X□□ : Specified length R□□ : Robot cable	Refer to the options table below.

* Refer to p. 31 of the front matter for details on the model specification items.



POINT Selection Points

- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 2.5). This is the maximum acceleration.
- (3) The horizontal load capacity assumes use of an external guide and absence of external force applied from any direction other than the moving direction of the rod.

- 32 mm
- 37 mm
- 45 mm
- 64 mm
- 100 mm
- 158 mm

Actuator Specifications						
Lead and Load Capacity				Stroke and Maximum Speed		
Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCAW-①-I-20-10-②-A1-③-④	20	10	4	1.5	36.2	50 ~ 200 (Set in 100-mm steps)
RCAW-①-I-20-5-②-A1-③-④		5	9	3	72.4	
RCAW-①-I-20-2.5-②-A1-③-④		2.5	18	6.5	144.8	

Stroke	50 ~ 200 (Set in 50-mm steps)
10	500
5	250
2.5	125

Explanation of numbers ① Type ② Stroke ③ Cable length ④ Options (Unit: mm/s)

Options		
Name	Model	Page
Brake (*1)	B	P381
Flange	FL	P382
Foot bracket	FT	P384
Home sensor	HS	P385
Knuckle joint	NJ	P385
Reversed-home specification	NM	P385
Clevis bracket (*2)	QR	P386
Front trunnion bracket (*3)	TRF	P389
Rear trunnion bracket (*3)	TRR	P389

Actuator Specifications	
Item	Description
Drive method	Ball screw Ø8mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.05mm or less
Base	Material: Aluminum with white alumite treatment
Rod diameter	Ø16mm
Rod non-rotation accuracy	±1.0°
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)
Protective structure	IP54

(*1) There is no setting of the brake for the RA3D.
 (*2) The clevis metal fittings can be used only on the RA3R.
 (*3) The trunnion metal fittings can be used only on the RA3C/RA3D.

- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

- Controller - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller

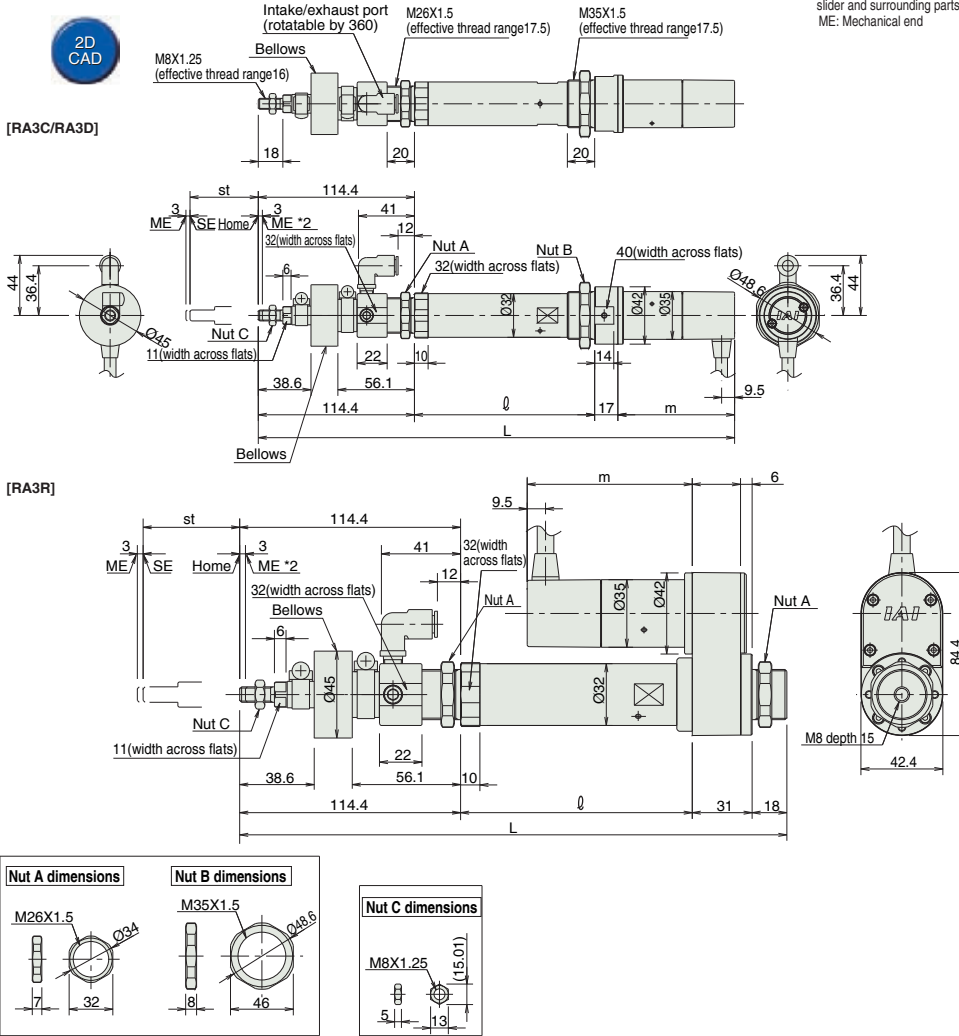
Dimensions

You can download CAD drawings from our website.

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*1 Connect the motor/encoder cables. Refer to p. 324 for details on the cables.
 *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
 ME: Mechanical end SE: Stroke end



Dimensions and Weight by Stroke

RCAW-RA3C-RA3D/RA3R (without brake)

Stroke	50	100	150	200	
L	RA3C	348.9	398.9	448.9	498.9
	RA3D	329.9	379.9	429.9	479.9
	RA3R	283.4	333.4	383.4	433.4
Ø	RA3C	132	182	232	282
	RA3D	132	182	232	282
	RA3R	120	170	220	270
m	RA3C	85.5			
	RA3D	66.5			
	RA3R	85.5			
Weight (kg)	RA3C	1.0	1.1	1.2	1.3
	RA3D	1.0	1.1	1.2	1.3
	RA3R	1.1	1.2	1.3	1.4

RCAW-RA3C-RA3D/RA3R (with brake)

Stroke	50	100	150	200	
L	RA3C	387.9	437.9	487.9	537.9
	RA3D	Not available with brake.			
	RA3R	283.4	333.4	383.4	433.4
Ø	RA3C	132	182	232	282
	RA3D	132	182	232	282
	RA3R	120	170	220	270
m	RA3C	124.5			
	RA3D	Not available with brake.			
	RA3R	124.5			
Weight (kg)	RA3C	1.2	1.3	1.4	1.5
	RA3D	1.2	1.3	1.4	1.5
	RA3R	1.3	1.4	1.5	1.6

- 32 mm
- 37 mm
- 45 mm
- 64 mm
- 100 mm
- 158 mm

Controller

Applicable Controllers

RCP2 series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-20I-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	Rating: 1.3A, Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-20I-NP-2-0					
Solenoid valve type		ACON-CY-20I-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-20I-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-20I-NP-2-0	Pulse-train input type supporting an open collector				
Serial communication type		ACON-SE-20I-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-20 I -NP-2-0	Programmable type capable of operating up to 2 axes	1500 points	→P345		

* The ASEL model name is based on a 1-axis specification.

- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

RCAW-RA4C/RA4D/RA4R

ROBO Cylinder, Splash-Proof Rod Type, Actuator Diameter Ø37mm, 24-V Servo Motor
Coupling Specification//Built-In Specification/Motor Reversing Specification

Model Specification Items									
RCAW	Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
RA4C:	I: Incremental	20: Servo motor	12: 12mm	50: 50mm	A1: ACON	N: No cable	Refer to the options table below.		
Coupling Specification	specification	20W	6: 6mm	?	ASEL	P: 1m			
RA4D:	A: Absolute	30: Servo motor	3: 3mm	300: 300mm		S: 3m			
Built-In Specification	specification	30W		(Set in 50-mm steps)		M: 5m			
RA4R:	Motor Reversing Specification					X□□: Specified length			
Motor Reversing Specification						R□□: Robot cable			

* Refer to p. 31 of the front matter for details on the model specification items.



- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). This is the maximum acceleration.
- (3) The horizontal load capacity assumes use of an external guide and absence of external force applied from any direction other than the moving direction of the rod.

Actuator Specifications

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCAW-①-②-20-12-③-④-⑤-⑥	20	12	3.0	1.0	18.9	50 ~ 300 (Set in 100-mm steps)
RCAW-①-②-20-6-③-④-⑤-⑥		6	6.0	2.0	37.7	
RCAW-①-②-20-3-③-④-⑤-⑥		3	12.0	4.0	75.4	
RCAW-①-②-30-12-③-④-⑤-⑥	30	12	4.0	1.5	28.3	
RCAW-①-②-30-6-③-④-⑤-⑥		6	9.0	3.0	56.6	
RCAW-①-②-30-3-③-④-⑤-⑥		3	18.0	6.5	113.1	

Stroke and Maximum Speed

Stroke	50 ~ 300 (Set in 50-mm steps)	
	Lead	50 ~ 300
12		600
6		300
3		150

(Unit: mm/s)

Explanation of numbers ① Type ② Encoder type ③ Stroke ④ Applicable controller ⑤ Cable length ⑥ Options

Options

Name	Model	Page
Brake (*1)	B	P381
Flange	FL	P382
Foot bracket	FT	P384
Home sensor	HS	P385
Knuckle joint	NJ	P385
Reversed-home specification	NM	P385
Clevis bracket (*2)	QR	P386
Front trunnion bracket (*3)	TRF	P389
Rear trunnion bracket (*3)	TRR	P389

(*1) There is no setting of the brake for the RA3D.
(*2) The clevis metal fittings can be used only on the RA3R.
(*3) The trunnion metal fittings can be used only on the RA3C/RA3D.

Actuator Specifications

Item	Description
Drive method	Ball screw Ø10mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.05mm or less
Base	Material: Aluminum with white alumite treatment
Rod diameter	Ø20mm
Rod non-rotation accuracy	±1.0°
Ambient operating temperature, humidity	0~40°C, 85% RH or below (non-condensing)
Protective structure	IP54

Dimensions

You can download CAD drawings from our website.

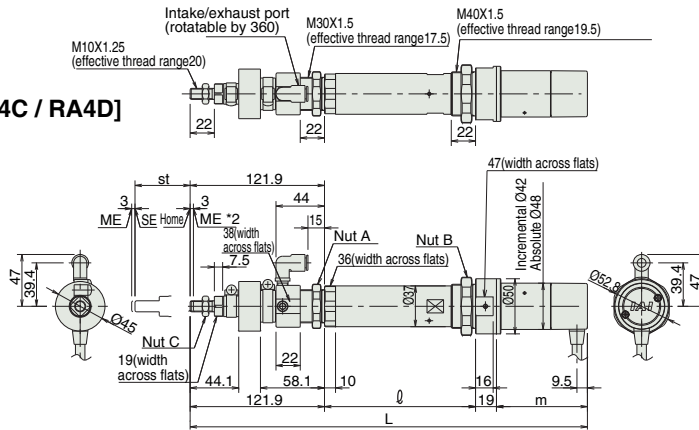
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2D CAD

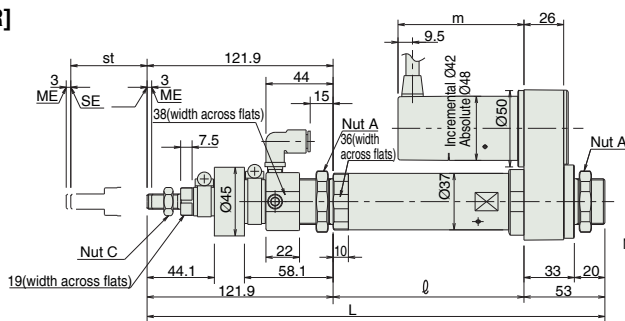
- *1 Connect the motor/encoder cables. Refer to p. 324 for details on the cables.
- *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.

ME: Mechanical end SE: Stroke end

[RA4C / RA4D]



[RA4R]

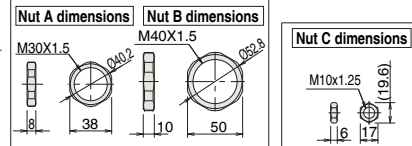


Dimensions and Weight by Stroke

RCAW-RA4C-RA4D/RA4R (without brake)

Stroke	Stroke							
		50	100	150	200	250	300	
L	RA4C	20W	Incremental 345.4	395.4	445.4	495.4	545.4	595.4
		Absolute	358.4	408.4	458.4	508.4	558.4	608.4
	30W	Incremental	360.4	410.4	460.4	510.4	560.4	610.4
		Absolute	373.4	423.4	473.4	523.4	573.4	623.4
	RA4D	20W	Incremental 323.4	373.4	423.4	473.4	523.4	573.4
		Absolute	336.4	386.4	436.4	486.4	536.4	586.4
30W	Incremental	338.4	388.4	438.4	488.4	538.4	588.4	
	Absolute	351.4	401.4	451.4	501.4	551.4	601.4	
Q	RA4C	20W	Incremental 137	187	237	287	337	387
		Absolute	137	187	237	287	337	387
	RA4D	20W	Incremental 137	187	237	287	337	387
		Absolute	137	187	237	287	337	387
	RA4R	20W	Incremental 125	175	225	275	325	375
		Absolute	125	175	225	275	325	375
m	RA4C	20W	Incremental 67.5					
		Absolute	80.5					
	30W	Incremental	82.5					
		Absolute	95.5					
	RA4D	20W	Incremental 45.5					
		Absolute	58.5					
	30W	Incremental	60.5					
		Absolute	73.5					
	RA4R	20W	Incremental 67.5					
		Absolute	80.5					
	30W	Incremental	82.5					
		Absolute	95.5					
Weight (kg)	RA4C	20W/30W	1.4	1.5	1.7	1.8	2.0	2.1
	RA4D	20W/30W	1.3	1.5	1.6	1.8	1.9	2.1
	RA4R	20W/30W	1.5	1.7	1.8	2.0	2.1	2.3

* The RA4C type has its overall length extended by 43 mm when a brake is added. With the RA4R type with brake, the motor length is extended by 43 mm, but the overall length remains unchanged due to the motor reversing specification. The brake setting is not available with the RA4D type. The weight increases by 0.2 kg with all models with brake.



- 32 mm
- 37 mm
- 45 mm
- 64 mm
- 100 mm
- 158 mm

Controller

Applicable Controllers

RCP2 series actuators can be operated using the following controllers. Choose the type that best suits your specific purpose.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Reference page
Positioner type		ACON-C-20I-NP-2-0	Supporting up to 512 positioning points	512 points	DC24V	Rating: 1.3A, Peak: 5.1A	→P315
Positioner type meeting safety category		ACON-CG-20I-NP-2-0					
Solenoid valve type		ACON-CY-20I-NP-2-0	Same control actions as those applicable to solenoid valves	3 points			
Pulse-train input type (differential line driver specification)		ACON-PL-20I-NP-2-0	Pulse-train input type supporting a differential line driver	(-)			
Pulse-train input type (open collector specification)		ACON-PO-20I-NP-2-0	Pulse-train input type supporting an open collector				
Serial communication type		ACON-SE-20I-0-0	Dedicated serial communication type	64 points			
Program control type		ASEL-C-1-20 I -NP-2-0	Programmable type capable of operating up to 2 axes	1500 points		→P345	

* The ASEL model name is based on a 1-axis specification.
* ① indicates the encoder type (I: Incremental / A: Absolute).

- Pulse Motor
- 20w
- 30w
- 60w
- 100w
- 150w

ACON-/PCON-ABU Controller Module

ABU



Absolute unit
Module for ACON and PCON controller

Features

1 Easy Change from Incremental to Absolute Encoder Type

Only connecting to ACON/PCON, RCA/RCP2 actuators incremental version will function as absolute version (with back-up battery). ACON/PCON-ABU set includes ACON/PCON-ABU unit, back-up battery (AB-7) and cable connected to controller (CB-AC/PC-PJ002).

* Caution: An error will be indicated when sliders or rod of the actuators move faster than specified speed. Please refer to the specified speed (allowable rotation per minute) in the specification table.

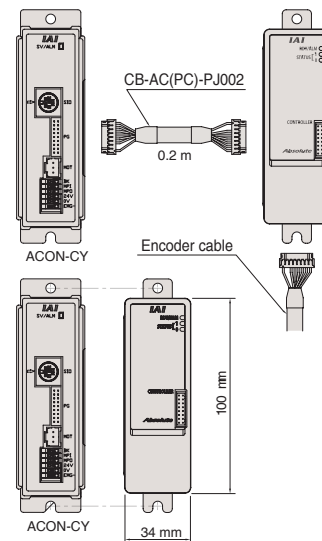
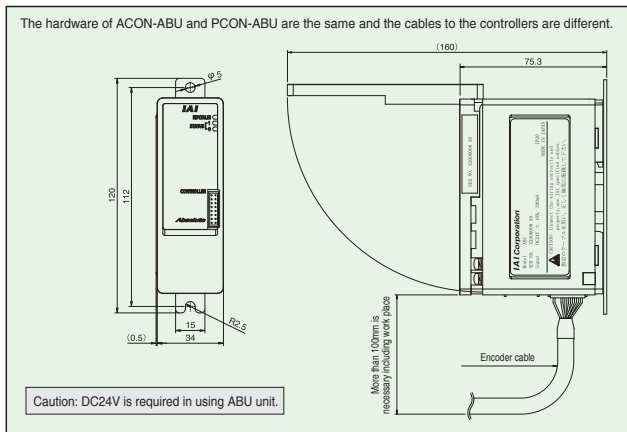
2 No Home Return necessary

By connecting with ACON/PCON-C, -CG, -CY or -SE type the current position of system will be held even if power is disconnected, the actuator can operate immediately without homing. Encoder data can be saved as long as 20 days.

3 Small Size like as Controller Types SE/CY

It is as compact as CY and SE controller types (width 34 mm, height 100 mm, length 75.3 mm), so space and cost can be saved.

External Dimensions



Specification Table

Item	ACON-ABU		PCON-ABU	
Controller type to be connected	ACON-C/CG/CY/SE		PCON-C/CG/CY/SE	
	In ordering controllers to be connected to ABU unit, please add "ABU" at the end of controller type name, e.g. "ACON-C-20I-NP-2-0-ABU"			
Connected actuators	RCA series		RCP2 series *1	
Cables connected to controller	CB-AC-PJ002 (0.2 m)		CB-PC-PJ002 (0.2 m)	
Backup battery (included in a set)	AB-7			
Power voltage	DC24V ±10%			
Power capacity	max. 300mA			
Ambient Temperature	0~40°C (at best 20°C)			
Ambient Humidity	95% RH (non-condensing)			
Environment	No corrosive gas, no dust			
Weight	330 g			
Allowable encoder rotation per minute *2	800 rpm	400 rpm	200 rpm	100 rpm
Position data retainable hours *2	120h	240h	360h	480h

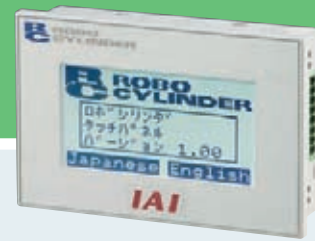
*1 ABU unit does not function for types RA2C, RA10C, GRS, GRM, GR3LS, GR3LM, GR3SS, GR3SM, RTBL, RTCL and RCP2-W-SA16.

*2 Position data retainable hours varies by allowable rotation per minute.

Controller - Integrated Type
Slider Type
Rod Type
Arm / Flat Type
Gripper / Rotary Type
Cleanroom Type
Splash Proof Type
Controller
Controller Models
Gateway unit
Absolute Unit / Touch Panel
ERC2
PCON
ACON
SCON
PSEL
ASEL
SSEL
XSEL

RCM-PM

Touch panel to input, change and monitor data of PCON/ACON/SCON/ERC2/ROBONET



Features

1 Easy Input, Change and Monitor Data

Position data and parameter (user parameter) can be changed and position, speed and IO status can be monitored. Dialogue window help users using for the first time.

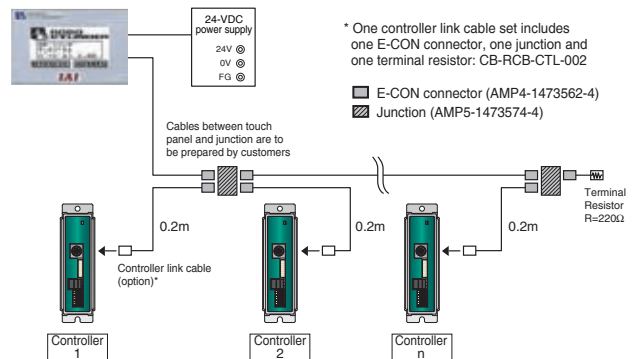
2 Three-color Back Light indicates the Status

In the normal status the back light is white and it turn to pink with error and to red with emergency.

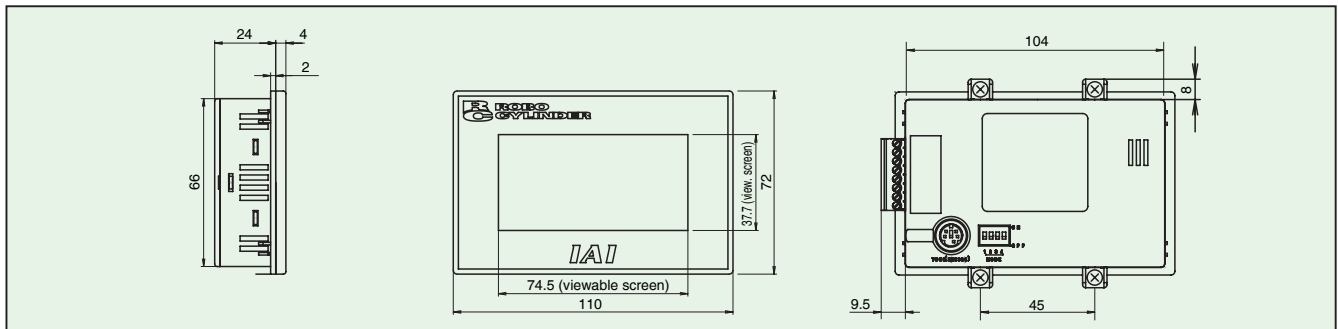
3 Connecting multiple Controllers

Up to 16 controllers of PCON, ACON, SCON, ERC2 or ROBONET can be connected.

The diagram shows only serial communication connection. Please refer to the manual for power supply and emergency.



External Dimensions



Specification Table

	Item	RCM-PM-01
Basic specifications	Power supply voltage	DC 24V
	Functional voltage	DC 21.6~26.4V
	Power capacity	less than 2W (less than 80mA)
	Ambient temperature / humidity	0~50°C / 20~85% RH (non-condensing)
	Environment	IP65 (initial stage) only from front side
	Weight	ca. 160g
Communication	Communication standard	RS485
	Communication condition	Transmit speed 115.2 kbps, Data bit 8 bit, no parity, Stop bit 1 bit
	Protocol	Modbus/RTU
	Controller to be connected	PCON/ACON/SCON/ERC2/ROBONET (max. 16 controllers can be connected)
Function	Monitor	Current position, speed, acceleration, error code, error message, PIO status bit, speed wave, current wave, current value
	Error list	max. 16 error lists (code, detail code, address, time, message)
	Position table edit	Position, speed, acceleration, band-width, push-mode, individual zone, incremental position, jog/inching, direct teaching, error message by non allowable data
	Move function	Position, direct movement, jog, screen jump function at error
	Parameter edit	Zone signal, software limit, PIO pattern selection, jog speed, inching distance, speed at push mode, safety speed
	Back light	White (standard), pink (error), red (emergency)
	View screen adjustment	Contrast and brightness adjustment
Gateway monitor function	Current position (max. 4 axes), current speed (max. 4 axes), current level (max. 4 axes), total current level, error monitor for all axes, Gateway system status	

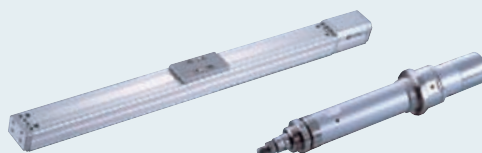
- Controller - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller
- Controller Models
- Gateway Unit
- Absolute Unit / Touch Panel
- ERC2
- PCON
- ACON
- SCON
- PSEL
- ASEL
- SSEL
- XSEL

ACON Controller

ACON

Model C / CG / CY / PL / PO / SE

Position controller for RCA series

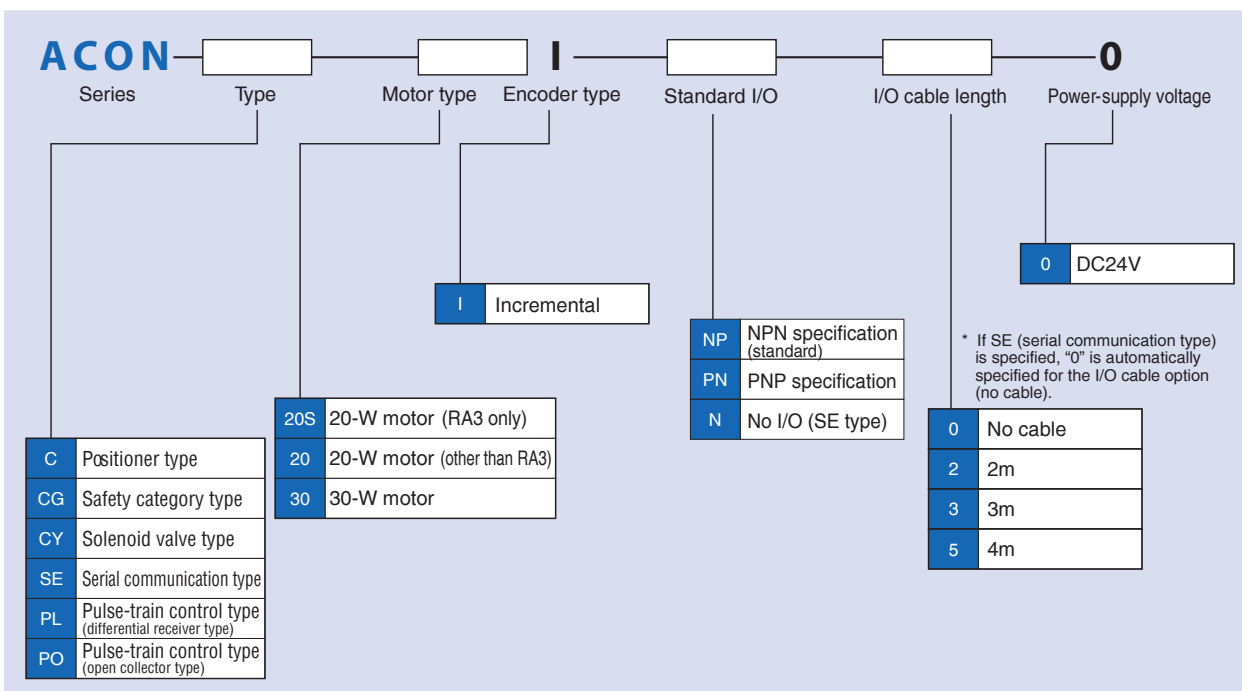


Type List

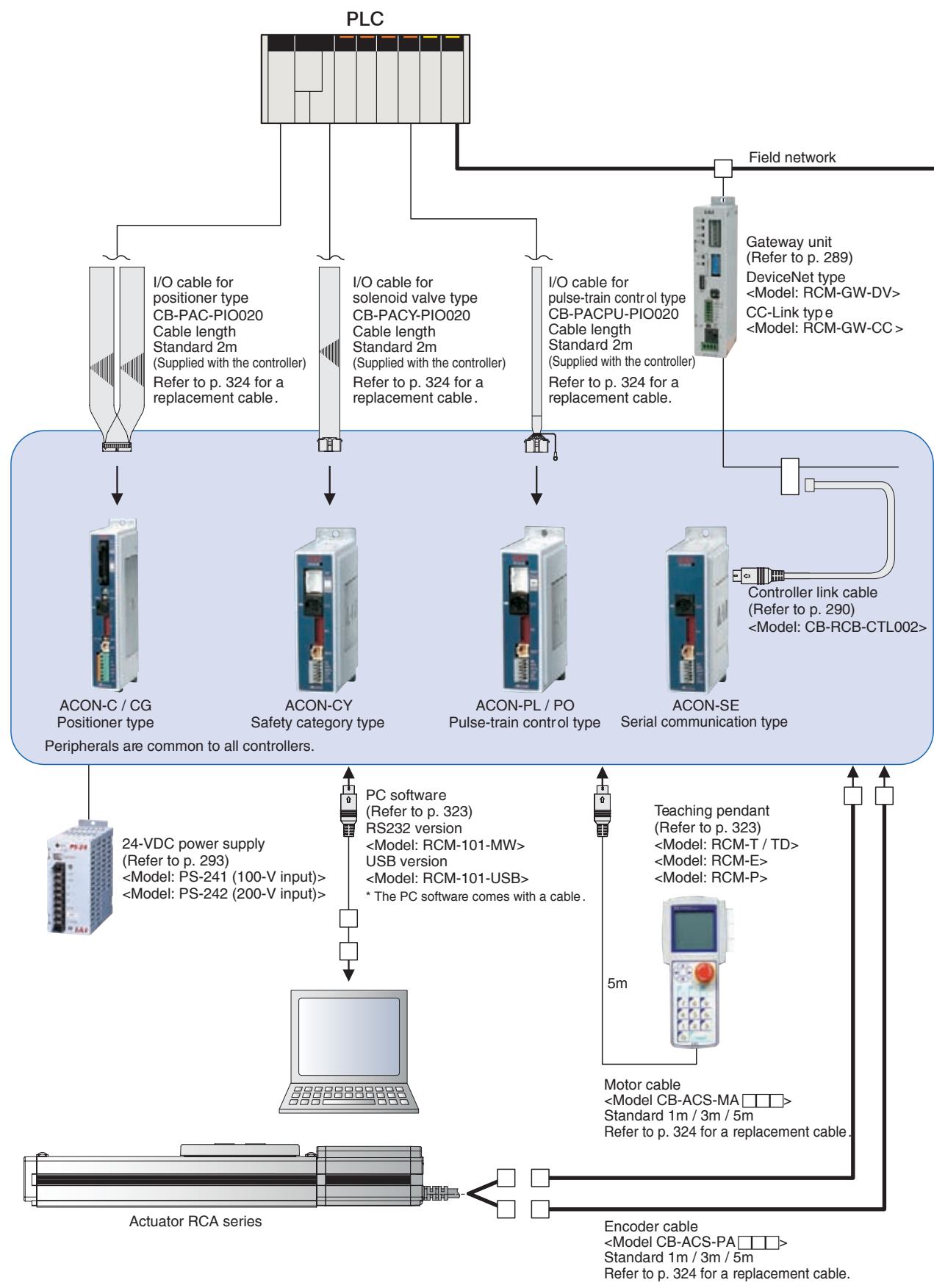
Position controller capable of operating RCA series actuator. Select from five types each supporting a different control mode.

Type	C	CG	CY	PL / PO	SE
Name	Positioner type	Safety category type	Solenoid valve type	Pulse-train control type	Serial communication type
External view					
Description	Positioner supporting up to 512 positioning points	C type conforming to safety category	Same control actions as those used on air cylinders	Controller for pulse-train control	Network controller
Number of position points	512 points	512 points	3 points	(Unlimited)	64 points
	—	—	—	—	—

Model



System Configuration



- Controller - Integrated type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller**
- Controller Models
- Gateway unit
- PS-24
- ER02
- PCON
- ACON
- SCON
- PSSEL
- ASSEL
- SSSEL
- XSSEL

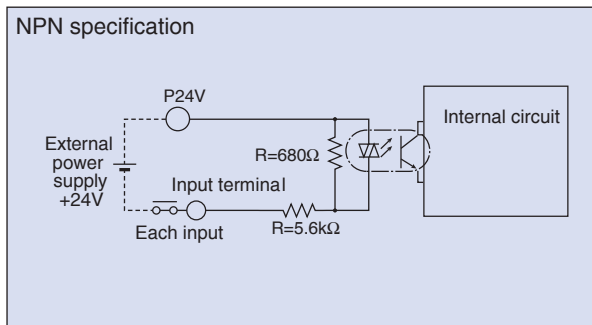
ACON Controller

I/O

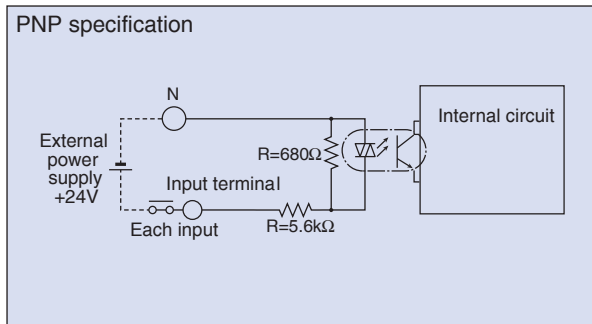
Input Part External input specifications

Item	Specification
Input voltage	24VDC ± 10%
Input current	4mA/circuit
Leak current	1mA max./point
Insulation method	Photocoupler

NPN specification



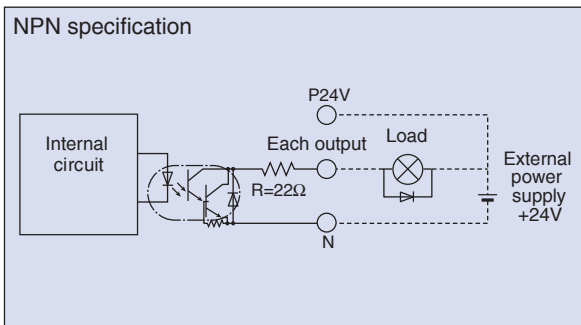
PNP specification



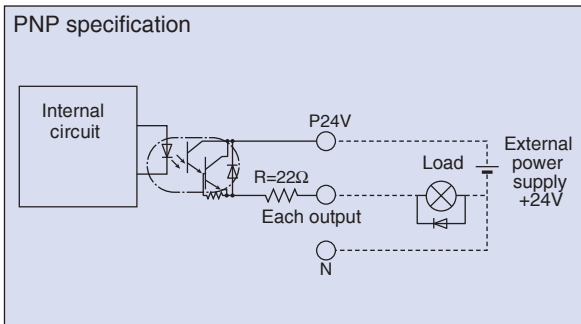
Output Part External output specifications

Item	Specification
Load voltage	DC24V
Maximum load current	50mA/point
Residual voltage	2V max.
Insulation method	Photocoupler

NPN specification



PNP specification



I/O Specifications

The four controller types (C/CG, CY, PL/PO and SE) are differentiated by their I/O specifications. Since the positioner type and solenoid valve type allow the I/O signal settings to be changed through the controller, multiple functions can be provided for selection as needed.

Controller Functions by Type

Type	C / CG	CY	PL / PO	SE	Features
Name	Positioner type	Solenoid valve type	Pulse-train control type	Serial communication type	
Positioner mode	○	○	×	×	A basic operation mode in which the actuator is operated by specifying a position number and then inputting a start signal.
Teaching mode	○	×	×	×	In this mode, the slider (rod) can be moved by means of an external signal to store the achieved position as position data.
Solenoid valve mode	○	○	×	×	The actuator can be moved simply by ON/OFF of position number signals. This mode makes it easy to convert applications previously using air cylinders with solenoid valves.
Pulse train mode	×	×	○	×	You can operate the actuator freely according to your control needs, without inputting position data.
Network support	○	○	×	○	The controller can be connected to a network via a gateway unit and serial communication function.

Controller - Integrated Type
Slider Type
Rod Type
Arm / Flat Type
Gripper / Rotary Type
Cleanroom Type
Splash Proof Type
Controller
Controller Models
Gateway unit
PS-24
ERC2
PCON
ACON
SCON
PSEL
ASEL
SSEL
XSEL

Explanation of I/O Signal Functions

The table below explains the functions assigned to the respective I/O signals of the controller. Since the signals that can be used vary depending on the controller type and settings, check the signal table for each controller to confirm the available functions.

■ Controller Functions by Type

Category	Abbreviation	Signal name	Function description
Input	CSTR	PTP strobe signal (start signal)	Input this signal to cause the actuator to start moving to the position set by the command position number signal.
	PC1~PC256	Command position number signal	This signal is used to input a target position number (binary input).
	BKRL	Brake forced-release signal	This signal forcibly releases the brake.
	RMOD	Running mode switching signal	This signal can switch the running mode when the MODE switch on the controller is set to AUTO (AUTO when this signal is OFF, or MANU when the signal is ON).
	* STP	Pause signal	Turning this signal OFF causes the moving actuator to decelerate to a stop. The actuator will resume the remaining movement if the signal is turned OFF during the pause.
	RES	Reset signal	Turning this signal ON resets the alarms that are present. If this signal is turned ON while the actuator is paused (*STP is OFF), the remaining movement can be cancelled.
	SON	Servo ON signal	The servo remains on while this signal is ON, or off while the signal is OFF.
	HOME	Home return signal	Turning this signal ON performs home-return operation.
	MODE	Teaching mode signal	Turning this signal ON switches the controller to the teaching mode (provided that CSTR, JOG+ and JOG- are all OFF and the actuator is not moving).
	JISL	Jog/inching switching signal	The actuator can be jogged with JOG+ and JOG- while this signal is OFF. The actuator performs inching operation with JOG+ and JOG- while this signal is ON.
	JOG+ JOG-	-----	----
	PWRT	Teaching signal	In the teaching mode, specify a desired position number and then turn this signal ON for at least 20 ms to write the current position under the specified position number.
	ST0~ST6	Start position command	Turning this signal ON in the solenoid valve mode causes the actuator to move to the specified position. (Start signal is not required.)
	TL	Torque limit selection signal	While this signal is ON, torque is limited by the value set by a parameter. The TLR signal turns ON if torque has reached the specified value.
	DCLR	Deviation counter clear signal	The position deviation counter is continuously cleared while this signal is ON.
Output	PEND/INP	Position complete signal	This signal turns ON when the actuator has entered the positioning band after movement. If the actuator has exceeded the positioning band, PEND does not turn OFF, but INP does. PEND and INP can be swapped using a parameter.
	PM1~PM256	Completed position number signal	This signal is used to output the position number achieved at completion of positioning (binary output).
	HEND	Home return complete signal	This signal turns ON upon completion of home return.
	ZONE1	Zone signal	This signal turns ON when the current actuator position has entered the range specified by parameters.
	PZONE	Position zone signal	This signal turns ON when the current actuator position has entered the range specified by position data during position movement. PZONE can be used together with ZONE1, but PZONE is valid only during movement to a specified position.
	RMDS	Running mode status signal	This signal is used to output the running mode status.
	* ALM	Controller alarm status signal	This signal remains ON while the controller is normal, and turns OFF if an alarm has generated.
	MOVE	Moving signal	This signal remains ON while the actuator is moving (including the periods during home return and push-motion operation).
	SV	Servo ON status signal	This signal remains ON while the servo is on.
	* EMGS	Emergency stop status signal	This signal remains ON while the controller is not in the emergency stop mode, and turns OFF once an emergency stop has been actuated.
	MODES	Mode status signal	This signal turns ON when the controller has switched to the teaching mode via MODE signal input. It turns OFF upon returning to the normal mode.
	WEND	Write complete signal	This signal remains OFF after the controller has switched to the teaching mode. It turns ON upon completion of data write using the PWRT signal. If the PWRT signal is turned OFF, this signal also turns OFF.
	PE0~PE6	Current position number signal	This signal turns ON after the controller has completed moving to the target position in the solenoid valve mode.
	TLR	Torque limiting signal	This signal turns ON once the motor torque has reached the specified value in a condition where torque is being limited by the TL signal.
	LSO~LS2	Limit switch output signal	Each signal turns ON when the current actuator position has entered the positioning band before or after the target position. If the actuator has already completed home return, these signals are output even before a movement command is issued or while the servo is OFF.
TRQS	Torque level status signal	This signal outputs when the current value of the motor reaches the limitation value, before the JOG operation returns to the starting point and the slider (rod) collides to the mechanical end or an obstacle.	

I/O Signal Table

■ Positioner type (ACON-C / CG)

Pin number	Category	Number of positioning points	Parameter (PIO pattern) selection					
			0	1	2	3	4	5
			Positioning mode	Teaching mode	256-point mode	512-point mode	Solenoid valve mode 1	Solenoid valve mode 2
			64 points	64 points	256 points	512 points	7 points	3 points
		Zone signal	○	x	x	x	○	○
		P zone signal	○	○	○	x	○	○
1A	24V		P24					
2A	24V		P24					
3A	?		NC					
4A	?		NC					
5A	Input	IN0	PC1	PC1	PC1	PC1	ST0	ST0
6A		IN1	PC2	PC2	PC2	PC2	ST1	ST1 (JOG+)
7A		IN2	PC4	PC4	PC4	PC4	ST2	ST2 (-)
8A		IN3	PC8	PC8	PC8	PC8	ST3	?
9A		IN4	PC16	PC16	PC16	PC16	ST4	?
10A		IN5	PC32	PC32	PC32	PC32	ST5	?
11A		IN6	?	MODE	PC64	PC64	ST6	?
12A		IN7	?	JISL	PC128	PC128	?	?
13A		IN8	?	JOG+	?	PC256	?	?
14A		IN9	BKRL	JOG-	BKRL	BKRL	BKRL	BKRL
15A		IN10	RMOD	RMOD	RMOD	RMOD	RMOD	RMOD
16A		IN11	HOME	HOME	HOME	HOME	HOME	?
17A		IN12	* STP	* STP	* STP	* STP	* STP	?
18A		IN13	CSTR	CSTR/PWRT	CSTR	CSTR	?	?
19A		IN14	RES	RES	RES	RES	RES	RES
20A	IN15	SON	SON	SON	SON	SON	SON	
1B	Output	OUT0	PM1	PM1	PM1	PM1	PE0	LSO
2B		OUT1	PM2	PM2	PM2	PM2	PE1	LS1 (TRQS)
3B		OUT2	PM4	PM4	PM4	PM4	PE2	LS2(-)
4B		OUT3	PM8	PM8	PM8	PM8	PE3	?
5B		OUT4	PM16	PM16	PM16	PM16	PE4	?
6B		OUT5	PM32	PM32	PM32	PM32	PE5	?
7B		OUT6	MOVE	MOVE	PM64	PM64	PE6	?
8B		OUT7	ZONE1	MODES	PM128	PM128	ZONE1	ZONE1
9B		OUT8	PZONE	PZONE	PZONE	PM256	PZONE	PZONE
10B		OUT9	RMDS	RMDS	RMDS	RMDS	RMDS	RMDS
11B		OUT10	HEND	HEND	HEND	HEND	HEND	HEND
12B		OUT11	PEND	PEND/WEND	PEND	PEND	PEND	?
13B		OUT12	SV	SV	SV	SV	SV	SV
14B		OUT13	* EMGS	* EMGS	* EMGS	* EMGS	* EMGS	* EMGS
15B	OUT14	* ALM	* ALM	* ALM	* ALM	* ALM	* ALM	
16B		?	?	?	?	?	?	
17B	?		NC					
18B	?		NC					
19B	0V		N					
20B	0V		N					

■ Solenoid valve type (ACON-CY)

Pin number	Category	Number of positioning points	Parameter (PIO pattern) selection	
			0	1
			Solenoid valve mode 0	Solenoid valve mode 1
			3 points	3 points
		Zone signal	x	x
		P zone signal	x	○
1	24V			
2	0V			
3	Input	IN0	ST0	ST0
4		IN1	ST1(JOG)	ST1(JOG)
5		IN2	ST2(?)	ST2(?)
6		IN3	SON	SON
7	Output	OUT0	LS0	PE0
8		OUT1	LS1(TRQS)	PE1(TRQS)
9		OUT2	LS2(?)	PE2(?)
10		OUT3	SV	PZONE
11		OUT4	HEND	HEND
12	OUT5	* ALM	* ALM	

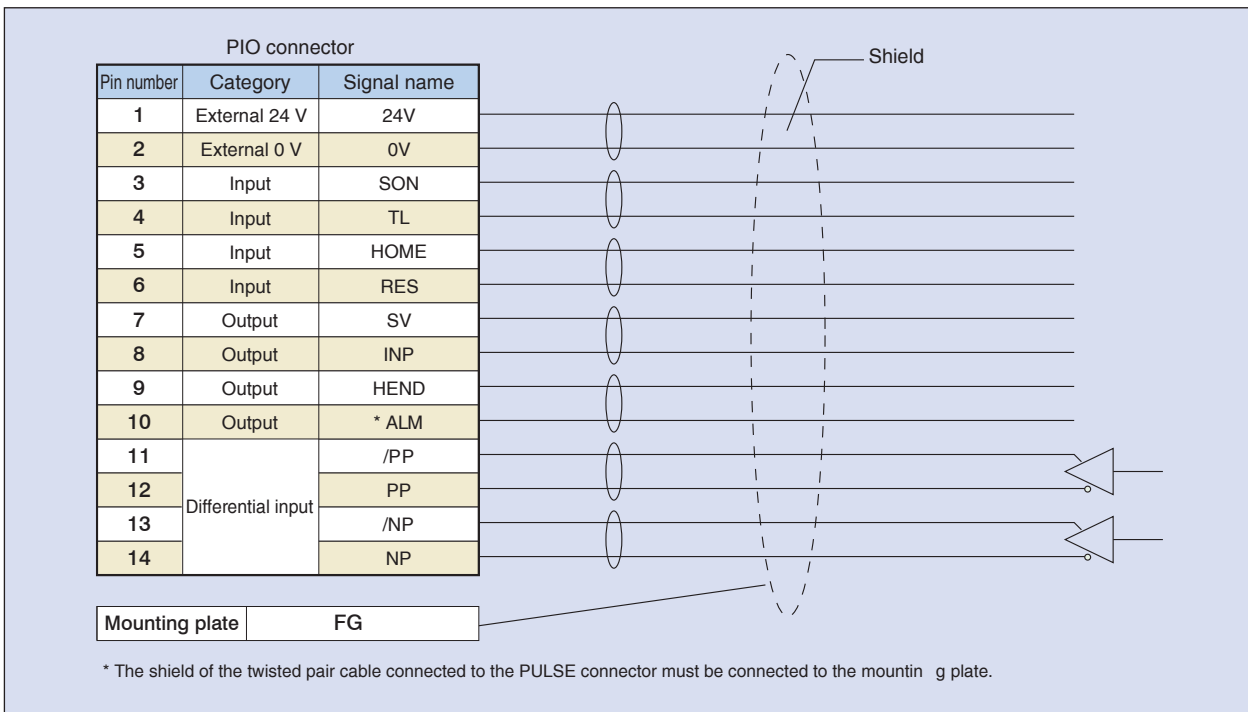
■ Pulse-train type (ACON-PL/PO)

Pin number	Category	Number of positioning points	Parameter (PIO pattern) selection	
			0	1
			Standard mode	Push mode
			?	?
		Zone signal	x	x
		P zone signal	x	x
1	24V			
2	0V			
3	Input	IN0	SON	SON
4		IN1	TL	TL
5		IN2	HOME	HOME
6		IN3	RES	RES/DCLR
7	Output	OUT0	SV	SV
8		OUT1	INP	INP/TLR
9		OUT2	HEND	HEND
10		OUT3	* ALM	* ALM
11	Input		* PP	* PP
12			PP	PP
13			* NP	* NP
14			NP	NP

Wiring Diagram for Pulse-Train Input Type

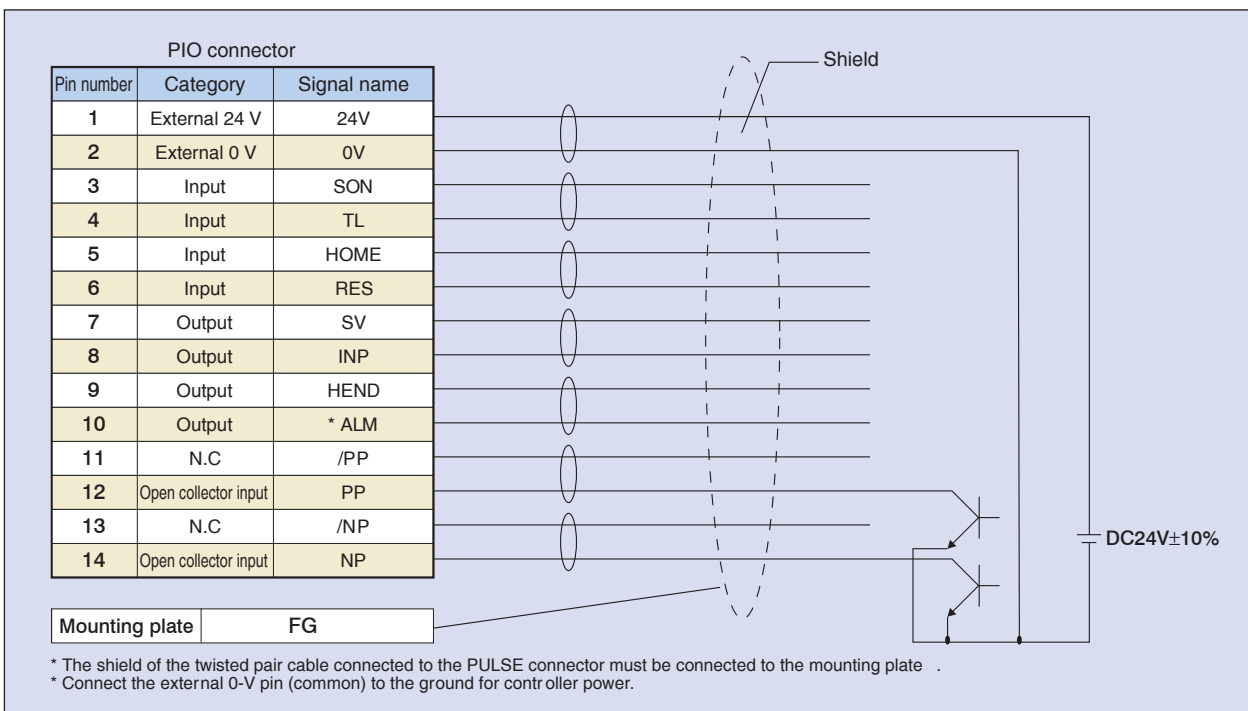
■ Differential Receiver Method (ACON-PL)

Maximum input pulse frequency : MAX 200kpps
 Cable length : MAX 10m



■ Open Collector Method (ACON-PO)

Maximum input pulse frequency : MAX 60kpps
 Cable length : MAX 2m



- Controller - Integrated type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller**
- Controller Models
- Gateway unit
- PS-24
- ERIC2
- PCON
- ACON
- SCON
- PSSEL
- ASSEL
- SSSEL
- XSSEL

ACON Controller

Command Pulse Input Patterns

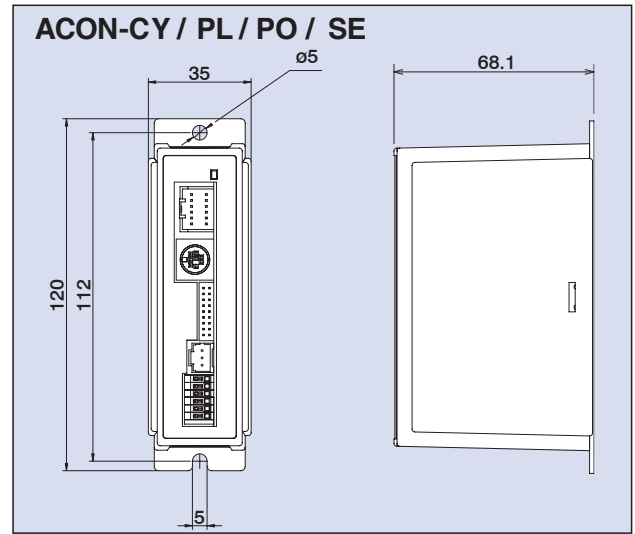
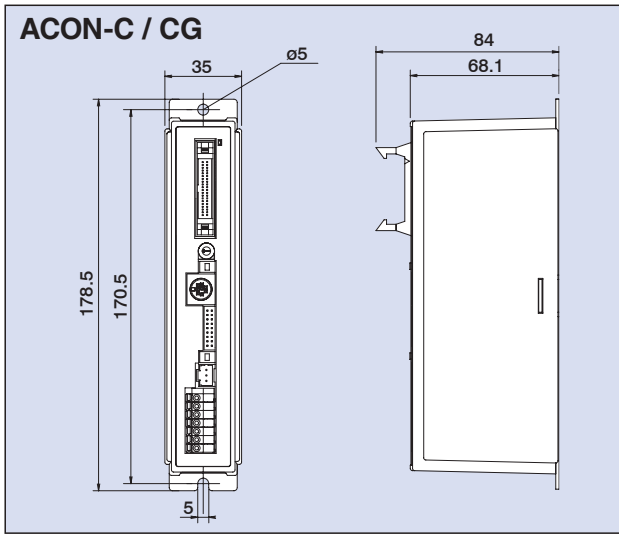
Command pulse train pattern		Input terminal	Forward	Reverse
Negative logic	Forward pulse train	PP•/PP		
	Reverse pulse train	NP•/NP		
	Forward pulse trains and reverse pulse trains indicate the motor revolutions in forward direction and reverse direction, respectively.			
	Pulse train	PP•/PP		
	Sign	NP•/NP	Low	High
	Command pulses indicate the motor revolutions, while the sign of the command indicates the rotating direction.			
	Phase-A/B pulse train	PP•/PP		
		NP•/NP		
	Phase-A/B (x4) pulses with a 90° phase difference specify both the revolutions and rotating direction.			
	Positive logic	Forward pulse train	PP•/PP	
Reverse pulse train		NP•/NP		
Pulse train		PP•/PP		
Sign		NP•/NP	High	Low
Phase-A/B pulse train		PP•/PP		
		NP•/NP		

Specification Table

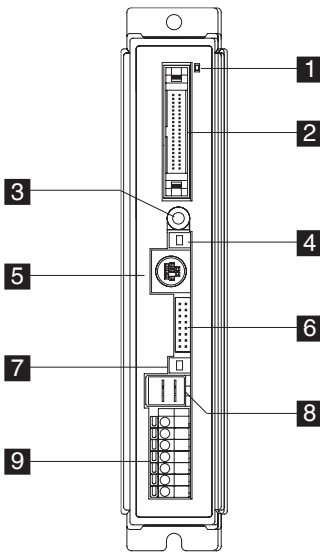
Item	Specification					
Controller type	C	CG	CY	PL	PO	SE
Connectable actuators	RCA series actuator					
Number of controlled axes	1 axis					
Operation method	Positioner type		Solenoid valve type	Pulse-train control type		Serial communication type
Number of positioning points	512 points		3 points	—		64 points
Backup memory	EEPROM					
I/O connector	40-pin connector		12-pin connector	14-pin connector		None
Number of I/O points	16 input points / 16 output points		4 input points / 6 output points	4 input points / 4 output points		None
I/O power supply	Externally supplied 24VDC ± 10%					
Serial communication	RS485 1ch					
Peripheral communication cable	CB-PAC-PIO □□□		CB-PACY-PIO □□□	CB-PACPU-PIO □□□		CB-RCB-CTL002
Command pulse-train input method	—			Differential line driver	Open collector	—
Maximum input pulse frequency (Note 1)	—			Max 200kpps	Max 60kpps	—
Position detection method	Incremental encoder					
Drive-source cutoff relay at emergency stop	Built-in	External				
Forced release of electromagnetic brake	Brake release switch ON/OFF		BK-release terminal signal ON/OFF on power connector			
Motor cable	CB-ACS-MA □□□ (20m max.)					
Encoder cable	CB-ACS-PA □□□ (20m max.)					
Input power supply	DC24V±10%					
Power-supply capacity	SA4 • SA5 20W (Rating 1.3A / Peak 5.1A) SA6 30W (Rating 1.3A / Peak 5.1A) RA3 20W (Rating 1.7A / Peak 5.1A) RA4 20W (Rating 1.3A / Peak 5.1A) RA4 30W (Rating 1.3A / Peak 5.1A)					
Dielectric strength voltage	DC500V 1MΩ					
Vibration resistance	XYZ directions	10-57Hz One-side amplitude 0.035mm (continuous), 0.075mm (intermittent) 58-150Hz 4.9m/s ² (continuous), 9.8m/s ² (intermittent)				
Ambient operating temperature	0~40°C					
Ambient operating humidity	10~95% (non-condensing)					
Operating ambience	Free from corrosive gases					
Protection class	IP20					
Weight	Approx. 300g			Approx. 130g		

(Note 1) With the open collector specification, keep the maximum input frequency to 60 kpps or below to prevent malfunction. Use a differential line driver if 60 kpps is exceeded.

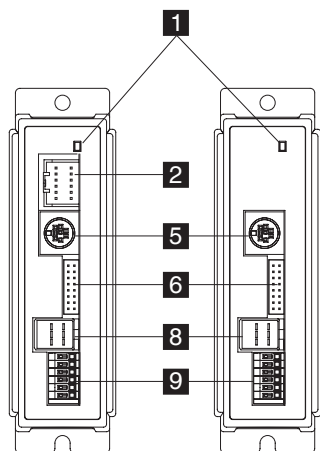
External Dimensions



Name of Each Part



C / CG type



CY / PL / PO type

SE type

* PIO connector pins
CY: 12 pins
PL/PO: 14 pins

Blinking (green) LED indicators

These LED indicate the condition of the controller.

Unlit Servo on Lit (red) Alarm present Lit (green) Servo off **1** Automatic servo-off mode

2 PIO connector

Connect a cable for communicating with a PLC or other external equipment.

3 Address-setting rotary switch

This switch is used to set the address of each controller when multiple controllers are linked.

4 Mode switch

This switch is used to switch between teaching operation (MANU) and automatic operation (AUTO).

Operation details

MANU	I/O commands are not accepted. Data can be written from a teaching pendant.
AUTO	I/O commands are valid, while operations from a teaching pendant are not accepted. Monitoring is possible.

5 SIO connector

Connect a teaching-pendant or PC cable, or a controller to connect to a gateway unit.

Operation details

Pin number	Signal	Pin	Remarks
1	SGA	RS485 differential signal+	
2	SGB	RS485 differential signal-	
3	5V	+5-V output	For RS232/485 conversion
4	ENBL	Enable signal	
5	EMGA	EMG line connection to external equipment	
6	24V	24-V power for Teach pendant	For Teach pendant
7	0V	Ground	
8	EMGB	EMG line connection to external equipment	
9	0V	Ground for EMG line connection to external equipment	

6 Encoder/brake connector

Connect the encoder/brake cables of the actuator.

7 Brake release switch

A switch to forcibly release the brake

8 Motor connector

Connect the motor cable of the actuator.

9 Power terminal block

Supplies the main controller power and actuates an emergency stop.

C/CG types

Pin number	Signal Name	Name
7	S1	TP_EMG external drive-source cutoff terminal
6	S2	cutoff terminal
5	MPI	Motor drive-source cutoff terminal
4	MPO	Motor drive-source cutoff terminal
3	24V	Positive side of the 24-V power supply
2	0V	Negative side of the 24-V power supply
1	EMG	EMG signal (application of 24 V)

CY / PL / PO / SE types

Pin number	Signal Name	Name
6	BK	Brake release
5	MPI	Motor drive-source cutoff terminal
4	MPO	Motor drive-source cutoff terminal
3	24V	Positive side of the 24-V power supply
2	0V	Negative side of the 24-V power supply
1	EMG	EMG signal (application of 24 V)




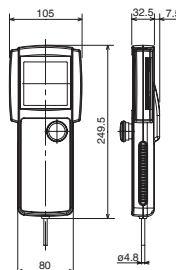
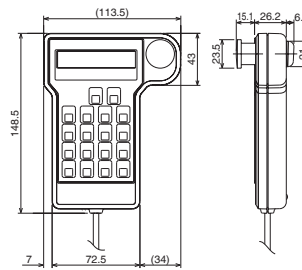
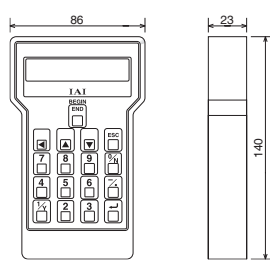
- Controller - Integrated type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller
- Controller Models
- Gateway Unit
- PS-24
- ERIC2
- PCON
- ACON
- SCON
- PSSEL
- ASSEL
- SSSEL
- XSSEL

ACON Controller

Options

Teaching Pendant

An input device that provides all functions you need for trial operation and adjustment, such as position data input, test operation, as well as monitoring of current axis positions and input/output signals.

Name	Teaching Pendant	Simple teaching pendant	Data setting unit
Model	RCM-T (standard specification) RCM-TD (with deadman switch *1)	RCM-E	RCM-P
Standard price	—	—	—
External view			
Features	A standard, user-friendly teaching pendant equipped with a large LCD screen. A deadman switch type ensuring added safety is also available.	An economical type offering the same functions as the RCA-T at a substantially lower price.	An affordable data setting unit that provides all editing functions other than those relating to axis operation. * This unit does not support operations relating to axis movement.
Display	21 characters x 16 lines on LCD	16 characters x 2 lines on LCD	16 characters x 2 lines on LCD
Weight	Approx. 550g	Approx. 400g	Approx. 360g
Cable length	5m	5m	5m
Ambient operating temperature, humidity	Temperature: 0~40°C, Humidity: 85% RH or below		
External dimensions			

*1 The deadman switch is a safety switch that cuts off the drive source when released to disable operation.

PC Software

A software program that helps input position data and perform test operation. It significantly facilitates debugging operation by offering wide-ranging functions including jogging, inching, step operation and continuous operation.

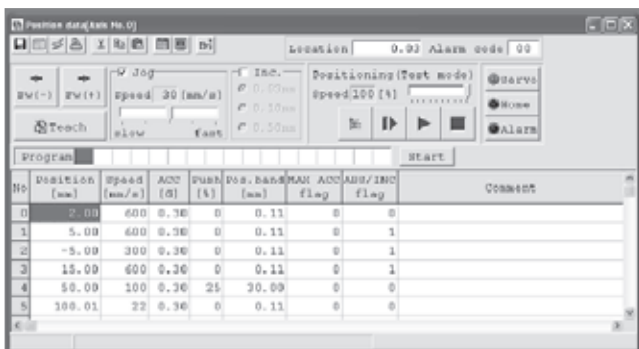
RS232 Communication Type Model RCM-101-MW

<Content>PC software (CD-ROM),
PC cable
(communication cable +
RS232 conversion unit)



USB Communication Type Model RCM-101-USB

<Content>PC software (CD-ROM),
PC cable
(communication cable + USB
conversion unit + USB cable)



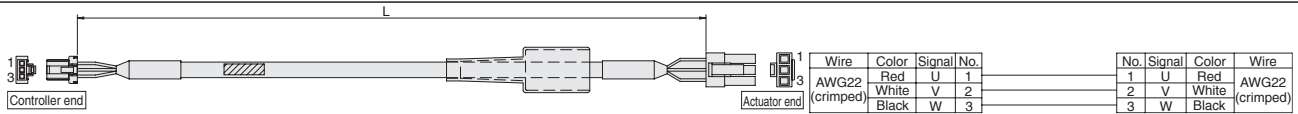
Spare Parts

Should you require spare parts after the purchase of your product for replacing the original cables, etc., refer to the model names specified below.

Motor Cable

Model **CB-ACS-MA** □□□

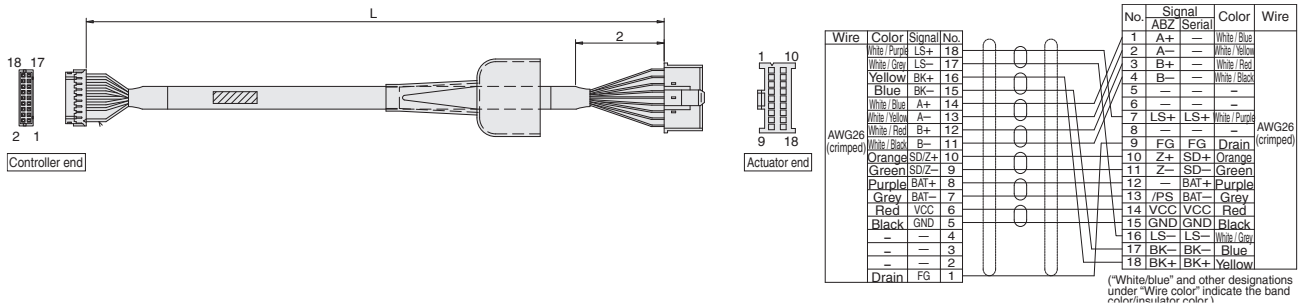
* □□□ indicates the cable length (L). Lengths up to 20 m can be specified. Example) 080 = 8 m



Encoder Cable / Encoder Robot Cable

Model **CB-ACS-PA** □□□/ **CB-ACS-PA** □□□-**RB**

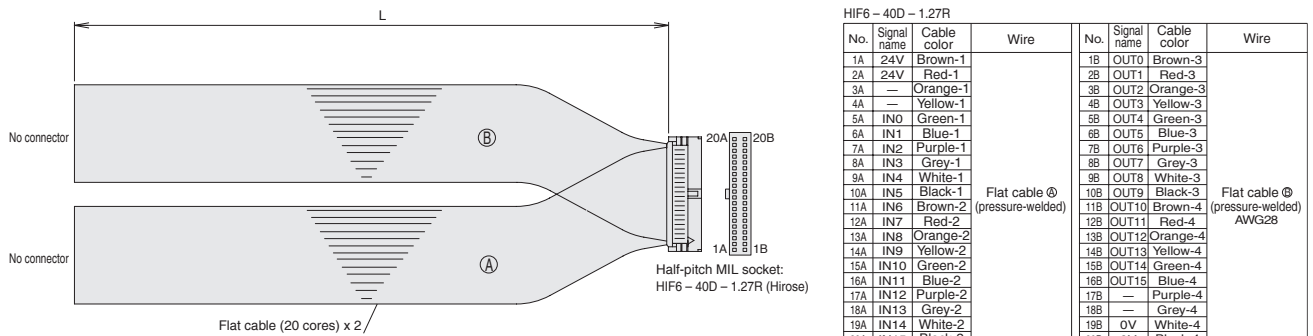
* The standard encoder cable is a normal cable. A robot cable can be specified as an option. * □□□ indicates the cable length (L). Lengths up to 20 m can be specified. Example) 080 = 8 m



I/O Cable for Positioner Type (ACON-C/CG)

Model **CB-PAC-PIO** □□□

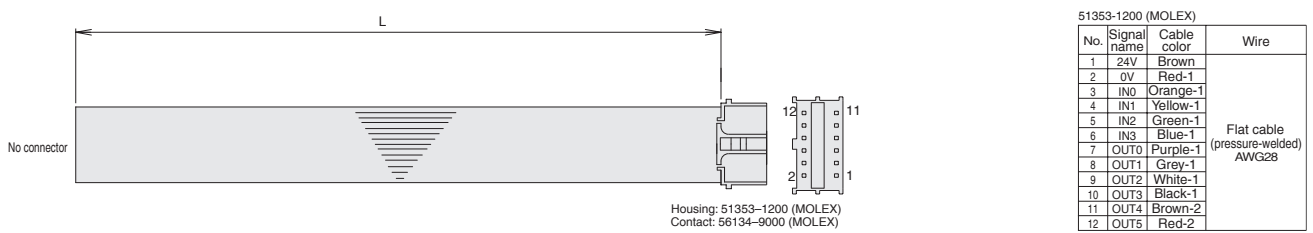
* □□□ indicates the cable length (L). Lengths up to 20 m can be specified. Example) 080 = 8 m



I/O Cable for Solenoid Valve Type (ACON-CY)

Model **CB-PACY-PIO** □□□

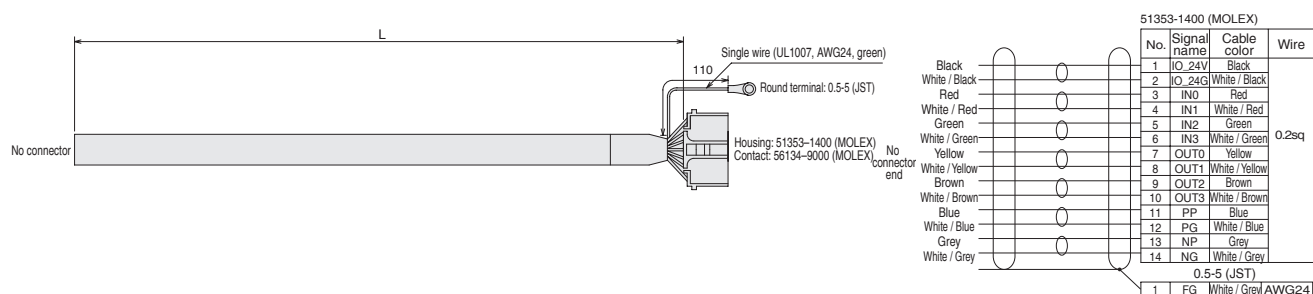
* □□□ indicates the cable length (L). Lengths up to 20 m can be specified. Example) 080 = 8 m



I/O Cable for Pulse-Train Control Type (ACON-PL/PO)

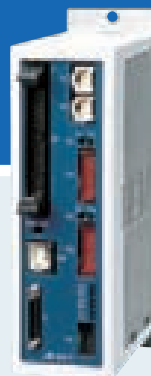
Model **CB-PACPU-PIO** □□□

* □□□ indicates the cable length (L). Lengths up to 20 m can be specified. Example) 080 = 8 m



ASEL Controller

ASEL



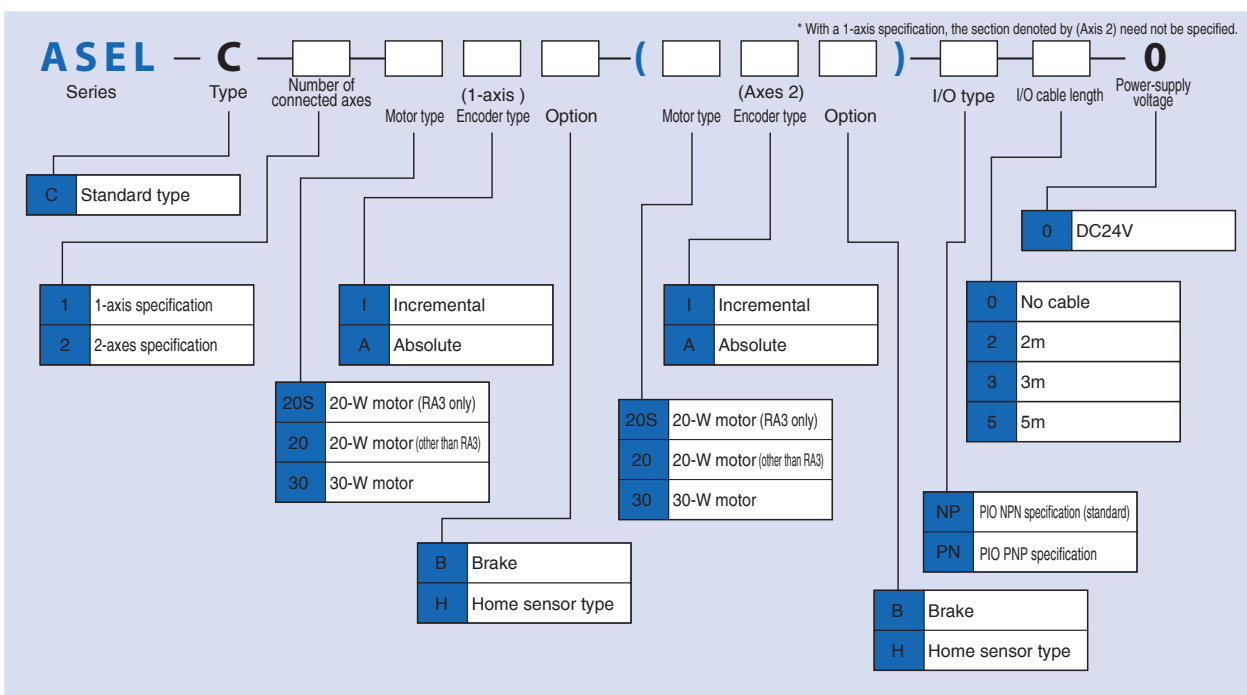
Position controller for RCA series
Program controller

Type List

Program controller capable of operating RCA series actuator. Various control functions are combined into a single unit.

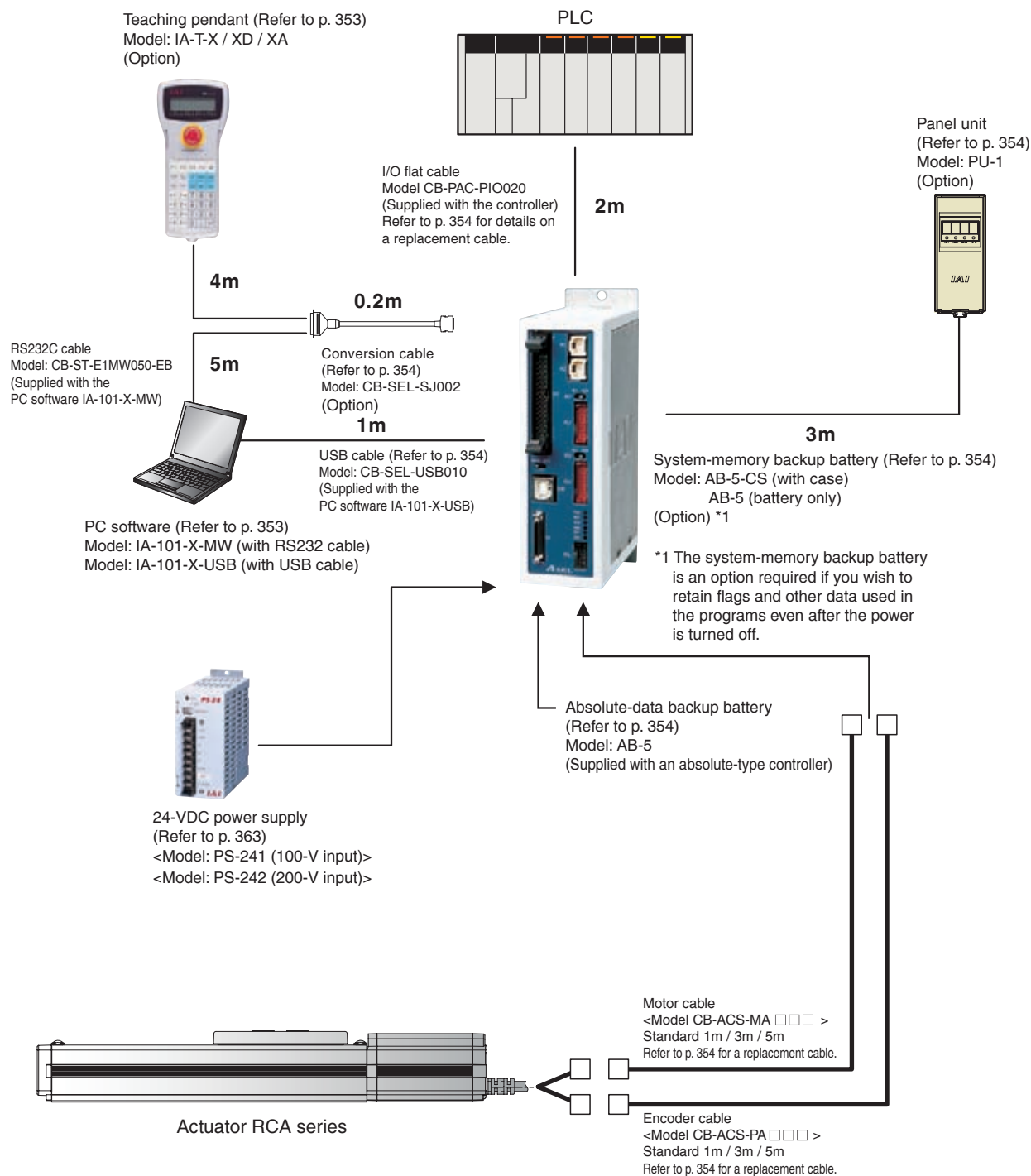
Type	C	
Name	Program mode	Positioner mode
External view		
Description	Both actuator operation and communication with external equipment can be handled by a single controller. When two axes are connected, arc interpolation and path operation can be performed.	Up to 1,500 positioning points are supported. Push-motion operation and teaching operation are also possible.
Number of position points	1500	

Model



- Controller - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller
- Controller Models
- Gateway unit
- PS-24
- ERC2
- PCON
- ACON
- SCON
- PSEL
- ASEL
- SSEL
- XSEL

System Configuration

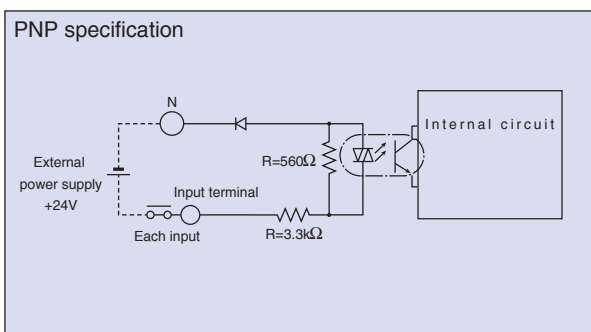
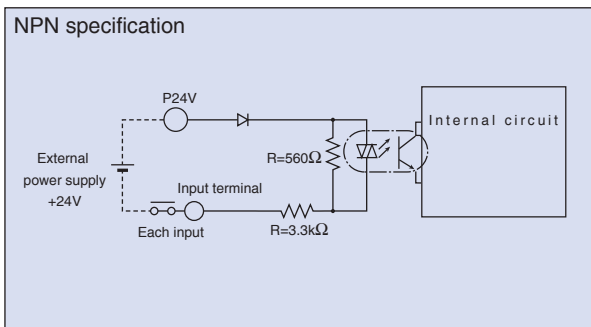


- Controller - Integrated type
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- Controller Models
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- ACON
- SCON
- PSSEL
- ASEL**
- SSEL
- XSEL

I/O Specifications

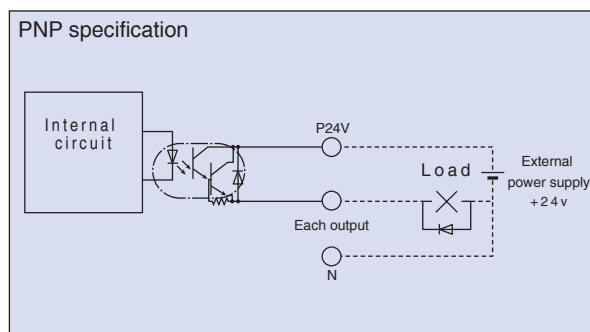
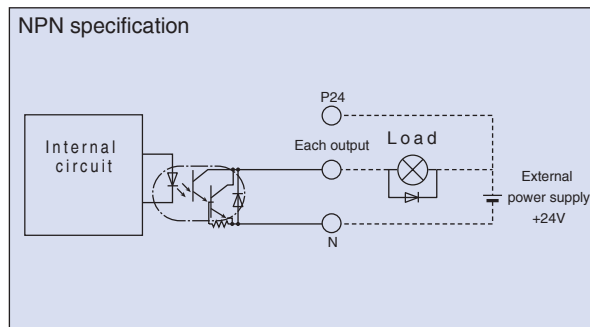
■ **Input Part** External input specifications

Item	Specification
Input voltage	DC24V ± 10%
Input current	7mA/1circuit
ON/OFF voltage	ON voltage (Min.) NPN:DC16V/PNP:DC8V OFF voltage (Max.) NPN:DC5V/PNP:DC19V
Insulation method	Photocoupler



■ **Output Part** External output specifications.

Item	Specification
Load voltage	DC24V
Max. load current	1mA/point 400mA/8point total
Leak current	Max. 0.1mA/1point
Insulation method	Photocoupler



Explanation of I/O Functions

The ASEL controller lets you select either the “program mode” in which the actuator is operated by programs input to the controller, or the “positioner mode” in which the actuator moves to the positions specified by PLC signals received from the host. The positioner mode provides the following five input patterns each supporting different applications.

■ **Controller Functions by Type**

Operation mode	Features	
Program mode	Various operations including linear/arc interpolation operation, path operation ideal for coating processes, etc., arch-motion operation and palletizing operation can be performed using the Super SEL language that lets you program complex control actions using simple commands.	
Positioner mode	Standard mode	A basic operation mode in which a position number is specified and then a start signal is input to start operation. Push-motion operation and 2-axis linear interpolation operation are also supported.
	Product-type switchover mode	Multiple works of the same shape with slightly different hole positions can be handled using movement commands to the same position numbers by simply changing the product type number.
	2-axis independent mode	With a 2-axis controller, each axis can be commanded and operated separately.
	Teaching mode	The slider (rod) can be moved via an external signal to store the achieved position as position data.
	DS-S-C1 compatible mode	If you were using a DS-S-C1 controller before, you can replace it with a ASEL controller without having to change the host programs. * This mode does not ensure actuator compatibility.

Controller - Integrated Type
Slider Type
Rod Type
Arm / Flat Type
Gripper / Rotary Type
Cleanroom Type
Splash Proof Type
Controller
Controller Models
Gateway unit
PS-24
ERC2
PCON
ACON
SCON
PSEL
ASEL
SSEL
XSEL

Explanation of I/O Functions

Program mode

Pin number	Category	Port number	Program mode	Function	Wiring diagram	
1A	P24		24-V input	Connect 24V.		
1B		016	Program No. 1 selection	These signals are used to select the program to be started. (BCD input using ports 016 to 022)		
2A		017	Program No. 2 selection			
2B		018	Program No. 4 selection			
3A		019	Program No. 8 selection			
3B		020	Program No. 10 selection			
4A		021	Program No. 20 selection			
4B		022	Program No. 40 selection			
5A		023	CPU reset			This signal is used to reset the system to create the same condition after power reconnection.
5B		000	Start			This signal is used to start the program selected by port Nos. 016 to 022.
6A		001	General-purpose input			These signals are used with a program command to wait for external input.
6B		002	General-purpose input			
7A		003	General-purpose input			
7B		004	General-purpose input			
8A		005	General-purpose input			
8B		006	General-purpose input			
9A		007	General-purpose input			
9B		008	General-purpose input			
10A		009	General-purpose input			
10B		010	General-purpose input			
11A		011	General-purpose input			
11B		012	General-purpose input			
12A		013	General-purpose input			
12B		014	General-purpose input			
13A		015	General-purpose input			
13B		300	Alarm	This signal is output upon an alarm. (Contact B)		
14A		301	Ready	This signal is output once the controller has started properly and entered a ready state.		
14B		302	General-purpose output	These signals can be turned ON/OFF freely using program commands.		
15A		303	General-purpose output			
15B		304	General-purpose output			
16A		305	General-purpose output			
16B		306	General-purpose output			
17A		307	General-purpose output			
17B	N		0-V input	Connect 0V.		

Positioner, Standard Mode

Pin number	Category	Port number	Positioner, standard mode	Function	Wiring diagram	
1A	P24		24-V input	Connect 24V.		
1B		016	Position input 10	Port Nos. 007 to 019 are used to specify a target position number. Numbers can be specified either as BCD or binary codes.		
2A		017	Position input 11			
2B		018	Position input 12			
3A		019	Position input 13			
3B		020	-			
4A		021	-			
4B		022	-			
5A		023	Error reset			This signal is used to reset minor errors. (The power must be reconnected to reset serious errors.)
5B		000	Start			This signal is used to cause the actuator to start moving to the selected position.
6A		001	Home return			This signal is used to perform home return.
6B		002	Servo ON	This signal is used to switch the servo on/off.		
7A		003	Push	This signal is used to perform push-motion operation.		
7B		004	Pause	When this signal is turned OFF while the actuator is moving, the actuator will pause. When the signal is turned ON, the actuator will resume and complete the remaining operation.		
8A		005	Cancellation	When this signal is turned OFF while the actuator is moving, the actuator will stop and the remaining operation will be cancelled.		
8B		006	Interpolation setting	With a 2-axis specification, turning ON this signal causes the actuator to move via linear interpolation.		
9A		007	Position input 1	Port Nos. 007 to 019 are used to specify a target position number. Numbers can be specified either as BCD or binary codes.		
9B		008	Position input 2			
10A		009	Position input 3			
10B		010	Position input 4			
11A		011	Position input 5			
11B		012	Position input 6			
12A		013	Position input 7			
12B		014	Position input 8			
13A		015	Position input 9			
13B		300	Alarm	This signal is output upon an alarm. (Contact B)		
14A		301	Ready	This signal is output once the controller has started properly and entered a ready state.		
14B		302	Position complete	This signal is output upon completion of movement to the specified position.		
15A		303	Home return complete	This signal is output upon completion of home return.		
15B		304	Servo ON output	This signal is output while the servo is on.		
16A		305	Push motion complete	This signal is output upon completion of push-motion operation.		
16B		306	System-memory backup battery error	This signal is output when the system-memory backup battery voltage has dropped (to the warning level).		
17A		307	Absolute-data backup battery error	This signal is output when the absolute-data backup battery voltage has dropped (to the warning level).		
17B	N		0-V input	Connect 0V.		

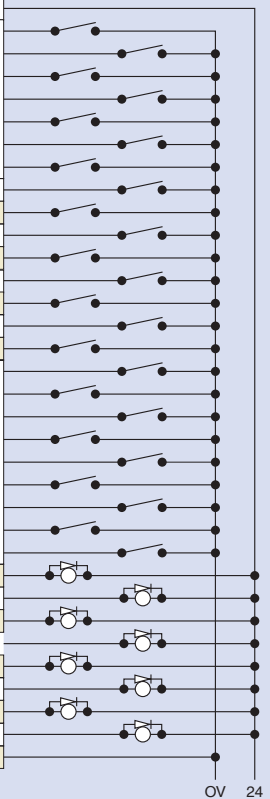
- Controller - Integrated type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller**
- Controller Models
- Gateway unit
- PS-24
- ERC2
- PCOM
- ACOM
- SCOM
- PSSEL
- ASEL**
- SSEL
- XSEL

Explanation of I/O Functions

Positioner, Product-Type Switchover Mode

Pin number	Category	Port number	Positioner, product-type switchover mode	Function		
1A	P24	/	24-V input	Connect 24V.		
1B			016	Position/product type input 10	Port Nos. 007 to 022 are used to specify a target position number and a product type number. Position numbers and product type numbers are assigned by parameter settings. Numbers can be specified either as BCD or binary codes.	
2A			017	Position/product type input 11		
2B			018	Position/product type input 12		
3A			019	Position/product type input 13		
3B			020	Position/product type input 14		
4A			021	Position/product type input 15		
4B			022	Position/product type input 16		
5A			023	Error reset		This signal is used to reset minor errors. (The power must be reconnected to reset serious errors)
5B			000	Start		This signal is used to cause the actuator to start moving to the selected position.
6A			001	Home return		This signal is used to perform home return.
6B			002	Servo ON		This signal is used to switch the servo on/off.
7A			003	Push		This signal is used to perform push-motion operation.
7B			004	Pause		When this signal is turned OFF while the actuator is moving, the actuator will pause. When the signal is turned ON, the actuator will resume and complete the remaining operation.
8A			005	Cancellation		When this signal is turned OFF while the actuator is moving, the actuator will stop and the remaining operation will be cancelled.
8B			006	Interpolation setting		With a 2-axis specification, turning ON this signal causes the actuator to move via linear interpolation.
9A			007	Position/product type input 1		Port Nos. 007 to 022 are used to specify a target position number and a product type number. Position numbers and product type numbers are assigned by parameter settings. Numbers can be specified either as BCD or binary codes.
9B	008	Position/product type input 2				
10A	009	Position/product type input 3				
10B	010	Position/product type input 4				
11A	011	Position/product type input 5				
11B	012	Position/product type input 6				
12A	013	Position/product type input 7				
12B	014	Position/product type input 8				
13A	015	Position/product type input 9				
13B	Output	300	Alarm	This signal is output upon an alarm. (Contact B)		
14A		301	Ready	This signal is output once the controller has started properly and entered a ready state.		
14B		302	Position complete	This signal is output upon completion of movement to the specified position.		
15A		303	Home return complete	This signal is output upon completion of home return.		
15B		304	Servo ON output	This signal is output while the servo is on.		
16A		305	Push motion complete	This signal is output upon completion of push-motion operation.		
16B		306	System-memory backup battery error	This signal is output when the system-memory backup battery voltage has dropped (to the warning level).		
17A	307	Absolute-data backup battery error	This signal is output when the absolute-data backup battery voltage has dropped (to the warning level).			
17B	N	/	0-V input	Connect 0V.		

Wiring diagram

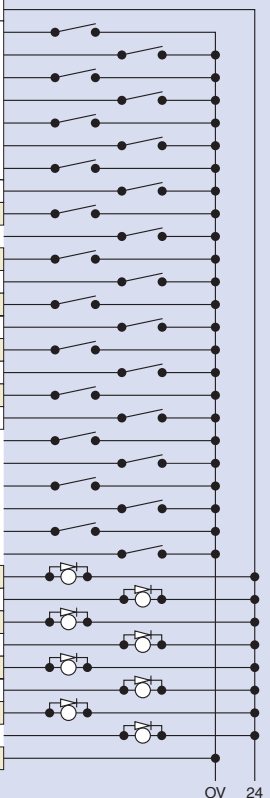


OV 24

Positioner, 2-axis Independent Mode

Pin number	Category	Port number	Positioner	Function		
1A	P24	/	24-V input	Connect 24V.		
1B			016	Position input 10	Port Nos. 010 to 022 are used to specify a target position number. Position numbers for axis 1 and those for axis 2 are assigned by parameter settings. Numbers can be specified either as BCD or binary codes.	
2A			017	Position input 11		
2B			018	Position input 12		
3A			019	Position input 13		
3B			020	Position input 14		
4A			021	Position input 15		
4B			022	Position input 16		
5A			023	Error reset		This signal is used to reset minor errors. (The power must be reconnected to reset serious errors.)
5B			000	Start 1		This signal is used to cause the actuator to start moving to the selected position.
6A			001	Home return 1		This signal is used to move axis 1 to the home.
6B			002	Servo ON 1		This signal is used to switch on/off the servo for axis 1.
7A			003	Pause 1		When this signal is turned OFF while axis 1 is moving, the actuator will pause. When the signal is turned ON, the actuator will resume and complete the remaining operation.
7B			004	Cancellation 1		This signal is used to cancel the movement of axis 1.
8A			005	Start 2		This signal is used to cause axis 2 to start moving to the selected position.
8B			006	Home return 2		This signal is used to move axis 2 to the home.
9A			007	Servo ON 2		This signal is used to switch on/off the servo for axis 2.
9B	008	Pause 2	When this signal is turned OFF while axis 2 is moving, the actuator will pause. When the signal is turned ON, the actuator will resume and complete the remaining operation.			
10A	009	Cancellation 2	This signal is used to cancel the movement of axis 2.			
10B	010	Position input 1	Port Nos. 010 to 022 are used to specify a target position number. Position numbers for axis 1 and those for axis 2 are assigned by parameter settings. Numbers can be specified either as BCD or binary codes.			
11A	011	Position input 2				
11B	012	Position input 3				
12A	013	Position input 4				
12B	014	Position input 5				
13A	015	Position input 6				
13B	Output	300	Alarm	This signal is output upon an alarm. (Contact B)		
14A		301	Ready	This signal is output once the controller has started properly and entered a ready state.		
14B		302	Position complete 1	This signal is output upon completion of movement of axis 1 to the specified position.		
15A		303	Home return complete 1	This signal is output upon completion of home return of axis 1.		
15B		304	Servo ON output 1	This signal is output while the servo for axis 1 is on.		
16A		305	Position complete 2	This signal is output upon completion of movement of axis 2 to the specified position.		
16B		306	Home return complete 2	This signal is output upon completion of home return of axis 2.		
17A	307	Servo ON output 2	This signal is output while the servo for axis 2 is on.			
17B	N	/	0-V input	Connect 0V.		

Wiring diagram



OV 24

- Controller - Integrated Type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
- Splash Proof Type
- Controller
- Controller Models
- Gateway unit
- PS-24
- ERC2
- PCON
- ACON
- SCON
- PSEL
- ASEL
- SSEL
- XSEL

Explanation of I/O Functions

Positioner, Teaching Mode

Pin number	Category	Port number	Positioner	Function	Wiring diagram		
1A	P24		24-V input	Connect 24V.			
1B			016	Axis 1 JOG-		While this signal is input, axis 1 moves in the negative direction.	
2A			017	Axis 2 JOG+		While this signal is input, axis 2 moves in the positive direction.	
2B			018	Axis 2 JOG-		While this signal is input, axis 2 moves in the negative direction.	
3A			019	Inching specification (0.01mm)		These signals are used to specify an inching travel distance. (The travel distance is the sum of values specified by port Nos. 019 to 022.)	
3B			020	Inching specification (0.1mm)			
4A			021	Inching specification (0.5mm)			
4B			022	Inching specification (1mm)			
5A			023	Error reset		This signal is used to reset minor errors. (The power must be reconnected to reset serious errors.)	
5B			000	Start		This signal is used to cause the actuator to start moving to the selected position.	
6A			001	Servo ON		This signal is used to switch the servo on/off.	
6B			002	Pause		When this signal is turned OFF while the actuator is moving, the actuator will pause. When the signal is turned ON, the actuator will resume and complete the remaining operation.	
7A			Input	003		Position input 1	Port Nos. 003 to 013 are used to specify a target position number and a position number under which to input the current position. When the teaching mode specification signal at port No. 014 is ON, the current value will be written under the specified position number upon turning ON of the start signal at port No. 000.
7B				004		Position input 2	
8A				005		Position input 3	
8B				006		Position input 4	
9A				007		Position input 5	
9B	008	Position input 6					
10A	009	Position input 7					
10B	010	Position input 8					
11A	011	Position input 9					
11B	012	Position input 10					
12A	013	Position input 11					
12B	014	Teaching mode specification					
13A	015	Axis 1 JOG+	While this signal is input, axis 1 moves in the positive direction.				
13B	Output	300	Alarm	This signal is output upon an alarm. (Contact B)			
14A		301	Ready	This signal is output once the controller has started properly and entered a ready state.			
14B		302	Position complete	This signal is output upon completion of movement to the specified position.			
15A		303	Home return complete	This signal is output upon completion of home return.			
15B		304	Servo ON output	This signal is output while the servo is on.			
16A		305	-	-			
16B		306	System-memory backup battery error	This signal is output when the system-memory backup battery voltage has dropped (to the warning level).			
17A	307	Absolute-data backup battery error	This signal is output when the absolute-data backup battery voltage has dropped (to the warning level).				
17B	N		0-V input	Connect 0V.			

Positioner, DS-S-C1 Compatible Mode

Pin number	Category	Port number	Positioner	Function	Wiring diagram		
1A	P24		24-V input	Connect 24V.			
1B			016	Position No.1000		(Same as port Nos. 004 to 015)	
2A			017	-		-	
2B			018	-		-	
3A			019	-		-	
3B			020	-		-	
4A			021	-		-	
4B			022	-		-	
5A			023	CPU reset		This signal is used to reset the system to create the same condition after power reconnection.	
5B			000	Start		This signal is used to cause the actuator to start moving to the selected position.	
6A			001	Hold (pause)		When this signal is turned OFF while the actuator is moving, the actuator will pause. When the signal is turned ON, the actuator will resume and complete the remaining operation.	
6B			002	Cancellation		When this signal is turned OFF while the actuator is moving, the actuator will stop and the remaining operation will be cancelled.	
7A			Input	003		Interpolation setting	With a 2-axis specification, turning ON this signal causes the actuator to move via linear interpolation.
7B				004		Position No.1	Port Nos. 004 to 016 are used to specify a target position number. Numbers can be specified either as BCD or binary codes.
8A				005		Position No.2	
8B				006		Position No.4	
9A				007		Position No.8	
9B	008	Position No.10					
10A	009	Position No.20					
10B	010	Position No.40					
11A	011	Position No.80					
11B	012	Position No.100					
12A	013	Position No.200					
12B	014	Position No.400					
13A	015	Position No.800					
13B	Output	300	Alarm	This signal is output upon an alarm. (Contact A)			
14A		301	Ready	This signal is output once the controller has started properly and entered a ready state.			
14B		302	Position complete	This signal is output upon completion of movement to the specified position.			
15A		303	-	-			
15B		304	-	-			
16A		305	-	-			
16B		306	System-memory backup battery error	This signal is output when the system-memory backup battery voltage has dropped (to the warning level).			
17A	307	Absolute-data backup battery error	This signal is output when the absolute-data backup battery voltage has dropped (to the warning level).				
17B	N		0-V input	Connect 0V.			

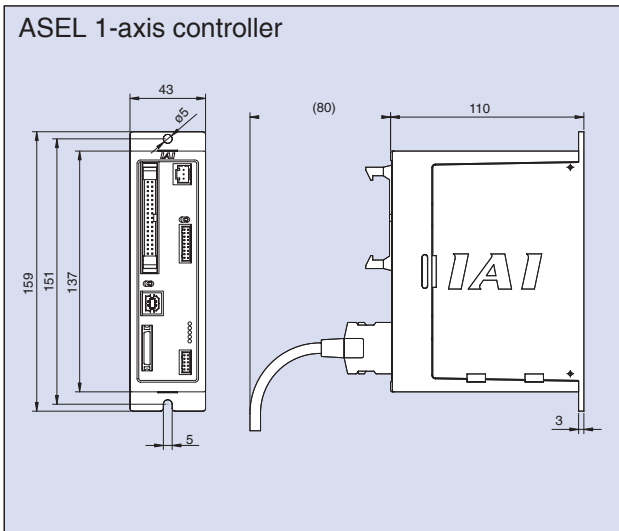
- Controller - Integrated type
- Slider Type
- Rod Type
- Arm / Flat Type
- Gripper / Rotary Type
- Cleanroom Type
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- Controller**
- Controller Models
- Gateway unit
- PS-24
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- PCON
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- PSSEL
- ASEL**
- SSEL
- XSEL

Specification Table

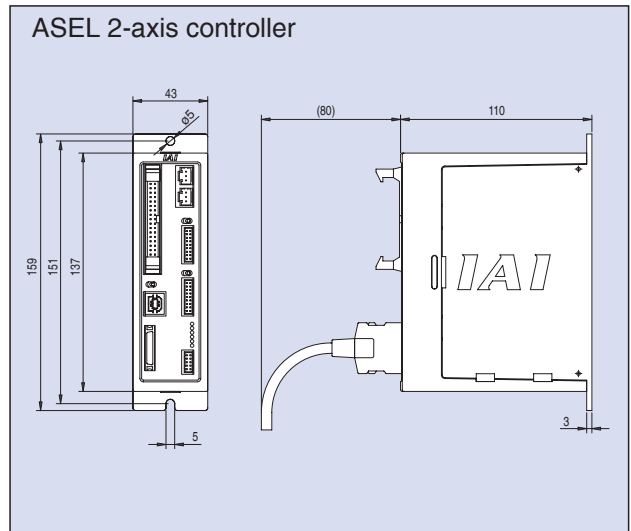
	Item	Specification
Basic specifications	Connectable actuators	RCA series actuator
	Input power supply	DC24V ±10%
	Power-supply capacity	Control power: 1.2A max. Motor power: Rating 1.7A / Peak 5A (per axis)
	Dielectric strength voltage	500VDC, 10MΩ or above
	Breakdown resistance	500VAC, 1 minute
	Rush current	30A max.
	Vibration resistance	XYZ directions One-side amplitude 0.035 mm (continuous), 0.075 ç 4.9m/s ² (continuous), 0.8m/s ² (continuous)
Control specifications	Number of controlled axes	1 axis/2 axes
	Maximum total output of connected axes	60W (30W+30W)
	Position detection method	Incremental encoder / Absolute encoder
	Speed setting	From 1mm/s. The maximum limit varies depending on the actuator.
	Acceleration setting	From 0.01G. The maximum limit varies depending on the actuator.
Program	Operation method	Program operation / Positioner operation (switchable)
	Programming language	Super SEL language
	Number of programs	64 programs
	Number of program steps	2,000 steps
	Number of multi-tasking programs	8 programs
	Number of positioning points	1,500 points
Communication	Data storage device	Flash ROM (A system-memory backup battery can be added as an option)
	Data input method	Teaching pendant or PC software
	Number of I/O points	24 input points / 8 output points (NPN or PNP selectable)
	I/O power supply	Externally supplied 24VDC ± 10%
	PIO cable	CB-DS-PIO□□□(supplied with the controller)
	Serial communication function	RS232C (D-sub, half-pitch connector) / USB connector
	Field network	(To be supported in the future)
	Motor cable	CB-ACS-MA□□□(20m max.)
	Encoder cable	CB-ACS-PA□□□(20m max.)
	General specifications	Protective functions
Ambient operating temperature, humidity		0~40°C 10~95% (non-condensing)
Operating ambience		Free from corrosive gases. In particular, there shall be no significant powder dust.
Protection class		IP20
Weight		Approx. 450g
External dimensions		43mm (W) x159mm (H) x110mm (D)

External Dimensions

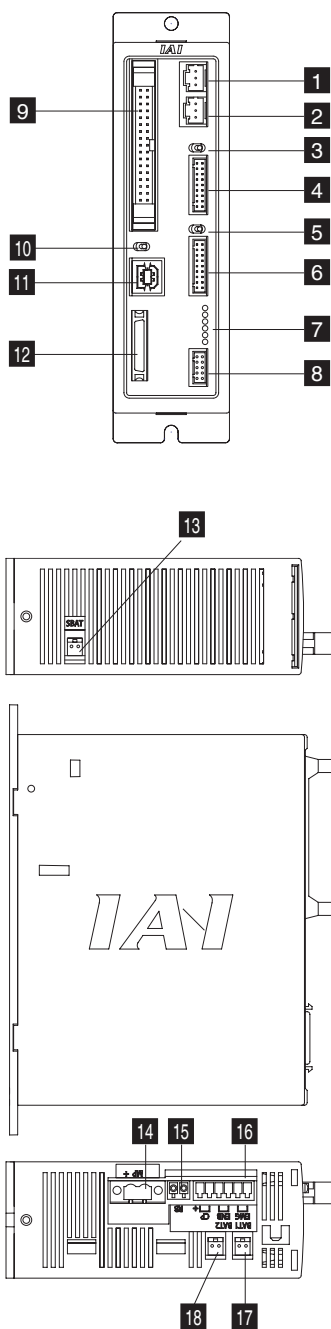
ASEL 1-axis controller



ASEL 2-axis controller



Name of Each Part



1 Motor connector for axis 1

Connect the motor cable of the axis 1 actuator.

2 Motor connector for axis 2

Connect the motor cable of the axis 2 actuator.

3 Brake switch for axis 1

This switch is used to release the axis brake. Setting it to the left position (RLS side) forcibly releases the brake, while setting it to the right position (NOM side) causes the controller to automatically control the brake.

4 Encoder connector for axis 1

Connect the encoder cable of the axis 1 actuator.

5 Brake switch for axis 2

This switch is used to release the axis brake. Setting it to the left position (RLS side) forcibly releases the brake, while setting it to the right position (NOM side) causes the controller to automatically control the brake.

6 Encoder connector for axis 2

Connect the encoder cable of the axis 2 actuator.

7 Status indicator LEDs

These LEDs are used to indicate the operating condition of the controller.

Indication details are as follows:

PWR: This LED indicates that the controller is receiving power.

RDY: This LED indicates that the controller is ready to perform program operation.

ALM: This LED indicates that the controller is abnormal.

EMG: This LED indicates that an emergency stop is actuated and the drive source is cut off.

SV1: This LED indicates that the axis 1 actuator servo is on.

SV2: This LED indicates that the axis 2 actuator servo is on.

8 Panel unit connector

A connector for the panel unit (optional) that displays the controller status and error numbers.

9 I/O connector

A connector for interface I/Os.

A 34-pin flat connector is used for the DIO (24 IN/8 OUT) interface.

The I/O power is also supplied to the controller through this connector (pins 1 and 34).

10 Mode switch

This switch is used to specify the running mode of the controller. The left position indicates the MANU (manual operation) mode, while the right position indicates the AUTO (automatic operation) mode. Teaching can only be performed as manual operation, and automatic operation using external I/Os is not possible in the MANU mode.

11 USB connector

A connector for PC connection via USB. If the USB connector is connected, the TP connector is disabled and all communication inputs to the TP connector are cut off.

12 Teaching pendant (TP) connector

A half-pitch I/O 26-pin connector that connects a teaching pendant when the running mode is MANU. A special conversion cable is needed to connect a conventional D-sub, 25-pin connector.

13 System-memory backup battery connector

If you wish to retain the various data recorded in the SRAM of the controller even after the power is cut off, connect the necessary battery to this connector.

This battery is installed externally to the unit. The controller does not come standard with the battery (it must be specified as an option).

14 Motor power input connector

This connector is used to input the motor power. It consists of a 2-pin, 2-piece connector by Phoenix Contact.

15 External regenerative resistor connector

A connector for the regenerative resistor that must be connected when the built-in regenerative resistor alone does not offer sufficient capacity in high-acceleration/high-load operation, etc. Whether or not an external regenerative resistor is necessary depends on the conditions of your specific application such as the axis configuration.

16 Control power/system input connector

This connector is used to connect the control power input, emergency stop switch, and enable switch.

It consists of a 6-pin, 2-piece connector by Phoenix Contact.

17 Absolute-data backup battery connector for axis 1

A connector for the battery that backs up absolute data when the actuator uses an absolute encoder. Secure installation of the battery is the customer's responsibility.

18 Absolute-data backup battery connector for axis 2

A connector for the battery that backs up absolute data when the actuator uses an absolute encoder. Secure installation of the battery is the customer's responsibility.

Controller - Integrated Type

Slider Type

Rod Type

Arm / Flat Type

Gripper / Rotary Type

Cleanroom Type

Splash Proof Type

Controller

Controller Models

Gateway Unit

PS-24

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PCON

ACON

SCON

PSSEL

ASEL

SSEL

XSEL

ASEL Controller

Options

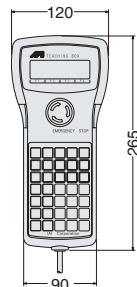
Teaching pendant

Features A teaching device providing program/position input function, test operation function, monitoring function, and more.

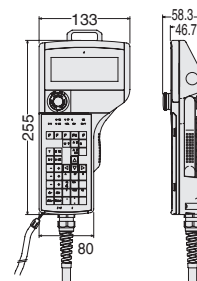
Model

Model	Description
IA-T-X-J	Standard type with connector conversion cable
IA-T-X	Standard type
IA-T-XD-J	Deadman switch type with connector conversion cable
IA-T-XD	Deadman switch type
IA-T-XA-J	ANSI type with connector conversion cable
IA-T-XA	ANSI type

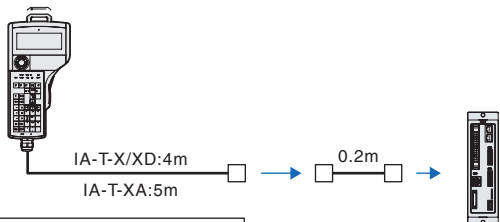
IA-T-X/XD



IA-T-XA



Configuration



NOTE

The PSEL controller is supported by version 1.40 or later (or 1.30 or later with the ANSI type).

Conversion cable:CB-SEL-SJ002

Specifications

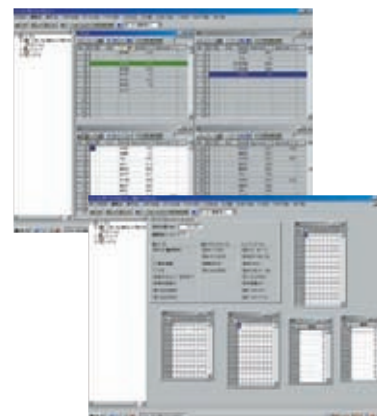
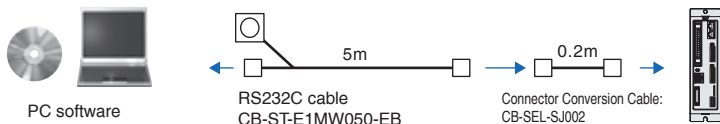
Item	IA-T-X/XD	IA-T-XA
Ambient operating temperature, humidity	Temperature 0~40°C, Humidity 85% RH or below	
Operating ambience	Free from corrosive gases. In particular, there shall be no significant powder dust.	Protective structure conforming to IP54
Weight	Approx. 650g	Approx. 600g (excluding cable)
Cable length	4m	5m
Display	LCD with 20 characters x 4 lines	LCD with 32 characters x 8 lines

PC Software (Windows Only)

Features A startup support software program offering program/position input function, test operation function, monitoring function, and more. The functions needed for debugging have been enhanced to help reduce the startup time.

Model IA-101-X-MW-J (with RS232C Cable + Connector Conversion Cable)

Configuration

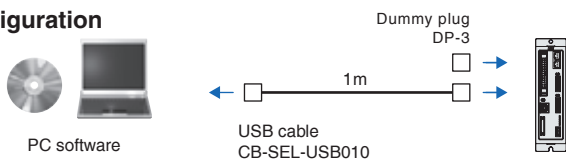


NOTE

The PSEL controller is supported by version 7.0.0.0 or later.

Model IA-101-X-USB (with USB Cable)

Configuration

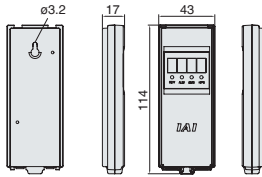


Controller - Integrated Type
Slider Type
Rod Type
Arm / Flat Type
Gripper / Rotary Type
Cleanroom Type
Splash Proof Type
Controller
Controller Models
Gateway unit
PS-24
ERC2
PCON
ACON
SCON
PSEL
ASEL
SSEL
XSEL

Options

Panel Unit

- Features** A display for checking controller error codes and active program numbers.
- Model** **PU-1 (Cable Length 3m)**



Dummy plug

- Features** When connecting your SSEL controller to a PC using a USB cable, install this plug on the teaching port to cut off the enable circuit. (This plug comes with the PC software IA-101-X-USB.)
- Model** **DP-3**



Absolute-Data Backup Battery

- Features** This battery backs up absolute data when an absolute-type actuator is operated. Same as the system-memory backup battery.
- Model** **AB-5**



System-Memory Backup Battery

- Features** If your programs use global flags, etc., you need this battery to retain data even after the power is turned off.
- Model** **AB-5-CS (with Case)**
AB-5 (Battery Only)



USB cable

- Features** Use this cable to connect your controller with USB port to a PC. If your controller has no USB port (XSEL), connect a RS232C cable to a USB cable via a USB conversion adapter and connect the USB cable to the USB port on the PC. (Refer to the PC software IA-101-X-USBMW.)
- Model** **CB-SEL-USB010 (Cable Length 1m)**



Connector conversion cable

- Features** This conversion cable is used to connect a D-sub, 25-pin connector for teaching pendant or PC software to the teaching connector (half-pitch) on the ASEL controller.
- Model** **CB-SEL-SJ002 (Cable Length 0.2m)**



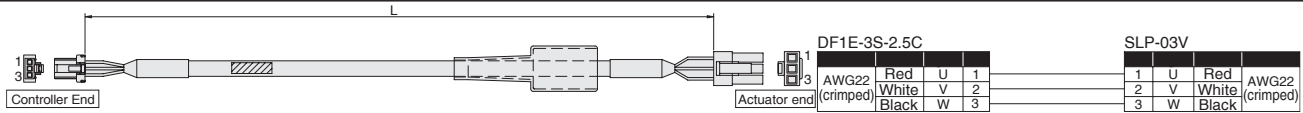
Spare Parts

Should you require spare parts after the purchase of your product for replacing the original cables, etc., refer to the model names specified below.

Motor Cable

Model **CB-ACS-MA**

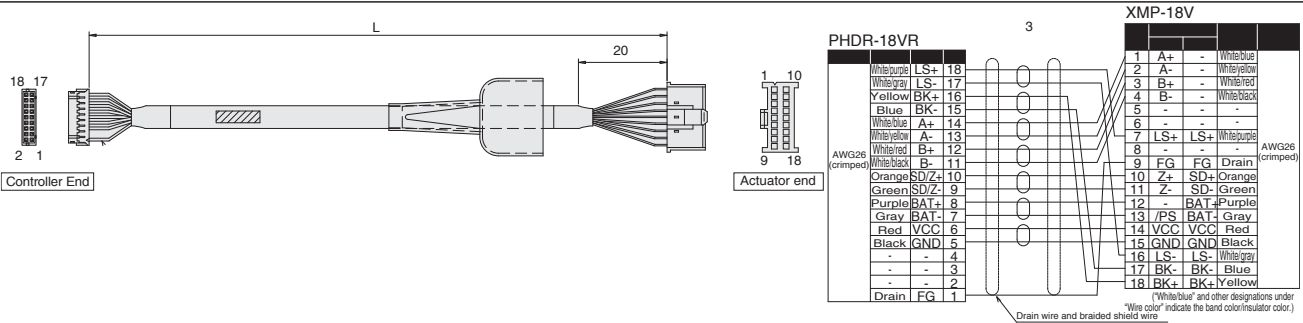
* The standard motor cable is a robot cable. * indicates the cable length (L). Lengths up to 20 m can be specified. Example) 080 = 8 m



Encoder Cable/ Encoder Robot Cable

Model **CB-ACS-PA** / **CB-ACS-PA** **-RB**

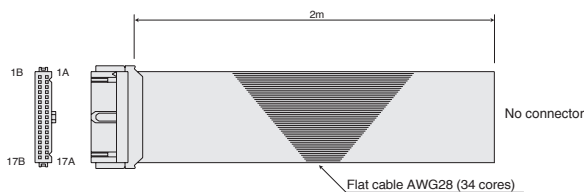
* The standard encoder cable is a normal cable. * indicates the cable length (L). Lengths up to 20 m can be specified. A robot cable can be specified as an option. Example) 080 = 8 m



I/O Flat Cable

Model **CB-DS-PIO**

* indicates the cable length (L). Lengths up to 20 m can be specified. Example) 080 = 8 m



1A	Brown1	9B	Gray2
1B	Red1	10A	White2
2A	Orange1	10B	Black2
2B	Yellow1	11A	Brown-3
3A	Green1	11B	Red3
3B	Blue1	12A	Orange3
4A	Purple1	12B	Yellow3
4B	Gray1	13A	Green3
5A	White1	13B	Blue3
5B	Black1	14A	Purple3
6A	Brown-2	14B	Gray3
6B	Red2	15A	White3
7A	Orange2	15B	Black3
7B	Yellow2	16A	Brown-4
8A	Green2	16B	Red4
8B	Blue2	17A	Orange4
9A	Purple2	17B	Yellow4

Controller - Integrated type
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PCON
ACON
SCON
PSSEL
ASEL
SSEL
XSEL

RCA Series
Extract Cat. No. 0707-E

The information contained in this catalog is subject to change without notice for the purpose of product improvement



Providing quality products since 1986



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