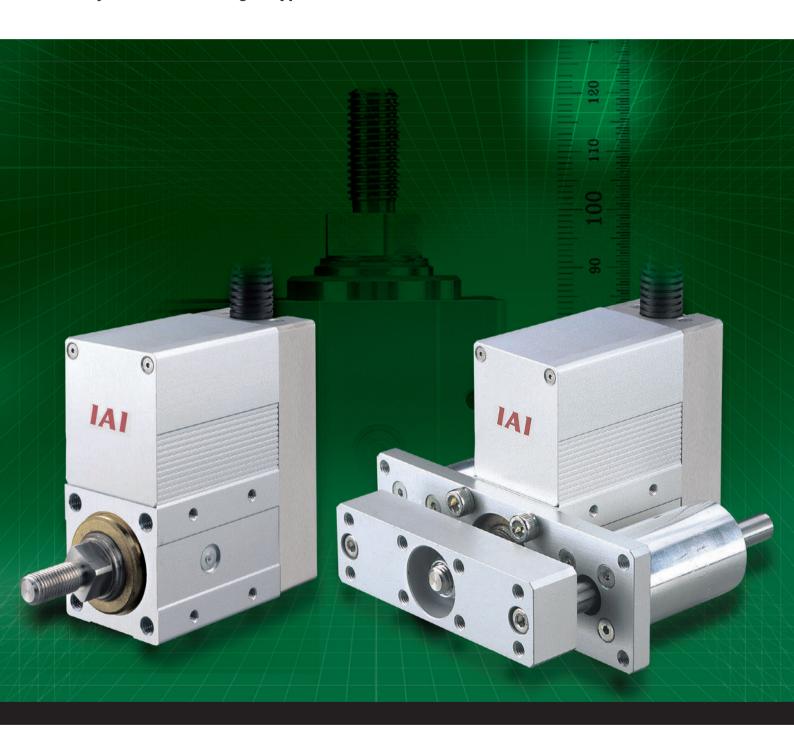




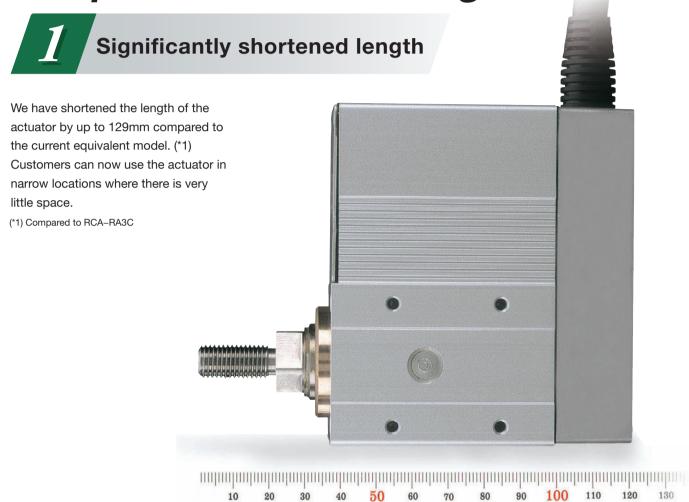
RoboCylinder Short Length Type

RCP2/RCA-SRA4R

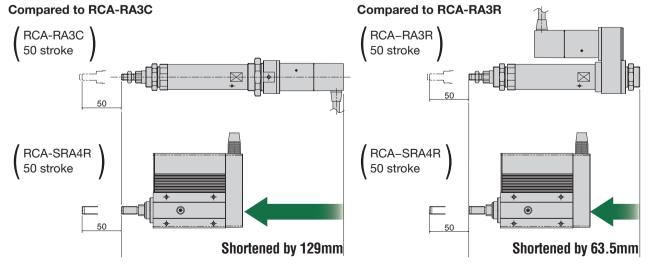




We have reduced the length by a maximum of 45% compared to the existing model



■ Length Comparison with Existing Model



2

Choose between a pulse motor or servo motor

Select between 2 types of motors: a pulse motor type suitable for push force and low-speed raising and lowering operations, or a servo motor type effective for stable transportation during high-speed operations

Pulse motor: RCP2 Series

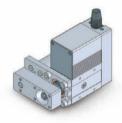
Usage Low-speed raising and lowering operations, such as clamping and press fitting



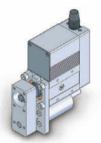
3

A guide type can be selected

A guide type can be selected if a load is applied to the end of a rod, or if a straight motion is required. A single guide or a double guide can be selected, and for the single guide, there are 3 directions that it can be installed.



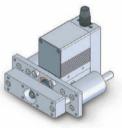
Single guide Installed on left



Single guide Installed on bottom



Single guide Installed on right



Double guide



Flexible Installation method

There are 5 installation surfaces on the actuator. We have also prepared optional front and rear flanges and foot brackets (bottom, side).



Flange (Installed on front)



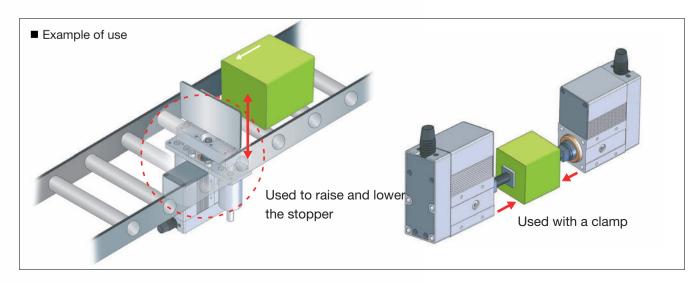
Flange (Installed on rear)



Foot bracket (Installed on bottom)



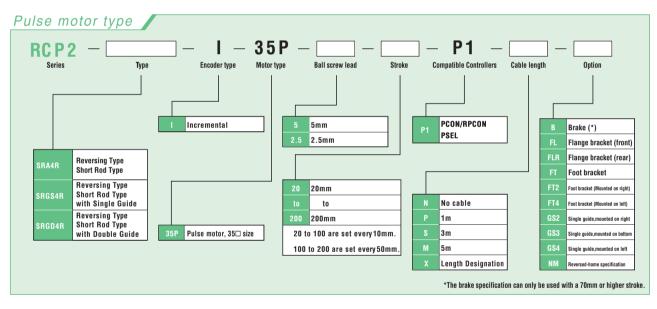
Foot bracket (Installed on side)

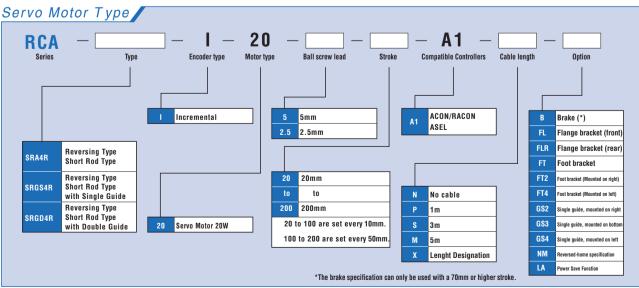


■ Product & Specification List

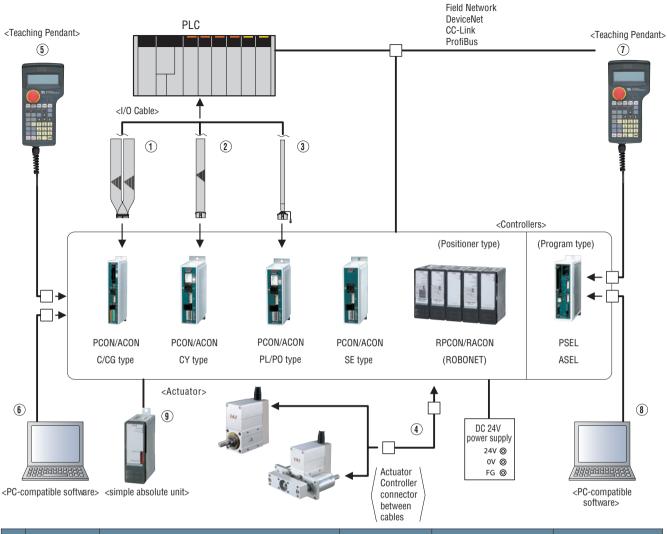
Onder Name	Matartuna	Time		Stroke	Ball screw		Dated throat	Maximum lo	oad capacity	Maximum
Series Name	Motor type	Турє	;	Stroke	lead	Maximum speed	Rated thrust	Horizontal	Vertical	pushing force
		Standard (no guide)	E		5	250	ı	10 to 25	2 to 9	90
		(no garac)			2.5	125	ı	30 to 35	3 to 15	170
RCP2	Pulse motor	With single guide			5	250	1	9 to 24	1 to 8	90
NGFZ	35□	Single galac			2.5	125	1	30 to 35	3 to 15	170
		With double guide	E.		5	250	-	9 to 24	1 to 8	90
		double galac		20 to 200mm	2.5	125	1	30 to 35	3 to 15	170
		Standard (no guide)	E	/20 to 100 are	5	250	41	9	3	_
		(no garac)		set every 10mm. 100 to 200 are	2.5	125	81	18	6.5	_
RCA	Servo Motor	With single guide		\set every 50mm/	5	250	41	9	2	_
NGA	20W	Single guide			2.5	125	81	18	5.5	_
		With double guide	4		5	250	41	9	2	_
		acabic guide			2.5	125	81	18	5.5	_

■ Model description





■ System Configuration



No.	Title	Туре	Model	Remarks	See page
1		for use with C/CGType	CB-PAC-PI0020	Oabla lawath Oas	(*)
2	I/O Cable	for use with CYType	CB-PACY-PI0020	Cable length 2m (fitting for controller) for both PCON/ACON	(*)
3		for use with PL/PO type (pulse train)	CB-PACPU-PI0020	TOT BOTH PCON/ACON	(*)
(4)	Actuator Controller	A motor/encoder integrated cable for use with RCP2 (PCON/RPCON/PSEL)	CB-PCS-MPA	Cable lengths 1m/3m/5m	P19
4	connector between cables	A motor/encoder integrated cable for use with RCA (ACON/RACON/ASEL)	CB-ACS-MPA	(required option for actuator)	P19
		Standard Teaching Pendant	CON-T-ENG		P22
5	PositionerType Teaching Pendant	Simple Teaching Pendant	RCM-E	Cable length 5m for PCON/ACON/ROBONET	P22
		Data Setting Unit	RCM-P		P22
6	PositionerType	RS232 ConnectionType	RCM-101-MW-EU	Auxillary cable for PC connection	P22
0	PC software	USB ConnectionType	RCM-101-USB-EU	(5m) for PCON/ACON/ROBONET	P22
	ProgramType	Standard specification	SEL-T-J	Cable length 5m for both PSEL/ASEL	P22
7	Teaching Pendant	ANSI compatible specification	SEL-TD-J	3 position enable switch for both PSEL/ASEL	P22
	ProgramType			Auxillary cable for PC connection	P22
0	Program type PC Software			(5m) for both PSEL/ASEL	P22
9	simple absolute	for PCON	PCON-ABU		(*)
(9)	unit	for ACON	ACON-ABU		(*)

(*) Refer to RoboCylinder General Catalog.

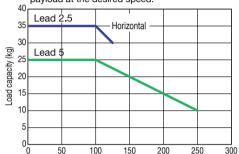
Pulse Motor, Motor Reversing Specification ■ Model Description RCP2 — SRA4R — 35P Encoder type Motor type Compatible Controllers Туре I: Incremental 35P: Pulse motor 5: 5mm 20:20mm P1: PCON N: None Options below P: 1m S: 3m specification 35□Size to 200:200mm RPCON See Options Table 2.5: 2.5mm PSEL (10mm pitch setting) X□□: Length * See P3 for model descriptions *Every 50mm for strokes over 100mm.

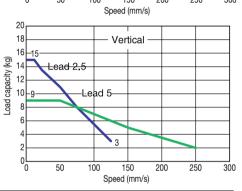


- (1) The RCP2 series uses a pulse motor so the load capacity decreases at high speeds. Confirm the payload at the desired speed in the Speed vs. Payload graph at right.
- The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation with lead 2.5). The above values are maximum acceleration.
- The horizontal load capacity assumes use of an external guide. Take note that the interlock may get damaged if external force is applied from any direction other than the moving direction of the rod.

■ Speed vs. Payload Graph

Since the RCP2 Series uses a pulse motor, the payload decreases as speed increases. Use the table below to confirm that there is sufficient payload at the desired speed.





Actuator Specifications							
■Leads and Payloads (Note	1)Note that the	maximum load	capacity decre	eases as the sp	eed increases.	■Stroke and	Maximum Speed
Model	Lead	Maximum pag	yload (Note 1)	Maximum pushing force	Stroke	Stroke	20 to 200
iviodei	(mm)	Horizontal (kg)	Vertical (kg)	(N) (Note 2)	(mm)	Lead	(every 10mm)
RCP2-SRA4R-I-35P-5P1 ③ ② ①	5	25	9	90	20 to 200 (every 10mm)	5	250
RCP2-SRA4R-I-35P-2.5P1 ③ ② ①	2.5	35	15	170	(Note 3)	2.5	125
Legend Stroke Cable Length Option 3 2 1				ush force grapl stroke at over 1			(L

Cable Length						
Туре	Cable symbol					
	P (1m)					
Standard type	S (3m)					
	M (5m)					
	X06 (6m) - X10 (10m)					
Special length	X11 (11m) - X15 (15m)					

X16 (16m) - X20 (20m) *A built-in motor-encoder cable is standard, and meets the robot cable specification.

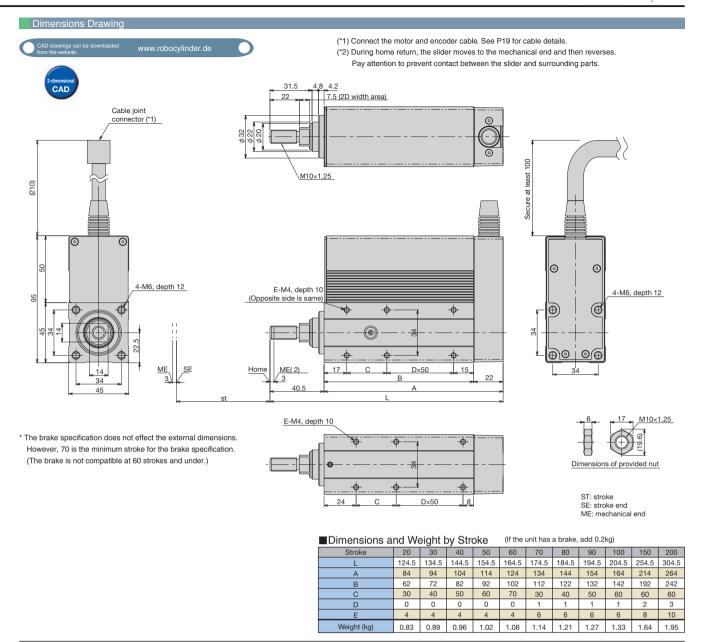
^{*}See P19 for maintenance cables.

Options		
Title	Option code	See page
Brake	В	-
Flange bracket (front)	FL	P19
Flange bracket (rear)	FLR	P19
Foot bracket 1 (mounted on bottom)	FT	P19
Foot brackets 2 (Mounted on right or left side)	FT2/FT4	P19

^{*}The brake can be used at 70 stroke or above.

Note 2)	(mm)		Lead	(every 10mm)
90	20 to 200 (every 10mm)		5	250
70	(Note 3)		2.5	125
rce graph on P17. at over 100mm.				(Unit = mm/s)

Actuator Specifications						
Item	Description					
Drive System	Ball screw ϕ 8mm rolled C10					
Positioning Repeatability	±0.05mm					
Backlash	0.1mm or less					
Rod diameter	φ22mm					
Non-rotary Rod Precision	-					
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (without condensation)					
Operating life	5000km					



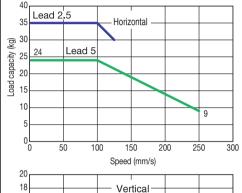
Title External View Model Features Maximum number of positioning points Input power Power-supply capacity See page								
Positioner Type	External view	PCON-C-35PI-NP-2-0	Up to 512-point	positioning points	iriput power	Ромет-supply сарасity	See page	
Safety category compatible Positioner type		PCON-CG-35PI-NP-2-0	positioning possible	512 points				
Solenoid valve type		PCON-CY-35PI-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points				
Pulse series input type (Differential line driver specification)	õ	PCON-PL-35PI-NP-2-0	Differential line driver compatible Pulse series input type	()	DC24V	Maximum 2A	P20	
river specification) Pulse series input type (Open collector specification)		PCON-PO-35PI-NP-2-0	Open collector compatible Pulse series input type	(-)	DG24V	Waxiiiuiii ZA	FZU	
Serial communication type		PCON-SE-35PI-N-0-0	Serial communications Special Type	64 points				
Field network type(*1)		RPCON-35P	Field Network Dedicated type	768 points				
Program control type		PSEL-C-1-35PI-NP-2-0	Programmed operation enabled Maximum biaxial operation enabled	1500 points				

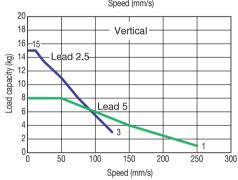
ROBO Cylinder, Short Rod Type with Single Guide, Actuator Width 45mm, Pulse Motor, Motor Reversing Specification ■ Model Description RCP2 — SRGS4R — 35P Motor type Encoder type -Stroke Compatible Controllers Cable length Options P1: PCON specification 35□Size 2.5: 2.5mm to RPCON P: 1m See Options Table 200:200mm PSEL (10mm pitch setting) X□□: Length *Every 50mm for strokes over 100mm. * See P3 for model descriptions



■Speed vs. Payload Graph

Since the RCP2 Series uses a pulse motor, the payload decreases as speed increases. Use the table below to confirm that there is sufficient payload at the desired speed.





- (1) The RCP2 series uses a pulse motor so the load capacity decreases at high speeds. Confirm the payload at the desired speed in the Speed vs. Payload graph at right.
- The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation with lead 2.5).
 The above values are maximum acceleration.
- The horizontal load capacity assumes use of an external guide. See P.18 of the Technical Reference for the load capacities that can be used with the single guide that is provided.

Actuator Specifications							
	1)Note that the	maximum load	capacity decr	eases as the sp	eed increases.	■Stroke and	Maximum Speed
Model	Lead (mm)	Maximum pa		Maximum pushing force (N) (Note 2)	Stroke (mm)	Stroke	20 to 200 (every 10mm)
RCP2-SRGS4R-I-35P-5P1 ③ ② ①	5	24	8	90	20 to 200	5	250
RCP2-SRGS4R-I-35P-2.5P1 3 2 1	2.5	35	15	170	(every 10mm) (Note 3)	2.5	125
Legend Stroke Cable Length Option 3 2 1 (Note 2) Refer to the push force graph on P17. (Unit = mm/s) (Note 3) Every 50mm stroke at over 100mm.							

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

and meets the robot cable specification.

*See P19 for maintenance cables.

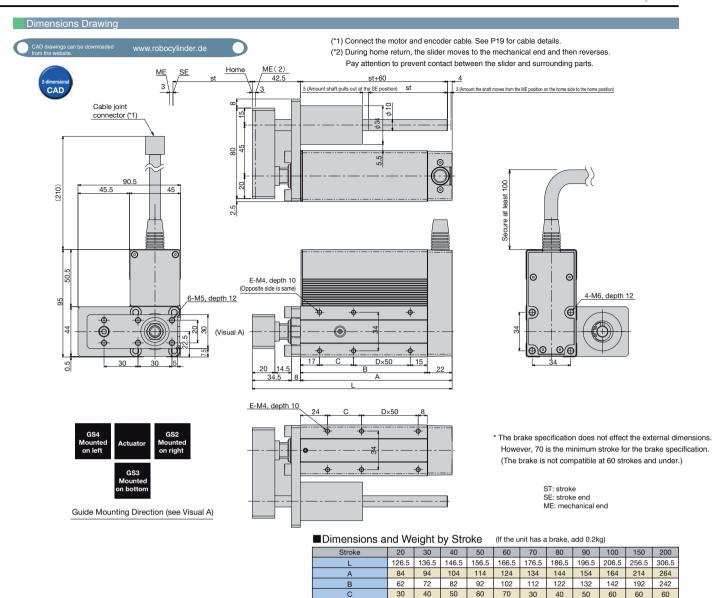
Options		
Title	Option code	See page
Brake	В	-
Flange bracket (rear)	FLR	P19
Foot bracket 1(mounted on bottom)	FT	P19
Foot brackets 2 (Mounted on right and left sides)	FT2/FT4	P19
Guide installation direction change	GS2 to GS4	P8

^{*}The brake can be used at 70 stroke or above.

Actuator Specifications		
Item	Description	
Drive System	Ball screw ϕ 8mm rolled C10	
Positioning Repeatability	±0.05mm	
Backlash	0.1mm or less	
Rod diameter	φ22mm	
Non-rotary Rod Precision	±0.05 degrees	
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (without condensation)	
Operating life	5000km	

^{*}Always input the direction the guide should be mounted on the model.

^{*}The guide and foot bracket cannot be used in the same direction.



0

1.2 1.27

6 6

1.48 1.54

6

1.68

10

1.75 2.09 2.43

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	See page
Positioner Type	Ĩ	PCON-C-35PI-NP-2-0	Up to 512-point	540			
Safety category compatible Positioner type		PCON-CG-35PI-NP-2-0	positioning possible	512 points			
Solenoid valve type		PCON-CY-35PI-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points			
Pulse series input type (Differential line driver specification)	Ñ	PCON-PL-35PI-NP-2-0	Differential line driver compatible Pulse series input type		500 11/		D 00
Pulse series input type (Open collector specification)		PCON-PO-35PI-NP-2-0	Open collector compatible Pulse series input type	(-)	DC24V	Maximum 2A	P20
Serial communication type		PCON-SE-35PI-N-0-0	Serial communications Special Type	64 points			
Field network type(*1)		RPCON-35P	Field Network Dedicated type	768 points			
Program control type		PSEL-C-1-35PI-NP-2-0	Programmed operation enabled Maximum biaxial operation enabled	1500 points			

D

Weight (kg)

RCP2-SRGD4R ROBO Cylinder, Short Rod Type with Double Guide, Actuator Width 45mm, Pulse Motor, Motor Reversing Specification ■ Model Description RCP2 — SRGD4R **P1** 35P Encoder type Motor type Lead Compatible Controller Cable length I: Incremental 5: 5mm 20:20mm P1: PCON N: None 35P: Pulse motor Options below P: 1m S: 3m to 200:200mm specification 35□Size RPCON 2.5: 2.5mm See Options PSEL Table (10mm pitch setting) M· 5m X□□: Lenath *Every 50mm for strokes over 100mm. * See P3 for model descriptions



- The RCP2 series uses a pulse motor so the load capacity decreases at high speeds. Confirm the payload at the desired speed in the Speed vs. Payload graph at right.
- The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation with lead 2.5).
- The above values are maximum acceleration.
- The horizontal load capacity assumes use of an external quide. See P.18 of the Technical Reference for the load capacities that can be used with the double guide that is provided.

■Speed vs. Payload Graph

Since the RCP2 Series uses a pulse motor, the payload decreases as speed increases. Use the table below to confirm that there is sufficient payload at the desired speed.





Actuator Specifications

■Leads and Payloads (Note 1) Note that the maximum load capacity decreases as the speed increases

Model	Lead (mm)	Maximum pay Horizontal (kg)	/load (Note 1) Vertical (kg)	Maximum pushing force (N) (Note 2)	Stroke (mm)
RCP2-SRGD4R-I-35P-5P1 ③ ② ①	5	24	8	90	20 to 200 (every 10mm)
RCP2-SRGD4R-I-35P-2.5P1 3 2 1	2.5	35	15	170	(Note 3)
Legend Stroke Cable Length Option 3 2 1				oush force grap	

(Note 2) Refer to the push force graph on P17. (Note 3) Every 50mm stroke at over 100mm.

■Stroke and Maximum Speed			
Stroke	20 to 200 (every 10mm)		
5	250		
2.5	125		

Cable Length

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

*A built-in motor-encoder cable is standard, and meets the robot cable specification.

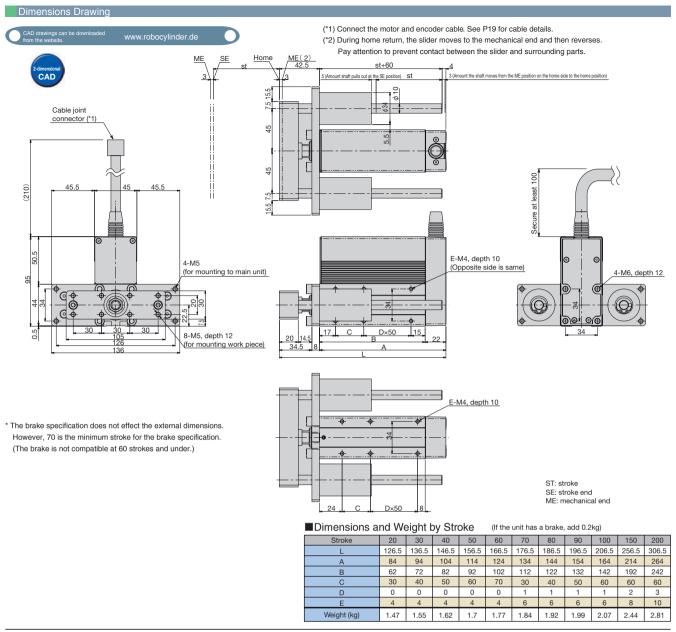
*See P19 for maintenance cables

Options		
Title	Option code	See page
Brake	В	_
Foot bracket 1 (mounted on bottom)	FT	P19

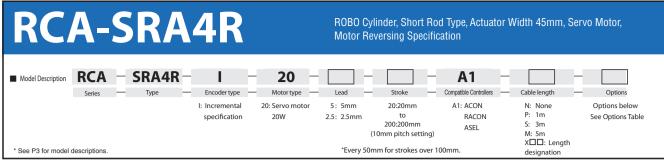
*The brake can be used at 70 stroke or above.

*The foot bracket cannot be mounted on the side.

Actuator Specifications		
Item	Description	
Drive System	Ball screw ϕ 8mm rolled C10	
Positioning Repeatability	±0.05mm	
Backlash	0.1mm or less	
Rod diameter	φ22mm	
Non-rotary Rod Precision	±0.05 degrees	
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (without condensation)	
Operating life	5000km	



Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	See page
Positioner Type	Ĩ	PCON-C-35PI-NP-2-0	Up to 512-point	540			
Safety category compatible Positioner type		PCON-CG-35PI-NP-2-0	positioning possible	512 points			
Solenoid valve type		PCON-CY-35PI-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points			
Pulse series input type (Differential line driver specification)		PCON-PL-35PI-NP-2-0	Differential line driver compatible Pulse series input type	()	DOSAL		Doo
Pulse series input type (Open collector specification)		PCON-PO-35PI-NP-2-0	Open collector compatible Pulse series input type	(-)	DC24V	Maximum 2A	P20
Serial communication type		PCON-SE-35PI-N-0-0	Serial communications Special Type	64 points			
Field network type(*1)		RPCON-35P	Field Network Dedicated type	768 points			
Program control type		PSEL-C-1-35PI-NP-2-0	Programmed operation enabled Maximum biaxial operation enabled	1500 points			



IAI

For low-power applications

- (1) The payload capacity acceleration is 0.3G acceleration (0.2G acceleration in vertical operation with lead 2.5). The above value is the maximum acceleration.
- (2) There is horizontal load capacity when external guides are used. Take note that if external force is applied in any direction other than moving direction the rod, the interlock may get damaged.

Actuator Specifications ■Leads and Payloads ■Stroke and Maximum Speed Maximum payload (Note 1) Rated thrust Stroke 20 to 200 Lead Model every 10mm (mm) RCA-SRA4R-I-20-5--A1-- 3 2 1 5 5 250 41 20 to 200 (every 10mm) RCA-SRA4R-I-20-2.5--A1-- 3 2 1 2.5 18 6.5 2.5 (Note 1) (Note 1) Every 50mm for strokes over 100mm (Unit = mm/s) Legend Stroke Cable Length Option 3 2 1

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

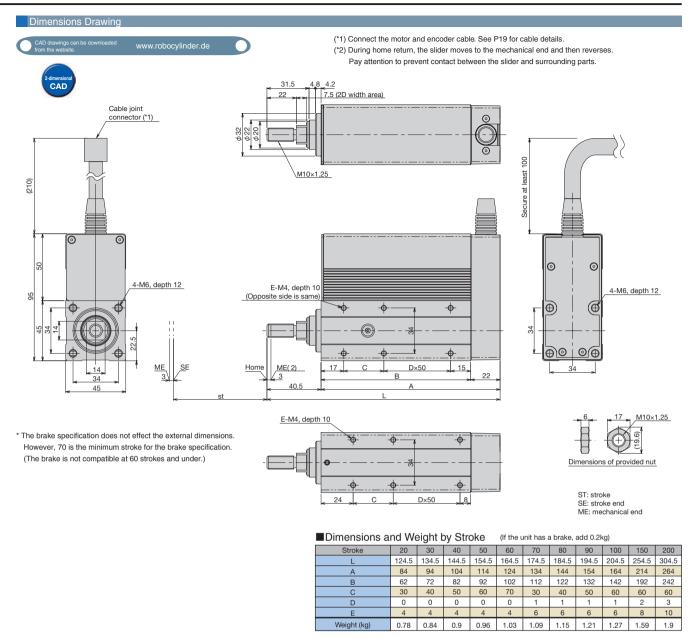
*A built-in motor-encoder cable is standard, and meets the robot cable specification. *See P19 for maintenance cables.

\circ	ntiono	
U	ptions	

Options		
Title	Option code	See page
Brake	В	_
Flange bracket (front)	FL	P19
Flange bracket (rear)	FLR	P19
Foot bracket 1 (mounted on bottom)	FT	P19
Foot brackets 2 (Mounted on right or left sides)	FT2/FT4	P19
Power save function	LA	_

*The brake can be used at 70 stroke or above.

Actuator Specifications		
Item	Description	
Drive System	Ball screw ϕ 8mm rolled C10	
Positioning Repeatability	±0.05mm	
Backlash	0.1mm or less	
Rod diameter	φ22mm	
Non-rotary Rod Precision	-	
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (without condensation)	
Operating life	5000km	



RCA Series actuators can be operated with the following controllers. Select the type that is compatible with your application.									
Title	External View	Model (*2)	Features	Maximum number of positioning points	Input power	Power-supply capacity	See page		
Positioner Type		ACON-C-20I①-NP-2-0	Up to 512-point	510 i-t-					
Safety category compatible Positioner type		ACON-CG-20I①-NP-2-0	positioning possible	512 points		(Standard) Rated 1.3A Peak 4.4A	Rated 1.3A Peak 4.4A		1.3A 4.4A
Solenoid valve type		ACON-CY-20I①-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points					
Pulse series input type (Differential line driver specification)	ű	ACON-PL-20I①-NP-2-0	Differential line driver compatible Pulse series input type	()	DC24V				
Pulse series input type (Open collector specification)		ACON-PO-20I①-NP-2-0	Open collector compatible Pulse series input type	(-)	DG24V	(Energy-saving) Rated 1.3A Peak 2.5A	P20		
Serial communication type		ACON-SE-20I①-N-0-0	Serial communications Special Type	64 points		(*2)			
Field network type (*1)		RACON-20①	Field Network Dedicated type	768 points					
Program control type		ASEL-C-1-20I①-NP-2-0 (*3)	Programmed operation enabled Maximum biaxial operation enabled	1500 points					

RCA-SRGS4R ROBO Cylinder, Short Rod Type with Single Guide, Actuator Width 45mm, Servo Motor, Motor Reversing Specification -SRGS4R 20 **RCA A1** ■ Model Description Cable length Encoder type Motor type Lead Compatible Controll 5: 5mm N: None I: Incremental 20: Servo motor 20:20mm A1: ACON Options below specification 20W 2.5:2.5mm RACON See Options Table S: 3m M: 5m X□□: Length 200:200mm ASFI (10mm pitch setting) *Every 50mm for strokes over 100mm. * See P3 for model descriptions



For low-power applications

(Unit = mm/s)



- (1) The payload capacity acceleration is 0.3G acceleration (0.2G acceleration in vertical operation with lead 2.5). The above value is the maximum acceleration.
- (2) There is horizontal load capacity when external guides are used. See P.18 of the Technical Reference for the load capacities that can be used with the single guide that is provided.

Actuator Specifications ■Leads and Payloads ■Stroke and Maximum Speed Maximum payload (Note 1) Rated thrust Stroke 20 to 200 Lead Model every 10m (mm) RCA-SRGS4R-I-20-5--A1-- 3 2 1 5 250 5 41 20 to 200 every 10mm RCA-SRGS4R-I-20-2.5--A1-- 3 2 1 2.5 18 2.5 (Note 1) (Note 1) Every 50mm for strokes over 100mm Legend Stroke Cable Length Option 3 2 1

±0.05mm

 ϕ 22mm

5000km

0.1mm or less

±0.05 degrees

Ball screw ϕ 8mm rolled C10

Description

0 to 40°C, 85% RH or less (without condensation)

Actuator Specifications

Item

Positioning Repeatability

Non-rotary Rod Precision

Ambient operating temperature, humidity
Operating life

Drive System

Rod diameter

Backlash

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

*A built-in motor-encoder cable is standard, and meets the robot cable specification.

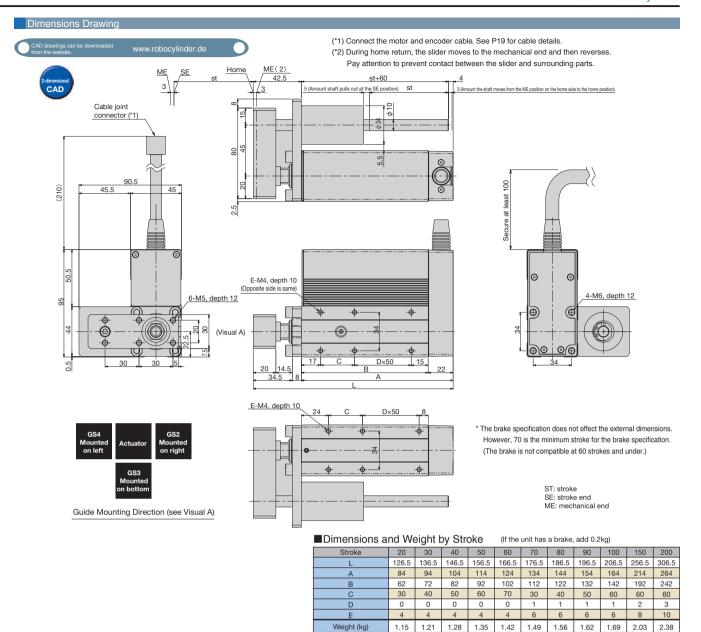
^{*}See P19 for maintenance cables.

Options		
Title	Option code	See page
Brake	В	_
Flange bracket (rear)	FLR	P19
Foot bracket 1 (mounted on bottom)	FT	P19
Foot brackets 2 (Mounted on right and left sides)	FT2/FT4	P19
Guide mounting direction	GS2 to GS4	P14
Power save function	LA	_

^{*}The brake can be used at 70 stroke or above.

^{*}Always input the direction the guide should be mounted on the model.

^{*}The guide and foot bracket cannot be used in the same direction.



RCA Series actuators can be operated with the following controllers. Select the type that is compatible with your application.									
Title	External View	Model (*2)	Features	Maximum number of positioning points	Input power	Power-supply capacity	See page		
Positioner Type		ACON-C-20I①-NP-2-0	Up to 512-point	510 int-					
Safety category compatible Positioner type	ď	ACON-CG-20I①-NP-2-0	positioning possible	512 points					
Solenoid valve type		ACON-CY-20I①-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points		(Standard) Rated 1.3A Peak 4.4A (Energy-saving) Rated 1.3A Peak 2.5A (*2)	' '		
Pulse series input type (Differential line driver specification)	Î	ACON-PL-20I①-NP-2-0	Differential line driver compatible Pulse series input type	()	DC24V		Peak 4.4A (Energy-saving) P20 Rated 1.3A Peak 2.5A		
Pulse series input type (Open collector specification)		ACON-PO-20I①-NP-2-0	Open collector compatible Pulse series input type	(-)					
Serial communication type		ACON-SE-20I①-N-0-0	Serial communications Special Type	64 points					
Field network type (*1)		RACON-20①	Field Network Dedicated type	768 points					
Program control type		ASEL-C-1-20I①-NP-2-0 (*3)	Programmed operation enabled Maximum biaxial operation enabled	1500 points					

RCA-SRGD4R ROBO Cylinder, Short Rod Type with Double Guide, Actuator Width 45mm, Servo Motor, Motor Reversing Specification ■ Model Description RCA -SRGD4R 20 **A1** Encoder type Motor type Lead Stroke Compatible Controller Cable length Options I: Incremental 20: Servo motor 5: 5mm 20:20mm A1: ACON N: None Options below 1m specification 20W See Options Table 2.5:2.5mm RACON 200:200mm S: 3m ASEL M: 5m X□□: Length (10mm pitch setting) designation * See P3 for model descriptions *Every 50mm for strokes over 100mm.



For low-power applications



- (1) The payload capacity acceleration is 0.3G acceleration (0.2G acceleration in vertical operation with lead 2.5). The above value is the maximum acceleration.
- (2) There is horizontal load capacity when external guides are used. See P.18 of the Technical Reference for the load capacities that can be used with the double guide that is provided.

Actuator Specifications ■Leads and Payloads ■Stroke and Maximum Speed Maximum payload (Note 1) Rated thrust Stroke 20 to 200 Lead Model every 10mm (mm) RCA-SRGD4R-I-20-5--A1-- 3 2 1 5 5 250 41 20 to 200 (every 10mm) RCA-SRGD4R-I-20-2.5--A1-- 3 2 1 2.5 18 5.5 2.5 (Note 1) (Unit = mm/s) (Note 1) Every 50mm for strokes over 100mn Legend Stroke Cable Length Option 3 2 1

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

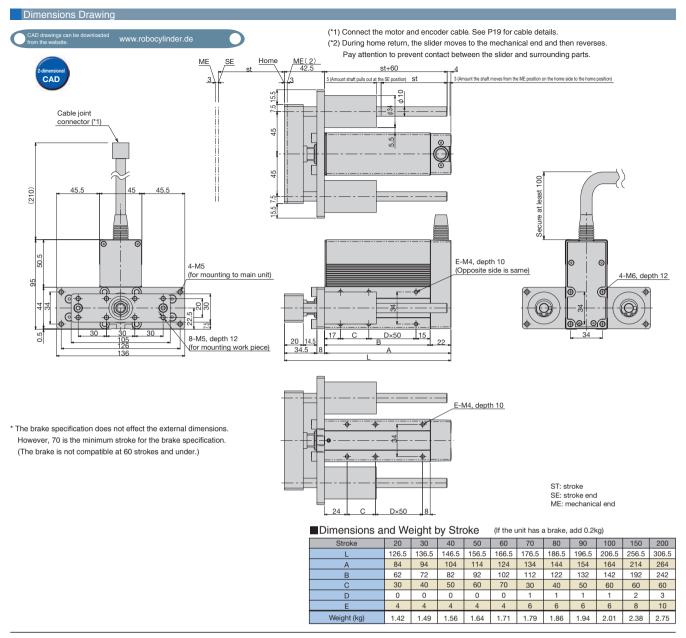
*A built-in motor-encoder cable is standard, and meets the robot cable specification. *See P19 for maintenance cables.

Options		
Title	Option code	See page
Brake	В	_
Foot bracket1(mounted on bottom)	FT	P19
Power save function	LA	_

*The brake can be used at 70 stroke or above.

Actuator Specifications						
Item	Description					
Drive System	Ball screw ϕ 8mm rolled C10					
Positioning Repeatability	±0.05mm					
Backlash	0.1mm or less					
Rod diameter	φ22mm					
Non-rotary Rod Precision	±0.05 degrees					
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (without condensation)					
Operating life	5000km					

^{*}The foot bracket cannot be mounted on the side.



Title	External View	Model (*2)	Features	Maximum number of positioning points	Input power	Power-supply capacity	See page		
Positioner Type	ī	ACON-C-20I①-NP-2-0	Up to 512-point	510 i-t-					
Safety category compatible Positioner type	ı	ACON-CG-20I①-NP-2-0	positioning possible	512 points		(Standard)			
Solenoid valve type		ACON-CY-20I①-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points			Rated 1.3A Peak 4.4A (Energy-saving) Rated 1.3A Peak 2.5A	, ,	
Pulse series input type (Differential line driver specification)	ine ation)	í)	ACON-PL-20I①-NP-2-0	Differential line driver compatible Pulse series input type	()	DC24V		P20	
Pulse series input type (Open collector specification)			ACON-PO-20I①-NP-2-0	Open collector compatible Pulse series input type	(-)				
Serial communication type		ACON-SE-20I①-N-0-0	Serial communications Special Type	64 points		(*2)			
Field network type (*1)		RACON-20①	Field Network Dedicated type	768 points					
Program control type		ASEL-C-1-20I①-NP-2-0 (*3)	Programmed operation enabled Maximum biaxial operation enabled	1500 points					

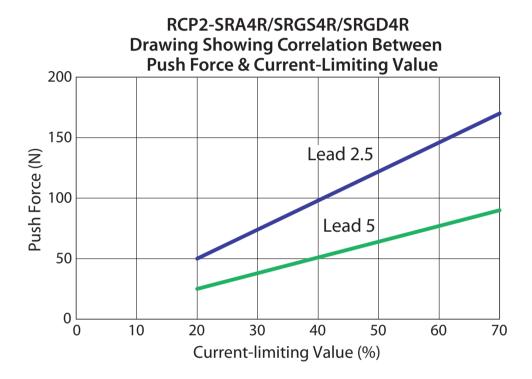
Diagram Showing Relationship of Push Force & Current-Limiting Value

The push force applied in push-motion operation can be changed freely by changing the current-limiting value in the controller.

Use the graph below to check the required push force.

Caution for Use

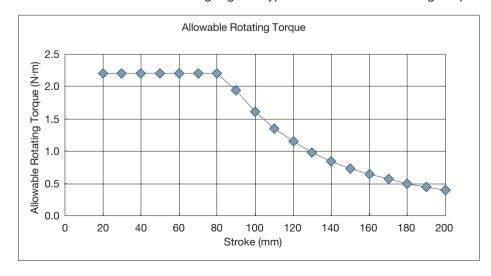
- The relationships of push force the and current-limiting value represent reference values and may differ slightly from actual values.
- If the current-limiting value is less than 20%, the push force may fluctuate. Keep the current-limiting value to 20% or above.
- The travel speed is fixed to 20 mm/s during push-motion operation.
- For applications requiring the use of push operation, please use the RCP2. (Pulse Motor)

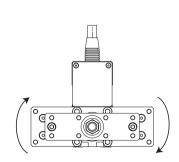


Allowable Rotating Torque

If rotating torque is to be applied, keep the torque within the range specified below.

Take note that standard and single-guide types cannot receive rotating torque.

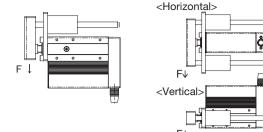




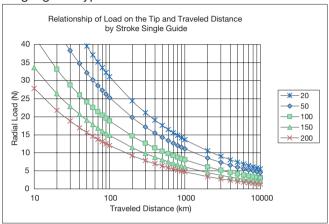
Relationship of Allowable Load at Tip & Traveling Life

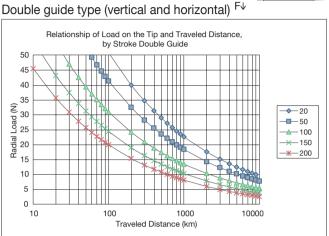
The greater the load at the guide tip, the shorter the traveling life becomes.

Select an appropriate model by considering an optimal balance between load and life.



Single guide type

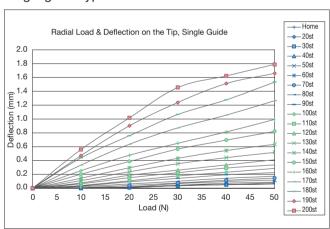


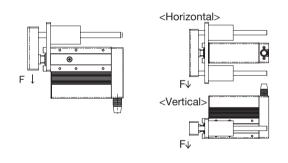


Radial Load & Deflection at Tip

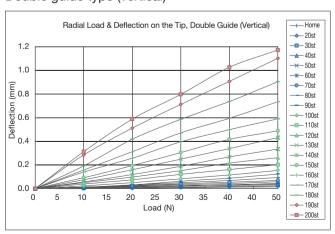
The diagrams below show how the load applied at the tip of the guide correlates with the deflection that results.

Single guide type

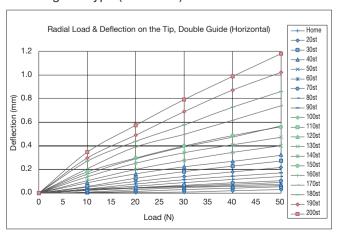




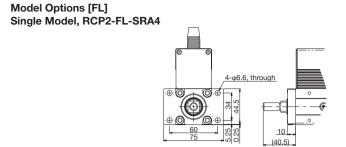
Double guide type (vertical)



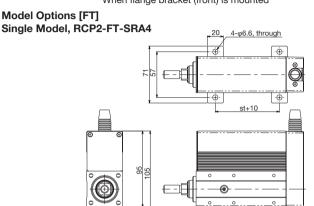
Double guide type (horizontal)



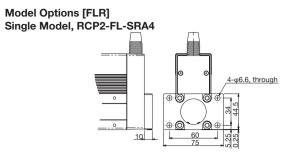
Actuator options (flange/foot brackets)



When flange bracket (front) is mounted

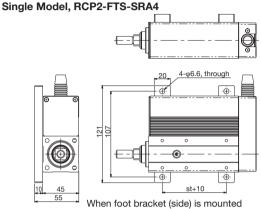


When foot bracket (bottom) is mounted



When flange bracket (rear) is mounted

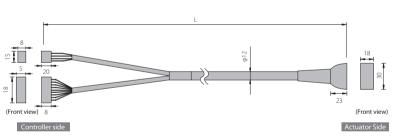
Model Options [FT2 (mounted on right side/FT4 (mounted on left side)]



Maintenance parts (motor-encoder cable)

Motor-encoder cable for RCP2

*Enter the cable length (L) for \(\superscript{\substack} \), up to a maximum compatible length of 20m. Example: 080=8m

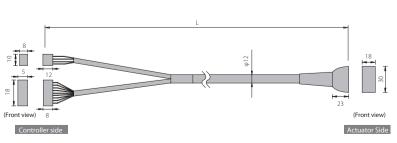


Signal	Pin No.	(Wire color)	Signal	Pin No.
Α	В1	Black	A 1	Α
VMM	A2	White	B1	VMM
/A	A 1	Red	A 2	/ A
В	В3	Green	B ₂	В
VMM	B2	Yellow —	А3	VMM
/B	А3	Brown	В3	/B
		Λ	A4	NC
		. [3	B4	NC
BK+	14	Pink (Red•)	A 5	BK+
BK-	13	Pink (Blue•)	B5	BK-
LS+	16	White (Red•)	Α6	LS+
LS-	15	White (Blue•)	B6	LS-
A +	12	Orange (Red•)	A7	A +
Α-	11	Orange (Blue-)	B7	A –
В+	10	Gray (Red•)	A8	B+
B-	9	Gray (Blue•)	B8	B-
NC	8		Α9	NC
VPS	7	Orange (Blue-consecutive)	B9	VPS
$V \subset C$	6	Gray (Red- consecutive)	A 10	$V \subset C$
GND	5	Gray (Blue-consecutive)	B 10	GND
NC	4		A 11	NC
FG	1	Shield	B11	FG
		*		

Motor-encoder cable for RCA

Model **CB-ACS-MPA** \square \square

*Enter the cable length (L) for □□□, up to a maximum compatible length of 20m. Example: 080=8m



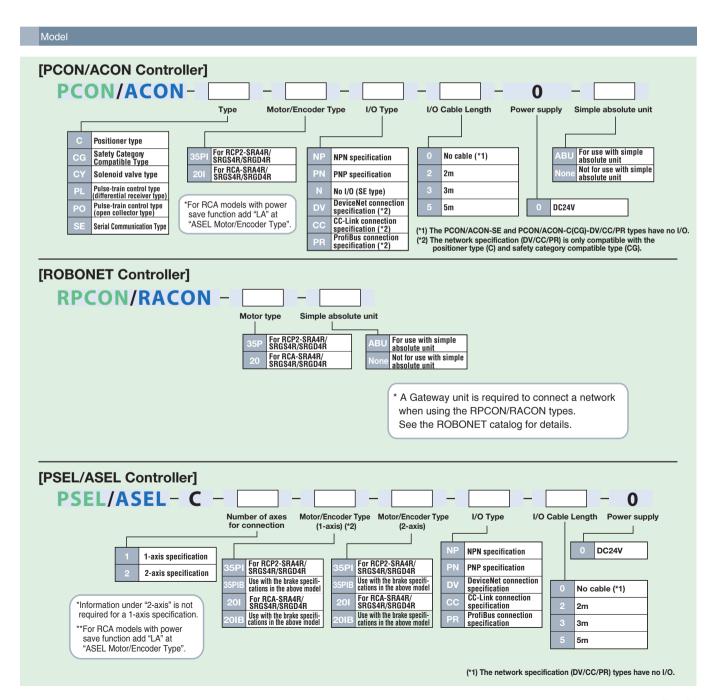
Signal Pin No. U 1 V 2 W 3	(Wire color) Red Yellow Black	Pin No. A1 B1 A2 B2	Signal U V W N C
	Λ	A3 B3	N C N C
BK+ 16	Yellow (Red•)	A4	BK+
B K – 15	Yellow (Blue•)	B4	BK-
LS+ 18	Pink (Red•)	A 5	LS+
L S- 17	Pink (Blue•)	B 5	LS-
A + 14	White (Red•)	Α6	A +
A- 13	White (Blue•)	B6	A-
B + 12	Orange (Red•)	Α7	B+
B- 11	Orange (Blue•)	B7	B-
Z + 10	Gray (Red•)	A.8	Z+
Z- 9	Gray (Blue-)	B8	Z-
- 8	Orange (Red+ consecutive)	A 9	- 1
/PS 7	Orange (Blue- consecutive)	B9	/PS
VCC 6	Gray (Red- consecutive)	A 10	VCC
GND 5	Gray (Blue- consecutive)	B 10	GND
NC	11	A11	NC
FG 1	Shield - \	B11	FG

RCP2/RCA Controllers

Model List

Model				RPCON	PSEL/ASEL		
Model	С	CG	CY	PL/PO	SE	RACON (ROBONET)	PSEL/ASEL
Name	Positioner type	Safety category compatible type	Solenoid valve type	Pulse in-line control type	Serial Communication Type	Field Network type	Program Type
Appearance							
Features	Positioner can be positioned for up to 512 points.	Safety category compatible specification	Can be operated using the same control as an air cylinder.	An in-line pulse can be used to control as desired	Serial Communication Dedicated Controller (*1)	Can be operated through DeviceNet CC-Link ProfiBus	Programmable, Built-in Sequence Function

(*1) A Gateway unit (sold separately) is required to use RPCON/RACON.

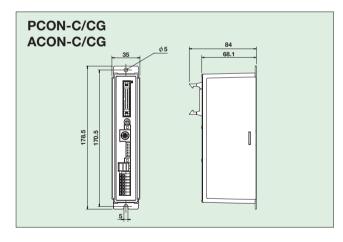


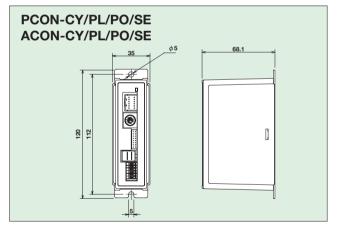
Specification Table

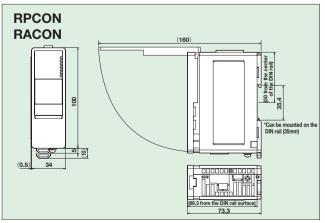
Item	Specification								
Controller type			RPCON/RACON	PSEL/ASEL					
	С	CG	CY	PL	P0	SE	(ROBONET)	T OLL/AGEL	
Maximum number of control axes		1-axis U						2-axes	
Operation method	Positioner type		Solenoid valve type	Pulse series input type		Serial Communication Type	Field Network	Program	
Number of positions	512 points		3 points	-		64 points	768 points	1500 points	
I/O connector	40-pin connector		12-pin connector	14-pin connector		-	-	34-pin connector	
Number of I/O	16 input,16 output		4 input 6 output	4 input,4 output		-		24 input 8 output	
Serial communications		RS485						RS232	
Peripheral Device Cables for communicating	CB-PAC-PIO		CB-PACY-PIO	CB-PACPU-PIO		CB-RCB-CTL002	-	CB-DS-PIO	
Command pulse input method -			Differential line driver Open collector			-			
Maximum input pulse frequency -			200kpps 60kpps			-			
Position detection method		Incremental encoder							
Motor/Encoder cable		CB-PCS-MPA□□□ (for PCON/PSEL) / CB-ACS-MPA□□□ (for ACON/ASEL) (Max. length 20m)							
Input power		DC24V±10%							
RCP2 (all models)		Maximum 2A					Max.2A (*1)	Max.5.5A	
Power-supply capacity RCA SRGS4R SRGD4R		Rated 1.3A, max. 4.4A (standard specification) (*2) Rated 1.3A, max. 2.5A (power-saving specification)						(*3)	
Dielectric strength voltage		DC500V 1MΩ						DC500V 10M Ω	
Ambient operating temperature, Ambient operating humidity		0 to 40°C, 10 to 95% (free from condensation or corrosive gases)							
Ingress Protection		IP20							
Mass Ap		x.300g	Approx.130g				Approx.200g	Approx.450g	

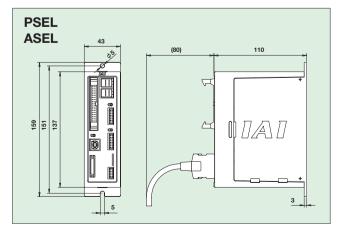
- (*1) During use, the following amount of power is required: 2A x the number of units used, plus the power consumed by the Gateway unit (approx. 0.6A).
- (*2) The following power capacity is required for RACON: ACON power capacity x number of units used, plus the power consumed by the Gateway unit (approx. 0.6A).
- (*3) The following power capacity is required for ASEL: ACON power capacity x number of control axes, plus the power for the control unit (1.2A).

External Dimensions









Controller Options

Teaching Pendant

This is a teaching device that provides information on functions such as position input, running tests, and monitoring.

Item	RCM-E	RCM-P	CON-T-ENG	SEL-T-J	SEL-TD-J					
Exterior dimensions	(113.5) (11	140	110.0 66.6 88.6 83.6	110.0 66.6	110.0 66.6 88.6 66.3					
Applicable controllers	PCC	N/ACON/RPCON/RAC	ON	PSEL	PSEL/ASEL					
Position input	0	0	0	0	0					
Program input	-	-	-	0	0					
Actuator operation	0	-	0		0					
Display	16 characters x 2 li	nes, LCD display	20 characters x 4 lines, LCD display							
3 position enabling switch	-	-	- (*1)	-	0					
Compatible with the ANSI standard	-	-	- (*1)	-	0					
Compatible with the CE mark	-	-	0	0	0					
Compatible with the UL standard	-	-	- (*1)	-	0					
Cable length	5m									
Ambient operating temperature, humidity	0 to 40°C temperature, 85% RH or less									
Ingress Protection	-	-	IP54							
Mass	Approx. 400g	Approx. 360g	Approx. 400g	Approx. 400g	Approx. 400g					

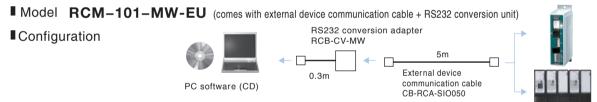
(*1) Feature of CON-TG-S

PC-compatible software (Windows only)

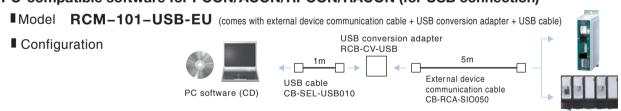
Feature

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.

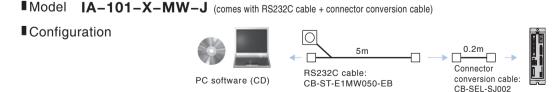
PC-compatible software for PCON/ACON/RPCON/RACON (for RS232 connection)



PC-compatible software for PCON/ACON/RPCON/RACON (for USB connection)



PC-compatible software for PSEL/ASEL (for RS232 connection)



PC-compatible software (for USB connection)



www.actuator.ru тел.:(495) 662-87-56, e-mail: iai@actuator.ru

RCP2&RCA-SRA4R Series Short Rod Type Catalogue No. 0209-E

Errors excepted - the information contained in this catalogue is subject to change without notice for the pupose of product improvement



Providing quality products since 1986



IAI Industrieroboter GmbH

Ober der Röth 4 D-65824 Schwalbach / Frankfurt Germany Tel.:+49-6196-8895-0

Fax:+49-6196-8895-24 E-Mail: info@IAI-GmbH.de Internet: http://www.eu.IAI-GmbH.de

IAI America, Inc.

2690 W. 237th Street Torrance, CA 90505, U.S.A. Phone: +1-310-891-6015 Fax: +1-310-891-0815

IAI (Shanghai) Co., Ltd.

Shanghai Jiahua B. C. A8404.808 Hongqiao Rd., Shanghai 200030, China Phone: +86-21-6448-4753 Fax: +86-21-6448-3992

IAI CORPORATION

645-1 Shimizu Hirose Shizuoka 424-0102, Japan Phone: +81-543-64-5105 Fax: +81-543-64-5182