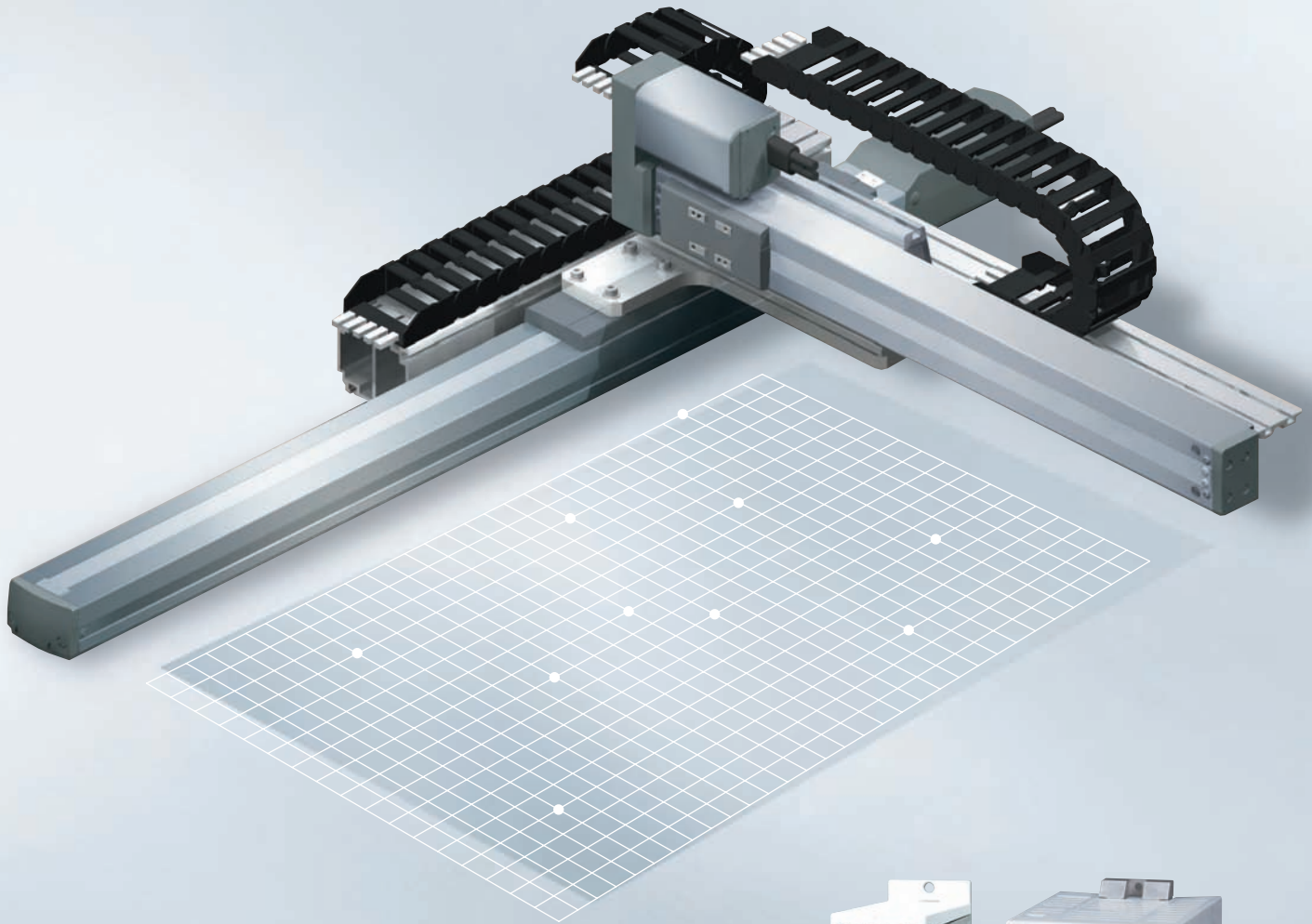
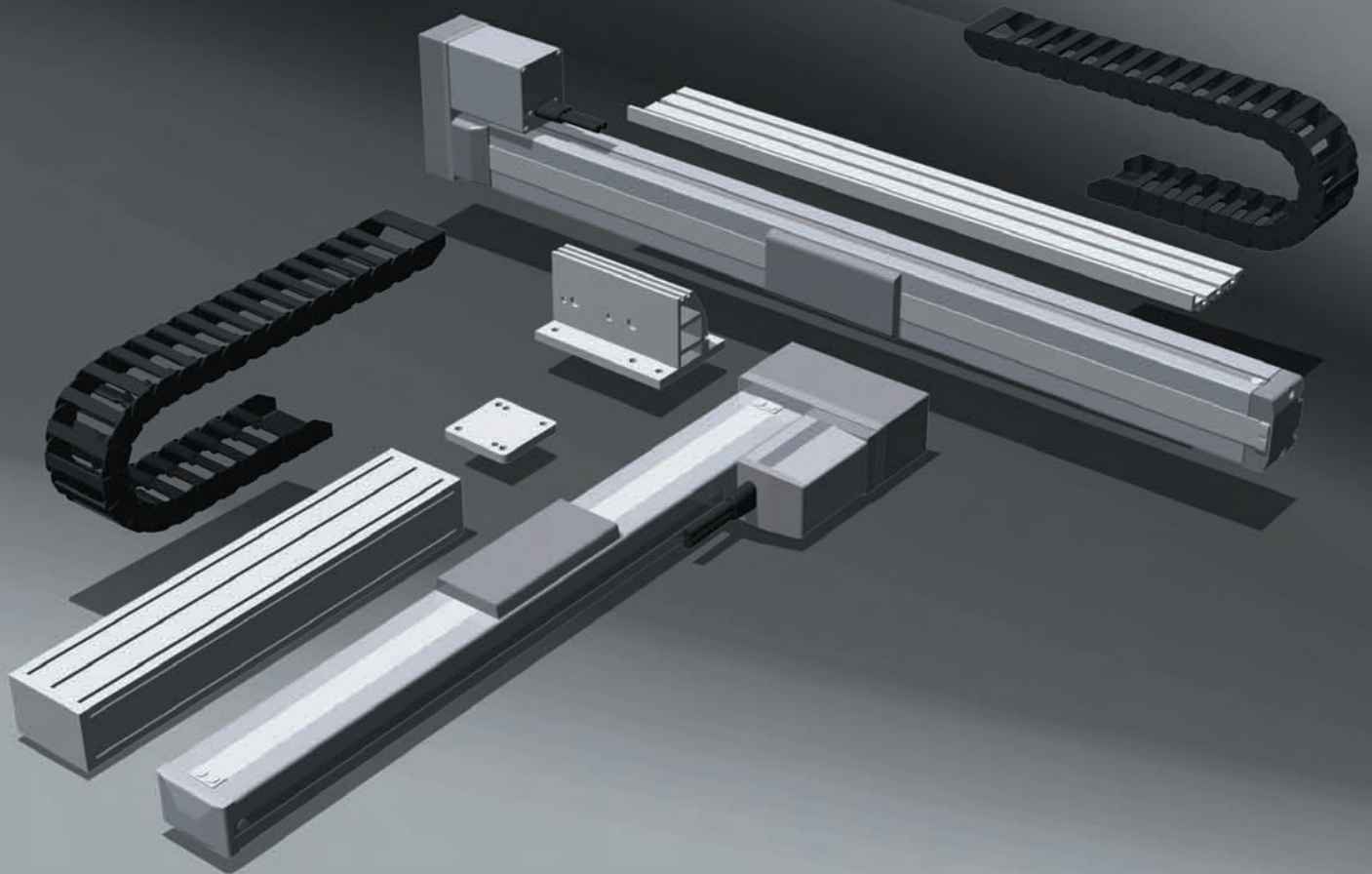


ROBO Cylinder IK Series Catalog



ROBO Cylinder IK Series

IK Series: Components



1. Wide Variation

The engineers at IAI have worked extensively to produce the highest quality products at affordable prices. The new IK Series lineup offers many variations and can be easily integrated and prepared to your specific needs.

2. Motor Options

The IK Series is offered in both pulse and servo motors. Choose the pulse motor for applications requiring high thrust at low speeds. Choose the servo motor for applications requiring constant thrust regardless of the operating speed.

3. Easy Assembly

The ROBO Cylinder IK Series multi-axes kit includes everything needed for fast and easy assembly.

Components

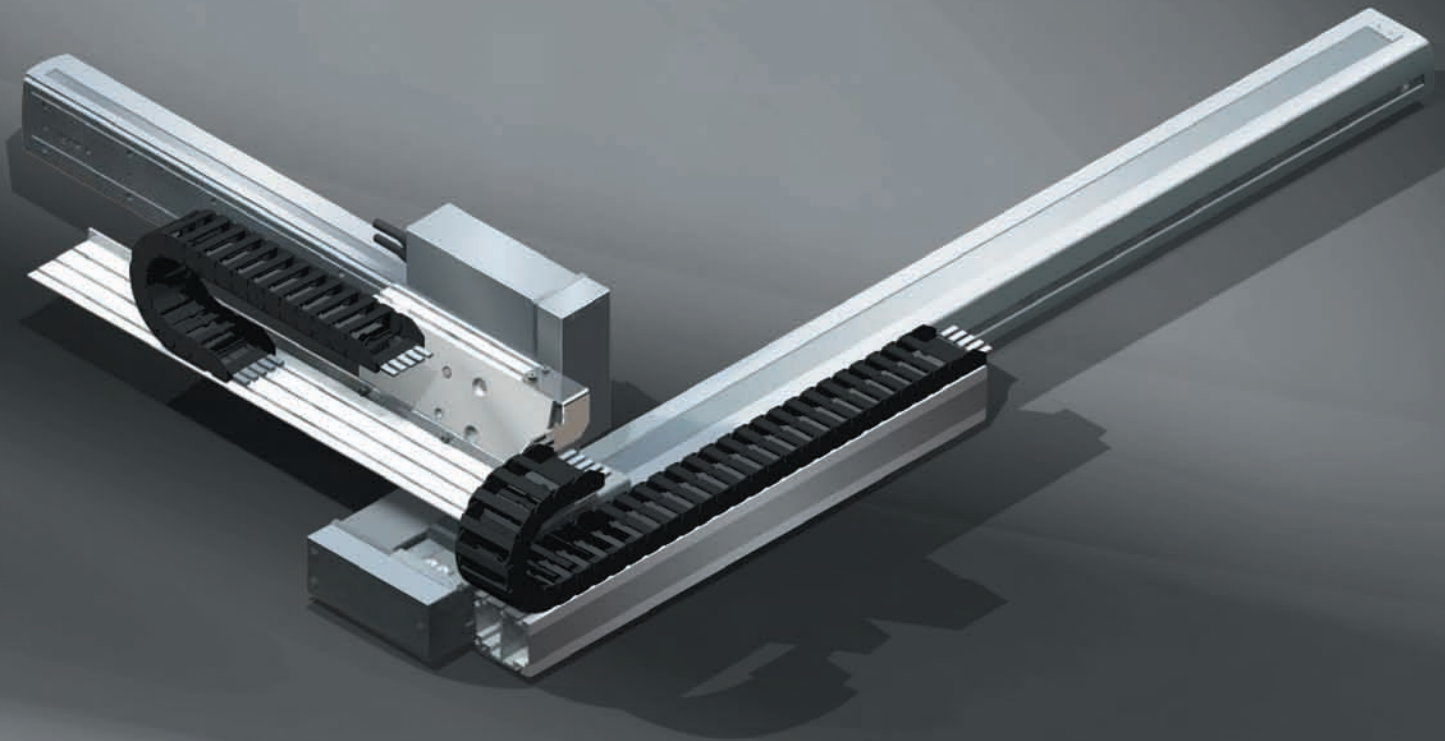


Assembled



Multi-Axes Systems

IK Series: Assembled



4. High Functionality

Combined with the PCON/PSEL/SCON/SSEL/XSEL controllers, complex programming is made easy.



5. Quality and Innovation

We at IAI are always working to offer high quality and innovative solutions tailored for your specific application. Whenever you need support, IAI's experienced teams of technical support engineers are available to help you diagnose and troubleshoot IAI products. When you require innovative and high quality robots, excellent service and support for your unique needs, demand IAI!



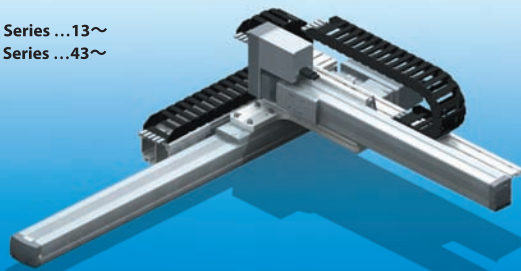
Wide-ranging Lineup Lineup of IK Series

Combinations

XYB (XY, base mount)

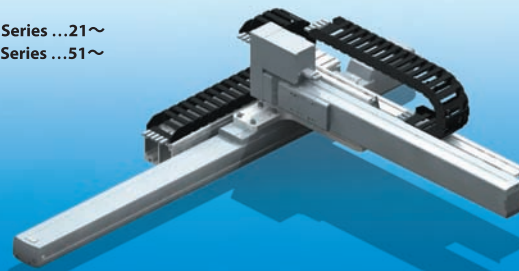
Page

IK2-PXBD Series ...13~
IK2-SXBD Series ...43~



Page

IK2-PXBC Series ...21~
IK2-SXBC Series ...51~



•IK2-PXBD Series •IK2-SXBD Series

		Maximum X-axis stroke	Maximum Y-axis stroke	Load capacity at maximum Y-axis stroke
Single-slider	Y high-speed type	600mm	200mm	2.5kg
	Y medium-speed type	600mm	200mm	5.0kg
Double-slider	Y high-speed type	450mm	400mm	2.0kg
	Y medium-speed type	450mm	400mm	4.0kg

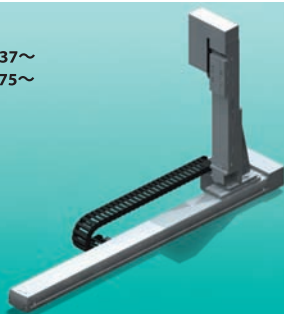
•IK2-PXBC Series •IK2-SXBC Series

		Maximum X-axis stroke	Maximum Y-axis stroke	Load capacity at maximum Y-axis stroke
Single-slider	Y high-speed type	600mm	200mm	3.0kg
	Y medium-speed type	600mm	200mm	6.0kg
Double-slider	Y high-speed type	450mm	400mm	3.0kg
	Y medium-speed type	450mm	400mm	6.0kg

XZ (Upright type)

Page

IK2-PXZB Series ...37~
IK2-SXZB Series ...75~



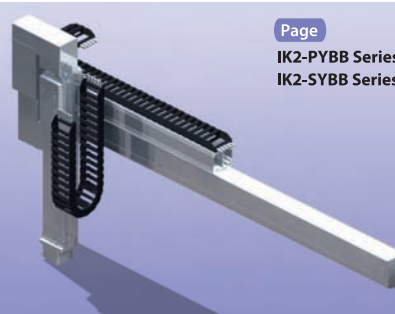
•IK2-PXZB Series •IK2-SXZB Series

		Maximum X-axis stroke	Maximum Z-axis stroke	Load capacity at maximum Y-axis stroke
Single-slider	X high-speed/Z high-speed type	1,000mm	250mm	1.5kg
	X high-speed/Z medium-speed type	1,000mm	250mm	2.5kg
	X high-speed/Z low-speed type	1,000mm	250mm	3.0kg
Double-slider	X high-speed/Z high-speed type	800mm	300mm	1.5kg
	X high-speed/Z medium-speed type	800mm	300mm	3.0kg
	X high-speed/Z low-speed type	800mm	300mm	5.5kg

YZB (Cross type, base mount)

Page

IK2-PYBB Series ...41~
IK2-SYBB Series ...79~

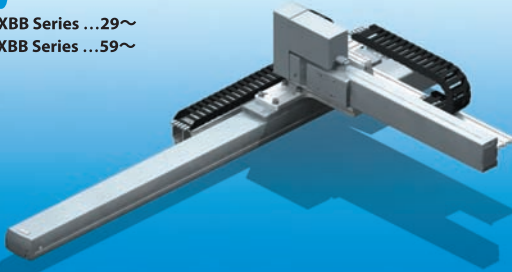


•IK2-PYBB Series •IK2-SYBB Series

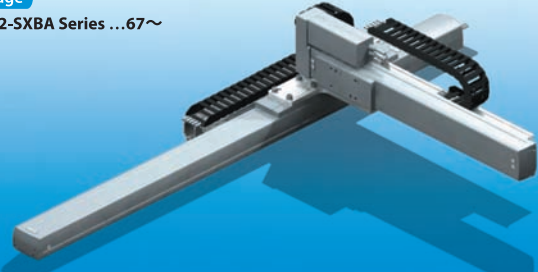
		Maximum X-axis stroke	Maximum Z-axis stroke	Load capacity at maximum Y-axis stroke
Single-slider	X high-speed/Z high-speed type	1,000mm	300mm	1.5kg
	X high-speed/Z medium-speed type	1,000mm	300mm	3.0kg
	X high-speed/Z low-speed type	1,000mm	300mm	5.5kg

IK2-P Series / IK3-P Series	ROBO Cylinder RCP2 combinations based on pulse motor
IK2-S Series / IK3-S Series	ROBO Cylinder RCS2 combinations based on servo motor

Page
IK2-PXBB Series ...29~
IK2-SXBB Series ...59~



Page
IK2-SXBA Series ...67~



•IK2-PXBB Series •IK2-SXBB Series

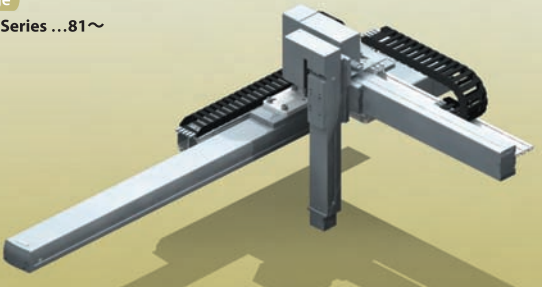
		Maximum X-axis stroke	Maximum Y-axis stroke	Load capacity at maximum Y-axis stroke
Single-slider	High-speed type	1,000mm	300mm	6.0kg
	Medium-speed type	1,000mm	300mm	8.0kg
Double-slider	High-speed type	800mm	400mm	5.5kg
	Medium-speed type	800mm	400mm	10.5kg

•IK2-SXBA Series

		Maximum X-axis stroke	Maximum Y-axis stroke	Load capacity at maximum Y-axis stroke
Single-slider	High-speed type	1,000mm	350mm	7.0kg
	Medium-speed type	1,000mm	200mm	12.5kg
Double-slider	High-speed type	800mm	400mm	10.0kg
	Medium-speed type	800mm	400mm	11.5kg

3-axis type (XYB+Z, base mount)

Page
IK3-Series ...81~



•IK3 Series

		Maximum X-axis stroke	Maximum Y-axis stroke	Maximum Z-axis stroke	Load capacity at maximum Y-axis stroke
Single-slider	X high-speed/Y high-speed/Z high-speed type	1,000mm	300mm	200mm	1.0kg
	X high-speed/Y high-speed/Z medium-speed type	1,000mm	300mm	200mm	2.0kg
	X high-speed/Y high-speed/Z low-speed type	1,000mm	300mm	200mm	4.0kg
Double-slider	X high-speed/Y high-speed/Z high-speed type	800mm	400mm	200mm	1.0kg
	X high-speed/Y high-speed/Z medium-speed type	800mm	400mm	200mm	2.0kg
	X high-speed/Y high-speed/Z low-speed type	800mm	400mm	200mm	4.0kg

2-axis combination – Axis configurations

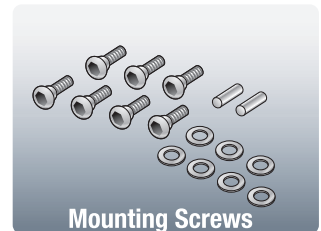
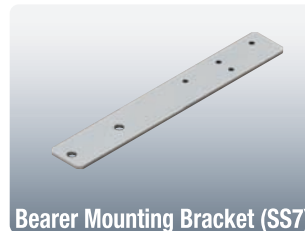
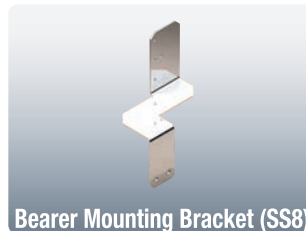
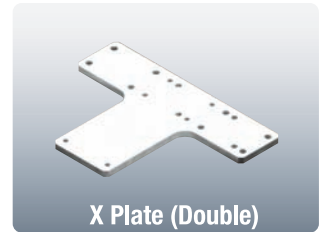
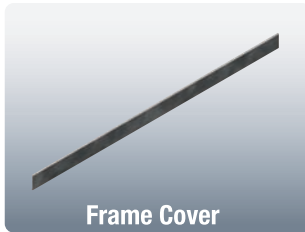
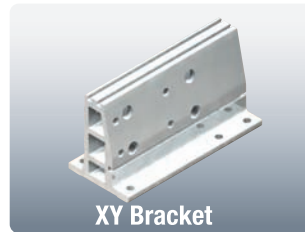
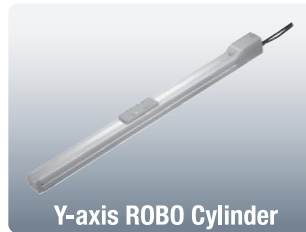
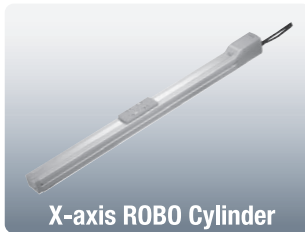
	Axis 1	Axis 2
IK2-PXBD	RCP2-SS7□	RCP2-SA5R
IK2-SXBD	RCS2-SS7□	RCS2-SA5R
IK2-PXBC	RCP2-SS7□	RCP2-SA6R
IK2-SXBC	RCS2-SS7□	RCS2-SA6R
IK2-PXBB	RCP2-SS8□	RCP2-SA7R
IK2-SXBB	RCS2-SS8□ (100W)	RCS2-SA7R
IK2-SXBA	RCS2-SS8□ (150W)	RCS2-SS8R (100W)
IK2-PXZB	RCP2-SS8□	RCP2-SA7R
IK2-SXZB	RCS2-SS8□ (100W)	RCS2-SA7R
IK2-PYBB	RCP2-SS8□	RCP2-SA7R
IK2-SYBB	RCS2-SS8□ (100W)	RCS2-SA7R

3-axis combination – Axis configurations

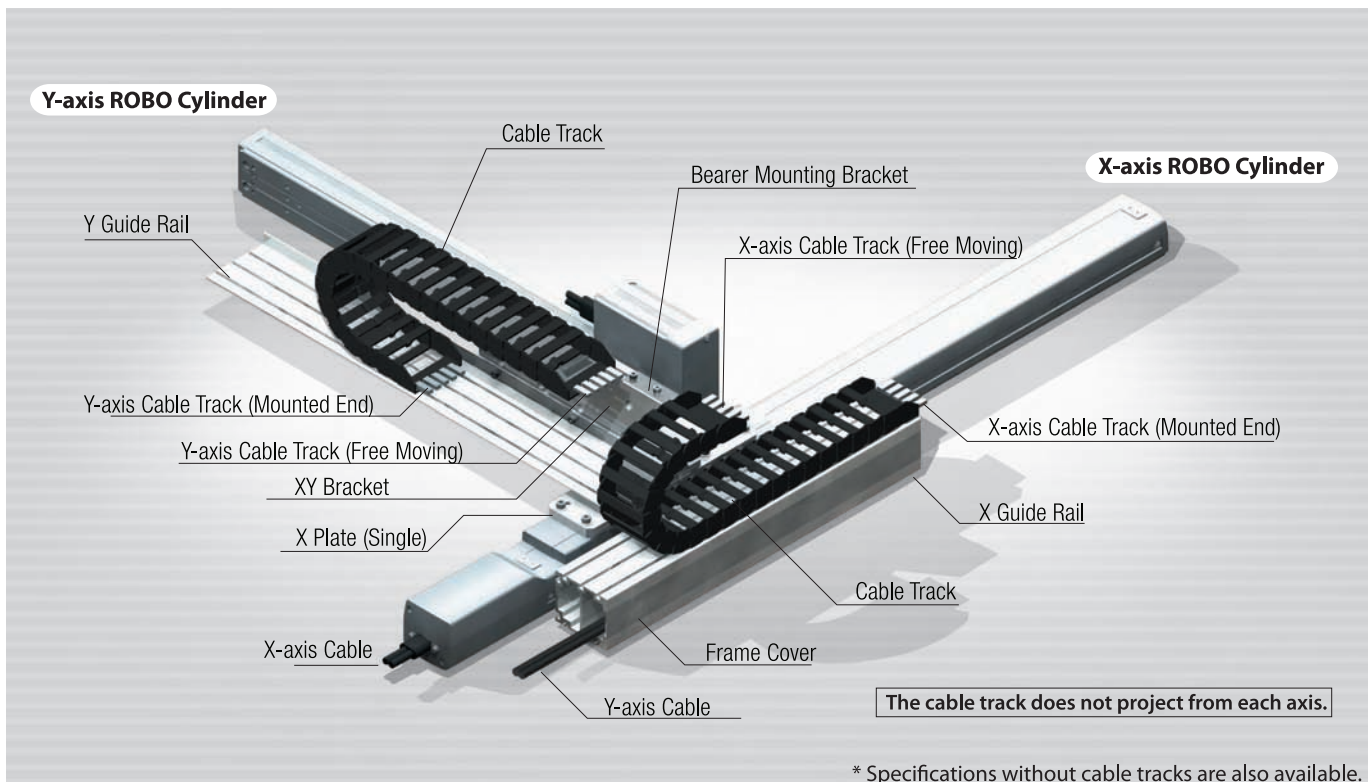
	X axis	Y axis	Z axis
IK3	RCP2-SS8□	RCP2-SA7R	RCP2-SA6R
	RCS2-SS8□ (100W)	RCS2-SA7R	RCS2-SA6R

IK Series

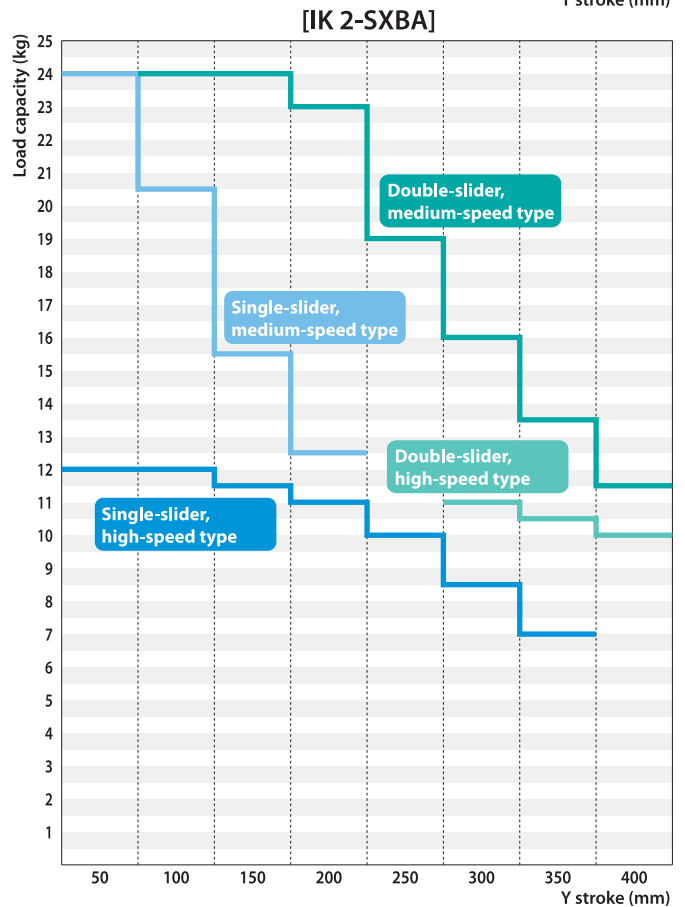
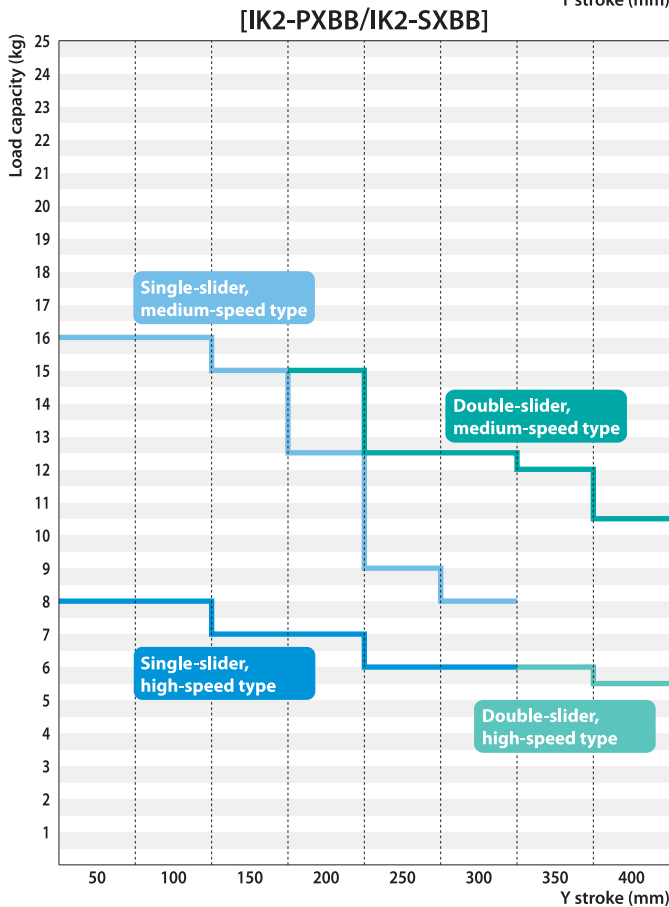
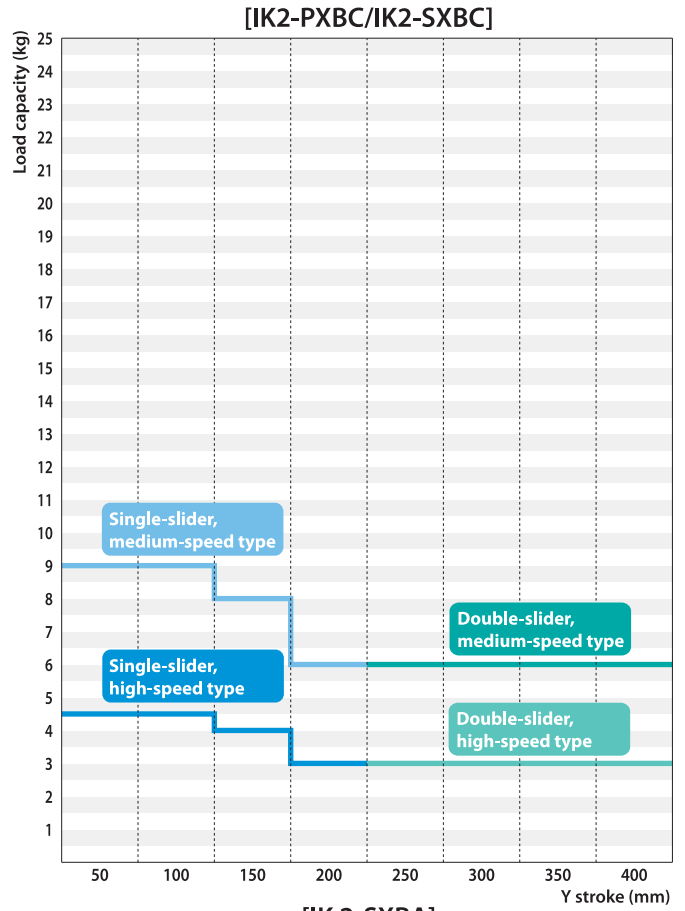
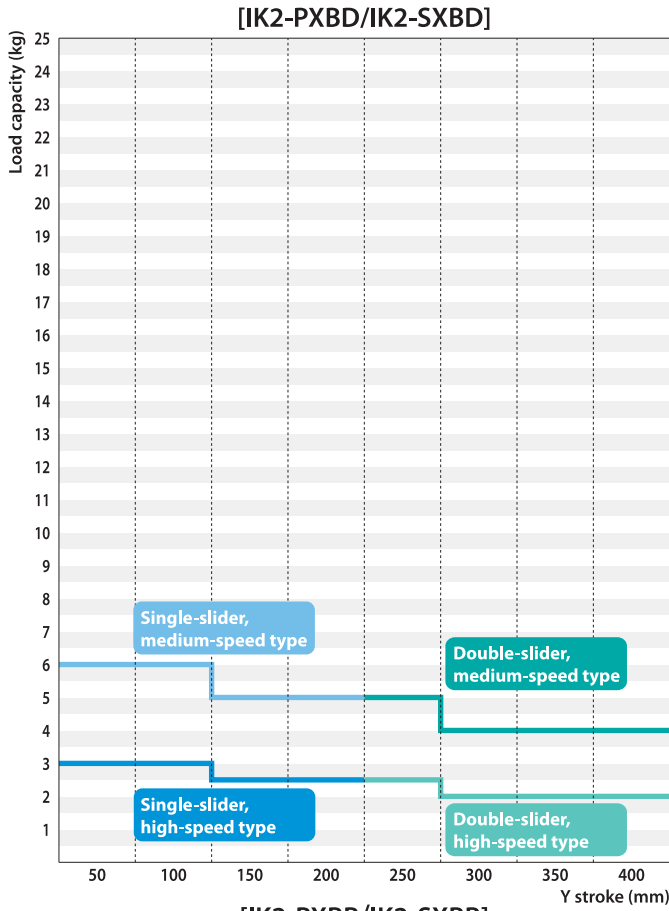
The IK Series is a set that includes the following components needed to assemble the cartesian robot.



Note: The above images are provided for reference purposes only. The actual components may vary depending on the combination type, direction, etc.

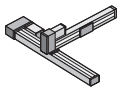


Load Capacity Graphs for XYB Combinations

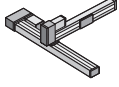


Combination Unit List for IK Series

RCP2 Combination Unit List for 2-axis Configuration (XYB) (□ in the model names indicates a value from 1 to 4 specifying the combination direction. For the combination directions, refer to P. 10.)

Page	Combination model	Combined shape	Axis 1				Axis 2	
			Type	Motor size	Lead (mm)	Maximum speed (mm/sec)	Stroke (mm)	Type
13	IK2-PXBD1□HHS	 XYB	SS7R Reversed	42□	12	400	50-600	SA5R Reversed
	12				350			
15	IK2-PXBD1□HHD		SS7R Reversed, double-slider		12	400	50-450	
	12				350			
17	IK2-PXBD2□HHS		SS7C Straight		12	400	50-600	
	12				350			
19	IK2-PXBD2□HHD		SS7C Straight, double-slider		12	400	50-450	
	12				350			
21	IK2-PXBC1□HHS		SS7R Reversed		12	400	50-600	
	12				250			
23	IK2-PXBC1□HHD		SS7R Reversed, double-slider		12	400	50-450	
	12				250			
25	IK2-PXBC2□HHS		SS7C Straight		12	400	50-600	
	12				250			
27	IK2-PXBC2□HHD		SS7C Straight, double-slider		12	400	50-450	
	12				250			
29	IK2-PXBB1□HHS		SS8R Reversed		20	250	50-1000	
	10				125			
31	IK2-PXBB1□HHD		SS8R Reversed, double-slider		20	250	50-800	
	10				125			
33	IK2-PXBB2□HHS	SS8C Straight	20	250	50-1000			
	10		125					
35	IK2-PXBB2□HHD	SS8C Straight, double-slider	20	250	50-800			
	10		125					
37	IK2-PXZB1□HHS	SS8R Reversed	56□	20	250	50-1000	SA7R Reversed	
	IK2-PXZB1□HMS							
39	IK2-PXZB1□HHD	SS8R Reversed, double-slider	56□	20	250	50-800		
	IK2-PXZB1□HMD							
41	IK2-PYBB1□HHS	SS8R Reversed	56□	20	250	50-1000		
	IK2-PYBB1□HMS							

RCS2 Combination Unit List for 2-axis Configuration (XYB) (□ in the model names indicates a value from 1 to 4 specifying the combination direction. For the combination directions, refer to P. 10.)

Page	Combination model	Combined shape	Axis 1				Axis 2	
			Type	Motor output (W)	Lead (mm)	Maximum speed (mm/sec)	Stroke (mm)	Type
43	IK2-SXBD1□HHS	 XYB	SS7R Reversed	60	12	600	50-600	SA5R Reversed
	12				600			
45	IK2-SXBD1□HHD		SS7R Reversed, double-slider		12	600	50-450	
	12				600			
47	IK2-SXBD2□HHS		SS7C Straight		12	600	50-600	
	12				600			
49	IK2-SXBD2□HHD		SS7C Straight, double-slider		12	600	50-450	
	12				600			
51	IK2-SXBC1□HHS		SS7R Reversed		12	600	50-600	
	6				300			
53	IK2-SXBC1□HHD		SS7R Reversed, double-slider		12	600	50-450	
	6				300			
55	IK2-SXBC2□HHS		SS7C Straight		12	600	50-600	
	6				300			
57	IK2-SXBC2□HHD		SS7C Straight, double-slider		12	600	50-450	
	6				300			
59	IK2-SXBB1□HHS		SS8R (100W) Reversed		20	1000	50-1000	
	10				500			
61	IK2-SXBB1□HHD		SS8R (100W) Reversed, double-slider		20	1000	50-800	
	10				500			
63	IK2-SXBB2□HHS	SS8C (100W) Straight	20	1000	50-1000			
	10		500					
65	IK2-SXBB2□HHD	SS8C (100W) Straight, double-slider	20	1000	50-800			
	10		500					
67	IK2-SXBA1□HHS	SS8R (150W) Reversed	20	1000	50-1000			
	10		500					
69	IK2-SXBA1□HHD	SS8R (150W) Reversed, double-slider	20	1000	50-800			
	10		500					
71	IK2-SXBA2□HHS	SS8C (150W) Straight	20	1000	50-1000			
	10		500					
73	IK2-SXBA2□HHD	SS8C (150W) Straight, double-slider	20	1000	50-800			
	10		500					
75	IK2-SXZB1□HHS	SS8R (100W) Reversed	100	20	1000	50-1000	SA7R Reversed	
	IK2-SXZB1□HMS							
77	IK2-SXZB1□HHD	SS8R (100W) Reversed, double-slider	100	20	1000	50-800		
	IK2-SXZB1□HMD							
79	IK2-SYBB1□HHS	SS8R (100W) Reversed	100	20	1000	50-1000		
	IK2-SYBB1□HMS							

		Axis 2			Load capacity by axis 2 stroke							
Motor size	Lead (mm)	Maximum speed (mm/sec)	Stroke (mm)	50	100	150	200	250	300	350	400	
42□	12	600	50-200	3.0	3.0	2.5	2.5					
	6	300	50-200	6.0	6.0	5.0	5.0					
	12	600	250-400					2.5	2.0	2.0	2.0	
	6	300	250-400					5.0	4.0	4.0	4.0	
	12	600	50-200	3.0	3.0	2.5	2.5					
	6	300	50-200	6.0	6.0	5.0	5.0					
42□	12	600	50-200	4.5	4.5	4.0	3.0					
	6	300	50-200	9.0	9.0	8.0	6.0					
	12	600	250-400					3.0	3.0	3.0	3.0	
	6	300	250-400					6.0	6.0	6.0	6.0	
	12	600	50-200	4.5	4.5	4.0	3.0					
	6	300	50-200	9.0	9.0	8.0	6.0					
56□	16	450	50-300	8.0	8.0	7.0	7.0	6.0	6.0			
	8	220	50-300	16.0	16.0	15.0	12.5	9.0	8.0			
	16	450	350-400							6.0	5.5	
	8	220	200-400				15.0	12.5	12.5	12.0	10.5	
	16	450	50-300	8.0	8.0	7.0	7.0	6.0	6.0			
	8	220	50-300	16.0	16.0	15.0	12.5	9.0	8.0			
56□	16	450	350-400							6.0	5.5	
	8	220	200-400				15.0	12.5	12.5	12.0	10.5	
	16	360	50-250	2.0	2.0	2.0	2.0	1.5				
	8	180	50-250	4.0	4.0	3.5	3.5	2.5				
	4	90	50-250	8.0	7.0	5.0	4.0	3.0				
	16	400	300						1.5			
56□	8	200	300						3.0			
	4	100	150-300			7.0	7.0	5.5	5.5			
	16	360	50-300	2.0	2.0	2.0	2.0	1.5	1.5			
	8	180	50-300	4.0	4.0	3.5	3.5	3.0	3.0			
	4	90	50-300	8.0	8.0	7.0	7.0	6.0	5.5			

		Axis 2			Load capacity by axis 2 stroke							
Motor output (W)	Lead (mm)	Maximum speed (mm/sec)	Stroke (mm)	50	100	150	200	250	300	350	400	
20	12	800	50-200	3.0	3.0	2.5	2.5					
	6	400		6.0	6.0	5.0	5.0					
	12	800	250-400					2.5	2.0	2.0	2.0	
	6	400						5.0	4.0	4.0	4.0	
	12	800	50-200	3.0	3.0	2.5	2.5					
	6	400		6.0	6.0	5.0	5.0					
30	12	800	250-400					2.5	2.0	2.0	2.0	
	6	400						5.0	4.0	4.0	4.0	
	12	800	50-200	4.5	4.5	4.0	3.0					
	6	400		9.0	9.0	8.0	6.0					
	12	800	250-400					3.0	3.0	3.0	3.0	
	6	400						6.0	6.0	6.0	6.0	
60	16	800	50-300	8.0	8.0	7.0	7.0	6.0	6.0			
	8	400		16.0	16.0	15.0	12.5	9.0	8.0			
	16	800	350-400							6.0	5.5	
	8	400	200-400				15.0	12.5	12.5	12.0	10.5	
	16	800	50-300	8.0	8.0	7.0	7.0	6.0	6.0			
	8	400		16.0	16.0	15.0	12.5	9.0	8.0			
100	16	800	350-400							6.0	5.5	
	8	400	200-400				15.0	12.5	12.5	12.0	10.5	
	20	1000	50-350	12.0	12.0	11.5	11.0	10.0	8.5	7.0		
	10	500		24.0	20.5	15.5	12.5					
	20	1000	300-400						11.0	10.5	10.0	
	10	500	100-400		24.0	24.0	23.0	19.0	16.0	13.5	11.5	
60	20	1000	50-350	12.0	12.0	11.5	11.0	10.0	8.5	7.0		
	10	500		24.0	20.5	15.5	12.5					
	20	1000	300-400						11.0	10.5	10.0	
	10	500	100-400		24.0	24.0	23.0	19.0	16.0	13.5	11.5	
	16	800	50-250	2.0	2.0	2.0	2.0	1.5				
	8	400		4.0	4.0	3.5	3.5	2.5				
60	4	200	300	8.0	7.0	5.0	4.0	3.0				
	16	800							1.5			
	8	400	150-300						3.0			
	4	200				7.0	7.0	5.5	5.5			
	16	800	50-300	2.0	2.0	2.0	2.0	1.5	1.5			
	8	400		4.0	4.0	3.5	3.5	3.0	3.0			
4	200		8.0	8.0	7.0	7.0	6.0	5.5				

RCP2 Combination Unit List for 3-axis Configuration (XYB+Z-axes, base mount) (□ in the model names indicates a value from 1 to 4 specifying the combination direction. For the combination directions, refer to P.10.)

Page	Combination model	Combined shape	X axis				Y axis	
			Type	Motor size	Lead (mm)	Maximum speed (mm/sec)	Stroke (mm)	Type
81	IK3-PBBG1□HHHS	XYB+Z, base mount	SS8R Reversed, single-slider	56□	20	220	50-1000	SA7R Reversed
	IK3-PBBG1□HHMS							
	IK3-PBBG1□HHLS							
83	IK3-PBBG1□HHHD		SS8R Reversed, double-slider				50-800	
	IK3-PBBG1□HHMD							
	IK3-PBBG1□HHLD							

RCS2 Combination Unit List for 3-axis Configuration (XYB+Z-axes, base mount) (□ in the model names indicates a value from 1 to 4 specifying the combination direction. For the combination directions, refer to P.10.)

Page	Combination model	Combined shape	X axis				Y axis	
			Type	Motor output (W)	Lead (mm)	Maximum speed (mm/sec)	Stroke (mm)	Type
85	IK3-SBBG1□HHHS	XYB+Z, base mount	SS8R (100W) Reversed, single-slider	100	20	1000	50-1000	SA7R Reversed
	IK3-SBBG1□HHMS							
	IK3-SBBG1□HHLS							
88	IK3-SBBG1□HHHD		SS8R (100W) Reversed, double-slider				50-800	
	IK3-SBBG1□HHMD							
	IK3-SBBG1□HHLD							

Tips on Selection

1. Differences between RCP2 and RCS2

Features of RCP2

- [1] Adopting a pulse motor.
- [2] Characterized by high thrust at low speed.
- [3] Less expensive than the RCS2.

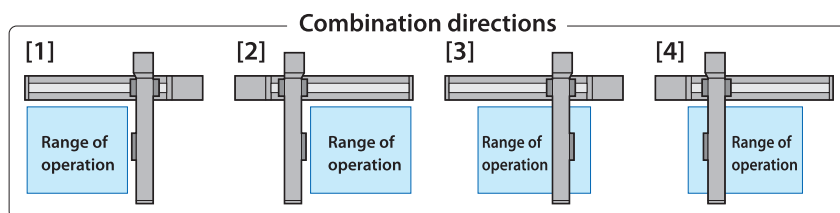
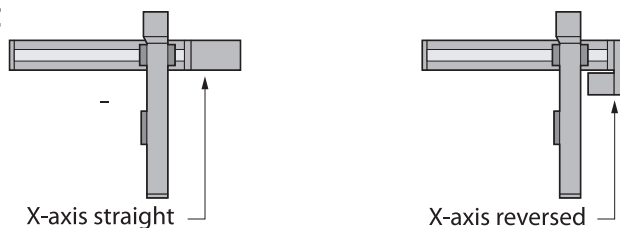


Features of RCS2

- [1] Adopting a servo motor.
- [2] Able to operate at a constant thrust regardless of the speed.
- [3] Able to move at higher speeds than the RCP2.

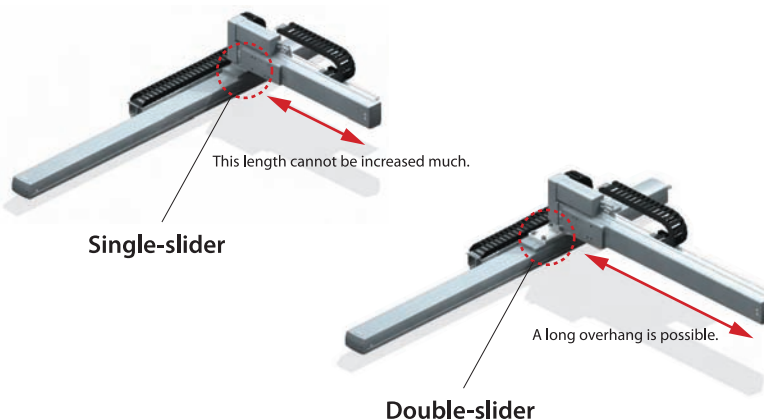
2. Differences between X-axis Straight and Reversed Types

The X-axis reversed type can have a shorter dimension in the X-axis direction. When the 150-watt RCS2-SS8C (straight) and 150-watt SS8R (reversed) are compared, for example, the SS8R is shorter by 130 mm. Note, however, that the reversed type does not support configurations based on combination directions [3] and [4].





3. Differences between Single-slider and Double-slider Types

A double-slider consists of two sliders connected to each other and has a greater permissible load moment compared to a single-slider type. Accordingly, double-slider units are used as the X-axis in XY configurations with a long overhang. Note, however, that because the double-slider structure naturally has a longer slider section, a double-slider unit has a shorter stroke than a single-slider unit of the same total length.



Controller List

The IA kit supports the following controllers. For details on each controller, refer to the reference page describing the applicable controller.

	Exterior view	Features	Maximum number of positioning points	Input power supply	Reference page
PCON		A positioning controller for the RCP2 series. Pulse-train control and serial communication types are also available.	512	DC24V	Refer to the ROBO Cylinder General Catalog
PSEL		A program controller for the RCP2 series. Can be programmed using SEL language. 1-axis and 2-axis types are available.	1500	DC24V	P. 93
SCON		A positioning controller for the RCS2 series. Field networks are supported.	512	100 VAC Single-phase 200 VAC	Refer to the ROBO Cylinder General Catalog
SSEL		A program controller for the RCS2 series. Can be programmed using SEL language. 1-axis and 2-axis types are available.	1500	100 VAC Single-phase 200 VAC	P. 93
ROBONET		Able to operate 1 to 16 ROBO Cylinder axes via a field network. Less hassle of wiring and installation.	768	DC24V	P. 93
XSEL-J/K		For the RCS2 series. 3-axis and 4-axis configurations are supported. Two sets of 2-axis combination systems can be controlled. J type: Small size K type: Provides greater expandability because I/Os can be used.	3000	100 VAC Single-phase 200 VAC	P. 93
XSEL-P/Q		For the RCS2 series. 5-axis and 6-axis configurations are supported.	4000	Three-phase 200 VAC	P. 93



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FROM OUR EASY TO USE SOFTWARE, TO COMPLETE AUTOMATION SOLUTIONS, WE PROVIDE YOU WITH THE TOOLS NECESSARY TO SCALE YOUR BUSINESS. WHEN YOU DEMAND INNOVATIVE AND HIGH QUALITY ROBOTS, EXCELLENT SERVICE AND SUPPORT FOR YOUR UNIQUE NEEDS, DEMAND IAI!



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IAI is RoHS compliant and recognizes the responsibility in reducing hazardous substances to better serve our customers and our environment.



IK2-PXBD1□□S

RCP2 2-axis Combinations X axis: SS7R (Reversed, Single-slider)
Y axis: SA5R (Reversed)

Model Details Series — Type — Encoder type — Axis 1 (X axis) — Axis 2 (Y axis) — Controllers — Cable — Shipping configuration

IK2 — PXBD1□□S — □ — □ — □ — □ — P1 — □ — □ — □ — □

Combination directions 1-2

Differences between Single-slider and Double-slider Types
 HH: X high-speed, Y high-speed
 HM: X high-speed, Y medium-speed

Encoder type
I: Incremental

Stroke (mm)
5: 50mm
? (Can be set in 50-mm increments)

Options
 NM: Opposite-home specification
 SR: Slider roller specification

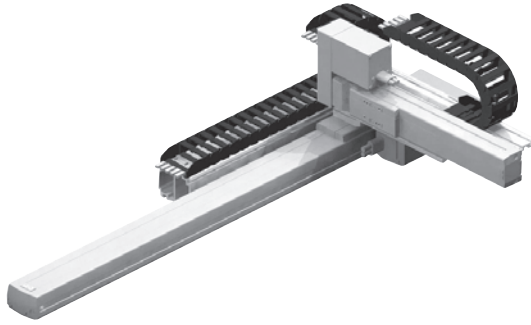
Cable length
1L: 1m
3L: 3m
5L: 5m
□L: □m

Wiring 1 N: Cable only

Wiring 2 CT: With cable track

Shipping configuration
 K: Individual components (kit)
 A: Assembled

* Refer to P.10 for details on the items comprising the model name.



Both wiring 1 and wiring 2 assume use of a cable track.

Maximum Stroke

X axis 600 mm

Y axis 200 mm

Axis 2 (High-speed type)

X axis 400 mm/s

Y axis 600 mm/s

Maximum Load Capacity

Y-axis stroke	X high-speed, Y high-speed	X high-speed, Y medium-speed
50mm	3.0kg	6.0kg
100mm	3.0kg	6.0kg
150mm	2.5kg	5.0kg
200mm	2.5kg	5.0kg

List of Options

Name	Option code
Opposite-home specification	NM
Slider roller specification	SR

Specifications

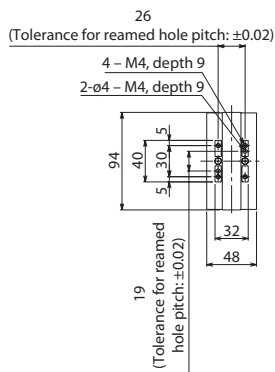
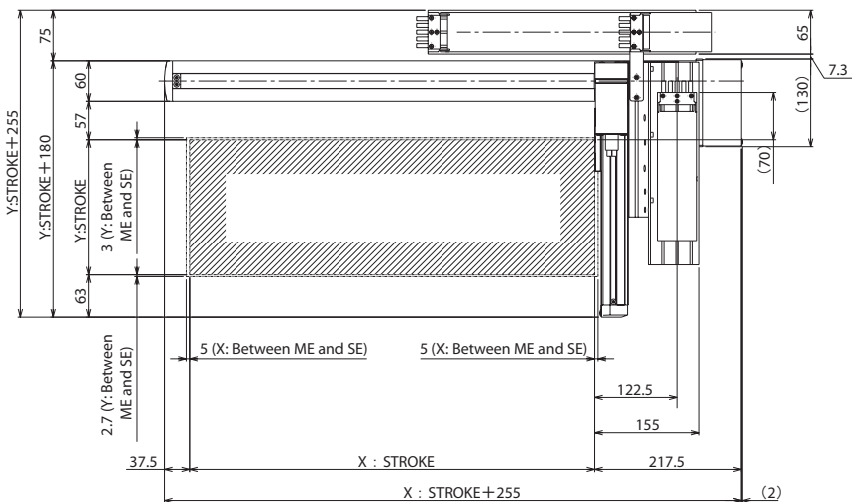
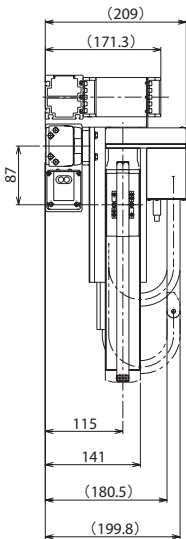
Item	X axis	Y axis
Axis model	RCP2-SS7R	RCP2-SA5R
Stroke (Can be set in 50-mm increments)	50-600mm	50-200mm
Axis 2	HH type: 400mm/s HM type: 350mm/s	High-speed type: 600mm/s Medium-speed type: 300mm/s
Motor size	42-square pulse motor	
Ball screw lead	High-speed type: 12mm	High-speed type: 12mm Medium-speed type: 6mm
Drive method	Ball screw, ø10 mm, rolled, C10	
Positioning repeatability	±0.02mm	
Base material	Dedicated alloy steel	Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

Dimensions

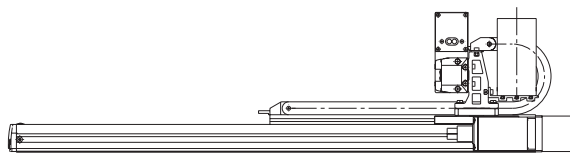
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2D
CAD

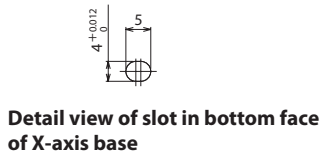
Note 1. The connected position shown in the drawing defines the home.
 Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
 Note 3. For details on the cable track, refer to P.90.
 Note 4. For details on the bracket on the moving end of the cable track, refer to P.90.



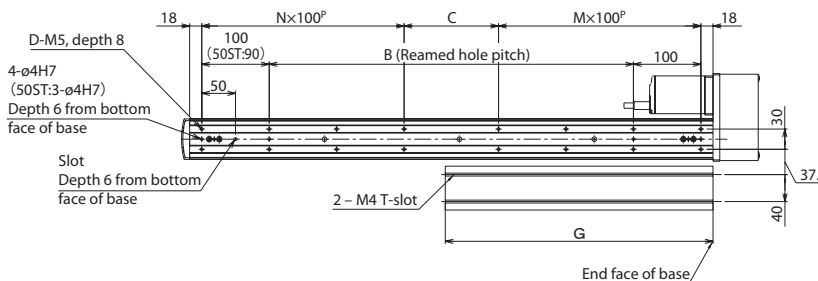
ME: Mechanical end
 SE: Stroke end



Detail view of Y-axis slider



Detail view of slot in bottom face of X-axis base



Detail view of X-axis installation

■ Dimensions by Stroke

X: Model	50	100	150	200	250	300	350	400	450	500	550	600
B	0	40	90	140	190	240	290	340	390	440	490	540
C	90	40	90	140	190	40	90	140	190	40	90	140
D	6	8	8	8	8	12	12	12	12	16	16	16
M	1	1	1	1	1	2	2	2	2	3	3	3
N	0	1	1	1	1	2	2	2	2	3	3	3
G	122	147	172	197	222	247	272	297	322	347	372	397

Controllers

Applicable controller

Refer to P. 91 for the controllers.

IK2-PXBD1□□D

RCP2 2-axis Combinations X axis: SS7R (Reversed, Double-slider)
Y axis: SA5R (Reversed)

Model Details Series: IK2 Type: PXBD1□□D Encoder type: I: Incremental Axis 1 (X axis): □ Axis 2 (Y axis): □ Controllers: P1 Cable: □ Wiring 1: □ Wiring 2: □ Shipping configuration: □

Combination directions 1-2

Differences between Single-slider and Double-slider Types
 HH: X high-speed, Y high-speed
 HM: X high-speed, Y medium-speed

Encoder type I: Incremental

Stroke (mm) 5: 50mm
 ? (Can be set in 50-mm increments)

Options
 NM: Opposite-home specification
 SR: Slider roller specification

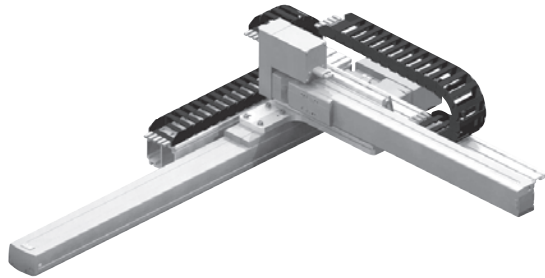
Cable length
 1L: 1m
 3L: 3m
 5L: 5m
 □L: □m

Wiring 1 N: Cable only
 CT: With cable track

Wiring 2 □

Shipping configuration
 K: Individual components (kit)
 A: Assembled

* Refer to P.10 for details on the items comprising the model name.



Maximum Stroke

X axis 450 mm Y axis 400 mm

Axis 2 (High-speed type)

X axis 400 mm/s Y axis 600 mm/s

Maximum Load Capacity

Y-axis stroke	X high-speed, Y high-speed	X high-speed, Y medium-speed
250mm	2.5kg	5.0kg
300mm	2.0kg	4.0kg
350mm	2.0kg	4.0kg
400mm	2.0kg	4.0kg

Both wiring 1 and wiring 2 assume use of a cable track.

List by Stroke

		Incremental			
Y-axis stroke		250	300	350	400
X-axis stroke	50	-	-	-	-
	100	-	-	-	-
	150	-	-	-	-
	200	-	-	-	-
	250	-	-	-	-
	300	-	-	-	-
	350	-	-	-	-
	400	-	-	-	-
	450	-	-	-	-

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.
 * Refer to P.90 for lengths other than those specified above.

Cable track

	X-axis stroke	50-300	350-450
Wiring 1 (Next to X-axis)	Y-axis stroke	-	-
Wiring 2 (Next to Y-axis)	X-axis stroke	250-400	-
	Y-axis stroke	-	-

List of Options

Name	Option code	
Opposite-home specification	NM	-
Slider roller specification	SR	Axis 1 (X-axis) Axis 2 (Y-axis)

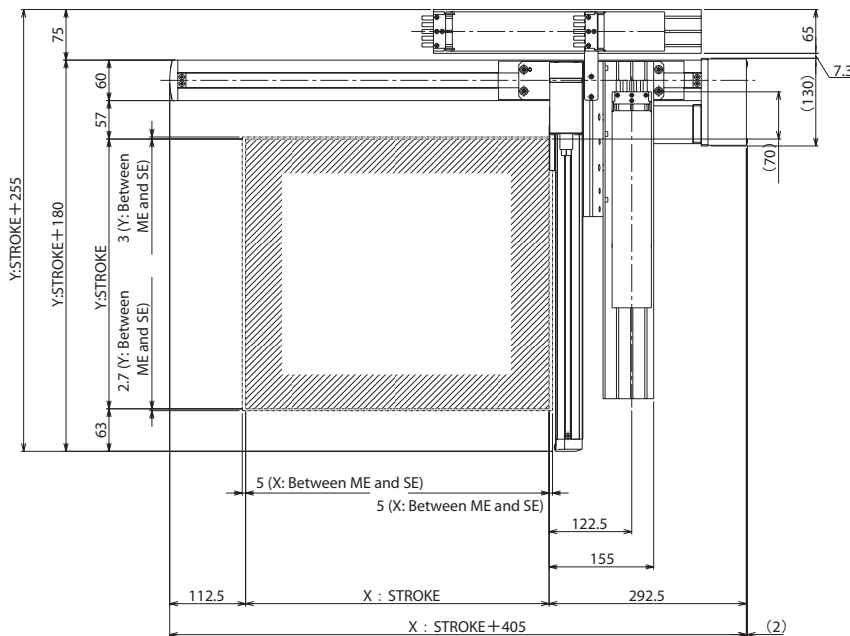
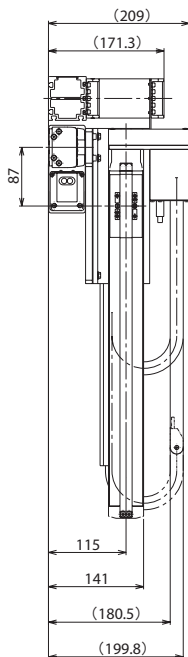
Specifications

Item	X axis	Y axis
Axis model	RCP2-SS7R	RCP2-SA5R
Stroke (Can be set in 50-mm increments)	50-450mm	250-400mm
Axis 2	HH type: 400mm/s HM type: 350mm/s	High-speed type: 600mm/s Medium-speed type: 300mm/s
Motor size	42-square pulse motor	
Ball screw lead	High-speed type: 12mm	High-speed type: 12mm Medium-speed type: 6mm
Drive method	Ball screw, ø10 mm, rolled, C10	
Positioning repeatability	±0.02mm	
Base material	Dedicated alloy steel	Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

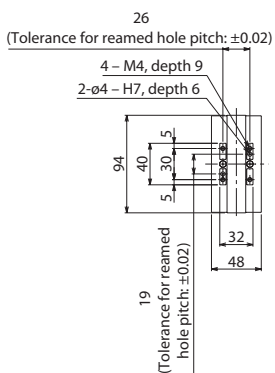
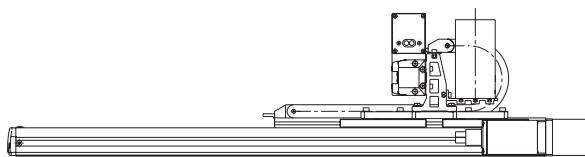
Dimensions

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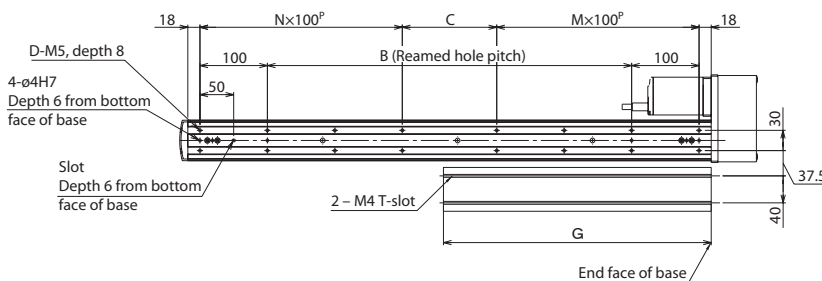
ME: Mechanical end
SE: Stroke end



Detail view of Y-axis slider



Detail view of slot in bottom face of X-axis base



Detail view of X-axis installation

Dimensions by Stroke

X: Nominal stroke	200	250	300	350	400	450	500	550	600
X: Effective stroke	50	100	150	200	250	300	350	400	450
B	140	190	240	290	340	390	440	490	540
C	140	190	40	90	140	190	40	90	140
D	8	8	12	12	12	12	16	16	16
M	1	1	2	2	2	2	3	3	3
N	1	1	2	2	2	2	3	3	3
G	197	222	247	272	297	322	347	372	397

Controllers

Applicable controller

Refer to P. 91 for the controllers.

IK2-PXBD2□□S

RCP2 2-axis Combinations X axis: SS7C (Straight, Single-slider)
Y axis: SA5R (Reversed)

Model Details Series: IK2 Type: PXBD2□□S Encoder type: I: Incremental Axis 1 (X axis): □ Axis 2 (Y axis): □ Controllers: P1 Cable: □ Shipping configuration: □

Combination directions 1-4

Differences between Single-slider and Double-slider Types
 HH: X high-speed, Y high-speed
 HM: X high-speed, Y medium-speed

Encoder type I: Incremental

Stroke (mm) 5: 50mm
 ? (Can be set in 50-mm increments)

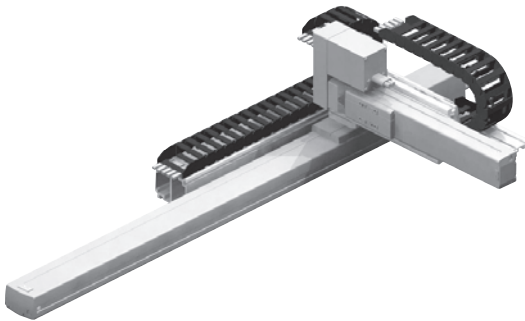
Options
 NM: Opposite-home specification
 SR: Slider roller specification

Cable length
 1L: 1m
 3L: 3m
 5L: 5m
 □L: □m

Wiring 1 N: Cable only
Wiring 2 CT: With cable track

Shipping configuration
 K: Individual components (kit)
 A: Assembled

* Refer to P.10 for details on the items comprising the model name.



Maximum Stroke

X axis 600 mm Y axis 200 mm

Axis 2 (High-speed type)

X axis 400 mm/s Y axis 600 mm/s

Maximum Load Capacity

Y-axis stroke	X high-speed, Y high-speed	X high-speed, Y medium-speed
50mm	3.0kg	6.0kg
100mm	3.0kg	6.0kg
150mm	2.5kg	5.0kg
200mm	2.5kg	5.0kg

Both wiring 1 and wiring 2 assume use of a cable track.

List by Stroke

		Incremental			
Y-axis stroke		50	100	150	200
X-axis stroke	50	-	-	-	-
	100	-	-	-	-
	150	-	-	-	-
	200	-	-	-	-
	250	-	-	-	-
	300	-	-	-	-
	350	-	-	-	-
	400	-	-	-	-
	450	-	-	-	-
	500	-	-	-	-
550	-	-	-	-	
600	-	-	-	-	

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.
 * Refer to P.90 for lengths other than those specified above.

Cable track

	X-axis stroke	50-300	350-600
Wiring 1 (Next to X-axis)	Y-axis stroke	-	-
Wiring 2 (Next to Y-axis)	X-axis stroke	50-200	-
	Y-axis stroke	-	-

List of Options

Name	Option code	
Opposite-home specification	NM	
Slider roller specification	SR	Axis 1 (X-axis) Axis 2 (Y-axis)

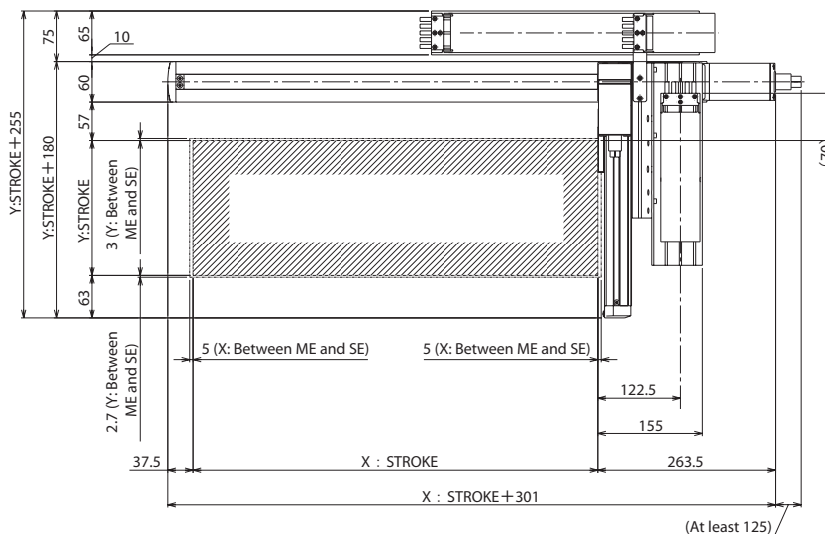
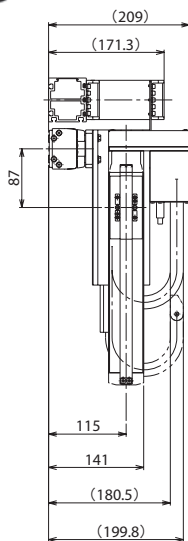
Specifications

Item	X axis	Y axis
Axis model	RCP2-SS7C	RCP2-SA5R
Stroke (Can be set in 50-mm increments)	50-600mm	50-200mm
Axis 2	HH type: 400mm/s HM type: 350mm/s	High-speed type: 600mm/s Medium-speed type: 300mm/s
Motor size	42-square pulse motor	
Ball screw lead	High-speed type: 12mm	High-speed type: 12mm Medium-speed type: 6mm
Drive method	Ball screw, ø10 mm, rolled, C10	
Positioning repeatability	±0.02mm	
Base material	Dedicated alloy steel	Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

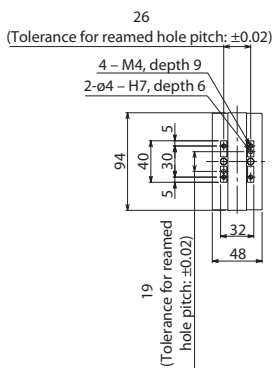
Dimensions

You can download CAD drawings from our website. www.intelligentactuator.com

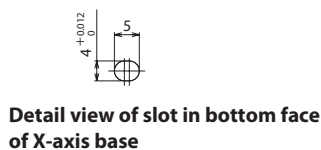
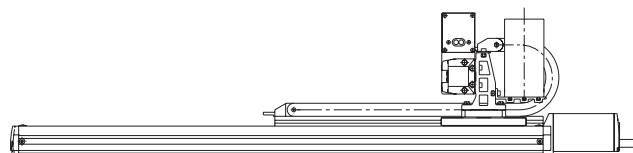
2D
CAD



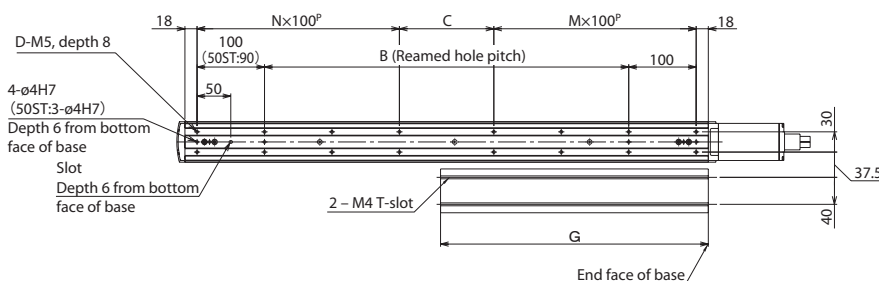
ME: Mechanical end
SE: Stroke end



Detail view of Y-axis slider



Detail view of slot in bottom face of X-axis base



Detail view of X-axis installation

■ Dimensions by Stroke

X: Model	50	100	150	200	250	300	350	400	450	500	550	600
B	0	40	90	140	190	240	290	340	390	440	490	540
C	90	40	90	140	190	40	90	140	190	40	90	140
D	6	8	8	8	8	12	12	12	12	16	16	16
M	1	1	1	1	1	2	2	2	2	3	3	3
N	0	1	1	1	1	2	2	2	2	3	3	3
G	122	147	172	197	222	247	272	297	322	347	372	397

Controllers

Applicable controller

Refer to P. 91 for the controllers.

IK2-PXBD2□□D

RCP2 2-axis Combinations X axis: SS7C (Straight, Double-slider)
Y axis: SA5R (Reversed)

Model Details Series — Type — Encoder type — Axis 1 (X axis) — Axis 2 (Y axis) — Controllers — Cable — Shipping configuration

IK2 — **PXBD2**□□**D** — □ — □ — □ — □ — **P1** — □ — □ — □ — □

Combination directions 1-4

Differences between Single-slider and Double-slider Types
 HH: X high-speed, Y high-speed
 HM: X high-speed, Y medium-speed

Encoder type I: Incremental

Stroke (mm) 5: 50mm
 ? (Can be set in 50-mm increments)

Options
 NM: Opposite-home specification
 SR: Slider roller specification

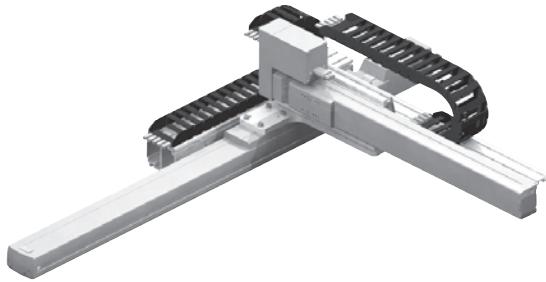
Cable length
 1L: 1m
 3L: 3m
 5L: 5m
 □L: □m

Wiring 1 N: Cable only

Wiring 2 CT: With cable track

Shipping configuration
 K: Individual components (kit)
 A: Assembled

* Refer to P.10 for details on the items comprising the model name.



Maximum Stroke

X axis 450 mm Y axis 400 mm

Axis 2 (High-speed type)

X axis 400 mm/s Y axis 600 mm/s

Maximum Load Capacity

Y-axis stroke	X high-speed, Y high-speed	X high-speed, Y medium-speed
250mm	2.5kg	5.0kg
300mm	2.0kg	4.0kg
350mm	2.0kg	4.0kg
400mm	2.0kg	4.0kg

Both wiring 1 and wiring 2 assume use of a cable track.

List by Stroke

		Incremental			
Y-axis stroke		250	300	350	400
X-axis stroke	50	-	-	-	-
	100	-	-	-	-
	150	-	-	-	-
	200	-	-	-	-
	250	-	-	-	-
	300	-	-	-	-
	350	-	-	-	-
	400	-	-	-	-
	450	-	-	-	-

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.
 * Refer to P. 90 for lengths other than those specified above.

Cable track

	X-axis stroke	50-300	350-450
Wiring 1 (Next to X-axis)	Y-axis stroke	-	-
Wiring 2 (Next to Y-axis)	X-axis stroke	250-400	-
	Y-axis stroke	-	-

List of Options

Name	Option code	
Opposite-home specification	NM	
Slider roller specification	SR	Axis 1 (X-axis) Axis 2 (Y-axis)

Specifications

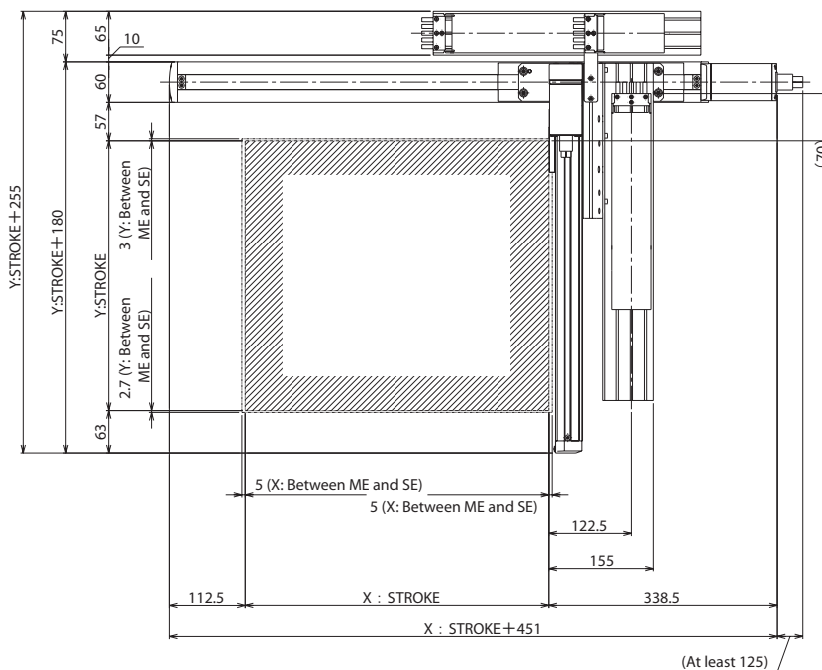
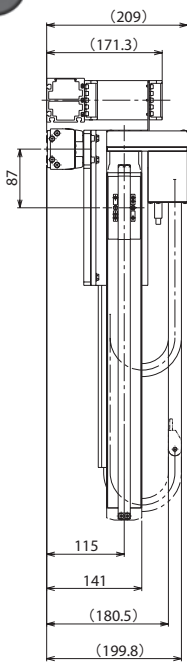
Item	X axis	Y axis
Axis model	RCP2-SS7C	RCP2-SA5R
Stroke (Can be set in 50-mm increments)	50-450mm	250-400mm
Axis 2	HH type: 400mm/s HM type: 350mm/s	High-speed type: 600mm/s Medium-speed type: 300mm/s
Motor size	42-square pulse motor	
Ball screw lead	High-speed type: 12mm	High-speed type: 12mm Medium-speed type: 6mm
Drive method	Ball screw, ø10 mm, rolled, C10	
Positioning repeatability	±0.02mm	
Base material	Dedicated alloy steel	Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

Dimensions

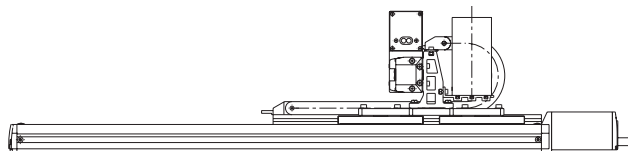
You can download CAD drawings from our website. www.intelligentactuator.com



Note 1. The connected position shown in the drawing defines the home.
 Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
 Note 3. For details on the cable track, refer to P.90.
 Note 4. For details on the bracket on the moving end of the cable track, refer to P.90.

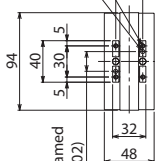


ME: Mechanical end
 SE: Stroke end



26
 (Tolerance for reamed hole pitch: ±0.02)

4 – M4, depth 9
 2-ø4 – H7, depth 6

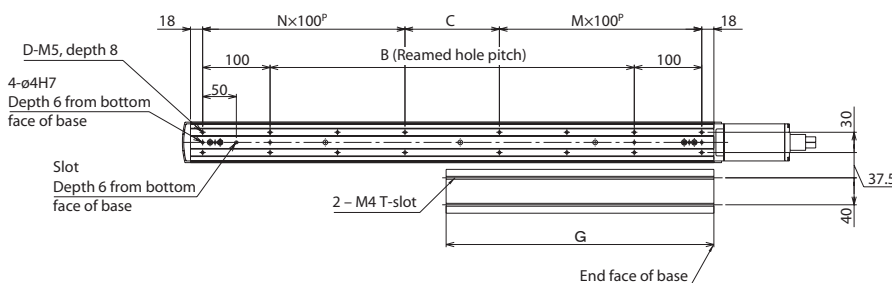


19
 (Tolerance for reamed hole pitch: ±0.02)

Detail view of Y-axis slider



Detail view of slot in bottom face of X-axis base



Detail view of X-axis installation

■ Dimensions by Stroke

X: Nominal stroke	200	250	300	350	400	450	500	550	600
X: Effective stroke	50	100	150	200	250	300	350	400	450
B	140	190	240	290	340	390	440	490	540
C	140	190	40	90	140	190	40	90	140
D	8	8	12	12	12	12	16	16	16
M	1	1	2	2	2	2	3	3	3
N	1	1	2	2	2	2	3	3	3
G	197	222	247	272	297	322	347	372	397

Controllers

Applicable controller

Refer to P. 91 for the controllers.

IK2-PXBC1□□S

RCP2 2-axis Combinations X axis: SS7R (Reversed, Single-slider)
Y axis: SA5R (Reversed)

Model Details Series: IK2 Type: PXBC1□□S Encoder type: I: Incremental Axis 1 (X axis): □ Axis 2 (Y axis): □ Controllers: P1 Cable: □ Wiring 1: □ Wiring 2: □ Shipping configuration: □

Combination directions 1-2

Differences between Single-slider and Double-slider Types
 HH: X high-speed, Y high-speed
 HM: X high-speed, Y medium-speed

Encoder type I: Incremental

Stroke (mm) 5: 50mm
 ? (Can be set in 50-mm increments)

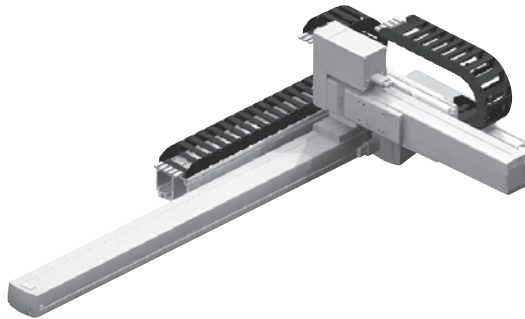
Options
 NM: Opposite-home specification
 SR: Slider roller specification

Cable length
 1L: 1m
 3L: 3m
 5L: 5m
L: m

Wiring 1 N: Cable only
Wiring 2 CT: With cable track

Shipping configuration
 K: Individual components (kit)
 A: Assembled

* Refer to P.10 for details on the items comprising the model name.



Both wiring 1 and wiring 2 assume use of a cable track.

Maximum Stroke

X axis 600 mm Y axis 200 mm

Axis 2 (High-speed type)

X axis 400 mm/s Y axis 600 mm/s

Maximum Load Capacity

Y-axis stroke	X high-speed, Y high-speed	X high-speed, Y medium-speed
50mm	4.5kg	9.0kg
100mm	4.5kg	9.0kg
150mm	4.0kg	8.0kg
200mm	3.0kg	6.0kg

List by Stroke

		Incremental			
Y-axis stroke		50	100	150	200
X-axis stroke	50	-	-	-	-
	100	-	-	-	-
	150	-	-	-	-
	200	-	-	-	-
	250	-	-	-	-
	300	-	-	-	-
	350	-	-	-	-
	400	-	-	-	-
	450	-	-	-	-
	500	-	-	-	-
550	-	-	-	-	
600	-	-	-	-	

List of by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.
 * Refer to P.90 for lengths other than those specified above.

Cable track

	X-axis stroke	50-300	350-600
Wiring 1 (Next to X-axis)	Y-axis stroke	-	-
Wiring 2 (Next to Y-axis)	X-axis stroke	50-200	-

List of Options

Name	Option code	
Opposite-home specification	NM	
Slider roller specification	SR	Axis 1 (X-axis) Axis 2 (Y-axis)

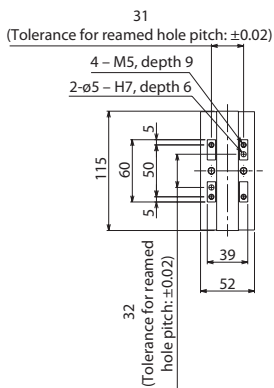
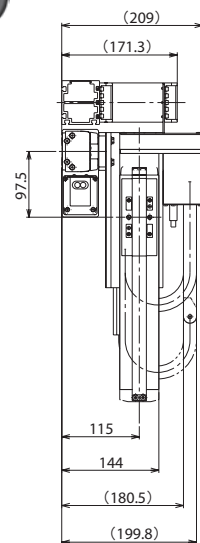
Specifications

Item	X axis	Y axis
Axis model	RCP2-SS7R	RCP2-SA6R
Stroke (Can be set in 50-mm increments)	50-600mm	50-200mm
Axis 2	HH type: 400mm/s HM type: 250mm/s	High-speed type: 600mm/s Medium-speed type: 300mm/s
Motor size	42-square pulse motor	
Ball screw lead	High-speed type: 12mm	High-speed type: 12mm Medium-speed type: 6mm
Drive method	Ball screw, ø10 mm, rolled, C10	
Positioning repeatability	±0.02mm	
Base material	Dedicated alloy steel	Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

Dimensions

You can download CAD drawings from our website. www.intelligentactuator.com

2D
CAD

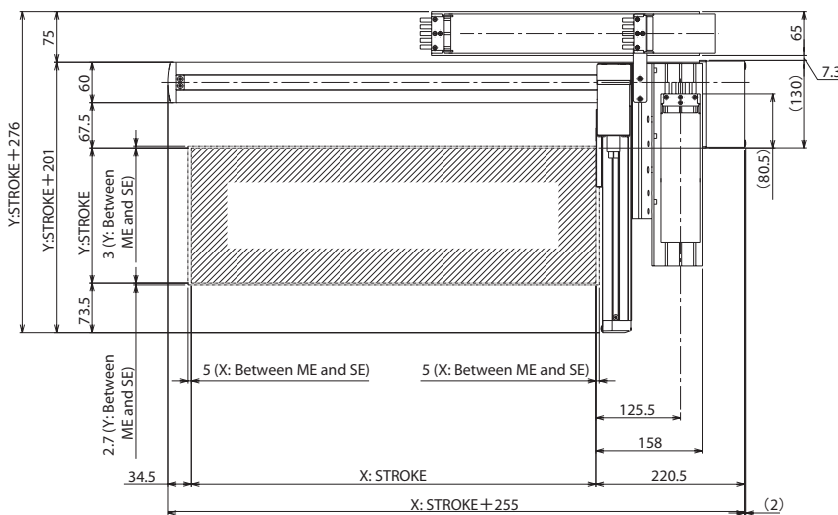


Detail view of Y-axis slider

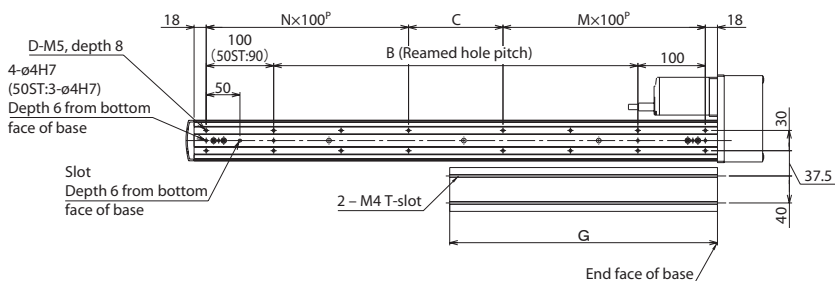
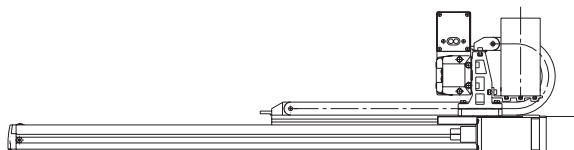


Detail view of slot in bottom face of X-axis base

Note 1. The connected position shown in the drawing defines the home.
Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
Note 3. For details on the cable track, refer to P.90.
Note 4. For details on the bracket on the moving end of the cable track, refer to P.90.



ME: Mechanical end
SE: Stroke end



Detail view of X-axis installation

■ Dimensions by Stroke

X: Model	50	100	150	200	250	300	350	400	450	500	550	600
B	0	40	90	140	190	240	290	340	390	440	490	540
C	90	40	90	140	190	40	90	140	190	40	90	140
D	6	8	8	8	8	12	12	12	12	16	16	16
M	1	1	1	1	1	2	2	2	2	3	3	3
N	0	1	1	1	1	2	2	2	2	3	3	3
G	122	147	172	197	222	247	272	297	322	347	372	397

Controllers

Applicable controller



Refer to P. 91 for the controllers.

IK2-PXBC1□□D

RCP2 2-axis Combinations X axis: SS7R (Reversed, Double-slider)
Y axis: SA5R (Reversed)

Model Details Series — Type — Encoder type — Axis 1 (X axis) — Axis 2 (Y axis) — Controllers — Cable — Shipping configuration

IK2 — **PXBC1**□□**D** — — — — — **P1** — — — —

Combination directions 1-2

Differences between Single-slider and Double-slider Types
 HH: X high-speed, Y high-speed
 HM: X high-speed, Y medium-speed

Encoder type
I: Incremental

Stroke (mm)
5: 50mm
? (Can be set in 50-mm increments)

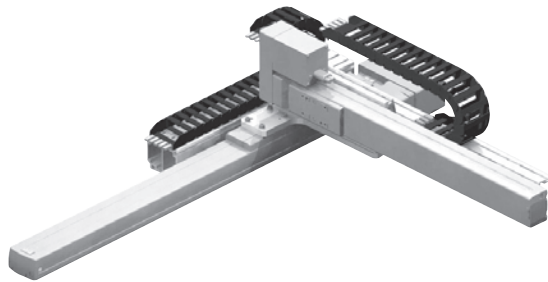
Options
 NM: Opposite-home specification
 SR: Slider roller specification

Cable length
 1L: 1m
 3L: 3m
 5L: 5m
L: m

Wiring 1 N: Cable only
Wiring 2 CT: With cable track

Shipping configuration
 K: Individual components (kit)
 A: Assembled

* Refer to P.10 for details on the items comprising the model name.



Maximum Stroke

X axis 450 mm **Y axis** 400 mm

Axis 2 (High-speed type)

X axis 400 mm/s **Y axis** 600 mm/s

Maximum Load Capacity

Y-axis stroke	X high-speed, Y high-speed	X high-speed, Y medium-speed
250mm	3.0kg	6.0kg
300mm	3.0kg	6.0kg
350mm	3.0kg	6.0kg
400mm	3.0kg	6.0kg

Both wiring 1 and wiring 2 assume use of a cable track.

List by Stroke

		Incremental			
Y-axis stroke		250	300	350	400
X-axis stroke	50	-	-	-	-
	100	-	-	-	-
	150	-	-	-	-
	200	-	-	-	-
	250	-	-	-	-
	300	-	-	-	-
	350	-	-	-	-
	400	-	-	-	-
	450	-	-	-	-

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.
 * Refer to P.90 for lengths other than those specified above.

Cable track

Wiring 1 (Next to X-axis)	X-axis stroke	50-300	350-450
		Y-axis stroke	250-400
Wiring 2 (Next to Y-axis)			

List of Options

Name	Option code	
Opposite-home specification	NM	
Slider roller specification	SR	Axis 1 (X-axis) Axis 2 (Y-axis)

Specifications

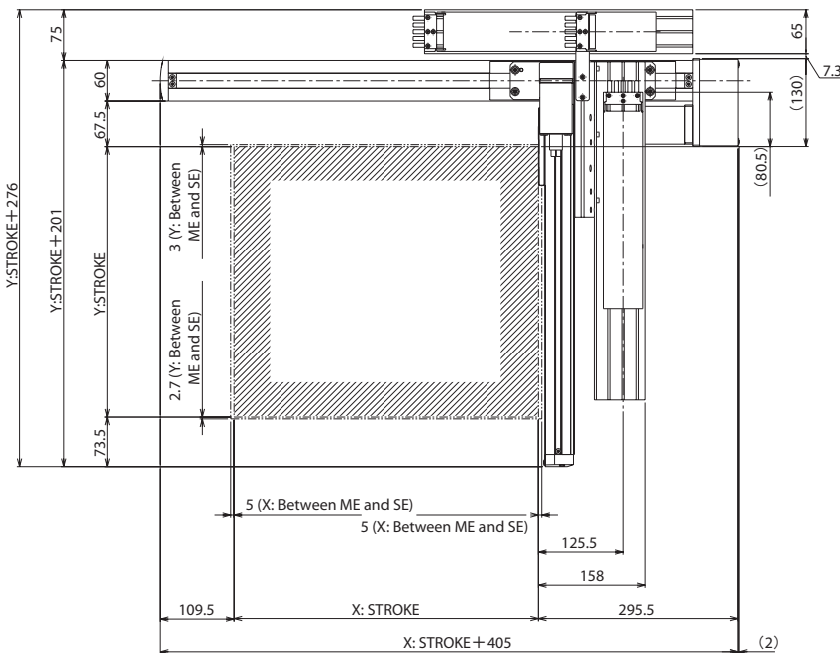
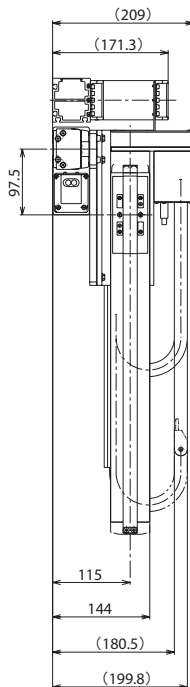
Item	X axis	Y axis
Axis model	RCP2-SS7R	RCP2-SA6R
Stroke (Can be set in 50-mm increments)	50-450mm	250-400mm
Axis 2	HH type: 400mm/s HM type: 250mm/s	High-speed type: 600mm/s Medium-speed type: 300mm/s
Motor size	42-square pulse motor	
Ball screw lead	High-speed type: 12mm	High-speed type: 12mm Medium-speed type: 6mm
Drive method	Ball screw, ø10 mm, rolled, C10	
Positioning repeatability	±0.02mm	
Base material	Dedicated alloy steel	Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

Dimensions

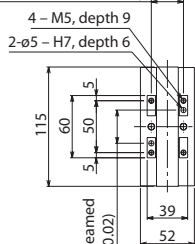
You can download CAD drawings from our website. www.intelligentactuator.com

2D
CAD

Note 1. The connected position shown in the drawing defines the home.
 Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
 Note 3. For details on the cable track, refer to P.90.
 Note 4. For details on the bracket on the moving end of the cable track, refer to P.90.



31
(Tolerance for reamed hole pitch: ±0.02)

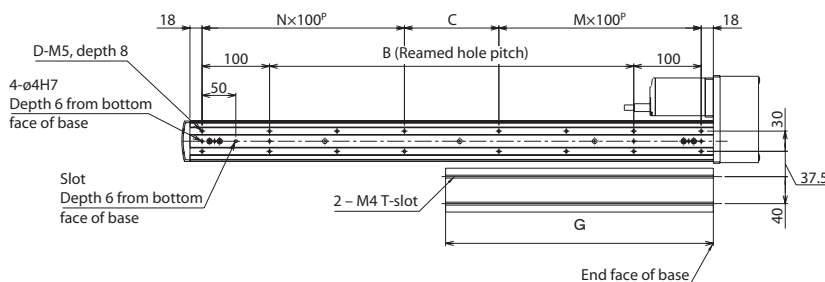
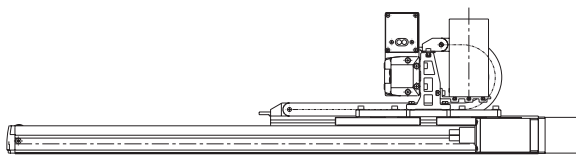


Detail view of Y-axis slider



Detail view of slot in bottom face of X-axis base

ME: Mechanical end
 SE: Stroke end



Detail view of X-axis installation

Dimensions by Stroke

X: Nominal stroke	200	250	300	350	400	450	500	550	600
X: Effective stroke	50	100	150	200	250	300	350	400	450
B	140	190	240	290	340	390	440	490	540
C	140	190	40	90	140	190	40	90	140
D	8	8	12	12	12	12	16	16	16
M	1	1	2	2	2	2	3	3	3
N	1	1	2	2	2	2	3	3	3
G	197	222	247	272	297	322	347	372	397

Controllers

Applicable controller

Refer to P. 91 for the controllers.

IK2-PXBC2□□S

RCP2 2-axis Combinations X axis: SS7C (Straight, Single-slider)
Y axis: SA6R (Reversed)

Model Details

Series: IK2 Type: PXBC2□□S Encoder type: I: Incremental Axis 1 (X axis): □ Axis 2 (Y axis): □ Controllers: P1 Cable: □ Shipping configuration: □

Combination directions 1-4
Differences between Single-slider and Double-slider Types
HH: X high-speed, Y high-speed
HM: X high-speed, Y medium-speed

Encoder type I: Incremental

Stroke (mm)
5: 50mm
? (Can be set in 50-mm increments)

Options
NM: Opposite-home specification
SR: Slider roller specification

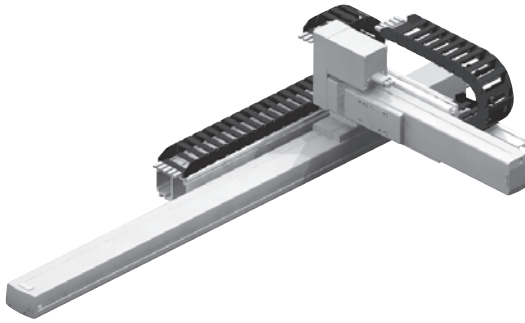
Cable length
1L: 1m
3L: 3m
5L: 5m
□L: □m

Wiring 1
N: Cable only

Wiring 2
CT: With cable track

Shipping configuration
K: Individual components (kit)
A: Assembled

* Refer to P.10 for details on the items comprising the model name.



Both wiring 1 and wiring 2 assume use of a cable track.

Maximum Stroke

X axis 600 mm Y axis 200 mm

Axis 2 (High-speed type)

X axis 400 mm/s Y axis 600 mm/s

Maximum Load Capacity

Y-axis stroke	X high-speed, Y high-speed	X high-speed, Y medium-speed
50mm	4.5kg	9.0kg
100mm	4.5kg	9.0kg
150mm	4.0kg	8.0kg
200mm	3.0kg	6.0kg

List by Stroke

		Incremental			
Y-axis stroke		50	100	150	200
X-axis stroke	50	-	-	-	-
	100	-	-	-	-
	150	-	-	-	-
	200	-	-	-	-
	250	-	-	-	-
	300	-	-	-	-
	350	-	-	-	-
	400	-	-	-	-
	450	-	-	-	-
	500	-	-	-	-
550	-	-	-	-	
600	-	-	-	-	

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.
* Refer to P.90 for lengths other than those specified above.

Cable track

	X-axis stroke	50-300	350-600
Wiring 1 (Next to X-axis)	Y-axis stroke	-	-
Wiring 2 (Next to Y-axis)	X-axis stroke	50-200	-

List of Options

Name	Option code	
Opposite-home specification	NM	
Slider roller specification	SR	Axis 1 (X-axis) Axis 2 (Y-axis)

Specifications

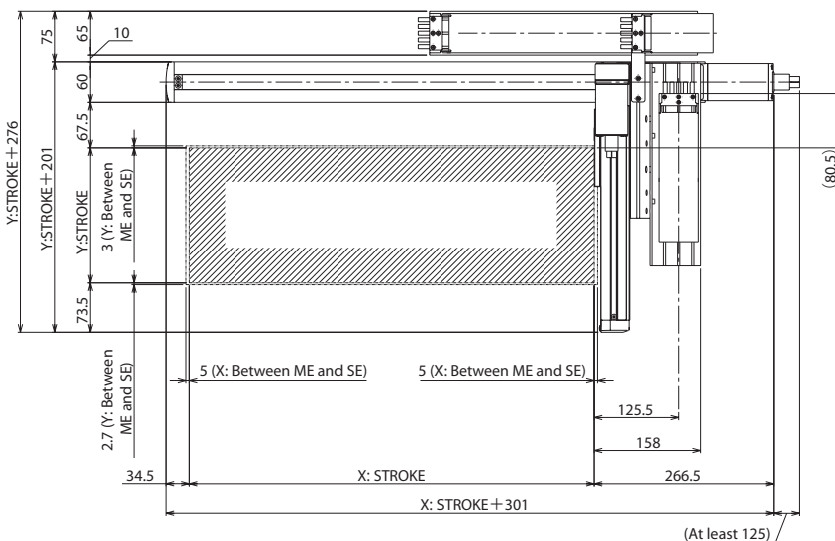
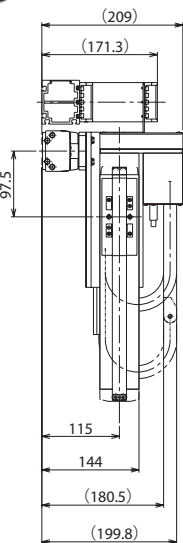
Item	X axis	Y axis
Axis model	RCP2-SS7C	RCP2-SA6R
Stroke (Can be set in 50-mm increments)	50-600mm	50-200mm
Axis 2	HH type: 400mm/s HM type: 250mm/s	High-speed type: 600mm/s Medium-speed type: 300mm/s
Motor size	42-square pulse motor	
Ball screw lead	High-speed type: 12mm	High-speed type: 12mm Medium-speed type: 6mm
Drive method	Ball screw, ø10 mm, rolled, C10	
Positioning repeatability	±0.02mm	
Base material	Dedicated alloy steel	Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

Dimensions

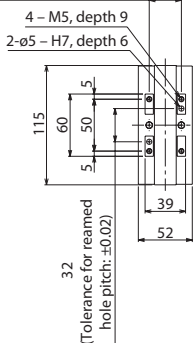
You can download CAD drawings from our website. www.intelligentactuator.com

2D
CAD

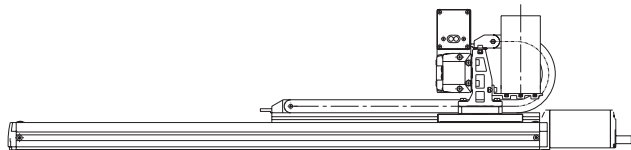
Note 1. The connected position shown in the drawing defines the home.
 Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
 Note 3. For details on the cable track, refer to P.90.
 Note 4. For details on the bracket on the moving end of the cable track, refer to P.90.



31
(Tolerance for reamed hole pitch: ±0.02)

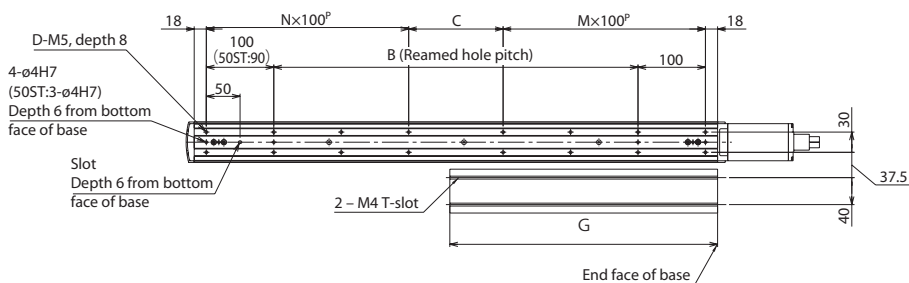


ME: Mechanical end
 SE: Stroke end



Detail view of Y-axis slider

Detail view of slot in bottom face of X-axis base



Detail view of X-axis installation

■ Dimensions by Stroke

X: Model	50	100	150	200	250	300	350	400	450	500	550	600
B	0	40	90	140	190	240	290	340	390	440	490	540
C	90	40	90	140	190	40	90	140	190	40	90	140
D	6	8	8	8	8	12	12	12	12	16	16	16
M	1	1	1	1	1	2	2	2	2	3	3	3
N	0	1	1	1	1	2	2	2	2	3	3	3
G	122	147	172	197	222	247	272	297	322	347	372	397

Controllers

Applicable controller

Refer to P. 91 for the controllers.

IK2-PXBC2□□D

RCP2 2-axis Combinations X axis: SS7C (Straight, Double-slider)
Y axis: SA6R (Reversed)

Model Details Series — Type — Encoder type — Axis 1 (X axis) — Axis 2 (Y axis) — Controllers — Cable — Shipping configuration

IK2 — **PXBC2**□□**D** — — — — — **P1** — — — —

Combination directions 1-4
Differences between Single-slider and Double-slider Types
HH: X high-speed, Y high-speed
HM: X high-speed, Y medium-speed

Encoder type I: Incremental

Stroke (mm) 5: 50mm
? (Can be set in 50-mm increments)

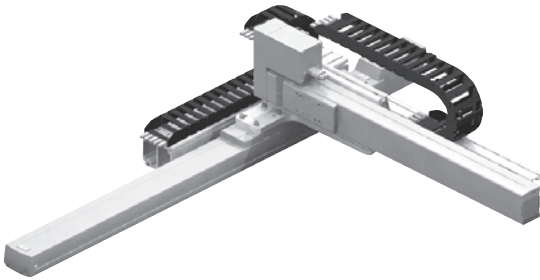
Options NM: Opposite-home specification
SR: Slider roller specification

Cable length 1L: 1m
3L: 3m
5L: 5m
L: □m

Wiring 1 N: Cable only
Wiring 2 CT: With cable track

Shipping configuration K: Individual components (kit)
A: Assembled

* Refer to P.10 for details on the items comprising the model name.



Maximum Stroke

X axis 450 mm **Y axis** 400 mm

Axis 2 (High-speed type)

X axis 400 mm/s **Y axis** 600 mm/s

Maximum Load Capacity

Y-axis stroke	X high-speed, Y high-speed	X high-speed, Y medium-speed
250mm	3.0kg	6.0kg
300mm	3.0kg	6.0kg
350mm	3.0kg	6.0kg
400mm	3.0kg	6.0kg

Both wiring 1 and wiring 2 assume use of a cable track.

List by Stroke

		Incremental			
Y-axis stroke		250	300	350	400
X-axis stroke	50	-	-	-	-
	100	-	-	-	-
	150	-	-	-	-
	200	-	-	-	-
	250	-	-	-	-
	300	-	-	-	-
	350	-	-	-	-
	400	-	-	-	-
	450	-	-	-	-

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.
* Refer to P. 90 for lengths other than those specified above.

Cable track

Wiring 1 (Next to X-axis)	X-axis stroke	50-300	350-450
		Y-axis stroke	250-400
Wiring 2 (Next to Y-axis)			

List of Options

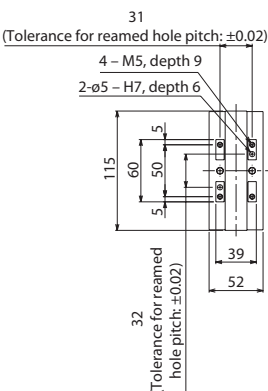
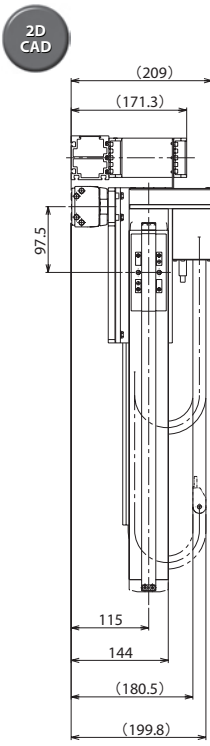
Name	Option code	
Opposite-home specification	NM	
Slider roller specification	SR	Axis 1 (X-axis) Axis 2 (Y-axis)

Specifications

Item	X axis	Y axis
Axis model	RCP2-SS7C	RCP2-SA6R
Stroke (Can be set in 50-mm increments)	50-450mm	250-400mm
Axis 2	HH type: 400mm/s HM type: 250mm/s	High-speed type: 600mm/s Medium-speed type: 300mm/s
Motor size	42-square pulse motor	
Ball screw lead	High-speed type: 12mm	High-speed type: 12mm Medium-speed type: 6mm
Drive method	Ball screw, ø10 mm, rolled, C10	
Positioning repeatability	±0.02mm	
Base material	Dedicated alloy steel	Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

Dimensions

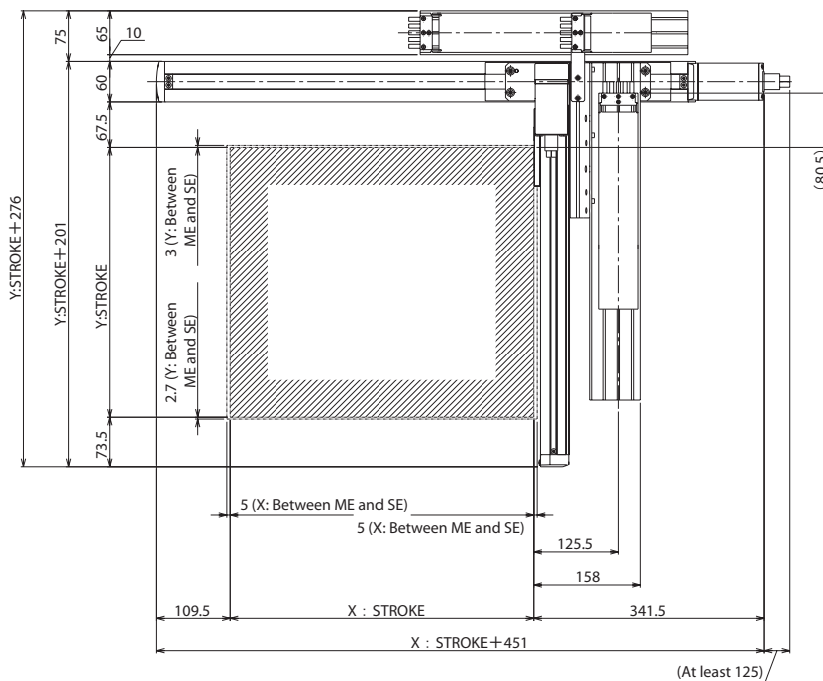
You can download CAD drawings from our website. www.intelligentactuator.com



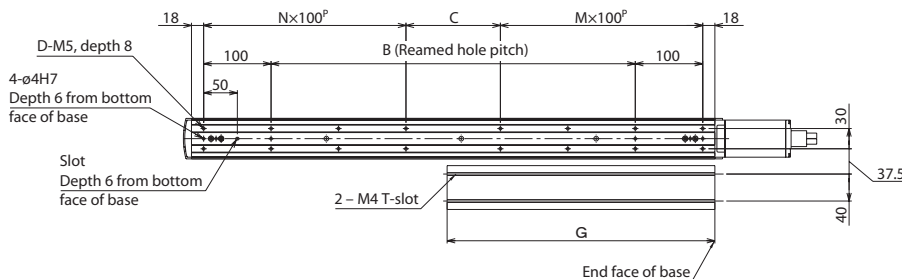
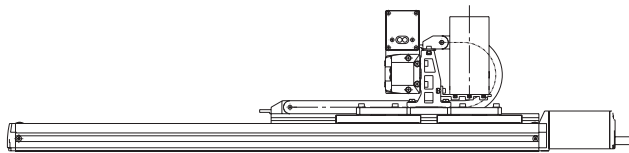
Detail view of Y-axis slider



Detail view of slot in bottom face of X-axis base



ME: Mechanical end
SE: Stroke end



Detail view of X-axis installation

■ Dimensions by Stroke

X: Nominal stroke	200	250	300	350	400	450	500	550	600
X: Effective stroke	50	100	150	200	250	300	350	400	450
B	140	190	240	290	340	390	440	490	540
C	140	190	40	90	140	190	40	90	140
D	8	8	12	12	12	12	16	16	16
M	1	1	2	2	2	2	3	3	3
N	1	1	2	2	2	2	3	3	3
G	197	222	247	272	297	322	347	372	397

Controllers

Applicable controller

Refer to P. 91 for the controllers.

IK2-PXBB1□□S

RCP2 2-axis Combinations X axis: SS8R (Reversed, Single-slider)
Y axis: SA7R (Reversed)

Model Details Series — Type — Encoder type — Axis 1 (X axis) — Axis 2 (Y axis) — Controllers — Cable — Shipping configuration

IK2 — **PXBB1**□□**S** — □ — □ — □ — □ — **P1** — □ — □ — □ — □

Combination directions 1-2

Differences between Single-slider and Double-slider Types
 HH: X high-speed, Y high-speed
 MM: X medium-speed, Y medium-speed

Encoder type
I: Incremental

Stroke (mm)
S: 50mm
{
(Can be set in 50-mm increments)

Options
 NM: Opposite-home specification
 SR: Slider roller specification

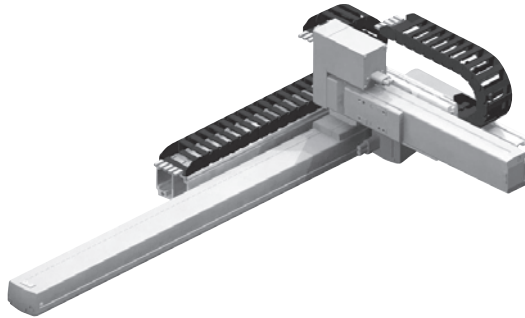
Cable length
 1L: 1m
 3L: 3m
 5L: 5m
 □L: □m

Wiring 1 N: Cable only

Wiring 2 CT: With cable track

Shipping configuration
 K: Individual components (kit)
 A: Assembled

* Refer to P.10 for details on the items comprising the model name.



Maximum Stroke

X axis 1000 mm Y axis 300 mm

Axis 2 (High-speed type)

X axis 250 mm/s Y axis 450 mm/s

Maximum Load Capacity

Y-axis stroke	X high-speed, Y high-speed	X medium-speed, Y medium-speed
50mm	8.0kg	16kg
100mm	8.0kg	16kg
150mm	7.0kg	15kg
200mm	7.0kg	12.5kg
250mm	6.0kg	9.0kg
300mm	6.0kg	8.0kg

Both wiring 1 and wiring 2 assume use of a cable track.

List by Stroke

		Incremental					
Y-axis stroke		50	100	150	200	250	300
X-axis stroke	50	-	-	-	-	-	-
	100	-	-	-	-	-	-
	150	-	-	-	-	-	-
	200	-	-	-	-	-	-
	250	-	-	-	-	-	-
	300	-	-	-	-	-	-
	350	-	-	-	-	-	-
	400	-	-	-	-	-	-
	450	-	-	-	-	-	-
	500	-	-	-	-	-	-
	550	-	-	-	-	-	-
	600	-	-	-	-	-	-
	650	-	-	-	-	-	-
	700	-	-	-	-	-	-
	750	-	-	-	-	-	-
	800	-	-	-	-	-	-
	850	-	-	-	-	-	-
900	-	-	-	-	-	-	
950	-	-	-	-	-	-	
1000	-	-	-	-	-	-	

Cable track

	X-axis stroke	50-300	350-600	650-900	950-1000
Wiring 1 (Next to X-axis)	X-axis stroke	50-300	350-600	650-900	950-1000
Wiring 2 (Next to Y-axis)	Y-axis stroke	50-200	250-300	-	-

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.
 * Refer to P.90 for lengths other than those specified above.

List of Options

Name	Option code	
Opposite-home specification	NM	
Slider roller specification	SR	Axis 1 (X-axis) Axis 2 (Y-axis)

Specifications

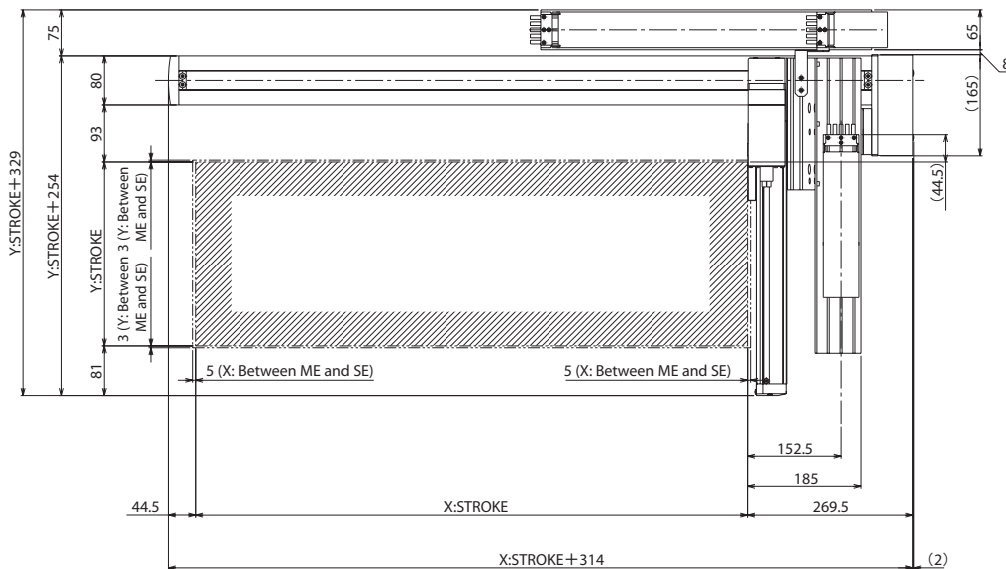
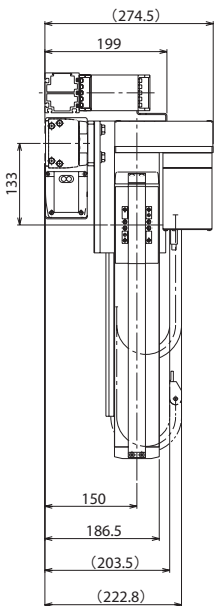
Item	X axis	Y axis
Axis model	RCP2-SS8R	RCP2-SA7R
Stroke (Can be set in 50-mm increments)	50-1000mm	50-300mm
Axis 2	High-speed type: 250mm/s Medium-speed type: 125mm/s	High-speed type: 450mm/s Medium-speed type: 220mm/s
Motor size	56-square pulse motor	
Ball screw lead	High-speed type: 20mm Medium-speed type: 10mm	High-speed type: 16mm Medium-speed type: 8mm
Drive method	Ball screw, ø16mm, rolled, C10	Ball screw, ø12mm, rolled, C10
Positioning repeatability	±0.02mm	
Base material	Dedicated alloy steel	Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

Dimensions

You can download CAD drawings from our website. www.intelligentactuator.com

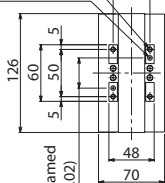


Note 1. The connected position shown in the drawing defines the home.
 Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
 Note 3. For details on the cable track, refer to P.90.
 Note 4. For details on the bracket on the moving end of the cable track, refer to P.90.



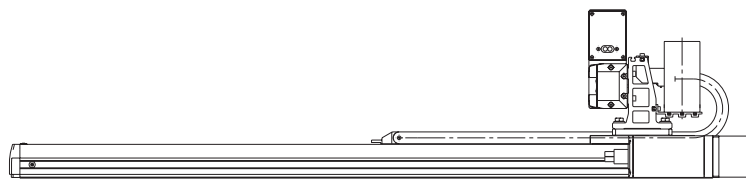
39
 (Tolerance for reamed hole pitch: ±0.02)

4 - M5, depth 10
 2-ø5 - H7, depth 10



32
 (Tolerance for reamed hole pitch: ±0.02)

ME: Mechanical end
 SE: Stroke end



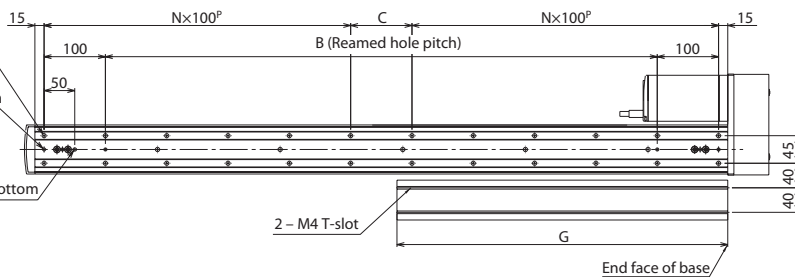
Detail view of Y-axis slider



Detail view of slot in bottom face of X-axis base

D-M8, depth 10
 4-ø 5H7
 Depth 6 from bottom face of base

Slot
 Depth 6 from bottom face of base



Detail view of X-axis installation

Dimensions by Stroke

X: Model	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
B	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
C	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
D	8	8	8	10	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	26
N	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
G	114.5	139.5	164.5	189.5	214.5	239.5	264.5	289.5	314.5	339.5	364.5	389.5	414.5	439.5	464.5	489.5	514.5	539.5	564.5	589.5

Controllers

Applicable controller

Refer to P. 91 for the controllers.

IK2-PXBB1□□D

RCP2 2-axis Combinations X axis: SS8R (Reversed, Double-slider)

Y axis: SA7R (Reversed)

Model Details Series — Type — Encoder type — Axis 1 (X axis) — Axis 2 (Y axis) — Controllers — Cable — Shipping configuration

IK2 — **PXBB1**□□**D** — **I** — □ — □ — □ — □ — **P1** — □ — □ — □ — □

Combination directions
1-2

Differences between Single-slider and Double-slider Types
HH: X high-speed, Y high-speed
MM: X medium-speed, Y medium-speed

Encoder type
I: Incremental

Stroke (mm)
5: 50mm
? (Can be set in 50-mm increments)

Options
NM: Opposite-home specification
SR: Slider roller specification

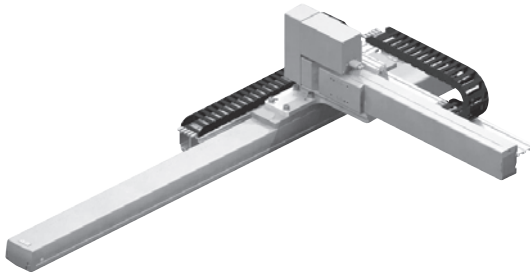
Cable length
1L: 1m
3L: 3m
5L: 5m
□L: □m

Wiring 1
N: Cable only

Wiring 2
CT: With cable track

Shipping configuration
K: Individual components (kit)
A: Assembled

* Refer to P.10 for details on the items comprising the model name.



Both wiring 1 and wiring 2 assume use of a cable track.

Maximum Stroke

X axis 800 mm

Y axis 400 mm

Axis 2 (High-speed type)

X axis 250 mm/s

Y axis 450 mm/s

Maximum Load Capacity

Y-axis stroke	X high-speed, Y high-speed	X medium-speed, Y medium-speed
200mm	—	15kg
250mm	—	12.5kg
300mm	—	12.5kg
350mm	6.0kg	12kg
400mm	5.5kg	10.5kg

List by Stroke

		Incremental				
Y-axis stroke		200	250	300	350	400
X-axis stroke	50	—	—	—	—	—
	100	—	—	—	—	—
	150	—	—	—	—	—
	200	—	—	—	—	—
	250	—	—	—	—	—
	300	—	—	—	—	—
	350	—	—	—	—	—
	400	—	—	—	—	—
	450	—	—	—	—	—
	500	—	—	—	—	—
	550	—	—	—	—	—
	600	—	—	—	—	—
	650	—	—	—	—	—
	700	—	—	—	—	—
	750	—	—	—	—	—
	800	—	—	—	—	—

Note: For the X high-speed/Y high-speed type, the Y-axis stroke must be 350 mm or more.

Cable track

Wiring 1 (Next to X-axis)	X-axis stroke	50-300	350-600	650-800
Wiring 2 (Next to Y-axis)	Y-axis stroke	200	250-400	—

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.

* Refer to P.90 for lengths other than those specified above.

List of Options

Name	Option code	
Opposite-home specification	NM	
Slider roller specification	SR	Axis 1 (X-axis) Axis 2 (Y-axis)

Specifications

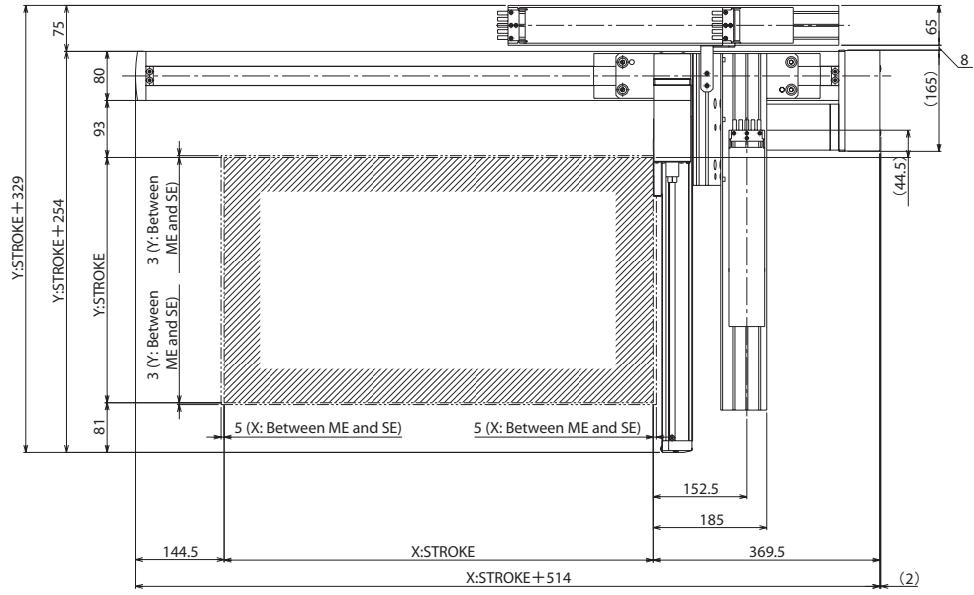
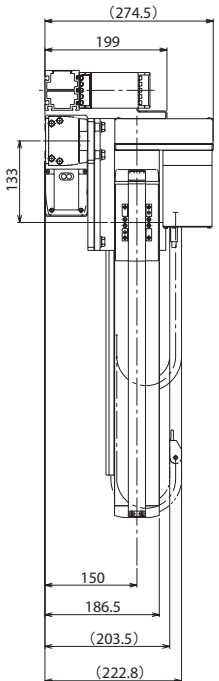
Item	X axis	Y axis
Axis model	RCP2-SS8R	RCP2-SA7R
Stroke (Can be set in 50-mm increments)	50-800mm	350-400mm
Axis 2	High-speed type: 250mm/s Medium-speed type: 125mm/s	High-speed type: 450mm/s Medium-speed type: 220mm/s
Motor size	56-square pulse motor	
Ball screw lead	High-speed type: 20mm Medium-speed type: 10mm	High-speed type: 16mm Medium-speed type: 8mm
Drive method	Ball screw, ø16mm, rolled, C10	Ball screw, ø12mm, rolled, C10
Positioning repeatability	±0.02mm	
Base material	Dedicated alloy steel	Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

Dimensions

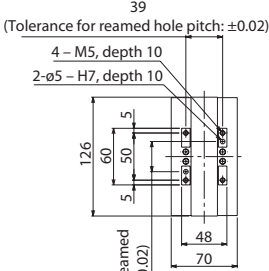
You can download CAD drawings from our website. www.intelligentactuator.com

2D
CAD

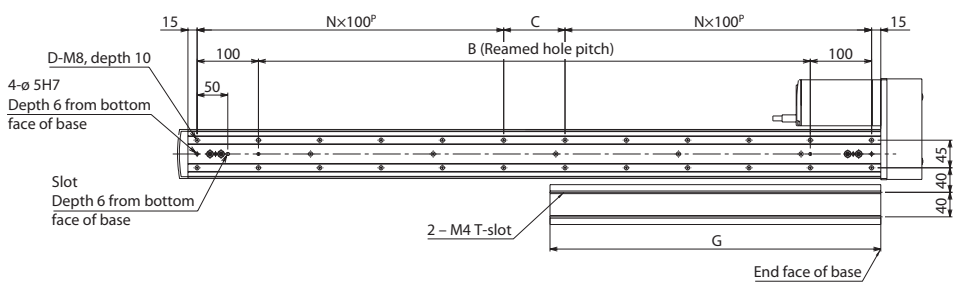
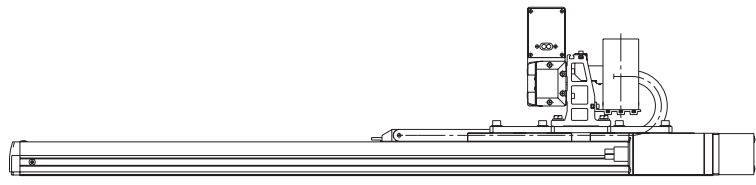
Note 1. The connected position shown in the drawing defines the home.
 Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
 Note 3. For details on the cable track, refer to P.90.
 Note 4. For details on the bracket on the moving end of the cable track, refer to P.90.



ME: Mechanical end
 SE: Stroke end



Detail view of Y-axis slider



Detail view of X-axis installation

Detail view of slot in bottom face of X-axis base

Dimensions by Stroke

X: Nominal stroke	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
X: Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
B	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
C	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
D	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	26
N	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
G	214.5	239.5	264.5	289.5	314.5	339.5	364.5	389.5	414.5	439.5	464.5	489.5	514.5	539.5	564.5	589.5

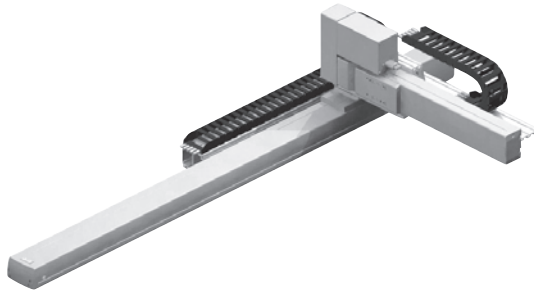
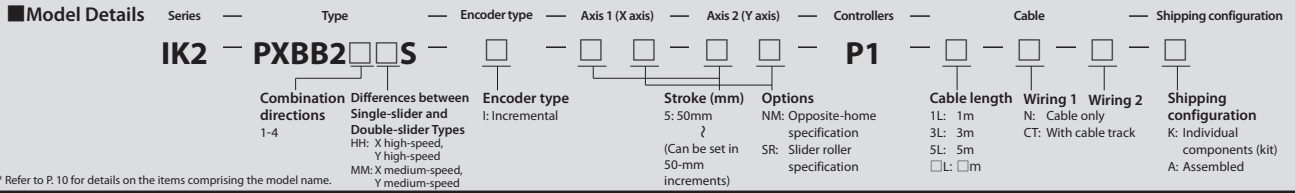
Controllers

Applicable controller

Refer to P. 91 for the controllers.

IK2-PXBB2□□S

RCP2 2-axis Combinations X axis: SS8C (Straight, Single-slider)
Y axis: SA7R (Reversed)



Maximum Stroke

X axis 1000 mm

Y axis 300 mm

Axis 2 (High-speed type)

X axis 250 mm/s

Y axis 450 mm/s

Maximum Load Capacity

Y-axis stroke	X high-speed, Y high-speed	X medium-speed, Y medium-speed
50mm	8.0kg	16kg
100mm	8.0kg	16kg
150mm	7.0kg	15kg
200mm	7.0kg	12.5kg
250mm	6.0kg	9.0kg
300mm	6.0kg	8.0kg

Both wiring 1 and wiring 2 assume use of a cable track.

List by Stroke

		Incremental					
Y-axis stroke		50	100	150	200	250	300
X-axis stroke	50	-	-	-	-	-	-
	100	-	-	-	-	-	-
	150	-	-	-	-	-	-
	200	-	-	-	-	-	-
	250	-	-	-	-	-	-
	300	-	-	-	-	-	-
	350	-	-	-	-	-	-
	400	-	-	-	-	-	-
	450	-	-	-	-	-	-
	500	-	-	-	-	-	-
	550	-	-	-	-	-	-
	600	-	-	-	-	-	-
	650	-	-	-	-	-	-
	700	-	-	-	-	-	-
	750	-	-	-	-	-	-
	800	-	-	-	-	-	-
850	-	-	-	-	-	-	
900	-	-	-	-	-	-	
950	-	-	-	-	-	-	
1000	-	-	-	-	-	-	

Cable track

	X-axis stroke	50-300	350-600	650-900	950-1000
Wiring 1 (Next to X-axis)	X-axis stroke	50-300	350-600	650-900	950-1000
Wiring 2 (Next to Y-axis)	Y-axis stroke	50-200	250-300	-	-

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.
* Refer to P.90 for lengths other than those specified above.

List of Options

Name	Option code	
Opposite-home specification	NM	
Slider roller specification	SR	Axis 1 (X-axis) Axis 2 (Y-axis)

Specifications

Item	X axis	Y axis
Axis model	RCP2-SS8C	RCP2-SA7R
Stroke (Can be set in 50-mm increments)	50-1000mm	50-300mm
Axis 2	High-speed type: 250mm/s Medium-speed type: 125mm/s	High-speed type: 450mm/s Medium-speed type: 220mm/s
Motor size	56-square pulse motor	
Ball screw lead	High-speed type: 20mm Medium-speed type: 10mm	High-speed type: 16mm Medium-speed type: 8mm
Drive method	Ball screw, ø16mm, rolled, C10	Ball screw, ø12mm, rolled, C10
Positioning repeatability	±0.02mm	
Base material	Dedicated alloy steel	Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

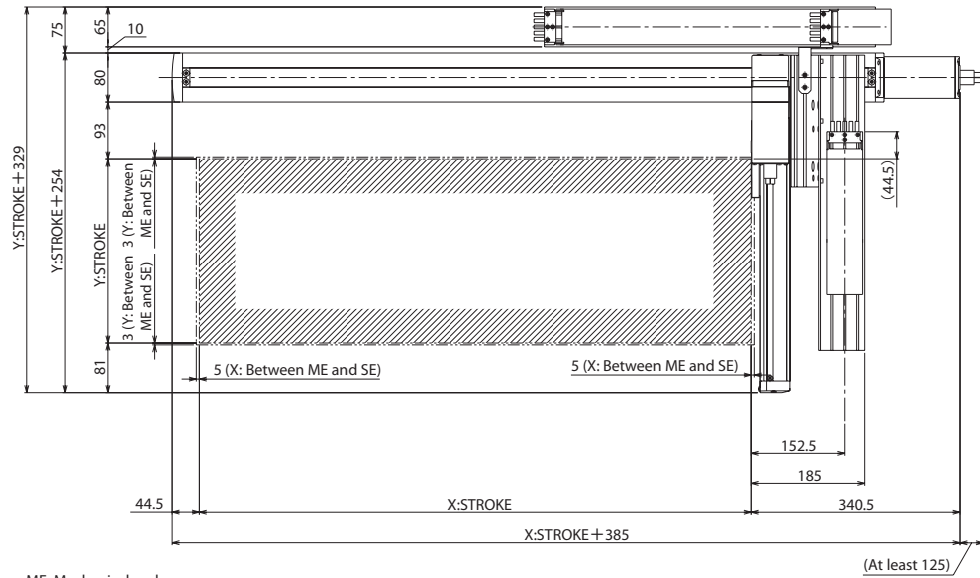
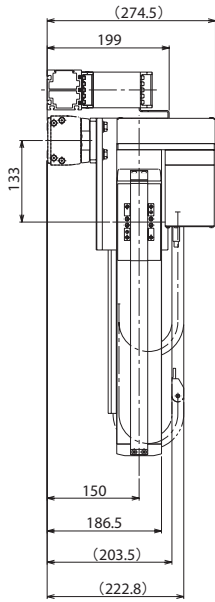
Dimensions

You can download CAD drawings from our website.

www.intelligentactuator.com

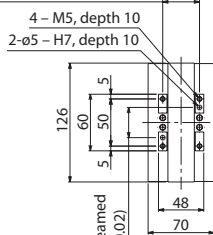
2D
CAD

Note 1. The connected position shown in the drawing defines the home.
 Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
 Note 3. For details on the cable track, refer to P.90.
 Note 4. For details on the bracket on the moving end of the cable track, refer to P.90.



ME: Mechanical end
 SE: Stroke end

39
 (Tolerance for reamed hole pitch: ±0.02)



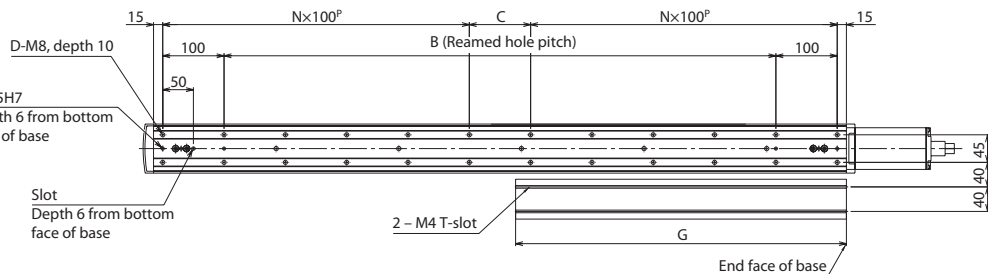
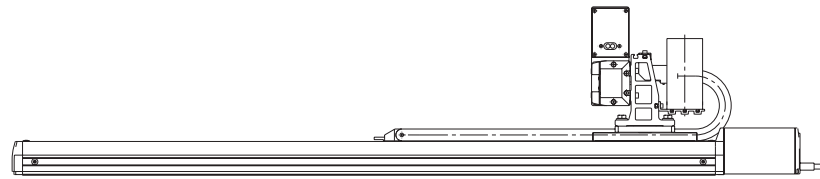
32
 (Tolerance for reamed hole pitch: ±0.02)

Detail view of Y-axis slider



Detail view of slot in bottom face of X-axis base

D-M8, depth 10
 4-ø 5H7
 Depth 6 from bottom face of base
 Slot
 Depth 6 from bottom face of base



Detail view of X-axis installation

Dimensions by Stroke

X: Model	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
B	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
C	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
D	8	8	8	10	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	26
N	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
G	114.5	139.5	164.5	189.5	214.5	239.5	264.5	289.5	314.5	339.5	364.5	389.5	414.5	439.5	464.5	489.5	514.5	539.5	564.5	589.5

Controllers

Applicable controller

Refer to P. 91 for the controllers.

IK2-PXBB2□□D

RCP2 2-axis Combinations X axis: SS8C (Straight, Double-slider)
Y axis: SA7R (Reversed)

Model Details

Series: IK2 Type: PXBB2□□D Encoder type: I: Incremental Axis 1 (X axis): □ Axis 2 (Y axis): □ Controllers: P1 Cable: □ Shipping configuration: □

Combination directions 1-4
Differences between Single-slider and Double-slider Types
HH: X high-speed, Y high-speed
MM: X medium-speed, Y medium-speed

Encoder type I: Incremental

Stroke (mm)
5: 50mm
? (Can be set in 50-mm increments)

Options
NM: Opposite-home specification
SR: Slider roller specification

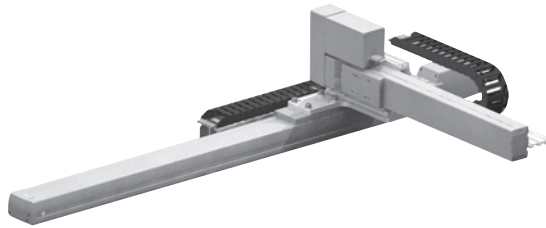
Cable length
1L: 1m
3L: 3m
5L: 5m
□L: □m

Wiring 1
N: Cable only

Wiring 2
CT: With cable track

Shipping configuration
K: Individual components (kit)
A: Assembled

* Refer to P.10 for details on the items comprising the model name.



Maximum Stroke

X axis 800 mm

Y axis 400 mm

Axis 2 (High-speed type)

X axis 250 mm/s

Y axis 450 mm/s

Maximum Load Capacity

Y-axis stroke	X high-speed, Y high-speed	X medium-speed, Y medium-speed
200mm	–	15kg
250mm	–	12.5kg
300mm	–	12.5kg
350mm	6.0kg	12kg
400mm	5.5kg	10.5kg

Both wiring 1 and wiring 2 assume use of a cable track.

List by Stroke

		Incremental				
Y-axis stroke		200	250	300	350	400
X-axis stroke	50	–	–	–	–	–
	100	–	–	–	–	–
	150	–	–	–	–	–
	200	–	–	–	–	–
	250	–	–	–	–	–
	300	–	–	–	–	–
	350	–	–	–	–	–
	400	–	–	–	–	–
	450	–	–	–	–	–
	500	–	–	–	–	–
	550	–	–	–	–	–
	600	–	–	–	–	–
	650	–	–	–	–	–
	700	–	–	–	–	–
	750	–	–	–	–	–
	800	–	–	–	–	–

Note: For the X high-speed/Y high-speed type, the Y-axis stroke must be 350 mm or more.

Cable track

	X-axis stroke	50-300	350-600	650-800
Wiring 1 (Next to X-axis)	X-axis stroke			
Wiring 2 (Next to Y-axis)	Y-axis stroke	200	250-400	–

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.
* Refer to P.90 for lengths other than those specified above.

List of Options

Name	Option code	
Opposite-home specification	NM	
Slider roller specification	SR	Axis 1 (X-axis) Axis 2 (Y-axis)

Specifications

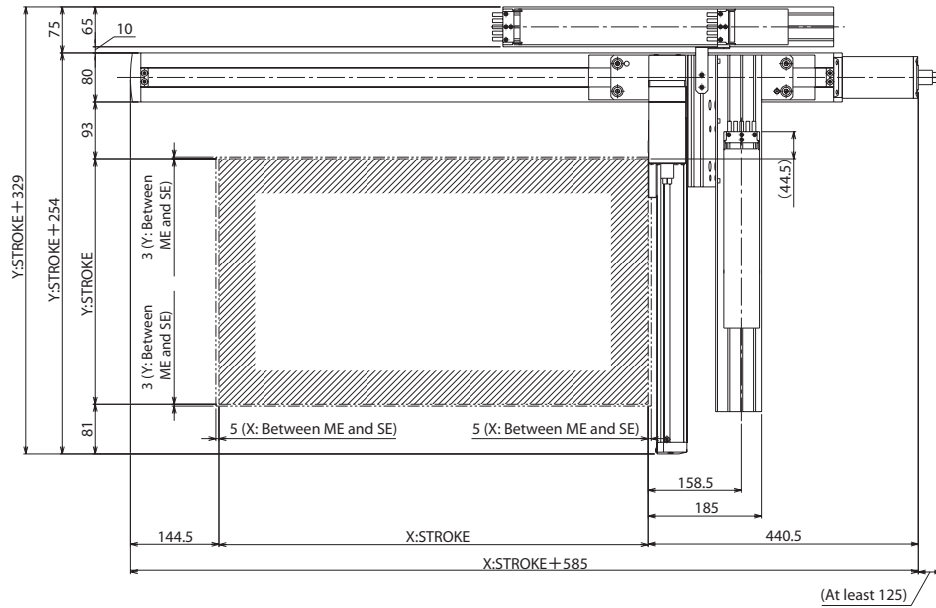
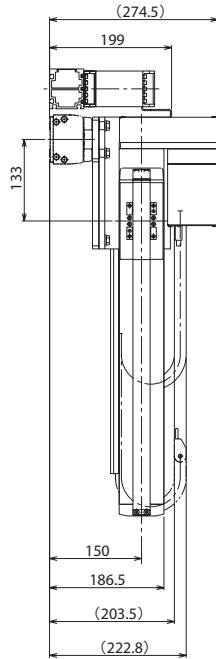
Item	X axis	Y axis
Axis model	RCP2-SS8C	RCP2-SA7R
Stroke (Can be set in 50-mm increments)	50-800mm	350-400mm
Axis 2	High-speed type: 250mm/s Medium-speed type: 125mm/s	High-speed type: 450mm/s Medium-speed type: 220mm/s
Motor size	56-square pulse motor	
Ball screw lead	High-speed type: 20mm Medium-speed type: 10mm	High-speed type: 16mm Medium-speed type: 8mm
Drive method	Ball screw, ø16mm, rolled, C10	Ball screw, ø12mm, rolled, C10
Positioning repeatability	±0.02mm	
Base material	Dedicated alloy steel	Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

Dimensions

You can download CAD drawings from our website. www.intelligentactuator.com

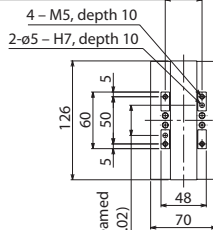
2D
CAD

Note 1. The connected position shown in the drawing defines the home.
 Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
 Note 3. For details on the cable track, refer to P.90.
 Note 4. For details on the bracket on the moving end of the cable track, refer to P.90.



ME: Mechanical end
 SE: Stroke end

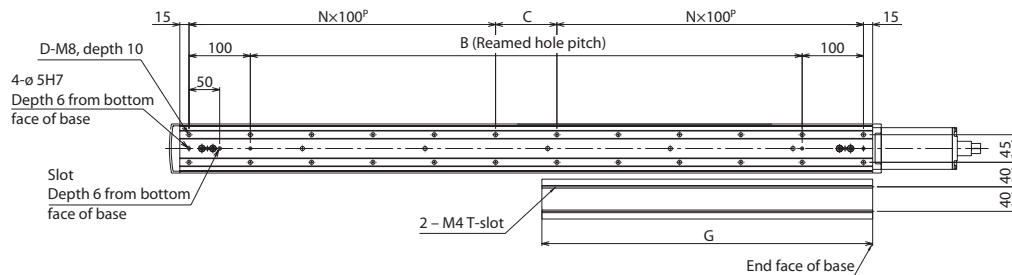
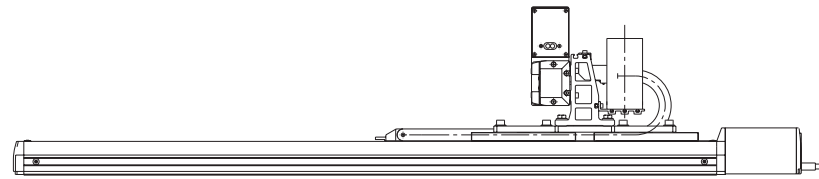
39
 (Tolerance for reamed hole pitch: ±0.02)



Detail view of Y-axis slider



Detail view of slot in bottom face of X-axis base



Detail view of X-axis installation

■ Dimensions by Stroke

X: Nominal stroke	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
X: Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
B	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
C	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
D	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	26
N	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
G	214.5	239.5	264.5	289.5	314.5	339.5	364.5	389.5	414.5	439.5	464.5	489.5	514.5	539.5	564.5	589.5

Controllers

Applicable controller

Refer to P. 91 for the controllers.

IK2-PXZB1□□S

RCP2 2-axis Combinations X axis: SS8R (Reversed, Single-slider)
Z axis: SA7R (Reversed)

Model Details Series — Type — Encoder type — Axis 1 (X axis) — Axis 2 (Z axis) — Controllers — Cable — Shipping configuration

IK2 — **PXZB1**□□**S** — □ — □ — □ — □ — **P1** — □ — □ — □ — □

Combination directions 1-4
Differences between Single-slider and Double-slider Types
HH: X high-speed, Z high-speed
HM: X high-speed, Z medium-speed
HL: X high-speed, Z low-speed

Encoder type
I: Incremental

Stroke (mm)
5: 50mm
(Can be set in 50-mm increments)

Options
B: Brake
NM: Opposite-home specification
SR: Slider roller specification

Cable length
1L: 1m
3L: 3m
5L: 5m
□L: □m

Wiring 1
N: Cable only
CT: With cable track

Wiring 2

Shipping configuration
K: Individual components (kit)
A: Assembled

* Refer to P.10 for details on the items comprising the model name.



Wiring 1 with cable track

Maximum Stroke

X axis 1000 mm

Z axis 250 mm

Axis 2 (High-speed type)

X axis 250 mm/s

Z axis 360 mm/s

Maximum Load Capacity

Z-axis stroke	Z high-speed, lead 16	Z medium-speed, lead 8	Z low-speed, lead 4
50mm	2.0kg	4.0kg	8.0kg
100mm	2.0kg	4.0kg	7.0kg
150mm	2.0kg	3.5kg	5.0kg
200mm	2.0kg	3.5kg	4.0kg
250mm	1.5kg	2.5kg	3.0kg

List by Stroke

		Incremental				
Z-axis stroke		50	100	150	200	250
X-axis stroke	50	-	-	-	-	-
	100	-	-	-	-	-
	150	-	-	-	-	-
	200	-	-	-	-	-
	250	-	-	-	-	-
	300	-	-	-	-	-
	350	-	-	-	-	-
	400	-	-	-	-	-
	450	-	-	-	-	-
	500	-	-	-	-	-
	550	-	-	-	-	-
	600	-	-	-	-	-
	650	-	-	-	-	-
	700	-	-	-	-	-
	750	-	-	-	-	-
	800	-	-	-	-	-
	850	-	-	-	-	-
900	-	-	-	-	-	
950	-	-	-	-	-	
1000	-	-	-	-	-	

Cable track

Wiring 1 (Next to X-axis)	X-axis stroke	150-300	350-600	650-900	950-1000

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.

* Refer to P.90 for lengths other than those specified above.

List of Options

Name	Option code	
Opposite-home specification	NM	
Slider roller specification	SR	Axis 1 (X-axis) Axis 2 (Z-axis)

Specifications

Item	X axis	Z axis
Axis model	RCP2-SS8R	RCP2-SA7R
Stroke (Can be set in 50-mm increments)	50-1000mm	50-250mm
Axis 2	High-speed type: 250mm/s	High-speed type: 360mm/s Medium-speed type: 180mm/s Low-speed type: 90mm/s
Motor size	56-square pulse motor	
Ball screw lead	High-speed type: 20mm	High-speed type: 16mm Medium-speed type: 8mm Low-speed type: 4mm
Drive method	Ball screw, ø16mm, rolled, C10	Ball screw, ø12mm, rolled, C10
Positioning repeatability	±0.02mm	
Base material	Dedicated alloy steel	Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

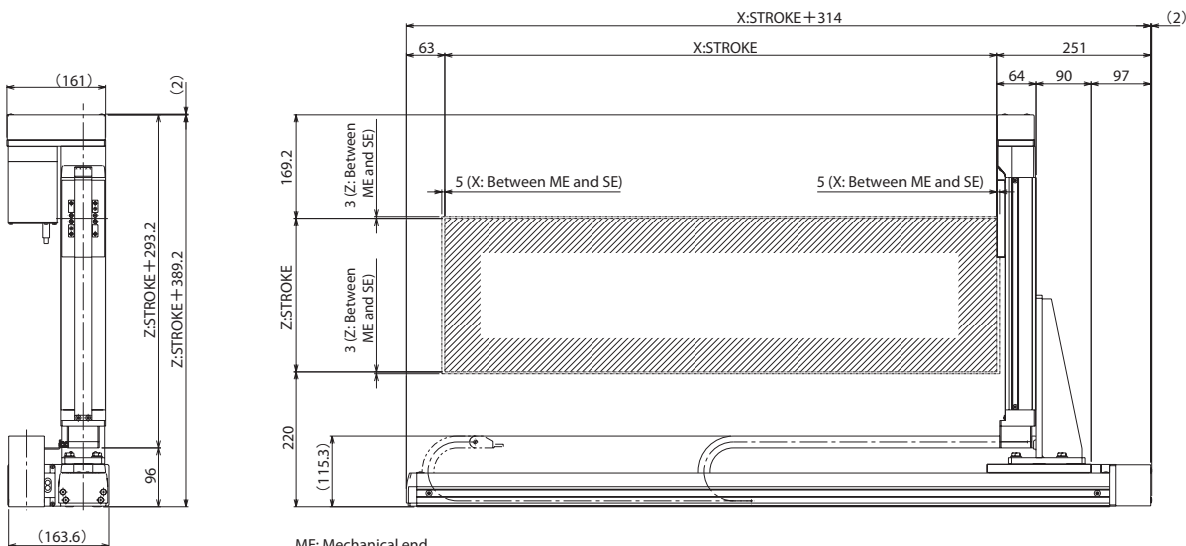
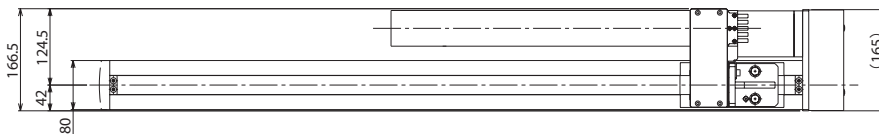
Dimensions

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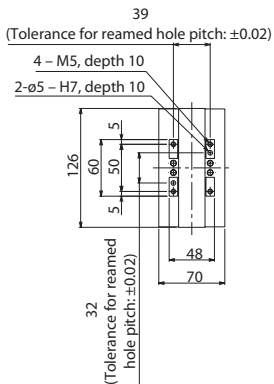
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2D
CAD

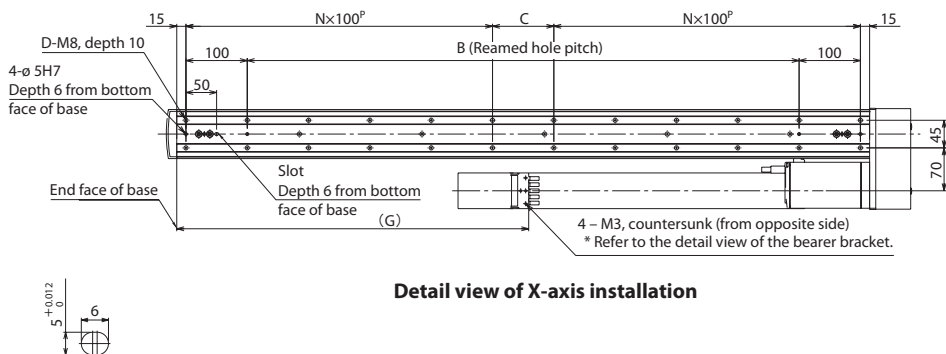
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 Note 4. For details on the bracket on the moving end of the cable track, refer to P.90.



ME: Mechanical end
 SE: Stroke end



Detail view of Z-axis slider



Detail view of slot in bottom face of X-axis base

Detail view of X-axis installation

Dimensions by Stroke

X: Model	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	
B	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	
C	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0	
D	8	8	8	10	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	26	
N	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	
G	-	-	-	199	224	249	274	299	324	349	374	399	424	449	474	499	524	549	574	599	624

* A bearer is not set when the X stroke is 50 or 100.

Controllers

Applicable controller



Refer to P. 91 for the controllers.

IK2-PXZB1□□D

RCP2 2-axis Combinations X axis: SS8R (Reversed, Double-slider)
Z axis: SA7R (Reversed)

Model Details Series — Type — Encoder type — Axis 1 (X axis) — Axis 2 (Z axis) — Controllers — Cable — Shipping configuration

IK2 — **PXZB1**□□**D** — □ — □ — □ — □ — **P1** — □ — □ — □ — □

Combination directions 1-4
Differences between Single-slider and Double-slider Types
HH: X high-speed, Z high-speed
HM: X high-speed, Z medium-speed
HL: X high-speed, Z low-speed

Encoder type
I: Incremental

Stroke (mm)
5: 50mm
(Can be set in 50-mm increments)

Options
B: Brake
NM: Opposite-home specification
SR: Slider roller specification

Cable length
1L: 1m
3L: 3m
5L: 5m
□: □m

Wiring 1
N: Cable only
CT: With cable track

Wiring 2

Shipping configuration
K: Individual components (kit)
A: Assembled

* Refer to P.10 for details on the items comprising the model name.



Wiring 1 with cable track

Maximum Stroke

X axis 800 mm Z axis 300 mm

Axis 2 (High-speed type)

X axis 250 mm/s Z axis 400 mm/s

Maximum Load Capacity

Z-axis stroke	Z high-speed, lead 16	Z medium-speed, lead 8	Z low-speed, lead 4
150mm	—	—	7.0kg
200mm	—	—	7.0kg
250mm	—	—	5.5kg
300mm	1.5kg	3.0kg	5.5kg

List by Stroke

		Incremental			
Z-axis stroke		150	200	250	300
X-axis stroke	50	—	—	—	—
	100	—	—	—	—
	150	—	—	—	—
	200	—	—	—	—
	250	—	—	—	—
	300	—	—	—	—
	350	—	—	—	—
	400	—	—	—	—
	450	—	—	—	—
	500	—	—	—	—
	550	—	—	—	—
	600	—	—	—	—
	650	—	—	—	—
	700	—	—	—	—
	750	—	—	—	—
	800	—	—	—	—

Note: For the Z high-speed type and Z medium-speed type, The Z-axis stroke is limited to 300 mm.

Cable track

Wiring 1 (Next to X-axis)	X-axis stroke	150-300	350-600	650-800

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.

* Refer to P.90 for lengths other than those specified above.

List of Options

Name	Option code	
Opposite-home specification	NM	
Slider roller specification	SR	Axis 1 (X-axis) Axis 2 (Z-axis)

Specifications

Item	X axis	Z axis
Axis model	RCP2-SS8R	RCP2-SA7R
Stroke (Can be set in 50-mm increments)	50-800mm	150-300mm
Axis 2	High-speed type: 250mm/s	High-speed type: 400mm/s Medium-speed type: 200mm/s Low-speed type: 100mm/s
Motor size	56-square pulse motor	
Ball screw lead	High-speed type: 20mm	High-speed type: 16mm Medium-speed type: 8mm Low-speed type: 4mm
Drive method	Ball screw, ø16mm, rolled, C10	Ball screw, ø12mm, rolled, C10
Positioning repeatability	±0.02mm	
Base material	Dedicated alloy steel	Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

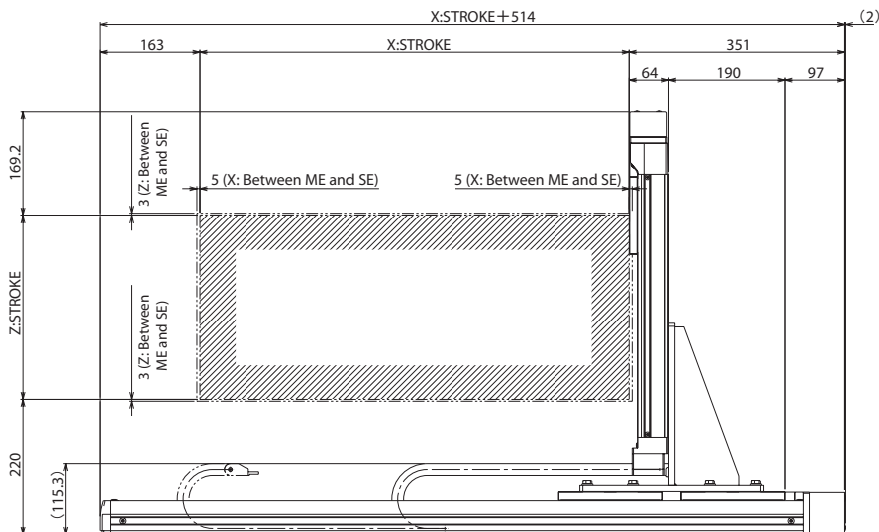
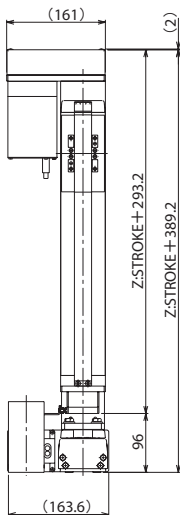
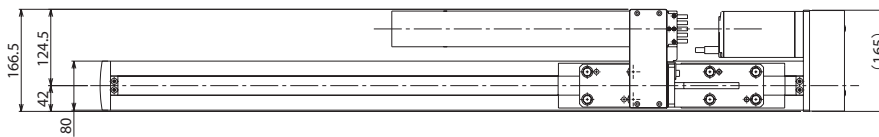
Dimensions

You can download CAD drawings from our website.

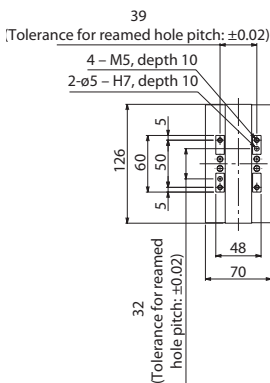
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2D
CAD

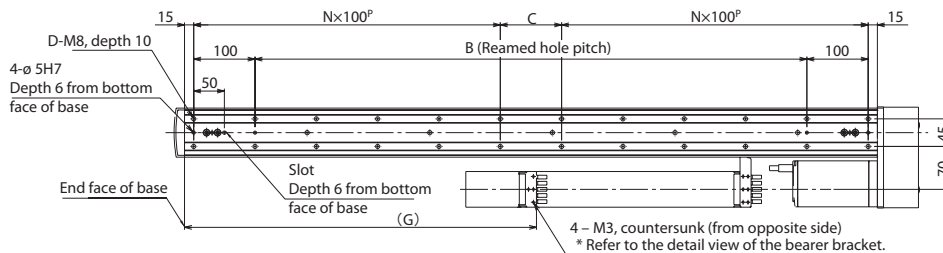
Note 1. The connected position shown in the drawing defines the home.
 Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
 Note 3. For details on the cable track, refer to P.90.
 Note 4. For details on the bracket on the moving end of the cable track, refer to P.90.



ME: Mechanical end
 SE: Stroke end



Detail view of Z-axis slider



Detail view of X-axis installation



Detail view of slot in bottom face of X-axis base

■ Dimensions by Stroke

X: Nominal stroke	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
X: Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
B	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
C	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
D	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	26
N	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
G	-	-	299	324	349	374	399	424	449	474	499	524	549	574	599	624

* A bearer is not set when the X stroke is 50 or 100.

Controllers

Applicable controller

Refer to P. 91 for the controllers.

IK2-PYBB1□□S

RCP2 2-axis Combinations Y axis: SS8R (Reversed, Double-slider)
Z axis: SA7R (Reversed)

Model Details Series — Type — Encoder type — Axis 1 (Y axis) — Axis 2 (Z axis) — Controllers — Cable — Shipping configuration

IK2 — **PYBB1**□□**S** — □ — □ — □ — □ — **P1** — □ — □ — □ — □

Combination directions 1-2
Differences between Single-slider and Double-slider Types
HH: Y high-speed, Z high-speed
HM: Y high-speed, Z medium-speed
HL: Y high-speed, Z low-speed

Encoder type
I: Incremental

Stroke (mm)
5: 50mm
┆
(Can be set in 50-mm increments)

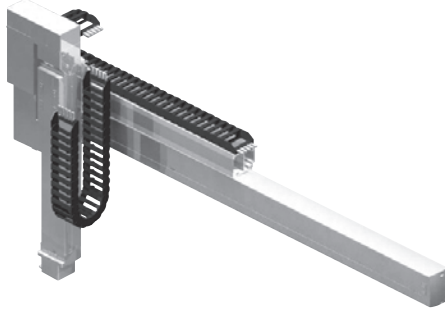
Options
B: Brake
NM: Opposite-home specification
SR: Slider roller specification

Cable length
1L: 1m
3L: 3m
5L: 5m
□L: □m

Wiring 1 □
Wiring 2 □
N: Cable only
CT: With cable track

Shipping configuration
K: Individual components (kit)
A: Assembled

* Refer to P.10 for details on the items comprising the model name.



Maximum Stroke

Y axis 1000 mm **Z axis** 300 mm

Axis 2 (High-speed type)

Y axis 250 mm/s **Z axis** 360 mm/s

Maximum Load Capacity

Z-axis stroke	Z high-speed, lead 16	Z medium-speed, lead 8	Z low-speed, lead 4
50mm	2.0kg	4.0kg	8.0kg
100mm	2.0kg	4.0kg	8.0kg
150mm	2.0kg	3.5kg	7.0kg
200mm	2.0kg	3.5kg	7.0kg
250mm	1.5kg	3.0kg	6.0kg
300mm	1.5kg	3.0kg	5.5kg

Both wiring 1 and wiring 2 assume use of a cable track.

List by Stroke

		Incremental					
Z-axis stroke		50	100	150	200	250	300
Y-axis stroke	50	-	-	-	-	-	-
	100	-	-	-	-	-	-
	150	-	-	-	-	-	-
	200	-	-	-	-	-	-
	250	-	-	-	-	-	-
	300	-	-	-	-	-	-
	350	-	-	-	-	-	-
	400	-	-	-	-	-	-
	450	-	-	-	-	-	-
	500	-	-	-	-	-	-
	550	-	-	-	-	-	-
	600	-	-	-	-	-	-
	650	-	-	-	-	-	-
	700	-	-	-	-	-	-
	750	-	-	-	-	-	-
	800	-	-	-	-	-	-
850	-	-	-	-	-	-	
900	-	-	-	-	-	-	
950	-	-	-	-	-	-	
1000	-	-	-	-	-	-	

Cable track

	Y-axis stroke	50-300	350-600	650-900	950-1000
Wiring 1 (Next to Y-axis)					
Wiring 2 (Next to Z-axis)	Z-axis stroke	50-200	250-300	-	-

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.
* Refer to P.90 for lengths other than those specified above.

List of Options

Name	Option code	
Opposite-home specification	NM	
Slider roller specification	SR	Axis 1 (Y-axis) Axis 2 (Z-axis)

Specifications

Item	Y axis	Z axis
Axis model	RCP2-SS8R	RCP2-SA7R
Stroke (Can be set in 50-mm increments)	50-1000mm	50-300mm
Axis 2	High-speed type: 250mm/s	High-speed type: 360mm/s Medium-speed type: 180mm/s Low-speed type: 90mm/s
Motor size	56-square pulse motor	
Ball screw lead	High-speed type: 20mm	High-speed type: 16mm Medium-speed type: 8mm Low-speed type: 4mm
Drive method	Ball screw, ø16mm, rolled, C10	Ball screw, ø12mm, rolled, C10
Positioning repeatability	±0.02mm	
Base material	Dedicated alloy steel	Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

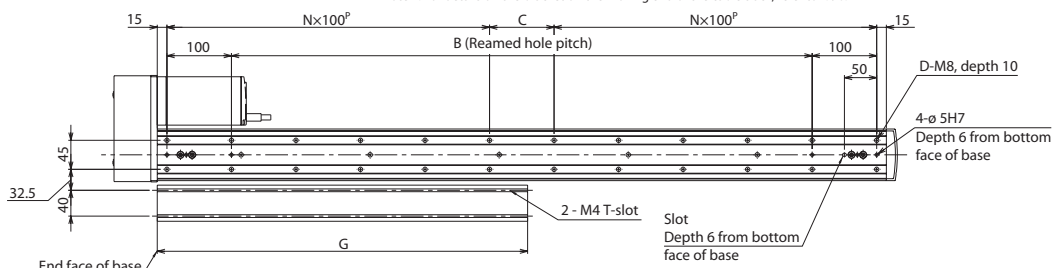
Dimensions

You can download CAD drawings from our website.

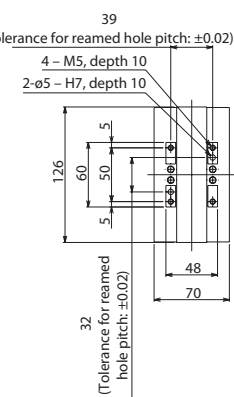
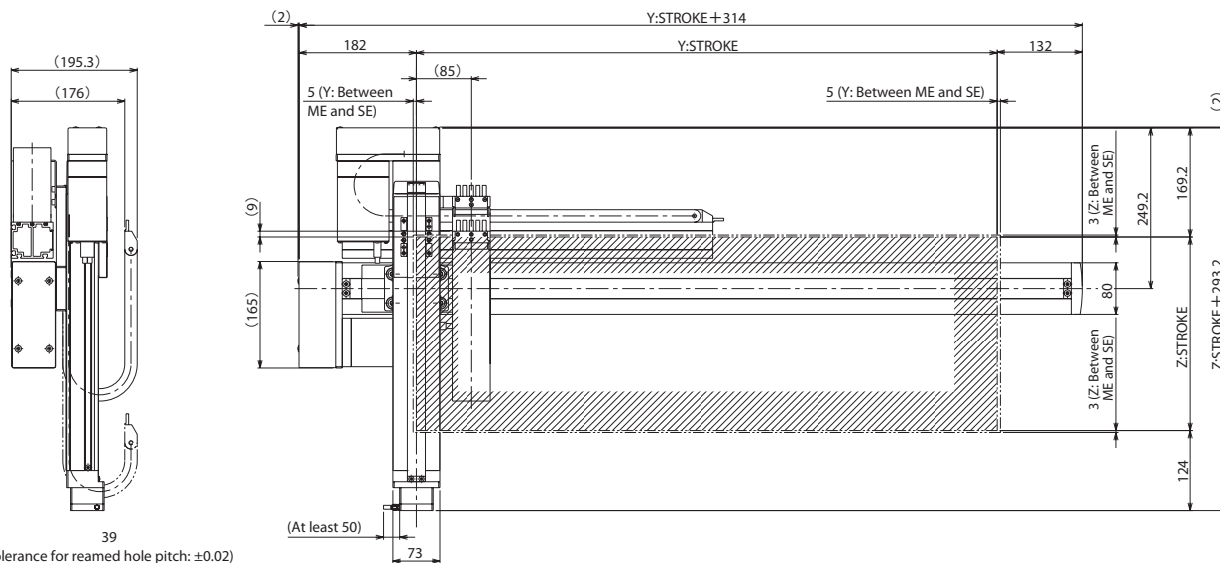
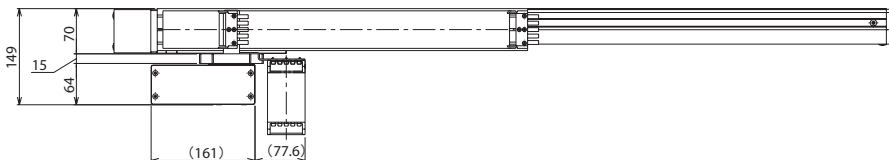
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2D
CAD

Note 1. The connected position shown in the drawing defines the home.
 Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
 Note 3. For details on the cable track, refer to P.90.
 Note 4. For details on the bracket on the moving end of the cable track, refer to P.90.



Detail view of Y-axis installation



Detail view of Z-axis slider Detail view of slot in bottom face of Y-axis base

■ Dimensions by Stroke

Y: Model	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
B	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
C	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
D	8	8	8	10	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	26
N	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
G	149	174	199	224	249	274	299	324	349	374	399	424	449	474	499	524	549	574	599	624

Controllers

Applicable controller



Refer to P. 91 for the controllers.

IK2-SXBD1□□S

RCS2 2-axis Combinations X axis: SS7R (Reversed, Single-slider)
Y axis: SA5R (Reversed)

Model Details

Series: IK2 — Type: SXBD1□□S — Encoder type: □ — Axis 1 (X axis): □ — Axis 2 (Y axis): □ — Controller: □ — Cable: □ — Shipping configuration: □

Combination directions 1-2

Differences between Single-slider and Double-slider Types
 HH: X high-speed, Y high-speed
 HM: X high-speed, Y medium-speed

Encoder type
 I: Incremental
 A: Absolute

Stroke (mm)
 5: 50mm
 (Can be set in 50-mm increments)

Options
 NM: Opposite-home specification
 SR: Slider roller specification

Controllers
 T1: XSEL-J/K
 T2: SSEL
 XSEL-P/Q

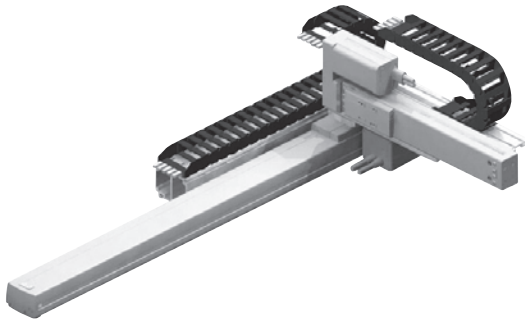
Cable length
 1L: 1m
 3L: 3m
 5L: 5m
 □L: □m

Wiring 1
 N: Cable only
 CT: With cable track

Wiring 2

Shipping configuration
 K: Individual components (kit)
 A: Assembled

* Refer to P. 10 for details on the items comprising the model name.



Both wiring 1 and wiring 2 assume use of a cable track.

Maximum Stroke

X axis 600 mm

Y axis 200 mm

Axis 2

	High-speed type	Medium-speed type
X axis	600mm/s	—
Y axis	800mm/s	400mm/s

Maximum Load Capacity

Y-axis stroke	X high-speed, Y high-speed	X high-speed, Y medium-speed
50mm	3.0kg	6.0kg
100mm	3.0kg	6.0kg
150mm	2.5kg	5.0kg
200mm	2.5kg	5.0kg

List by Stroke

Y-axis stroke	Incremental				Absolute			
	50	100	150	200	50	100	150	200
50	—	—	—	—	—	—	—	—
100	—	—	—	—	—	—	—	—
150	—	—	—	—	—	—	—	—
200	—	—	—	—	—	—	—	—
250	—	—	—	—	—	—	—	—
300	—	—	—	—	—	—	—	—
350	—	—	—	—	—	—	—	—
400	—	—	—	—	—	—	—	—
450	—	—	—	—	—	—	—	—
500	—	—	—	—	—	—	—	—
550	—	—	—	—	—	—	—	—
600	—	—	—	—	—	—	—	—

Cable track

Wiring 1 (Next to X-axis)	X-axis stroke	50-300	350-600
		—	—
Wiring 2 (Next to Y-axis)	Y-axis stroke	50-200	—
		—	—

List of Options

Name	Option code
Opposite-home specification	NM
Slider roller specification	SR

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.
 * Refer to P. 90 for lengths other than those specified above.

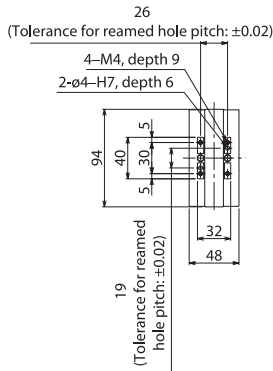
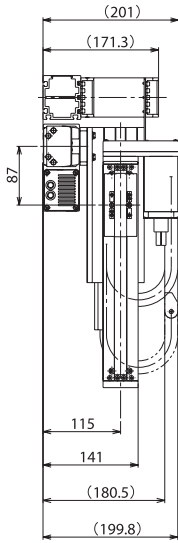
Specifications

Item	X axis	Y axis
Axis model	RCS2-SS7R	RCS2-SA5R
Stroke (Can be set in 50-mm increments)	50-600mm	50-200mm
Axis 2	High-speed: 600mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s
Motor output (W)	60W	20W
Ball screw lead	High-speed type: 12mm	High-speed type: 12mm Medium-speed type: 6mm
Drive method	Ball screw, ø10 mm, rolled, C10	
Positioning repeatability	±0.02mm	
Base Material	Dedicated alloy steel	Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

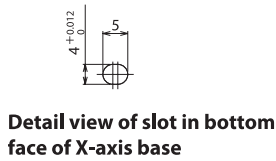
Dimensions

You can download CAD drawings from our website. www.intelligentactuator.com

2D CAD

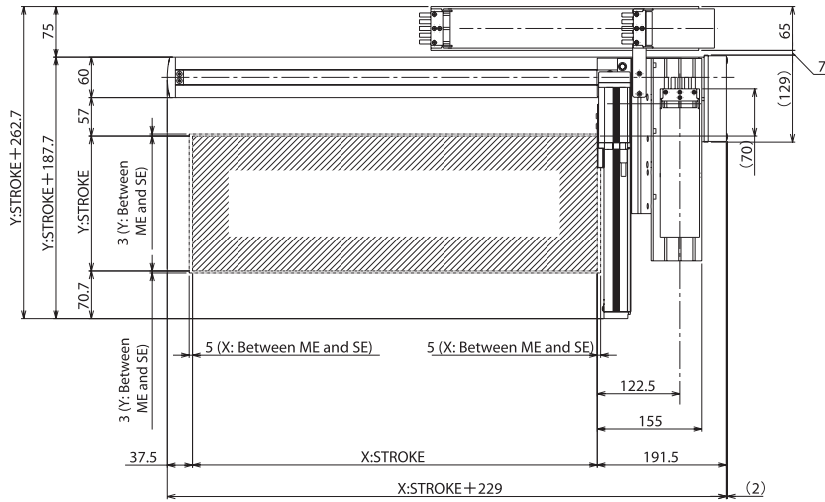


Detail view of Y-axis slider

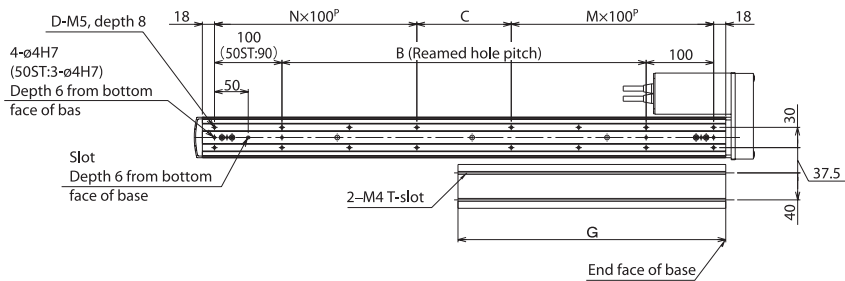
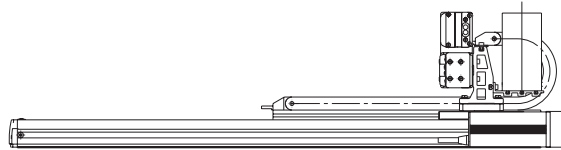


Detail view of slot in bottom face of X-axis base

Note 1. The connected position shown in the drawing defines the home.
 Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
 Note 3. For details on the cable track, refer to P.90.
 Note 4. For details on the bracket on the moving end of the cable track, refer to P.90.



ME: Mechanical end
 SE: Stroke end



Detail view of X-axis installation

■ Dimensions by Stroke

X: Nominal stroke	50	100	150	200	250	300	350	400	450	500	550	600
B	0	40	90	140	190	240	290	340	390	440	490	540
C	90	40	90	140	190	40	90	140	190	40	90	140
D	6	8	8	8	8	12	12	12	12	16	16	16
M	1	1	1	1	1	2	2	2	2	3	3	3
N	0	1	1	1	1	2	2	2	2	3	3	3
G	122	147	172	197	222	247	272	297	322	347	372	397

Controllers

Applicable controller

Refer to P. 91 for the controllers.

IK2-SXBD1□□D

RCS2 2-axis Combinations X axis: SS7R (Reversed, Double-slider)
Y axis: SA5R (Reversed)

Model Details

Series: IK2 — Type: SXBD1□□D — Encoder type: □ — Axis 1 (X axis): □ — Axis 2 (Y axis): □ — Controllres: □ — Cable: □ — Shipping configuration: □

Combination directions 1-2

Differences between Single-slider and Double-slider Types
 HH: X high-speed, Y high-speed
 HM: X high-speed, Y medium-speed

Encoder type
 I: Incremental
 A: Absolute

Stroke (mm)
 S: 50mm
 ? (Can be set in 50-mm increments)

Options
 NM: Opposite-home specification
 SR: Slider roller specification

Controllres
 T1: XSEL-J/K
 T2: SSEL
 XSEL-P/Q

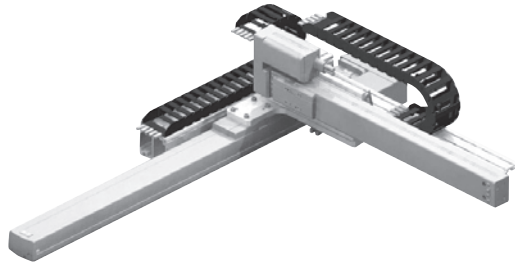
Cable length
 1L: 1m
 3L: 3m
 5L: 5m
 □L: □m

Wiring 1
 N: Cable only
 CT: With cable track

Wiring 2

Shipping configuration
 K: Individual components (kit)
 A: Assembled

* Refer to P.10 for details on the items comprising the model name.



Both wiring 1 and wiring 2 assume use of a cable track.

Maximum Stroke

X axis 450 mm Y axis 400 mm

Axis 2 Reversed

	High-speed type	Medium-speed type
X axis	600mm/s	—
Y axis	800mm/s	400mm/s

Maximum Load Capacity

Y-axis stroke	X high-speed, Y high-speed	X high-speed, Y medium-speed
250mm	2.5kg	5.0kg
300mm	2.0kg	4.0kg
350mm	2.0kg	4.0kg
400mm	2.0kg	4.0kg

List by Stroke

		Incremental				Absolute			
Y-axis stroke		250	300	350	400	250	300	350	400
X-axis stroke	50	—	—	—	—	—	—	—	—
	100	—	—	—	—	—	—	—	—
	150	—	—	—	—	—	—	—	—
	200	—	—	—	—	—	—	—	—
	250	—	—	—	—	—	—	—	—
	300	—	—	—	—	—	—	—	—
	350	—	—	—	—	—	—	—	—
	400	—	—	—	—	—	—	—	—
	450	—	—	—	—	—	—	—	—

Cable track

Wiring 1 (Next to X-axis)	X-axis stroke	50-300	350-450
	Y-axis stroke	—	—
Wiring 2 (Next to Y-axis)	X-axis stroke	250-400	—
	Y-axis stroke	—	—

List of Options

Name	Option code
Opposite-home specification	NM
Slider roller specification	SR

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.
 * Refer to P. 90 for lengths other than those specified above.

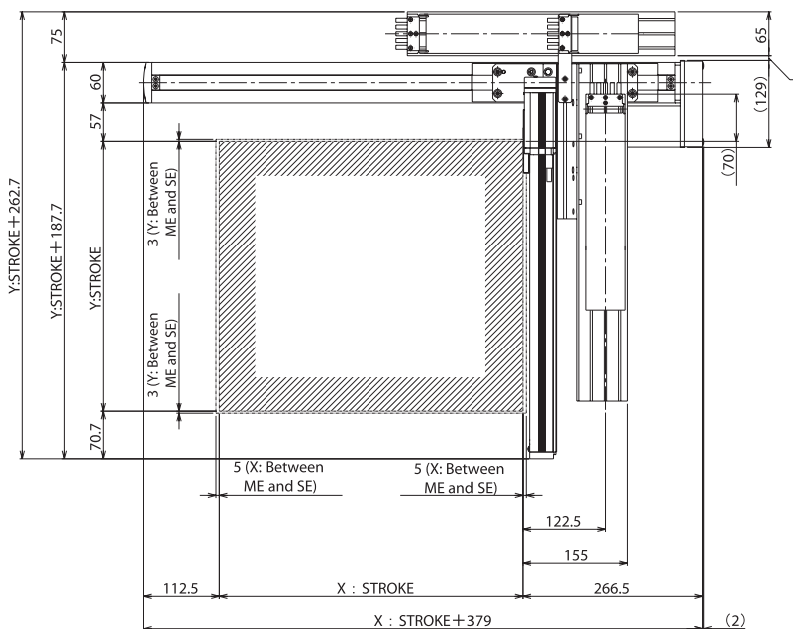
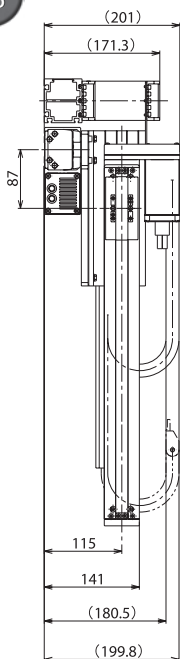
Specifications

Item	X axis	Y axis
Axis model	RCS2-SS7R	RCS2-SA5R
Stroke (Can be set in 50-mm increments)	50-450mm	250-400mm
Axis 2	High-speed: 600mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s
Motor output (W)	60W	20W
Ball screw lead	High-speed type: 12mm	High-speed type: 12mm Medium-speed type: 6mm
Drive method	Ball screw, ø10 mm, rolled, C10	
Positioning repeatability	±0.02mm	
Base Material	Dedicated alloy steel	Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

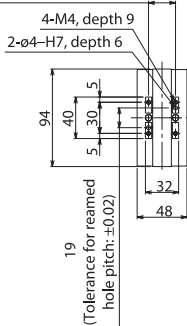
Dimensions

You can download CAD drawings from our website. www.intelligentactuator.com

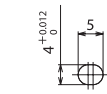
2D CAD



26
(Tolerance for reamed hole pitch: ±0.02)

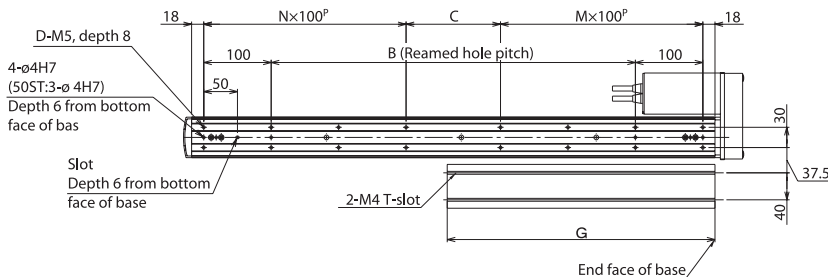
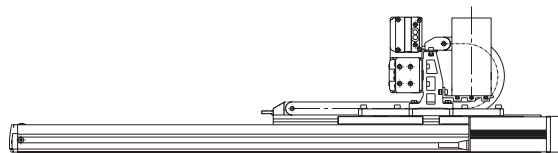


Detail view of Y-axis slider



Detail view of slot in bottom face of X-axis base

ME: Mechanical end
SE: Stroke end



Detail view of X-axis installation

■ Dimensions by Stroke

	200	250	300	350	400	450	500	550	600
X: Nominal stroke	200	250	300	350	400	450	500	550	600
X: Effective stroke	50	100	150	200	250	300	350	400	450
B	140	190	240	290	340	390	440	490	540
C	140	190	40	90	140	190	40	90	140
D	8	8	12	12	12	12	16	16	16
M	1	1	2	2	2	2	3	3	3
N	1	1	2	2	2	2	3	3	3
G	197	222	247	272	297	322	347	372	397

Controllers

Applicable controller

Refer to P. 91 for the controllers.

IK2-SXBD2□□S

RCS2 2-axis Combinations X axis: SS7C (Reversed, Single-slider)
Y axis: SA5R (Reversed)

Model Details

Series: **IK2** Type: **SXBD2□□S**

Encoder type: I: Incremental A: Absolute

Axis 1 (X axis): Stroke (mm): 5: 50mm ? (Can be set in 50-mm increments)

Axis 2 (Y axis): Options: NM: Opposite-home specification SR: Slider roller specification

Controllers: T1: XSEL-I/K T2: SSEL XSEL-P/Q

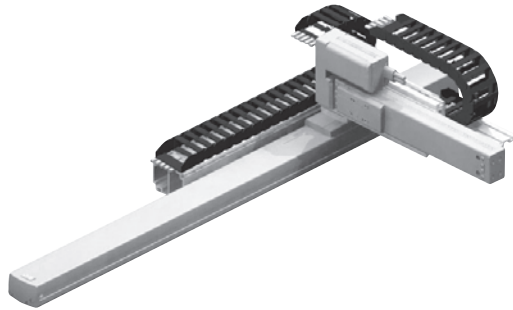
Cable length: 1L: 1m 3L: 3m 5L: 5m □L: □m

Wiring 1: N: Cable only CT: With cable track

Wiring 2:

Shipping configuration: K: Individual components (kit) A: Assembled

* Refer to P. 10 for details on the items comprising the model name.



Both wiring 1 and wiring 2 assume use of a cable track.

Maximum Stroke

X axis 600 mm Y axis 200 mm

Axis 2

	High-speed type	Medium-speed type
X axis	600mm/s	—
Y axis	800mm/s	400mm/s

Maximum Load Capacity

Y-axis stroke	X high-speed, Y high-speed	X high-speed, Y medium-speed
50mm	3.0kg	6.0kg
100mm	3.0kg	6.0kg
150mm	2.5kg	5.0kg
200mm	2.5kg	5.0kg

List by Stroke

Y-axis stroke	Incremental				Absolute			
	50	100	150	200	50	100	150	200
50	—	—	—	—	—	—	—	—
100	—	—	—	—	—	—	—	—
150	—	—	—	—	—	—	—	—
200	—	—	—	—	—	—	—	—
250	—	—	—	—	—	—	—	—
300	—	—	—	—	—	—	—	—
350	—	—	—	—	—	—	—	—
400	—	—	—	—	—	—	—	—
450	—	—	—	—	—	—	—	—
500	—	—	—	—	—	—	—	—
550	—	—	—	—	—	—	—	—
600	—	—	—	—	—	—	—	—

Cable track

Wiring	Next to	X-axis stroke	50-300	350-600
Wiring 1	(Next to X-axis)	X-axis stroke	50-300	350-600
		Y-axis stroke	—	—
Wiring 2	(Next to Y-axis)	Y-axis stroke	50-200	—
		X-axis stroke	—	—

List of Options

Name	Option code	
Opposite-home specification	NM	
Slider roller specification	SR	Axis 1 (X-axis) Axis 2 (Y-axis)

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.
* Refer to P. 90 for lengths other than those specified above.

Specifications

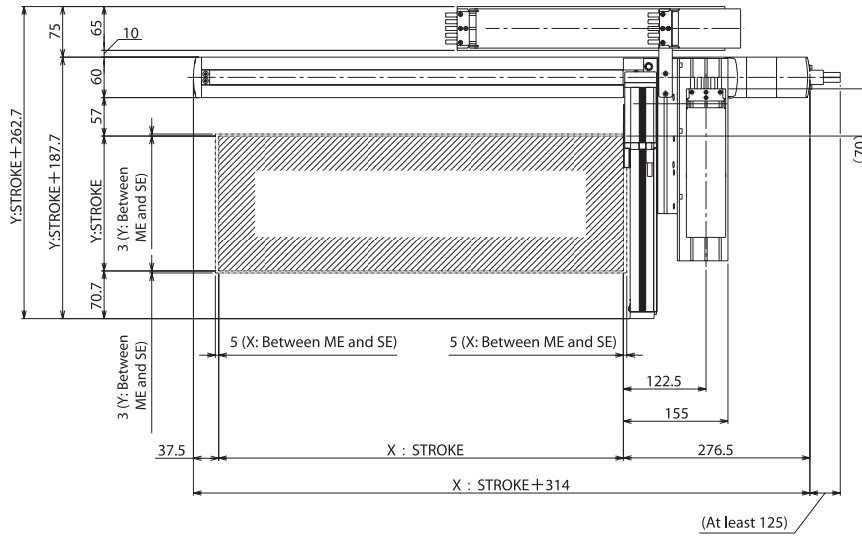
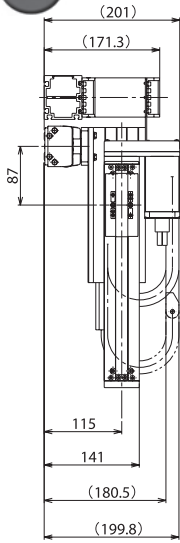
Item	X axis	Y axis
Axis model	RCS2-SS7C	RCS2-SA5R
Stroke (Can be set in 50-mm increments)	50-600mm	50-200mm
Axis 2	High-speed: 600mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s
Motor output (W)	60W	20W
Ball screw lead	High-speed type: 12mm	High-speed type: 12mm Medium-speed type: 6mm
Drive method	Ball screw, ø10 mm, rolled, C10	
Positioning repeatability	±0.02mm	
Base Material	Dedicated alloy steel	Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

2-axis Combinations RCP2
2-axis Combinations RCS2
3-axis Combinations RCP2
3-axis Combinations RCS2
Controllers

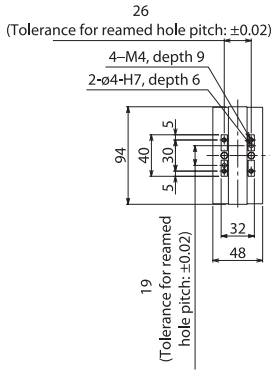
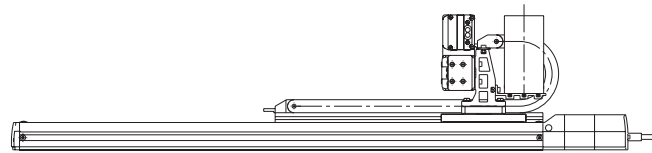
Dimensions

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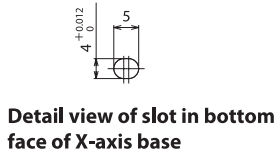
2D
CAD



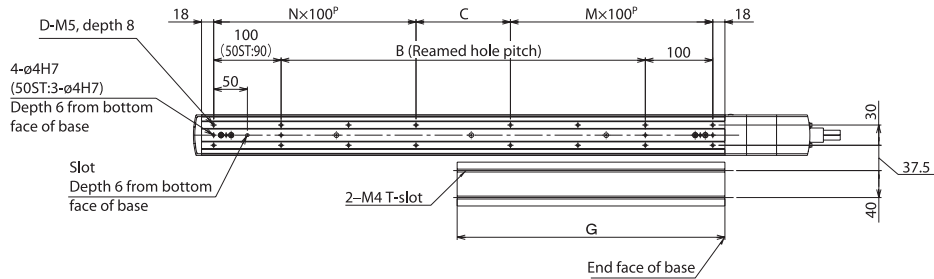
ME: Mechanical end
SE: Stroke end



Detail view of Y-axis slider



Detail view of slot in bottom face of X-axis base



Detail view of X-axis installation

Dimensions by Stroke

X: Nominal stroke	50	100	150	200	250	300	350	400	450	500	550	600
B	0	40	90	140	190	240	290	340	390	440	490	540
C	90	40	90	140	190	40	90	140	190	40	90	140
D	6	8	8	8	8	12	12	12	12	16	16	16
M	1	1	1	1	1	2	2	2	2	3	3	3
N	0	1	1	1	1	2	2	2	2	3	3	3
G	122	147	172	197	222	247	272	297	322	347	372	397

Controllers

Applicable controller

Refer to P. 91 for the controllers.

IK2-SXBD2□□D

RCS2 2-axis Combinations X axis: SS7C (Straight, Double-slider)
Y axis: SA5R (Reversed)

Model Details

Series: IK2 — Type: SXBD2□□D — Encoder type: □ — Axis 1 (X axis): □ — Axis 2 (Y axis): □ — Controller: □ — Cable: □ — Shipping configuration: □

Combination directions 1-4

Differences between Single-slider and Double-slider Types
 HH: X high-speed, Y high-speed
 HM: X high-speed, Y medium-speed

Encoder type
 I: Incremental
 A: Absolute

Stroke (mm)
 S: 50mm
 ? (Can be set in 50-mm increments)

Options
 NM: Opposite-home specification
 SR: Slider roller specification

Controllers
 T1: XSEL-J/K
 T2: SSEL XSEL-P/Q

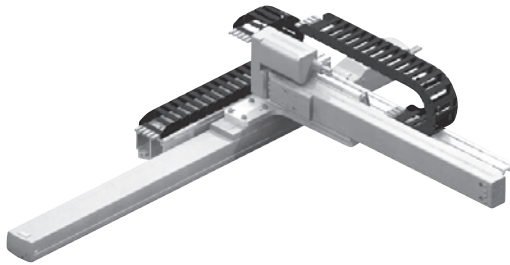
Cable length
 1L: 1m
 3L: 3m
 5L: 5m
 □L: □m

Wiring 1
 N: Cable only
 CT: With cable track

Wiring 2

Shipping configuration
 K: Individual components (kit)
 A: Assembled

* Refer to P.10 for details on the items comprising the model name.



Both wiring 1 and wiring 2 assume use of a cable track.

Maximum Stroke

X axis 450 mm Y axis 400 mm

Axis 2

	High-speed type	Medium-speed type
X axis	600mm/s	—
Y axis	800mm/s	400mm/s

Maximum Load Capacity

Y-axis stroke	X high-speed, Y high-speed	X high-speed, Y medium-speed
250mm	2.5kg	5.0kg
300mm	2.0kg	4.0kg
350mm	2.0kg	4.0kg
400mm	2.0kg	4.0kg

List by Stroke

Y-axis stroke	Incremental				Absolute			
	250	300	350	400	250	300	350	400
50	—	—	—	—	—	—	—	—
100	—	—	—	—	—	—	—	—
150	—	—	—	—	—	—	—	—
200	—	—	—	—	—	—	—	—
250	—	—	—	—	—	—	—	—
300	—	—	—	—	—	—	—	—
350	—	—	—	—	—	—	—	—
400	—	—	—	—	—	—	—	—
450	—	—	—	—	—	—	—	—

Cable track

Wiring	Stroke	50-300	350-450
Wiring 1 (Next to X-axis)	X-axis stroke	—	—
Wiring 2 (Next to Y-axis)	Y-axis stroke	250-400	—

List of Options

Name	Option code	
Opposite-home specification	NM	
Slider roller specification	SR	Axis 1 (X-axis) Axis 2 (Y-axis)

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.
 * Refer to P. 90 for lengths other than those specified above.

Specifications

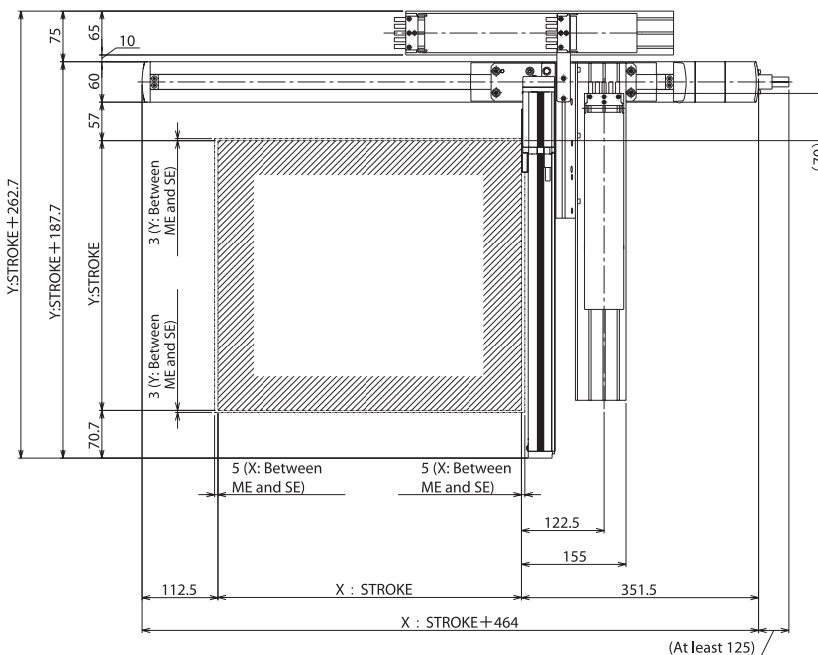
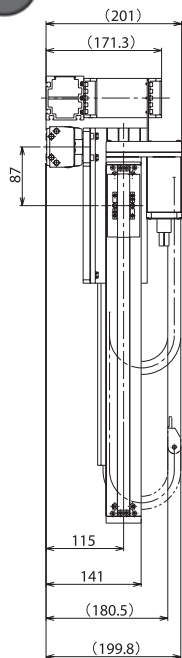
Item	X axis	Y axis
Axis model	RCS2-SS7C	RCS2-SA5R
Stroke (Can be set in 50-mm increments)	50-450mm	250-400mm
Axis 2	High-speed: 600mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s
Motor output (W)	60W	20W
Ball screw lead	High-speed type: 12mm	High-speed type: 12mm Medium-speed type: 6mm
Drive method	Ball screw, ø10 mm, rolled, C10	
Positioning repeatability	±0.02mm	
Base Material	Dedicated alloy steel	Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

Dimensions

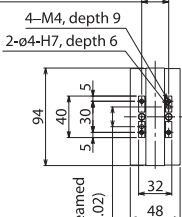
You can download CAD drawings from our website. www.intelligentactuator.com

2D
CAD

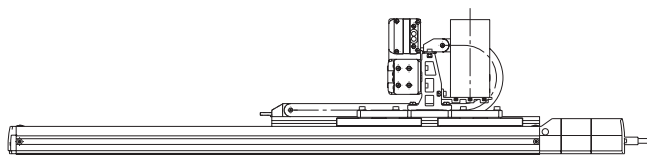
Note 1. The connected position shown in the drawing defines the home.
 Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
 Note 3. For details on the cable track, refer to P. 90.
 Note 4. For details on the bracket on the moving end of the cable track, refer to P. 90.



26
(Tolerance for reamed hole pitch: ±0.02)



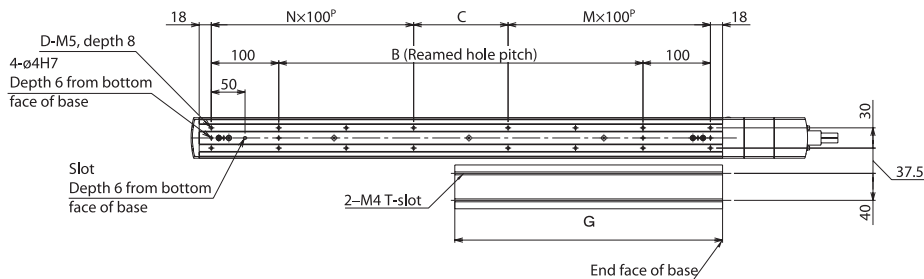
ME: Mechanical end
 SE: Stroke end



Detail view of Y-axis slider



Detail view of slot in bottom face of X-axis base



Detail view of X-axis installation

■ Dimensions by Stroke

X: Nominal stroke	200	250	300	350	400	450	500	550	600
X: Effective stroke	50	100	150	200	250	300	350	400	450
B	140	190	240	290	340	390	440	490	540
C	140	190	40	90	140	190	40	90	140
D	8	8	12	12	12	12	16	16	16
M	1	1	2	2	2	2	3	3	3
N	1	1	2	2	2	2	3	3	3
G	197	222	247	272	297	322	347	372	397

Controllers

Applicable controller

Refer to P. 91 for the controllers.

IK2-SXBC1□□S

RCS2 2-axis Combinations X axis: SS7R (Reversed, Single-slider)
Y axis: SA6R (Reversed)

Model Details

Series: IK2 Type: SXBC1□□S

Encoder type: I: Incremental, A: Absolute

Axis 1 (X axis): Stroke (mm) 5: 50mm, ? (Can be set in 50-mm increments)

Axis 2 (Y axis): Options: NM: Opposite-home specification, SR: Slider roller specification

Controllers: T1: XSEL-J/K, T2: SSEL, XSEL-P/Q

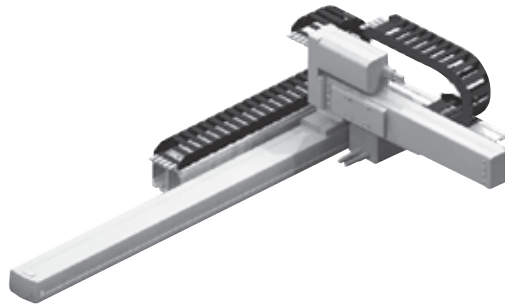
Cable length: 1L: 1m, 3L: 3m, 5L: 5m

Wiring 1: N: Cable only, CT: With cable track

Wiring 2: N: Cable only, CT: With cable track

Shipping configuration: K: Individual components (kit), A: Assembled

* Refer to P.10 for details on the items comprising the model name.



Both wiring 1 and wiring 2 assume use of a cable track.

Maximum Stroke

X axis 600 mm Y axis 200 mm

Axis 2

	High-speed type	Medium-speed type
X axis	600mm/s	300mm/s
Y axis	800mm/s	400mm/s

Maximum Load Capacity

Y-axis stroke	X high-speed, Y high-speed	X medium-speed, Y medium-speed
50mm	4.5kg	9.0kg
100mm	4.5kg	9.0kg
150mm	4.0kg	8.0kg
200mm	3.0kg	6.0kg

List by Stroke

Y-axis stroke	Incremental				Absolute			
	50	100	150	200	50	100	150	200
50	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-
250	-	-	-	-	-	-	-	-
300	-	-	-	-	-	-	-	-
350	-	-	-	-	-	-	-	-
400	-	-	-	-	-	-	-	-
450	-	-	-	-	-	-	-	-
500	-	-	-	-	-	-	-	-
550	-	-	-	-	-	-	-	-
600	-	-	-	-	-	-	-	-

Cable track

Wiring 1 (Next to X-axis)	X-axis stroke	50-300	350-600
Wiring 2 (Next to Y-axis)	Y-axis stroke	50-200	-

List of Options

Name	Option code	
Opposite-home specification	NM	
Slider roller specification	SR	Axis 1 (X-axis) Axis 2 (Y-axis)

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.
* Refer to P. 90 for lengths other than those specified above.

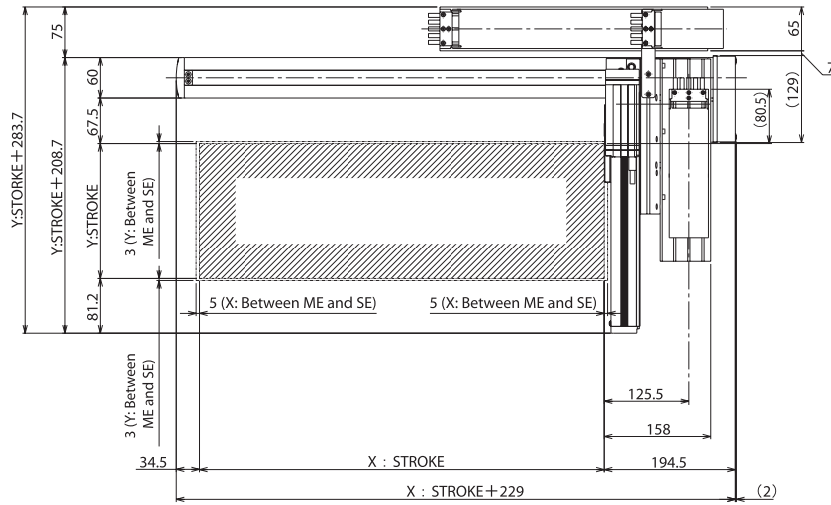
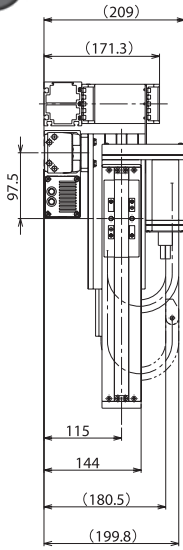
Specifications

Item	X axis	Y axis
Axis model	RCS2-SS7R	RCS2-SA6R
Stroke (Can be set in 50-mm increments)	50-600mm	50-200mm
Axis 2	High-speed type: 600mm/s Medium-speed type: 300mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s
Motor output (W)	60W	30W
Ball screw lead	High-speed type: 12mm Medium-speed type: 6mm	
Drive method	Ball screw, ø10 mm, rolled, C10	
Positioning repeatability	±0.02mm	
Base Material	Dedicated alloy steel	Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

Dimensions

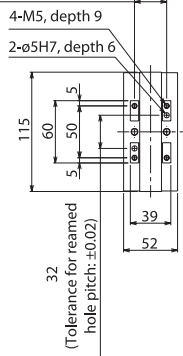
You can download CAD drawings from our website. www.intelligentactuator.com

2D CAD

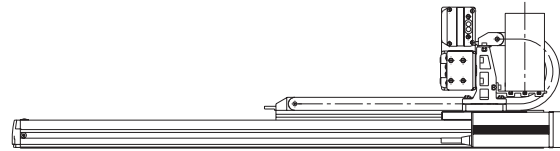


Note 1. The connected position shown in the drawing defines the home.
 Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
 Note 3. For details on the cable track, refer to P. 90.
 Note 4. For details on the bracket on the moving end of the cable track, refer to P. 90.

31
 (Tolerance for reamed hole pitch: ±0.02)



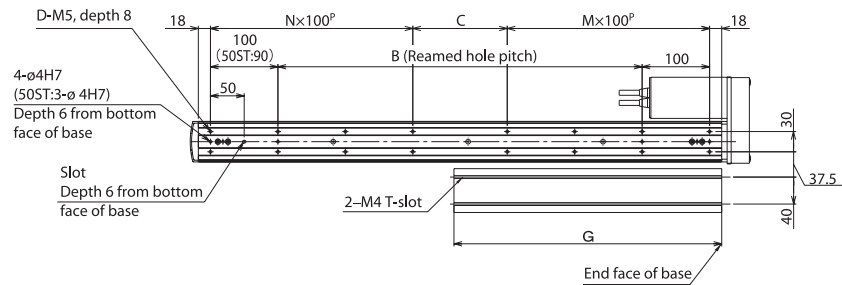
ME: Mechanical end
 SE: Stroke end



Detail view of Y-axis slider



Detail view of slot in bottom face of X-axis base



Detail view of X-axis installation

■ Dimensions by Stroke

X: Nominal stroke	50	100	150	200	250	300	350	400	450	500	550	600
B	0	40	90	140	190	240	290	340	390	440	490	540
C	90	40	90	140	190	40	90	140	190	40	90	140
D	6	8	8	8	8	12	12	12	12	16	16	16
M	1	1	1	1	1	2	2	2	2	3	3	3
N	0	1	1	1	1	2	2	2	2	3	3	3
G	122	147	172	197	222	247	272	297	322	347	372	397

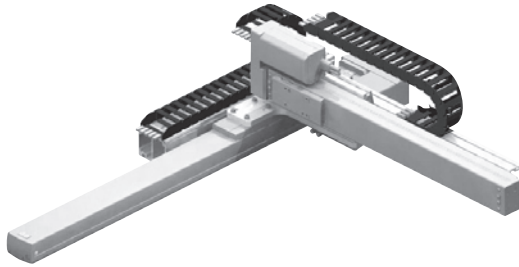
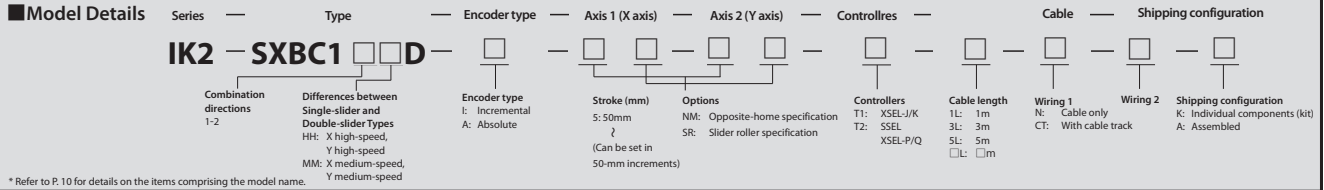
Controllers

Applicable controller

Refer to P. 91 for the controllers.

IK2-SXBC1□□D

RCS2 2-axis Combinations X axis: SS7R (Reversed, Double-slider)
Y axis: SA6R (Reversed)



Both wiring 1 and wiring 2 assume use of a cable track.

Maximum Stroke

X axis 450 mm Y axis 400 mm

Axis 2

	High-speed type	Medium-speed type
X axis	600mm/s	300mm/s
Y axis	800mm/s	400mm/s

Maximum Load Capacity

Y-axis stroke	X high-speed, Y high-speed	X medium-speed, Y medium-speed
250mm	3.0kg	6.0kg
300mm	3.0kg	6.0kg
350mm	3.0kg	6.0kg
400mm	3.0kg	6.0kg

List by Stroke

		Incremental				Absolute				
		Y-axis stroke	250	300	350	400	250	300	350	400
X-axis stroke	50	-	-	-	-	-	-	-	-	-
	100	-	-	-	-	-	-	-	-	-
	150	-	-	-	-	-	-	-	-	-
	200	-	-	-	-	-	-	-	-	-
	250	-	-	-	-	-	-	-	-	-
	300	-	-	-	-	-	-	-	-	-
	350	-	-	-	-	-	-	-	-	-
	400	-	-	-	-	-	-	-	-	-
	450	-	-	-	-	-	-	-	-	-

Cable track

	X-axis stroke	50-300	350-450
Wiring 1 (Next to X-axis)			-
Wiring 2 (Next to Y-axis)	Y-axis stroke	250-400	-

List of Options

Name	Option code	
Opposite-home specification	NM	
Slider roller specification	SR	Axis 1 (X-axis) Axis 2 (Y-axis)

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.
 * Refer to P. 90 for lengths other than those specified above.

Specifications

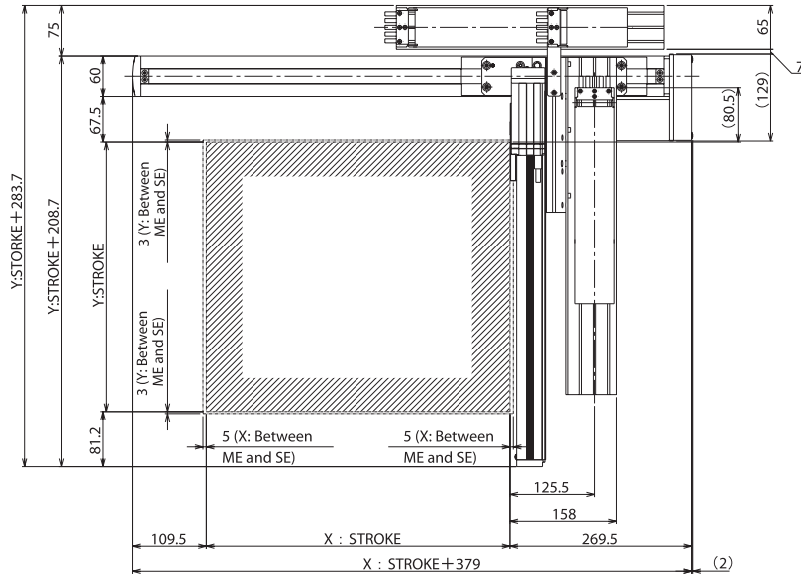
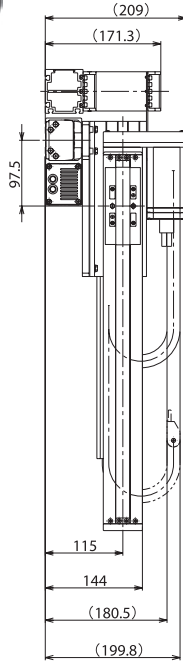
Item	X axis	Y axis
Axis model	RCS2-SS7C	RCS2-SA6R
Stroke (Can be set in 50-mm increments)	50-450mm	250-400mm
Axis 2	High-speed type: 600mm/s Medium-speed type: 300mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s
Motor output (W)	60W	30W
Ball screw lead	High-speed type: 12mm Medium-speed type: 6mm	
Drive method	Ball screw, ø10 mm, rolled, C10	
Positioning repeatability	±0.02mm	
Base Material	Dedicated alloy steel	Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

Dimensions

You can download CAD drawings from our website.

www.intelligentactuator.com

2D CAD



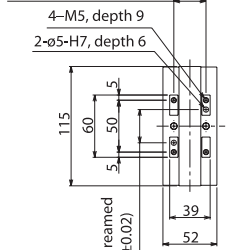
Note 1. The connected position shown in the drawing defines the home.

Note 2. Both wiring 1 and wiring 2 assume use of a cable track.

Note 3. For details on the cable track, refer to P. 90.

Note 4. For details on the bracket on the moving end of the cable track, refer to P. 90.

31
(Tolerance for reamed hole pitch: ±0.02)



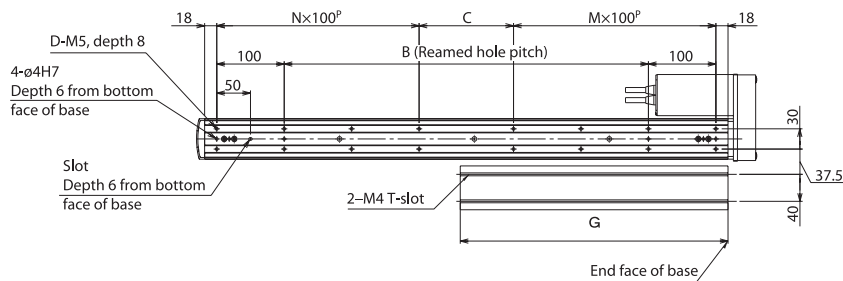
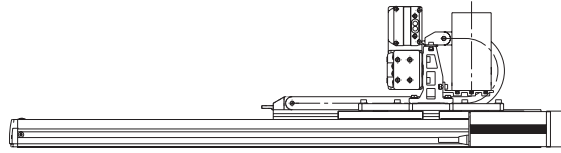
Detail view of Y-axis slider

32
(Tolerance for reamed hole pitch: ±0.02)



Detail view of slot in bottom face of X-axis base

ME: Mechanical end
SE: Stroke end



Detail view of X-axis installation

■ Dimensions by Stroke

X: Nominal stroke	200	250	300	350	400	450	500	550	600
X: Effective stroke	50	100	150	200	250	300	350	400	450
B	140	190	240	290	340	390	440	490	540
C	140	190	40	90	140	190	40	90	140
D	8	8	12	12	12	12	16	16	16
M	1	1	2	2	2	2	3	3	3
N	1	1	2	2	2	2	3	3	3
G	197	222	247	272	297	322	347	372	397

Controllers

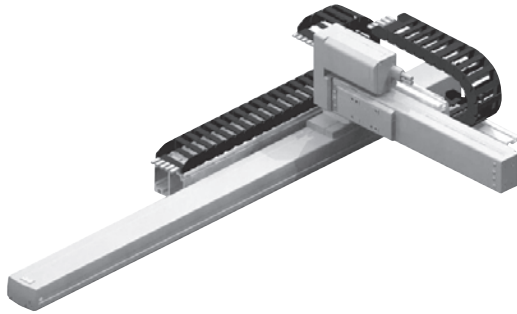
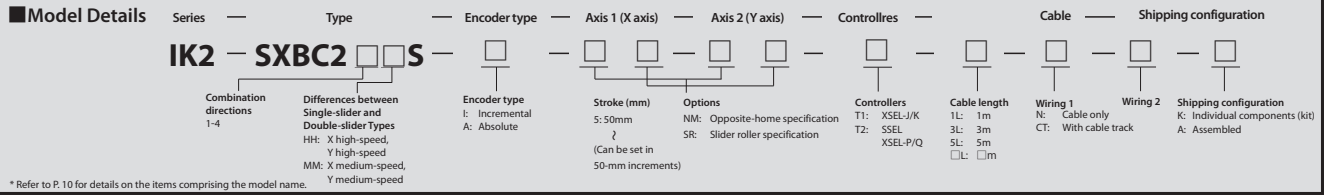
Applicable controller



Refer to P. 91 for the controllers.

IK2-SXBC2□□S

RCS2 2-axis Combinations X axis: SS7C (Straight, Single-slider)
Y axis: SA6R (Reversed)



Both wiring 1 and wiring 2 assume use of a cable track.

Maximum Stroke

X axis 600 mm Y axis 200 mm

Axis 2

	High-speed type	Medium-speed type
X axis	600mm/s	300mm/s
Y axis	800mm/s	400mm/s

Maximum Load Capacity

Y-axis stroke	X high-speed, Y high-speed	X medium-speed, Y medium-speed
50mm	4.5kg	9.0kg
100mm	4.5kg	9.0kg
150mm	4.0kg	8.0kg
200mm	3.0kg	6.0kg

List by Stroke

Y-axis stroke	Incremental				Absolute			
	50	100	150	200	50	100	150	200
50	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-
250	-	-	-	-	-	-	-	-
300	-	-	-	-	-	-	-	-
350	-	-	-	-	-	-	-	-
400	-	-	-	-	-	-	-	-
450	-	-	-	-	-	-	-	-
500	-	-	-	-	-	-	-	-
550	-	-	-	-	-	-	-	-
600	-	-	-	-	-	-	-	-

Cable track

Wiring 1 (Next to X-axis)	X-axis stroke	50-300	350-600
Wiring 2 (Next to Y-axis)	Y-axis stroke	50-200	-

List of Options

Name	Option code	
Opposite-home specification	NM	
Slider roller specification	SR	Axis 1 (X-axis) Axis 2 (Y-axis)

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.
* Refer to P. 90 for lengths other than those specified above.

Specifications

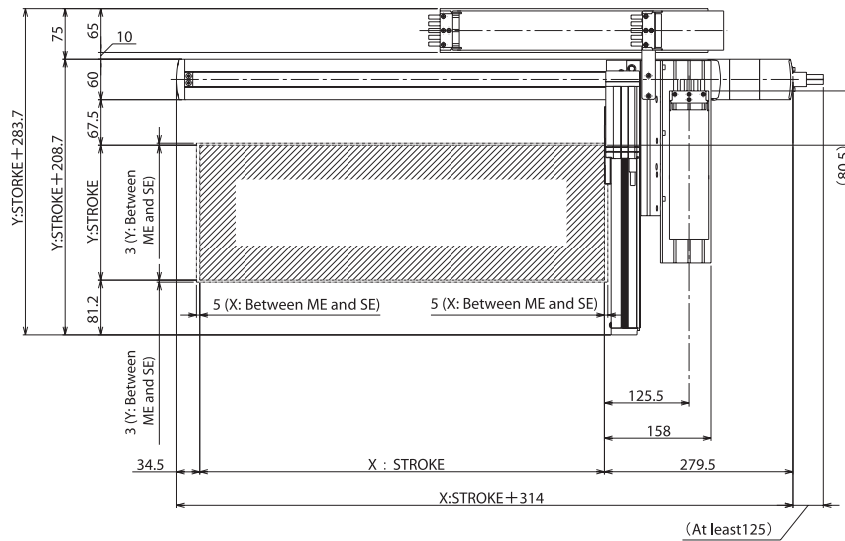
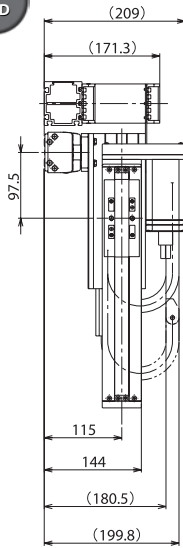
Item	X axis	Y axis
Axis model	RCS2-SS7C	RCS2-SA6R
Stroke (Can be set in 50-mm increments)	50-600mm	50-200mm
Axis 2	High-speed type: 600mm/s Medium-speed type: 300mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s
Motor output (W)	60W	30W
Ball screw lead	High-speed type: 12mm Medium-speed type: 6mm	
Drive method	Ball screw, ø10 mm, rolled, C10	
Positioning repeatability	±0.02mm	
Base Material	Dedicated alloy steel	Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

Dimensions

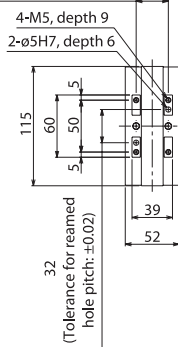
You can download CAD drawings from our website.

www.intelligentactuator.com

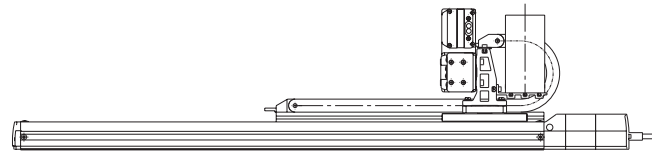
2D CAD



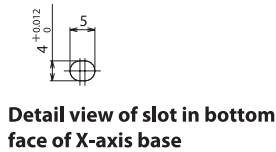
31
(Tolerance for reamed hole pitch: ±0.02)



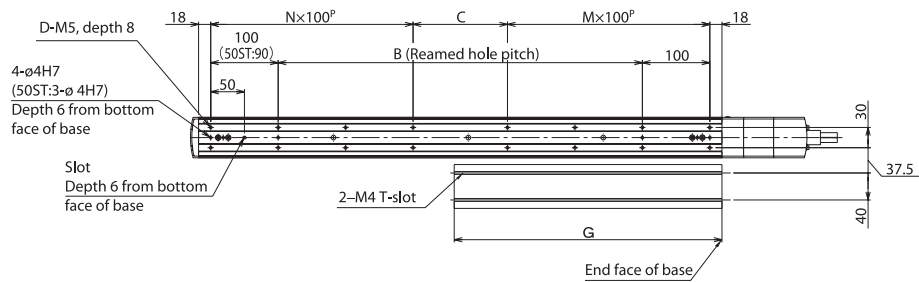
ME: Mechanical end
SE: Stroke end



Detail view of Y-axis slider



Detail view of slot in bottom face of X-axis base



Detail view of X-axis installation

Dimensions by Stroke

X: Nominal stroke	50	100	150	200	250	300	350	400	450	500	550	600
B	0	40	90	140	190	240	290	340	390	440	490	540
C	90	40	90	140	190	40	90	140	190	40	90	140
D	6	8	8	8	8	12	12	12	12	16	16	16
M	1	1	1	1	1	2	2	2	2	3	3	3
N	0	1	1	1	1	2	2	2	2	3	3	3
G	122	147	172	197	222	247	272	297	322	347	372	397

Controllers

Applicable controller



Refer to P. 91 for the controllers.

IK2-SXBC2□□D

RCS2 2-axis Combinations X axis: SS7C (Straight, Double-slider)
Y axis: SA6R (Reversed)

Model Details

Series: IK2 — Type: SXBC2□□D — Encoder type: □ — Axis 1 (X axis): □ — Axis 2 (Y axis): □ — Controllers: □ — Cable: □ — Shipping configuration: □

Combination directions 1-4

Differences between Single-slider and Double-slider Types
 HT: X high-speed, Y high-speed
 MM: X medium-speed, Y medium-speed

Encoder type
 I: Incremental
 A: Absolute

Stroke (mm)
 5: 50mm
 ? (Can be set in 50-mm increments)

Options
 NM: Opposite-home specification
 SR: Slider roller specification

Controllers
 T1: XSEL-J/K
 T2: SSEL XSEL-P/Q

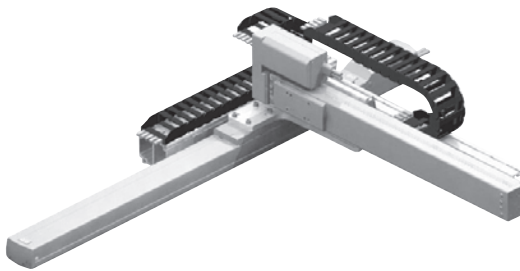
Cable length
 1L: 1m
 3L: 3m
 5L: 5m
 □L: □m

Wiring 1
 N: Cable only
 CT: With cable track

Wiring 2

Shipping configuration
 K: Individual components (kit)
 A: Assembled

* Refer to P.10 for details on the items comprising the model name.



Both wiring 1 and wiring 2 assume use of a cable track.

Maximum Stroke

X axis 450 mm Y axis 400 mm

Axis 2

	High-speed type	Medium-speed type
X axis	600mm/s	300mm/s
Y axis	800mm/s	400mm/s

Maximum Load Capacity

Y-axis stroke	X high-speed, Y high-speed	X medium-speed, Y medium-speed
250mm	3.0kg	6.0kg
300mm	3.0kg	6.0kg
350mm	3.0kg	6.0kg
400mm	3.0kg	6.0kg

List by Stroke

Y-axis stroke	Incremental				Absolute			
	250	300	350	400	250	300	350	400
50	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-
250	-	-	-	-	-	-	-	-
300	-	-	-	-	-	-	-	-
350	-	-	-	-	-	-	-	-
400	-	-	-	-	-	-	-	-
450	-	-	-	-	-	-	-	-

Cable track

Wiring	Axis stroke	50-300	350-450
Wiring 1 (Next to X-axis)	X-axis stroke		-
Wiring 2 (Next to Y-axis)	Y-axis stroke	250-400	-

List of Options

Name	Option code	
Opposite-home specification	NM	
Slider roller specification	SR	Axis 1 (X-axis) Axis 2 (Y-axis)

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.
 * Refer to P.90 for lengths other than those specified above.

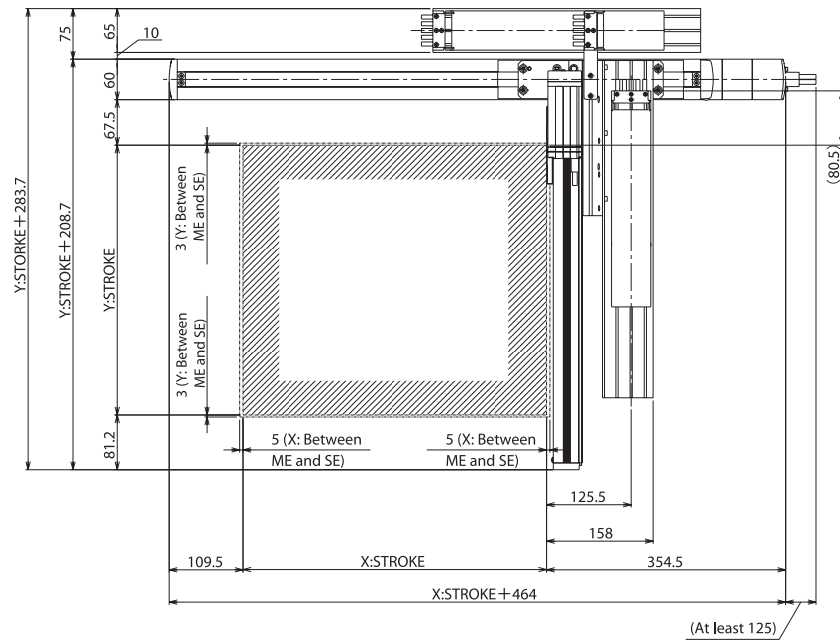
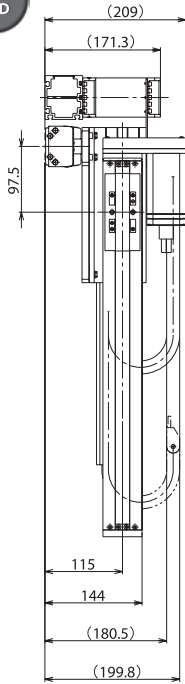
Specifications

Item	X axis	Y axis
Axis model	RCS2-SS7C	RCS2-SA6R
Stroke (Can be set in 50-mm increments)	50-450mm	250-400mm
Axis 2	High-speed type: 600mm/s Medium-speed type: 300mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s
Motor output (W)	60W	30W
Ball screw lead	High-speed type: 12mm Medium-speed type: 6mm	
Drive method	Ball screw, ø10 mm, rolled, C10	
Positioning repeatability	±0.02mm	
Base Material	Dedicated alloy steel	Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

Dimensions

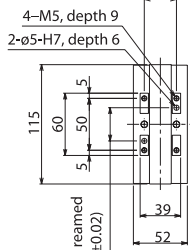
You can download CAD drawings from our website. www.intelligentactuator.com

2D CAD



Note 1. The connected position shown in the drawing defines the home.
 Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
 Note 3. For details on the cable track, refer to P. 90.
 Note 4. For details on the bracket on the moving end of the cable track, refer to P. 90.

31
 (Tolerance for reamed hole pitch: ±0.02)

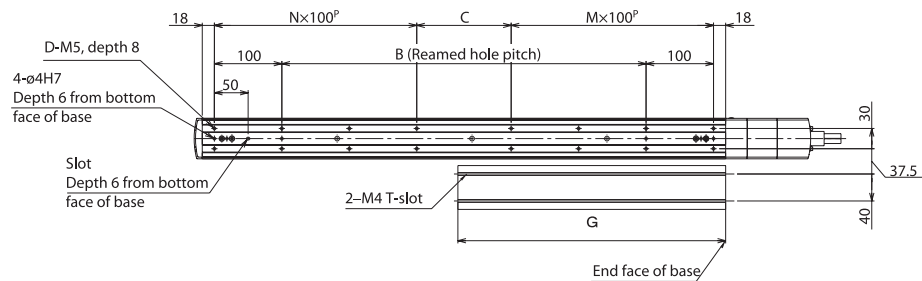
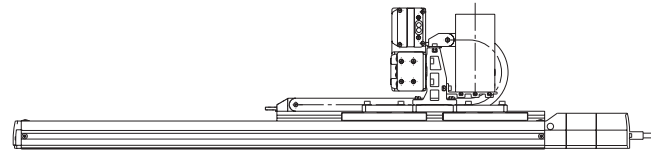


Detail view of Y-axis slider



Detail view of slot in bottom face of X-axis base

ME: Mechanical end
 SE: Stroke end



Detail view of X-axis installation

Dimensions by Stroke

X: Nominal stroke	200	250	300	350	400	450	500	550	600
X: Effective stroke	50	100	150	200	250	300	350	400	450
B	140	190	240	290	340	390	440	490	540
C	140	190	40	90	140	190	40	90	140
D	8	8	12	12	12	12	16	16	16
M	1	1	2	2	2	2	3	3	3
N	1	1	2	2	2	2	3	3	3
G	197	222	247	272	297	322	347	372	397

Controllers

Applicable controller

Refer to P. 91 for the controllers.

IK2-SXBB1□□S

RCS2 2-axis Combinations X axis: SS8R (100W, Reversed, Single-slider)
Y axis: SA7R (Reversed)

Model Details Series — Type — Encoder type — Axis 1 (X axis) — Axis 2 (Y axis) — Controllers — Cable — Shipping configuration

IK2 — **SXBB1**□□**S**

Combination directions 1-2

Differences between Single-slider and Double-slider Types
HH: X high-speed, Y high-speed
MM: X medium-speed, Y medium-speed

Encoder type
I: Incremental
A: Absolute

Stroke (mm)
S: 50mm
? (Can be set in 50-mm increments)

Options
NM: Opposite-home specification
SR: Slider roller specification

Controllers
T1: XSEL-J/K
SSEL
T2: XSEL-P/Q

Cable length
1L: 1m
3L: 3m
5L: 5m
□L: □m

Wiring 1
N: Cable only
CT: With cable track

Wiring 2

Shipping configuration
K: Individual components (kit)
A: Assembled

* Refer to P. 10 for details on the items comprising the model name.

Maximum Stroke

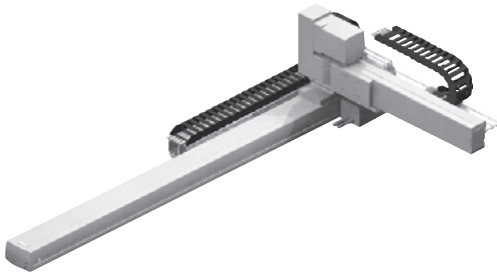
X axis 1000 mm Y axis 300 mm

Axis 2

	High-speed type	Medium-speed type
X axis	1000mm/s	500mm/s
Y axis	800mm/s	400mm/s

Maximum Load Capacity

Y-axis stroke	X high-speed, Y high-speed	X medium-speed, Y medium-speed
50mm	8.0kg	16kg
100mm	8.0kg	16kg
150mm	7.0kg	15kg
200mm	7.0kg	12.5kg
250mm	6.0kg	9.0kg
300mm	6.0kg	8.0kg



Both wiring 1 and wiring 2 assume use of a cable track.

List by Stroke

Y-axis stroke	Incremental						Absolute					
	50	100	150	200	250	300	50	100	150	200	250	300
50	-	-	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-	-	-
250	-	-	-	-	-	-	-	-	-	-	-	-
300	-	-	-	-	-	-	-	-	-	-	-	-
350	-	-	-	-	-	-	-	-	-	-	-	-
400	-	-	-	-	-	-	-	-	-	-	-	-
450	-	-	-	-	-	-	-	-	-	-	-	-
500	-	-	-	-	-	-	-	-	-	-	-	-
550	-	-	-	-	-	-	-	-	-	-	-	-
600	-	-	-	-	-	-	-	-	-	-	-	-
650	-	-	-	-	-	-	-	-	-	-	-	-
700	-	-	-	-	-	-	-	-	-	-	-	-
750	-	-	-	-	-	-	-	-	-	-	-	-
800	-	-	-	-	-	-	-	-	-	-	-	-
850	-	-	-	-	-	-	-	-	-	-	-	-
900	-	-	-	-	-	-	-	-	-	-	-	-
950	-	-	-	-	-	-	-	-	-	-	-	-
1000	-	-	-	-	-	-	-	-	-	-	-	-

Cable track

Wiring 1 (Next to X-axis)	X-axis stroke	50-300	350-600	650-900	950-1000
Wiring 2 (Next to Y-axis)	Y-axis stroke	50-200	250-300	-	-

List of Options

Name	Option code	
Opposite-home specification	NM	
Slider roller specification	SR	Axis 1 (X-axis) Axis 2 (Y-axis)

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.

* Refer to P. 90 for lengths other than those specified above.

Specifications

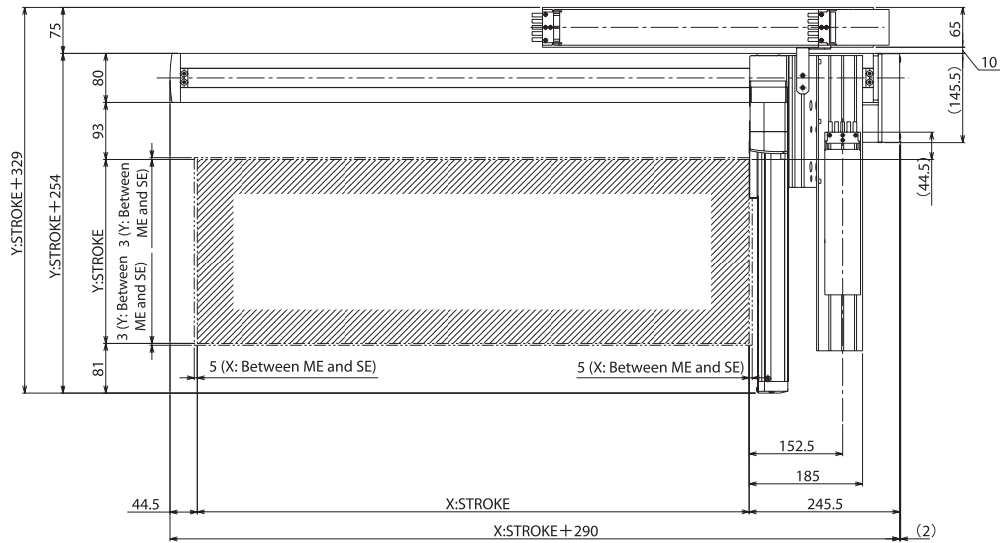
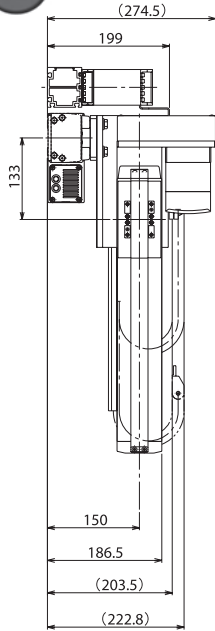
Item	X axis	Y axis
Axis model	RCS2-SS8R	RCS2-SA7R
Stroke (Can be set in 50-mm increments)	50-1000mm	50-300mm
Axis 2	High-speed type: 1000mm/s Medium-speed type: 500mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s
Motor output (W)	100W	60W
Ball screw lead	High-speed type: 20mm Medium-speed type: 10mm	High-speed type: 16mm Medium-speed type: 8mm
Drive method	Ball screw, ø16 mm, rolled, C10	Ball screw, ø12 mm, rolled, C10
Positioning repeatability	±0.02mm	
Base Material	Dedicated alloy steel	Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

Dimensions

You can download CAD drawings from our website.

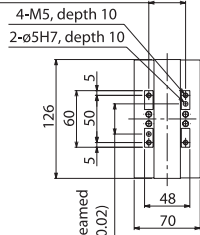
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2D CAD



Note 1. The connected position shown in the drawing defines the home.
 Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
 Note 3. For details on the cable track, refer to P. 90.
 Note 4. For details on the bracket on the moving end of the cable track, refer to P. 90.

39
 (Tolerance for reamed hole pitch: ±0.02)

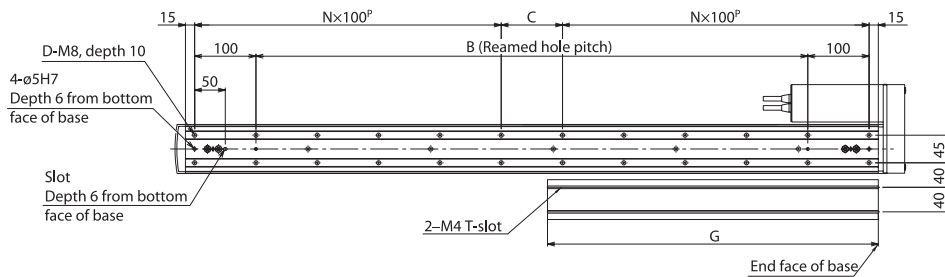
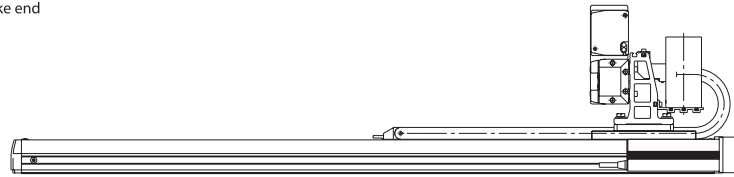


Detail view of Y-axis slider



Detail view of slot in bottom face of X-axis base

ME: Mechanical end
 SE: Stroke end



Detail view of X-axis installation

Dimensions by Stroke

X: Nominal stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
B	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
C	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
D	8	8	8	10	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	26
N	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
G	114.5	139.5	164.5	189.5	214.5	239.5	264.5	289.5	314.5	339.5	364.5	389.5	414.5	439.5	464.5	489.5	514.5	539.5	564.5	589.5

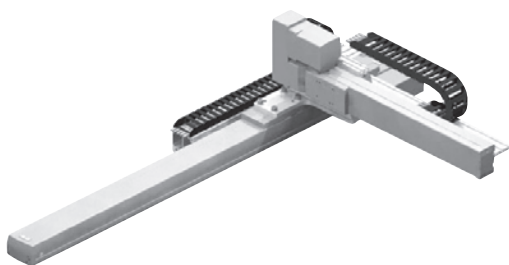
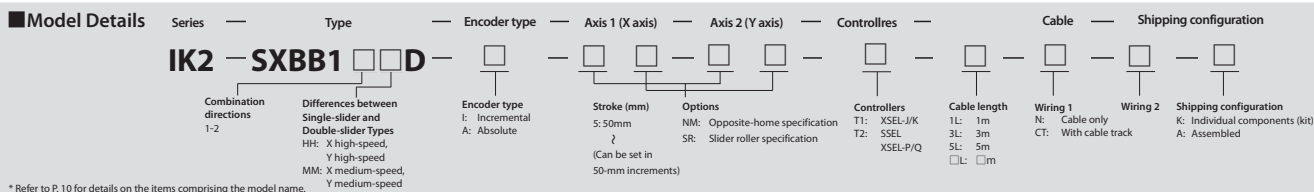
Controllers

Applicable controller

Refer to P. 91 for the controllers.

IK2-SXBB1 □ □ D

RCS2 2-axis Combinations X axis: SS8R (100W, Reversed, Double-slider)
Y axis: SA7R (Reversed)



Maximum Stroke

X axis 800 mm Y axis 400 mm

Axis 2

	High-speed type	Medium-speed type
X axis	1000mm/s	500mm/s
Y axis	800mm/s	400mm/s

Maximum Load Capacity

Y-axis stroke	X high-speed, Y high-speed	X medium-speed, Y medium-speed
200mm	—	15kg
250mm	—	12.5kg
300mm	—	12.5kg
350mm	6.0kg	12kg
400mm	5.5kg	10.5kg

Both wiring 1 and wiring 2 assume use of a cable track.

List by Stroke

Y-axis stroke	Incremental					Absolute				
	200	250	300	350	400	200	250	300	350	400
50	—	—	—	—	—	—	—	—	—	—
100	—	—	—	—	—	—	—	—	—	—
150	—	—	—	—	—	—	—	—	—	—
200	—	—	—	—	—	—	—	—	—	—
250	—	—	—	—	—	—	—	—	—	—
300	—	—	—	—	—	—	—	—	—	—
350	—	—	—	—	—	—	—	—	—	—
400	—	—	—	—	—	—	—	—	—	—
450	—	—	—	—	—	—	—	—	—	—
500	—	—	—	—	—	—	—	—	—	—
550	—	—	—	—	—	—	—	—	—	—
600	—	—	—	—	—	—	—	—	—	—
650	—	—	—	—	—	—	—	—	—	—
700	—	—	—	—	—	—	—	—	—	—
750	—	—	—	—	—	—	—	—	—	—
800	—	—	—	—	—	—	—	—	—	—

Note: For the X high-speed/Y high-speed type, the Y-axis stroke must be 350 mm or more.

Cable track

Wiring 1 (Next to X-axis)	X-axis stroke	50-300	350-600	650-800
Wiring 2 (Next to Y-axis)	Y-axis stroke	200	250-400	—

List of Options

Name	Option code	
Opposite-home specification	NM	
Slider roller specification	SR	Axis 1 (X-axis) Axis 2 (Y-axis)

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.

* Refer to P. 90 for lengths other than those specified above.

Specifications

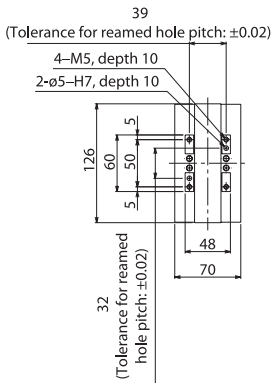
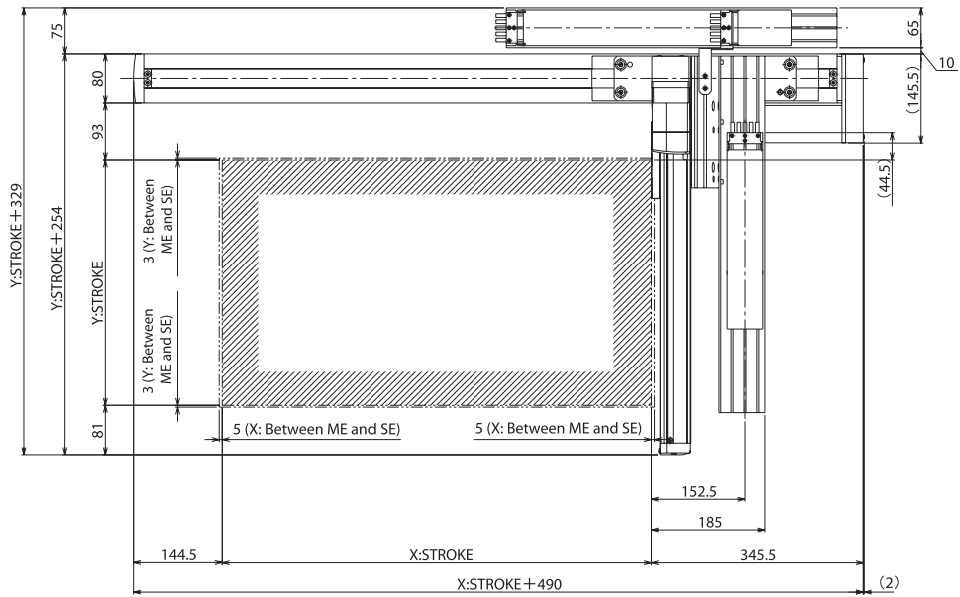
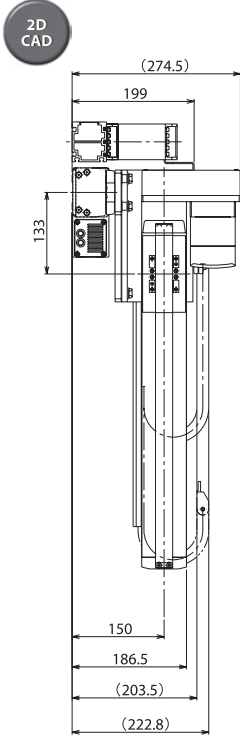
Item	X axis	Y axis
Axis model	RCS2-SS8R	RCS2-SA7R
Stroke (Can be set in 50-mm increments)	50-800mm	200-400mm
Axis 2	High-speed type: 1000mm/s Medium-speed type: 500mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s
Motor output (W)	100W	60W
Ball screw lead	High-speed type: 20mm Medium-speed type: 10mm	High-speed type: 16mm Medium-speed type: 8mm
Drive method	Ball screw, ø16 mm, rolled, C10	Ball screw, ø12 mm, rolled, C10
Positioning repeatability	±0.02mm	
Base Material	Dedicated alloy steel	Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

Dimensions

You can download CAD drawings from our website.

www.intelligentactuator.com

Note 1. The connected position shown in the drawing defines the home.
 Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
 Note 3. For details on the cable track, refer to P.90.
 Note 4. For details on the bracket on the moving end of the cable track, refer to P.90.

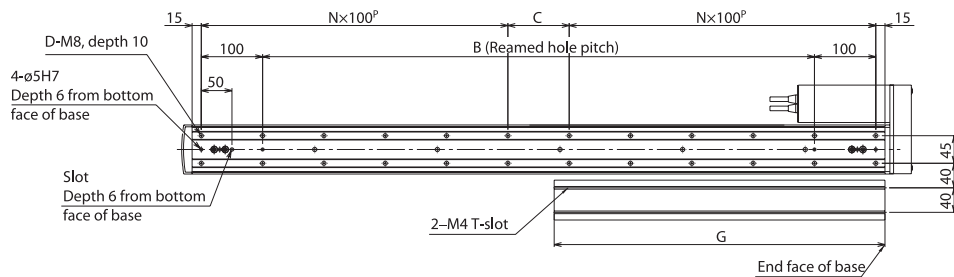
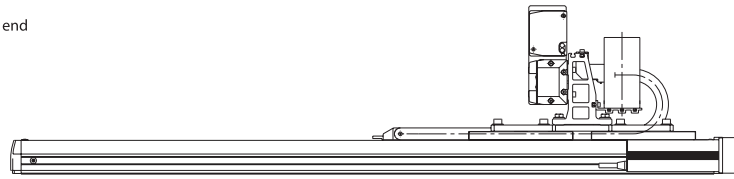


Detail view of Y-axis slider



Detail view of slot in bottom face of X-axis base

ME: Mechanical end
 SE: Stroke end



Detail view of X-axis installation

Dimensions by Stroke

X: Nominal stroke	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
X: Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
B	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
C	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
D	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	26
N	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
G	214.5	239.5	264.5	289.5	314.5	339.5	364.5	389.5	414.5	439.5	464.5	489.5	514.5	539.5	564.5	589.5

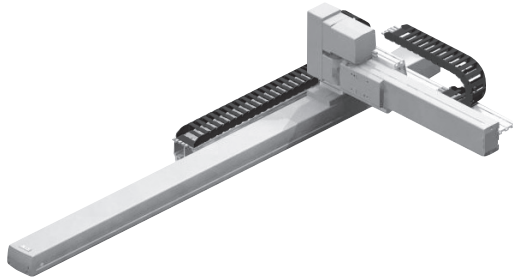
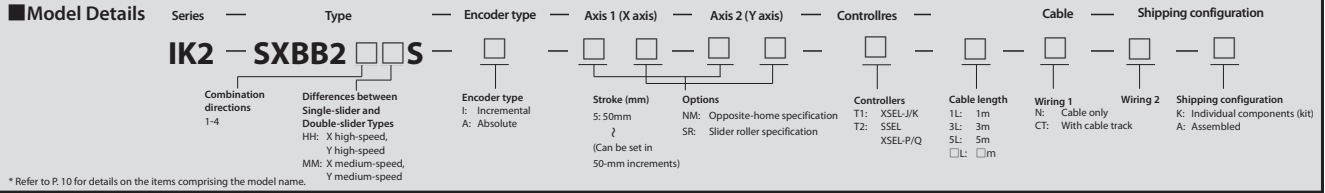
Controllers

Applicable controller

Refer to P. 91 for the controllers.

IK2-SXBB2□□S

RCS2 2-axis Combinations X axis: SS8C (100W, Straight, Single-slider)
Y axis: SA7R (Reversed)



Both wiring 1 and wiring 2 assume use of a cable track.

Maximum Stroke

X axis 1000 mm | Y axis 300 mm

Axis 2

	High-speed type	Medium-speed type
X axis	1000mm/s	500mm/s
Y axis	800mm/s	400mm/s

Maximum Load Capacity

Y-axis stroke	X high-speed, Y high-speed	X medium-speed, Y medium-speed
50mm	8.0kg	16kg
100mm	8.0kg	16kg
150mm	7.0kg	15kg
200mm	7.0kg	12.5kg
250mm	6.0kg	9.0kg
300mm	6.0kg	8.0kg

List by Stroke

Y-axis stroke	Incremental						Absolute					
	50	100	150	200	250	300	50	100	150	200	250	300
50	-	-	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-	-	-
250	-	-	-	-	-	-	-	-	-	-	-	-
300	-	-	-	-	-	-	-	-	-	-	-	-
350	-	-	-	-	-	-	-	-	-	-	-	-
400	-	-	-	-	-	-	-	-	-	-	-	-
450	-	-	-	-	-	-	-	-	-	-	-	-
500	-	-	-	-	-	-	-	-	-	-	-	-
550	-	-	-	-	-	-	-	-	-	-	-	-
600	-	-	-	-	-	-	-	-	-	-	-	-
650	-	-	-	-	-	-	-	-	-	-	-	-
700	-	-	-	-	-	-	-	-	-	-	-	-
750	-	-	-	-	-	-	-	-	-	-	-	-
800	-	-	-	-	-	-	-	-	-	-	-	-
850	-	-	-	-	-	-	-	-	-	-	-	-
900	-	-	-	-	-	-	-	-	-	-	-	-
950	-	-	-	-	-	-	-	-	-	-	-	-
1000	-	-	-	-	-	-	-	-	-	-	-	-

Cable track

Wiring 1 (Next to X-axis)	X-axis stroke	50-300	350-600	650-900	950-1000
Wiring 2 (Next to Y-axis) <th>Y-axis stroke</th> <td>50-200</td> <td>250-300</td> <td>-</td> <td>-</td>	Y-axis stroke	50-200	250-300	-	-

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.
 * Refer to P. 90 for lengths other than those specified above.

List of Options

Name	Option code	
Opposite-home specification	NM	
Slider roller specification	SR	Axis 1 (X-axis) Axis 2 (Y-axis)

Specifications

Item	X axis	Y axis
Axis model	RCS2-SS8C	RCS2-SA7R
Stroke (Can be set in 50-mm increments)	50-1000mm	50-300mm
Axis 2	High-speed type: 1000mm/s Medium-speed type: 500mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s
Motor output (W)	100W	60W
Ball screw lead	High-speed type: 20mm Medium-speed type: 10mm	High-speed type: 16mm Medium-speed type: 8mm
Drive method	Ball screw, ø16 mm, rolled, C10	Ball screw, ø12 mm, rolled, C10
Positioning repeatability	±0.02mm	
Base Material	Dedicated alloy steel	Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

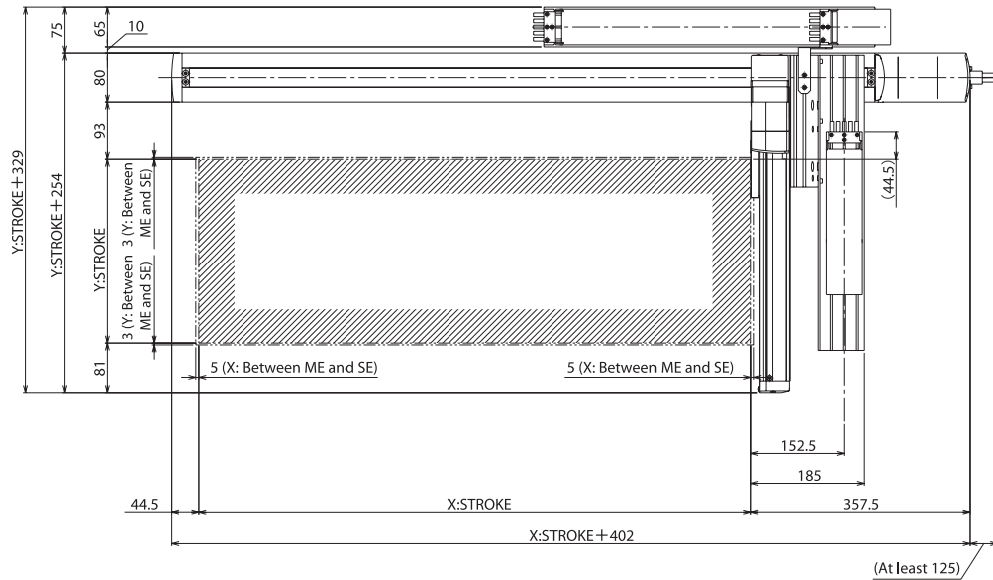
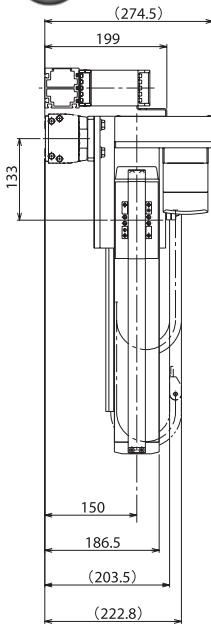
Dimensions

You can download CAD drawings from our website.

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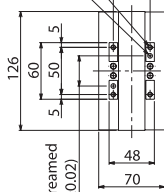
Note 1. The connected position shown in the drawing defines the home.
 Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
 Note 3. For details on the cable track, refer to P.90.
 Note 4. For details on the bracket on the moving end of the cable track, refer to P.90.

2D
CAD



39
(Tolerance for reamed hole pitch: ±0.02)

4-M5, depth 10
2-ø5-H7, depth 10



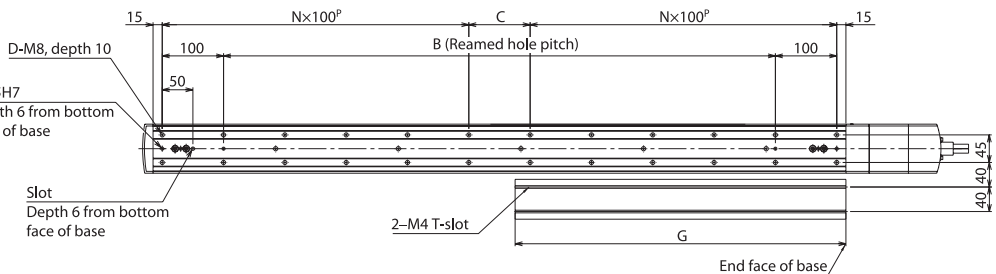
32
(Tolerance for reamed hole pitch: ±0.02)

Detail view of Y-axis slider

4-ø5H7
Depth 6 from bottom face of base



Detail view of slot in bottom face of X-axis base



Detail view of X-axis installation

Dimensions by Stroke

X: Nominal stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
B	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
C	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
D	8	8	8	10	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	26
N	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
G	114.5	139.5	164.5	189.5	214.5	239.5	264.5	289.5	314.5	339.5	364.5	389.5	414.5	439.5	464.5	489.5	514.5	539.5	564.5	589.5

Controllers

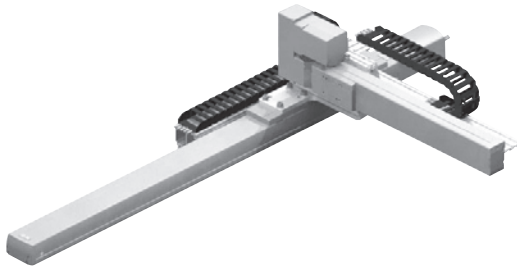
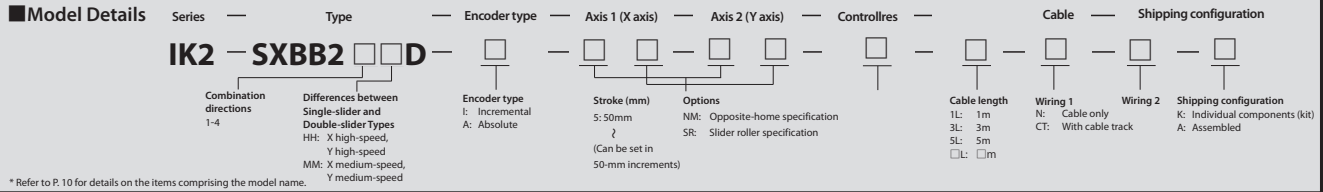
Applicable controller



Refer to P. 91 for the controllers.

IK2-SXBB2□□D

RCS2 2-axis Combinations X axis: SS8C (100W, Straight, Double-slider)
Y axis: SA7R (Reversed)



Both wiring 1 and wiring 2 assume use of a cable track.

Maximum Stroke

X axis 800 mm Y axis 400 mm

Axis 2

	High-speed type	Medium-speed type
X axis	1000mm/s	500mm/s
Y axis	800mm/s	400mm/s

Maximum Load Capacity

Y-axis stroke	X high-speed, Y high-speed	X medium-speed, Y medium-speed
200mm	—	15kg
250mm	—	12.5kg
300mm	—	12.5kg
350mm	6.0kg	12kg
400mm	5.5kg	10.5kg

List by Stroke

Y-axis stroke	Incremental					Absolute				
	200	250	300	350	400	200	250	300	350	400
50	—	—	—	—	—	—	—	—	—	—
100	—	—	—	—	—	—	—	—	—	—
150	—	—	—	—	—	—	—	—	—	—
200	—	—	—	—	—	—	—	—	—	—
250	—	—	—	—	—	—	—	—	—	—
300	—	—	—	—	—	—	—	—	—	—
350	—	—	—	—	—	—	—	—	—	—
400	—	—	—	—	—	—	—	—	—	—
450	—	—	—	—	—	—	—	—	—	—
500	—	—	—	—	—	—	—	—	—	—
550	—	—	—	—	—	—	—	—	—	—
600	—	—	—	—	—	—	—	—	—	—
650	—	—	—	—	—	—	—	—	—	—
700	—	—	—	—	—	—	—	—	—	—
750	—	—	—	—	—	—	—	—	—	—
800	—	—	—	—	—	—	—	—	—	—

Note: For the X high-speed/Y high-speed type, the Y-axis stroke must be 350 mm or more.

Cable track

	X-axis stroke	50-300	350-600	650-800
Wiring 1 (Next to X-axis)	Y-axis stroke	200	250-400	—
Wiring 2 (Next to Y-axis)	—	—	—	—

List of Options

Name	Option code	
Opposite-home specification	NM	
Slider roller specification	SR	Axis 1 (X-axis) Axis 2 (Y-axis)

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.

* Refer to P.90 for lengths other than those specified above.

Specifications

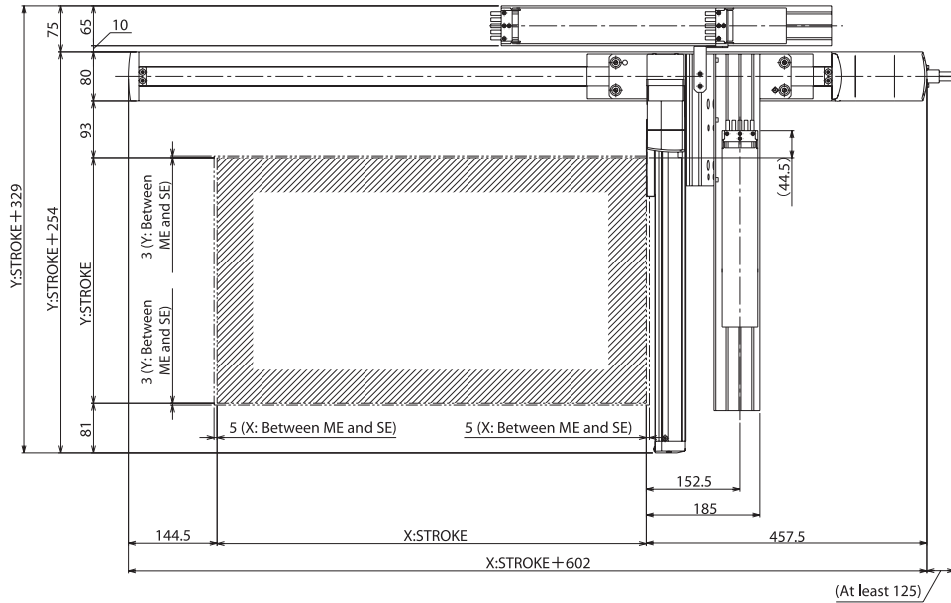
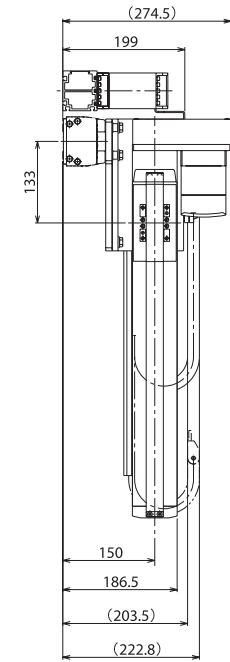
Item	X axis	Y axis
Axis model	RCS2-SS8C	RCS2-SA7R
Stroke (Can be set in 50-mm increments)	50-800mm	200-400mm
Axis 2	High-speed type: 1000mm/s Medium-speed type: 500mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s
Motor output (W)	100W	60W
Ball screw lead	High-speed type: 20mm Medium-speed type: 10mm	High-speed type: 16mm Medium-speed type: 8mm
Drive method	Ball screw, ø16 mm, rolled, C10	Ball screw, ø12 mm, rolled, C10
Positioning repeatability	±0.02mm	
Base Material	Dedicated alloy steel	Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

Dimensions

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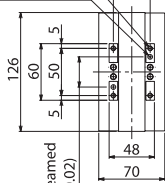
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 Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
 Note 3. For details on the cable track, refer to P. 90.
 Note 4. For details on the bracket on the moving end of the cable track, refer to P. 90.



ME: Mechanical end
 SE: Stroke end

39
 (Tolerance for reamed hole pitch: ±0.02)

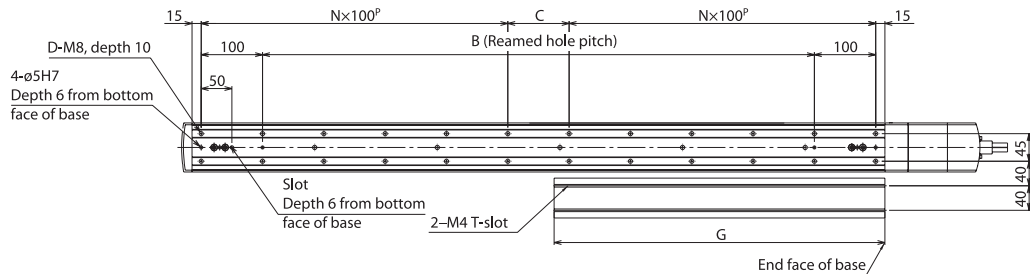
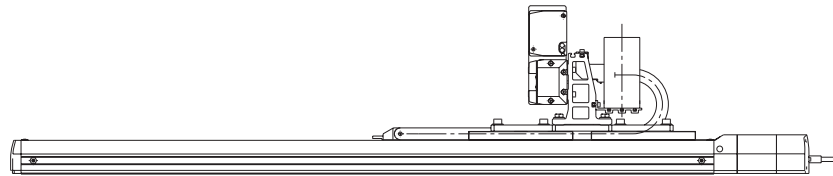
4-M5, depth 10
 2-ø5-H7, depth 10



Detail view of Y-axis slider



Detail view of slot in bottom face of X-axis base



Detail view of X-axis installation

■ Dimensions by Stroke

X: Nominal stroke	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
X: Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
B	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
C	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
D	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	26
N	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
G	214.5	239.5	264.5	289.5	314.5	339.5	364.5	389.5	414.5	439.5	464.5	489.5	514.5	539.5	564.5	589.5

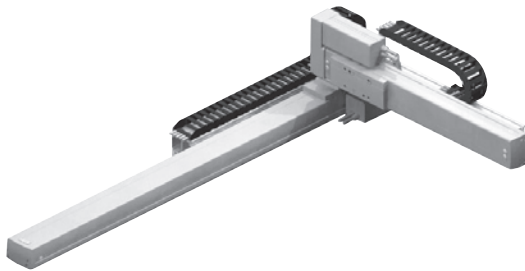
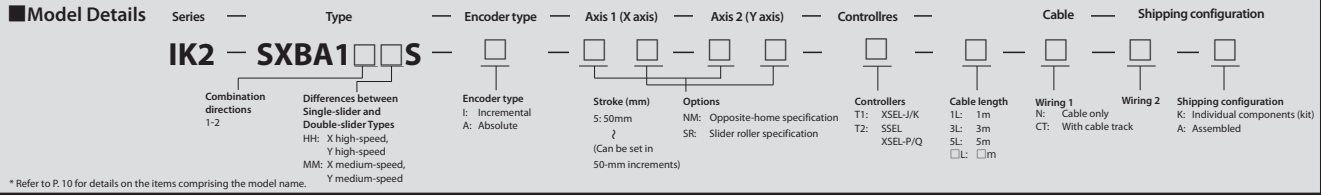
Controllers

Applicable controller

Refer to P. 91 for the controllers.

IK2-SXBA1□□S

RCS2 2-axis Combinations X axis: SS8R (150W, Reversed, Single-slider)
Y axis: SS8R (100W, Reversed)



Both wiring 1 and wiring 2 assume use of a cable track.

Maximum Stroke

X axis 1000 mm Y axis 350 mm

Axis 2

	High-speed type	Medium-speed type
X axis	1000mm/s	500mm/s
Y axis	1000mm/s	500mm/s

Maximum Load Capacity

Y-axis stroke	X high-speed, Y high-speed	X medium-speed, Y medium-speed
50mm	12kg	24kg
100mm	12kg	20.5kg
150mm	11.5kg	15.5kg
200mm	11kg	12.5kg
250mm	10kg	-
300mm	8.5kg	-
350mm	7kg	-

List by Stroke

Y-axis stroke	Incremental							Absolute						
	50	100	150	200	250	300	350	50	100	150	200	250	300	350
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-	-	-	-	-
250	-	-	-	-	-	-	-	-	-	-	-	-	-	-
300	-	-	-	-	-	-	-	-	-	-	-	-	-	-
350	-	-	-	-	-	-	-	-	-	-	-	-	-	-
400	-	-	-	-	-	-	-	-	-	-	-	-	-	-
450	-	-	-	-	-	-	-	-	-	-	-	-	-	-
500	-	-	-	-	-	-	-	-	-	-	-	-	-	-
550	-	-	-	-	-	-	-	-	-	-	-	-	-	-
600	-	-	-	-	-	-	-	-	-	-	-	-	-	-
650	-	-	-	-	-	-	-	-	-	-	-	-	-	-
700	-	-	-	-	-	-	-	-	-	-	-	-	-	-
750	-	-	-	-	-	-	-	-	-	-	-	-	-	-
800	-	-	-	-	-	-	-	-	-	-	-	-	-	-
850	-	-	-	-	-	-	-	-	-	-	-	-	-	-
900	-	-	-	-	-	-	-	-	-	-	-	-	-	-
950	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1000	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: For the X medium-speed/Y medium-speed type, the Y-axis stroke must be 200 mm or less.

Cable track

Wiring 1 (Next to X-axis)	X-axis stroke	50-300	350-600	650-900	950-1000
Wiring 2 (Next to Y-axis)	Y-axis stroke	50-200	250-300	-	-

List of Options

Name	Option code	
Opposite-home specification	NM	
Slider roller specification	SR	Axis 1 (X-axis) Axis 2 (Y-axis)

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.

* Refer to P. 90 for lengths other than those specified above.

Specifications

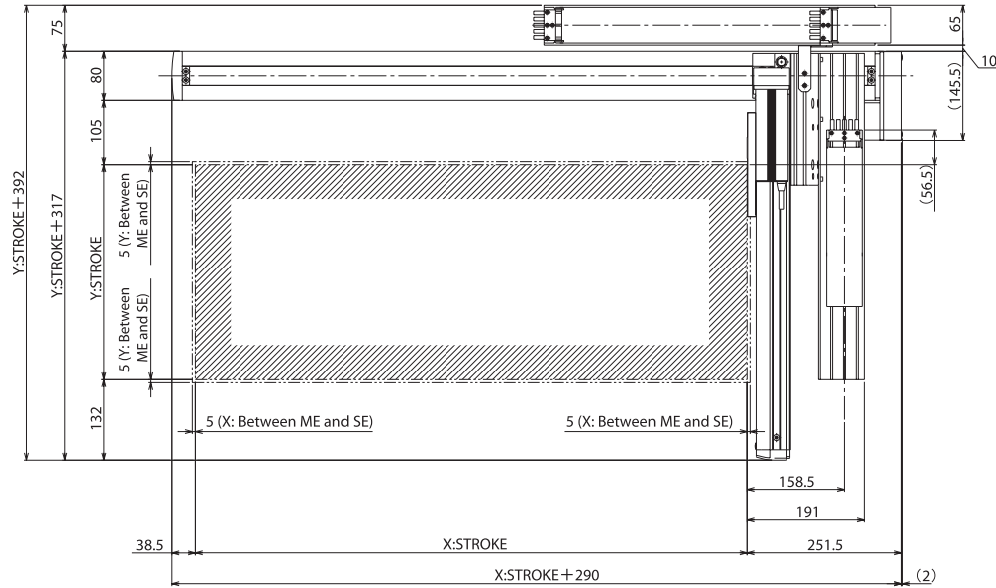
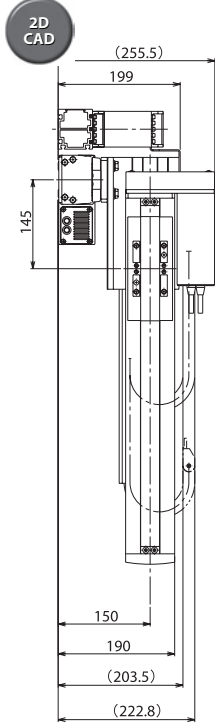
Item	X axis	Y axis
Axis model	RCS2-SS8R	RCS2-SS8R
Stroke (Can be set in 50-mm increments)	50-1000mm	50-350mm
Axis 2	High-speed type: 1000mm/s Medium-speed type: 500mm/s	High-speed type: 1000mm/s Medium-speed type: 500mm/s
Motor output (W)	150W	100W
Ball screw lead	High-speed type: 20mm Medium-speed type: 10mm	
Drive method	Ball screw, ø16 mm, rolled, C10	
Positioning repeatability	±0.02mm	
Base Material	Dedicated alloy steel	Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

IK2-SXBA1□□S

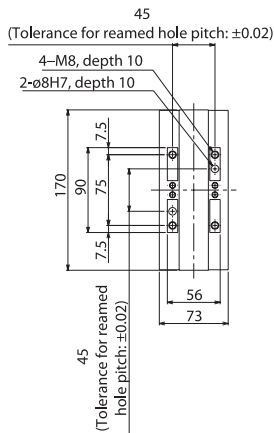
Dimensions

You can download CAD drawings from our website. www.intelligentactuator.com

Note 1. The connected position shown in the drawing defines the home.
 Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
 Note 3. For details on the cable track, refer to P. 90.
 Note 4. For details on the bracket on the moving end of the cable track, refer to P. 90.



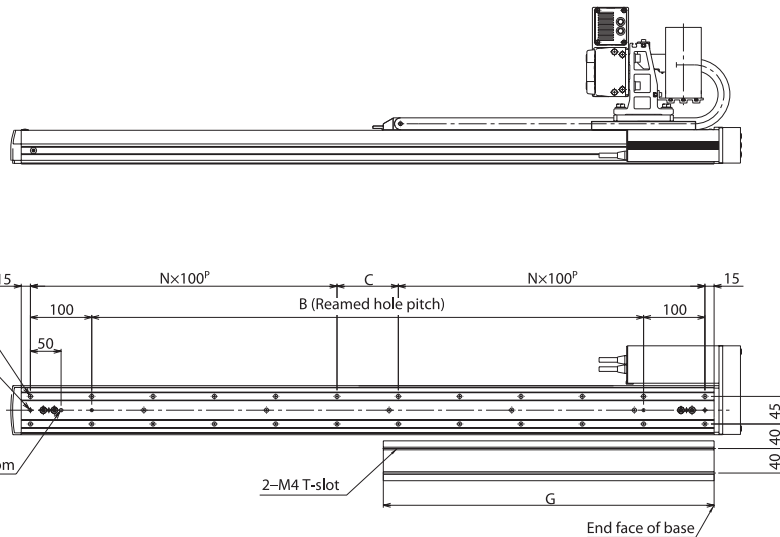
ME: Mechanical end
 SE: Stroke end



Detail view of Y-axis slider



Detail view of slot in bottom face of X-axis base



Detail view of X-axis installation

■ Dimensions by Stroke

X: Nominal stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
B	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
C	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
D	8	8	8	10	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	26
N	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
G	114.5	139.5	164.5	189.5	214.5	239.5	264.5	289.5	314.5	339.5	364.5	389.5	414.5	439.5	464.5	489.5	514.5	539.5	564.5	589.5

Controllers

Applicable controller

Refer to P. 91 for the controllers.

2-axis Combinations RCP2

2-axis Combinations RCS2

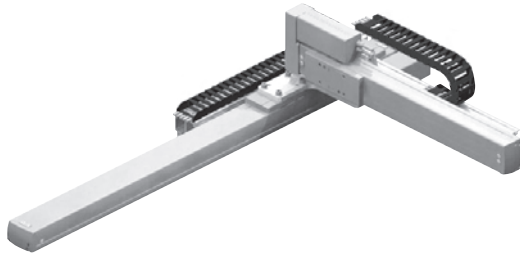
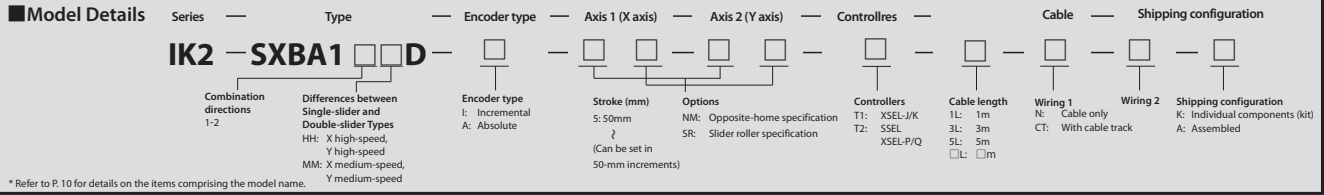
3-axis Combinations RCP2

3-axis Combinations RCS2

Controllers

IK2-SXBA1□□D

RCS2 2-axis Combinations X axis: SS8R (150W, Reversed, Double-slider)
Y axis: SS8R (100W, Reversed)



Both wiring 1 and wiring 2 assume use of a cable track.

Maximum Stroke

X axis 800 mm Y axis 400 mm

Axis 2

	High-speed type	Medium-speed type
X axis	1000mm/s	500mm/s
Y axis	1000mm/s	500mm/s

Maximum Load Capacity

Y-axis stroke	X high-speed, Y high-speed	X medium-speed, Y medium-speed
100mm	—	24kg
150mm	—	24kg
200mm	—	23kg
250mm	—	19kg
300mm	11kg	16kg
350mm	10.5kg	13.5kg
400mm	10kg	11.5kg

List by Stroke

Y-axis stroke	Incremental							Absolute						
	100	150	200	250	300	350	400	100	150	200	250	300	350	400
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-	-	-	-	-
250	-	-	-	-	-	-	-	-	-	-	-	-	-	-
300	-	-	-	-	-	-	-	-	-	-	-	-	-	-
350	-	-	-	-	-	-	-	-	-	-	-	-	-	-
400	-	-	-	-	-	-	-	-	-	-	-	-	-	-
450	-	-	-	-	-	-	-	-	-	-	-	-	-	-
500	-	-	-	-	-	-	-	-	-	-	-	-	-	-
550	-	-	-	-	-	-	-	-	-	-	-	-	-	-
600	-	-	-	-	-	-	-	-	-	-	-	-	-	-
650	-	-	-	-	-	-	-	-	-	-	-	-	-	-
700	-	-	-	-	-	-	-	-	-	-	-	-	-	-
750	-	-	-	-	-	-	-	-	-	-	-	-	-	-
800	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: For the X high-speed/Y high-speed type, the Y-axis stroke must be 300 mm or more.

Cable track

Wiring 1 (Next to X-axis)	X-axis stroke	50-300	350-600	650-800
Wiring 2 (Next to Y-axis)	Y-axis stroke	200	250-400	—

List of Options

Name	Option code	
Opposite-home specification	NM	
Slider roller specification	SR	Axis 1 (X-axis) Axis 2 (Y-axis)

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.

* Refer to P. 90 for lengths other than those specified above.

Specifications

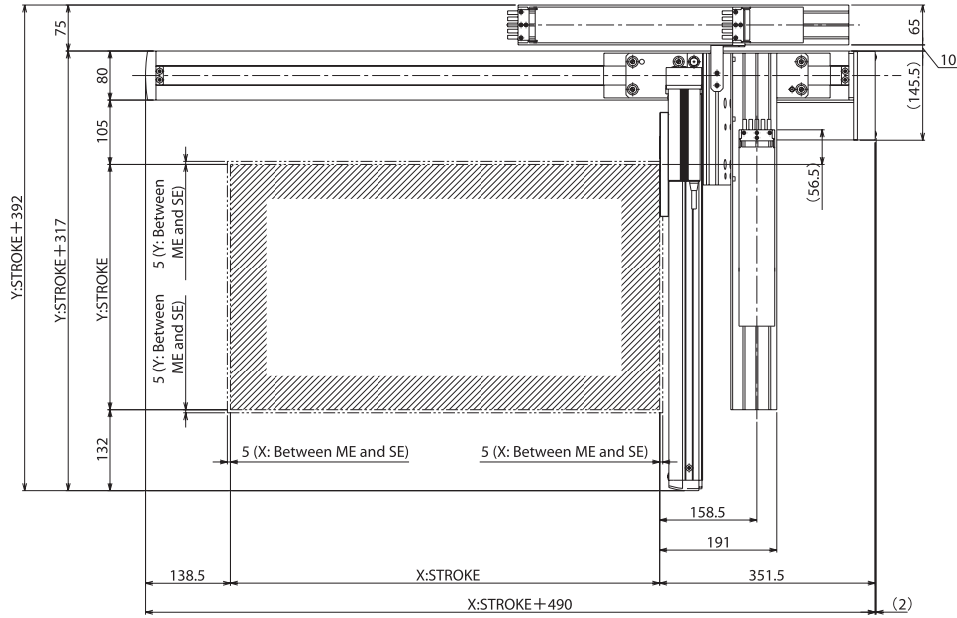
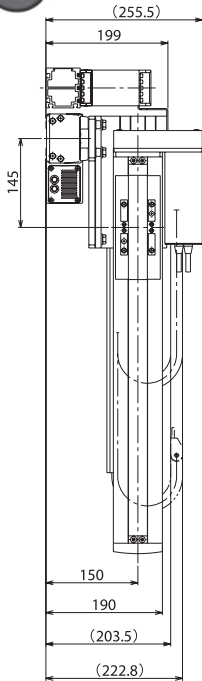
Item	X axis	Y axis
Axis model	RCS2-SS8R	RCS2-SS8R
Stroke (Can be set in 50-mm increments)	50-800mm	100-400mm
Axis 2	High-speed type: 1000mm/s Medium-speed type: 500mm/s	High-speed type: 1000mm/s Medium-speed type: 500mm/s
Motor output (W)	150W	100W
Ball screw lead	High-speed type: 20mm Medium-speed type: 10mm	
Drive method	Ball screw, ø16 mm, rolled, C10	
Positioning repeatability	±0.02mm	
Base Material	Dedicated alloy steel	
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

Dimensions

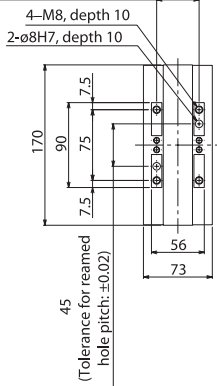
You can download CAD drawings from our website. www.intelligentactuator.com

Note 1. The connected position shown in the drawing defines the home.
 Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
 Note 3. For details on the cable track, refer to P.90.
 Note 4. For details on the bracket on the moving end of the cable track, refer to P.90.

2D CAD



45
 (Tolerance for reamed hole pitch: ±0.02)

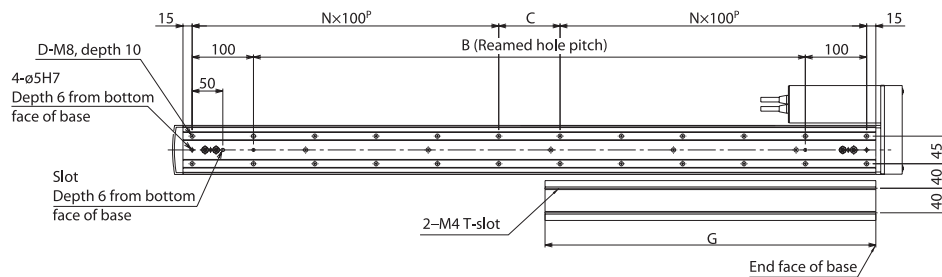
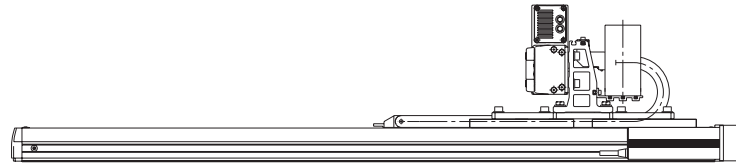


Detail view of Y-axis slider



Detail view of slot in bottom face of X-axis base

ME: Mechanical end
 SE: Stroke end



Detail view of X-axis installation

Dimensions by Stroke

X: Nominal stroke	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
X: Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
B	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
C	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
D	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	26
N	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
G	214.5	239.5	264.5	289.5	314.5	339.5	364.5	389.5	414.5	439.5	464.5	489.5	514.5	539.5	564.5	589.5

Controllers

Applicable controller

Refer to P. 91 for the controllers.

2-axis Combinations RCP2

2-axis Combinations RCS2

3-axis Combinations RCP2

3-axis Combinations RCS2

Controllers

IK2-SXBA2□□S

RCS2 2-axis Combinations X axis: SS8C (150W, Straight, Single-slider)
Y axis: SS8R (100W, Reversed)

Model Details

Series: IK2 Type: SXBA2□□S

Encoder type: I: Incremental, A: Absolute

Axis 1 (X axis): Stroke (mm) 5: 50mm, ? (Can be set in 50-mm increments)

Axis 2 (Y axis): Options: NM: Opposite-home specification, SR: Slider roller specification

Controllers: T1: XSEL-I/K, T2: SSEL, XSEL-P/Q

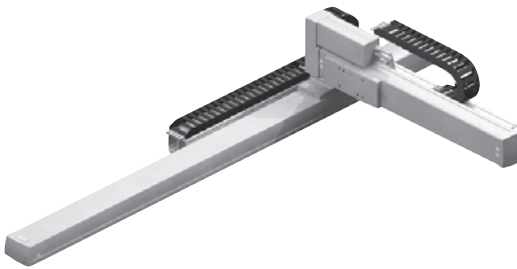
Cable length: 1L: 1m, 3L: 3m, 5L: 5m, □L: □m

Wiring 1: N: Cable only, CT: With cable track

Wiring 2: □

Shipping configuration: K: Individual components (kit), A: Assembled

* Refer to P.10 for details on the items comprising the model name.



Both wiring 1 and wiring 2 assume use of a cable track.

Maximum Stroke

X axis 1000 mm

Y axis 350 mm

Axis 2

	High-speed type	Medium-speed type
X axis	1000mm/s	500mm/s
Y axis	1000mm/s	500mm/s

Maximum Load Capacity

X high-speed, Y high-speed	X high-speed, Y high-speed	X medium-speed, Y medium-speed
50mm	12kg	24kg
100mm	12kg	20.5kg
150mm	11.5kg	15.5kg
200mm	11kg	12.5kg
250mm	10kg	-
300mm	8.5kg	-
350mm	7kg	-

List by Stroke

Y-axis stroke	Incremental								Absolute							
	50	100	150	200	250	300	350	50	100	150	200	250	300	350		
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
100	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
150	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
200	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
250	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
300	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
350	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
400	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
450	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
500	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
550	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
600	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
650	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
700	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
750	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
800	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
850	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
900	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
950	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1000	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

Note: For the X medium-speed/Y medium-speed type, the Y-axis stroke must be 200 mm or less.

Cable track

Wiring 1 (Next to X-axis)	X-axis stroke	50-300	350-600	650-900	950-1000
Wiring 2 (Next to Y-axis)	Y-axis stroke	50-200	250-300	-	-

List of Options

Name	Option code	
Opposite-home specification	NM	
Slider roller specification	SR	Axis 1 (X-axis) Axis 2 (Y-axis)

List by Cable Length

Type	Cable code	Length	
Standard type	1L	1m	
	3L	3m	
	5L	5m	

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.

* Refer to P. 90 for lengths other than those specified above.

Specifications

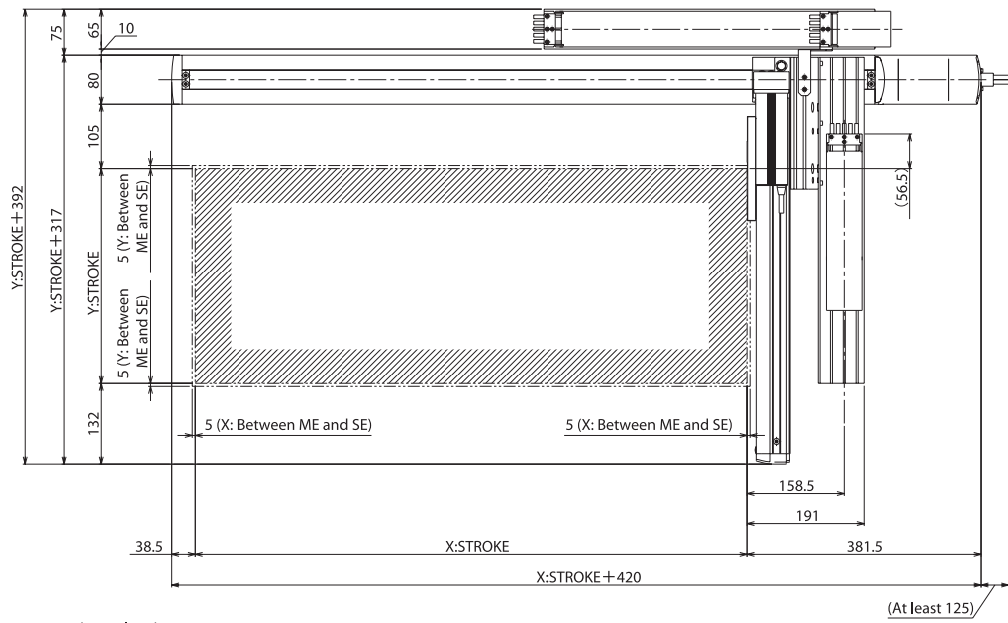
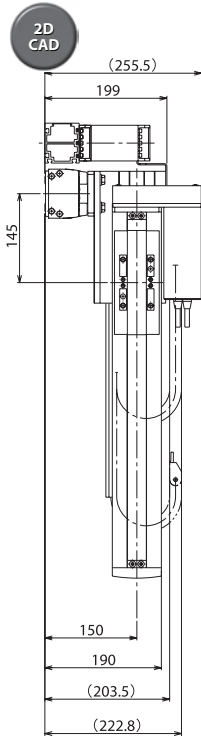
Item	X axis	Y axis
Axis model	RCS2-SS8C	RCS2-SS8R
Stroke (Can be set in 50-mm increments)	50-1000mm	50-350mm
Axis 2	High-speed type: 1000mm/s Medium-speed type: 500mm/s	High-speed type: 1000mm/s Medium-speed type: 500mm/s
Motor output (W)	150W	100W
Ball screw lead	High-speed type: 20mm Medium-speed type: 10mm	
Drive method	Ball screw, ø16 mm, rolled, C10	
Positioning repeatability	±0.02mm	
Base Material	Dedicated alloy steel	
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

Dimensions

You can download CAD drawings from our website.

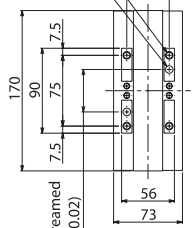
www.intelligentactuator.com

Note 1. The connected position shown in the drawing defines the home.
 Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
 Note 3. For details on the cable track, refer to P. 90.
 Note 4. For details on the bracket on the moving end of the cable track, refer to P. 90.



ME: Mechanical end
 SE: Stroke end

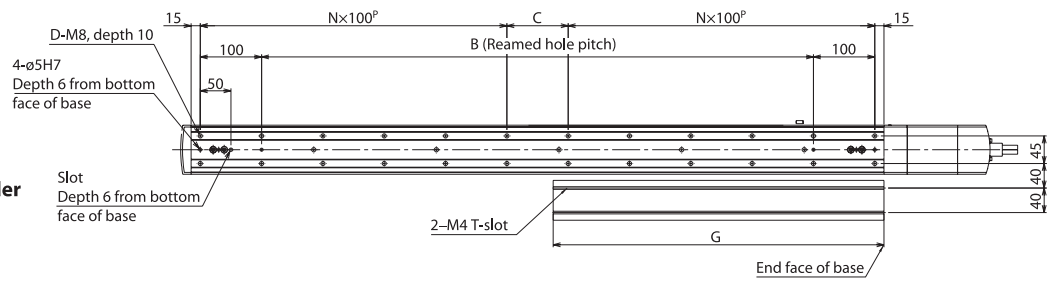
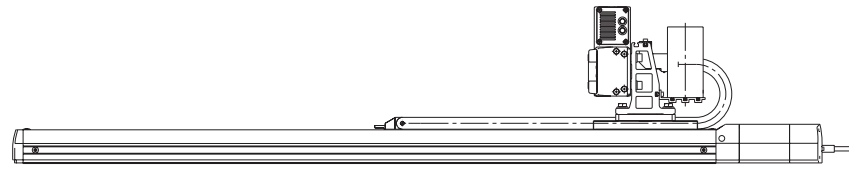
45
 (Tolerance for reamed hole pitch: ±0.02)
 4-M8, depth 10
 2-ø8-H7, depth 10



Detail view of Y-axis slider



Detail view of slot in bottom face of X-axis base



Detail view of X-axis installation

Dimensions by Stroke

X: Model	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
B	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
C	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
D	8	8	8	10	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	26
N	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
G	114.5	139.5	164.5	189.5	214.5	239.5	264.5	289.5	314.5	339.5	364.5	389.5	414.5	439.5	464.5	489.5	514.5	539.5	564.5	589.5

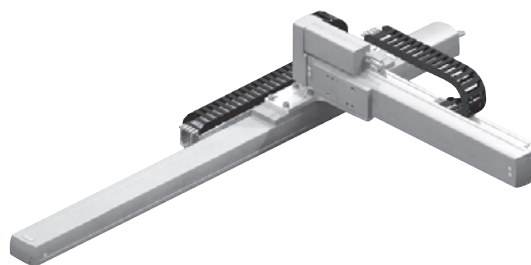
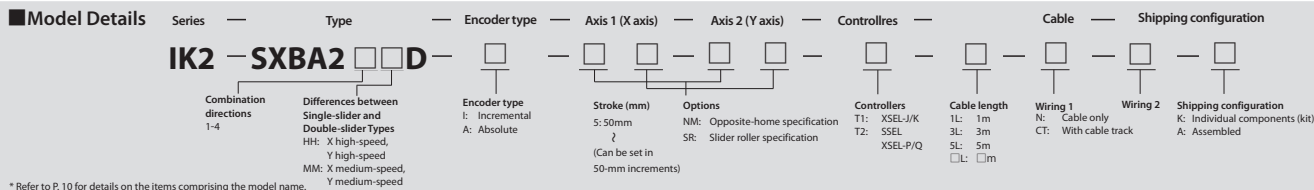
Controllers

Applicable controller

Refer to P. 91 for the controllers.

IK2-SXBA2□□D

RCS2 2-axis Combinations X axis: SS8C (150W, Straight, Double-slider)
Y axis: SS8R (100W, Reversed)



Both wiring 1 and wiring 2 assume use of a cable track.

Maximum Stroke

X axis 800 mm Y axis 400 mm

Axis 2

	High-speed type	Medium-speed type
X axis	1000mm/s	500mm/s
Y axis	1000mm/s	500mm/s

Maximum Load Capacity

Y-axis stroke	X high-speed, Y high-speed	X medium-speed, Y medium-speed
100mm	—	24kg
150mm	—	24kg
200mm	—	23kg
250mm	—	19kg
300mm	11kg	16kg
350mm	10.5kg	13.5kg
400mm	10kg	11.5kg

List by Stroke

Y-axis stroke	Incremental							Absolute						
	100	150	200	250	300	350	400	100	150	200	250	300	350	400
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-	-	-	-	-
250	-	-	-	-	-	-	-	-	-	-	-	-	-	-
300	-	-	-	-	-	-	-	-	-	-	-	-	-	-
350	-	-	-	-	-	-	-	-	-	-	-	-	-	-
400	-	-	-	-	-	-	-	-	-	-	-	-	-	-
450	-	-	-	-	-	-	-	-	-	-	-	-	-	-
500	-	-	-	-	-	-	-	-	-	-	-	-	-	-
550	-	-	-	-	-	-	-	-	-	-	-	-	-	-
600	-	-	-	-	-	-	-	-	-	-	-	-	-	-
650	-	-	-	-	-	-	-	-	-	-	-	-	-	-
700	-	-	-	-	-	-	-	-	-	-	-	-	-	-
750	-	-	-	-	-	-	-	-	-	-	-	-	-	-
800	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: For the X high-speed/Y high-speed type, the Y-axis stroke must be 300 mm or more.

Cable track

Wiring 1 (Next to X-axis)	X-axis stroke	50-300	350-600	650-800
Wiring 2 (Next to Y-axis)	Y-axis stroke	200	250-400	—

List of Options

Name	Option code	
Opposite-home specification	NM	
Slider roller specification	SR	Axis 1 (X-axis) Axis 2 (Y-axis)

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.

* Refer to P. 90 for lengths other than those specified above.

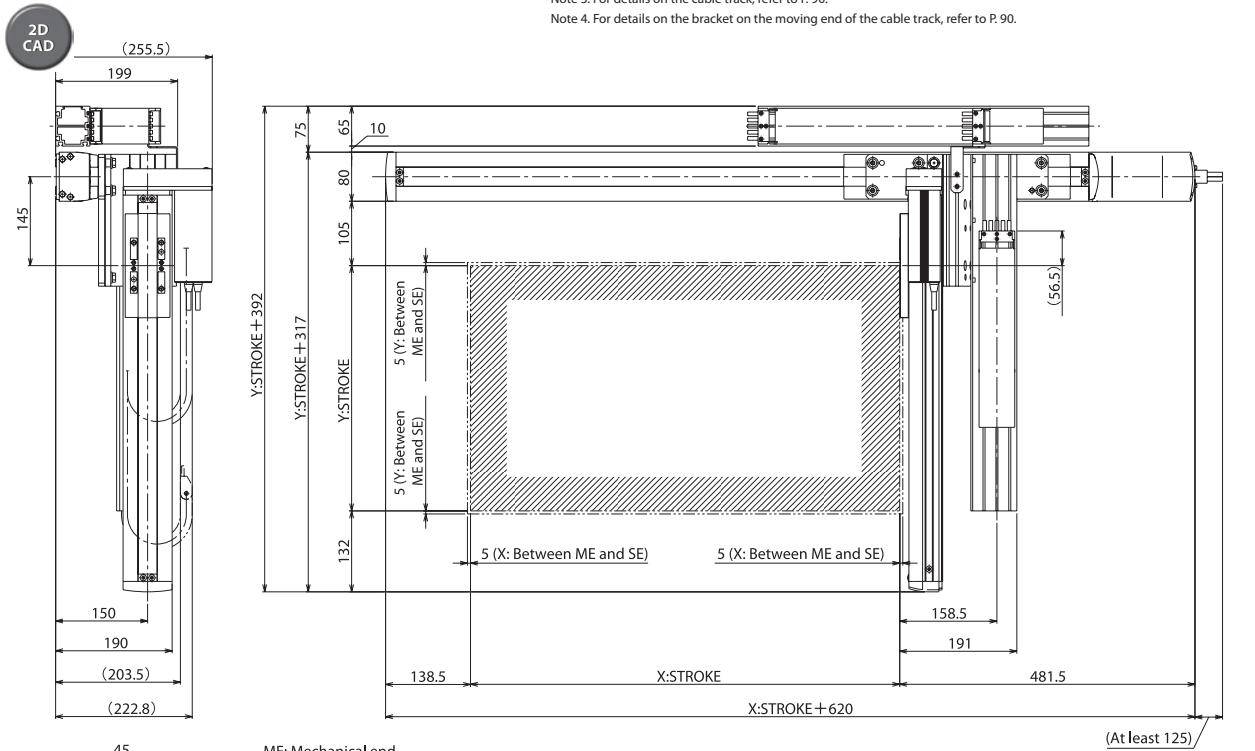
Specifications

Item	X axis	Y axis
Axis model	RCS2-SS8C	RCS2-SS8R
Stroke (Can be set in 50-mm increments)	50-800mm	100-400mm
Axis 2	High-speed type: 1000mm/s Medium-speed type: 500mm/s	High-speed type: 1000mm/s Medium-speed type: 500mm/s
Motor output (W)	150W	100W
Ball screw lead	High-speed type: 20mm Medium-speed type: 10mm	
Drive method	Ball screw, ø16 mm, rolled, C10	
Positioning repeatability	±0.02mm	
Base Material	Dedicated alloy steel	
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

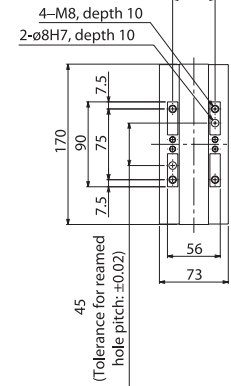
Dimensions

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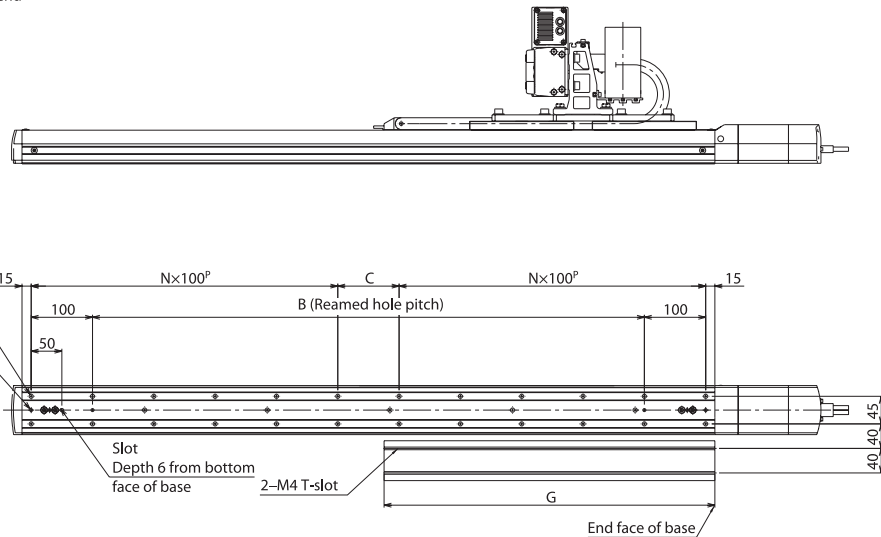
Note 1. The connected position shown in the drawing defines the home.
 Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
 Note 3. For details on the cable track, refer to P.90.
 Note 4. For details on the bracket on the moving end of the cable track, refer to P.90.



45 ME: Mechanical end
 (Tolerance for reamed hole pitch: ±0.02) SE: Stroke end



Detail view of Y-axis slider



Detail view of X-axis installation

Detail view of slot in bottom face of X-axis base



■ Dimensions by Stroke

X: Nominal stroke	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
X: Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
B	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
C	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
D	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	26
N	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
G	214.5	239.5	264.5	289.5	314.5	339.5	364.5	389.5	414.5	439.5	464.5	489.5	514.5	539.5	564.5	589.5

Controllers

Applicable controller

Refer to P. 91 for the controllers.

IK2-SXZB1□□S

RCS2 2-axis combination (XZ) X axis: SS8R (100W, Reversed, Single-slider)
Z axis: SA7R (Reversed)

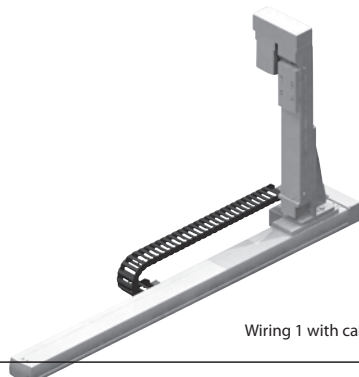
Model Details

Series: IK2 — Type: SXZB1□□S — Encoder type: □ — Axis 1 (X axis): □ — Axis 2 (Z axis): □ — Controller: □ — Cable: □ — Shipping configuration: □

Combinations

- Combination directions 1-4
- Differences between Single-slider and Double-slider Types:
 - HH: X high-speed, Z high-speed
 - HM: X high-speed, Z medium-speed
 - HL: X high-speed, Z low-speed
- Encoder type:
 - I: Incremental
 - A: Absolute
- Stroke (mm): 5: 50mm (Can be set in 50-mm increments)
- Options:
 - B: Brake
 - NM: Opposite-home specification
 - SR: Slider roller specification
- Controllers:
 - T1: XSEL-J/K
 - T2: SSEL XSEL-P/Q
- Cable length:
 - 1L: 1m
 - 3L: 3m
 - 5L: 5m
 - L: □m
- Wiring 1:
 - N: Cable only
 - CT: With cable track
- Wiring 2: □
- Shipping configuration:
 - K: Individual components (kit)
 - A: Assembled

* Refer to P. 10 for details on the items comprising the model name.



Wiring 1 with cable track

Maximum Stroke

X axis 1000 mm Z axis 250 mm

Axis 2

	High-speed type	Medium-speed type	Low-speed type
X axis	1000mm/s	—	—
Z axis	800mm/s	400mm/s	200mm/s

Maximum Load Capacity

Z-axis stroke	Z-axis high-speed, lead 16	Z-axis medium-speed, lead 8	Z-axis low-speed, lead 4
50mm	2.0kg	4.0kg	8.0kg
100mm	2.0kg	4.0kg	7.0kg
150mm	2.0kg	3.5kg	5.0kg
200mm	2.0kg	3.5kg	4.0kg
250mm	1.5kg	2.5kg	3.0kg

List by Stroke

Z-axis stroke	Incremental					Absolute				
	50	100	150	200	250	50	100	150	200	250
50	—	—	—	—	—	—	—	—	—	—
100	—	—	—	—	—	—	—	—	—	—
150	—	—	—	—	—	—	—	—	—	—
200	—	—	—	—	—	—	—	—	—	—
250	—	—	—	—	—	—	—	—	—	—
300	—	—	—	—	—	—	—	—	—	—
350	—	—	—	—	—	—	—	—	—	—
400	—	—	—	—	—	—	—	—	—	—
450	—	—	—	—	—	—	—	—	—	—
500	—	—	—	—	—	—	—	—	—	—
550	—	—	—	—	—	—	—	—	—	—
600	—	—	—	—	—	—	—	—	—	—
650	—	—	—	—	—	—	—	—	—	—
700	—	—	—	—	—	—	—	—	—	—
750	—	—	—	—	—	—	—	—	—	—
800	—	—	—	—	—	—	—	—	—	—
850	—	—	—	—	—	—	—	—	—	—
900	—	—	—	—	—	—	—	—	—	—
950	—	—	—	—	—	—	—	—	—	—
1000	—	—	—	—	—	—	—	—	—	—

Cable track

Wiring 1 (Next to X-axis)	X-axis stroke	150-300	350-600	650-900	950-1000

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.
* Refer to P. 90 for lengths other than those specified above.

List of Options

Name	Option code	
Opposite-home specification	NM	
Slider roller specification	SR	Axis 1 (X-axis) Axis 2 (Z-axis)

Specifications

Item	X axis	Y axis
Axis model	RCS2-SS8R	RCS2-SA7R
Stroke (Can be set in 50-mm increments)	50-1000mm	50-250mm
Axis 2	High-speed type: 1000mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s Low-speed type: 200mm/s
Motor output (W)	100W	60W
Ball screw lead	High-speed type: 20mm	High-speed type: 16mm Medium-speed type: 8mm Low-speed type: 4mm
Drive method	Ball screw, ø16mm, rolled, C10	Ball screw, ø12mm, rolled, C10
Positioning repeatability		±0.02mm
Base material	Dedicated alloy steel	Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

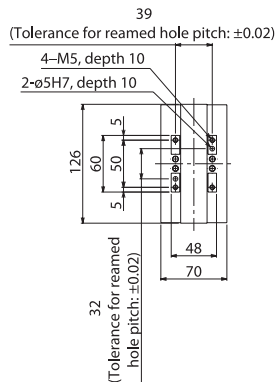
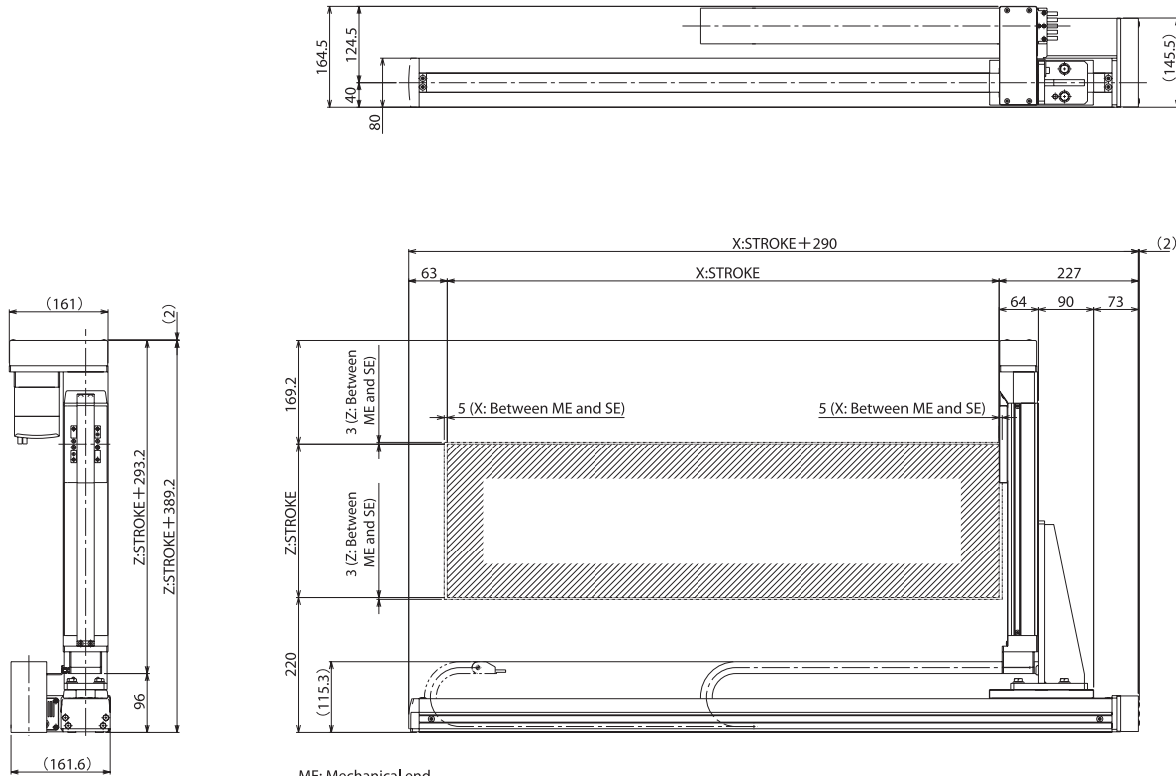
Dimensions

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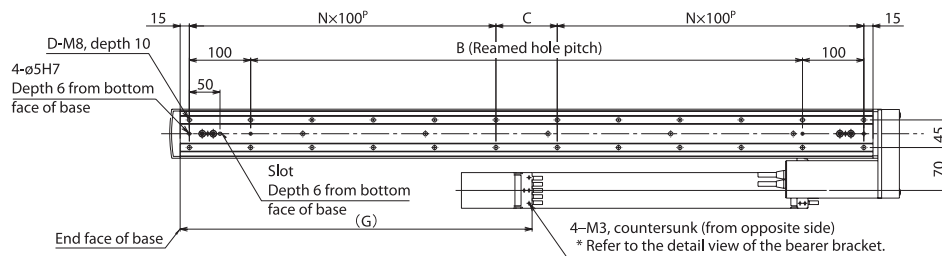
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2D CAD

Note 1. The connected position shown in the drawing defines the home.
 Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
 Note 3. For details on the cable track, refer to P. 90.
 Note 4. For details on the bracket on the moving end of the cable track, refer to P. 90.



Detail view of Z-axis slider



Detail view of X-axis installation

Detail view of slot in bottom face of X-axis base

Dimensions by Stroke

X: Model	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
B	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
C	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
D	8	8	8	10	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	26
N	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
G	-	-	199	224	249	274	299	324	349	374	399	424	449	474	499	524	549	574	599	624

* A bearer is not set when the X stroke is 50 or 100.

Controllers

Applicable controller

Refer to P. 91 for the controllers.

IK2-SXZB1 □ □ D

RCS2 2-axis Combinations(XZ)

X axis: SS8R (100W, Reversed, Double-slider)
Z axis: SA7R (Reversed)

Model Details

Series — Type — Encoder type — Axis 1 (X axis) — Axis 2 (Z axis) — Controllers — Cable — Shipping configuration

IK2 — SXZB1 □ □ D —

Combination directions 1-4
Differences between Single-slider and Double-slider Types
HH: X high-speed, Z high-speed
HM: X high-speed, Z medium-speed
HL: X high-speed, Z low-speed

Encoder type
I: Incremental
A: Absolute

Stroke (mm)
5: 50mm
? (Can be set in 50-mm increments)

Options
B: Brake
NM: Opposite-home specification
SR: Slider roller specification

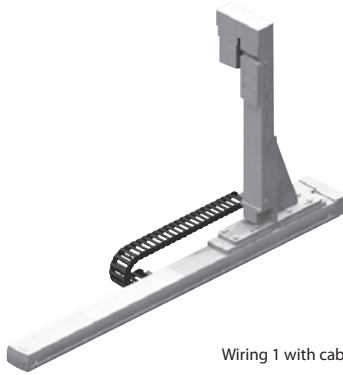
Controllers
T1: XSEL-J/K
T2: SSEL
XSEL-P/Q

Cable length
1L: 1m
3L: 3m
5L: 5m
□L: □m

Wiring 1
N: Cable only
CT: With cable track

Wiring 2
K: Individual components (kit)
A: Assembled

* Refer to P.10 for details on the items comprising the model name.



Wiring 1 with cable track

Maximum Stroke

X axis 800 mm

Z axis 300 mm

Axis 2

	High-speed type	Medium-speed type	Low-speed type
X axis	1000mm/s	—	—
Z axis	800mm/s	400mm/s	200mm/s

Maximum Load Capacity

Z-axis stroke	Z-axis high-speed, lead 16	Z-axis medium-speed, lead 8	Z-axis low-speed, lead 4
150mm	—	—	7.0kg
200mm	—	—	7.0kg
250mm	—	—	5.5kg
300mm	1.5kg	3.0kg	5.5kg

List by Stroke

Y-axis stroke	Incremental				Absolute			
	150	200	250	300	150	200	250	300
50	—	—	—	—	—	—	—	—
100	—	—	—	—	—	—	—	—
150	—	—	—	—	—	—	—	—
200	—	—	—	—	—	—	—	—
250	—	—	—	—	—	—	—	—
300	—	—	—	—	—	—	—	—
350	—	—	—	—	—	—	—	—
400	—	—	—	—	—	—	—	—
450	—	—	—	—	—	—	—	—
500	—	—	—	—	—	—	—	—
550	—	—	—	—	—	—	—	—
600	—	—	—	—	—	—	—	—
650	—	—	—	—	—	—	—	—
700	—	—	—	—	—	—	—	—
750	—	—	—	—	—	—	—	—
800	—	—	—	—	—	—	—	—

Note: For the Z high-speed type and Z medium-speed type, The Z-axis stroke is limited to 300 mm.

Cable track

Wiring 1 (Next to X-axis)	X-axis stroke	150-300	350-600	650-800

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.

* Refer to P. 90 for lengths other than those specified above.

List of Options

Name	Option code	
Opposite-home specification	NM	
Slider roller specification	SR	Axis 1 (X-axis) Axis 2 (Z-axis)

Specifications

Item	X axis	Y axis
Axis model	RCS2-SS8R	RCS2-SA7R
Stroke (Can be set in 50-mm increments)	50-1000mm	50-250mm
Axis 2	High-speed type: 1000mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s Low-speed type: 200mm/s
Motor output (W)	100W	60W
Ball screw lead	High-speed type: 20mm	High-speed type: 16mm Medium-speed type: 8mm Low-speed type: 4mm
Drive method	Ball screw, ϕ 16mm, rolled, C10	Ball screw, ϕ 12mm, rolled, C10
Positioning repeatability		± 0.02 mm
Base material	Dedicated alloy steel	Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

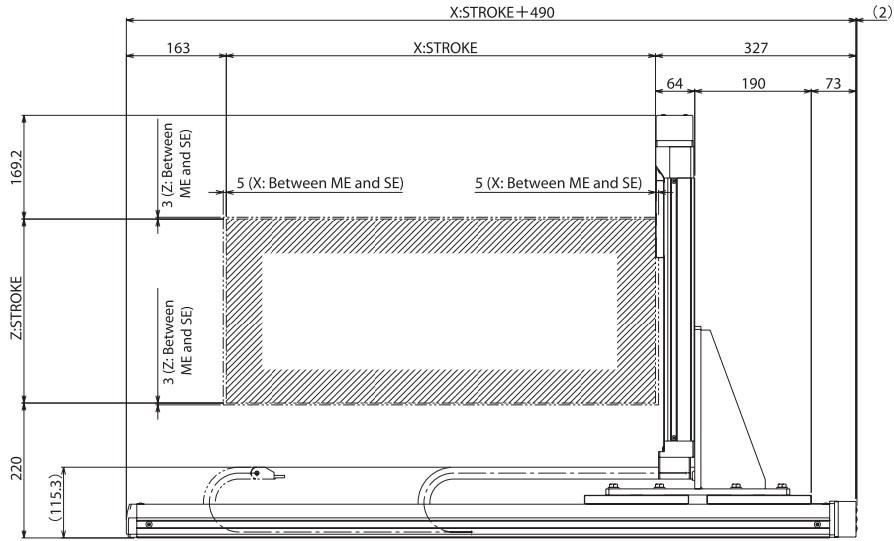
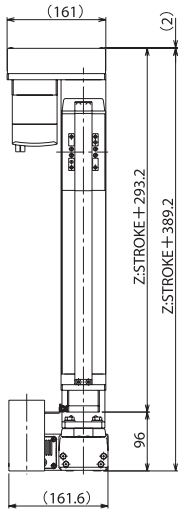
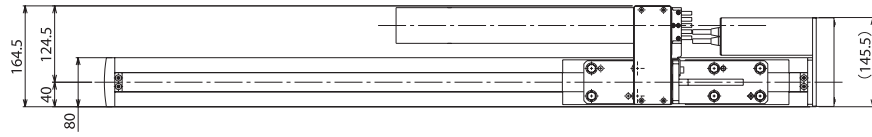
Dimensions

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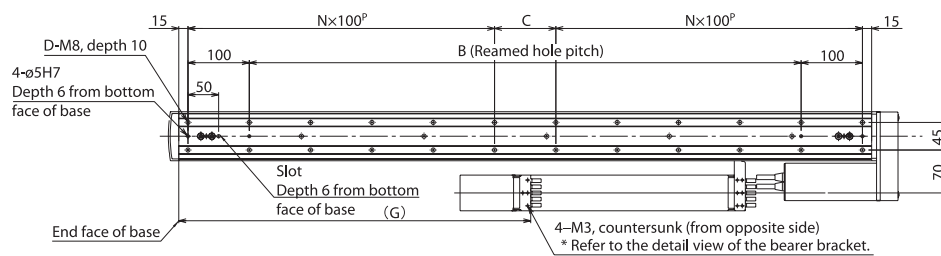
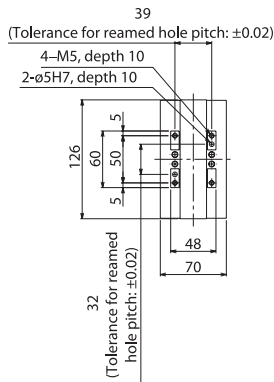
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2D CAD

Note 1. The connected position shown in the drawing defines the home.
 Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
 Note 3. For details on the cable track, refer to P. 90.
 Note 4. For details on the bracket on the moving end of the cable track, refer to P. 90.



ME: Mechanical end
 SE: Stroke end



Detail view of X-axis installation

Detail view of Z-axis slider



Detail view of slot in bottom face of X-axis base

Dimensions by Stroke

X: Nominal stroke	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
X: Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
B	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
C	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
D	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	26
N	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
G	-	-	299	324	349	374	399	424	449	474	499	524	549	574	599	624

* A bearer is not set when the X stroke is 50 or 100.

Controllers

Applicable controller

Refer to P. 91 for the controllers.

2-axis Combinations RCP2

2-axis Combinations RCS2

3-axis Combinations RCP2

3-axis Combinations RCS2

Controllers

IK2-SYBB1□□S

RCS2 2-axis combination (YZ) Y axis: SS8R (100W, Reversed, Single-slider)
Z axis: SA7R (Reversed)

Model Details

Series: IK2 — Type: SYBB1□□S — Encoder type: — Axis 1 (Y axis): — Axis 2 (Z axis): B□ — Controllers: — Cable: — Shipping configuration: —

Combination directions 1-2
HT: Y high-speed, Z high-speed
HM: Y high-speed, Z medium-speed
HL: Y high-speed, Z low-speed

Differences between Single-slider and Double-slider Types

Encoder type
I: Incremental
A: Absolute

Stroke (mm)
5: 50mm
(Can be set in 50-mm increments)

Options
B: Brake
NM: Opposite-home specification
SR: Slider roller specification

Controllers
T1: XSEL-J/K
T2: SSEL
XSEL-P/Q

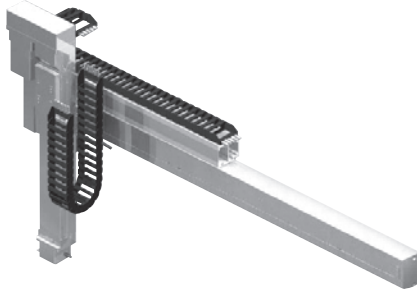
Cable length
1L: 1m
3L: 3m
5L: 5m
□L: □m

Wiring 1
N: Cable only
CT: With cable track

Wiring 2

Shipping configuration
K: Individual components (kit)
A: Assembled

* Refer to P. 10 for details on the items comprising the model name.



Both wiring 1 and wiring 2 assume use of a cable track.

Maximum Stroke

Y axis 1000 mm Z axis 300 mm

Axis 2

	High-speed type	Medium-speed type	Low-speed type
Y axis	1000mm/s	—	—
Z axis	800mm/s	400mm/s	200mm/s

Maximum Load Capacity

Z-axis stroke	Z-axis high-speed, lead 16	Z-axis medium-speed, lead 8	Z-axis low-speed, lead 4
50mm	2.0kg	4.0kg	8.0kg
100mm	2.0kg	4.0kg	8.0kg
150mm	2.0kg	3.5kg	7.0kg
200mm	2.0kg	3.5kg	7.0kg
250mm	1.5kg	3.0kg	6.0kg
300mm	1.5kg	3.0kg	5.5kg

List by Stroke

Y-axis stroke	Z-axis stroke	Incremental						Absolute					
		50	100	150	200	250	300	50	100	150	200	250	300
50	50	—	—	—	—	—	—	—	—	—	—	—	—
50	100	—	—	—	—	—	—	—	—	—	—	—	—
50	150	—	—	—	—	—	—	—	—	—	—	—	—
50	200	—	—	—	—	—	—	—	—	—	—	—	—
50	250	—	—	—	—	—	—	—	—	—	—	—	—
50	300	—	—	—	—	—	—	—	—	—	—	—	—
50	350	—	—	—	—	—	—	—	—	—	—	—	—
50	400	—	—	—	—	—	—	—	—	—	—	—	—
50	450	—	—	—	—	—	—	—	—	—	—	—	—
50	500	—	—	—	—	—	—	—	—	—	—	—	—
50	550	—	—	—	—	—	—	—	—	—	—	—	—
50	600	—	—	—	—	—	—	—	—	—	—	—	—
50	650	—	—	—	—	—	—	—	—	—	—	—	—
50	700	—	—	—	—	—	—	—	—	—	—	—	—
50	750	—	—	—	—	—	—	—	—	—	—	—	—
50	800	—	—	—	—	—	—	—	—	—	—	—	—
50	850	—	—	—	—	—	—	—	—	—	—	—	—
50	900	—	—	—	—	—	—	—	—	—	—	—	—
50	950	—	—	—	—	—	—	—	—	—	—	—	—
50	1000	—	—	—	—	—	—	—	—	—	—	—	—

Cable track

Wiring 1 (Next to Y-axis)	Y-axis stroke	50-300	350-600	650-900	950-1000
Wiring 2 (Next to Z-axis)	Z-axis stroke	50-200	250-300	—	—

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.
* Refer to P. 90 for lengths other than those specified above.

List of Options

Name	Option code	
Opposite-home specification	NM	
Slider roller specification	SR	Axis 1 (Y-axis) Axis 2 (Z-axis)

Specifications

Item	X axis	Y axis
Axis model	RCS2-SS8R	RCS2-SA7R
Stroke (Can be set in 50-mm increments)	50-1000mm	50-300mm
Axis 2	High-speed type: 1000mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s Low-speed type: 200mm/s
Motor output (W)	100W	60W
Ball screw lead	High-speed type: 20mm	High-speed type: 16mm Medium-speed type: 8mm Low-speed type: 4mm
Drive method	Ball screw, ø16mm, rolled, C10	Ball screw, ø12mm, rolled, C10
Positioning repeatability	±0.02mm	
Base material	Dedicated alloy steel	Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)	

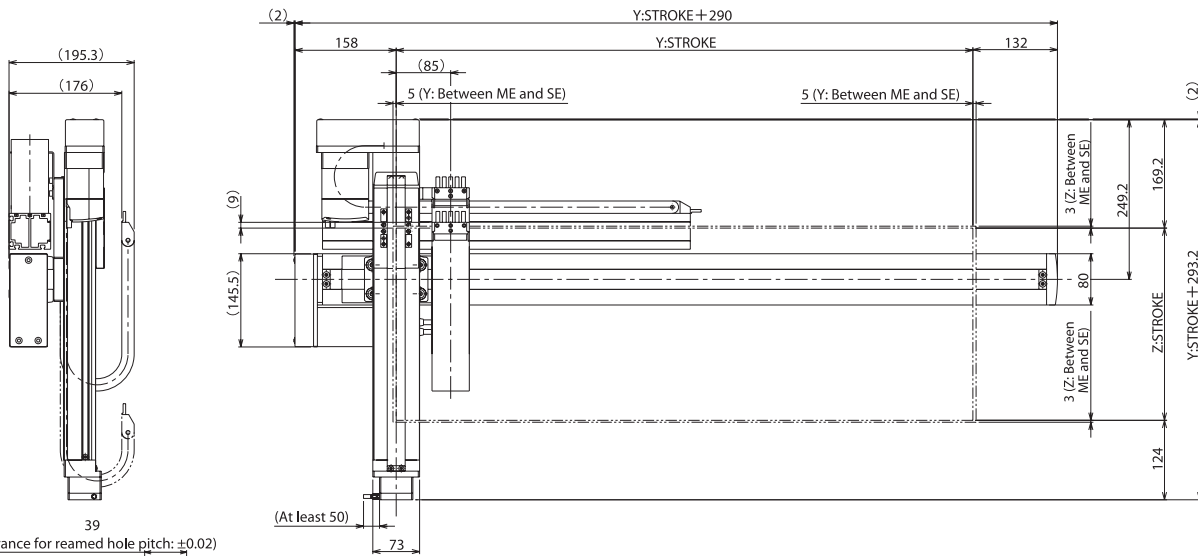
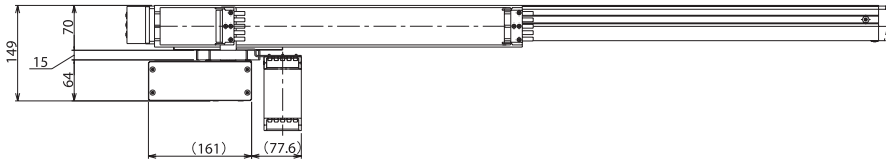
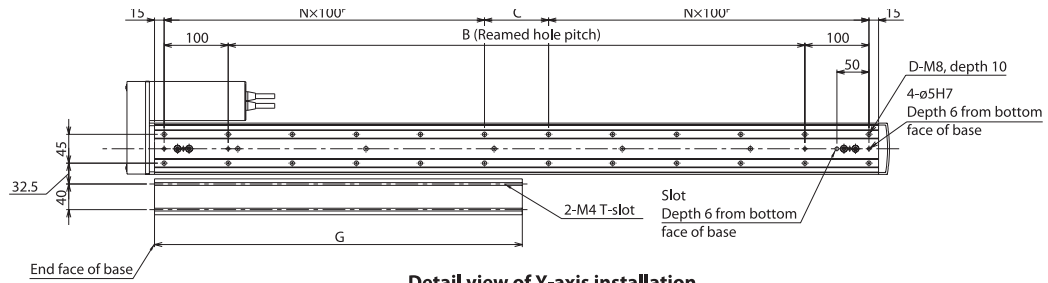
Dimensions

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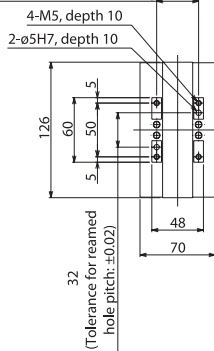
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2D
CAD

Note 1. The connected position shown in the drawing defines the home.
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 Note 3. For details on the cable track, refer to P. 90.
 Note 4. For details on the bracket on the moving end of the cable track, refer to P. 90.



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(Tolerance for reamed hole pitch: ±0.02)



ME: Mechanical end
 SE: Stroke end

Detail view of slot in bottom face of Y-axis base

■ Dimensions by Stroke

Y: Model	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
B	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
C	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
D	8	8	8	10	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	26
N	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
G	149	174	199	224	249	274	299	324	349	374	399	424	449	474	499	524	549	574	599	624

Controllers

Applicable controller

Refer to P. 91 for the controllers.

IK3-PBBG1□□S

RCP2 3-axis combination (XYB+Z-axes, base mount)

X axis: SS8R (Reversed, Single-slider)

Y axis: SA7R (Reversed) Z axis: SA6R (Reversed)

Model Details

Series — Type — Encoder type — Axis 1 (X axis) — Axis 2 (Y axis) — Axis 3 (Z axis) — Controllers — Cable — Shipping configuration

IK3 — PBBG1□□S

Combination directions 1-2

Differences between Single-slider and Double-slider Types
HHH: X high-speed, Y high-speed, Z high-speed
HHM: X high-speed, Y high-speed, Z medium-speed
HHL: X high-speed, Y high-speed, Z low-speed

Encoder type I: Incremental

Stroke (mm)
5: 50mm
? (Can be set in 50-mm increments)

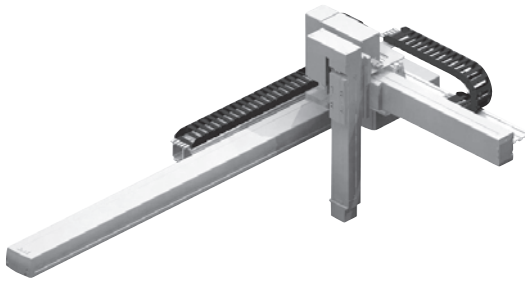
Options
B: Brake
NM: Opposite-home specification
SR: Slider roller specification

Cable length
1L: 1m
3L: 3m
5L: 5m
□L: □m

Wiring 1 N: Cable only
CT: With cable track

Wiring 2 K: Individual components (kit)
A: Assembled

* Refer to P. 10 for details on the items comprising the model name.



With cable tracks (Wiring 3 does not come with a cable track.)

Maximum Stroke

X axis 1000 mm Y axis 300 mm Z axis 200 mm

Axis 2

	X high-speed, Y high-speed, Z high-speed	X high-speed, Y high-speed, Z medium-speed	X high-speed, Y high-speed, Z low-speed
X axis	220mm/s		
Y axis	420mm/s		
Z axis	500mms	250mm/s	125mm/s

Maximum Load Capacity

Y-axis stroke	X high-speed, Y high-speed, Z high-speed	X high-speed, Y high-speed, Z medium-speed	X high-speed, Y high-speed, Z low-speed
50mm	1.0kg	2.0kg	4.0kg
100mm			
150mm			
200mm			
250mm			
300mm			

List by Stroke

		Incremental											
		50				100				150			
Y-axis stroke	Z-axis stroke	50	100	150	200	50	100	150	200	50	100	150	200
X-axis stroke	50	-	-	-	-	-	-	-	-	-	-	-	-
	100	-	-	-	-	-	-	-	-	-	-	-	-
	150	-	-	-	-	-	-	-	-	-	-	-	-
	200	-	-	-	-	-	-	-	-	-	-	-	-
	250	-	-	-	-	-	-	-	-	-	-	-	-
	300	-	-	-	-	-	-	-	-	-	-	-	-
	350	-	-	-	-	-	-	-	-	-	-	-	-
	400	-	-	-	-	-	-	-	-	-	-	-	-
	450	-	-	-	-	-	-	-	-	-	-	-	-
	500	-	-	-	-	-	-	-	-	-	-	-	-
	550	-	-	-	-	-	-	-	-	-	-	-	-
	600	-	-	-	-	-	-	-	-	-	-	-	-
	650	-	-	-	-	-	-	-	-	-	-	-	-
	700	-	-	-	-	-	-	-	-	-	-	-	-
	750	-	-	-	-	-	-	-	-	-	-	-	-
	800	-	-	-	-	-	-	-	-	-	-	-	-
	850	-	-	-	-	-	-	-	-	-	-	-	-
900	-	-	-	-	-	-	-	-	-	-	-	-	
950	-	-	-	-	-	-	-	-	-	-	-	-	
1000	-	-	-	-	-	-	-	-	-	-	-	-	

		Incremental											
		200				250				300			
Y-axis stroke	Z-axis stroke	50	100	150	200	50	100	150	200	50	100	150	200
X-axis stroke	50	-	-	-	-	-	-	-	-	-	-	-	-
	100	-	-	-	-	-	-	-	-	-	-	-	-
	150	-	-	-	-	-	-	-	-	-	-	-	-
	200	-	-	-	-	-	-	-	-	-	-	-	-
	250	-	-	-	-	-	-	-	-	-	-	-	-
	300	-	-	-	-	-	-	-	-	-	-	-	-
	350	-	-	-	-	-	-	-	-	-	-	-	-
	400	-	-	-	-	-	-	-	-	-	-	-	-
	450	-	-	-	-	-	-	-	-	-	-	-	-
	500	-	-	-	-	-	-	-	-	-	-	-	-
	550	-	-	-	-	-	-	-	-	-	-	-	-
	600	-	-	-	-	-	-	-	-	-	-	-	-
	650	-	-	-	-	-	-	-	-	-	-	-	-
	700	-	-	-	-	-	-	-	-	-	-	-	-
	750	-	-	-	-	-	-	-	-	-	-	-	-
	800	-	-	-	-	-	-	-	-	-	-	-	-
	850	-	-	-	-	-	-	-	-	-	-	-	-
900	-	-	-	-	-	-	-	-	-	-	-	-	
950	-	-	-	-	-	-	-	-	-	-	-	-	
1000	-	-	-	-	-	-	-	-	-	-	-	-	

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axes 2 and 3 come with a robot cable.
* Refer to P. 90 for lengths other than those specified above.

Cable track

		Y-axis stroke	
		50-200	250-300
X-axis stroke	50-400	-	-
	450-600	-	-
	650-800	-	-
	850-1000	-	-

Note) Both wiring 1 and wiring 2 should have a cable bear, or neither of the two should have a cable track. A cable track cannot be specified for one of the wirings.

List by Cable Length

Name	Option code
Opposite-home specification	NM
Slider roller specification	SR

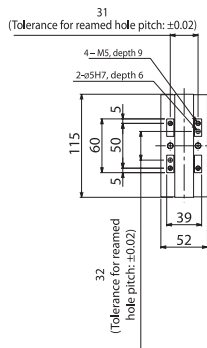
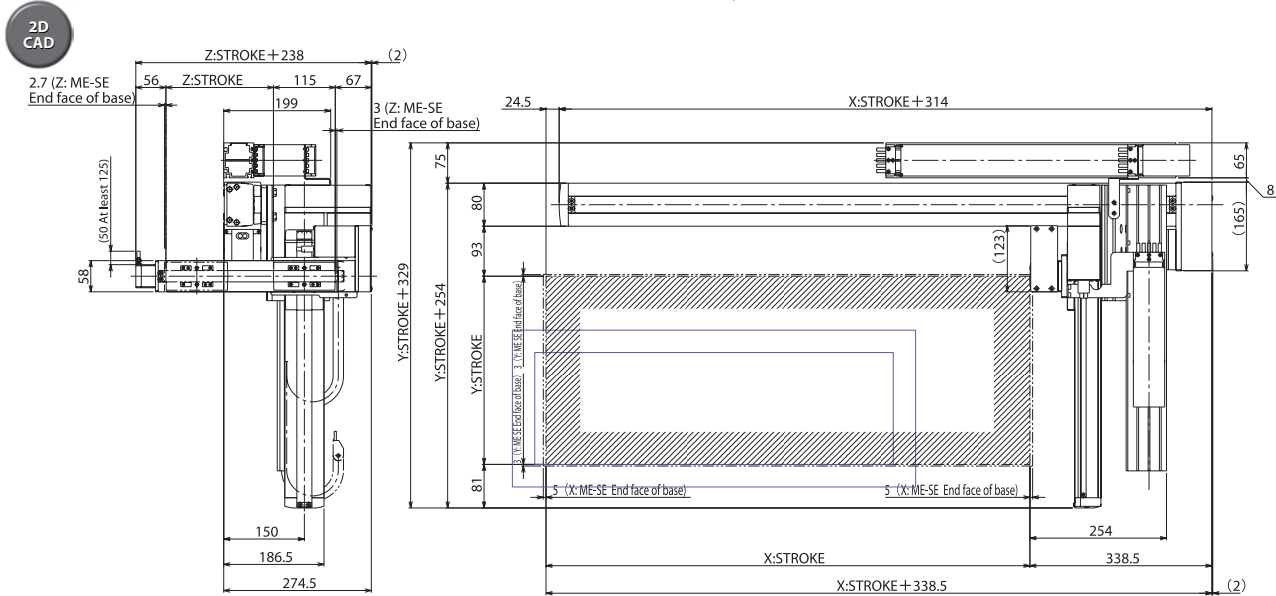
Specifications

Item	X axis	Y axis	Z axis
Axis model	RCP2-SS8R	RCP2-SA7R	RCP2-SA6R
Stroke (Can be set in 50-mm increments)	50-1000mm	50-300mm	50-200mm
Axis 2	High-speed type: 220mm/s	High-speed type: 420mm/s	High-speed type: 500mm/s Medium-speed type: 250mm/s Low-speed type: 125mm/s
Motor size	56-square pulse motor	56-square pulse motor	42-square pulse motor
Ball screw lead	High-speed type: 20mm	High-speed type: 16mm	High-speed type: 12mm Medium-speed type: 6mm Low-speed type: 3mm
Drive method	Ball screw, ø16mm, rolled, C10	Ball screw, ø12mm, rolled, C10	Ball screw, ø10mm, rolled, C10
Positioning repeatability		±0.02mm	
Base material	Dedicated alloy steel	Aluminum	
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)		

Dimensions

You can download CAD drawings from our website. www.intelligentactuator.com

Note 1. The connected position shown in the drawing defines the home.
 Note 2. The drawing below assumes that both wiring 1 and wiring 2 have a cable track.
 Note 3. For details on the cable track, refer to P. 90.

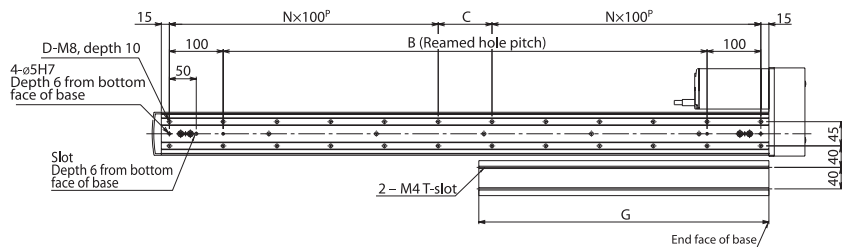
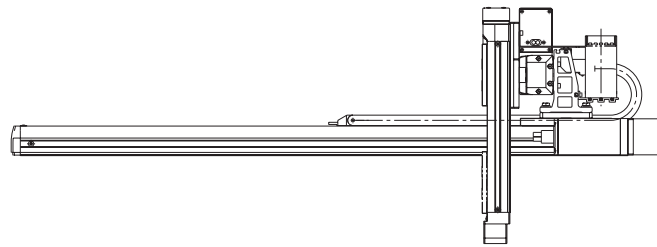


Detail view of Z-axis slider



Detail view of slot in bottom face of X-axis base

ME: Mechanical end
 SE: Stroke end



Detail view of X-axis installation

Dimensions by Stroke

X: Model	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	
B	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
C	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	1000
D	8	8	8	10	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	0
N	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	26
G	114.5	139.5	164.5	189.5	214.5	239.5	264.5	289.5	314.5	339.5	364.5	389.5	414.5	439.5	464.5	489.5	514.5	539.5	564.5	6

389.5

Controllers

Applicable controller

Refer to P. 91 for the controllers.

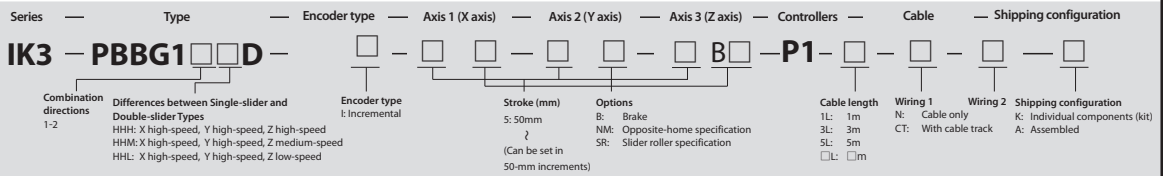
IK3-PBBG1□□D

RCP2 3-axis combination (XYB+Z-axes, base mount)

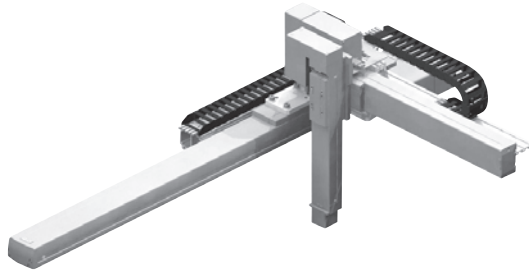
X axis: SS8R (Reversed, Double-slider)

Y axis: SA7R (Reversed) Z axis: SA6R (Reversed)

Model Details



* Refer to P. 10 for details on the items comprising the model name.



With cable tracks (Wiring 3 does not come with a cable track.)

Maximum Stroke

X axis 800 mm Y axis 400 mm Z axis 200 mm

Axis 2

	X high-speed, Y high-speed, Z high-speed	X high-speed, Y high-speed, Z medium-speed	X high-speed, Y high-speed, Z low-speed
X axis	220mm/s		
Y axis	420mm/s		
Z axis	500mm/s	250mm/s	125mm/s

Maximum Load Capacity

Y-axis stroke	X high-speed, Y high-speed, Z high-speed	X high-speed, Y high-speed, Z medium-speed	X high-speed, Y high-speed, Z low-speed
350mm	1.0kg	2.0kg	4.0kg
400mm			

List by Stroke

		Incremental							
		350				400			
Y-axis stroke									
Z-axis stroke		50	100	150	200	50	100	150	200
X-axis stroke	50	-	-	-	-	-	-	-	-
	100	-	-	-	-	-	-	-	-
	150	-	-	-	-	-	-	-	-
	200	-	-	-	-	-	-	-	-
	250	-	-	-	-	-	-	-	-
	300	-	-	-	-	-	-	-	-
	350	-	-	-	-	-	-	-	-
	400	-	-	-	-	-	-	-	-
	450	-	-	-	-	-	-	-	-
	500	-	-	-	-	-	-	-	-
	550	-	-	-	-	-	-	-	-
	600	-	-	-	-	-	-	-	-
	650	-	-	-	-	-	-	-	-
	700	-	-	-	-	-	-	-	-
	750	-	-	-	-	-	-	-	-
	800	-	-	-	-	-	-	-	-

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.

* Refer to P. 90 for lengths other than those specified above.

Cable track

		Y-axis stroke
		350-400
X-axis stroke	50-400	-
	450-600	-
	650-800	-

Note) Both wiring 1 and wiring 2 should have a cable bear, or neither of the two should have a cable track. A cable track cannot be specified for one of the wirings.

List by Cable Length

Name	Option code
Opposite-home specification	NM
Slider roller specification	SR

Specifications

Item	X axis	Y axis	Z axis
Axis model	RCP2-SS8R	RCP2-SA7R	RCP2-SA6R
Stroke (Can be set in 50-mm increments)	50-800mm	350-400mm	50-200mm
Axis 2	High-speed type: 220mm/s	High-speed type: 420mm/s	High-speed type: 500mm/s Medium-speed type: 250mm/s Low-speed type: 125mm/s
Motor size	56-square pulse motor	56-square pulse motor	42-square pulse motor
Ball screw lead	High-speed type: 20mm	High-speed type: 16mm	High-speed type: 12mm Medium-speed type: 6mm Low-speed type: 3mm
Drive method	Ball screw, ø16mm, rolled, C10	Ball screw, ø12mm, rolled, C10	Ball screw, ø10mm, rolled, C10
Positioning repeatability	±0.02mm		
Base material	Dedicated alloy steel	Aluminum	
Operating air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)		

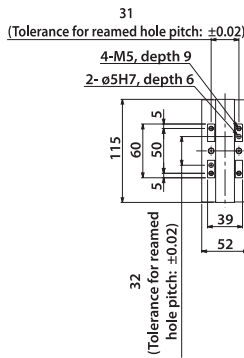
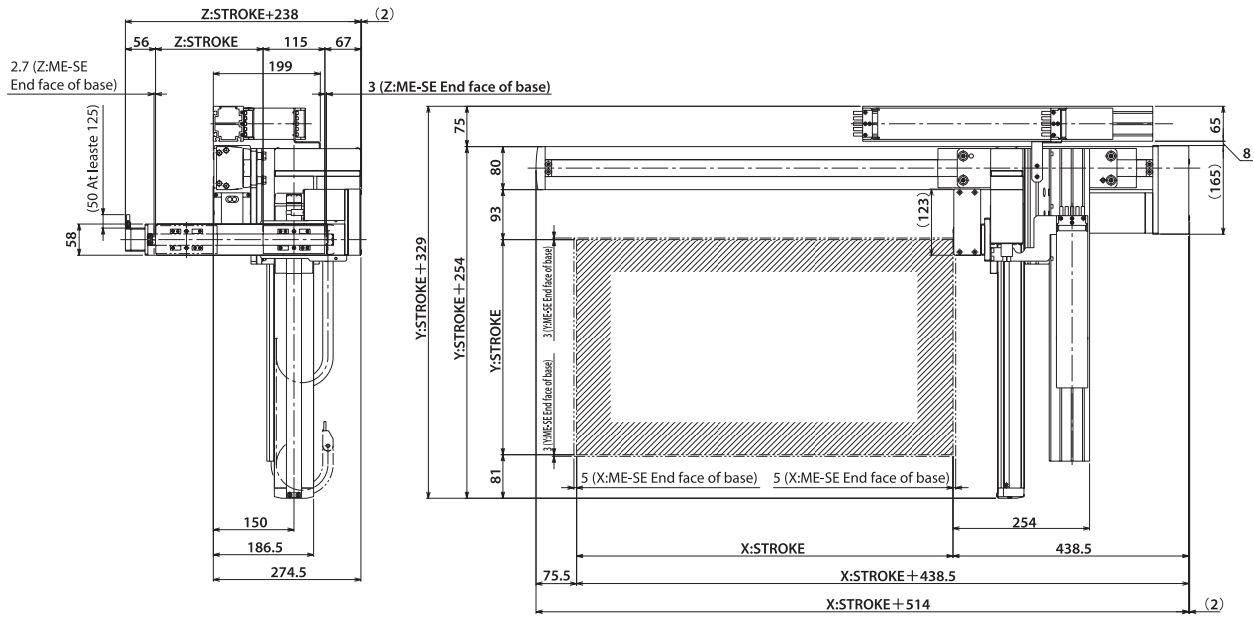
Dimensions

You can download CAD drawings from our website.

www.intelligentactuator.com

2D CAD

Note 1. The connected position shown in the drawing defines the home.
 Note 2. The drawing below assumes that both wiring 1 and wiring 2 have a cable track.
 Note 3. For details on the cable track, refer to P.90.

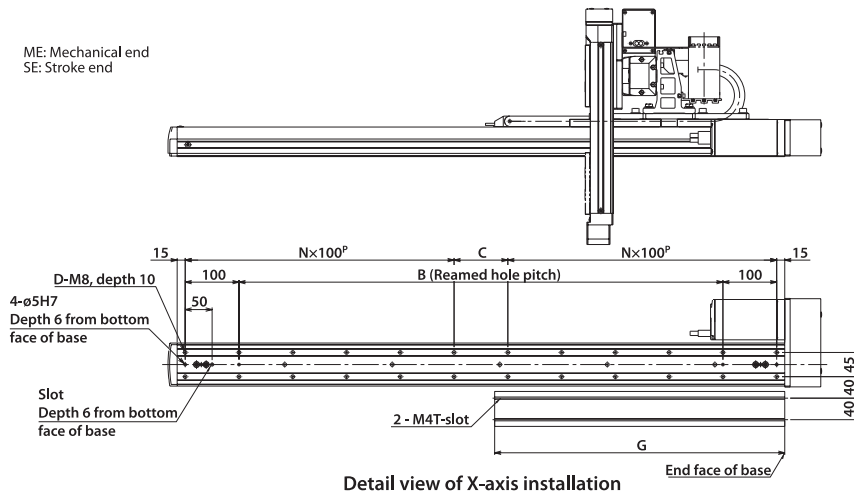


Detail view of Z-axis slider



Detail view of slot in bottom

ME: Mechanical end
 SE: Stroke end



Detail view of X-axis installation

■ Dimensions by Stroke

X: Nominal stroke	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
X: Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
B	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
C	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
D	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	26
N	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
G	214.5	239.5	264.5	289.5	314.5	339.5	364.5	389.5	414.5	439.5	464.5	489.5	514.5	539.5	564.5	589.5

Controllers

Applicable controller

Refer to P. 91 for the controllers.

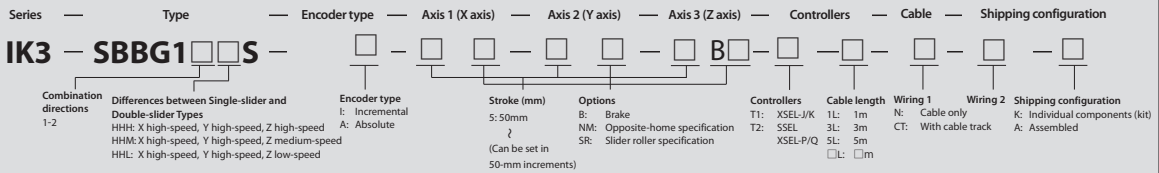
IK3-SBBG1□□S

RCS2 3-axis combination (XYB+Z-axes, base mount)

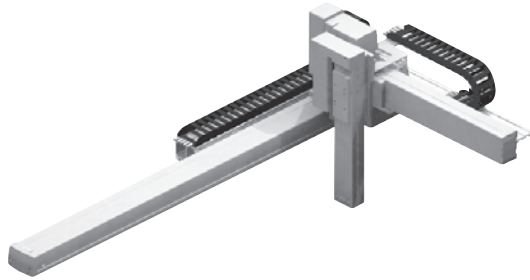
X axis: SS8R (100W, Reversed, Single-slider)

Y axis: SA7R (Reversed) Z axis: SA6R (Reversed)

Model Details



* Refer to P. 10 for details on the items comprising the model name.



With cable tracks (Wiring 3 does not come with a cable track.)

Maximum Stroke

X axis 1000 mm Y axis 300 mm Z axis 200 mm

Axis 2

	X high-speed, Y high-speed, Z high-speed	X high-speed, Y high-speed, Z medium-speed	X high-speed, Y high-speed, Z low-speed
X axis	1000mm/s		
Y axis	800mm/s		
Z axis	800mm/s	400mm/s	200mm/s

Maximum Load Capacity

Y-axis stroke	X high-speed, Y high-speed, Z high-speed	X high-speed, Y high-speed, Z medium-speed	X high-speed, Y high-speed, Z low-speed
50mm	1.0kg	2.0kg	4.0kg
100mm			
150mm			
200mm			
250mm			
300mm			

List by Stroke

Y-axis stroke	Incremental											
	50				100				150			
	50	100	150	200	50	100	150	200	50	100	150	200
Z-axis stroke 50	-	-	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-	-	-
250	-	-	-	-	-	-	-	-	-	-	-	-
300	-	-	-	-	-	-	-	-	-	-	-	-
350	-	-	-	-	-	-	-	-	-	-	-	-
400	-	-	-	-	-	-	-	-	-	-	-	-
450	-	-	-	-	-	-	-	-	-	-	-	-
500	-	-	-	-	-	-	-	-	-	-	-	-
550	-	-	-	-	-	-	-	-	-	-	-	-
600	-	-	-	-	-	-	-	-	-	-	-	-
650	-	-	-	-	-	-	-	-	-	-	-	-
700	-	-	-	-	-	-	-	-	-	-	-	-
750	-	-	-	-	-	-	-	-	-	-	-	-
800	-	-	-	-	-	-	-	-	-	-	-	-
850	-	-	-	-	-	-	-	-	-	-	-	-
900	-	-	-	-	-	-	-	-	-	-	-	-
950	-	-	-	-	-	-	-	-	-	-	-	-
1000	-	-	-	-	-	-	-	-	-	-	-	-

Y-axis stroke	Incremental											
	200				250				300			
	50	100	150	200	50	100	150	200	50	100	150	200
Z-axis stroke 50	-	-	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-	-	-
250	-	-	-	-	-	-	-	-	-	-	-	-
300	-	-	-	-	-	-	-	-	-	-	-	-
350	-	-	-	-	-	-	-	-	-	-	-	-
400	-	-	-	-	-	-	-	-	-	-	-	-
450	-	-	-	-	-	-	-	-	-	-	-	-
500	-	-	-	-	-	-	-	-	-	-	-	-
550	-	-	-	-	-	-	-	-	-	-	-	-
600	-	-	-	-	-	-	-	-	-	-	-	-
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850	-	-	-	-	-	-	-	-	-	-	-	-
900	-	-	-	-	-	-	-	-	-	-	-	-
950	-	-	-	-	-	-	-	-	-	-	-	-
1000	-	-	-	-	-	-	-	-	-	-	-	-

		Incremental											
Y-axis stroke		50				100				150			
X-axis stroke	Z-axis stroke	50	100	150	200	50	100	150	200	50	100	150	200
X-axis stroke	50	-	-	-	-	-	-	-	-	-	-	-	-
	100	-	-	-	-	-	-	-	-	-	-	-	-
	150	-	-	-	-	-	-	-	-	-	-	-	-
	200	-	-	-	-	-	-	-	-	-	-	-	-
	250	-	-	-	-	-	-	-	-	-	-	-	-
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	350	-	-	-	-	-	-	-	-	-	-	-	-
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	700	-	-	-	-	-	-	-	-	-	-	-	-
	750	-	-	-	-	-	-	-	-	-	-	-	-
	800	-	-	-	-	-	-	-	-	-	-	-	-
	850	-	-	-	-	-	-	-	-	-	-	-	-
900	-	-	-	-	-	-	-	-	-	-	-	-	
950	-	-	-	-	-	-	-	-	-	-	-	-	
1000	-	-	-	-	-	-	-	-	-	-	-	-	

		Incremental											
Y-axis stroke		200				250				300			
X-axis stroke	Z-axis stroke	50	100	150	200	50	100	150	200	50	100	150	200
X-axis stroke	50	-	-	-	-	-	-	-	-	-	-	-	-
	100	-	-	-	-	-	-	-	-	-	-	-	-
	150	-	-	-	-	-	-	-	-	-	-	-	-
	200	-	-	-	-	-	-	-	-	-	-	-	-
	250	-	-	-	-	-	-	-	-	-	-	-	-
	300	-	-	-	-	-	-	-	-	-	-	-	-
	350	-	-	-	-	-	-	-	-	-	-	-	-
	400	-	-	-	-	-	-	-	-	-	-	-	-
	450	-	-	-	-	-	-	-	-	-	-	-	-
	500	-	-	-	-	-	-	-	-	-	-	-	-
	550	-	-	-	-	-	-	-	-	-	-	-	-
	600	-	-	-	-	-	-	-	-	-	-	-	-
	650	-	-	-	-	-	-	-	-	-	-	-	-
	700	-	-	-	-	-	-	-	-	-	-	-	-
	750	-	-	-	-	-	-	-	-	-	-	-	-
	800	-	-	-	-	-	-	-	-	-	-	-	-
	850	-	-	-	-	-	-	-	-	-	-	-	-
900	-	-	-	-	-	-	-	-	-	-	-	-	
950	-	-	-	-	-	-	-	-	-	-	-	-	
1000	-	-	-	-	-	-	-	-	-	-	-	-	

List by Cable Length		
Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.
 * Refer to P. 90 for lengths other than those specified above.

Cable track			
		Y-axis stroke	
		50-200	250-300
X-axis stroke	50-400	-	-
	450-600	-	-
	650-800	-	-
	850-1000	-	-

Note) Both wiring 1 and wiring 2 should have a cable bear, or neither of the two should have a cable track. A cable track cannot be specified for one of the wirings.

Options	
Name	Option code
Opposite-home specification	NM
Slider roller specification	SR

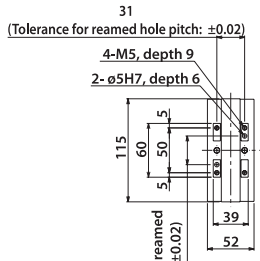
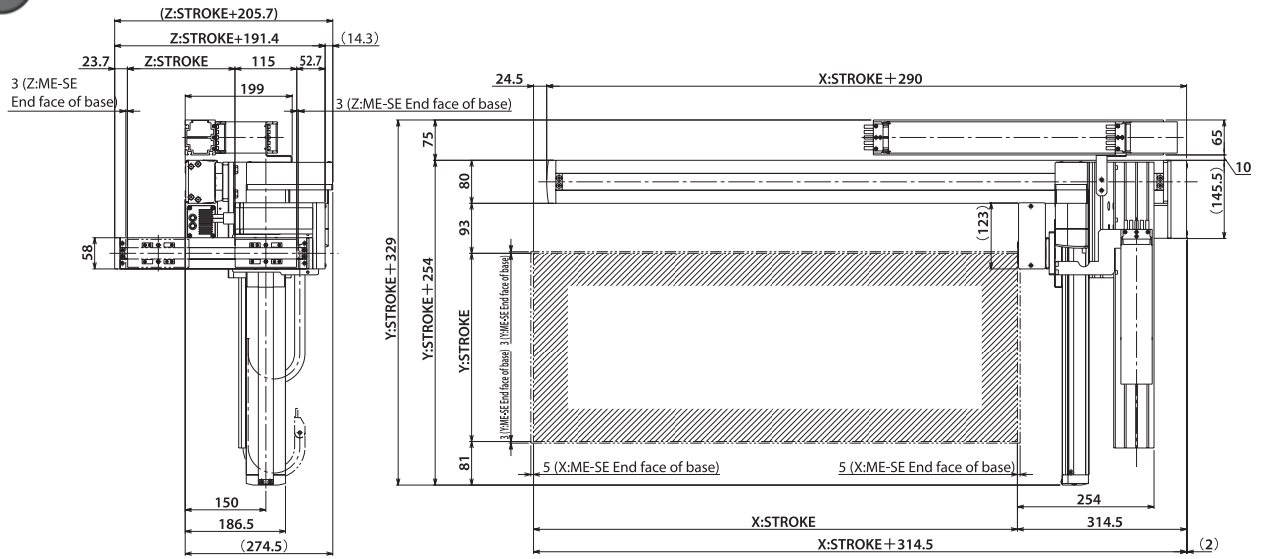
Specifications			
Item	X axis	Y axis	Z axis
Axis model	RCS2-SS8R	RCS2-SA7R	RCS2-SA6R
Stroke (Can be set in 50-mm increments)	50-1000mm	50-300mm	50-200mm
Axis 2	High-speed type: 1000mm/s	High-speed type: 800mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s Low-speed type: 200mm/s
Motor output (W)	100W	60W	30W
Ball screw lead	High-speed type: 20mm	High-speed type: 16mm	High-speed type: 12mm Medium-speed type: 6mm Low-speed type: 3mm
Drive method	Ball screw, ø16mm, rolled, C10	Ball screw, ø12mm, rolled, C10	Ball screw, ø10mm, rolled, C10
Positioning repeatability	±0.02mm		
Base material	Dedicated alloy steel		Aluminum
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)		

Dimensions

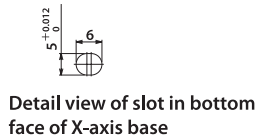
You can download CAD drawings from our website. www.intelligentactuator.com

Note 1. The connected position shown in the drawing defines the home.
 Note 2. The drawing below assumes that both wiring 1 and wiring 2 have a cable track.
 Note 3. For details on the cable track, refer to P. 90.

2D CAD

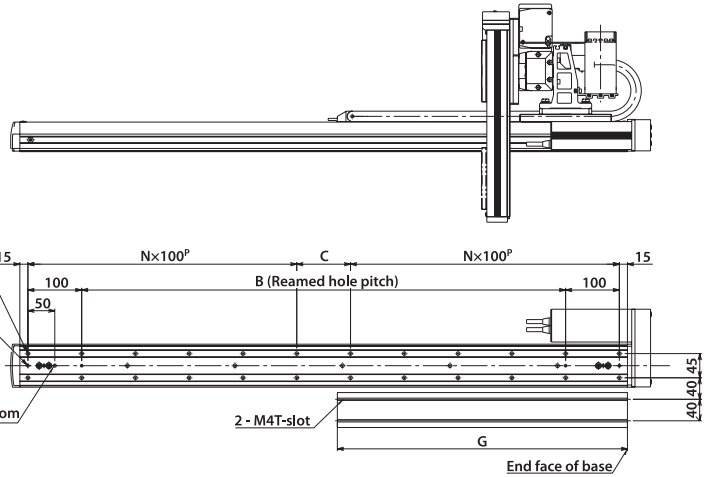


Detail view of Z-axis slider



Detail view of slot in bottom face of X-axis base

ME: Mechanical end
 SE: Stroke end



Detail view of X-axis installation

Dimensions by Stroke

X: Model	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
B	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
C	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
D	8	8	8	10	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	26
N	1	1	1	2	2	2	2	3	3	3	4	4	4	4	4	5	5	5	5	6
G	114.5	139.5	164.5	189.5	214.5	239.5	264.5	289.5	314.5	339.5	364.5	389.5	414.5	439.5	464.5	489.5	514.5	539.5	564.5	589.5

Controllers

Applicable controller

Refer to P. 91 for the controllers.

IK3-SBBG1□□D

RCS2 3-axis combination (XYB+Z-axes, base mount)
X axis: SS8R (100W, Reversed, Single-slider)
Y axis: SA7R (Reversed) Z axis: SA6R (Reversed)

Model Details Series — Type — Encoder type — Axis 1 (X axis) — Axis 2 (Y axis) — Axis 3 (Z axis) — Controllers — Cable — Shipping configuration

IK3 — **SBBG1**□□ — **D**

Combination directions 1-2
Differences between Single-slider and Double-slider Types
HHH: X high-speed, Y high-speed, Z high-speed
HHM: X high-speed, Y high-speed, Z medium-speed
HHL: X high-speed, Y high-speed, Z low-speed

Encoder type
I: Incremental
A: Absolute

Stroke (mm)
S: 50mm
? (Can be set in 50-mm increments)

Options
B: Brake
NM: Opposite-home specification
SR: Slider roller specification

Controllers
T1: XSEL-J/K
T2: SSEL
XSEL-P/Q

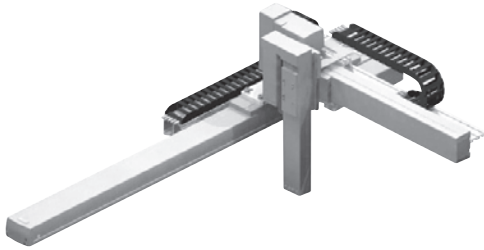
Cable length
1L: 1m
3L: 3m
5L: 5m
□L: □m

Wiring 1
N: Cable only
CT: With cable track

Wiring 2
N: Cable only
CT: With cable track

Shipping configuration
K: Individual components (kit)
A: Assembled

* Refer to P. 10 for details on the items comprising the model name.



Maximum Stroke

X axis 800 mm Y axis 400 mm Z axis 200 mm

Axis 2

	X high-speed, Y high-speed, Z high-speed	X high-speed, Y high-speed, Z medium-speed	X high-speed, Y high-speed, Z low-speed
X axis	1000mm/s		
Y axis	800mm/s		
Z axis	800mm/s	200mm/s	

Maximum Load Capacity

Y-axis stroke	X high-speed, Y high-speed, Z high-speed	X high-speed, Y high-speed, Z medium-speed	X high-speed, Y high-speed, Z low-speed
350mm	1.0kg	2.0kg	4.0kg
400mm			

With cable tracks (Wiring 3 does not come with a cable track.)

List by Stroke

Y-axis stroke	Incremental								Absolute							
	350				400				350				400			
Z-axis stroke	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
450	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
550	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
650	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
750	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Cable track

X-axis stroke	Y-axis stroke	
	50-400	350-400
50-400	-	-
450-600	-	-
650-800	-	-

Note) Both wiring 1 and wiring 2 should have a cable bear, or neither of the two should have a cable track. A cable track cannot be specified for one of the wirings.

List by Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m

* Axis 1 comes with a standard cable, while axis 2 comes with a robot cable.
* Refer to P. 90 for lengths other than those specified above.

List by Cable Length

Name	Option code
Opposite-home specification	NM
Slider roller specification	SR

Specifications

Item	X axis	Y axis	Z axis
Axis model	RCS2-SS8R	RCS2-SA7R	RCS2-SA6R
Stroke (Can be set in 50-mm increments)	50-800mm	350-400mm	50-200mm
Axis 2	High-speed type: 1000mm/s	High-speed type: 800mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s Low-speed type: 200mm/s
Motor output (W)	100W	60W	30W
Ball screw lead	High-speed type: 20mm	High-speed type: 16mm	High-speed type: 12mm Medium-speed type: 6mm Low-speed type: 3mm
Drive method	Ball screw, ø16mm, rolled, C10	Ball screw, ø12mm, rolled, C10	Ball screw, ø10mm, rolled, C10
Positioning repeatability	±0.02mm		
Base material	Dedicated alloy steel	Aluminum	
Surrounding air temperature/humidity	0 to 40°C, 85% RH or below (non-condensing)		

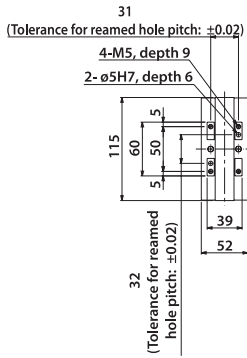
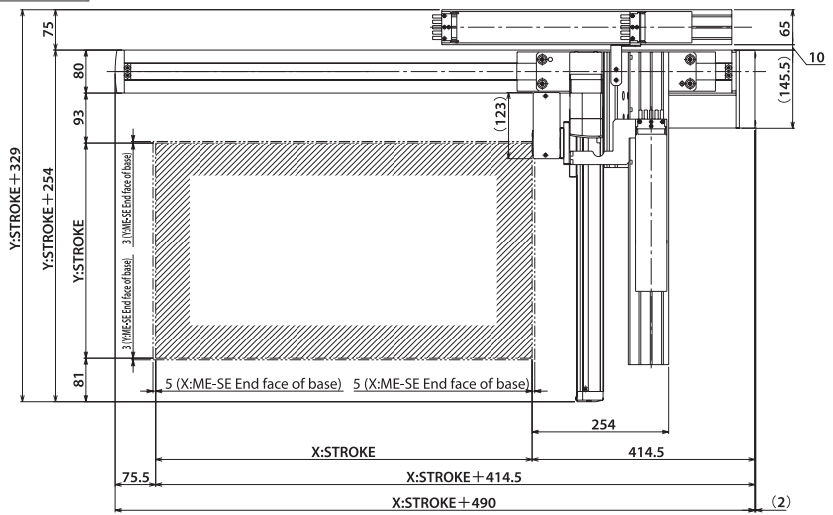
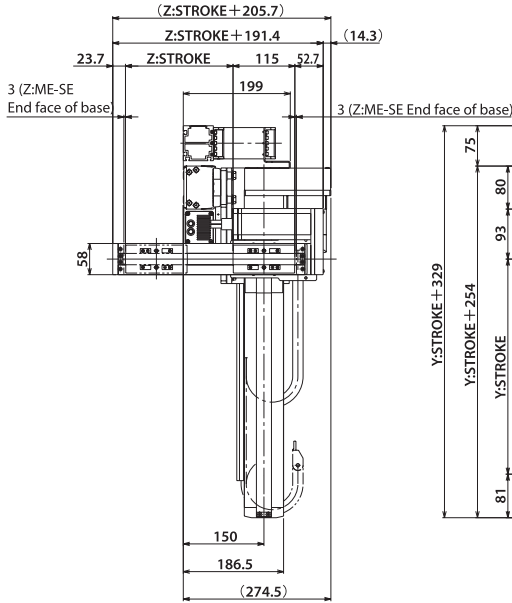
Dimensions

You can download CAD drawings from our website.

www.intelligentactuator.com

Note 1. The connected position shown in the drawing defines the home.
 Note 2. The drawing below assumes that both wiring 1 and wiring 2 have a cable track.
 Note 3. For details on the cable track, refer to P. 90.

2D CAD

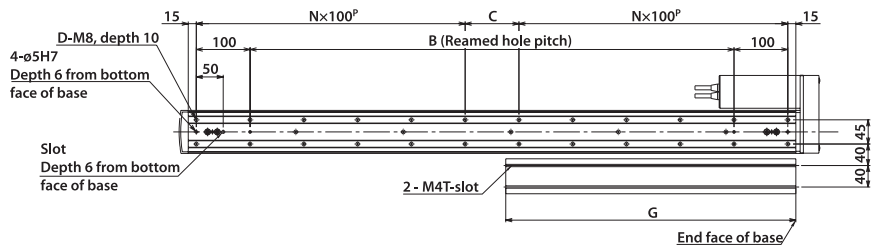


Detail view of Z-axis slider



Detail view of slot in bottom face of X-axis base

ME: Mechanical end
 SE: Stroke end



Detail view of X-axis installation

Dimensions by Stroke

X: Nominal stroke	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
X: Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
B	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
C	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
D	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	26
N	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
G	214.5	239.5	264.5	289.5	314.5	339.5	364.5	389.5	414.5	439.5	464.5	489.5	514.5	539.5	564.5	589.5

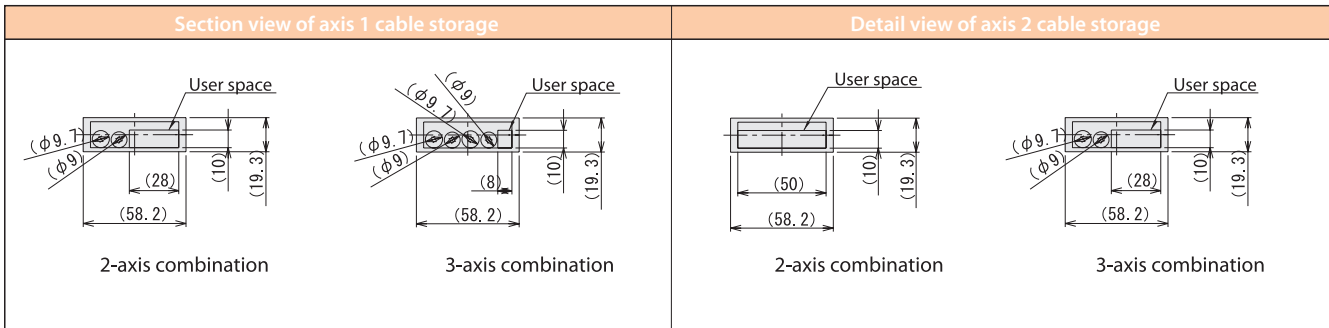
Controllers

Applicable controller

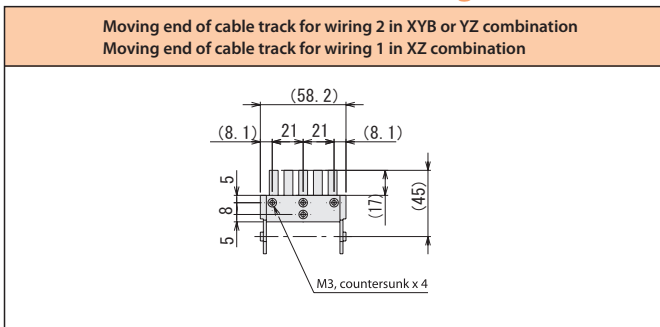
Refer to P. 91 for the controllers.

Reference

Cable Track



Detail View of Bracket on Moving End of Cable Track



List by Cable Length

Cable code	Length	RCP2 2-axis	RCS2 2-axis	RCP2 3-axis	RCS2 3-axis
		IK2-P	IK2-S	IK3-P	IK3-S
1L	1m	-	-	-	-
2L	2m	-	-	-	-
3L	3m	-	-	-	-
4L	4m	-	-	-	-
5L	5m	-	-	-	-
6L	6m	-	-	-	-
7L	7m	-	-	-	-
8L	8m	-	-	-	-
9L	9m	-	-	-	-
10L	10m	-	-	-	-
11L	11m	-	-	-	-
12L	12m	-	-	-	-
13L	13m	-	-	-	-
14L	14m	-	-	-	-
15L	15m	-	-	-	-
16L	16m	-	-	-	-
17L	17m	-	-	-	-
18L	18m	-	-	-	-
19L	19m	-	-	-	-
20L	20m	-	-	-	-

* Axis 1 comes with a standard cable, while axes 2 and 3 come with a robot cable.



Controllers

PSEL	RCP2-series program controller	PSEL-C	93
SSEL	RCS2-series program controller	SSEL-C	103
ROBONET	Field network controller	RPCON/RACON/Gateway units	113
XSEL	RCS2-series multi-axis program controller	X-SEL-J / K / P / Q	125

List of Applicable Controllers

	IA kit model	Applicable controller		
2-axis	IK2-PXBD	PSEL-C-2-42PI-42PI-NP-2-0	2-axis controller	
		IK2-PXBC	PCON-C-42PI-NP-2-0	1-axis controller
	IK2-PXBB	PRPCON-42P	1 unit	
		IK2-PXZB	PSEL-C-2-56PI-56PI-NP-2-0	2-axis controller
	IK2-PYBB	PCON-C-56PI-NP-2-0	1-axis controller	
		PRPCON-56P	1 unit	
	IK2-SXBD	SSEL-C-2-60I-20I-NP-2-[1]	2-axis controller (incremental)	
		SSEL-C-2-60A-20A-NP-2-[1]	2-axis controller (absolute)	
		SCON-C-60I-NP-2-[1]	1-axis controller (incremental for X-axis)	
		SCON-C-60A-NP-2-[1]	1-axis controller (absolute for X-axis)	
		SCON-C-20I-NP-2-[1]	1-axis controller (incremental for Y-axis)	
		SCON-C-20A-NP-2-[1]	1-axis controller (absolute for Y-axis)	
	IK2-SXBC	SSEL-C-2-60I-30I-NP-2-[1]	2-axis controller (incremental)	
		SSEL-C-2-60A-30A-NP-2-[1]	2-axis controller (absolute)	
		SCON-C-60I-NP-2-[1]	1-axis controller (incremental for X-axis)	
		SCON-C-60A-NP-2-[1]	1-axis controller (absolute for X-axis)	
		SCON-C-30I-NP-2-[1]	1-axis controller (incremental for Y-axis)	
	IK2-SXBB	SCON-C-30A-NP-2-[1]	1-axis controller (absolute for Y-axis)	
		SSEL-C-2-100I-60I-NP-2-[1]	2-axis controller (incremental)	
		SSEL-C-2-100A-60A-NP-2-[1]	2-axis controller (absolute)	
		SCON-C-100I-NP-2-[1]	1-axis controller (incremental for X-axis)	
		SCON-C-100A-NP-2-[1]	1-axis controller (absolute for X-axis)	
	IK2-SXBA	SCON-C-60I-NP-2-[1]	1-axis controller (incremental for Y-axis)	
		SCON-C-60A-NP-2-[1]	1-axis controller (absolute for Y-axis)	
		SSEL-C-2-150I-100I-NP-2-[1]	2-axis controller (incremental)	
		SSEL-C-2-150A-100A-NP-2-[1]	2-axis controller (absolute)	
		SCON-C-150I-NP-2-[1]	1-axis controller (incremental for X-axis)	
	IK2-SXZB	SCON-C-150A-NP-2-[1]	1-axis controller (absolute for X-axis)	
		SCON-C-100I-NP-2-[1]	1-axis controller (incremental for Y-axis)	
		SCON-C-100A-NP-2-[1]	1-axis controller (absolute for Y-axis)	
		SSEL-C-2-100I-60I-NP-2-[1]	2-axis controller (incremental)	
		SSEL-C-2-100A-60A-NP-2-[1]	2-axis controller (absolute)	
	IK2-SYBB	SCON-C-100I-NP-2-[1]	1-axis controller (incremental for X-axis)	
		SCON-C-100A-NP-2-[1]	1-axis controller (absolute for X-axis)	
		SCON-C-60I-NP-2-[1]	1-axis controller (incremental for Z-axis)	
		SCON-C-60A-NP-2-[1]	1-axis controller (absolute for Z-axis)	
		SSEL-C-2-100I-60I-NP-2-[1]	2-axis controller (incremental)	
	3-axis	IK3-PBBG	SSEL-C-2-100A-60A-NP-2-[1]	2-axis controller (absolute)
			PCON-C-56PI-42PI-NP-2-0	2-axis controller (for X/Y-axes)
			PCON-C-56PI-NP-2-0	1-axis controller (for X-axis)
			PCON-C-42PI-NP-2-0	1-axis controller (for Y-axis, Z-axis)
			PRPCON-56P	1-axis controller (for X-axis)
		IK3-SBBG	PRPCON-42P	1-axis controller (for Y-axis, Z-axis)
			SSEL-C-2-100I-60I-NP-2-[1]	2-axis controller (incremental for X/Y-axis)
			SSEL-C-2-100A-60A-NP-2-[1]	2-axis controller (absolute for X/Y-axis)
			SCON-C-100I-NP-2-[1]	1-axis controller (incremental for X-axis)
			SCON-C-100A-NP-2-[1]	1-axis controller (absolute for X-axis)
SCON-C-60I-NP-2-[1]	1-axis controller (incremental for Y-axis)			
SCON-C-60A-NP-2-[1]	1-axis controller (absolute for Y-axis)			
SCON-C-30I-NP-2-[1]	1-axis controller (incremental for Z-axis)			
SCON-C-30A-NP-2-[1]	1-axis controller (absolute for Z-axis)			

[1] Power-supply voltage (1: Single-phase 100 VAC / 2: Single-phase 200 VAC)

2-axis
Combinations
R C P 2

2-axis
Combinations
R C S 2

3-axis
Combinations
R C P 2

3-axis
Combinations
R C S 2

Controllers

Model
List

PSEL

SSEL

ROBONET

XSEL

PSEL



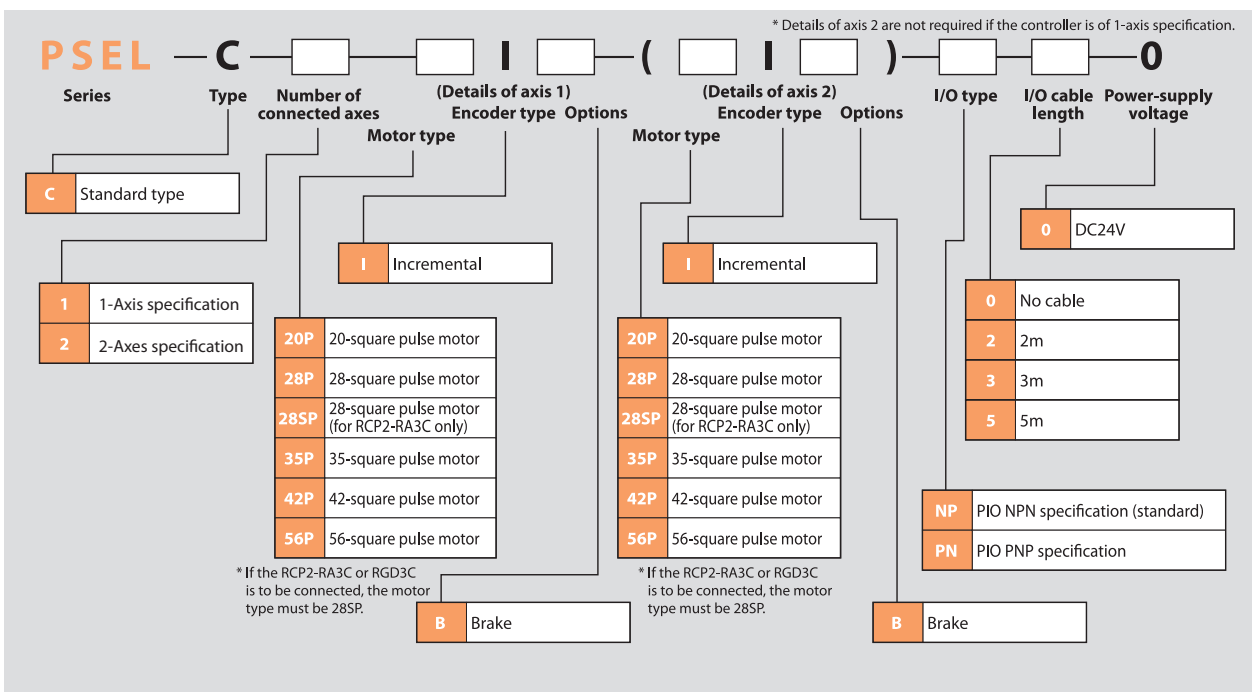
RCP2-series
program controller

Model List

A program controller capable of operating RCP2-series actuators. Various controls can be performed with a single unit.

Type	C	
Name	Program mode	Positioner mode
Exterior view		
Description	This controller can operate actuators and communicate with external devices without requiring any additional device. If two axes are operated, 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 positions	1,500	

Model

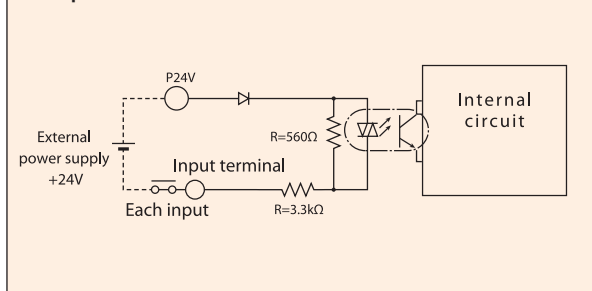


I/O Specifications

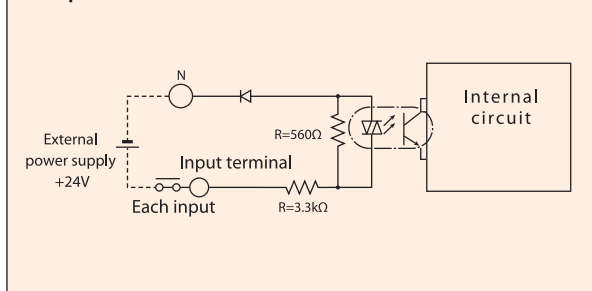
Input External input specifications

Item	Specification
Input voltage	DC24V ±10%
Input current	7 mA per circuit
ON/OFF voltages	ON voltage (min.) NPN: DC16V/PNP: DC8V OFF voltage (max.) NPN: DC5V/PNP: DC19V
Insulation method	Photo-coupler

NPN specification



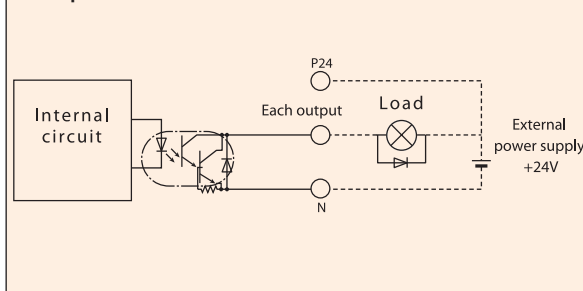
PNP specification



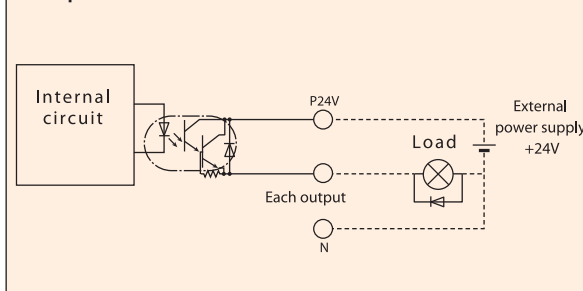
Output External output specifications

Item	Specification
Load voltage	DC24V
Maximum load current	100 mA per point, total 400 mA for 8 points
Leak current (max.)	Max. 0.1 mA per point
Insulation method	Photo-coupler

NPN specification



PNP specification



Explanation of I/O Functions

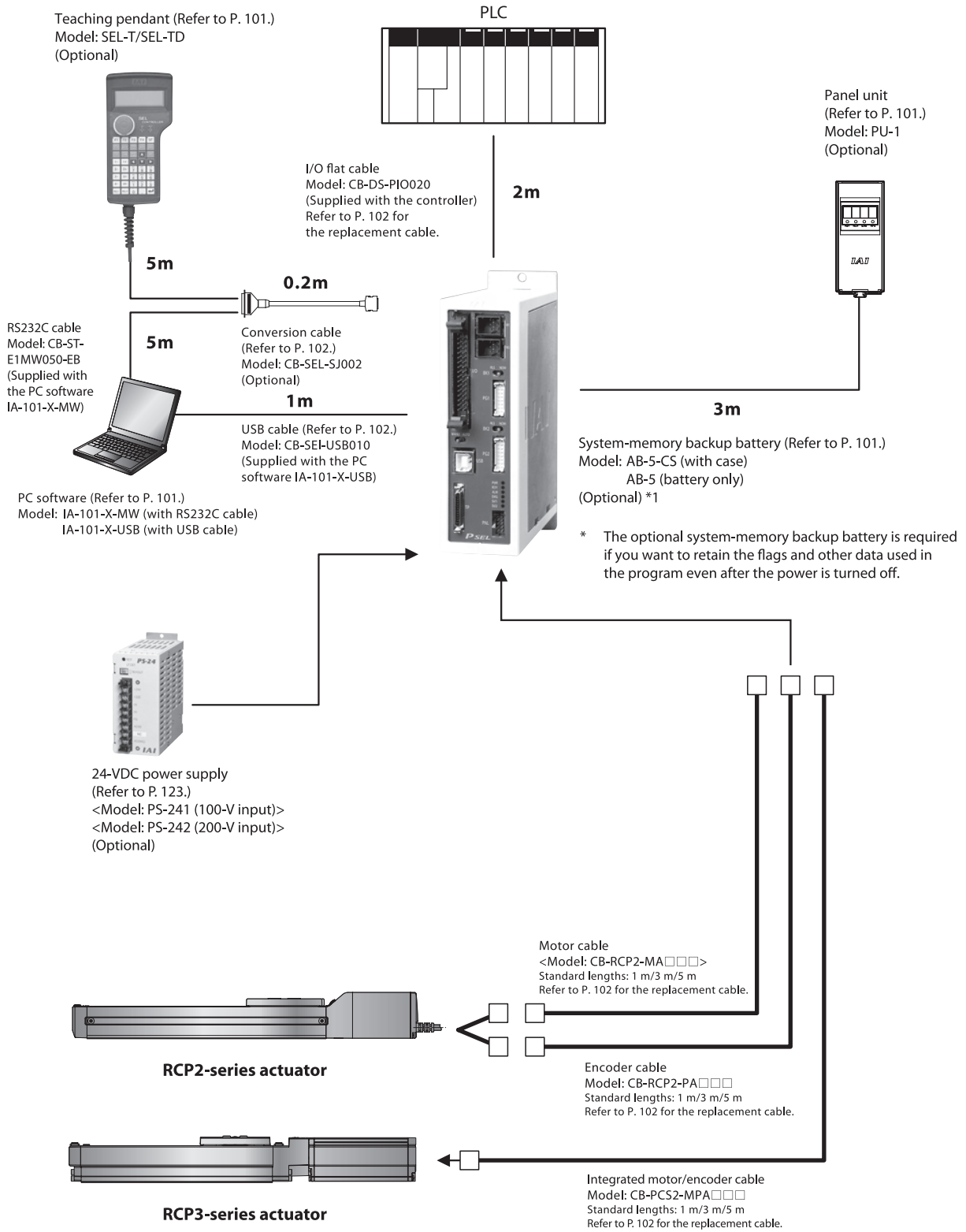
The PSEL controller can be operated in the “Program Mode” where a program is entered to operate the actuator or “Positioner Mode” where the actuator is moved to positions specified by signals received from a host PLC.

The positioner mode includes the following five input patterns to support various applications.

Functions by Controller Type

Operation mode	Features	
Program mode	You can use Super SEL, a language that allows for complex controls using simple commands, to perform linear and smooth interpolation operations, path operation ideal for coating and other applications, arch motion and palletizing operations, and more.	
Product-type Switchover Mode	Standard mode	The basic operation mode where all you need is to specify a position number and enter a start signal. Push-motion operation, and linear interpolation operation of two axes, is also supported.
	Type switching mode	When the system handles multiple loads of the same shape but slightly different hole positions, you can issue movement commands to the same position number by changing the type number.
	2-axis independent mode	When a 2-axis controller is used, the two axes can be operated independently using separate commands.
	Teaching mode	The slider (rod) can be moved using an external signal to register the stopped position as position data.
	DS-S-C1 compatible mode	If you have been using a DS-S-C1 controller, you can swap it with a PSEL controller without having to change the host programs. * Compatibility with actuators is not assured.

System Configuration



2-axis
Combinations
RCP2

2-axis
Combinations
RCS2

3-axis
Combinations
RCP2

3-axis
Combinations
RCS2

Controllers

Model
List

PSEL

SSEL

ROBONET

XSEL

Explanation of I/O Functions

Program Mode

Pin No.	Category	Port No.	Program Mode	Function	Wiring diagram
1A	P24		24-V input	Connect 24 V.	
1B		016	Program No. 1 selection	Select the program number of the program you want to start. (Enter one of ports 016 to 022 by a BCD code.)	
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	The system is reset and enters the same state achieved after the power has been reconnected.	
5B		000	Start	The program selected by one of port Nos. 016 to 022 is started.	
6A	Input	001	General-purpose input	The system waits for an external input in response to a program command.	
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	Output	015	General-purpose input	These signals can be turned ON/OFF freely using program commands.	
13B		300	Alarm		This signal is output when an alarm has occurred. (Contact B)
14A		301	Ready		This signal is output when the controller has started properly and become ready to operate.
14B		302	General-purpose output		
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		OV input	Connect OV.	

2-axis Combinations RCP 2
 2-axis Combinations RCS 2
 3-axis Combinations RCP 2
 3-axis Combinations RCS 2
 Controllers

Positioner, Standard Mode

Pin No.	Category	Port No.	Standard Positioner Mode	Function	Wiring diagram
1A	P24		24-V input	Connect 24 V.	
1B		016	Position input 10	Use one of port Nos. 007 to 019 to specify the position number corresponding to the position to move the actuator to. The value can be specified by either a BCD or binary code.	
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 resets minor errors. (The power must be reconnected to reset major errors.)	
5B		000	Start	The actuator starts moving to the position corresponding to the selected position number.	
6A	Input	001	Home return	The actuator returns home.	
6B		002	Servo ON	The servo is turned ON/OFF.	
7A		003	Push motion	The actuator performs push-motion operation.	
7B		004	Pause	The actuator pauses when this signal turns OFF, and resumes the remaining operation when the signal turns ON.	
8A		005	Cancel	The actuator stops when this signal turns OFF, and the remaining operation is cancelled.	
8B		006	Interpolation setting	In the case of a 2-axis specification, the actuators move via linear interpolation while this signal is ON.	
9A		007	Position input 1	Use one of port Nos. 007 to 019 to specify the position number corresponding to the position to move the actuator to. The value can be specified by either a BCD or binary code.	
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	Output	015	Position input 9	These signals can be turned ON/OFF freely using program commands.	
13B		300	Alarm		This signal is output when an alarm has occurred. (Contact B)
14A		301	Ready		This signal is output when the controller has started properly and become ready to operate.
14B		302	Positioning complete		This signal is output when movement to the specified position has completed.
15A		303	Home return complete		This signal is output when home return has completed.
15B		304	Servo ON output		This signal is output while the servo is ON.
16A		305	Push-motion complete		This signal is output when push-motion operation has completed.
16B	306	System battery error	This signal is output when the system battery voltage has dropped (to the warning level).		
17A	307	-	-		
17B	N		OV input	Connect OV.	

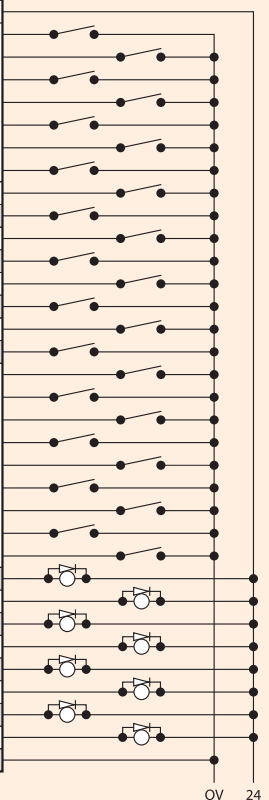
Model List
 PSEL
 SSEL
 ROBONET
 XSEL

Explanation of I/O Functions

Positioner, Product-Type Switchover Mode

Pin No.	Category	Port No.	Type-switching Positioner Mode	Function	
1A	P24		24-V input	Connect 24 V.	
1B	Input	016	Position/type input 10	Use one of port Nos. 007 to 022 to specify the position number corresponding to the position to move the actuator to, and another to specify the type number. Assignment of position numbers and type numbers are set using parameters. The value can be specified by either a BCD or binary code.	
2A		017	Position/type input 11		
2B		018	Position/type input 12		
3A		019	Position/type input 13		
3B		020	Position/type input 14		
4A		021	Position/type input 15		
4B		022	Position/type input 16		
5A		023	Error reset		This signal resets minor errors. (The power must be reconnected to reset major errors.)
5B		000	Start		The actuator starts moving to the position corresponding to the selected position number.
6A		001	Home return		The actuator returns home.
6B		002	Servo ON		The servo is turned ON/OFF.
7A		003	Push motion		The actuator performs push-motion operation.
7B		004	Pause		The actuator pauses when this signal turns OFF, and resumes the remaining operation when the signal turns ON.
8A		005	Cancel		The actuator stops when this signal turns OFF, and the remaining operation is cancelled.
8B		006	Interpolation setting		In the case of a 2-axis specification, the actuators move via linear interpolation while this signal is ON.
9A		007	Position/type input 1		Use one of port Nos. 007 to 022 to specify the position number corresponding to the position to move the actuator to, and another to specify the type number. Assignment of position numbers and type numbers are set using parameters. The value can be specified by either a BCD or binary code.
9B	008	Position/type input 2			
10A	009	Position/type input 3			
10B	010	Position/type input 4			
11A	011	Position/type input 5			
11B	012	Position/type input 6			
12A	013	Position/type input 7			
12B	014	Position/type input 8			
13A	015	Position/type input 9			
13B	Output	300	Alarm	This signal is output when an alarm has occurred. (Contact B)	
14A		301	Ready	This signal is output when the controller has started properly and become ready to operate.	
14B		302	Positioning complete	This signal is output when movement to the specified positioning has completed.	
15A		303	Home return complete	This signal is output when home return has completed.	
15B		304	Servo ON output	This signal is output while the servo is ON.	
16A		305	Push-motion complete	This signal is output when push-motion operation has completed.	
16B		306	System battery error	This signal is output when the system battery voltage has dropped (to the warning level).	
17A		307	-	-	
17B	N		OV input	Connect OV.	

Wiring diagram

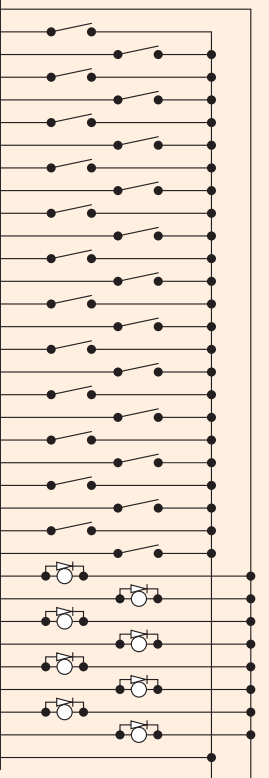


OV 24

Positioner, 2-axes Independent Mode

Pin No.	Category	Port No.	Type-switching Positioner Mode	Function	
1A	P24		24-V input	Connect 24 V.	
1B	Input	016	Position input 7	Use any of port Nos. 010 to 022 to specify the position number corresponding to the position to move the actuator to. Assignment of position numbers for axes 1 and 2 are set using parameters. The value can be specified by either a BCD or binary code.	
2A		017	Position input 8		
2B		018	Position input 9		
3A		019	Position input 10		
3B		020	Position input 11		
4A		021	Position input 12		
4B		022	Position input 13		
5A		023	Error reset		This signal resets minor errors. (The power must be reconnected to reset major errors.)
5B		000	Start 1		Axis 1 starts moving to the selected position number.
6A		001	Home return 1		Axis 1 returns home.
6B		002	Servo ON 1		The servo of axis 1 is turned ON/OFF.
7A		003	Pause 1		Axis 1 pauses when this signal turns OFF, and resumes the remaining operation when the signal turns ON.
7B		004	Cancel 1		Movement of axis 1 is cancelled.
8A	005	Start 2	Axis 2 starts moving to the selected position number.		
8B	006	Home return 2	Axis 2 returns home.		
9A	007	Servo ON 2	The servo of axis 2 is turned ON/OFF.		
9B	008	Pause 2	Axis 2 pauses when this signal turns OFF, and resumes the remaining operation when the signal turns ON.		
10A	009	Cancel 2	Movement of axis 2 is cancelled.		
10B	010	Position input 1	Use any of port Nos. 010 to 022 to specify the position number corresponding to the position to move the actuator to. Assignment of position numbers for axes 1 and 2 are set using parameters. The value can be specified by either a BCD or binary code.		
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 when an alarm has occurred. (Contact B)	
14A		301	Ready	This signal is output when the controller has started properly and become ready to operate.	
14B		302	Positioning complete 1	This signal is output when movement of axis 1 to the specified position has completed.	
15A		303	Home return complete 1	This signal is output when home return of axis 1 has completed.	
15B		304	Servo ON output 1	This signal is output while the servo of axis 1 is ON.	
16A		305	Positioning complete 2	This signal is output when movement of axis 2 to the specified position has completed.	
16B		306	Home return complete 2	This signal is output when home return of axis 2 has completed.	
17A		307	Servo ON output 2	This signal is output while the servo of axis 2 is ON.	
17B	N		OV input	Connect OV.	

Wiring diagram



OV 24

2-axis Combinations RCP2

2-axis Combinations RCS2

3-axis Combinations RCP2

3-axis Combinations RCS2

Controllers

Model List

PSEL

SSEL

ROBONET

XSEL

Explanation of I/O Functions

Positioner, Teach Mode

Pin No.	Category	Port No.	Type-switching Positioner Mode	Function	Wiring diagram		
1A	Input	P24	24-V input	Connect 24 V.			
1B			016	Axis 1 JOG -		Axis 1 moves in the negative direction while this signal is input.	
2A			017	Axis 2 JOG +		Axis 2 moves in the positive direction while this signal is input.	
2B			018	Axis 2 JOG -		Axis 2 moves in the negative direction while this signal is input.	
3A			019	Inching specification (0.01 mm)		Specify the travel over which to move the actuator by inching. (The travel is the sum of values specified by port Nos. 019 to 022.)	
3B			020	Inching specification (0.1 mm)			
4A			021	Inching specification (0.5 mm)			
4B			022	Inching specification (1 mm)			
5A			023	Error reset			This signal resets minor errors. (The power must be reconnected to reset major errors.)
5B			000	Start		The actuator starts moving to the position corresponding to the selected position number.	
6A			001	Servo ON		The servo is turned ON/OFF.	
6B			002	Pause		The actuator pauses when this signal turns OFF, and resumes the remaining operation when the signal turns ON.	
7A			Input	003		Position input 1	Use one of port Nos. 003 to 013 to specify the position number corresponding to the position to move the actuator to, and another to specify the position number under which to input the current position. If port No. 014 for teaching mode specification is ON, the current value is written to the specified position number when port No. 000 for start signal turns ON.
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	Output	015	Axis 1 JOG +	Axis 1 moves in the positive direction while this signal is input.			
13B		300	Alarm	This signal is output when an alarm has occurred. (Contact B)			
14A		301	Ready	This signal is output when the controller has started properly and become ready to operate.			
14B		302	Positioning complete	This signal is output when movement to the specified position has completed.			
15A		303	Home return complete	This signal is output when home return has completed.			
15B		304	Servo ON output	This signal is output while the servo is ON.			
16A		305	-	-			
16B		306	System battery error	This signal is output when the system battery voltage has dropped (to the warning level).			
17A	307	-	-				
17B	N	-	OV input	Connect OV.			

2-axis Combinations RCP 2
 2-axis Combinations RCS 2
 3-axis Combinations RCP 2
 3-axis Combinations RCS 2
 Controllers

Positioner, DS-S-C1 Compatible Mode

Pin No.	Category	Port No.	Standard Positioner Mode	Function	Wiring diagram		
1A	Input	P24	24-V input	Connect 24 V.			
1B			016	Position No. 1000		(Same with port Nos. 004 to 015.)	
2A			017	-		-	
2B			018	-		-	
3A			019	-		-	
3B			020	-		-	
4A			021	-		-	
4B			022	-		-	
5A			023	CPU reset		The system is reset and enters the same state achieved after the power has been reconnected.	
5B			000	Start		The actuator starts moving to the position corresponding to the selected position number.	
6A			001	Hold (pause)		The actuator pauses when this signal turns ON, and resumes the remaining operation when the signal turns OFF.	
6B			002	Cancel		The actuator stops when this signal turns ON, and the remaining operation is cancelled.	
7A			Input	003		Interpolation setting	In the case of a 2-axis specification, the actuators move via linear interpolation while this signal is ON.
7B				004		Position No. 1	Use one of port Nos. 004 to 016 to specify the position number corresponding to the position to move the actuator to. The value is specified by a BCD code.
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	Output	015	Position No. 800				
13B		300	Alarm	This signal is output when an alarm has occurred. (Contact A)			
14A		301	Ready	This signal is output when the controller has started properly and become ready to operate.			
14B		302	Positioning complete	This signal is output when movement to the specified position has completed.			
15A		303	-	-			
15B		304	-	-			
16A		305	-	-			
16B		306	System battery error	This signal is output when the system battery voltage has dropped (to the warning level).			
17A	307	-	-				
17B	N	-	OV input	Connect OV.			

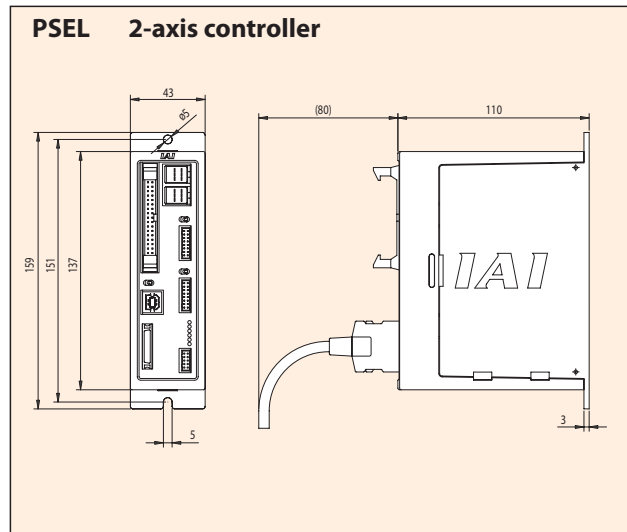
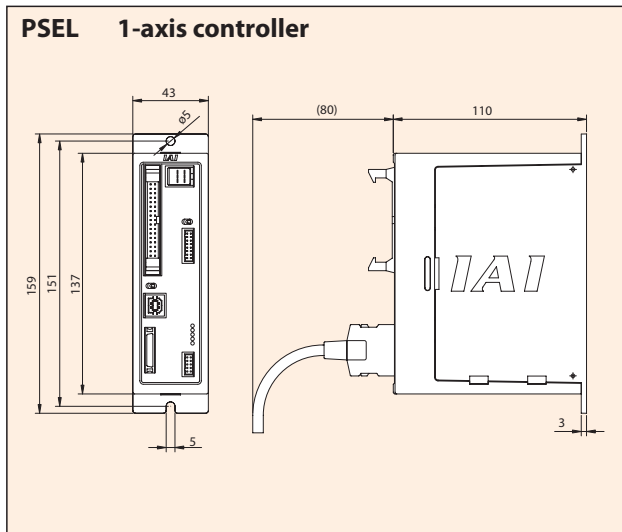
Model List
 PSEL
 SSEL
 ROBONET
 XSEL

Specification Table

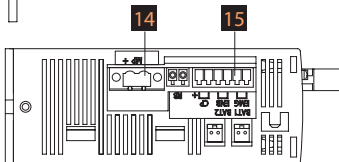
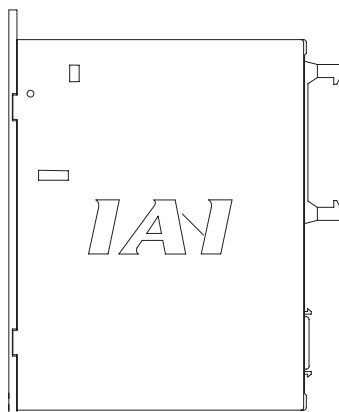
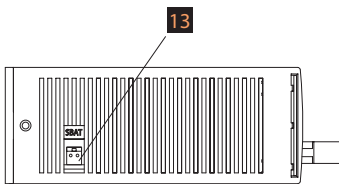
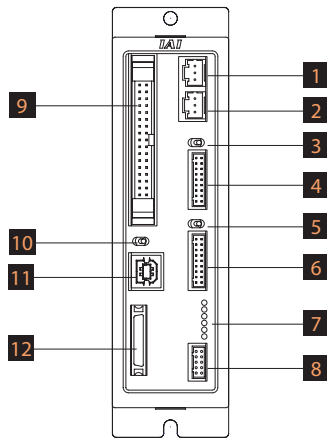
	Item	Specification	
Base specifications	Connected actuator	RCP2-series actuator (Note 1)	
	Input voltage	24 VDC ±10%	
	Power-supply capacity	Max. 5.5 A	
	Dielectric strength	500 VDC, 10 MΩ or more	
	Withstand voltage	500 VAC, 1 minute	
	Rush current	Max. 30 A	
	Vibration resistance	XYZ directions: 10 to 57 Hz: (Single amplitude) 0.035 mm (continuous), 0.075 mm (intermittent) 58 to 150 Hz: 4.9 m/sec ² (continuous), 9.8 m/sec ² (intermittent)	
Control specifications	Number of controlled axes	1/2	
	Maximum total output of connected axes	-	
	Position detection method	Incremental encoder	
	Speed setting	1 mm/sec ~ (The maximum limit varies depending on the actuator.)	
	Acceleration setting	0.01 G ~ (The maximum limit varies depending on the actuator.)	
Program	Operation method	Program operation/positioner operation (switchable)	
	Program language	Super SEL	
	Number of programs	64	
	Number of program steps	2,000	
	Number of multi-tasking programs	8	
	Number of positioning points	1500	
	Data storage device	Flash ROM (An optional system-memory backup battery can be added.)	
Communication related	Data input method	Teaching pendant or PC software	
	Number of I/O points	24 input points/8 output points (NPN/PNP selectable)	
	I/O power supply	24 VDC ±10%, externally supplied	
	PIO cable	CB-DS-PIO□□□□ (supplied with the controller)	
	Serial communication function	RS232C (half-pitch connector)/USB connector	
	Field network cable	(To be supported in the future)	
	Motor cable	CB-RCP2-MA□□□□ (max. 20 m)	
	Encoder cable	CB-RCP2-PA□□□□ (max. 20 m)	
	General specifications	Protective functions	Motor/driver temperature check, encoder open check, soft limit overtravel, system error, battery error, etc.
		Surrounding air temperature/humidity	0 to 40°C, 10 to 95% (non-condensing)
Surrounding ambience		Free from corrosive gases or significant dust.	
Protection degree		IP20	
Weight		Approx. 450 g	
External dimensions		43 mm (W) x 159 mm (H) x 110 mm (D)	

The high-thrust type (RA10C), high-speed type (HS8C/HS8R) and waterproof type (RCP2W-SA16) are not operated.

External Dimensions



Name of Each part



1 Axis 1 motor connector
Connect the motor cable for actuator axis 1 here.

2 Axis 2 motor connector
Connect the motor cable for actuator axis 2 here.

3 Axis 1 brake switch
This switch is used to release the axis brake. When the switch is set to the left (RLS) position, the brake is forcibly released. When the switch is set to the right (NOM) position, the brake is controlled automatically by the controller.

4 Axis 1 encoder connector
Connect the encoder cable for actuator axis 1 here.

5 Axis 2 brake switch
This switch is used to release the axis brake. When the switch is set to the left (RLS) position, the brake is forcibly released. When the switch is set to the right (NOM) position, the brake is controlled automatically by the controller.

6 Axis 2 encoder connector
Connect the encoder cable for actuator axis 2 here.

7 Status indicator LEDs
These LEDs indicate the operating status of the controller. What is indicated by each LED is explained below:
PWR: The power is currently input to the controller.
RDY: The controller is ready to perform program operation.
ALM: The controller is abnormal.
EMG: An emergency stop has been actuated and the drive source is being cut off.
SV1: The servo of actuator axis 1 is turned ON.
SV2: The servo of actuator axis 2 is turned ON.

8 Panel unit connector
This connector is used to connect the panel unit (optional) for displaying the controller status and error numbers.

9 IO connector
A connector for interface IOs.
If a DIO (24IN/8OUT) interface is used, this connector accepts a 34-pin flat cable connector.
The IO power is also supplied to the controller through this connector (pins 1 and 34).

10 Mode switch
This switch is used to indicate the operation mode of the controller.
The left position indicates the MANU (manual operation) mode, while the right position indicates the AUTO (auto operation) mode. Teaching operation can only be performed in the MANU mode, and operation using external IOs cannot be performed in the MANU mode.

11 USB connector
This connector is used to make USB connection with a PC. When the USB connector is in use, the TP connector cannot be used because communication through the TP connector is cut off.

12 Teaching pendant connector
This half-pitch, IO26-pin connector is used to connect a teaching pendant when the operation mode is MANU. You need a dedicated conversion cable to connect to a conventional D-sub, 25-pin connector.

13 System-memory backup battery connector
This connector is used to connect the battery needed to retain the various data stored in the built-in SRAM of the controller even after the power is cut off. The system-memory backup battery is installed on the exterior of the unit. This battery is not a standard accessory (available as an option).

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

15 Control-power/system input connector
This connector is used to connect the controller power input, emergency stop switch and enable switch, and consists of a 6-pin, 2-piece connector by Phoenix Contact.

Options

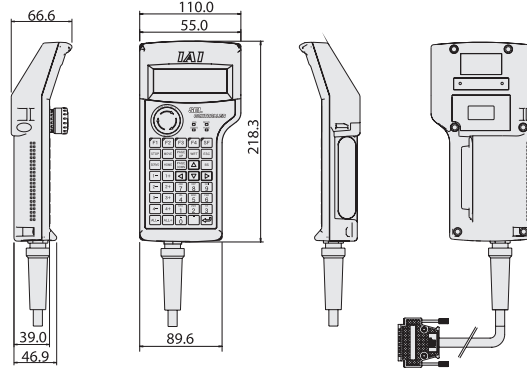
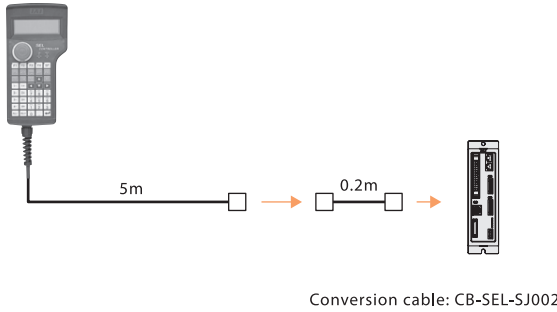
Teaching Pendant

Features A teaching device offering functions for program/position input, test operation, monitoring, and more.

Model/Price

Model	Description
SEL-T-J	Standard type with connector conversion cable
SEL-TD-J	Deadman switch type with connector conversion cable

Configuration



Specification

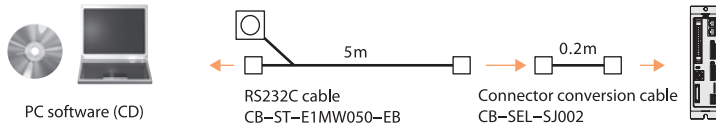
Item	SEL-T-J	SEL-TD-J
3-position enable switch	Not equipped	Equipped
ANSI/UL standard	Not compliant	Compliant
CE mark	Compliant	
Display	20 characters x 4 lines	
Surrounding air temperature/humidity	0-40°C 10-90%RH (non-condensing)	
Protection structure	IP54	
Weight	Approx. 0.4 kg (excluding cables)	

PC Software (Windows only)

Features A software program that assists the initial startup of your system, offering functions for program/position input, test operation, monitoring, and more. The enhanced debugging functions help reduce the startup time.

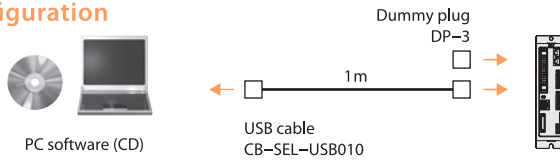
Model IA-101-X-MW-J (with RS232C cable + connector conversion cable)

Configuration



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

Configuration

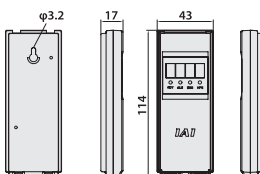


Note
The PSEL controller only supports version 7.0.0.0 or later.

Panel Unit

Features A display for checking controller error codes and the program number of the current program.

Model PU-1 (cable length: 3 m)



System memory backup battery

Features This battery is needed when global flags, etc., are used in the program and you want the data to be retained even after the power is turned off.

Model AB-5-CS (with case)
AB-5 (battery)



Dummy plug

Features This plug is connected to the teaching pendant to cut off the enable circuit when connecting the PSEL controller to a PC via a USB cable. (This plug is supplied with the PC software IA-101-X-USB.)

Model DP-3



Options

USB cable

Features This cable is used to connect a controller with USB port to a PC.

To connect a controller without USB port (XSEL) to a PC, connect the controller's 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: 1 m)



Connector conversion cable

Features This conversion cable is used to connect the D-sub, 25-pin connector for teaching pendant or PC to the teaching connector (half-pitch) on the PSEL controller.

Model **CB-SEL-SJ002** (cable length: 0.2 m)



Replacement Parts

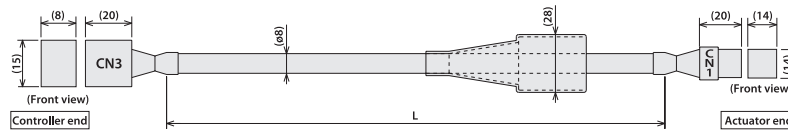
If you must order a replacement cable, etc., after the initial purchase of your product, specify the correct model by referring to the information below.

Motor Cable

Item **CB-RCP2-MA** [] [] []

* The standard motor cable is a robot cable.

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



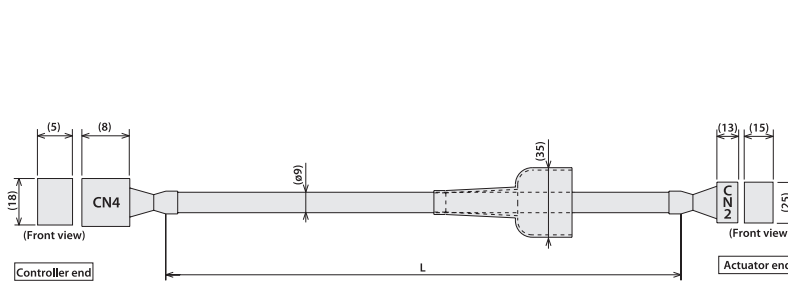
CN3			M cable		CN1			
Orange	A	A1	1	A	Yellow		SLP-06V (JST)	
Gray	VMM	A2	2	VMM	Gray			
White	B	A3	3	A	Orange			
Yellow	A	B1	4	B	Orange (black 1)			
Pink	VMM	B2	5	VMM	Pink			
Orange (black 1)	B	B3	6	B	White			

Encoder Cable/Robot Encoder Cable

Item **CB-RCP2-PB** [] [] [] / **CB-RCP2-PB** [] [] [] -**RB**

* The standard encoder cable is a normal cable. A robot cable can be specified as an option.

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

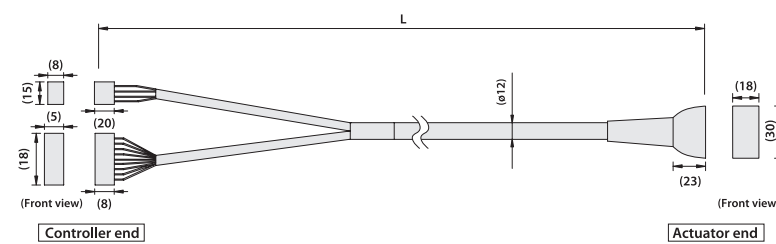


CN4			Signal name		Pin name		CN2		
Blue (red 1)	Orange (black 2)	LS+	16	LS+	16	1	ENA	Brown	Light gray (black 1)
White	Orange (red 2)	LS-	15	LS-	15	2	ENA	Green	Light gray (red 1)
Red	Orange (black 1)	BK+	14	BK+	14	3	ENB	Purple	White (black 1)
Gray	Orange (red 1)	BK-	13	BK-	13	4	ENB	Pink	White (red 1)
Brown	Light gray (black 1)	ENA	12	ENA	12	5	-	-	-
Green	Light gray (red 1)	ENA	11	ENA	11	6	-	-	-
Purple	White (black 1)	ENB	10	ENB	10	7	-	-	-
Pink	White (red 1)	ENB	9	ENB	9	8	-	-	-
Yellow	Yellow (black 1)	VPS	7	VPS	7	9	GND	Blue	Pink (black 1)
Orange	Pink (red 1)	VBB	6	VBB	6	10	VBB	Blue	Pink (black 1)
-	-	(N.C)	4	-	-	11	VPS	Yellow	Yellow (black 1)
-	-	(N.C)	3	-	-	12	-	-	-
-	-	(N.C)	2	-	-	13	LS+	Blue (red 1)	Orange (black 2)
Ground	Ground	F.G	1	F.G	1	14	LS-	White	Orange (red 2)

Integrated Motor/Encoder Cable for RCP3

Item **CB-PCS-MPA** [] [] []

* [] [] indicates the cable length (L). A desired length up to 10 m can be specified. Example) 080 = 8 m

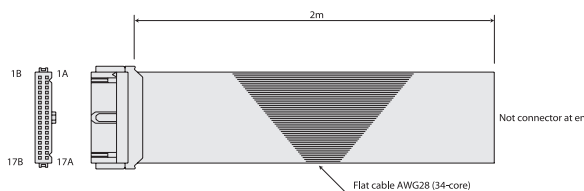


Signal	Pin No.	(Wire color)	Pin No.	Signal
A	B1	Black	A1	A
VMM	A2	White	B1	VMM
/A	A1	Red	A2	/A
B	B3	Green	B2	B
VMM	B2	Yellow	A3	VMM
/B	A3	Brown	B3	/B
BK+	14	-	A4	NC
BK-	13	-	A5	BK+
LS+	16	Pink (Red.)	B5	BK-
LS-	15	White (Red.)	A6	LS+
A+	12	White (Blue.)	B6	LS-
A-	11	Orange (Red.)	A7	A+
B+	10	Orange (Blue.)	B7	A-
B-	9	Gray (Red.)	A8	B+
NC	8	Gray (Blue.)	B8	B-
VPS	7	-	A9	NC
VCC	6	Orange (Blue, continuous)	B9	VPS
GND	5	Gray (Blue, continuous)	A10	VCC
NC	4	-	B10	GND
F.G	1	Shield	A11	NC
			B11	F.G

I/O Flat Cable

Item **CB-DS-PIO** [] [] []

* [] [] indicates the cable length (L). A desired length up to 10 m can be specified. Example) 080 = 8 m



No.	Color	Wire	No.	Color	Wire
1A	Brown 1	Flat cable, pressure-welded	9B	Gray 2	Flat cable, pressure-welded
1B	Red 1		10A	White 2	
2A	Orange 1		10B	Black 2	
2B	Yellow 1		11A	Brown-3	
3A	Green 1		11B	Red 3	
3B	Blue 1		12A	Orange 3	
4A	Purple 1		12B	Yellow 3	
4B	Gray 1		13A	Green 3	
5A	White 1		13B	Blue 3	
5B	Black 1		14A	Purple 3	
6A	Brown-2		14B	Gray 3	
6B	Red 2		15A	White 3	
7A	Orange 2		15B	Black 3	
7B	Yellow 2		16A	Brown-4	
8A	Green 2		16B	Red 4	
8B	Blue 2		17A	Orange 4	
9A	Purple 2		17B	Yellow 4	

SSEL



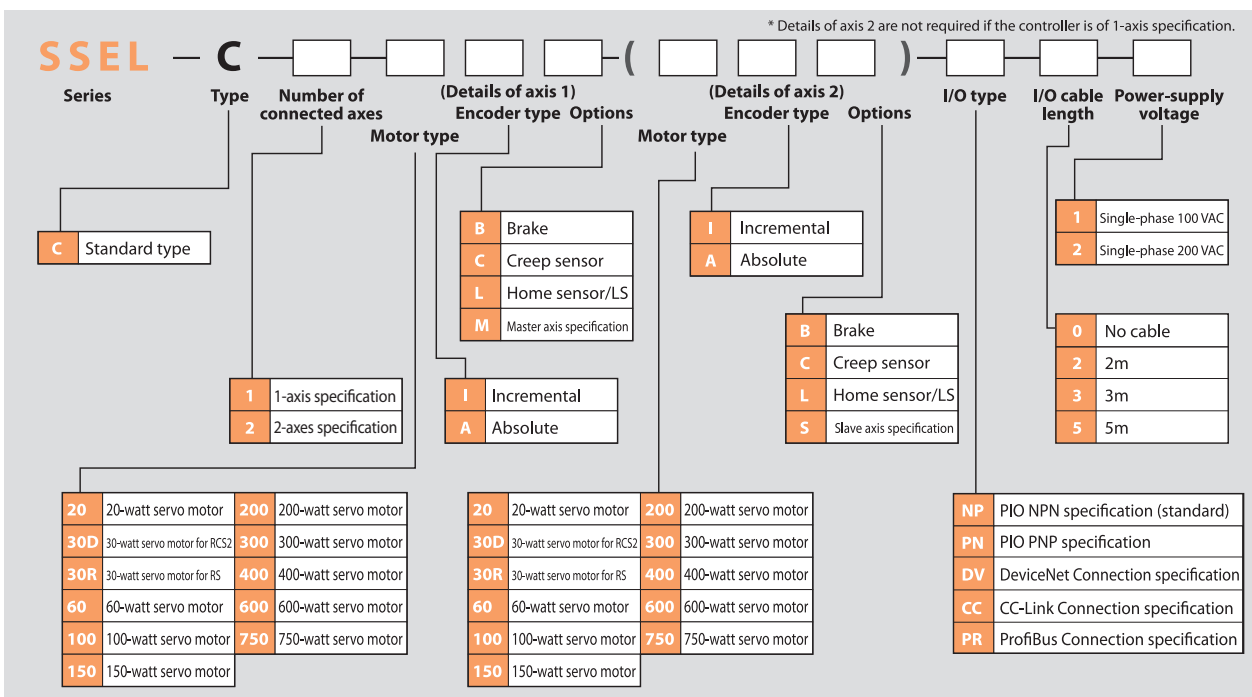
RCS2-series
program controller

Model List/Pricing

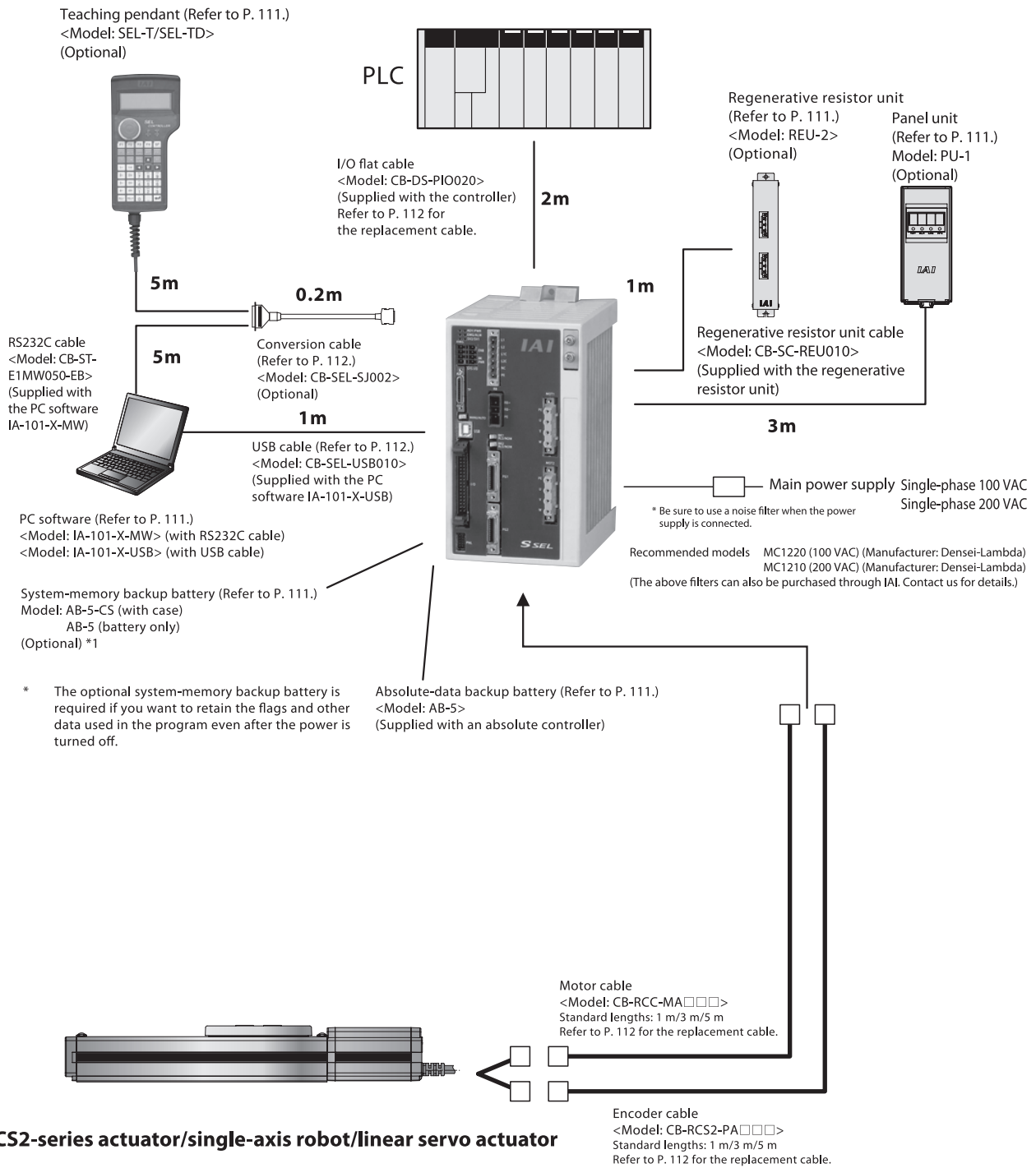
A program controller capable of operating RCS2-series actuators. Various controls can be performed with a single unit.

Type	C	
Name	Program mode	Positioner mode
Exterior view		
Description	This controller can operate actuators and communicate with external devices without requiring any additional device. If two axes are operated, arc interpolation, path operation and synchronized operation can be performed.	Up to 20,000 positioning points are supported. Push-motion operation and teaching operation are also possible.
Number of positions	20,000	

Model



System Configuration



2-axis
Combinations
RCP 2

2-axis
Combinations
RCS 2

3-axis
Combinations
RCP 2

3-axis
Combinations
RCS 2

Controllers

Model
List

PSEL

SSEL

ROBONET

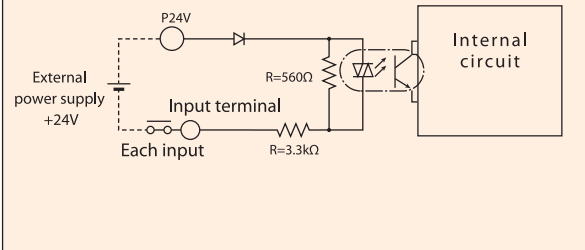
XSEL

I/O Specifications

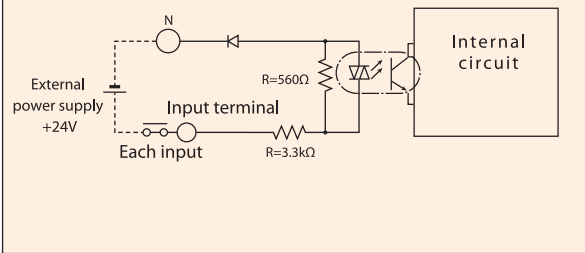
Input External input specifications

Item	Specification
Input voltage	DC24V ±10%
Input current	7 mA per circuit
ON/OFF voltages	ON voltage (min.) NPN: DC16V/PNP: DC8V OFF voltage (max.) NPN: DC5V/PNP: DC19V
Insulation method	Photo-coupler

NPN specification



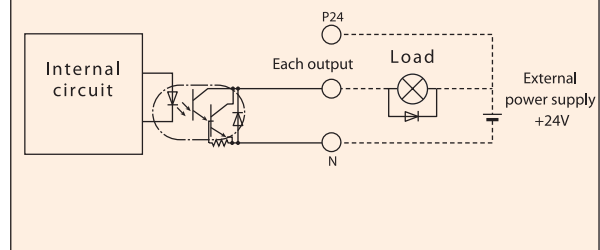
PNP specification



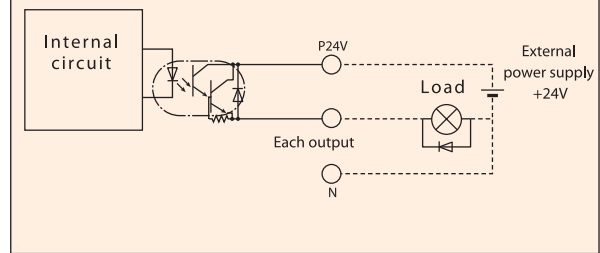
Output External output specifications

Item	Specification
Load voltage	DC24V
Maximum load current	100 mA per point, total 400 mA for 8 points
Leak current (max.)	Max. 0.1 mA per point
Insulation method	Photo-coupler

NPN specification



PNP specification



Explanation of I/O Functions

The SSEL controller can be operated in the “Program Mode” where a program is entered to operate the actuator or “Positioner Mode” where the actuator is moved to positions specified by signals received from a host PLC.

The positioner mode includes the following five input patterns to support various applications.

Functions by Controller Type

Operation mode		Features
Program mode		You can use Super SEL, a language that allows for complex controls using simple commands, to perform linear and smooth interpolation operations, path operation ideal for coating and other applications, arch motion and palletizing operations, and more.
Product-Type Switchover Mode	Standard mode	The basic operation mode where all you need is to specify a position number and enter a start signal. Push-motion operation, and linear interpolation operation of two axes, is also supported.
	Type switching mode	When the system handles multiple loads of the same shape but slightly different hole positions, you can issue movement commands to the same position number by changing the type number.
	2-axis independent mode	When a 2-axis controller is used, the two axes can be operated independently using separate commands.
	Teaching mode	The slider (rod) can be moved using an external signal to register the stopped position as position data.
	DS-S-C1 compatible mode	If you have been using a DS-S-C1 controller, you can swap it with a PSEL controller without having to change the host programs. * Compatibility with actuators is not assured.

Explanation of I/O Functions

Program Mode

Pin No.	Category	Port No.	Program Mode	Function	Wiring diagram		
1A	Input	P24	24-V input	Connect 24 V.			
1B			016	Program No. 1 selection		Select the program number of the program you want to start. (Enter one of ports 016 to 022 by a BCD code.)	
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			The system is reset and enters the same state achieved after the power has been reconnected.
5B			000	Start			The program selected by one of port Nos. 016 to 022 is started.
6A			001	General-purpose input			The system waits for an external input in response to a program command.
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	Output	300	Alarm	This signal is output when an alarm has occurred. (Contact B)			
14A			301	Ready	This signal is output when the controller has started properly and become ready to operate.		
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		OV input	Connect OV.			

Positioner, Standard Mode

Pin No.	Category	Port No.	Standard Positioner Mode	Function	Wiring diagram		
1A	Input	P24	24-V input	Connect 24 V.			
1B			016	Position input 10		Use one of port Nos. 007 to 019 to specify the position number corresponding to the position to move the actuator to. The value can be specified by either a BCD or binary code.	
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 resets minor errors. (The power must be reconnected to reset major errors.)
5B			000	Start			The actuator starts moving to the position corresponding to the selected position number.
6A			001	Home return			The actuator returns home.
6B			002	Servo ON			The servo is turned ON/OFF.
7A			003	Push motion			The actuator performs push-motion operation.
7B			004	Pause			The actuator pauses when this signal turns OFF, and resumes the remaining operation when the signal turns ON.
8A			005	Cancel			The actuator stops when this signal turns OFF, and the remaining operation is cancelled.
8B			006	Interpolation setting			In the case of a 2-axis specification, the actuators move via linear interpolation while this signal is ON.
9A			007	Position input 1			Use one of port Nos. 007 to 019 to specify the position number corresponding to the position to move the actuator to. The value can be specified by either a BCD or binary code.
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	Output	300	Alarm	This signal is output when an alarm has occurred. (Contact B)			
14A			301	Ready	This signal is output when the controller has started properly and become ready to operate.		
14B			302	Positioning complete	This signal is output when movement to the specified position has completed.		
15A			303	Home return complete	This signal is output when home return has completed.		
15B			304	Servo ON output	This signal is output while the servo is ON.		
16A			305	Push-motion complete	This signal is output when push-motion operation has completed.		
16B			306	System battery error	This signal is output when the system battery voltage has dropped (to the warning level).		
17A	307	Absolute battery error	This signal is output when the absolute battery voltage has dropped (to the warning level).				
17B	N		OV input	Connect OV.			

2-axis Combinations RCP 2

2-axis Combinations RCS 2

3-axis Combinations RCP 2

3-axis Combinations RCS 2

Controllers

Model List

PSEL

SSEL

ROBONET

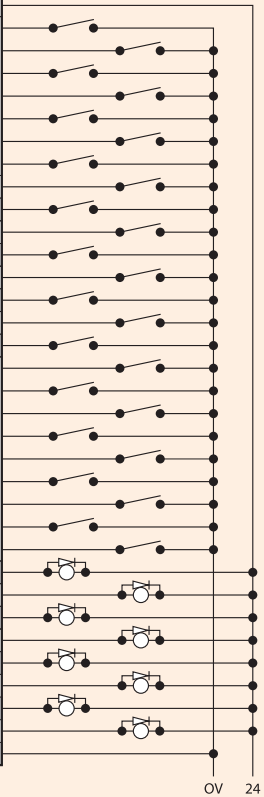
XSEL

Explanation of I/O Functions

Positioner, Product-Type Switchover Mode

Pin No.	Category	Port No.	Type-switching Positioner Mode	Function
1A	P24		24-V input	Connect 24V.
1B	Input	016	Position/type input 10	Use one of port Nos. 007 to 022 to specify the position number corresponding to the position to move the actuator to, and another to specify the type number. Assignment of position numbers and type numbers are set using parameters. The value can be specified by either a BCD or binary code.
2A		017	Position/type input 11	
2B		018	Position/type input 12	
3A		019	Position/type input 13	
3B		020	Position/type input 14	
4A		021	Position/type input 15	
4B		022	Position/type input 16	
5A		023	Error reset	This signal resets minor errors. (The power must be reconnected to reset major errors.)
5B		000	Start	The actuator starts moving to the position corresponding to the selected position number.
6A		001	Home return	The actuator returns home.
6B		002	Servo ON	The servo is turned ON/OFF.
7A		003	Push motion	The actuator performs push-motion operation.
7B		004	Pause	The actuator pauses when this signal turns OFF, and resumes the remaining operation when the signal turns ON.
8A		005	Cancel	The actuator stops when this signal turns OFF, and the remaining operation is cancelled.
8B		006	Interpolation setting	In the case of a 2-axis specification, the actuators move via linear interpolation while this signal is ON.
9A		007	Position/type input 1	Use one of port Nos. 007 to 022 to specify the position number corresponding to the position to move the actuator to, and another to specify the type number. Assignment of position numbers and type numbers are set using parameters. The value can be specified by either a BCD or binary code.
9B	008	Position/type input 2		
10A	009	Position/type input 3		
10B	010	Position/type input 4		
11A	011	Position/type input 5		
11B	012	Position/type input 6		
12A	013	Position/type input 7	This signal is output when an alarm has occurred. (Contact B)	
12B	014	Position/type input 8		
13A	015	Position/type input 9		
13B	300	Alarm		
14A	301	Ready		This signal is output when the controller has started properly and become ready to operate.
14B	302	Positioning complete		This signal is output when movement to the specified positioning has completed.
15A	Output	303	Home return complete	This signal is output when home return has completed.
15B		304	Servo ON output	This signal is output while the servo is ON.
16A		305	Push-motion complete	This signal is output when push-motion operation has completed.
16B		306	System battery error	This signal is output when the system battery voltage has dropped (to the warning level).
17A		307	Absolute battery error	This signal is output when the absolute battery voltage has dropped (to the warning level).
17B		N	OV input	Connect OV.

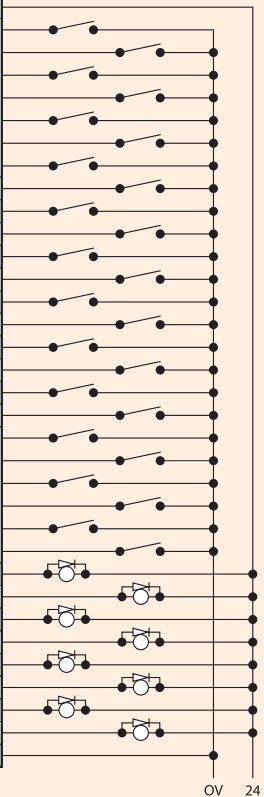
Wiring diagram



Positioner, 2-axes Independent Mode

Pin No.	Category	Port No.	Type-switching Positioner Mode	Function
1A	P24		24-V input	Connect 24V.
1B	Input	016	Position input 7	Use any of port Nos. 010 to 022 to specify the position number corresponding to the position to move the actuator to. Assignment of position numbers for axes 1 and 2 are set using parameters. The value can be specified by either a BCD or binary code.
2A		017	Position input 8	
2B		018	Position input 9	
3A		019	Position input 10	
3B		020	Position input 11	
4A		021	Position input 12	
4B		022	Position input 13	
5A		023	Error reset	This signal resets minor errors. (The power must be reconnected to reset major errors.)
5B		000	Start 1	Axis 1 starts moving to the selected position number.
6A		001	Home return 1	Axis 1 returns home.
6B		002	Servo ON 1	The servo of axis 1 is turned ON/OFF.
7A		003	Pause 1	Axis 1 pauses when this signal turns OFF, and resumes the remaining operation when the signal turns ON.
7B		004	Cancel 1	Movement of axis 1 is cancelled.
8A	005	Start 2	Axis 2 starts moving to the selected position number.	
8B	006	Home return 2	Axis 2 returns home.	
9A	007	Servo ON 2	The servo of axis 2 is turned ON/OFF.	
9B	008	Pause 2	Axis 2 pauses when this signal turns OFF, and resumes the remaining operation when the signal turns ON.	
10A	009	Cancel 2	Movement of axis 2 is cancelled.	
10B	010	Position input 1	Use any of port Nos. 010 to 022 to specify the position number corresponding to the position to move the actuator to. Assignment of position numbers for axes 1 and 2 are set using parameters. The value can be specified by either a BCD or binary code.	
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 when an alarm has occurred. (Contact B)
14A		301	Ready	This signal is output when the controller has started properly and become ready to operate.
14B		302	Positioning complete 1	This signal is output when movement of axis 1 to the specified position has completed.
15A		303	Home return complete 1	This signal is output when home return of axis 1 has completed.
15B		304	Servo ON output 1	This signal is output while the servo of axis 1 is ON.
16A		305	Positioning complete 2	This signal is output when movement of axis 2 to the specified position has completed.
16B		306	Home return complete 2	This signal is output when home return of axis 2 has completed.
17A	307	Servo ON output 2	This signal is output while the servo of axis 2 is ON.	
17B	N	OV input	Connect OV.	

Wiring diagram



2-axis
Combinations
RCP2

2-axis
Combinations
RCS2

3-axis
Combinations
RCP2

3-axis
Combinations
RCS2

Controllers

Model
List

PSEL

SSEL

ROBONET

XSEL

Explanation of I/O Functions

Positioner, Teaching Mode

Pin No.	Category	Port No.	Type-switching Positioner Mode	Function	Wiring diagram	
1A	Input	P24	24-V input	Connect 24 V.		
1B			016	Axis 1 JOG -		Axis 1 moves in the negative direction while this signal is input.
2A			017	Axis 2 JOG +		Axis 2 moves in the positive direction while this signal is input.
2B			018	Axis 2 JOG -		Axis 2 moves in the negative direction while this signal is input.
3A			019	Inching specification (0.01 mm)		Specify the travel over which to move the actuator by inching. (The travel is the sum of values specified by port Nos. 019 to 022.)
3B			020	Inching specification (0.1 mm)		
4A			021	Inching specification (0.5 mm)		
4B			022	Inching specification (1 mm)		
5A			023	Error reset		This signal resets minor errors. (The power must be reconnected to reset major errors.)
5B			000	Start		The actuator starts moving to the position corresponding to the selected position number.
6A			001	Servo ON		The servo is turned ON/OFF.
6B			002	Pause		The actuator pauses when this signal turns OFF, and resumes the remaining operation when the signal turns ON.
7A			003	Position input 1		Use one of port Nos. 003 to 013 to specify the position number corresponding to the position to move the actuator to, and another to specify the position number under which to input the current position. If port No. 14 for teaching mode specification is ON, the current value is written to the specified position number when port No. 000 for start signal turns ON.
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 +	Axis 1 moves in the positive direction while this signal is input.			
13B	300	Alarm	This signal is output when an alarm has occurred. (Contact B)			
14A	301	Ready	This signal is output when the controller has started properly and become ready to operate.			
14B	302	Positioning complete	This signal is output when movement to the specified position has completed.			
15A	303	Home return complete	This signal is output when home return has completed.			
15B	304	Servo ON output	This signal is output while the servo is ON.			
16A	305	-	-			
16B	306	System battery error	This signal is output when the system battery voltage has dropped (to the warning level).			
17A	307	Absolute battery error	This signal is output when the absolute battery voltage has dropped (to the warning level).			
17B	N		OV input	Connect OV.		

Positioner, DS-S-C1 Compatible Mode

Pin No.	Category	Port No.	Standard Positioner Mode	Function	Wiring diagram	
1A	Input	P24	24-V input	Connect 24 V.		
1B			016	Position No. 1000		(Same with port Nos. 004 to 015.)
2A			017	Position No. 2000		-
2B			018	Position No. 4000		-
3A			019	Position No. 8000		-
3B			020	Position No. 10000		-
4A			021	Position No. 20000		-
4B			022	NC (*1)		-
5A			023	CPU reset		The system is reset and enters the same state achieved after the power has been reconnected.
5B			000	Start		The actuator starts moving to the position corresponding to the selected position number.
6A			001	Hold (pause)		The actuator pauses when this signal turns ON, and resumes the remaining operation when the signal turns OFF.
6B			002	Cancel		The actuator stops when this signal turns ON, and the remaining operation is cancelled.
7A			003	Interpolation setting		In the case of a 2-axis specification, the actuators move via linear interpolation while this signal is ON.
7B			004	Position No. 1		Use one of port Nos. 004 to 016 to specify the position number corresponding to the position to move the actuator to. The value is specified by a BCD code.
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	300	Alarm	This signal is output when an alarm has occurred. (Contact A)			
14A	301	Ready	This signal is output when the controller has started properly and become ready to operate.			
14B	302	Positioning complete	This signal is output when movement to the specified position has completed.			
15A	303	-	-			
15B	304	-	-			
16A	305	-	-			
16B	306	System battery error	This signal is output when the system battery voltage has dropped (to the warning level).			
17A	307	Absolute battery error	This signal is output when the absolute battery voltage has dropped (to the warning level).			
17B	N		OV input	Connect OV.		

(*1) This input must be turned OFF. Make sure the signal is not connected.

2-axis Combinations RCP 2

2-axis Combinations RCS 2

3-axis Combinations RCP 2

3-axis Combinations RCS 2

Controllers

Model List

PSEL

SSEL

ROBONET

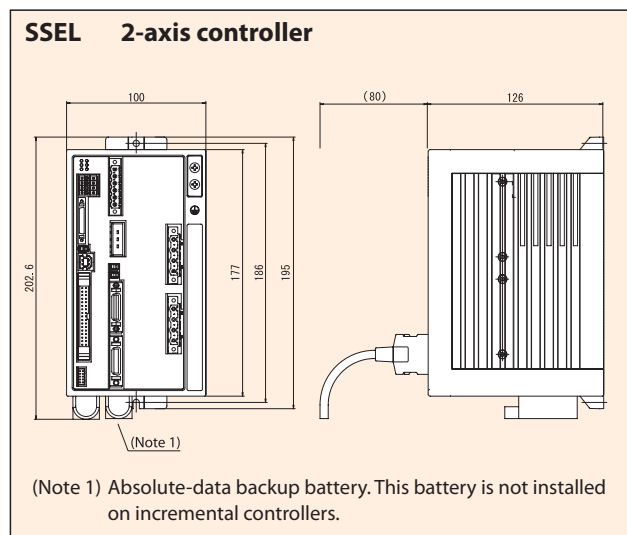
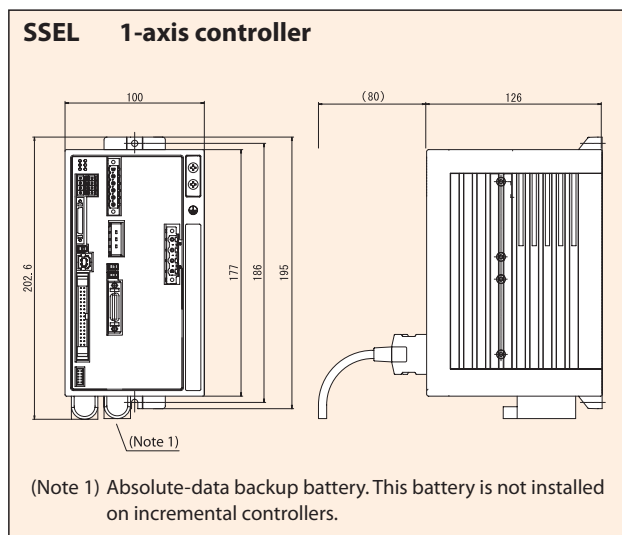
XSEL

Specification Table

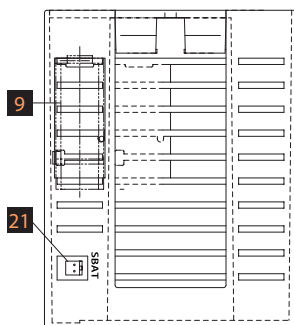
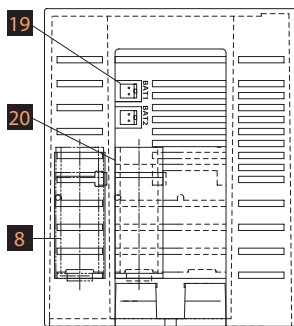
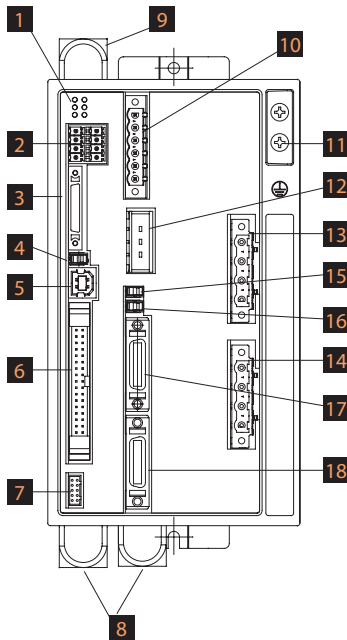
	Item	Specification
Base specifications	Connected actuator	RCS2-series actuator/single-axis robot/linear servo actuator
	Input power supply	Single-phase 100 VAC ±10% Single-phase 200 VAC ±10%
	Power-supply capacity	Max. 1660 VA (400 W, 2-axis operation)
	Dielectric strength	500 VDC, 10 MΩ or more
	Withstand voltage	500 VAC, 1 minute
	Rush current	Max. 30 A
	Vibration resistance	XYZ directions: 10 to 57 Hz: (Single amplitude) 0.035 mm (continuous), 0.0 75 mm (intermittent) 58 to 150 Hz: 4.9 m/sec ² (continuous), 9.8 m/sec ² (intermittent)
Control specifications	Number of controlled axes	1/2
	Maximum total output of connected axes	400 W 800 W
	Position detection method	Incremental encoder/Absolute encoder
	Speed setting	1 mm/sec ~ (The maximum limit varies depending on the actuator.)
	Acceleration setting	0.01 G ~ (The maximum limit varies depending on the actuator.)
Program	Operation method	Program operation/positioner operation (switchable)
	Program language	Super SEL
	Number of programs	128 (*1)
	Number of program steps	9999 (*1)
	Number of multi-tasking programs	8
	Number of positioning points	20000 (*1)
	Data storage device	Flash ROM (An optional system-memory backup battery can be added.)
	Data input method	Teaching pendant or PC software
	Number of I/O points	24 input points/8 output points (NPN/PNP selectable)
	I/O power supply	24 VDC ±10%, externally supplied
Communication related	PIO cable	CB-DS-PIO□□□ (supplied with the controller)
	Serial communication function	RS232C (half-pitch connector)/USB connector
	Field network cable	(To be supported in the future)
	Motor cable	CB-RCC2-MA□□□ (max. 20 m)
	Encoder cable	CB-RCS2-PA□□□ (max. 20 m)
General specifications	Protective functions	Motor overcurrent, motor/driver temperature check, overload check, encoder open check, soft limit overtravel, system battery error, etc.
	Surrounding air temperature/humidity	0 to 40°C, 10 to 95% (non-condensing)
	Surrounding ambience	Free from corrosive gases or significant dust.
	Protection degree	IP20
	Weight	1.4 kg
	External dimensions	100 mm (W) x 202.6 mm (H) x 126 mm (D)

(*1) These specifications are different for PNP controllers. Contact IAI for details.

External Dimensions



Name of Each Part



1 Status indicator LEDs

These LEDs indicate the operating status of the controller. What is indicated by each LED is explained below:

PWR: The power is currently input to the controller.

RDY: The controller is ready to perform program operation.

ALM: The controller is abnormal.

EMG: An emergency stop has been actuated and the drive source is being cut off.

SV1: The servo of actuator axis 1 is turned ON.

SV2: The servo of actuator axis 2 is turned ON.

2 System I/O connector

This connector connects the emergency stop input, enable input, brake power input, etc.

3 Teaching pendant connector

This half-pitch, IO26-pin connector is used to connect a teaching pendant when the operation mode is MANU. You need a dedicated conversion cable to connect to a conventional D-sub, 25-pin connector.

4 Mode switch

This switch is used to indicate the operation mode of the controller. The left position indicates the MANU (manual operation) mode, while the right position indicates the AUTO (auto operation) mode. Teaching operation can only be performed in the MANU mode, and auto operation using external IOs cannot be performed in the MANU mode.

5 USB connector

This connector is used to make USB connection with a PC. When the USB connector is in use, the TP connector cannot be used because communication through the TP connector is cut off.

6 IO connector

A connector for interface IOs. If a DIO (24IN/8OUT) interface is used, this connector accepts a 34-pin flat cable connector. The I/O power is also supplied to the controller through this connector (pins 1 and 34).

7 Panel unit connector

This connector is used to connect the panel unit (optional) for displaying the controller status and error numbers.

8 Absolute-data backup battery

This battery is used to retain position data even after the power is cut off when an absolute axis is operated.

9 System-memory backup battery (optional)

This connector is used to connect the battery needed to retain the various data stored in the built-in SRAM of the controller even after the power is cut off. The system-memory backup battery is an optional. Specify the battery only if necessary.

10 Power-supply connector

A connector for AC power supply. The control power and motor power are input separately.

11 Grounding screw

A screw for protective grounding. Be sure to connect this screw to ground.

12 External regenerative resistor connector

This connector is used to connect an additional regenerative resistor when the built-in regenerative resistor is not enough due to high acceleration, high load, etc. Whether or not an external regenerative resistor is needed depends on the specifics of the application, such as the axis configuration.

13 Axis 1 motor connector

Connect the motor cable for actuator axis 1 here.

14 Axis 2 motor connector

Connect the motor cable for actuator axis 2 here.

15 Axis 1 brake switch

This switch is used to release the axis brake. When the switch is set to the left (RLS) position, the brake is forcibly released. When the switch is set to the right (NOM) position, the brake is controlled automatically by the controller.

16 Axis 2 brake switch

This switch is used to release the axis brake. When the switch is set to the left (RLS) position, the brake is forcibly released. When the switch is set to the right (NOM) position, the brake is controlled automatically by the controller.

17 Axis 1 encoder connector

Connect the encoder cable for actuator axis 1 here.

18 Axis 2 encoder connector

Connect the encoder cable for actuator axis 2 here.

19 Axis 1 absolute battery connector

This connector is used to connect the absolute-data backup battery for axis 1 when the actuator is equipped with an absolute encoder.

20 Axis 2 absolute battery connector

This connector is used to connect the absolute-data backup battery for axis 2 when the actuator is equipped with an absolute encoder.

21 System-memory backup battery connector

This connector is used to connect the system-memory backup battery.

2-axis Combinations RCP 2

2-axis Combinations RCS 2

3-axis Combinations RCP 2

3-axis Combinations RCS 2

Controllers

Model List

PSEL

SSEL

ROBONET

XSEL

Options

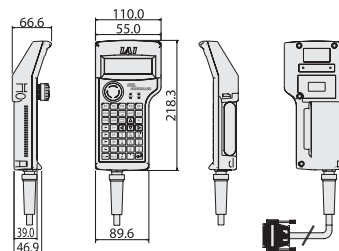
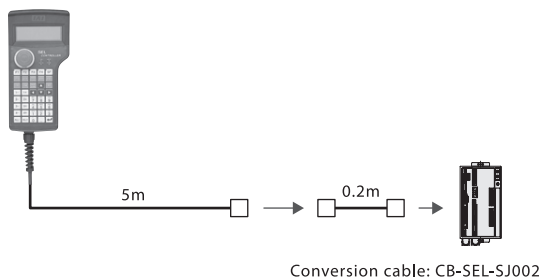
Teaching Pendant

Features A teaching device offering functions for program/position input, test operation, monitoring, and more.

Model/Price

Model	Description
SEL-T-J	Standard type with connector conversion cable
SEL-TD-J	Deadman switch type with connector conversion cable

Configuration



Specification

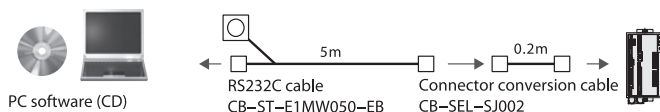
Item	SEL-T-J	SEL-TD-J
3-position enable switch	Not equipped	Equipped
ANSI/UL standard	Not compliant	Compliant
CE mark	Compliant	
Display	20 characters x 4 lines	
Surrounding air temperature/humidity	0-40°C 10-90%RH (non-condensing)	
Protection structure	IP54	
Weight	Approx. 0.4 kg (excluding cables)	

PC Software (Windows only)

Features A software program that assists the initial startup of your system, offering functions for program/position input, test operation, monitoring, and more. The enhanced debugging functions help reduce the startup time.

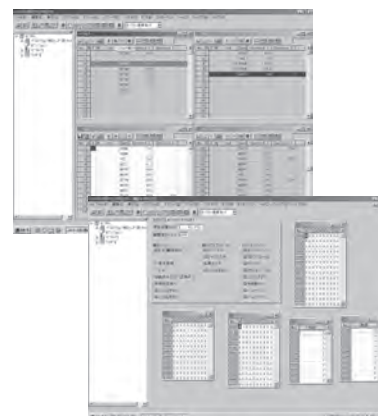
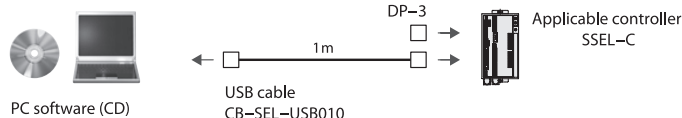
Model **IA-101-X-MW-J** (with RS232C cable + connector conversion cable)
IA-101-X-MW (with RS232C cable)

Configuration



Model **IA-101-X-USB** (with USB cable)

Configuration



Note
The SSEL controller only supports version 6.0.0.0 or later.

Regenerative Resistor Unit

Features This unit converts to heat the regenerative current produced when the motor decelerates. Use the table on the right to check the total wattage of the actuators to be operated, and provide a regenerative resistor or resistors if necessary.

Item **REU-2** (for SCON/SSEL)

Specification

Weight	0.9kg
Built-in regenerative resistor	220Ω 80W
Unit-controller connection cable (supplied)	CB-SC-REU010 (for SSEL)

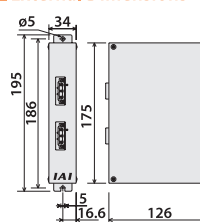
Guide for Determining Necessary Number of Regenerative Resistor Units

	Horizontal	Vertical
0 unit	~800W	~200W
1 unit		~600W
2 unit		~800W

* Depending on the operating conditions, the required number of regenerative resistor unit(s) may be more than what is specified above.

* If two regeneration units are required, order one REU-2 and one REU-1 (refer to P. 132).

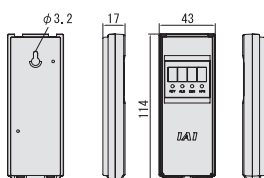
External Dimensions



Panel Unit

Features A display for checking controller error codes and the program number of the current program.

Model **PU-1** (cable length: 3 m)



Absolute-data Backup Battery

Features An absolute-data backup battery used when an absolute actuator is operated. The battery is the same as the system-memory backup battery.

Model **AB-5**



System memory backup battery

Features This battery is needed when global flags, etc., are used in the program and you want the data to be retained even after the power is turned off.

Model **AB-5-CS** (with case)
AB-5 (battery)



Options

Dummy plug

Features This plug is connected to the teaching pendant to cut off the enable circuit when connecting the SSEL controller to a PC via a USB cable. (This plug is supplied with the PC software IA-101-X-USB.)

Model DP-3



USB cable

Features This cable is used to connect a controller with USB port to a PC. To connect a controller without USB port (XSEL) to a PC, connect the controller's 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: 1 m)



Connector conversion cable

Features This conversion cable is used to connect the D-sub, 25-pin connector for teaching pendant or PC to the teaching connector (half-pitch) on the SSEL controller.

Model CB-SEL-SJ002 (cable length: 0.2 m)



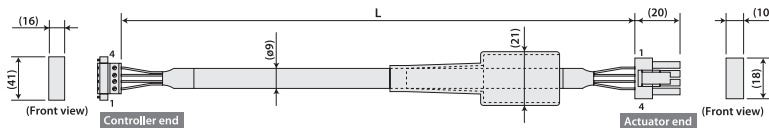
Replacement Parts

If you must order a replacement cable, etc., after the initial purchase of your product, specify the correct model by referring to the information below.

Motor Cable/Robot Motor Cable

Item **CB-RCC-MA** [] [] [] / **CB-RCC-MA** [] [] [] -RB

* [] [] indicates the cable length (L). A desired length up to 30 m can be specified. Example) 080 = 8 m



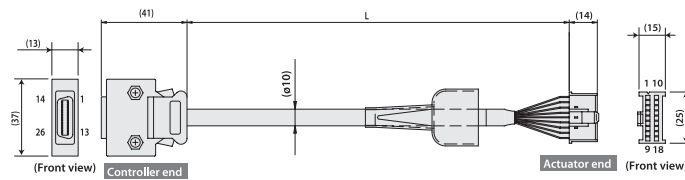
Wire	Color	Signal	No.
Green	PE	1	
Red	U	2	
White	V	3	
Black	W	4	

No.	Signal	Color	Wire
1	U	Red	0.75sq
2	V	White	(Crimped)
3	W	Black	
4	PE	Green	

Encoder Cable/Robot Encoder Cable

Item **CB-RCS2-PA** [] [] [] / **CB-X3-PA** [] [] []

* [] [] indicates the cable length (L). A desired length up to 30 m can be specified. Example) 080 = 8 m



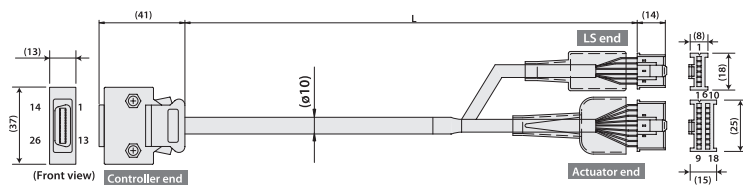
Wire	Color	Signal	No.
---	---	---	10
---	---	---	11
---	---	---	12
Gray/White	OV	13	
Brown/Black	LS	14	
---	---	---	15
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---	---	---	100

No.	Signal	Color	Wire
1	U	Red	AWG26 (Crimped)
2	V	White	
3	W	Black	
4	PE	Green	
5	OT	Brown/Red	
6	Z	White/Purple	
7	LS+	Brown/White	
8	---	---	---
9	FG	Ground	
10	SD	Blue	
11	SP	Orange	
12	BAT+	Black	
13	BAT-	Yellow	
14	VCC	Green	
15	GND	Brown	
16	LS-	Gray/Black	
17	BK	Gray	
18	BK+	Red	

Encoder Cable/Robot Encoder Cable for RCS2-RT6/RT6R/RT7R

Item **CB-RCS2-PLA** [] [] [] / **CB-X2-PLA** [] [] []

* [] [] indicates the cable length (L). A desired length up to 30 m can be specified. Example) 080 = 8 m



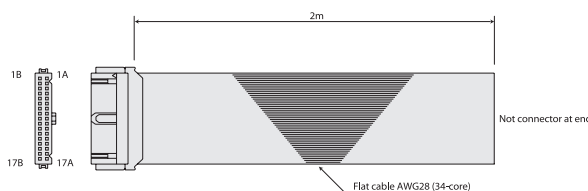
Wire	Color	Signal	No.
---	---	---	10
---	---	---	11
White/Orange	E24V	12	
White/Green	OV	13	
Brown/Black	LS	14	
Brown/Red	CLEP	25	
Brown/Black	OT	24	
Brown/Black	OV	23	
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---	---	---	100

No.	Signal	Color	Wire
1	U	Red	AWG26 (Crimped)
2	V	White	
3	W	Black	
4	PE	Green	
5	OT	Brown/Red	
6	Z	White/Purple	
7	LS+	Brown/White	
8	---	---	---
9	FG	Ground	
10	SD	Blue	
11	SP	Orange	
12	BAT+	Black	
13	BAT-	Yellow	
14	VCC	Green	
15	GND	Brown	
16	LS-	Gray/Black	
17	BK	Gray	
18	BK+	Red	

I/O Flat Cable

Item **CB-DS-PIO** [] [] []

* [] [] indicates the cable length (L). A desired length up to 10 m can be specified. Example) 080 = 8 m



No.	Color	Wire	No.	Color	Wire
1A	Brown 1	Flat cable, pressure-welded	9B	Gray 2	Flat cable, pressure-welded
1B	Red 1		10A	White 2	
2A	Orange 1		10B	Black 2	
2B	Yellow 1		11A	Brown-3	
3A	Green 1		11B	Red 3	
3B	Blue 1		12A	Orange 3	
4A	Purple 1		12B	Yellow 3	
4B	Gray 1		13A	Green 3	
5A	White 1		13B	Blue 3	
5B	Black 1	14A	Purple 3		
6A	Brown-2	14B	Gray 3		
6B	Red 2	15A	White 3		
7A	Orange 2	15B	Black 3		
7B	Yellow 2	16A	Brown-4		
8A	Green 2	16B	Red 4		
8B	Blue 2	17A	Orange 4		
9A	Purple 2	17B	Yellow 4		

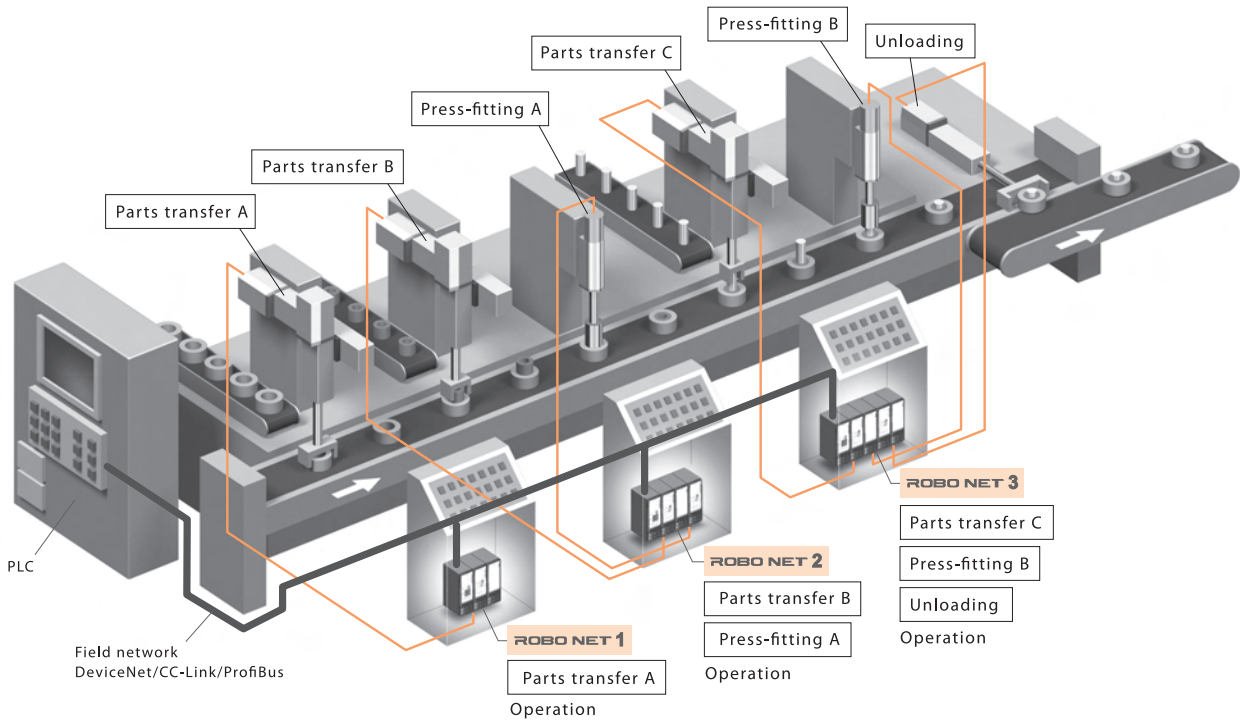
ROBONET



Dedicated field network controller

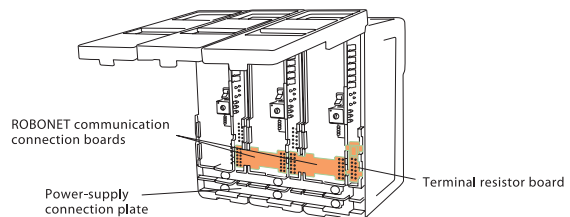
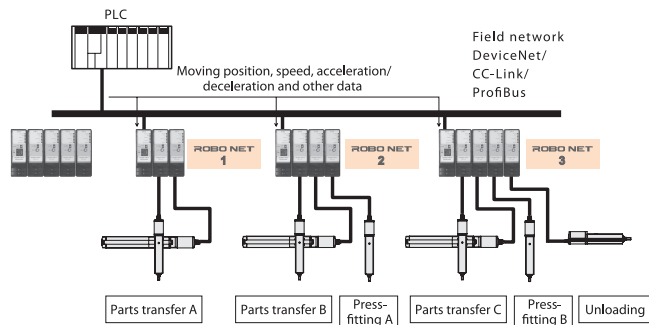
The ROBONET is a new type of controller unit capable of operating ROBO Cylinders at will via a field network. Adopting the wire-saving design, compact size and DIN-rail installation feature, the ROBONET lets you save the hassle of wiring and installation considerably compared to existing controllers.

Standard type



1 Wire-saving

Instead of connecting the I/O cables one by one to the PLC terminal, all I/Os can be connected via a field network. This means all you need to complete the wiring is to connect one dedicated cable. Also, units can be linked simply by interconnecting the unit connection boards, which significantly reduces the hassle of controller wiring.



(Linking units inside ROBONET)

2 Operation by Direct Numerical Specification of Moving Position, Speed, Acceleration/Deceleration, Etc.

In addition to using the traditional method of entering moving positions and speeds under position numbers and then specifying desired position numbers eternally, you can also send moving positions (coordinates), speeds, accelerations/decelerations, etc., as numeric data to operate the actuator.

This method is effective in situations where the moving position changes for each load or you want to move the load to a desired position.

	ROBONET controller	Standard controller (ACON/PCON)
Movement by position specification	○	○
Movement by direct numerical specification	○	△
Speed/acceleration specification	○	(Not supported in the PIO mode) (Supported in the serial communication mode.)
Current value output	○	

* The ROBONET operates via a field network, while the standard controller operates using PIOs.

3 Ultra-compact

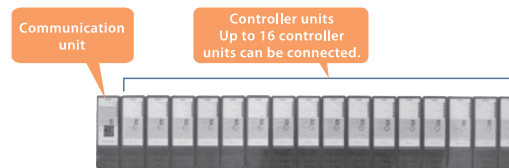
Each unit adopts an ultra-compact size of just 34 mm (w) x 100 mm (h) x 73 mm (d).

Since there is no base unit and the controllers are linked using connectors, the installation space is minimized even when many units must be connected.



4 Up to 16 Controllers Can Be Operated

Up to 16 controller units can be connected to one communication unit (Gateway R unit). You can connect a desired combination of RACON units (RCA controllers) and RPCON units (RCP2 controllers).



5 Simple Absolute Specification Not Requiring Home Return

The simple absolute R unit lets you operate incremental axes without returning the axes to their home first. If a simple absolute R unit is installed on an RACON unit (RCA controller) or RPCON unit (RCP2 controller), the actuator's encoder data will be backed up even after the power is cut off.



6 Installation to DIN Rail

Since the ROBONET adopts a DIN-rail installation feature, each controller can be affixed or removed with a single touch.

2-axis
Combinations
RCP 2

2-axis
Combinations
RCS 2

3-axis
Combinations
RCP 2

3-axis
Combinations
RCS 2

Controllers

Model
List

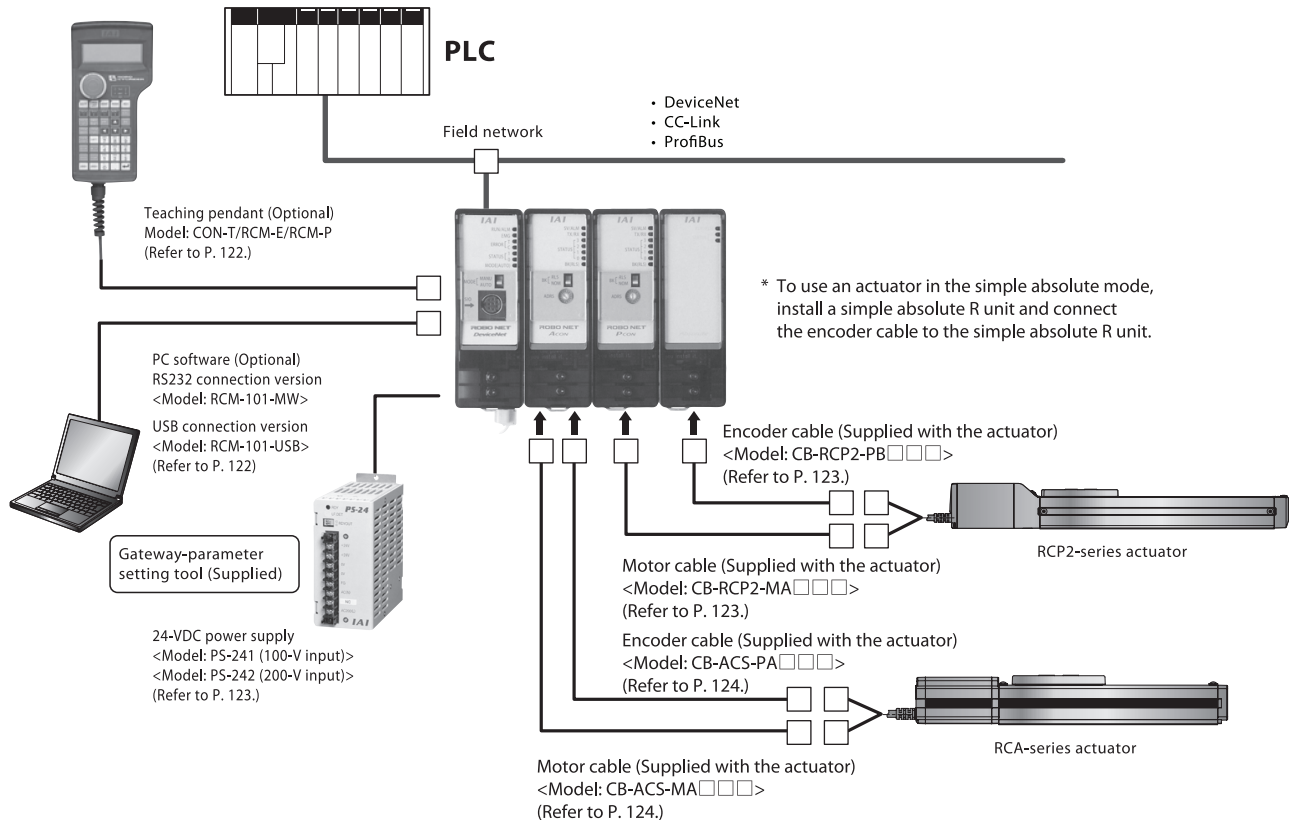
PSEL

SSEL

ROBONET

XSEL

System Configuration



ROBONET Expansion unit

The ROBONET expansion unit (optional) lets you fold the unit link using a cable when many ROBONET units have been connected and the system has become too wide. You can also connect an SCON or other standalone controller to the network via the ROBONET.

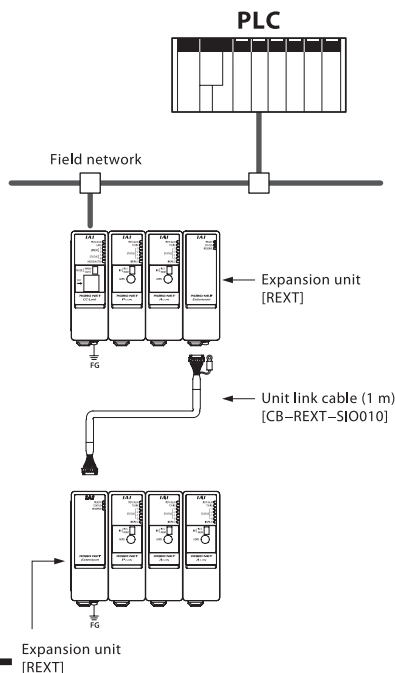
[ROBONET expansion set A]

(Unit-folding set)

Model: REXT-SIO

(Items included in the set)

- ROBONET expansion unit (model: REXT) x 2
- Unit link cable x 1
- Model: CB-REXT-SIO010



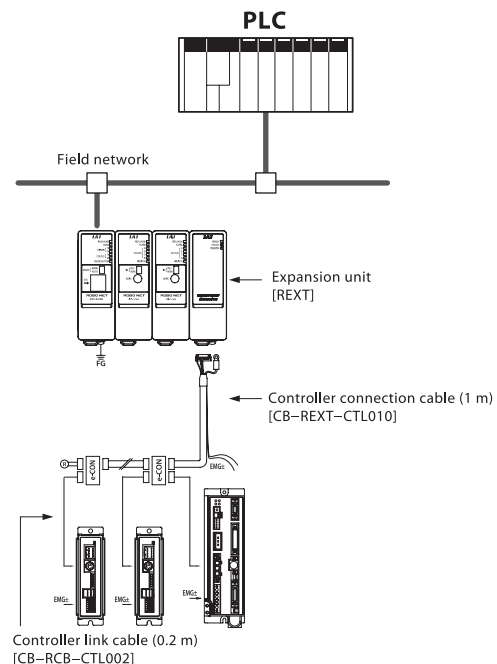
[ROBONET expansion set B]

(Controller connection set)

Model: REXT-CTL

(Items included in the set)

- ROBONET expansion unit (model: REXT) x 1
- Controller connection cable x 1
- Model: CB-REXT-CTL010



Component Units

You can order the necessary ROBONET components individually and combine them at your will.

If a need arises to add an actuator later, you can extend the system simply by adding an RACON/RPCON unit.



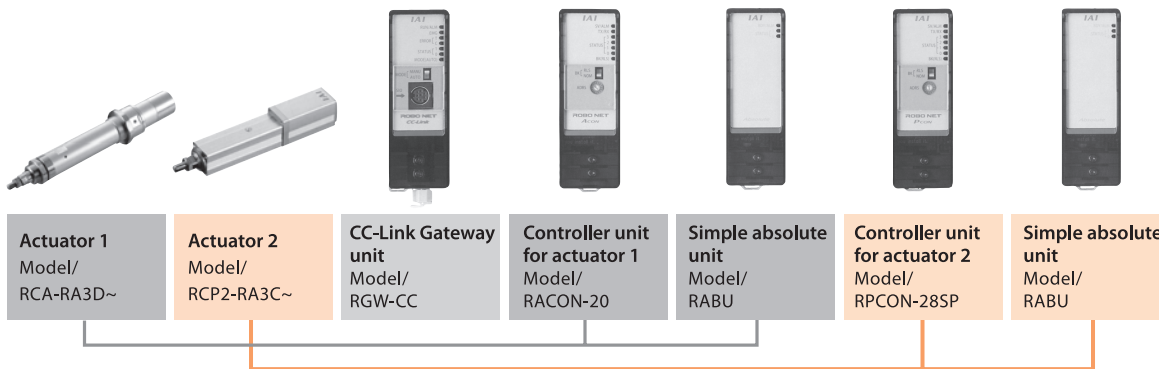
Gateway unit RACON unit RPCON unit Simple absolute R unit Expansion unit

Unit name	Description	Reference page
Gateway unit	A unit for making connection to a field network. One of four types (DeviceNet, CC-Link, Profibus and SIO) can be selected. *This unit is required in every ROBONET configuration.	P118 P119
RACON unit	A controller unit for operating an RCA actuator. (One RACON is required for one actuator axis.) Although the standard specification is incremental, you can also combine a simple absolute R unit to use the RACON unit as a simple absolute controller.	P120
RPCON unit	A controller unit for operating an RCP2 actuator. (One RPCON is required for one actuator axis.) Although the standard specification is incremental, you can also combine a simple absolute R unit to use the RPCON unit as a simple absolute controller.	P120
Simple absolute R unit	A backup battery unit for retaining the encoder data of the actuator after the power is cut off.	P121
Expansion unit	A unit for enabling operation via a network by folding the ROBONET link or connecting a standalone controller (SCON/PCON-CF) to the ROBONET.	P121

How to Order/Notes

You can individually order the necessary units comprising your ROBONET system. The delivered units are assembled by the customer. This feature lets you add units to the system or change existing units at will.

<Example of order> The following two axes are operated via CC-Link. The models specified below assume that the system is intended as an absolute system.



- Operation Manual** The operation manual that comes with each ROBONET product is provided in a CD-ROM, not on paper (as a paper manual). If you wish to have a paper operation manual, please specify so in your order. (Both the CD-ROM and paper manuals are free.)
 You can also download the operation manual from our website.
- Gateway-parameter Setting Tool** To connect the ROBONET to a field network, you need the gateway-parameter setting tool to set up the network. This tool can be obtained free of charge through the following methods:
 - (1) Download the tool from IAI's website.
 - (2) Purchase each PC software, and the tool will come with the PC software (included in the CD).
 To use the gateway-parameter setting tool, you need a cable to connect the PC and controller (PC software cable (model: CB-RCA-SIO050+RCB-CV-MW)). If you don't have any PC software, purchase this cable separately.
- PC Software, Teaching Pendant** To input position data, etc., to a ROBONET controller unit (RACON/RPCON), you need the PC software or teaching pendant.
 The ROBONET supports the PC software (model: RCM-101-MW/USB) of Version 6.04 or later. As for teaching pendants, the ROBONET supports the RCM-T of Version 2.06 or later and RCM-E/RCM-P of Version 2.08 or later.
 The ROBONET can be used with any version of the CON-T.
 If the version of your current PC software or teaching pendant is old, contact your IAI representative.

2-axis
Combinations
RCP 2

2-axis
Combinations
RCS 2

3-axis
Combinations
RCP 2

3-axis
Combinations
RCS 2

Controllers

Model List

PSEL

SSEL

ROBONET

XSEL

Explanation of Operation Modes

The ROBONET operates by receiving instructions from a PLC via a field network.

The ROBONET can be operated in any of the three modes specified below. Use a desired mode according to how your system should be operated and controlled.

	Name	Description
1	Positioner mode	In this mode, the actuator is operated by specifying position numbers. The position data, speed, acceleration/ deceleration, etc., are input to the position table beforehand. Up to 768 positions can be registered.
2	Simple direct mode	In this mode, only the position data is specified directly by a value, and the remaining items such as speed, acceleration/deceleration, positioning band and current-limiting value during push-motion operation are specified by a position number. Up to 768 positions can be registered.
3	Direct numerical specification mode	In this mode, the actuator is operated by specifying the position data, speed, acceleration/deceleration, positioning band and current-limiting value during push-motion operation directly by values. Since positions are specified numerically, there is no limit to the number of positioning points that can be registered.

List of Functions by Operation Mode

	Positioner mode	Simple direct mode	Direct numerical specification mode
Number of registerable positions	768	768	—
Movement by position number specification	○	×	×
Direct specification of position data	×	○	○
Direct specification of speed and acceleration/deceleration	×	×	○
Direct specification of positioning band	×	×	○
Push-motion operation	○	○	○
Monitoring of completed position number	○	○	×
Monitoring of zone output	○	○	○
Monitoring of position zone output	○	○	×
Teaching function	○	×	×
Jogging operation	○	○	○
Inching operation	○	○	○
Monitoring of various status signals (*)	○	○	○
Monitoring of current position (*)	○	○	○
Monitoring of alarm codes (*)	○	○	○
Monitoring of speed/current (*)	×	×	○
Maximum specifiable value of position data	9999.99mm	9999.99mm	9999.99mm
Number of connectable axes	16	16	8

* The various status signals, current position, alarm codes and speed/current can be monitored by accessing each address of the Gateway R unit from the PLC.

Gateway R Unit of ProfiBus Specification



This communication unit is used to operate the ROBONET via ProfiBus.

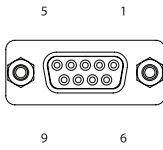
Model **RGW-PR**

Specification

Item	Specification	Item	Specification		
Power supply	DC24V ±10%	Environment conditions	Surrounding air temperature		
Current consumption	Max. 600 mA		Surrounding humidity		
ProfiBus specifications	Communication protocol		Operating ambience	Free from corrosive gases, flammable gas, oil mist or powder dust.	
	Baud rate	9.6kbps~12Mbps	Protection degree	IP20	
	Communication cable length	9.6kbps	1500m	Weight	140g
		500kbps	400m	Accessories	Terminal resistor board (model:TN-1) Network connector/emergency stop connector
		1.5Mbps	200m		
3Mbps		200m			
12Mbps	100m				

Network Connector

Gateway connector:
D-sub, 9-pin connector,
socket end



Pin No.	Signal name	Explanation	Pin No.	Signal name	Explanation
3	B-Line	Communication line B (RS485)	6	+5V	+5-V output (insulated)
4	RTS	Request to send	8	A-Line	Communication line A (RS485)
5	GND	Signal ground (insulated)	Housing	Shield	Cable shield. Connected to the enclosure.

* The mating connector (D-sub, 9-pin connector) is not supplied.
* Pins 1, 2, 7 and 9 are not connected.

Gateway R Unit of SIO Specification



This communication unit is used to operate the ROBONET in serial communication from an XSEL controller (*1) or Modbus communication unit.

Model **RGW-SIO**

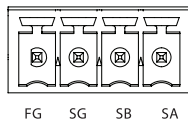
Specification

Item	Specification	Item	Specification		
SIO specifications	Power supply	DC24V ±10%	Environment conditions	Surrounding air temperature	0~40°C
	Current consumption	Max. 600 mA		Surrounding humidity	95% RH or below (non-condensing)
	Communication format	Conforming to RS485 (Modbus protocol), 1:1 communication connection		Operating ambience	Free from corrosive gases, flammable gas, oil mist or powder dust.
	Communication method	Asynchronous, half-duplex	Protection degree	IP20	
	Baud rate	Max. 230.4 kbps	Weight	140g	
	Cable length	100 m or less	Accessories	Terminal resistor board (model:TN-1) Network connector/emergency stop connector	
Recommended cable	Twisted paired cable (shielded) x 2				

Network Connector

Gateway connector:
MC1.5/4-G-3.5
(by Phoenix Contact)

Cable-end connector
MC1.5/4-ST-3.5
(by Phoenix Contact)
= Standard accessory



Signal name	Explanation
SA	Communication line A (+) Conforming to RS485 With a built-in terminal resistor (220Ω)
SB	Communication line A (-)
SG	Signal ground
FG	Frame ground. Connected to the enclosure.

Applicable Wire for Cable-end Connector

Item	Description
Applicable wire size	Stranded wires: AWG28-16 (0.14~1.5mm ²)
Stripped length	7mm

RACON Unit: RCA-series Controller



This controller unit is used to operate an RCA actuator in a ROBONET system.

Model RACON-[1]-[2]

* Specify the motor wattage in [1] in the model name. (Refer to the table below.)
In [2], specify "ABU" only if you are using the simple absolute unit. (If the simple absolute unit is not used, leave this space blank.)

Model	Applicable actuators
RACON-20-[2]	RCA-SA4□ / SS4□ / SA5□ / SS5□ / RA4□-20 / RG□4□-20/ A4R / A5R RCACR-SA4C / SA5□ RCAW-RA4□-20
RACON-20S-[2]	RCA-RA3□ / RG□3 RCAW-RA3□
RACON-30-[2]	RCA-SA6□ / SS6□ / RA4□-30 / RG□4□-30 / A6R RCACR-SA6□ RCAW-RA4□-30

Specification

Item	Specification	Item	Specification		
General specifications	Power supply	DC24V ±10%	Environment conditions	Surrounding air temperature	0~50°C
	Power-supply capacity	Max. 5.1 A (The specific capacity varies depending on the actuator.)		Surrounding humidity	95% RH or below (non-condensing)
	Operated actuator	RCA series		Operating ambience	Free from corrosive gases, flammable gas, oil mist or powder dust.
	Number of positioning points	768		Protection degree	IP20
	Backup memory	EEPROM	Weight	200g	
	Position detection method	Incremental encoder	Accessories	ROBONET communication connection board (model: JB-1), power-supply connection plate (model: PP-1)	
	Forced release of electromagnetic brake	Brake release switch			
	Motor cable	Model CB-ACS-MA□□□			
Encoder cable	Model CB-ACS-PA□□□				

RPCON Unit: RCP2-series Controller



This controller unit is used to operate an RCP2 actuator in a ROBONET system.

Model RACON-[1]-[2]

* Specify the motor type in [1] in the model name. (Refer to the table below.)
In [2], specify "ABU" only if you are using the simple absolute unit. (If the simple absolute unit is not used, leave this space blank.)

* The simple absolute unit cannot be used with the RCP2-RA2C, GRS, RTB and RTC.

Model	Applicable actuators
RPCON-20P	RCP2-RA2C / GRS
RPCON-28P-[2]	RCP2-GRM / GR3LS / GR3SS / RTB / RTC
RPCON-28SP-[2]	RCP2-RA3C / RGD3C
RPCON-42P-[2]	RCP2-SA5□ / SA6□ / SS7□ / BA6□ / BA7□ / RA4C / RG□4C / GR3LM / GR3SM RCP2CR-SA5C / SA6C / SS7C RCP2W-RA4C
RPCON-56P-[2]	RCP2-SA7□ / SS8□ / RA6C / RG□6C / RCP2CR-SA7C / SS8C RCP2W-RA6C

* RCP2 actuators of old types are also supported. (Contact IAI for details.)

Specification

Item	Specification	Item	Specification		
General specifications	Power supply	DC24V ±10%	Environment conditions	Surrounding air temperature	0~50°C
	Power-supply capacity	Max. 2 A		Surrounding humidity	95% RH or below (non-condensing)
	Operated actuator	RCP2 series		Operating ambience	Free from corrosive gases, flammable gas, oil mist or powder dust.
	Number of positioning points	768		Protection degree	IP20
	Backup memory	EEPROM	Weight	200g	
	Position detection method	Incremental encoder	Accessories	ROBONET communication connection board (model: JB-1), power-supply connection plate (model: PP-1)	
	Forced release of electromagnetic brake	Brake release switch			
	Motor cable	Model CB-RCP2-MA□□□			
Encoder cable	Model CB-RCP2-PB□□□				

Explanation of Component Units (Simple Absolute R Unit/Expansion Unit)

Simple absolute R unit



When this data-backup battery unit is connected to an RACON or RPCON (*1), an incremental actuator can be used as an absolute actuator.

*1 One simple absolute R unit is required for one RACON or RPCON unit.

Model RABU (RACON/RPCON)

* To order a simple absolute R unit together with a controller unit (RACON/RPCON), specify “-ABU” at the end of the model code of the controller to which the simple absolute R unit will be installed.

Specification

Item		Specification				Item		Specification	
General specifications	Power supply	DC24V ±10%				Environment conditions	Surrounding air temperature	0~40°C	
	Current consumption	Max. 300 mA					Surrounding humidity	95% RH or below (non-condensing)	
	Applicable battery	Ni-MH battery, nickel hydrogen battery					Operating ambience	Free from corrosive gases, flammable gas, oil mist or powder dust.	
	Charge time	Approx. 78 hours					Protection degree	IP20	
	Battery life	3 years				Weight	330g		
	Maximum rotation speed at which absolute data can be backed up (rpm)	800	400	200	100	Accessories	ROBONET communication connection board (model: JB-1), Simple absolute connection board (model: JB-1), power-supply connection plate (model: PP-1)		
Absolute-data backup time (h)	120	240	360	480					

Example of order



In certain situations, such as when many controllers have been linked to the ROBONET and the system has become too wide to fit the control panel, this unit can be used to fold the controller link by connecting a cable in the middle of the link.

You can also install the expansion unit at the end of the ROBONET link and use an external controller cable to operate an SCON or other standalone controller on the network just like the controller units linked to the ROBONET.

Model REXT (RPCON/RACON)

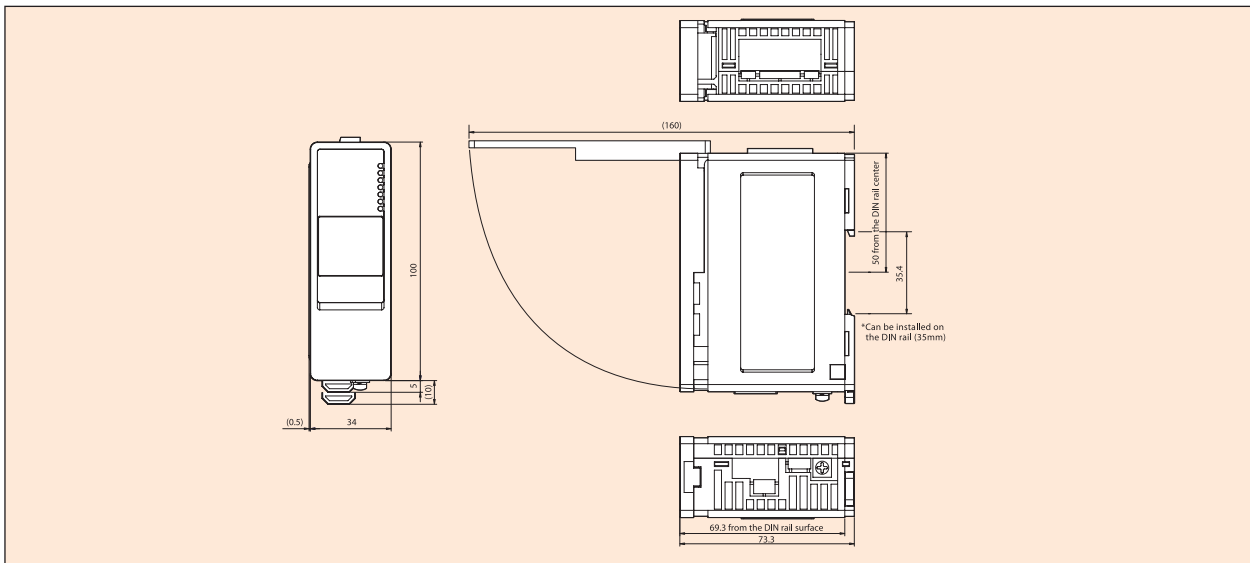
Specification

Item		Specification	
General specifications	Power supply	DC24V ±10%	
	Current consumption	Max. 100 mA	
Environment conditions	Surrounding air temperature	0~40°C	
	Surrounding humidity	95% RH or below (non-condensing)	
	Operating ambience	Free from corrosive gases, flammable gas, oil mist or powder dust.	
	Protection degree	IP20	
Weight	140g		
Accessories	ROBONET communication connection board (model: JB-1), power-supply connection plate (model: PP-1)		

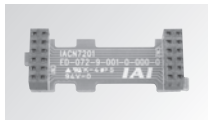
(Note) The cable used when the ROBONET link is folded is different from the one used to connect a standalone controller. For details, refer to the system configuration (ROBONET expansion unit) on P. 117.

External Dimensions

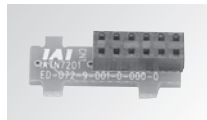
The Gateway R unit, RACON unit, RPCON unit and simple absolute R unit all have the same external dimensions.



Options



ROBONET communication connection board (simple absolute connection board)
Model JB-1



Terminal resistor board
Model TN-1



Power-supply connection plate
Model PP-1

2-axis
Combinations
RCP 2

2-axis
Combinations
RCS 2

3-axis
Combinations
RCP 2

3-axis
Combinations
RCS 2

Controllers

Model
List

PSEL

SSEL

ROBONET

XSEL

Options

24-VDC Power Supply

Features

This 24-V power supply for ROBO Cylinder has the rated maximum instantaneous output of 17 A. Since multiple PS units can be operated in parallel, you can add up to five PS units to your system if one PS does not provide enough capacity.

Model

PS-241
(100-V input specification)

PS-242
(200-V input specification)

Relationship of actuator and power-supply current

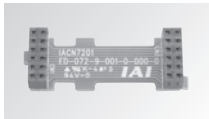
Controller type	Actuator type	Power-supply current [A]		Number of connectable units per PS-24	
		Rating (= Max.)		Servos of all axes are turned ON simultaneously*	Servos of all axes are not turned ON simultaneously*
RPCON PCON PSEL	All RCP2 models (Note)	Rating	2	8	8
RACON ACON ASEL	SA4, SA5 (20W)	Rating	1.3	3	6
		Max.	4.4		
	SA6 (30W)	Rating	1.3	4	6
		Max.	4		
	RA3 (20W)	Rating	1.7	3	5
		Max.	5.1		
RA4 (20W)	Rating	1.3	3	6	
	Max.	4.4			
RA4 (30W)	Rating	1.3	4	6	
	Max.	4			

* The first servo ON action after the power is turned on.
(Note) The HS8C, HS8R and RAIOC are excluded.

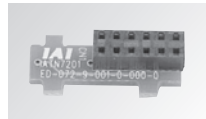


Replacement Parts

If you must order a replacement cable, etc., after the initial purchase of your product, specify the correct model by referring to the information below.



ROBONET communication connection board (simple absolute connection board)
Model JB-1



Terminal resistor board
Model TN-1

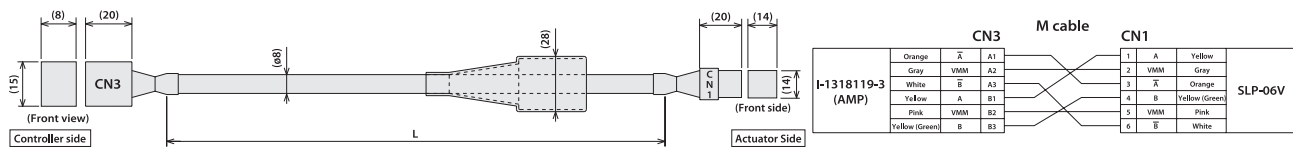


Power-supply connection plate
Model PP-1

Motor Cable for RCP2

Item **CB-RCP2-MA**

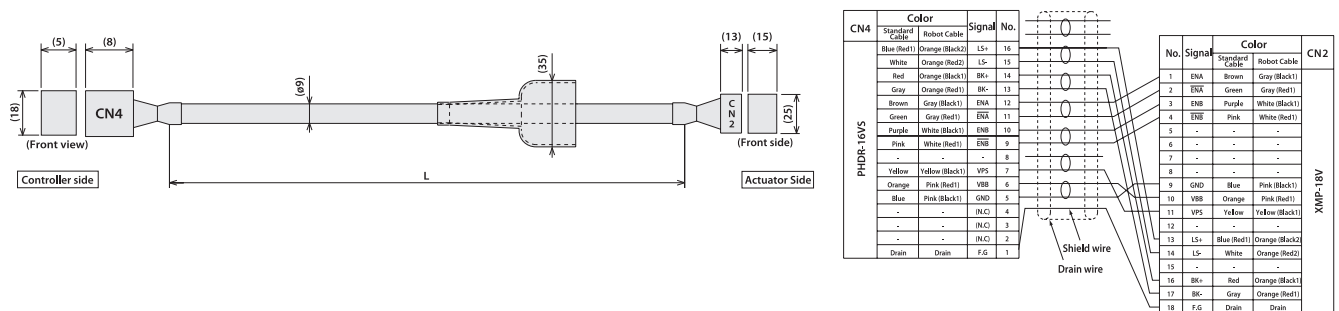
* The standard motor cable is a robot cable. You can select whether or not to use a robot cable.
* indicates the cable length (L). A desired length up to 20 m can be specified.
Example) 080 = 8 m



Encoder Cable/Robot Encoder Cable for RCP2

Item **CB-RCP2-PB** / **CB-RCP2-PB** **-RB**

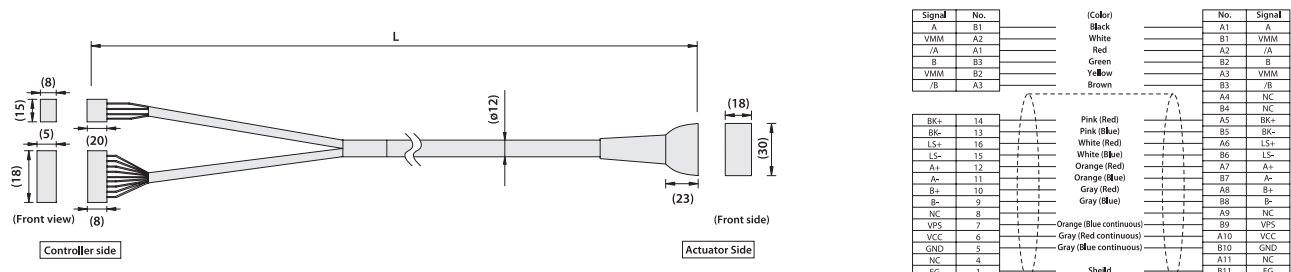
* The standard encoder cable is a normal cable. A robot cable can be specified as an option.
* indicates the cable length (L). A desired length up to 20 m can be specified.
Example) 080 = 8 m



Integrated Motor/Encoder Cable for RCP3

Item **CB-PCS-MPA**

* indicates the cable length (L). A desired length up to 10 m can be specified.
Example) 080 = 8 m

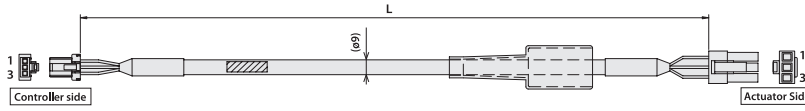


Replacement Parts

Motor Cable for RCA

Item **CB-ACS-MA**

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

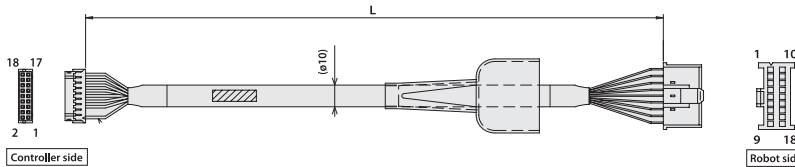


Wire	Color	Signal	No.	No.	Signal	Color	Wire
AWG22 (Press fit)	Red	U	1	1	U	Red	AWG22 (Press fit)
	White	V	2	2	V	White	
	Black	W	3	3	W	Black	

Encoder Cable/Robot Encoder Cable for RCA

Item **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). A desired length up to 20 m can be specified.
Example) 080 = 8 m



CN2				CN1			
Color	Signal	No.		No.	Signal	Color	
Robot Cable	Standard Cable			1	ENA	Gray	White/Blue
White/Purple	Blue	LS-	18	2	ENB	Red	White/Yellow
White/Gray	Orange	LS-	17	4	ENB	Black	White/Red
Yellow	Green	BK+	16	5	-	-	-
Blue	Brown	BK+	15	6	-	-	-
White/Blue	Gray	ENA	14	7	LS-	Blue	White/Purple
White/Yellow	Red	ENB	13	8	-	-	-
White/Red	Black	ENB	12	9	FG	Drain	Drain
White/Black	Yellow	ENB	11	10	ENZ	Orange	Orange
Orange	Pink	ENZ	10	11	ENZ	Purple	Green
Green	Purple	ENZ	9	12	-	White	Purple
Purple	White	-	8	13	VPS	Blue/Red	Gray
Gray	Blue/White	VPS	7	14	SV	Orange/White	Red
Red	Orange/White	SV	6	15	GND	Green/White	Black
Black	Green/White	GND	5	16	LS-	Orange	White/Gray
-	-	-	4	17	BK-	Brown	Blue
-	-	-	3	18	BK-	Green	Yellow
Drain	Drain	FG	1				

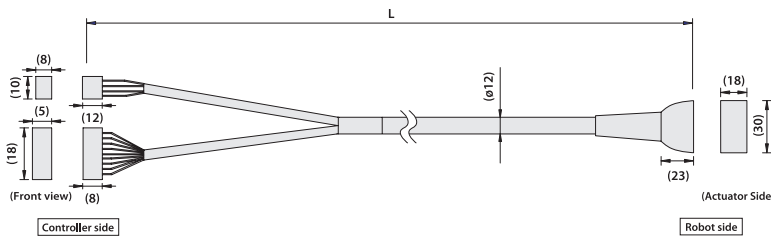
Housing: PHDR-18VR
Contact: SPHD-001T-P0.5

Plug Housing: XMP-18VR
Socket Contacts: ERA-001T-P0.6
Retainer: XMS-09V

Integrated Motor/Encoder Cable for RCA

Item **CB-ACS-MPA**

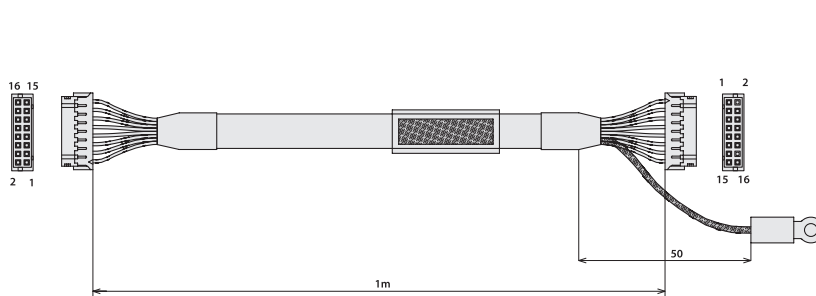
* indicates the cable length (L). A desired length up to 20 m can be specified.
Example) 080 = 8 m



Signal	No.	(Color)	No.	Signal
U	1	Red	A1	U
V	2	Yellow	B1	V
W	3	Black	A2	W
			B2	NC
			A3	NC
			B3	NC
BK+	16	Yellow (Red)	A4	BK+
BK-	15	Yellow (Blue)	B4	BK-
LS-	18	Pink (Blue)	A5	LS-
LS+	17	Pink (Red)	B5	LS+
A+	14	White (Red)	A6	A+
A-	13	White (Blue)	B6	A-
B+	12	Orange (Red)	A7	B+
B-	11	Orange (Blue)	B7	B-
Z+	10	Gray (Red)	A8	Z+
Z-	9	Gray (Blue)	B8	Z-
-	8	Orange (Red continuous)	A9	-
/PS	7	Gray (Blue continuous)	B9	/PS
VCC	6	Gray (Red continuous)	A10	VCC
GND	5	Gray (Blue continuous)	B10	GND
NC	-	Shield	A11	NC
FG	1		B11	FG

Unit Link Cable for Expansion Unit

Item **CB-REXT-SIO010**

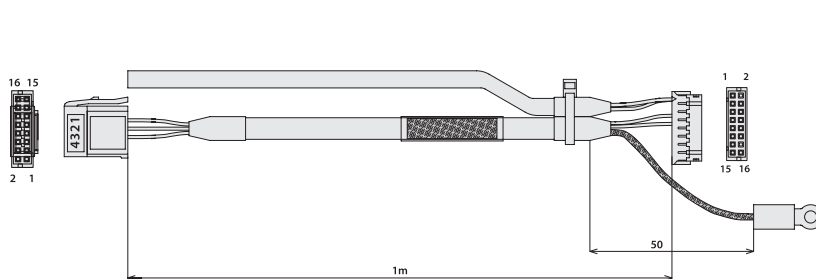


DF11-16DS-2C				Shielded group				DF11-16DS-2C			
Signal name	No.	Color				No.	Signal name	No.	Signal name		
/RSV1	16	Black/White		Black/White		16	/RSV1	16	/RSV1		
RSV1	15	Red/White		Red/White		15	RSV1	15	RSV1		
/ROUT	14	Black/Gray		Black/Gray		14	/ROUT	14	/ROUT		
ROUT	13	Red/Orange		Red/Orange		13	ROUT	13	ROUT		
/RSV0	12	Black/Orange		Black/Orange		12	/RSV0	12	/RSV0		
RSV0	11	Red/Orange		Red/Orange		11	RSV0	11	RSV0		
/ENA	10	Black/Pink		Black/Pink		10	/ENA	10	/ENA		
ENA	9	Red/Pink		Red/Pink		9	ENA	9	ENA		
COM2	8	Black/Yellow		Black/Yellow		8	COM2	8	COM2		
COM1	7	Red/Yellow		Red/Yellow		7	COM1	7	COM1		
SD-	6	Black/White		Black/White		6	SD-	6	SD-		
SD+	5	Red/White		Red/White		5	SD+	5	SD+		
RD-	4	Black/Gray		Black/Gray		4	RD-	4	RD-		
RD+	3	Red/Gray		Red/Gray		3	RD+	3	RD+		
EMG-	2	Black/Orange		Black/Orange		2	EMG-	2	EMG-		
EMG+	1	Red/Orange		Red/Orange		1	EMG+	1	EMG+		
				Ground							

Legend of wire color: Dot color and number of dot(s)/insulator color

Controller Connection Cable for Expansion Unit

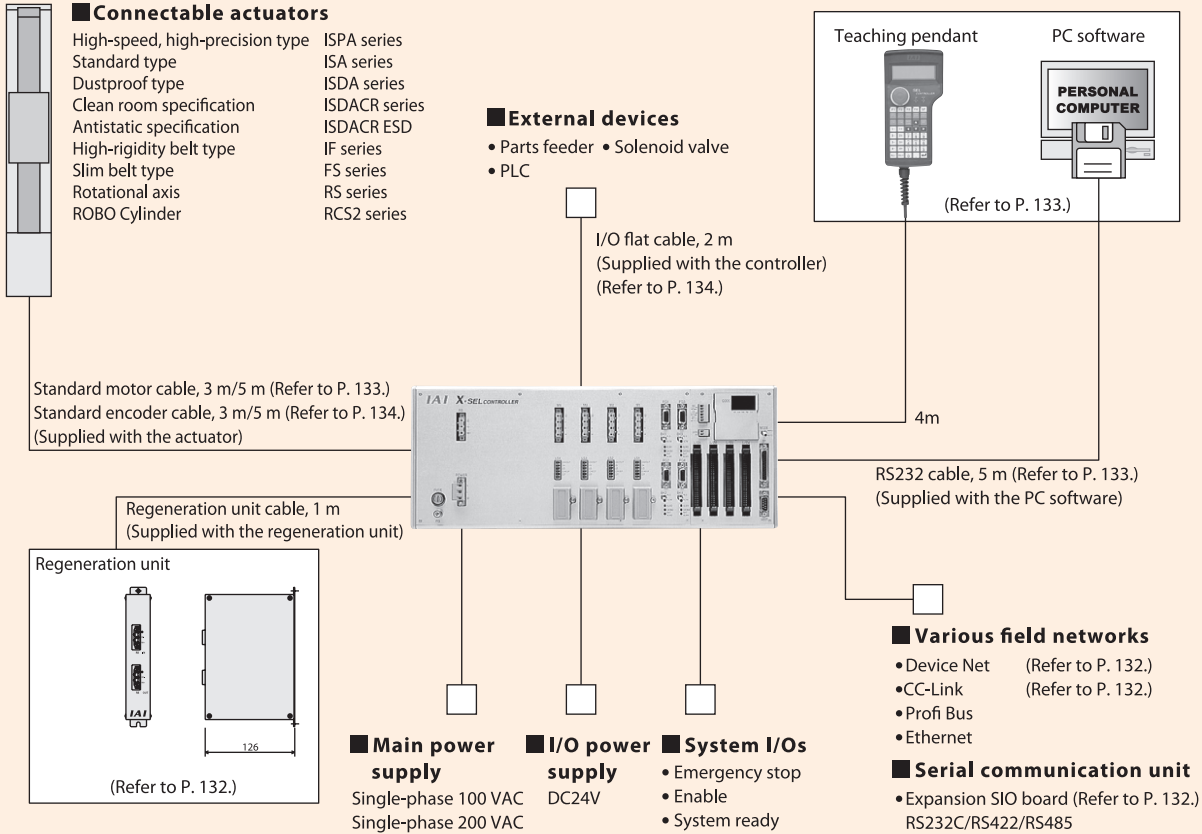
Item **CB-REXT-CTL010**



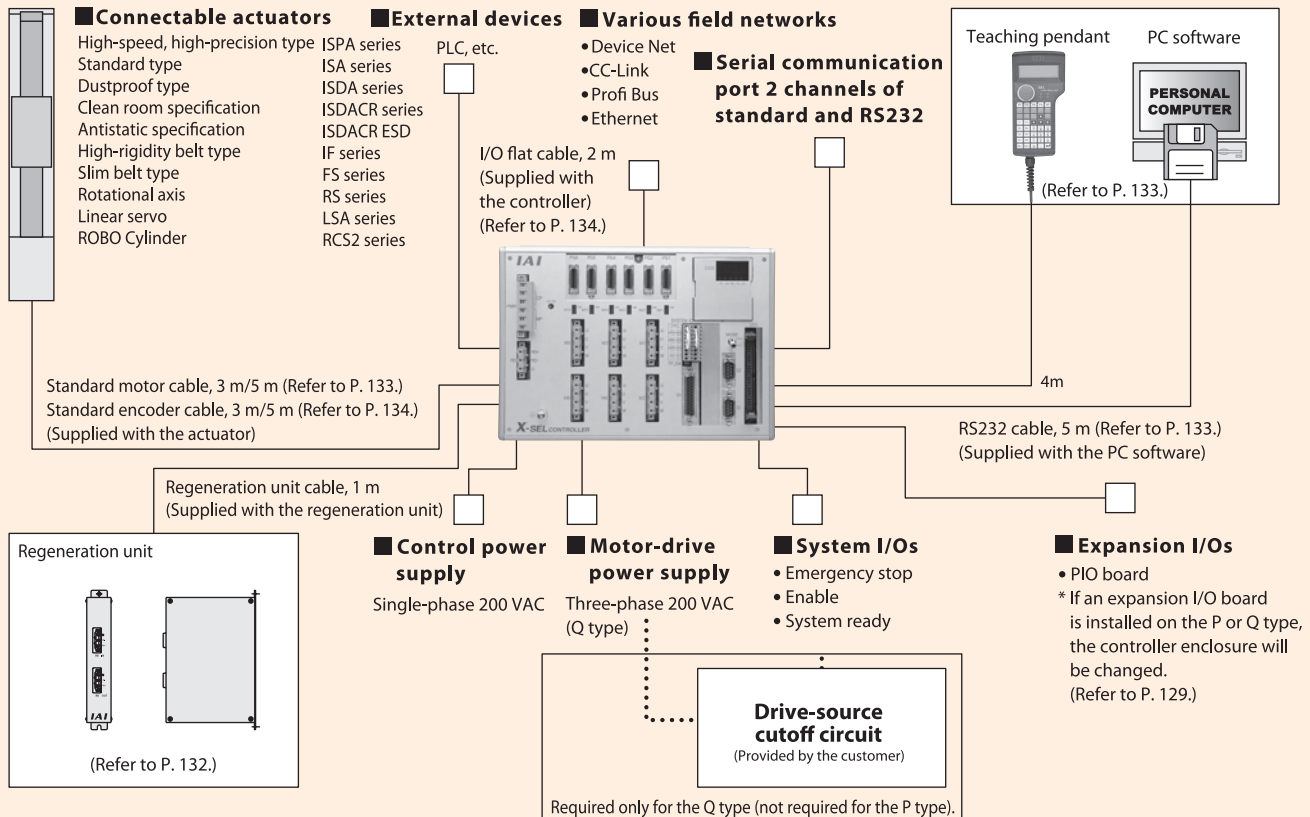
37104-3122-000FL				Shielded group				DF11-16DS-2C			
No.	Signal	Color				No.	Signal	No.	Signal		
4	N.C.	White		White		7	COM1	10	/ENA		
3	GND	Gray		Gray		6	SD-	9	ENA		
2	SD-	Orange		Orange		5	SD+	8	COM2		
1	SD+	Gray		Gray		4	RD-	4	RD-		
				Drain		3	RD+	3	RD+		
						2	EMG-	2	EMG-		
						1	EMG+	1	EMG+		

Regenerative resistor unit

J (Small Type)/K (General-purpose Type)/KE (CE Type)



P (Large-capacity Type)/Q (Large-capacity Global Type)



2-axis Combinations RCP2

2-axis Combinations RCS2

3-axis Combinations RCP2

3-axis Combinations RCS2

Controllers

Model List

PSEL

SSEL

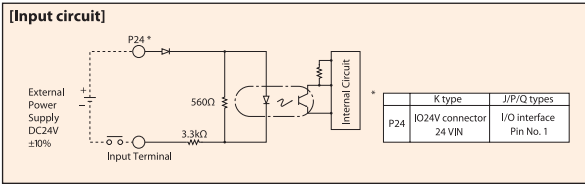
ROBONET

XSEL

I/O Wiring

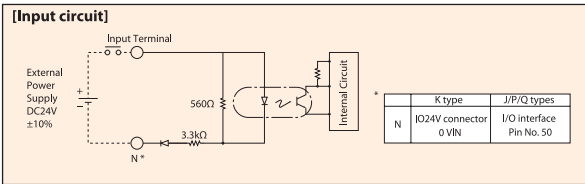
Input External input specifications (NPN specification)

Item	Specification
Input voltage	DC24V ±10%
Input current	7 mA per circuit
ON/OFF voltages	ON voltage --- Min. 16.0 VDC / OFF voltage --- Max. 5.0 VDC
Insulation method	Photo-coupler insulation
Externally connected devices	[1] No-voltage contacts (minimum load of approx. 5 VDC/1 mA) [2] Photoelectric/proximity sensors (NPN type) [3] Sequencer transistor outputs (open-collector type) [4] Sequencer contact outputs (minimum load of approx. 5 VDC/1 mA)



Input External input specifications (PNP specification)

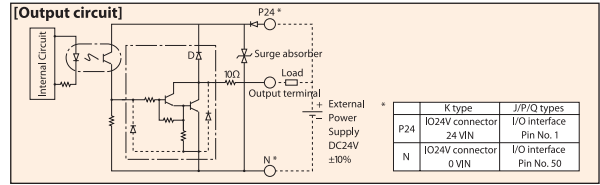
Item	Specification
Input voltage	DC24V ±10%
Input current	7 mA per circuit
ON/OFF voltages	ON voltage --- Min. 8.0 VDC / OFF voltage --- Max. 19.0 VDC
Insulation method	Photo-coupler insulation
Externally connected devices	[1] No-voltage contacts (minimum load of approx. 5 VDC/1 mA) [2] Photoelectric/proximity sensors (PNP type) [3] Sequencer transistor outputs (open-collector type) [4] Sequencer contact outputs (minimum load of approx. 5 VDC/1 mA)



Output External output specifications (NPN specification)

Item	Specification
Load voltage	DC24V
Maximum load current	100 mA per point, 400 mA peak (total current)
Leak current (max.)	Max. 0.1 mA per point
Insulation method	Photo-coupler insulation
Externally connected devices	[1] Miniature relays [2] Sequence input units

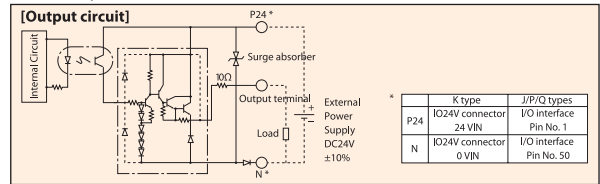
TD62084 (or equivalent) is used.



Output External output specifications (PNP specification)

Item	Specification
Load voltage	DC24V
Maximum load current	100 mA per point 400 mA per 8 ports Note)
Leak current (max.)	Max. 0.1 mA per point
Insulation method	Photo-coupler insulation
Externally connected devices	[1] Miniature relays [2] Sequence input units

TD62784 (or equivalent) is used.



Note) The maximum total load current for every eight ports from output port No. 300 is 400 mA.
(The maximum total load current of output port Nos. 300+n to 300+n+7 is 400 mA, where n is 0 or a multiple of 8.)

I/O Signal Tables

Standard I/O Signal Table (When N1 or P1 is selected)

Pin No.	Category	Port No.	Standard setting
1		—	(J/P/Q types: 24-V connection / K type: NC)
2		000	Program start
3		001	General-purpose input
4		002	General-purpose input
5		003	General-purpose input
6		004	General-purpose input
7		005	General-purpose input
8		006	General-purpose input
9		007	Program specification (PRG No. 1)
10		008	Program specification (PRG No. 2)
11		009	Program specification (PRG No. 4)
12		010	Program specification (PRG No. 8)
13		011	Program specification (PRG No. 10)
14		012	Program specification (PRG No. 20)
15		013	Program specification (PRG No. 40)
16	Input	014	General-purpose input
17		015	General-purpose input
18		016	General-purpose input
19		017	General-purpose input
20		018	General-purpose input
21		019	General-purpose input
22		020	General-purpose input
23		021	General-purpose input
24		022	General-purpose input
25		023	General-purpose input
26	024	General-purpose input	
27	025	General-purpose input	
28	026	General-purpose input	
29	027	General-purpose input	
30	028	General-purpose input	
31	029	General-purpose input	
32	030	General-purpose input	
33	031	General-purpose input	
34	Output	300	Alarm output
35		301	Ready output
36		302	Emergency stop output
37		303	General-purpose output
38		304	General-purpose output
39		305	General-purpose output
40		306	General-purpose output
41		307	General-purpose output
42		308	General-purpose output
43		309	General-purpose output
44		310	General-purpose output
45		311	General-purpose output
46		312	General-purpose output
47		313	General-purpose output
48		314	General-purpose output
49		315	General-purpose output
50		—	(J/P/Q types: 0-V connection / K type: NC)

Expansion I/O Signal Table (When N1 or P1 is selected)

Pin No.	Category	Standard setting
1		(J/P/Q types: 24-V connection / K type: NC)
2	Input	General-purpose input
3		General-purpose input
4		General-purpose input
5		General-purpose input
6		General-purpose input
7		General-purpose input
8		General-purpose input
9		General-purpose input
10		General-purpose input
11		General-purpose input
12		General-purpose input
13		General-purpose input
14		General-purpose input
15		General-purpose input
16		General-purpose input
17		General-purpose input
18		General-purpose input
19		General-purpose input
20		General-purpose input
21		General-purpose input
22		General-purpose input
23		General-purpose input
24		General-purpose input
25		General-purpose input
26		General-purpose input
27		General-purpose input
28		General-purpose input
29		General-purpose input
30		General-purpose input
31		General-purpose input
32	General-purpose input	
33	General-purpose input	
34	Output	General-purpose output
35		General-purpose output
36		General-purpose output
37		General-purpose output
38		General-purpose output
39		General-purpose output
40		General-purpose output
41		General-purpose output
42		General-purpose output
43		General-purpose output
44		General-purpose output
45		General-purpose output
46		General-purpose output
47		General-purpose output
48		General-purpose output
49		General-purpose output
50		—

Expansion I/O Signal Table (When N2 or P2 is selected)

Pin No.	Category	Standard setting
1		(J/P/Q types: 24-V connection / K type: NC)
2	Input	General-purpose input
3		General-purpose input
4		General-purpose input
5		General-purpose input
6		General-purpose input
7		General-purpose input
8		General-purpose input
9		General-purpose input
10		General-purpose input
11		General-purpose input
12		General-purpose input
13		General-purpose input
14		General-purpose input
15		General-purpose input
16		General-purpose input
17		General-purpose input
18		General-purpose output
19		General-purpose output
20		General-purpose output
21		General-purpose output
22		General-purpose output
23		General-purpose output
24		General-purpose output
25		General-purpose output
26		General-purpose output
27		General-purpose output
28		General-purpose output
29		General-purpose output
30		General-purpose output
31		General-purpose output
32	General-purpose output	
33	General-purpose output	
34	Output	General-purpose output
35		General-purpose output
36		General-purpose output
37		General-purpose output
38		General-purpose output
39		General-purpose output
40		General-purpose output
41		General-purpose output
42		General-purpose output
43		General-purpose output
44		General-purpose output
45		General-purpose output
46		General-purpose output
47		General-purpose output
48		General-purpose output
49		General-purpose output
50		—

Specification Table

■ J (Small Type)/K (General-purpose Type)

Item	Description							
Controller series/type	J (small type)				K (general-purpose type)/KE (CE type)			
Connected actuators	RCS2/ISA/ISPA/ISP/ISDA/ISDACR/ISPDACR/IF/FS/RS							
Applicable motor output (W)	20/30/60/100/150/200/300/400/600/750							
Number of connected axes	1	2	3	4	1	2	3	4
Maximum output of connected axes (W)	Max 800 (at power-supply voltage of 200 V) Max 400 (at power-supply voltage of 100 V)				Max 800	Max 1600 (at power-supply voltage of 200 V) Max 800 (at power-supply voltage of 200 V)		
Input power supply	100-V specification: Single-phase 100 to 115 VAC 200-V specification: Single-phase 200 to 230 VAC							
Operating power-supply voltage range	±10%							
Power-supply frequency	50Hz/60Hz							
Power-supply capacity	Max 1670VA	Max 1720VA	Max 1810VA	Max 1670VA	Max 3120VA	Max 3220VA	Max 3310VA	
Position detection method	Incremental encoder (wire-saving type) Multi-rotation data backup absolute encoder (wire-saving type)							
Speed setting	1 mm/sec ~ (The maximum limit varies depending on the actuator.)							
Acceleration setting	0.01 G ~ (The maximum limit varies depending on the actuator.)							
Program language	Super SEL							
Number of programs	64							
Number of program steps	6,000 (total)							
Number of multi-tasking programs	16							
Number of positions	3,000							
Data storage device	Flash ROM + SRAM backup battery							
Data input method	Teaching pendant or PC software							
Standard I/Os	32 points (total of dedicated inputs + general-purpose inputs)/16 points (total of dedicated outputs + general-purpose outputs)							
Expansion I/Os	None	1 unit, 48 points (1 unit can be added)				1 unit, 48 points (Up to 3 units can be added)		
Serial communication function	Standard RS232 port (D-sub, 25-pin)				Standard RS232 port + Expansion SIO board (optional)			
Other I/Os	System I/Os (emergency stop input, enable input, system ready output)							
Protective functions	Motor overcurrent, overload, motor/driver temperature check, overload check, encoder open detection, soft limit overtravel, system error, battery error, etc.							
Surrounding air temperature/humidity	Temperature 0 to 40°C, humidity 30 to 85%							
Surrounding ambience	Free from corrosive gases or significant dust.							
Weight	2.6kg	3.3kg	5.0kg		6.0kg		7.0kg	
Accessory	I/O flat cable							

■ P (Large-capacity Type)/Q (Large-capacity Type Conforming to Safety Category)

Item	Description												
Controller series/type	P (standard) type						Q (global) type						
Connected actuators	RCS2/ISA/ISPA/ISP/ISDA/ISDACR/ISPDACR/IF/FS/RS/LSA												
Applicable motor output	20/30/60/100/150/200/300/400/600/750												
Number of controlled axes	1	2	3	4	5	6	1	2	3	4	5	6	
Maximum output of connected axes (W)	Max2400W (1600 W for single-phase 200-VAC specification)												
Control power input	AC 200/230, single-phase -15%, +10%						AC 200/230, single-phase -15%, +10%						
Motor power input	AC 200/230, single-phase/three-phase -10%, +10%						AC 200/230, single-phase/three-phase -10%, +10%						
Power-supply frequency	50/60Hz												
Insulation resistance	10MΩ or more (at 500 VDC, between the power-supply terminal and each I/O terminal and between all external terminals and the case)												
Withstand voltage	1500 VAC (1 minute)						1500 VAC (1 minute)						
Power-supply capacity (*1)	Max 1744VA	Max 3266VA	Max 4787VA	Max 4878VA	Max 4931VA	Max 4998VA	Max 1744VA	Max 3266VA	Max 4787VA	Max 4878VA	Max 4931VA	Max 4998VA	
Position detection method	Incremental encoder (wire-saving type) Multi-rotation data backup absolute encoder (wire-saving type)												
Safety circuit configuration	Redundancy not supported						Redundancy supported						
Drive-source cutoff method	Internal cutoff relay						External safety circuit						
Enable input	Contact B input (power supplied internally)						Contact B input (power supplied externally, redundant)						
Speed setting	1 mm/sec ~ (The maximum limit varies depending on the actuator.)												
Acceleration setting	0.01 G ~ (The maximum limit varies depending on the actuator.)												
Program language	Super SEL												
Number of programs	64												
Number of program steps	6,000 (total)												
Number of multi-tasking programs	16												
Number of positions	4,000 (total)												
Data storage device	Flash ROM + SRAM backup battery												
Data input method	Teaching pendant or PC												
Standard I/Os	1 of PIO board with 48 I/O points (NPN/PNP) or PIO board with 96 I/O points (NPN/PNP) can be installed.												
Expansion I/Os	Up to 3 of PIO board with 48 I/O points (NPN/PNP) and/or PIO board with 96 I/O points (NPN/PNP) can be installed.												
Serial communication function	Standard teaching port (D-sub, 25-pin) + 2-channel RS232C port (D-sub, 9-pin x 2)												
Protective functions	Motor overcurrent, overload, motor/driver temperature check, overload check, encoder open detection, soft limit overtravel, system error, battery error												
Surrounding air temperature/humidity, ambience	0 to 40°C, 10 to 95% (non-condensing); free from corrosive gases or significant dust.												
Weight (*2)	5.2kg				5.7kg				4.5kg				5kg
Accessory	I/O flat cable												

*1 When axes corresponding to the maximum wattage are connected.
*2 Including the absolute battery, brake mechanism and expansion I/O box.

2-axis
Combinations
RCP2

2-axis
Combinations
RCS2

3-axis
Combinations
RCP2

3-axis
Combinations
RCS2

Controllers

Model
List

PSEL

SSEL

ROBONET

XSEL

External Dimensions

J (Small Type)/K (General-purpose Type)

	1-axis specification	2-axis specification	3/4-axis specification	Side view
J type (Small type)				
	1/2-axis specification		3/4-axis specification	
K type (General-purpose type)				

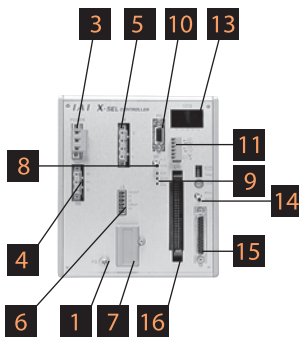
P (Large-capacity Standard Type)/Q (Large-capacity Global Type)

The shapes and dimensions of SEL-P/Q types vary depending on the controller specifications (encoder type, with/without brake, and with/without I/O expansion). The following four shapes are available. Check the applicable dimensions based on the desired type and number of axes to be connected.

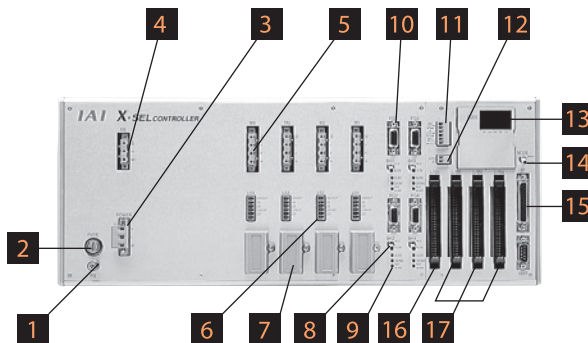
Controller specification	Base shape (incremental specification)		With brake/absolute unit	With I/O expansion base	With brake/absolute unit + I/O expansion base	Side view
	Encoder	Incremental	Absolute	Incremental	Absolute	
	Brake	Not equipped	Equipped	Not equipped	Equipped	
I/O	Standard only	Standard only	Standard only	Standard + Expansion	Standard + Expansion	
P type (Large-capacity)	1 to 4-axis specification					
	5 to 6-axis specification					
Q type (Large capacity conforming to safety standard)	1 to 4-axis specification					
	5 to 6-axis specification					

Name of Each Part

J Type (Small)



K Type (General-purpose)



1 FG connection terminal

A connection edge to connect the FG terminal of the enclosure. This terminal is connected to the PE terminal of the AC input part internally through the controller.

2 Fuse holder (K type only)

A half-cut fuse holder for protecting the AC input part from overcurrent.

3 Main-power input connector

A connector for 100/200-VAC single-phase input. (This connector comes with a cable-end plug. Refer to the right page.)

4 Regenerative-resistor unit connector

This connector is used to connect the regenerative resistor unit (optional: REU-1) that may be required if the built-in regenerative connector is not enough due to high acceleration, high load, etc.

5 Motor cable connector

A connector for the motor power cable of the actuator motor.

6 Actuator-sensor input connector

A connector for the LS, CREEP, OT and other axis sensors.

7 Absolute-data backup battery

A battery unit for backing up the absolute encoder if used. This battery is not connected to non-absolute axes.

8 Brake release switch (brake specification only)

An alternate switch with lock for releasing the axis brake. To operate this switch, pull the switch toward you and then tilt it to a desired position. Tilt the switch to the top (RLS) position to forcibly release the brake, or tilt it to the bottom (NOM) position to let the controller control the brake automatically.

9 Axis-driver status LEDs

These LEDs are used to monitor the operating status of the driver CPU that controls the motor drive. The following three LEDs are provided.

Name	Color	Meaning when the LED is lit
ALM	Orange	The driver has detected an error.
SVON	Green	The servo is ON and the motor is being driven.
BATT ALM	Orange	The absolute battery voltage is low.

10 Encoder cable connector

This 15-pin, D-sub connector is used to connect the encoder cable of the actuator.

11 System IO connector

This connector has a total of three I/Os including two inputs for controlling the controller operation and one output regarding the system status. (This connector comes with a cable-end plug. Refer to the right page.)

Name		
EMG	Emergency stop input	Operation is enabled when this signal is ON. An emergency stop is actuated when the signal turns OFF.
ENB	Safety gate input	Operation is enabled when this signal is ON. The servo turns OFF when the signal turns OFF.
RDY	System ready relay output	The controller status is output. Cascade connection is supported. The controller is ready when the output contacts are shorted and not ready when the contacts are open.

12 IO24V power connector (K type only)

If DI/DOs are installed in the IO slots 16, 17, this connector is used to supply the I/O power to the insulated part externally.

13 Panel window

The 4-digit 7-segment LED display and five LED lamps indicating the system status can be visually checked.

14 Mode switch

An alternate switch with lock for specifying the operation mode of the controller. To operate this switch, pull the switch toward you and then tilt it to a desired position. The top position indicates the MANU (manual operation) mode, while the bottom position indicates the AUTO (auto operation) mode. Teaching operation can only be performed in the MANU mode, and auto operation using external I/Os cannot be performed in the MANU mode.

15 Teaching connector

This D-sub, 25-pin connector is used to connect a teaching pendant or PC to input program positions.

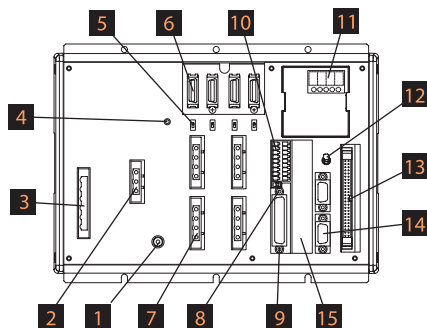
16 Standard I/O slot (slot 1)

The standard PIO board with 32 input points and 16 output points is installed in this slot.

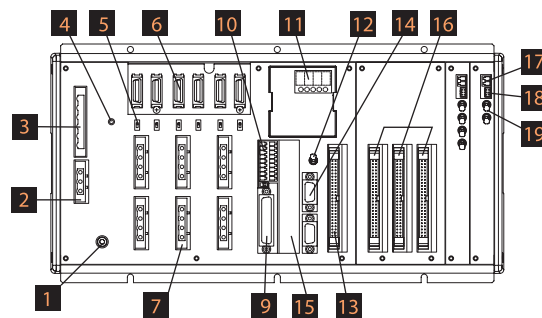
17 Expansion I/O slots (slot 2, slot 3, slot 4)

An expansion IO board (optional) can be installed in each of these slots.

P type (standard, 4-axis)



Q type (with absolute brake unit + expansion base, 6-axis)



1 FG connection terminal

A connection edge to connect the FG terminal of the enclosure. This terminal is connected to the PE terminal of the AC input part internally through the controller.

2 External regeneration unit connector

This connector is used to connect an additional regenerative resistor when the built-in regenerative resistor is not enough due to high acceleration, high load, etc. Whether or not an external regenerative resistor is needed depends on the specifics of the application, such as the axis configuration.

3 AC-power input connector

A connector for 200-VAC three-phase input. This connector consists of six terminals including the motor power-supply, control power-supply and PE terminals.

The standard specification only comes with a terminal block.

Caution To prevent electric shock, do not touch this connector while the power is supplied.

4 Control power-supply monitor LED

A green light is lit while the control power supply is generating the internal controller power properly.

5 Absolute-battery enable/disable switch

This switch is used to enable or disable the encoder backup operation using the absolute battery. The factory setting is to disable the backup. Connect the encoder and axes-sensor cables, turn on the power, and then set this switch to the top position.

6 Encoder/axis-sensor connector

A connector for the actuator encoder and axis sensors such as LS, CREEP and OT. *: LS, CREEP and OT sensors are optional.

7 Motor connector

A connector for driving the motor in the actuator.

8 Teaching-pendant type selector switch

This switch is used to change the type of the teaching pendant connected to the teaching connector **9**. You can switch between IAI's standard teaching pendant and ANSI teaching pendant. Set the switch provided on the front side of the board according to the teaching pendant to be used.

9 Teaching connector

This teaching interface is used to connect IAI's teaching pendant or PC (PC software) to operate, set or otherwise manipulate the system.

10 System I/O connector

This I/O connector controls the safety operations of the controller. With the global specification, this connector can be used, together with an external safety circuit, to configure a safety circuit meeting up to category 4.

11 Panel window

The panel window consists of the 4-digit, 7-segment LED display and five LED lamps indicating the status of the system.

Meanings of 5 LEDs

Name	Condition when the LED is lit
RDY	The CPU is ready (to perform program operation).
ALM	A CPU alarm (system-shutdown level error) or CPU hardware error is present.
EMG	An emergency stop is actuated or CPU hardware error or power-supply hardware error is present.
PSE	A power-supply hardware error is present.
CLK	The system clock is abnormal.

12 Mode switch

An alternate switch with lock for specifying the operation mode of the controller. To operate this switch, pull the switch toward you and then tilt it to a desired position. The top position indicates the MANU (manual operation) mode, while the bottom position indicates the AUTO (auto operation) mode. Teaching operation can only be performed in the MANU mode, and auto operation using external I/Os cannot be performed in the MANU mode.

13 Standard I/O connector

Overview of standard IO interface specifications

Item	Photo-coupler
Connector name	I/O
Applicable connector	Flat connector, 50-pins
Power supply	Power is supplied from connector pin Nos. 1 and 50.
Inputs	32 points (including general-purpose and dedicated inputs)
Outputs	16 points (including general-purpose and dedicated outputs)
Connected to	External PLC, sensor, etc.

14 General-purpose RS232C port connector

This port is used to connect general-purpose RS232C devices. (Two channels are provided.)

15 Field-network board slot

A fieldbus interface module is installed in this slot.

16 Expansion I/O boards (optional)

Optional expansion boards are installed in these slots.

17 Brake-power input connector

A power input connector for driving the brake of the actuator. 24 VDC must be supplied externally. If the specified power is not supplied, the actuator brake cannot be released. Be sure to supply this power to axes with brake. For the brake power cable, use a shielded cable and connect the shield on the 24-V power supply side.

18 Brake-release switch connector

This connector is used to connect a switch that releases the actuator brake from outside the controller. The brake is released when the COM and BKMRL* terminals of this connector are shorted. Use this connector if you want to manually operate the actuator when the controller power is cut off or other abnormality is present.

19 Brake switch

An alternate switch with lock for releasing the axis brake. To operate this switch, pull the switch toward you and then tilt it to a desired position. Tilt the switch to the top (RLS) position to forcibly release the brake, or tilt it to the bottom (NOM) position to let the controller control the brake automatically.

Options

Regenerative Resistor Unit

Model REU-1

Description

This unit converts to heat the regenerative current produced when the motor decelerates. Although the controller has a built-in regenerative resistor, a regeneration unit or units may be required if its capacity is not enough for the vertical axis load. (Refer to the table on the right.)

Specification

Item	Specification
Dimensions	W34mm×H195mm×D126mm
Weight	0.9kg
Built-in regenerative resistor	220Ω 80W
Accessory	Controller connection cable (model: CB-ST-REU101), 1 m

Installation Standards

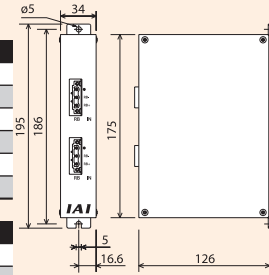
Determine the required number of unit(s) according to the total motor capacity of the connected vertical axes.

Horizontal application

Motor wattage	P/Q type	J type	K type
~200W	Not required	Not required	Not required
~800W	1 unit	Not required	Not required
~1000W	1 unit	–	Not required
~1500W	2 units	–	Not required
~2000W	3 units	–	–
~2400W	4 units	–	–

Vertical application

Motor wattage	P/Q type	J type	K type
~100W	Not required	Not required	Not required
~200W	1 unit	Not required	Not required
~400W	1 unit	1 unit	Not required
~600W	1 unit	1 unit	1 unit
~800W	1 unit	2 units	1 unit
~1200W	2 units	–	2 units
~1600W	3 units	–	Consult IAI.
~2000W	4 units	–	–
~2400W	5 units	–	–



Absolute-data Backup Battery (for XSEL-J/K/KE/KT/KET)

Model IA-XAB-BT

A data backup battery for absolute axes. Replace the battery as soon as the controller generates a battery alarm.

Packing specification

Individually packed. (One battery is required for one axis. Specify an appropriate quantity according to the number of axes to be used.)



Expansion SIO Board (for General-purpose Type Only)

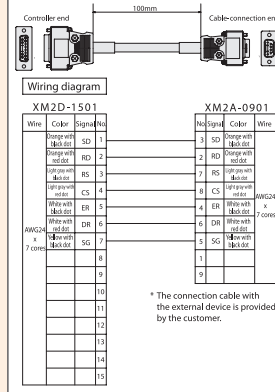
Model Specification

IA-105-X-MW-A (for RS232C connection) (board + joint cable [1] x 2)
 IA-105-X-MW-B (for RS422 connection) (board + joint cable [2] x 1)
 IA-105-X-MW-C (for RS485 connection) (board + joint cable [2] x 1)

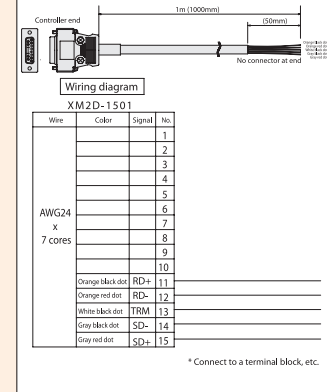
Description

This board is used to perform serial communication with external devices. The 2-channel port supports three communication patterns according to the supplied joint cable.

Joint cable [1] / Model: CB-ST-232J001



Joint cable [2] / Model: CB-ST-422J010



Absolute-data Backup Battery

Model AB-5

This absolute-data backup battery is used when absolute actuators are operated.



Expansion PIO Board

Description

This optional board is used to add I/Os (inputs/outputs). On the general-purpose and large-capacity types, up to three expansion PIO boards can be installed in the expansion slots. (On the small type, only one expansion PIO board can be installed in the expansion slot, provided that the controller is of 3 or 4-axis type.)

DeviceNet Connection Board

This board is used to connect the XSEL controller to DeviceNet.

Item	Specification			
Number of I/O points	256 input points/256 output points per board * Only one board can be installed.			
Communication protocol	Certified DeviceNet 2.0 interface module (Certification pending)			
	Group 2 only server			
Communication specification	Insulation node of network-power operation type			
	Master-slave connection	Bit strobe		
		Polling		
Cyclic				
Baud rate	500k/250k/125kpbs (Switchable via DIP switches)			
Communication cable length	Baud rate	Maximum network length	Maximum branch length	Total branch length
	500kbps	100m	6m	39m
	250kbps	250m		78m
125kbps	500m	156m		
(Note) When a thick DeviceNet cable is used.				
Communication power supply	24 VDC (supplied from DeviceNet)			
Current consumption of communication power supply	60 mA or more			
Number of occupied stations	1 node			
Connector	MSTBA2.5/5-G.08AUM by Phoenix Contact (*1)			

(*1) The cable-end connector (SMSTB2.5/5-ST-5.08AU by Phoenix Contact) is a standard accessory.

CC-Link Connection Board

This board is used to connect the XSEL controller to CC-Link.

Item	Specification					
Number of I/O points	256 input points/256 output points per board * Only one board can be installed.					
Communication protocol	CC-Link Ver1.10 (Certified)					
Baud rate	10M/5M/2.5M/625K/156kbps (switchable via a rotary switch)					
Communication method	Broadcast polling method					
Synchronization method	Frame synchronization method					
Encoding method	NRZI					
Transmission path format	Bus format (conforming to EIA RS485)					
Transmission format	Conforming to HDLC					
Error control method	CRC(X ¹⁶ +X ⁵ +X ² +X ¹)					
Number of occupied stations	1 to 3 stations (remote device stations)					
Communication cable length	Baud rate (bps)	10M	5M	2.5M	625k	156k
	Cable length (m)	100	160	400	900	1200
Connector (controller end)	MSTBA2.5/5-G.08AUM by Phoenix Contact (*1)					

(*1) The cable-end connector (SMSTB2.5/5-ST-5.08AU by Phoenix Contact) is a standard accessory.

2-axis Combinations RCP2

2-axis Combinations RCS2

3-axis Combinations RCP2

3-axis Combinations RCS2

Controllers

Model List

PSEL

SSEL

ROBONET

XSEL

Options

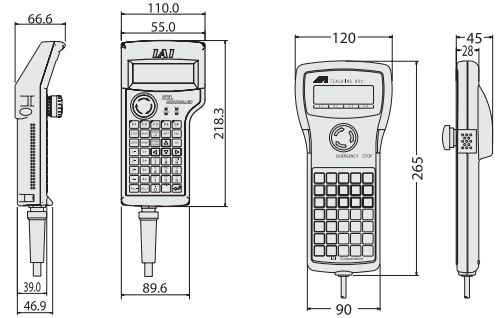
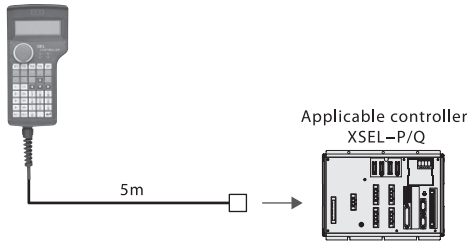
Teaching Pendant

Features A teaching device offering functions for program/position input, test operation, monitoring, and more.

Model/Price

Model	Description
SEL-T	Standard type with connector conversion cable
SEL-TD	Deadman switch type with connector conversion cable

Configuration



Specification

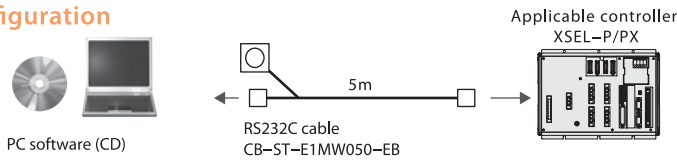
Item	SEL-T-J	SEL-TD-J
3-position enable switch	Not equipped	Equipped
ANSI/UL standard	Not compliant	Compliant
CE mark	Compliant	
Display	20 characters x 4 lines	
Surrounding air temperature/humidity	0-40°C 10-90%RH (non-condensing)	
Protection structure	IP54	
Weight	Approx. 0.4 kg (excluding cables)	

PC Software (Windows only)

Features A software program that assists the initial startup of your system, offering functions for program/position input, test operation, monitoring, and more. The enhanced debugging functions help reduce the startup time.

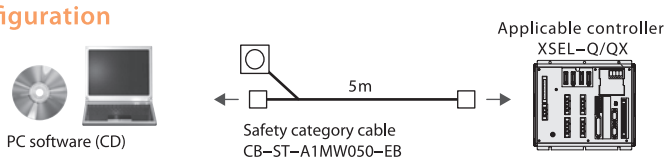
Model IA-101-X-MW (with RS232C cable)

Configuration



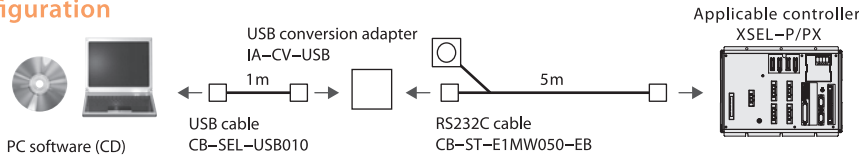
Model IA-101-XA-MW (with safety category 4 cable)

Configuration



Model IA-101-X-USBMW (with USB conversion adapter + cable)

Configuration



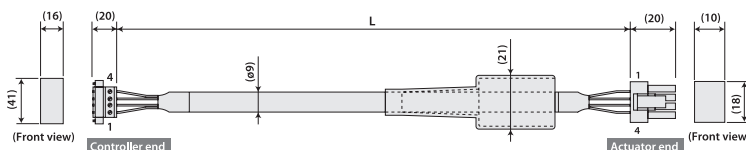
Replacement Parts

If you must order a replacement cable, etc., after the initial purchase of your product, specify the correct model by referring to the information below.

Motor Cable/Robot Motor Cable

Item **CB-RCC-MA** [] [] [] [] / **CB-RCC-MA** [] [] [] [] -**RB**

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



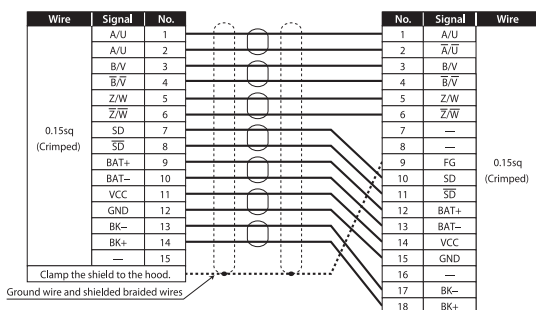
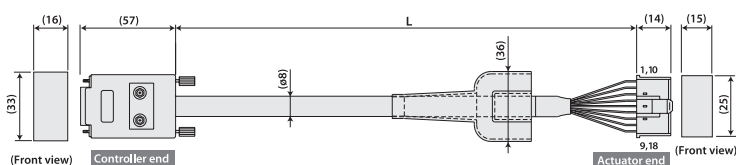
Signal	No.	No.	Signal	Wire
PE	1	1	U	0.75sq (crimped)
U	2	2	V	
V	3	3	W	
W	4	4	PE	

Replacement Parts

Encoder Cable/Robot Encoder Cable (for XSEL-J/K types)

Item **CB-RCBC-PA**□□□□ / **CB-RCBC-PA**□□□□-**RB**

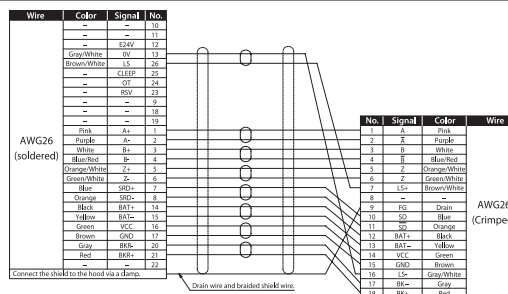
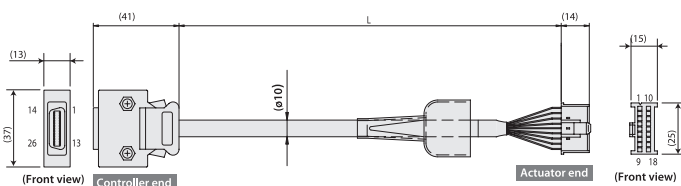
* □□□□ indicates the cable length (L). A desired length up to 15 m can be specified. Example) 080 = 8 m



Encoder Cable/Robot Encoder Cable (for XSEL-P/Q types)

Item **CB-RCS2-PA**□□□□ / **CB-X3-PA**□□□□

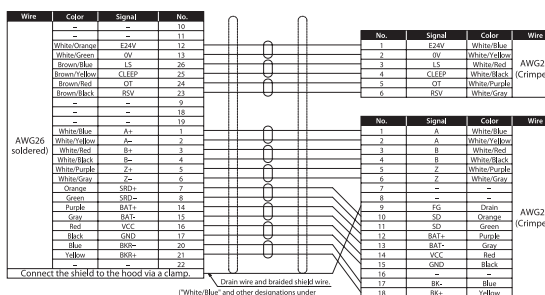
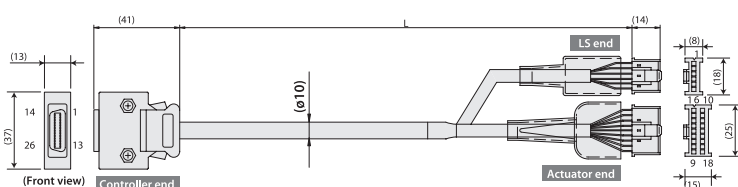
* □□□□ indicates the cable length (L). A desired length up to 20 m can be specified. Example) 080 = 8 m



Dedicated Encoder Cable/Robot Encoder Cable for Rotary Robots

Item **CB-RCS2-PLA**□□□□ / **CB-X2-PLA**□□□□

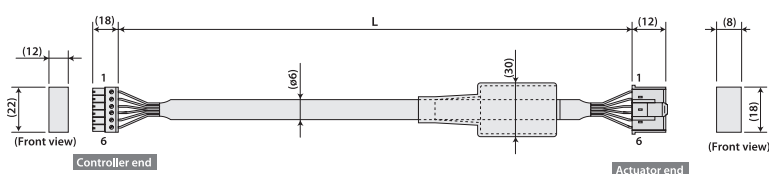
* □□□□ indicates the cable length (L). A desired length up to 30 m can be specified. Example) 080 = 8 m



Limit Switch Cable (for X-SEL-J/K types)

Item **CB-X-LC**□□□□

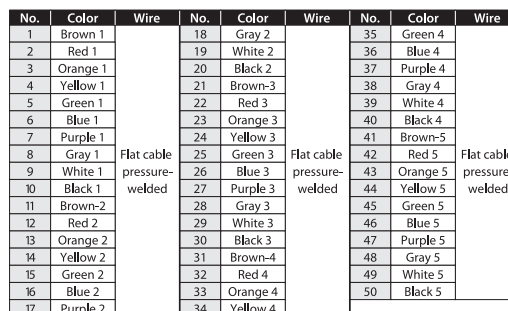
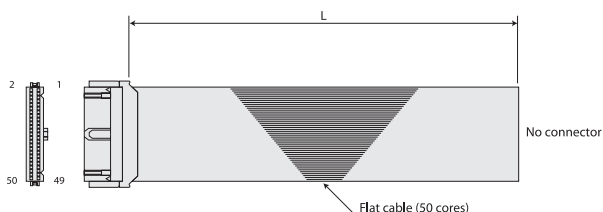
* □□□□ indicates the cable length (L). A desired length up to 20 m can be specified. Example) 080 = 8 m



I/O Flat Cable (XSEL-J/K/P/Q types)

Item **CB-X-PIO**□□□□

* □□□□ indicates the cable length (L). A desired length up to 10 m can be specified. Example) 080 = 8 m



2-axis Combinations RCP 2

2-axis Combinations RCS 2

3-axis Combinations RCP 2

3-axis Combinations RCS 2

Controllers

Model List

PSEL

SSEL

ROBONET

XSEL



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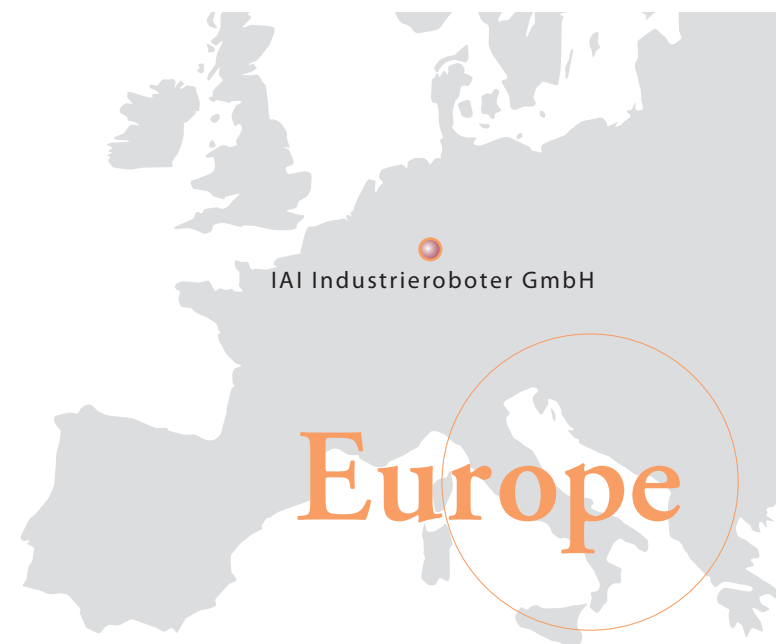
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Simple repair



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19 Tannery Road Singapore 347730

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FAX 6842-3646

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

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