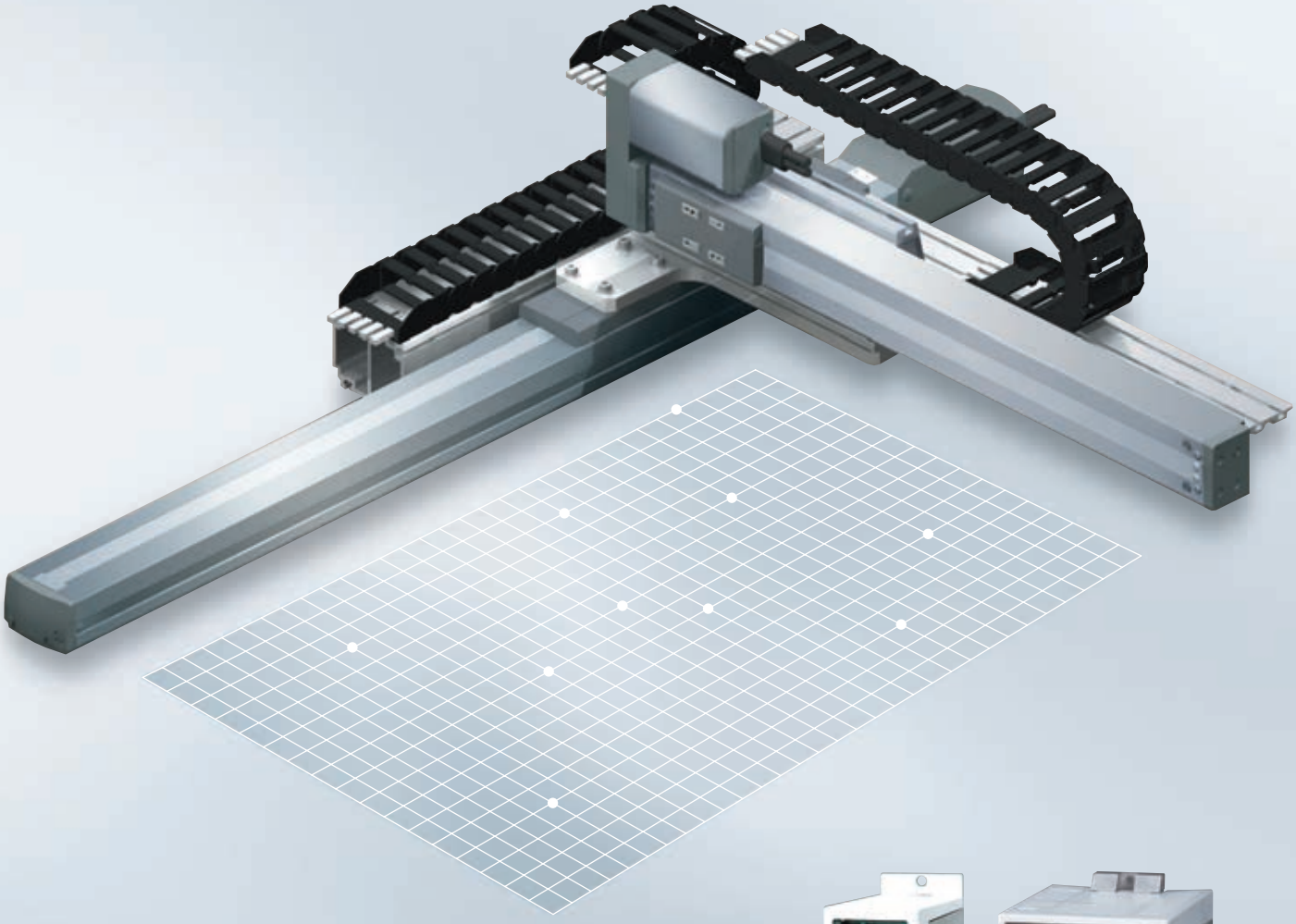
GB

IAI
Quality and Innovation

ROBO CYLINDER

RoboCylinder
IK Series Catalogue

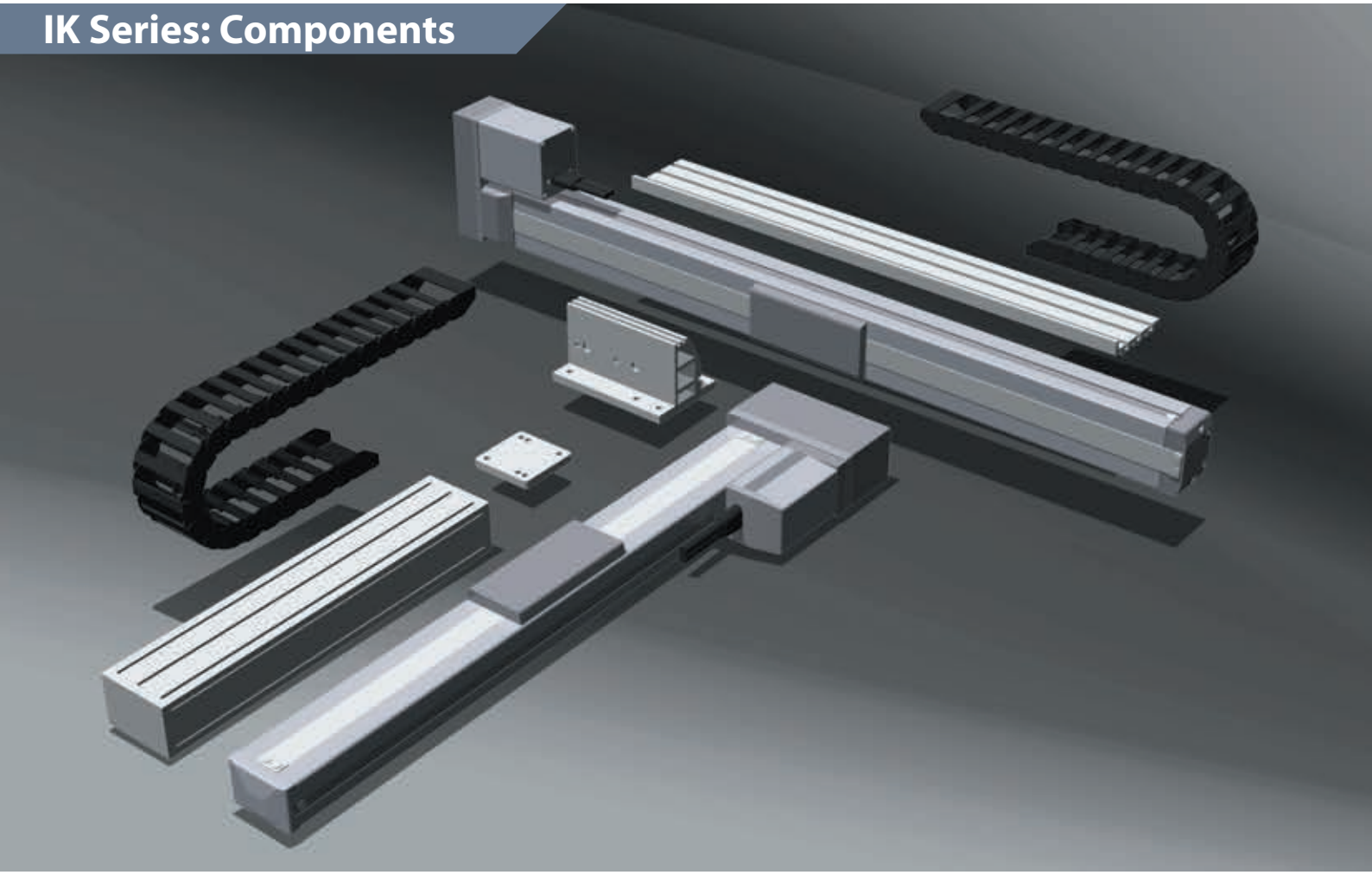
2nd Revised Edition



www.robocylinder.de

RoboCylinder IK Series

IK Series: Components



1. Wide Variation

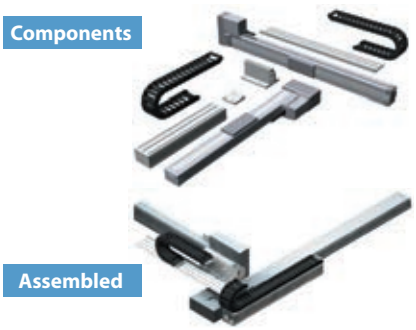
The engineers at IAI have worked extensively to produce the highest quality products at affordable prices. The new IK Series lineup offers many variations and can be easily integrated and prepared to your specific needs.

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 RoboCylinder IK Series multi-axes kit includes everything needed for fast and easy assembly.



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!

IAI
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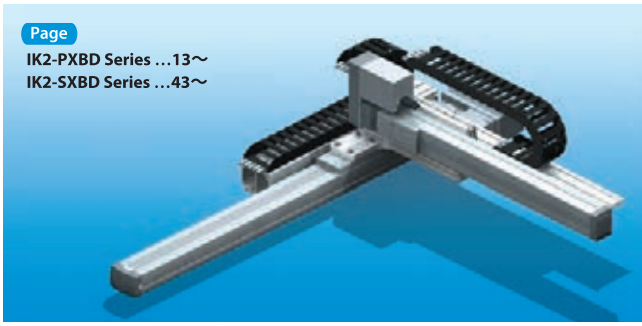
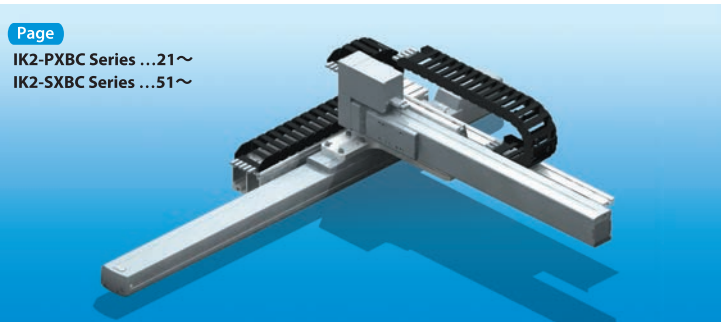
Wide-ranging Lineup
Lineup of IK Series

Combinations

XYB (XY, base mount)





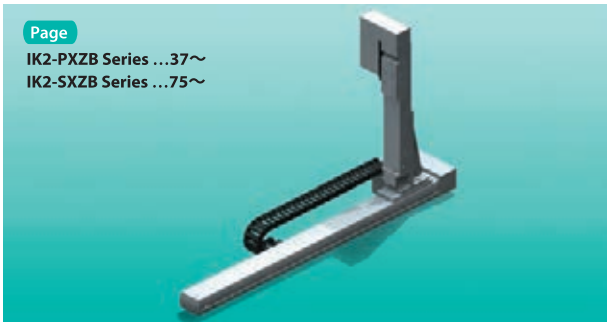
•IK2-PXBD Series •IK2-SXBD Series

		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

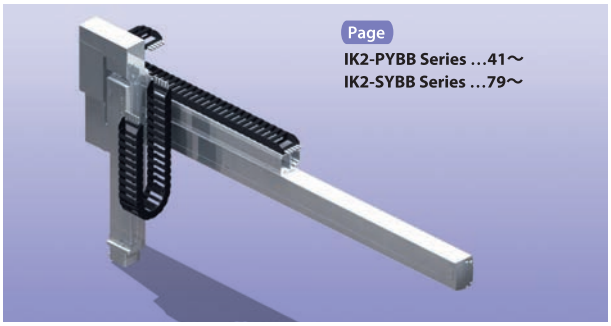
XZ (Upright type)



•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	1000mm	250mm	1.5kg
	X high-speed/Z medium-speed type	1000mm	250mm	2.5kg
	X high-speed/Z low-speed type	1000mm	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)

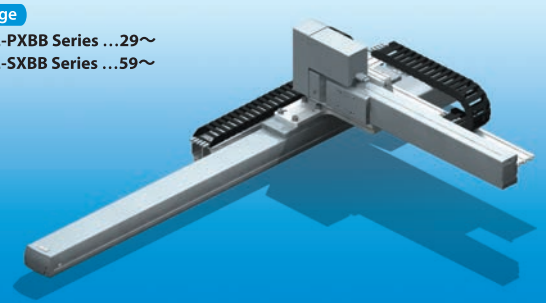


•IK2-PYBB Series •IK2-SYBB Series

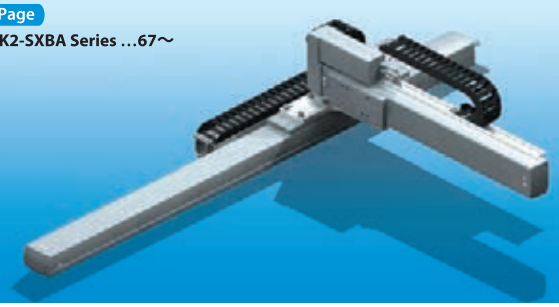
		Maximum X-axis stroke	Maximum Z-axis stroke	Load capacity at maximum Y-axis stroke
Single-slider	X high-speed/Z high-speed type	1000mm	300mm	1.5kg
	X high-speed/Z medium-speed type	1000mm	300mm	3.0kg
	X high-speed/Z low-speed type	1000mm	300mm	5.5kg

IK2-P Series / IK3-P Series	RoboCylinder RCP2 combinations based on pulse motor
IK2-S Series / IK3-S Series	RoboCylinder 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

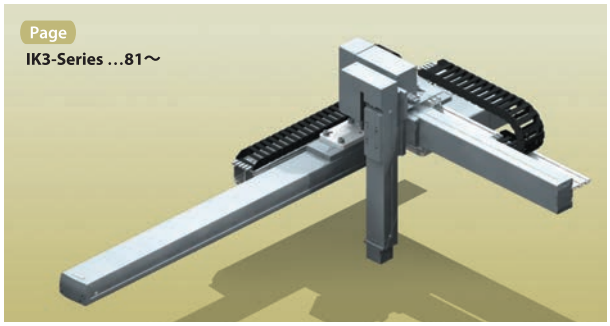
		Maximum X-axis stroke	Maximum Y-axis stroke	Load capacity at maximum Y-axis stroke
Single-slider	High-speed type	1000mm	300mm	6.0kg
	Medium-speed type	1000mm	300mm	8.0kg
Double-slider	High-speed type	800mm	400mm	5.5kg
	Medium-speed type	800mm	400mm	10.5kg

• IK2-SXBA Series

		Maximum X-axis stroke	Maximum Y-axis stroke	Load capacity at maximum Y-axis stroke
Single-slider	High-speed type	1000mm	350mm	7.0kg
	Medium-speed type	1000mm	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	1000mm	300mm	200mm	1.0kg
	X high-speed/Y high-speed/Z medium-speed type	1000mm	300mm	200mm	2.0kg
	X high-speed/Y high-speed/Z low-speed type	1000mm	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

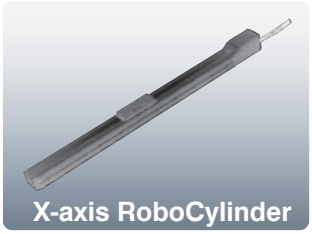
	Axis 1	Axis 2
IK2-PXBD IK2-SXBD	RCP2-SS7☐ RCS2-SS7☐	RCP2-SA5R RCS2-SA5R
IK2-PXBC IK2-SXBC	RCP2-SS7☐ RCS2-SS7☐	RCP2-SA6R RCS2-SA6R
IK2-PXBB IK2-SXBB	RCP2-SS8☐ RCS2-SS8☐ (100W)	RCP2-SA7R RCS2-SA7R
IK2-SXBA	RCS2-SS8☐ (150W)	RCS2-SS8R (100W)
IK2-PXZB IK2-SXZB	RCP2-SS8☐ RCS2-SS8☐ (100W)	RCP2-SA7R RCS2-SA7R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

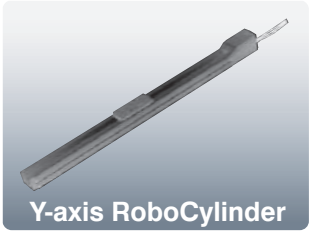
3-axis combination – Axis configurations

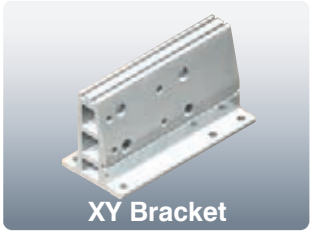
	X axis	Y axis	Z axis
IK3	RCP2-SS8☐ RCS2-SS8☐ (100W)	RCP2-SA7R RCS2-SA7R	RCP2-SA6R RCS2-SA6R

IK Series

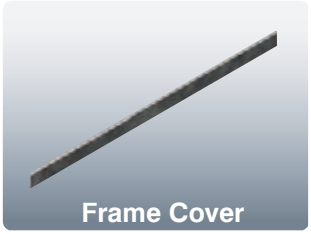
The IK Series is a set that includes the following components needed to assemble the cartesian robot.


X-axis RoboCylinder

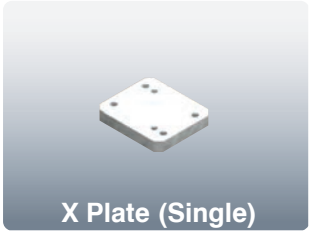

Y-axis RoboCylinder

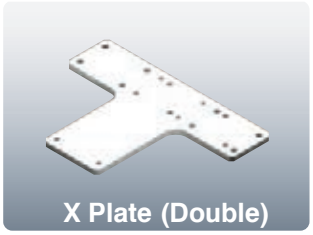

XY Bracket

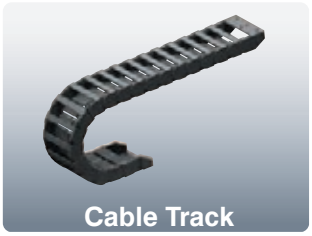

X Guide Rail

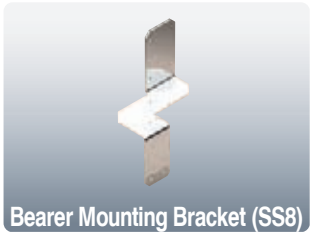

Frame Cover

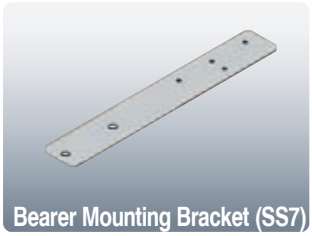

Y Guide Rail

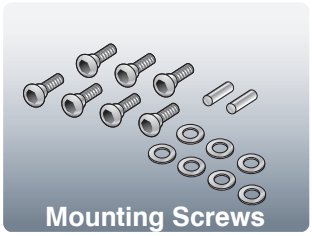

X Plate (Single)


X Plate (Double)

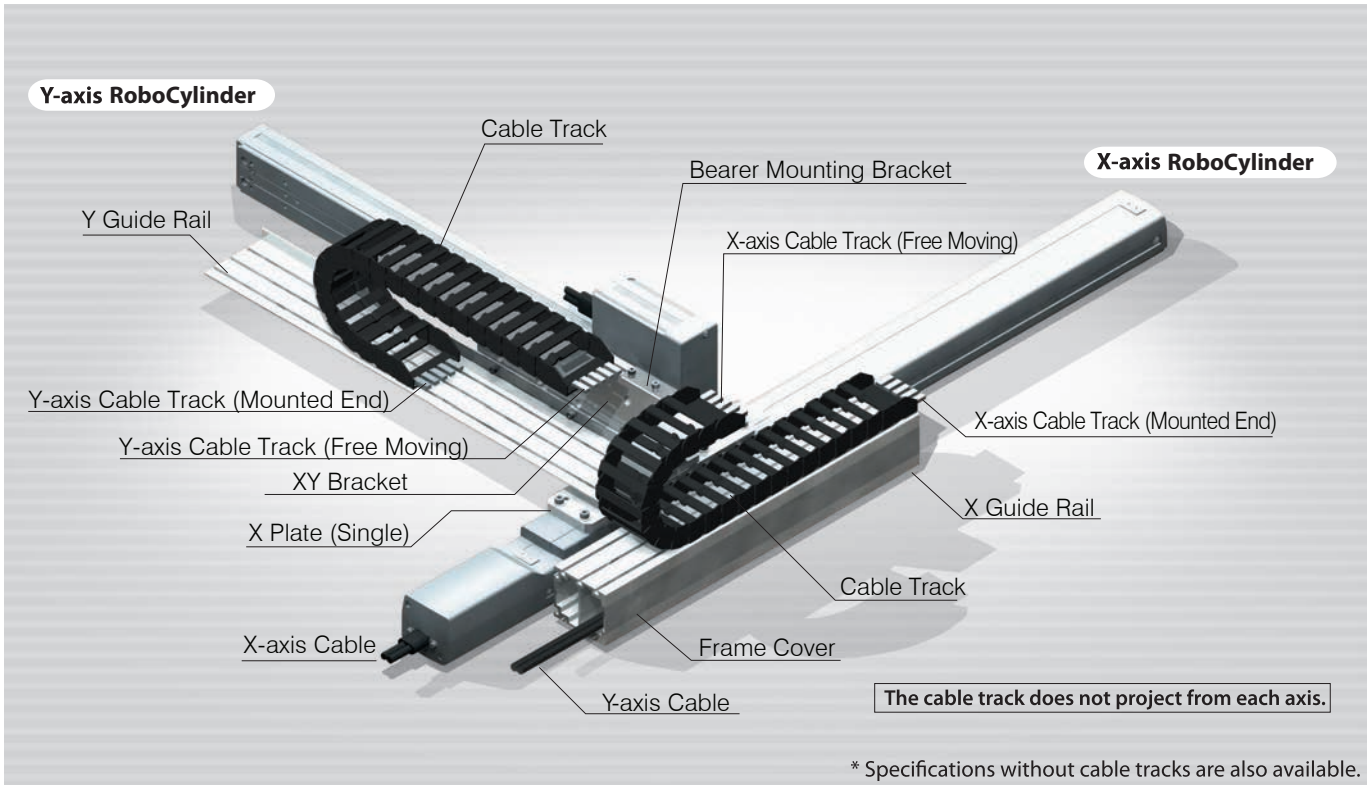

Cable Track


Bearer Mounting Bracket (SS8)


Bearer Mounting Bracket (SS7)


Mounting Screws

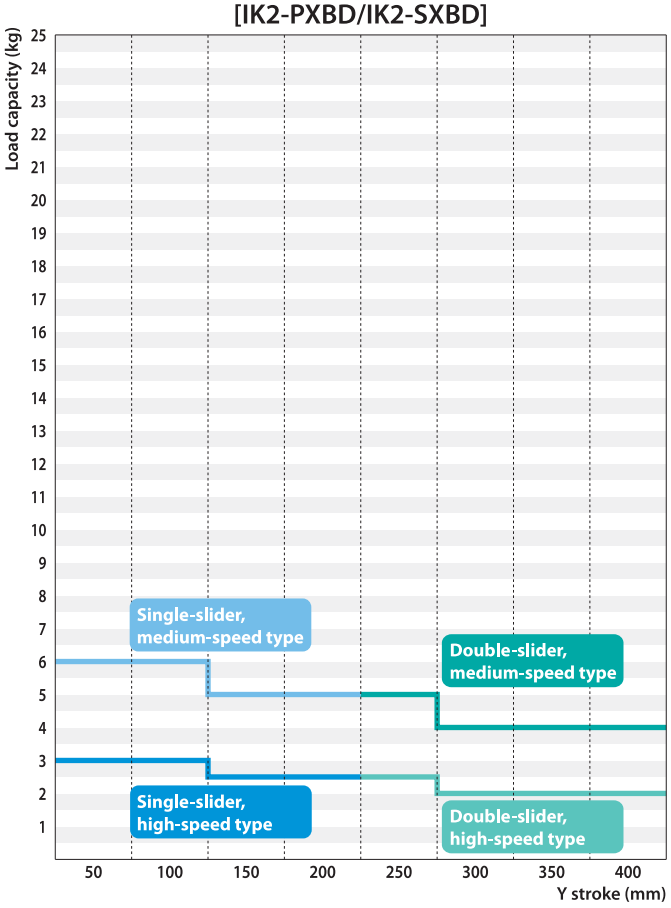
Note: The above images are provided for reference purposes only.
The actual components may vary depending on the combination type, direction, etc.



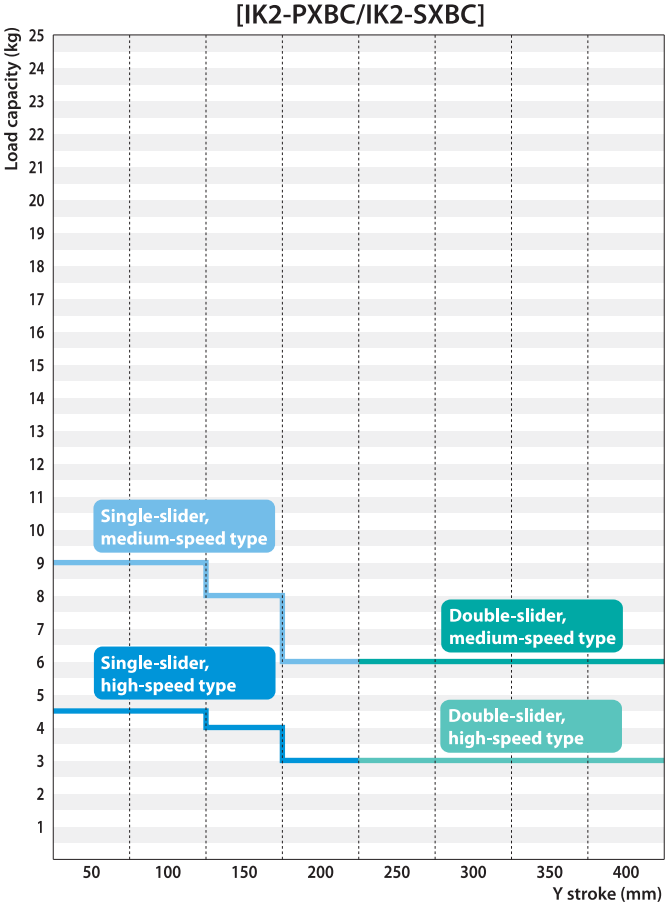
* Specifications without cable tracks are also available.

Load Capacity Graphs for XYB Combinations

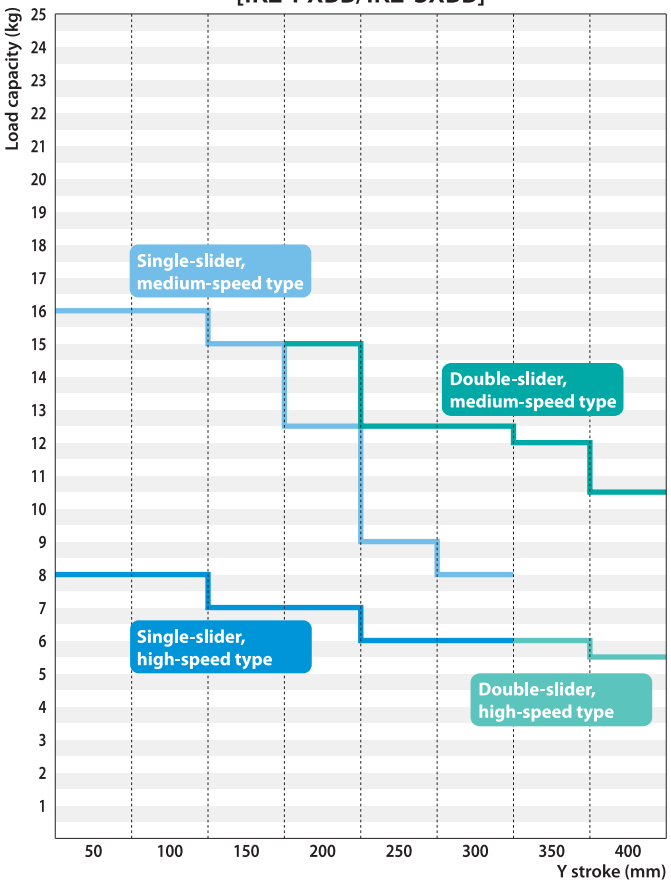
[IK2-PXBD/IK2-SXBD]



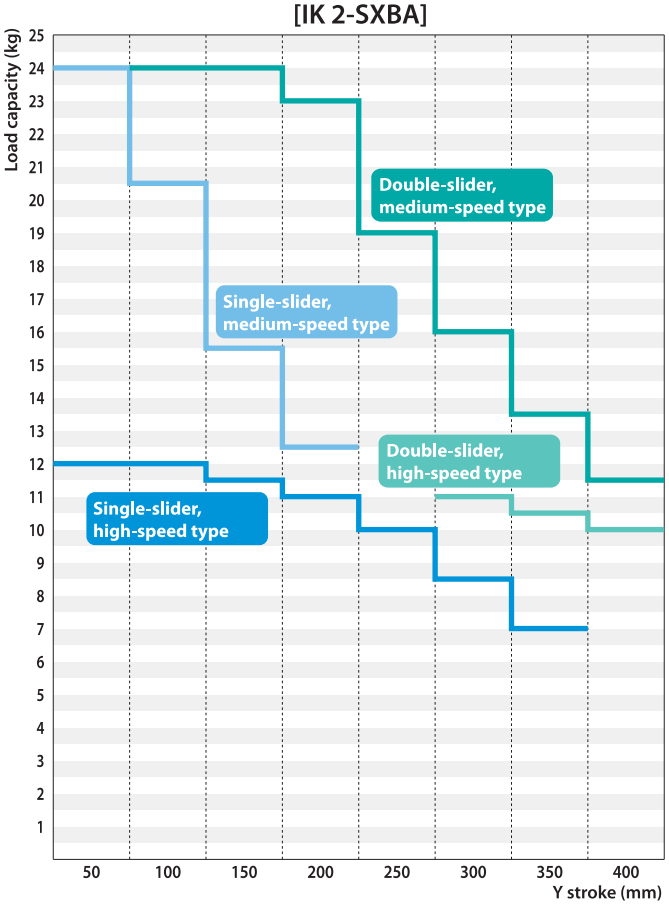
[IK2-PXBC/IK2-SXBC]



[IK2-PXBB/IK2-SXBB]

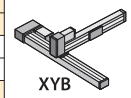
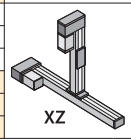


[IK 2-SXBA]



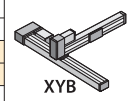
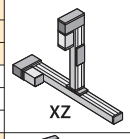
RCP2 Combination Unit List for 2-axis Configuration (XYB)

(☐ 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	
	IK2-PXBD1☐HMS				12	350			
15	IK2-PXBD1☐HHD		SS7R Reversed, double-slider		12	400	50–450		
	IK2-PXBD1☐HMD				12	350			
17	IK2-PXBD2☐HHS		SS7C Straight		12	400	50–600		
	IK2-PXBD2☐HMS				12	350			
19	IK2-PXBD2☐HHD		SS7C Straight, double-slider		12	400	50–450		
	IK2-PXBD2☐HMD				12	350			
21	IK2-PXBC1☐HHS		SS7R Reversed		12	400	50–600	SA6R Reversed	
	IK2-PXBC1☐HMS				12	250			
23	IK2-PXBC1☐HHD		SS7R Reversed, double-slider		12	400	50–450		
	IK2-PXBC1☐HMD				12	250			
25	IK2-PXBC2☐HHS		SS7C Straight		12	400	50–600		
	IK2-PXBC2☐HMS				12	250			
27	IK2-PXBC2☐HHD		SS7C Straight, double-slider		12	400	50–450		
	IK2-PXBC2☐HMD				12	250			
29	IK2-PXBB1☐HHS		SS8R Reversed	56☐	20	250	50–1000	SA7R Reversed	
	IK2-PXBB1☐MMS				10	125			
31	IK2-PXBB1☐HHD		SS8R Reversed, double-slider		20	250	50–800		
	IK2-PXBB1☐MMD				10	125			
33	IK2-PXBB2☐HHS		SS8C Straight		20	250	50–1000		
	IK2-PXBB2☐MMS				10	125			
35	IK2-PXBB2☐HHD		SS8C Straight, double-slider		20	250	50–800		
	IK2-PXBB2☐MMD				10	125			
37	IK2-PXZB1☐HHS	 XZ	SS8R Reversed	56☐	20	250	50–1000	SA7R Reversed	
	IK2-PXZB1☐HMS								
	IK2-PXZB1☐HLS								
39	IK2-PXZB1☐HHD		SS8R Reversed, double-slider				50–800		
	IK2-PXZB1☐HMD								
	IK2-PXZB1☐HLD								
41	IK2-PYBB1☐HHS	 YZB	SS8R Reversed				50–1000		
	IK2-PYBB1☐HMS								
	IK2-PYBB1☐HLS								

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	
	IK2-SXBD1☐HMS				12	600			
45	IK2-SXBD1☐HHD		SS7R Reversed, double-slider		12	600	50–450		
	IK2-SXBD1☐HMD				12	600			
47	IK2-SXBD2☐HHS		SS7C Straight		12	600	50–600		
	IK2-SXBD2☐HMS				12	600			
49	IK2-SXBD2☐HHD		SS7C Straight, double-slider		12	600	50–450		
	IK2-SXBD2☐HMD				12	600			
51	IK2-SXBC1☐HHS		SS7R Reversed		12	600	50–600	SA6R Reversed	
	IK2-SXBC1☐MMS				6	300			
53	IK2-SXBC1☐HHD		SS7R Reversed, double-slider		12	600	50–450		
	IK2-SXBC1☐MMD				6	300			
55	IK2-SXBC2☐HHS		SS7C Straight		12	600	50–600		
	IK2-SXBC2☐MMS				6	300			
57	IK2-SXBC2☐HHD		SS7C Straight, double-slider		12	600	50–450		
	IK2-SXBC2☐MMD				6	300			
59	IK2-SXBB1☐HHS		SS8R (100W) Reversed	100	20	1000	50–1000	SA7R Reversed	
	IK2-SXBB1☐MMS				10	500			
61	IK2-SXBB1☐HHD		SS8R (100W) Reversed, double-slider		20	1000	50–800		
	IK2-SXBB1☐MMD				10	500			
63	IK2-SXBB2☐HHS		SS8C (100W) Straight		20	1000	50–1000		
	IK2-SXBB2☐MMS				10	500			
65	IK2-SXBB2☐HHD		SS8C (100W) Straight, double-slider		20	1000	50–800		
	IK2-SXBB2☐MMD				10	500			
67	IK2-SXBA1☐HHS		SS8R (150W) Reversed	150	20	1000	50–1000	SS8R (100W) Reversed	
	IK2-SXBA1☐MMS				10	500			
69	IK2-SXBA1☐HHD		SS8R (150W) Reversed, double-slider		20	1000	50–800		
	IK2-SXBA1☐MMD				10	500			
71	IK2-SXBA2☐HHS		SS8C (150W) Straight		20	1000	50–1000		
	IK2-SXBA2☐MMS				10	500			
73	IK2-SXBA2☐HHD		SS8C (150W) Straight, double-slider		20	1000	50–800		
	IK2-SXBA2☐MMD				10	500			
75	IK2-SXZB1☐HHS	 XZ	SS8R (100W) Reversed	100	20	1000	50–1000	SA7R Reversed	
	IK2-SXZB1☐HMS								
	IK2-SXZB1☐HLS								
77	IK2-SXZB1☐HHD		SS8R (100W) Reversed, double-slider				50–800		
	IK2-SXZB1☐HMD								
	IK2-SXZB1☐HLD								
79	IK2-SYBB1☐HHS	 YZB	SS8R (100W) Reversed				50–1000		
	IK2-SYBB1☐HMS								
	IK2-SYBB1☐HLS								

Axis 1: Mount axis **Axis 2:** Axis installed on axis 1 **Axis 3:** Axis installed on axis 2 **Cable wiring 1:** Wiring for axis 2 **Cable wiring 2:** Wiring for axis 3

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				
	12	600	250–400					2.5	2.0	2.0	2.0
	6	300	250–400					5.0	4.0	4.0	4.0
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				
	12	600	250–400					3.0	3.0	3.0	3.0
	6	300	250–400					6.0	6.0	6.0	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		
	16	450	350–400							6.0	5.5
	8	220	200–400				15.0	12.5	12.5	12.0	10.5
56□	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		
	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 1: Mount axis **Axis 2:** Axis installed on axis 1 **Axis 3:** Axis installed on axis 2 **Cable wiring 1:** Wiring for axis 2 **Cable wiring 2:** Wiring for axis 3

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				
	12	800	250–400					2.5	2.0	2.0	2.0
	6	400						5.0	4.0	4.0	4.0
30	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
	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		
	16	800	350–400							6.0	5.5
	8	400	200–400				15.0	12.5	12.5	12.0	10.5
100	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
	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	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			
	4	200		8.0	7.0	5.0	4.0	3.0			
	16	800	300						1.5		
	8	400							3.0		
	4	200	150–300			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

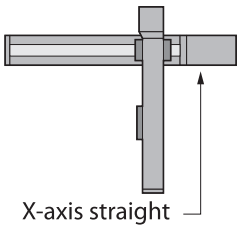
[1] Adopting a servo motor.

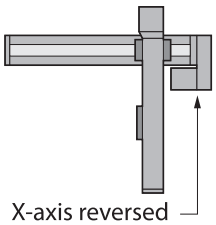
[2] Able to operate at a constant thrust regardless of the speed.

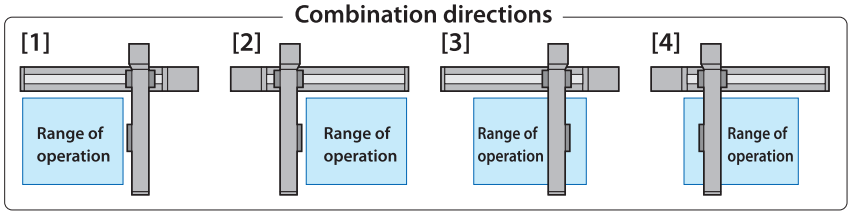
[3] Able to move at higher speeds than the RCP2.

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].

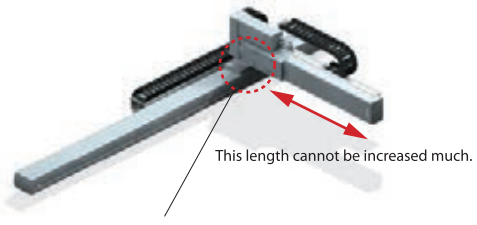


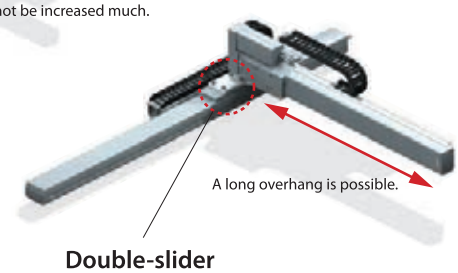




3. Differences between Single-slider and Double-slider Types

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.





Y axis				Z axis					Load capacity by Y-axis stroke							
Motor size	Lead (mm)	Maximum speed (mm/sec)	Stroke (mm)	Type	Motor size	Lead (mm)	Maximum speed (mm/sec)	Stroke (mm)	50	100	150	200	250	300	350	400
56□	16	420	50–300	SA6R Reversed	42□	12	500	50–200	1.0							
						6	250		2.0							
						3	125		4.0							
			350–400			12	500								1.0	
						6	250								2.0	
						3	125								4.0	

Y axis				Z axis					Load capacity by Y-axis stroke							
Motor output (W)	Lead (mm)	Maximum speed (mm/sec)	Stroke (mm)	Type	Motor output (W)	Lead (mm)	Maximum speed (mm/sec)	Stroke (mm)	50	100	150	200	250	300	350	400
60	16	800	50–300	SA6R Reversed	30	12	800	50–200	1.0							
						6	400		2.0							
						3	200		4.0							
			350–400			12	800								1.0	
						6	400								2.0	
						3	200								4.0	

Explanation of Items Comprising Model Name

[IK Series, 2-axis combination unit]

IK2–□□□□□□–□–□□–□□–□□–□–□–□–□–□

[1] [2] [3] [4] [5] [6] [7] [8] [9] [10] [11] [14] [15] [16] [17] [18]

[IK Series, 3-axis combination unit]

IK3–□□□□□□–□–□□–□□–□□–□□–□–□–□–□–□

[1] [2] [3] [4] [5] [6] [7] [8] [9] [10] [11] [12] [13] [14] [15] [16] [17] [18]

[1]Axis configuration

Code	Model
P	RCP2
S	RCS2

[2]Combined shape

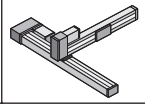
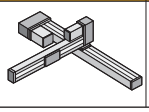
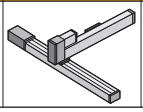
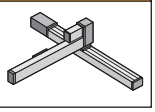
Code	Combined shape	Name
XB	XYB	XY, base mount
XZ	XZ	Upright type
YB	YZB	Cross type, base mount
BB	XYB+ZB	XYB+Z, base mount

[3]Configuration type

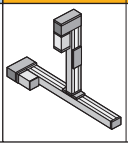
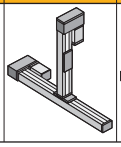
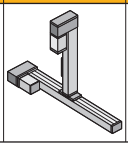
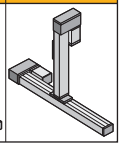
Code	Axis 1	Axis 2	Axis 3
A1	SS8R (150W)	SS8R (100W)	
A2	SS8C (150W)	SS8R (100W)	
B1	SS8R (100W)	SA7R	
B2	SS8C (100W)	SA7R	
C1	SS7R	SA6R	
C2	SS7C	SA6R	
D1	SS7R	SA5R	
D2	SS7C	SA5R	
G1	SS8R (100W)	SA7R	SA6R

[4]Combination directions

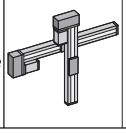
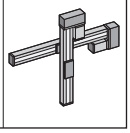
XYB (XY, base mount) *Only 1 and 2 are supported if the X-axis is of reversed type.

Code	1	2	3	4
Shape				

XZ (Upright type)

Code	1	2	3	4
Shape				

YZB (Cross type, base mount)

Code	1	2
Shape		

The combination directions supported by the 3-axis configuration (XYB+Z-axes, base mount) are the same as those of the XYB configuration shown above.

[5]Speed type

Code	Type		
HH	High-speed	High-speed	
HM	High-speed	Medium-speed	
HL	High-speed	Low-speed	
MM	Medium-speed	Medium-speed	
HHH	High-speed	High-speed	High-speed
HHM	High-speed	High-speed	Medium-speed
HHL	High-speed	High-speed	Low-speed

[6]X-Axis Slider Type

Code	Type
S	Single
D	Double

[7]Encoder Type

Code	Type
I	Incremental
A	Absolute

[8]Axis 1 stroke (cm)

5:50mm–100:1000mm
(Can be set in 50-mm increments)

[10]Axis 2 stroke (cm)

5:50mm–40:400mm
(Can be set in 50-mm increments)

[12]Axis 3 stroke (cm)

5:50mm–20:200mm
(Can be set in 50-mm increments)

[9]Axis 1 options

Code	Description
NM	Reversed-home specification
SR	Slider roller specification

[11]Axis 2 options

Code	Description
B	Brake
NM	Reversed-home specification
SR	Slider roller specification

[13]Axis 3 options

Code	Description
B	Brake
NM	Reversed-home specification
SR	Slider roller specification

Axis 1: Mount axis
Axis 2: Axis installed on axis 1
Axis 3: Axis 3: Axis installed on axis 2
Cable wiring 1: Wiring for axis 2
Cable wiring 2: Wiring for axis 3

[14]Applicable controller

Code	Model
T1	XSEL-KE/KET
T2	SSEL, XSEL-P/Q, MSCON
P1	PSEL, ROBONET
P3	MSEP

[15]Cable length

Code	Description
1L	1m
3L	3m
5L	5m
□L	□m

[16]Cable wiring 1

Code	Description
N	Cable only
CT	With cable track

[17]Cable wiring 2

Code	Description
N	Cable only
CT	With cable track

[18]Shipping configuration

Code	Description
K	Individual components (kit)

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 (Field network type: 768)	DC24V	Refer to the PCON-CA Brochure
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. 91
SCON		A positioning controller for the RCS2 series.	512 (Field network type: 768)	Single-phase 230 VAC	Refer to the SCON-CA Brochure
SSEL		A program controller for the RCS2 series. Can be programmed using SEL language. 1-axis and 2-axis types are available.	20000	Single-phase 230 VAC	P. 101
MSEP		Able to operate 1 to 8 RCP2 axes via a field network. Less hassle of wiring and installation.	256	DC24V	P. 111
MSCON		Able to operate 1 to 6 RCS2 axes via a field network. Less hassle of wiring and installation.	256	Single-phase 230 VAC	Refer to the MSCON Brochure
XSEL		For the RCS2 series. 3-/4-axis and 5-/6-axis (only P/Q types) configurations are supported. KE and P type: standard version KET and Q type: global version (conforming to safety category 4)	20000 (XSEL-KE/KET: 3000)	Single-/Three-phase 230 VAC	P. 121

All Models of the RoboCylinder Controllers support Field Network Connection

Features

1 The controller can be connected directly to major networks

- ProfiBus / ProfiNet
- DeviceNet
- CC-Link
- Ethernet / Ethernet-IP
- EtherCAT

2 To control the actuator, all you need is to turn the position number I/O ON via network, and the actuator will move to the specified position

Movement by position number specification
The actuator is operated by turning the I/O signals ON/OFF to specify desired coordinate numbers (position numbers) that have been input to the controller beforehand

3 The PCON, SCON, MSEP and MSCON controllers can operate actuators based on direct specification of target positions as numerical values

Movement by direct numerical specification
The coordinates of the target position are sent via network to move the actuator to position

Models

Controller Type	Positioner Type			Program Type		
Controller Series	MSEP / MSCON	PCON	SCON	PSEL	SSEL	XSEL
External View						
ProfiBus Model (PR)	MSEP/MSCON-C-□-□-□-PR-0-□	PCON-CA-□-PR-0-0	SCON-CA-□-PR-0-□	PSEL-CS-□-□-PR-0-0	SSEL-CS-□-□-PR-0-□	XSEL-□-□-□-PR-□-0-□
ProfiNet Model (PRT)	MSEP-C-□-□-□-PRT-0-□	PCON-CA-□-PRT-0-0	SCON-CA-□-PRT-0-□	–	–	–
DeviceNet Model (DV)	MSEP/MSCON-C-□-□-□-DV-0-□	PCON-CA-□-DV-0-0	SCON-CA-□-DV-0-□	PSEL-CS-□-□-DV-0-0	SSEL-CS-□-□-DV-0-□	XSEL-□-□-□-DV-□-0-□
CC-Link Model (CC)	MSEP/MSCON-C-□-□-□-CC-0-□	PCON-CA-□-CC-0-0	SCON-CA-□-CC-0-□	PSEL-CS-□-□-CC-0-0	SSEL-CS-□-□-CC-0-□	XSEL-□-□-□-CC-□-0-□
Ethernet/-IP Model (ET/EP)	MSEP/MSCON-C-□-□-□-EP-0-□	PCON-CA-□-EP-0-0	SCON-CA-□-EP-0-□	–	–	XSEL-□-□-□-ET/EP-□-0-□
EtherCAT Model (EC)	MSEP/MSCON-C-□-□-□-EC-0-□	PCON-CA-□-EC-0-0	SCON-CA-□-EC-0-□	–	–	–

Note) The MSEP, MSCON, PCON and SCON are supported by PC software and teaching pendants/box of RCM-101-MW (PC software) Version 9.02 or later, CON-T/PTA (teaching pendant) Version 1.20 or later and TB-01 (teaching box) Version 2.00 or later, respectively. The PSEL, SSEL and XSEL are supported by PC software and teaching pendants/box of IA-101-X-MW (PC software) Version 7.2.7 or later, SEL-T (teaching pendant) Version 1.02 or later and TB-01 (teaching box) Version 1.00 or later, respectively.

IK2-PXBD1□□S

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

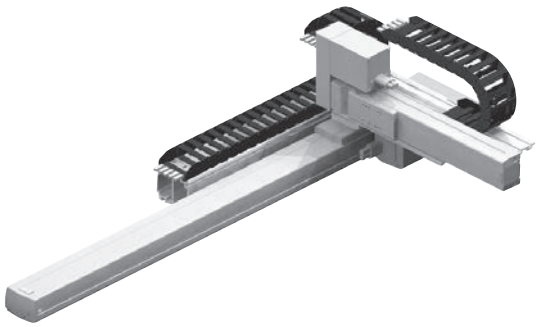
Model Details

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

IK2 — PXBD1□□S — □ — □ □ — □ □ — □ — □ — □ — □ — K

- **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
- **Controllers**: P1: PSEL; P3: MSEP
- **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)

* 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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

Cable track

Wiring 1 (Next to X-axis)	X-axis stroke	50-300	350-450
		-	-
Wiring 2 (Next to Y-axis)	Y-axis stroke	50-200	–
		-	–

Options

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

Specifications

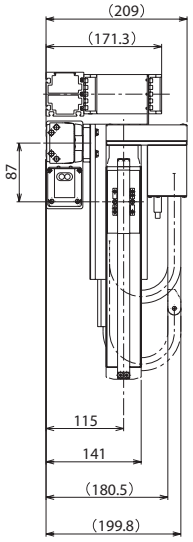
Item	X axis	Y axis
Axis model	RCP2-SS7R	RCP2-SA5R
Stroke (Can be set in 50-mm increments)	50-600mm	50-200mm
Maximum speed	HH type: 400mm/s HM type: 350mm/s	High-speed type: 600mm/s Medium-speed type: 300mm/s
Motor size	42-square pulse motor	
Ball screw lead	High-speed type: 12mm	High-speed type: 12mm 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)	

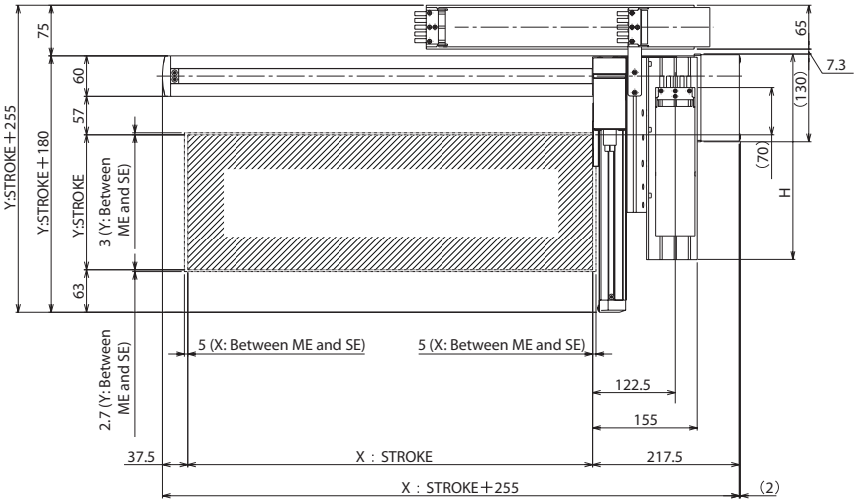
Dimensions

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

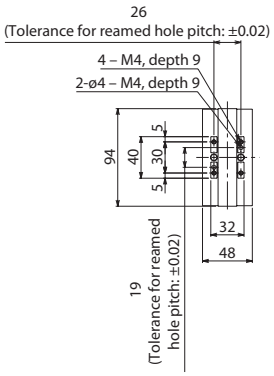
2D CAD

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.

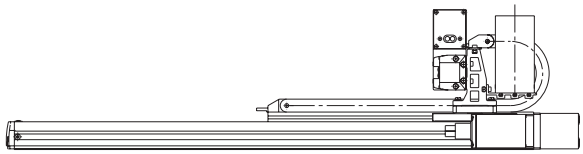




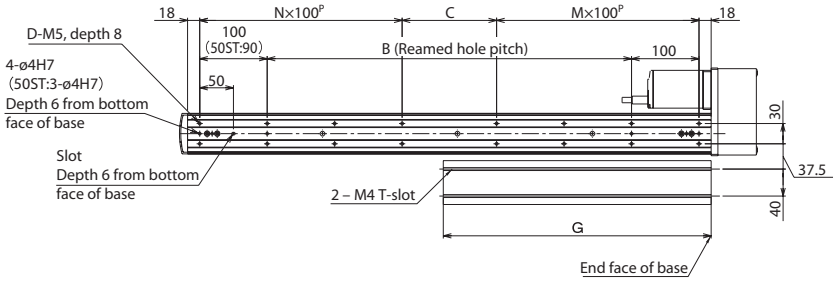
ME: Mechanical end
SE: Stroke end



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

Y: Model	50	100	150	200
H	150	200	250	300

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-PXBD1□□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 – PXBD1□□D – □ – □ □ – □ □ – □ – □ – □ – □ – K

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

Controllers
P1: PSEL
P3: MSEP

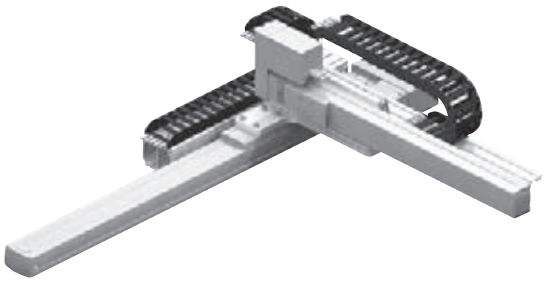
Cable length
1L: 1m
3L: 3m
5L: 5m
□L: □m

Wiring 1
N: Cable only
CT: With cable track

Wiring 2

Shipping configuration
K: Individual components (kit)

* 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)

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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

Cable track

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

Options

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

Specifications

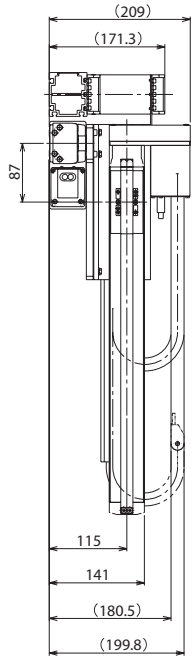
Item	X axis	Y axis
Axis model	RCP2-SS7R	RCP2-SA5R
Stroke (Can be set in 50-mm increments)	50-450mm	250-400mm
Maximum speed	HH type: 400mm/s HM type: 350mm/s	High-speed type: 600mm/s Medium-speed type: 300mm/s
Motor size	42-square pulse motor	
Ball screw lead	High-speed type: 12mm	High-speed type: 12mm 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)	

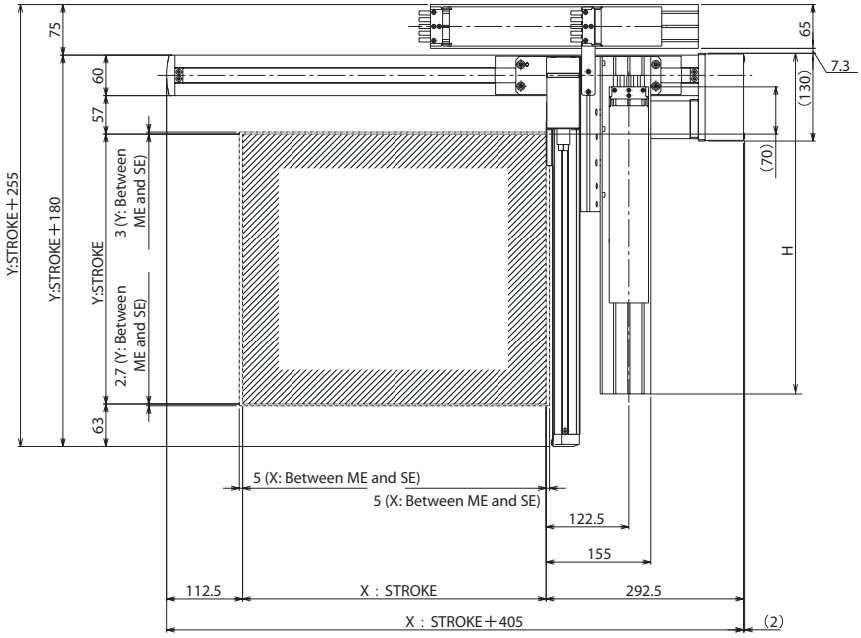
Dimensions

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

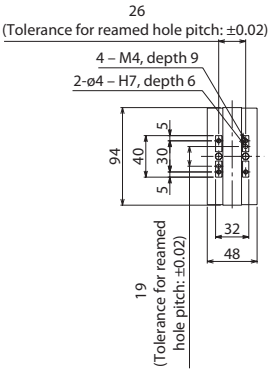
2D CAD

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.



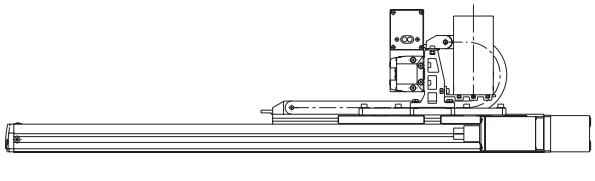


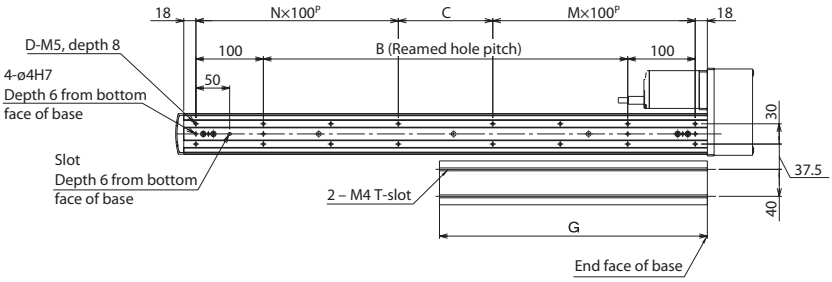
ME: Mechanical end
SE: Stroke end



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: 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

Y: Model	250	300	350	400
H	350	400	450	500

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-PXBD2□□S

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

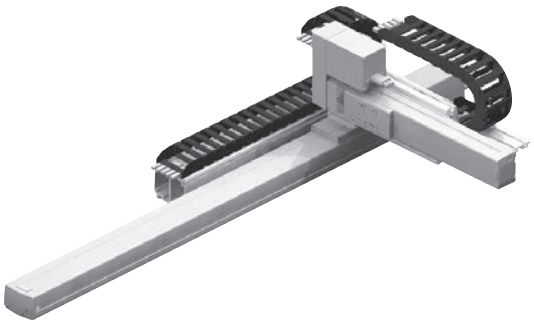
Model Details

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

IK2 — PXBD2□□S — □ — □ □ — □ □ — □ — □ — □ — □ — K

- **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
- **Controllers** P1: PSEL; P3: MSEP
- **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)

* 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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

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	–
		-	–

Options

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

Specifications

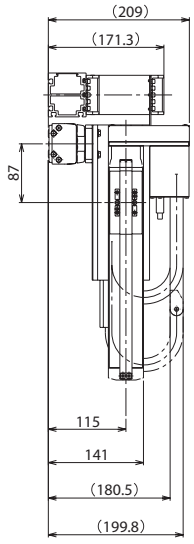
Item	X axis	Y axis
Axis model	RCP2-SS7C	RCP2-SA5R
Stroke (Can be set in 50-mm increments)	50-600mm	50-200mm
Maximum speed	HH type: 400mm/s HM type: 350mm/s	High-speed type: 600mm/s Medium-speed type: 300mm/s
Motor size	42-square pulse motor	
Ball screw lead	High-speed type: 12mm	High-speed type: 12mm 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)	

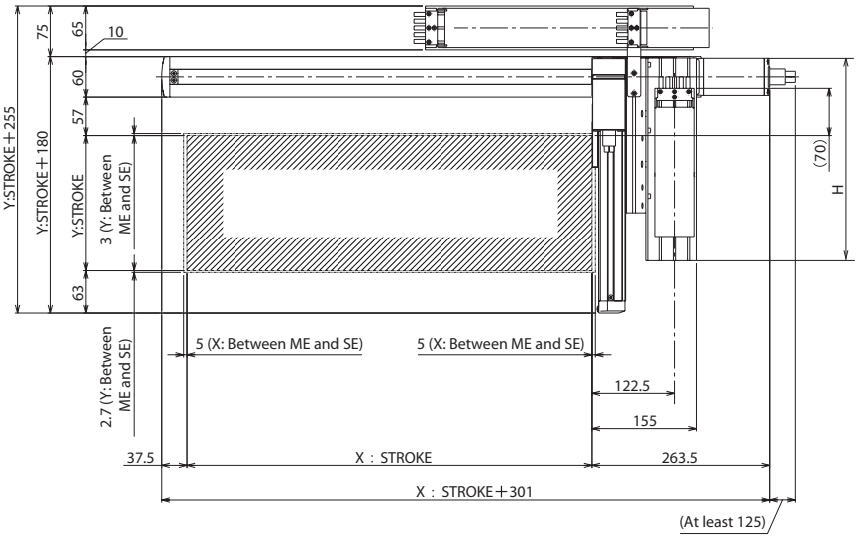
Dimensions

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

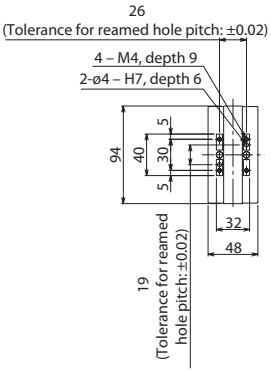
2D CAD

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.

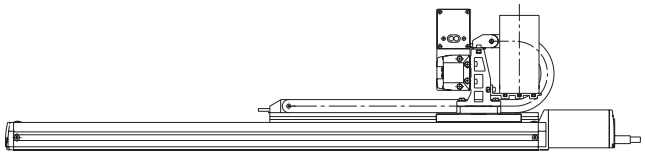




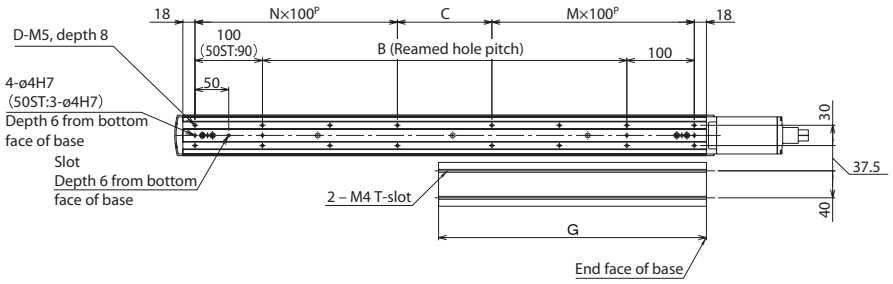
ME: Mechanical end
SE: Stroke end



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

Y: Model	50	100	150	200
H	150	200	250	300

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-PXBD2□□D

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

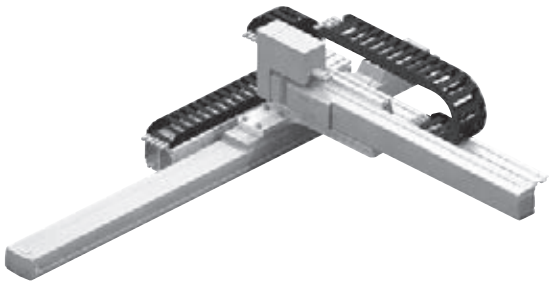
Model Details

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

IK2 – PXBD2□□D – □ – □ □ – □ □ – □ – □ – □ – □ – K

- **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
- **Controllers**: P1: PSEL; P3: MSEP
- **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)

* 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)

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

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.
** Cable length of second axis is defined by the length outside of cable track.
If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

Cable track

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

Options

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

Specifications

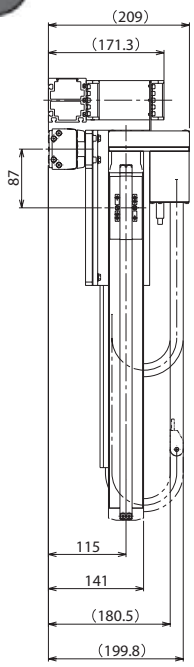
Item	X axis	Y axis
Axis model	RCP2-SS7C	RCP2-SA5R
Stroke (Can be set in 50-mm increments)	50-450mm	250-400mm
Maximum speed	HH type: 400mm/s HM type: 350mm/s	High-speed type: 600mm/s Medium-speed type: 300mm/s
Motor size	42-square pulse motor	
Ball screw lead	High-speed type: 12mm	High-speed type: 12mm 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)	

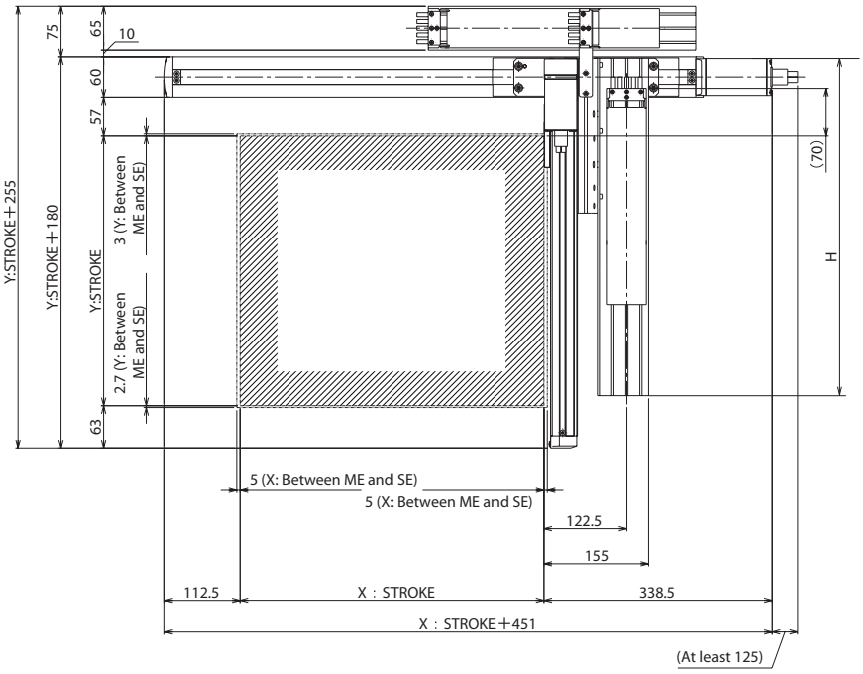
Dimensions

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

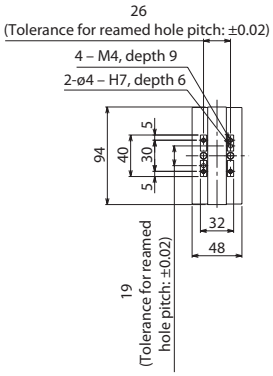
2D CAD

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.

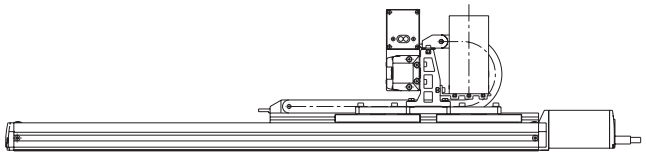




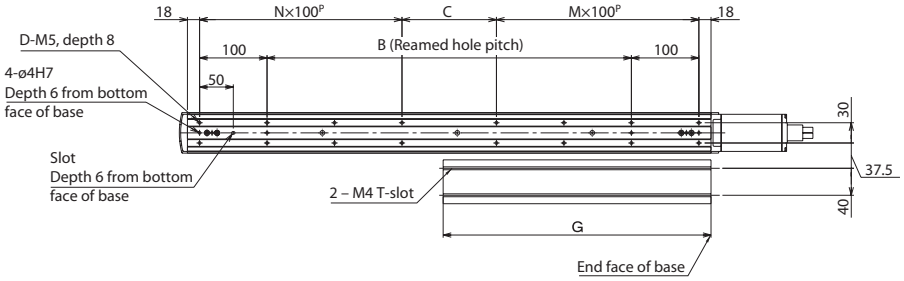
ME: Mechanical end
SE: Stroke end



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: 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

Y: Model	250	300	350	400
H	350	400	450	500

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-PXBC1□□S

RCP2 2-axis Combinations X axis: SS7R (Reversed, Single-slider)
Y axis: SA6R (Reversed)

Model Details

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

IK2 — PXBC1□□S — □ — □ □ — □ □ — □ — □ — □ — □ — K

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

Controllers
P1: PSEL
P3: MSEP

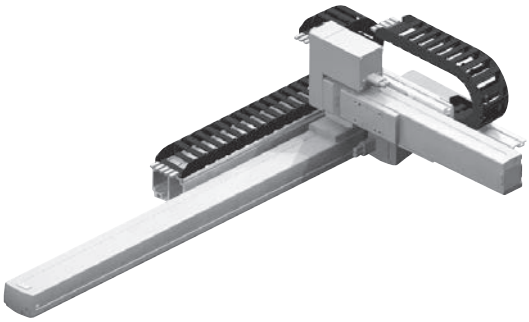
Cable length
1L: 1m
3L: 3m
5L: 5m
□L: □m

Wiring 1
N: Cable only
CT: With cable track

Wiring 2

Shipping configuration
K: Individual components (kit)

* 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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

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	–
			–

Options

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

Specifications

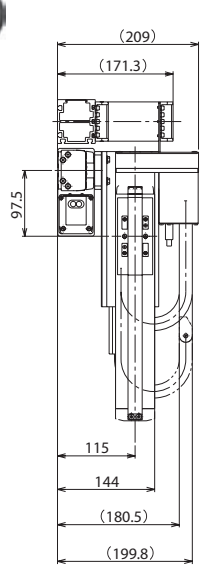
Item	X axis	Y axis
Axis model	RCP2-SS7R	RCP2-SA6R
Stroke (Can be set in 50-mm increments)	50-600mm	50-200mm
Maximum speed	HH type: 400mm/s HM type: 250mm/s	High-speed type: 600mm/s Medium-speed type: 300mm/s
Motor size	42-square pulse motor	
Ball screw lead	High-speed type: 12mm	High-speed type: 12mm 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)	

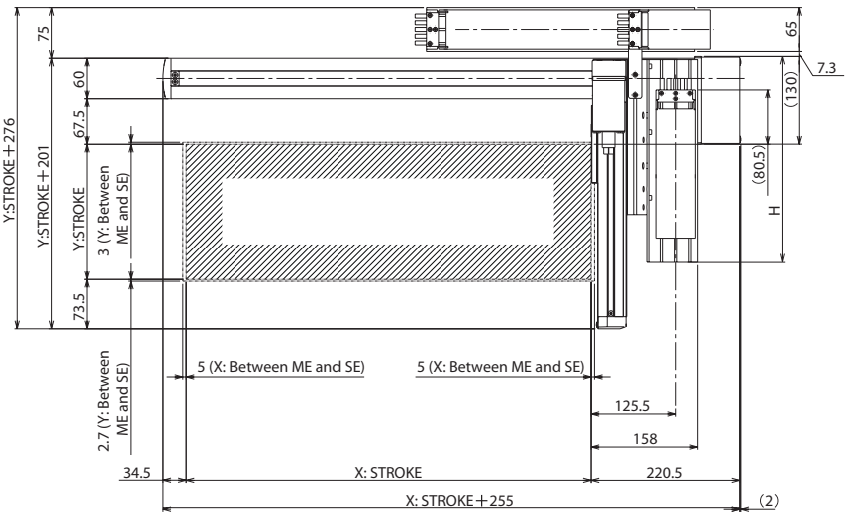
Dimensions

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

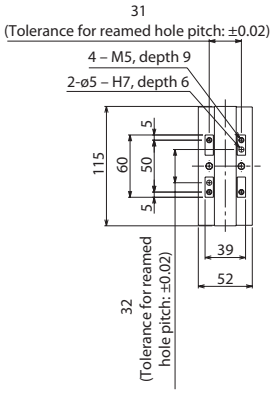
2D CAD

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.

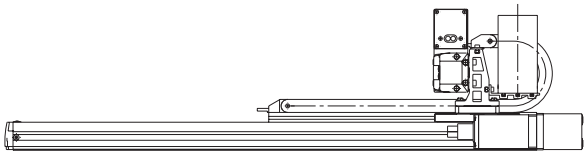




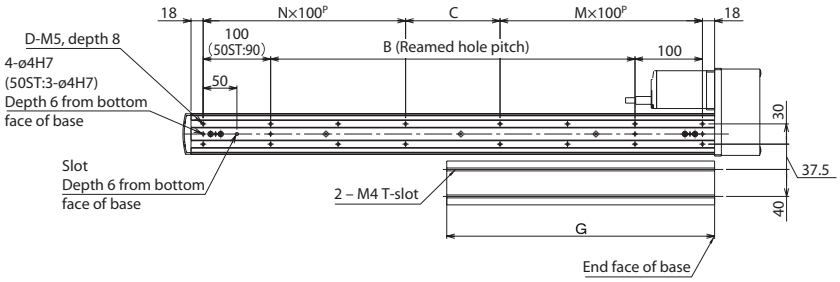
ME: Mechanical end
SE: Stroke end



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

Y: Model	50	100	150	200
H	150	200	250	300

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-PXBC1□□D

RCP2 2-axis Combinations X axis: SS7R (Reversed, 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 – PXBC1□□D – □ – □ □ – □ □ – □ – □ – □ – □ – K

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

Controllers
P1: PSEL
P3: MSEP

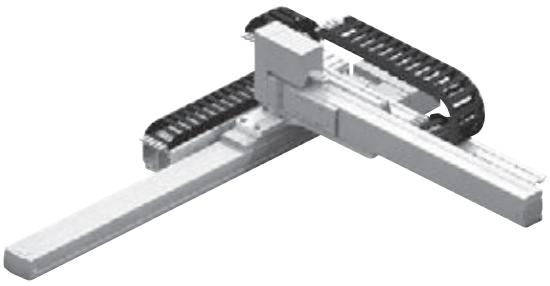
Cable length
1L: 1m
3L: 3m
5L: 5m
□L: □m

Wiring 1
N: Cable only
CT: With cable track

Wiring 2

Shipping configuration
K: Individual components (kit)

* 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)

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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

Cable track

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

Options

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

Specifications

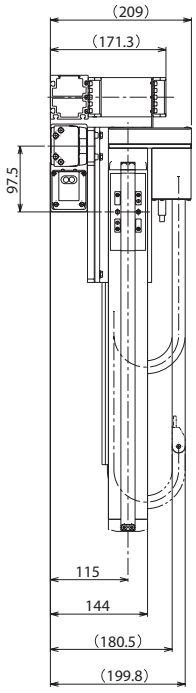
Item	X axis	Y axis
Axis model	RCP2-SS7R	RCP2-SA6R
Stroke (Can be set in 50-mm increments)	50-450mm	250-400mm
Maximum speed	HH type: 400mm/s HM type: 250mm/s	High-speed type: 600mm/s Medium-speed type: 300mm/s
Motor size	42-square pulse motor	
Ball screw lead	High-speed type: 12mm	High-speed type: 12mm 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)	

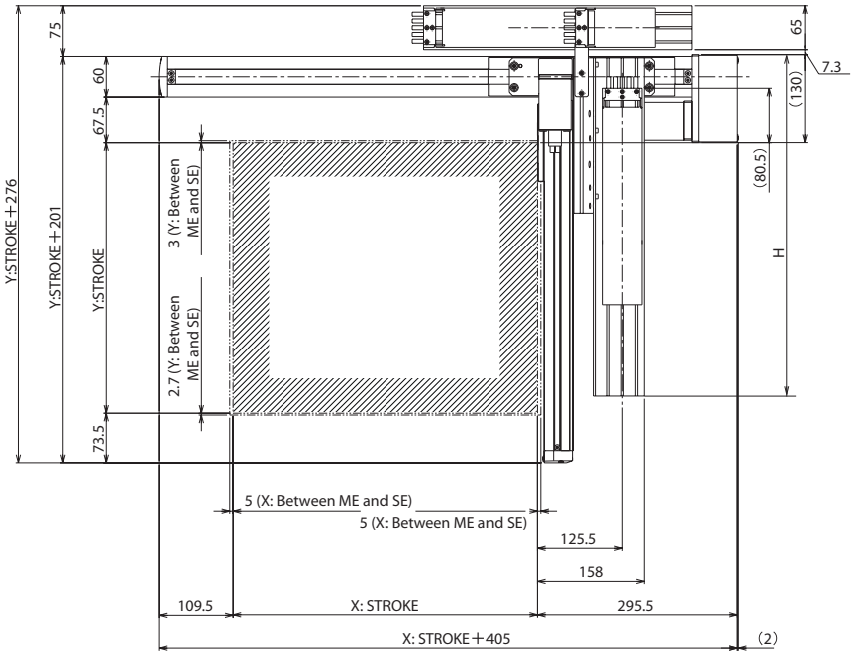
Dimensions

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

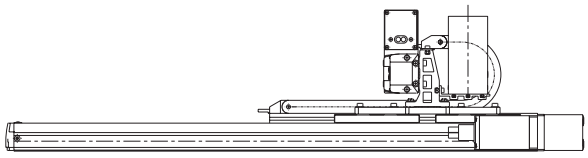
2D CAD

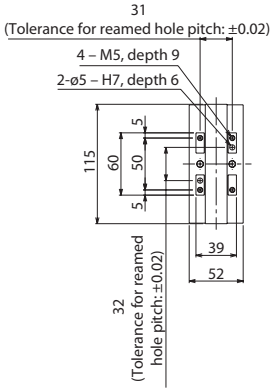
Note 1. The connected position shown in the drawing defines the home.
Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
Note 3. For details on the cable track, refer to P. 90.
Note 4. For details on the bracket on the moving end of the cable track, refer to P. 90.





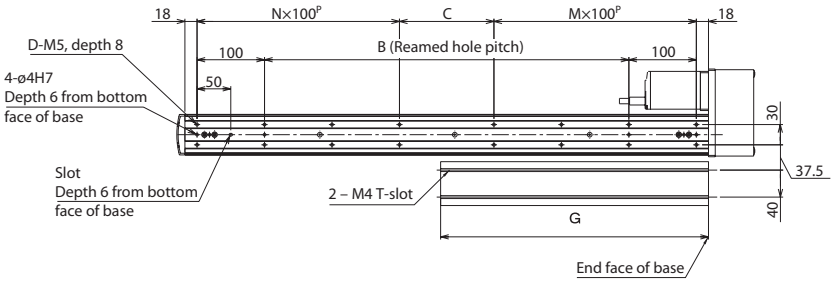
ME: Mechanical end
SE: Stroke end





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: 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

Y: Model	250	300	350	400
H	350	400	450	500

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-PXBC2□□S

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

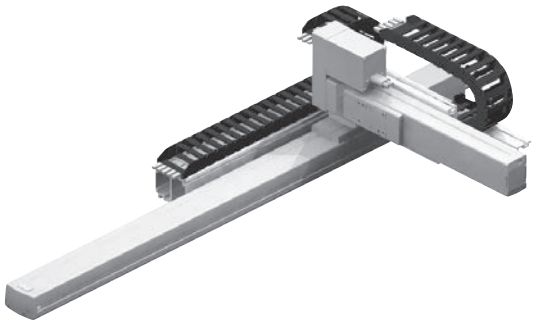
Model Details

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

IK2 — PXBC2□□S — □ — □ □ — □ □ — □ — □ — □ □ — K

- **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
- **Controllers**: P1: PSEL; P3: MSEP
- **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)

* 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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

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	–
			–

Options

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

Specifications

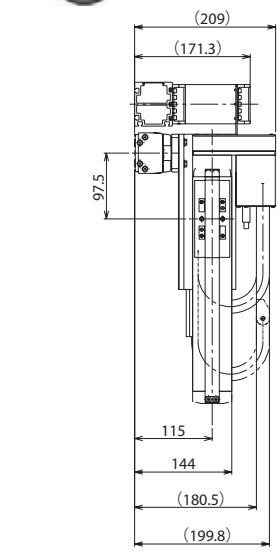
Item	X axis	Y axis
Axis model	RCP2-SS7C	RCP2-SA6R
Stroke (Can be set in 50-mm increments)	50-600mm	50-200mm
Maximum speed	HH type: 400mm/s HM type: 250mm/s	High-speed type: 600mm/s Medium-speed type: 300mm/s
Motor size	42-square pulse motor	
Ball screw lead	High-speed type: 12mm	High-speed type: 12mm 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)	

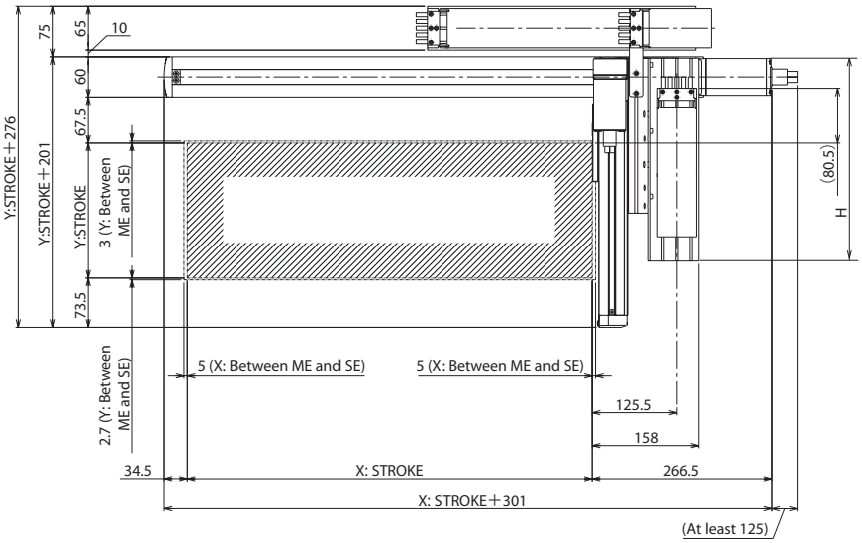
Dimensions

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

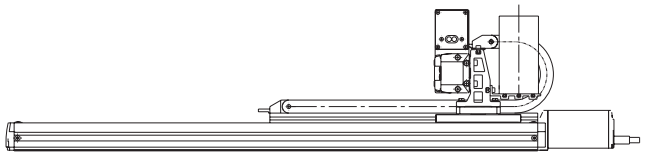
2D CAD

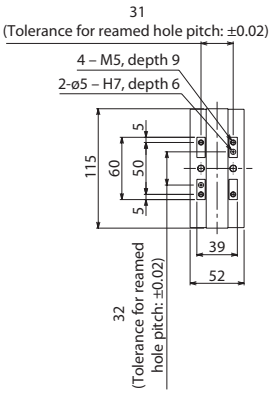
Note 1. The connected position shown in the drawing defines the home.
Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
Note 3. For details on the cable track, refer to P. 90.
Note 4. For details on the bracket on the moving end of the cable track, refer to P. 90.





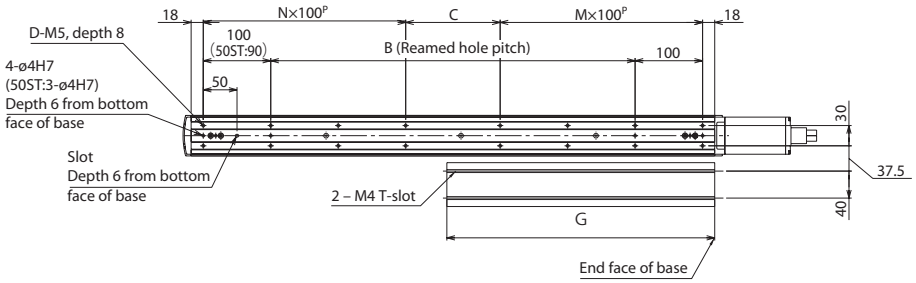
ME: Mechanical end
SE: Stroke end





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

Y: Model	50	100	150	200
H	150	200	250	300

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-PXBC2□□D

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

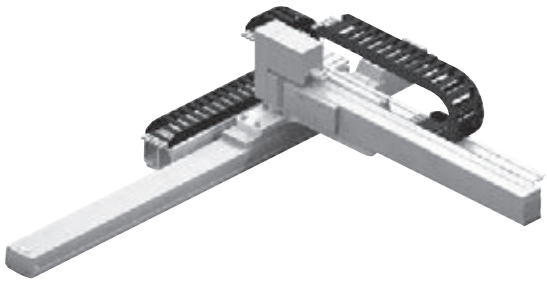
Model Details

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

IK2 – PXBC2□□D – □ – □ □ – □ □ – □ – □ – □ – □ – K

- **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
- **Controllers**: P1: PSEL; P3: MSEP
- **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)

* 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)

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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

Cable track

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

Options

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

Specifications

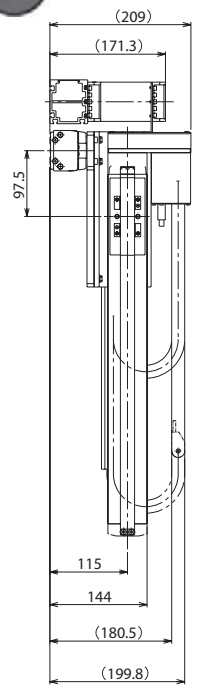
Item	X axis	Y axis
Axis model	RCP2-SS7C	RCP2-SA6R
Stroke (Can be set in 50-mm increments)	50-450mm	250-400mm
Maximum speed	HH type: 400mm/s HM type: 250mm/s	High-speed type: 600mm/s Medium-speed type: 300mm/s
Motor size	42-square pulse motor	
Ball screw lead	High-speed type: 12mm	High-speed type: 12mm 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)	

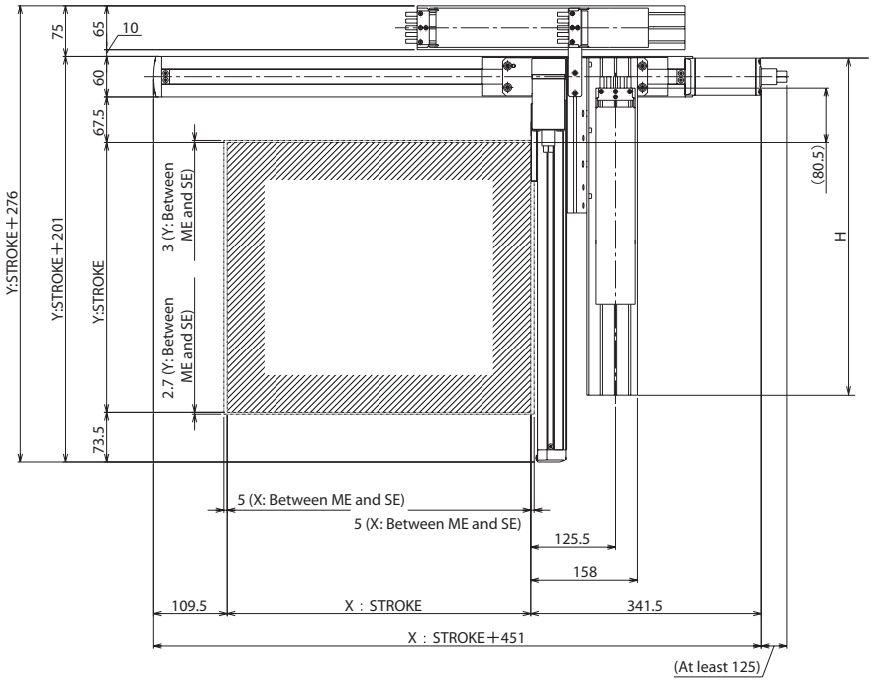
Dimensions

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

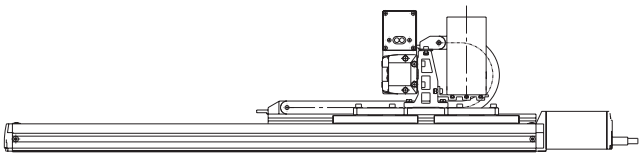
2D CAD

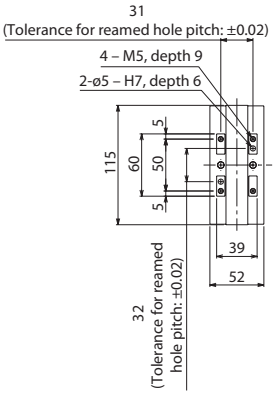
Note 1. The connected position shown in the drawing defines the home.
Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
Note 3. For details on the cable track, refer to P. 90.
Note 4. For details on the bracket on the moving end of the cable track, refer to P. 90.





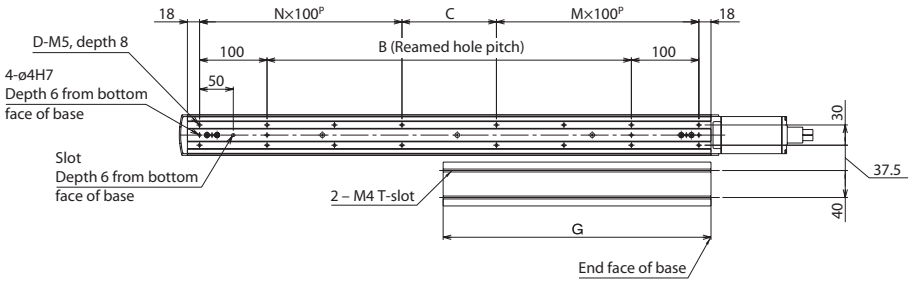
ME: Mechanical end
SE: Stroke end





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: 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

Y: Model	250	300	350	400
H	350	400	450	500

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-PXBB1□□S

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

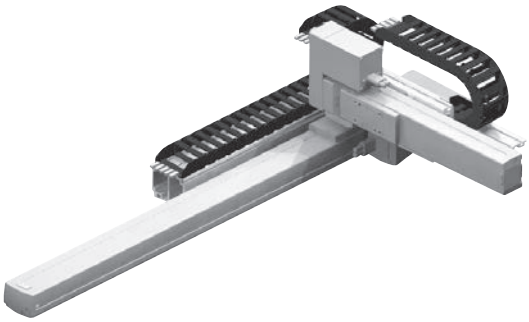
Model Details

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

IK2 — PXBB1□□S — □ — □ □ — □ □ — □ — □ — □ — □ — K

- **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
- **Controllers**: P1: PSEL; P3: MSEP
- **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)

* 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 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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

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	–	–

Options

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

Specifications

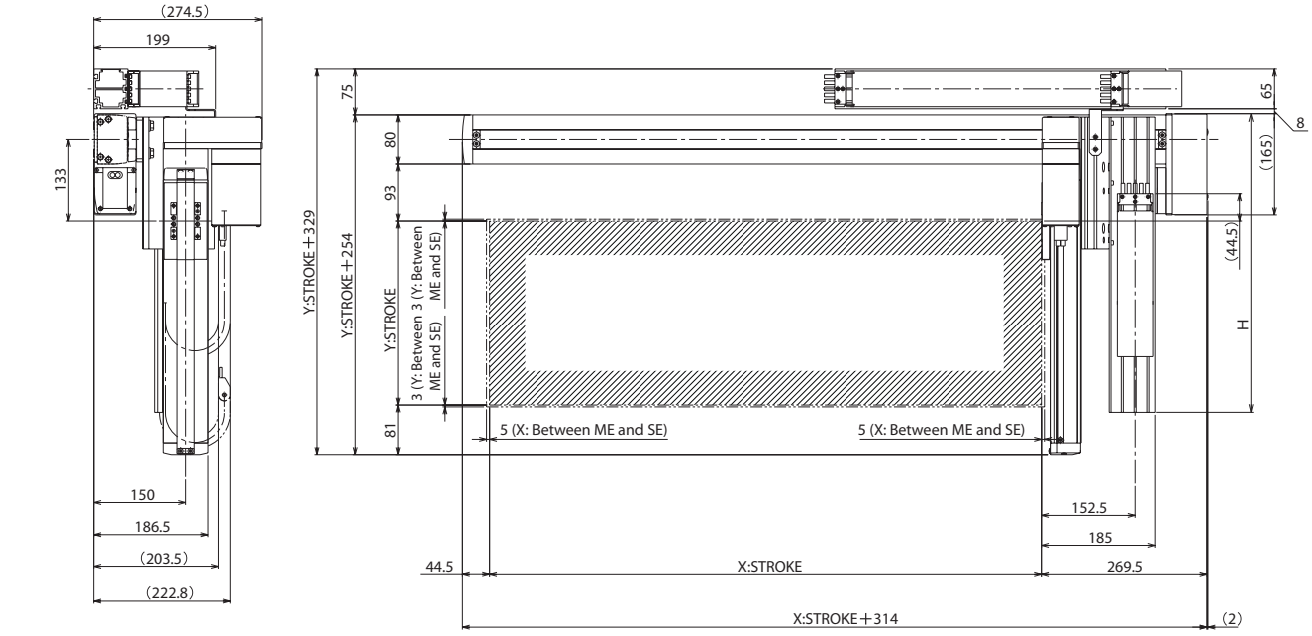
Item	X axis	Y axis
Axis model	RCP2-SS8R	RCP2-SA7R
Stroke (Can be set in 50-mm increments)	50-1000mm	50-300mm
Maximum speed	High-speed type: 250mm/s Medium-speed type: 125mm/s	High-speed type: 450mm/s Medium-speed type: 220mm/s
Motor size	56-square pulse motor	
Ball screw lead	High-speed type: 20mm Medium-speed 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

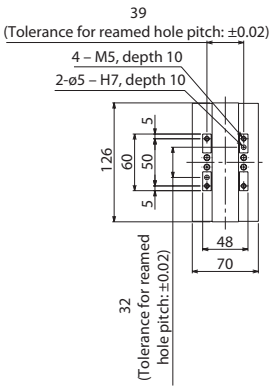
You can download CAD drawings from our website. www.robocylinder.de

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.

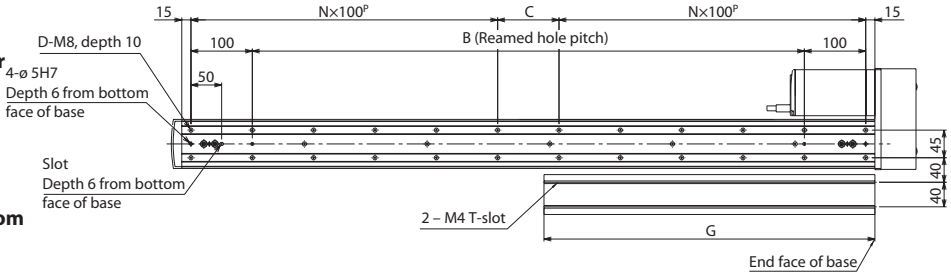


ME: Mechanical end
SE: Stroke end



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	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

Y: Model	50	100	150	200	250	300
H	231.5	281.5	331.5	381.5	431.5	481.5

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-PXBB1□□D

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

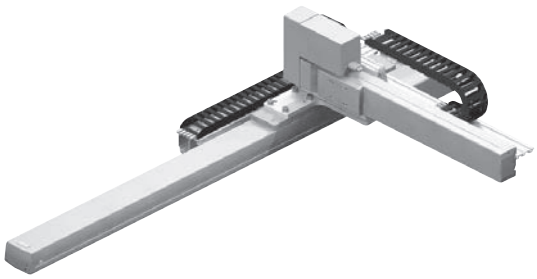
Model Details

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

IK2 – PXBB1□□D – □ – □ □ – □ □ – □ – □ – □ – □ – K

- **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
- **Controllers**: P1: PSEL; P3: MSEP
- **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)

* 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

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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

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	–
				–

Options

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

Specifications

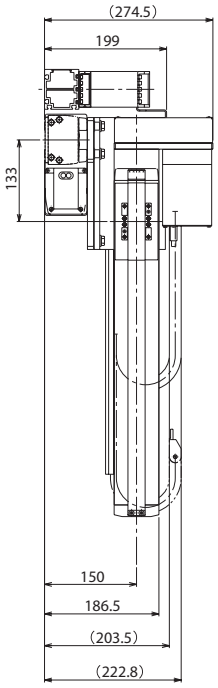
Item	X axis	Y axis
Axis model	RCP2-SS8R	RCP2-SA7R
Stroke (Can be set in 50-mm increments)	50-800mm	High-speed type: 350-400mm Medium-speed type: 200-400mm
Maximum speed	High-speed type: 250mm/s Medium-speed type: 125mm/s	High-speed type: 450mm/s Medium-speed type: 220mm/s
Motor size	56-square pulse motor	
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)	

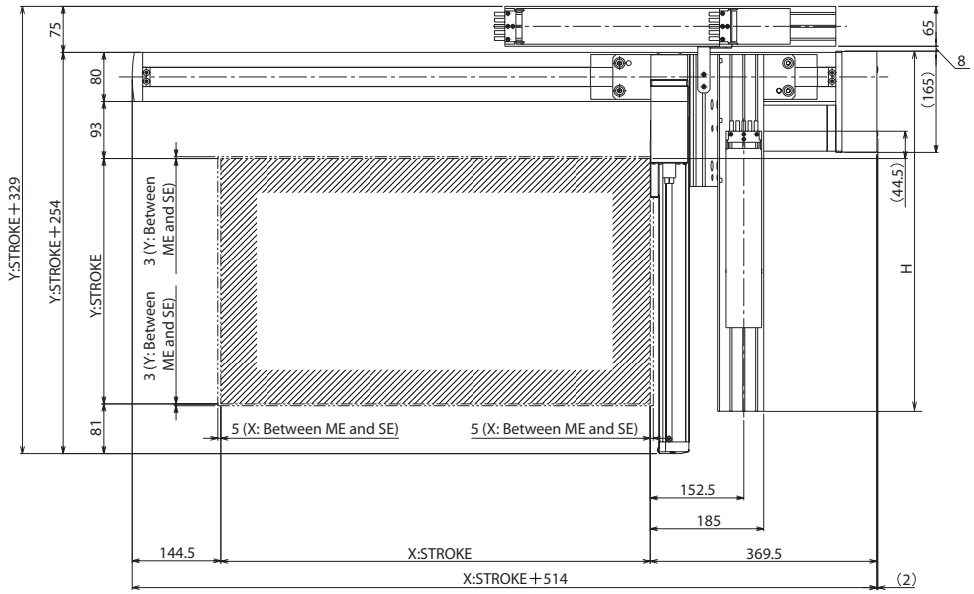
Dimensions

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

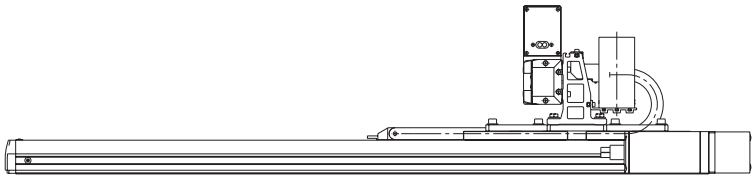
2D CAD

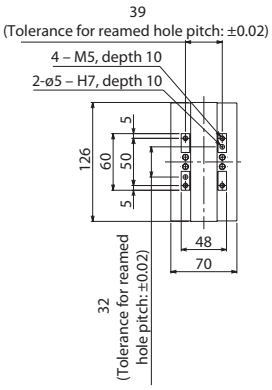
Note 1. The connected position shown in the drawing defines the home.
Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
Note 3. For details on the cable track, refer to P. 90.
Note 4. For details on the bracket on the moving end of the cable track, refer to P. 90.



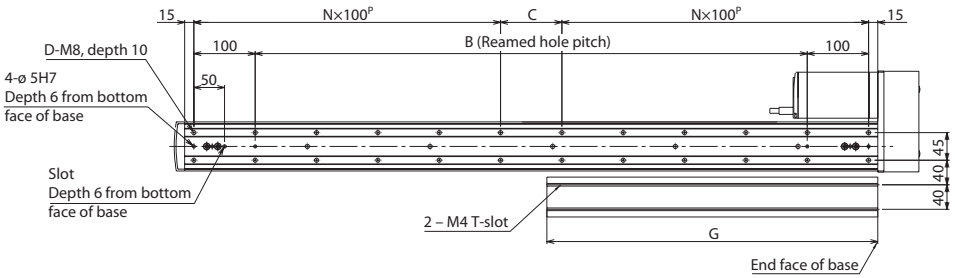


ME: Mechanical end
SE: Stroke end





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

Y: Model	200	250	300	350	400
H	381.5	431.5	481.5	531.5	581.5

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-PXBB2□□S

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

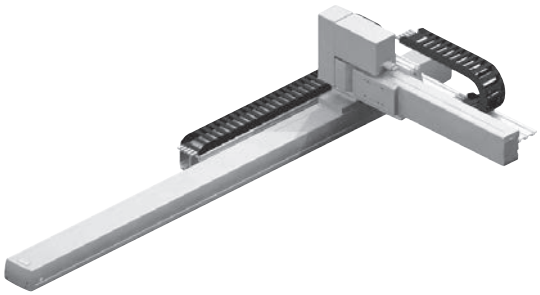
Model Details

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

IK2 — PXBB2□□S — □ — □ □ — □ □ — □ — □ — □ — □ — K

- **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
- **Controllers**: P1: PSEL; P3: MSEP
- **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)

* 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 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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

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	–	–
				–	–

Options

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

Specifications

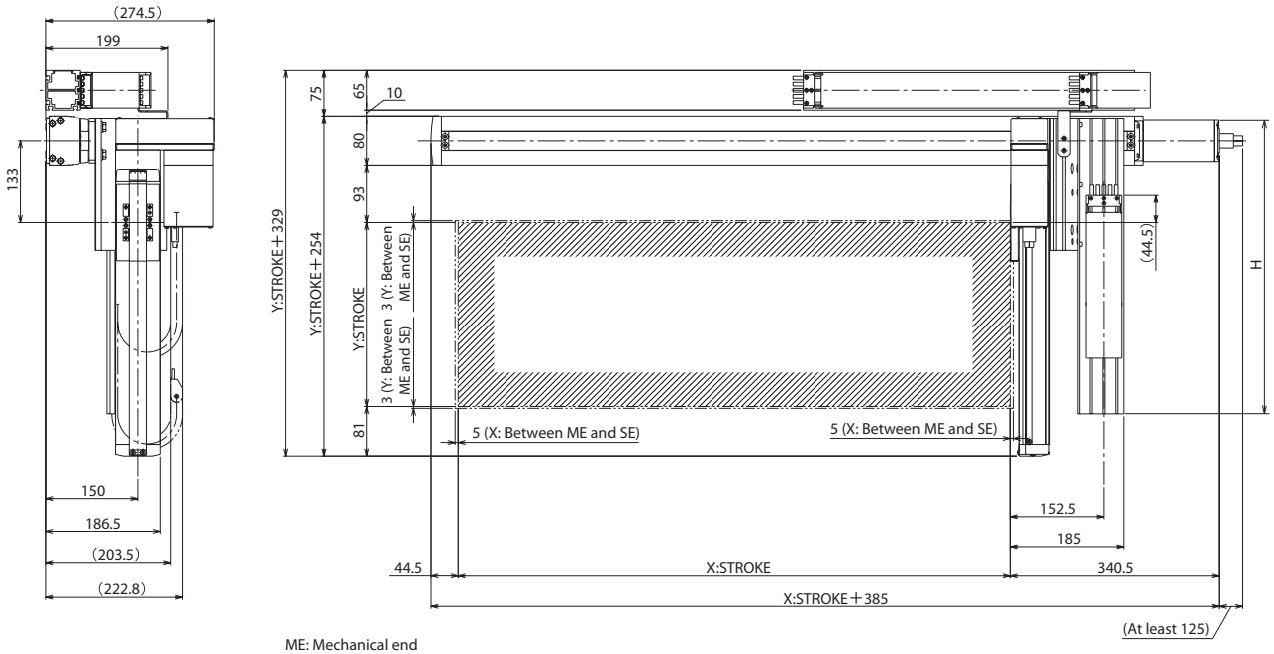
Item	X axis	Y axis
Axis model	RCP2-SS8C	RCP2-SA7R
Stroke (Can be set in 50-mm increments)	50-1000mm	50-300mm
Maximum speed	High-speed type: 250mm/s Medium-speed type: 125mm/s	High-speed type: 450mm/s Medium-speed type: 220mm/s
Motor size	56-square pulse motor	
Ball screw lead	High-speed type: 20mm Medium-speed 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

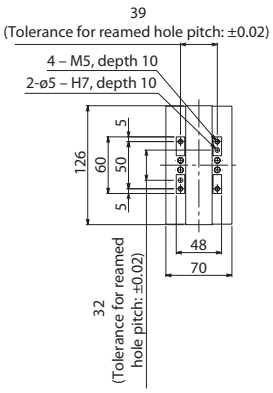
You can download CAD drawings from our website. www.robocylinder.de

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.

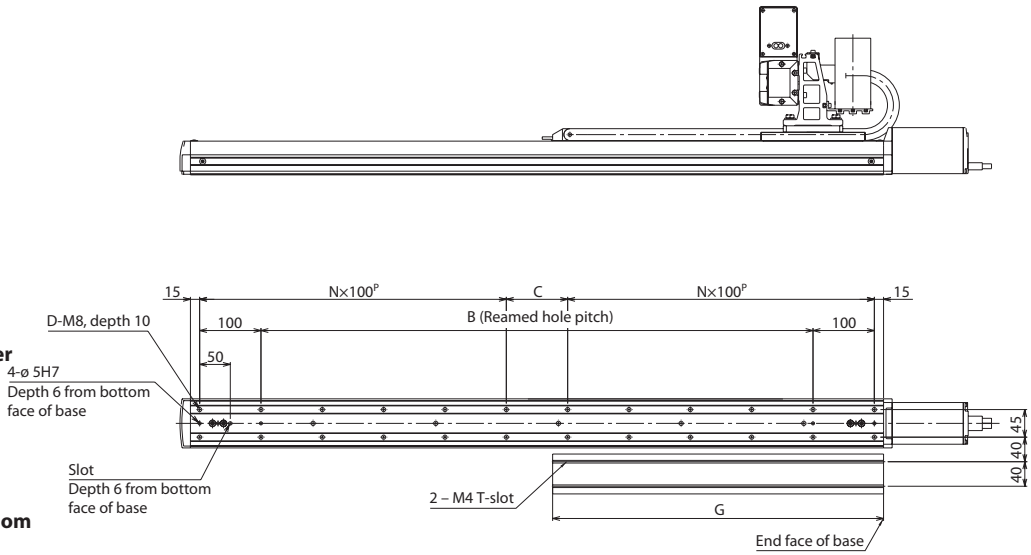


ME: Mechanical end
SE: Stroke end



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	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

Y: Model	50	100	150	200	250	300
H	231.5	281.5	331.5	381.5	431.5	481.5

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-PXBB2□□D

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

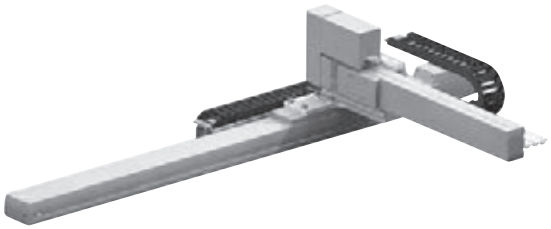
Model Details

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

IK2 – PXBB2□□D – □ – □ □ – □ □ – □ – □ – □ – □ – K

- **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
- **Controllers** P1: PSEL; P3: MSEP
- **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)

* 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

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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

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	–
				–

Options

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

Specifications

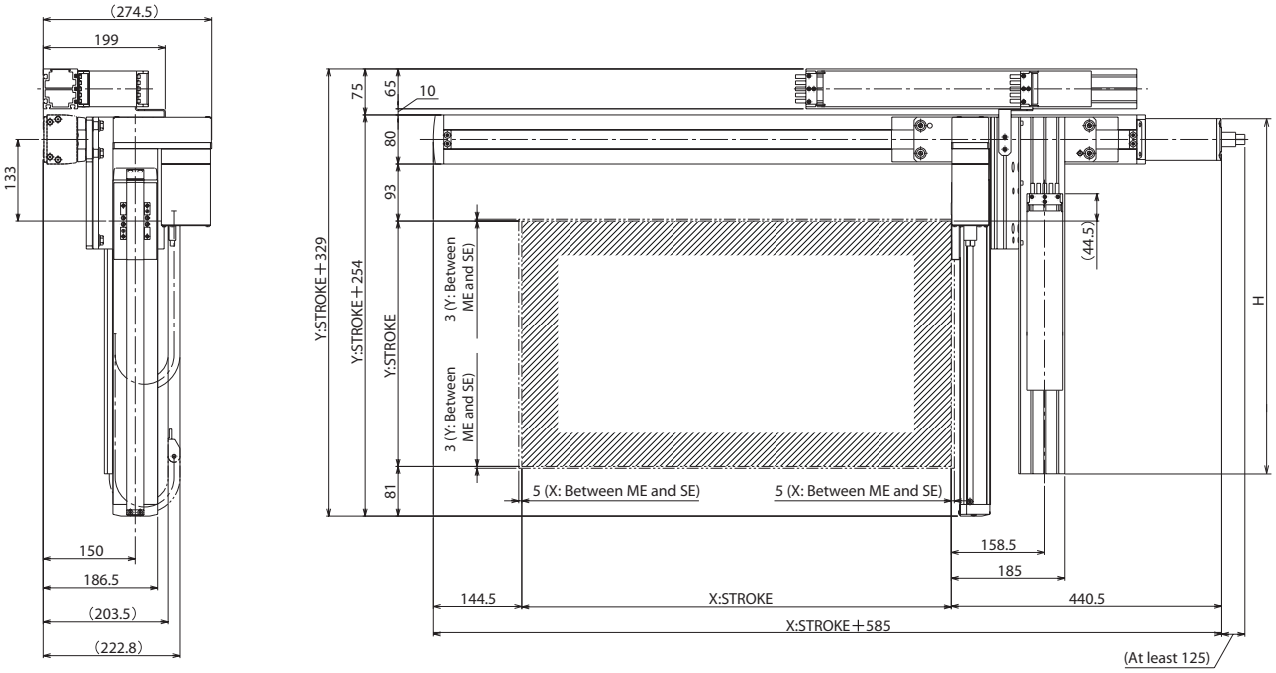
Item	X axis	Y axis
Axis model	RCP2-SS8C	RCP2-SA7R
Stroke (Can be set in 50-mm increments)	50-800mm	High-speed type: 350-400mm Medium-speed type: 200-400mm
Maximum speed	High-speed type: 250mm/s Medium-speed type: 125mm/s	High-speed type: 450mm/s Medium-speed type: 220mm/s
Motor size	56-square pulse motor	
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

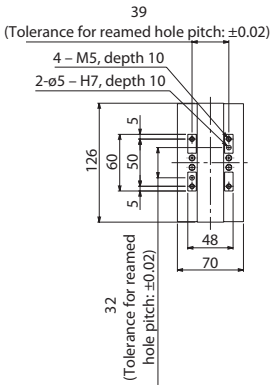
You can download CAD drawings from our website. www.robocylinder.de

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.

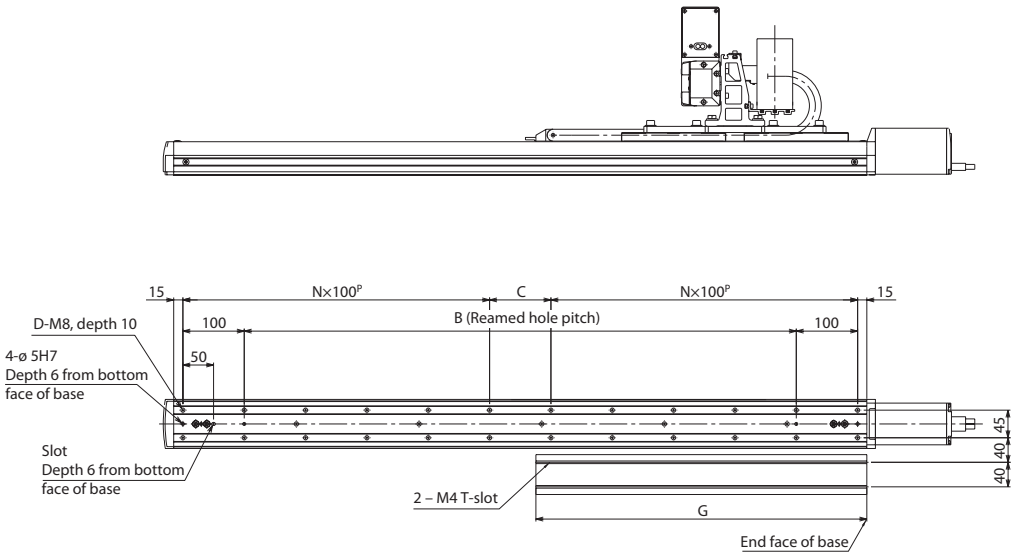


ME: Mechanical end
SE: Stroke end



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: 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

Y: Model	200	250	300	350	400
H	381.5	431.5	481.5	531.5	581.5

Controllers

Applicable controller

Refer to P. 90 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 — □ — □ □ — □ □ — □ — □ — □ — □ — K

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

Controllers
P1: PSEL
P3: MSEP

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)

* 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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

Cable track

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

Options

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

Specifications

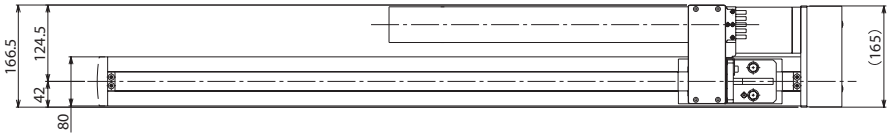
Item	X axis	Z axis
Axis model	RCP2-SS8R	RCP2-SA7R
Stroke (Can be set in 50-mm increments)	50-1000mm	50-250mm
Axis 2	High-speed type: 250mm/s	High-speed type: 360mm/s Medium-speed type: 180mm/s Low-speed type: 90mm/s
Maximum speed	56-square pulse motor	
Ball screw lead	High-speed type: 20mm	High-speed 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)	

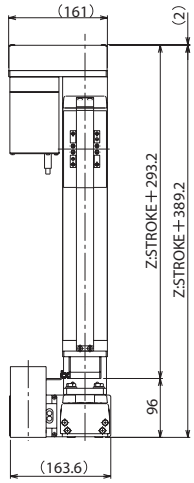
Dimensions

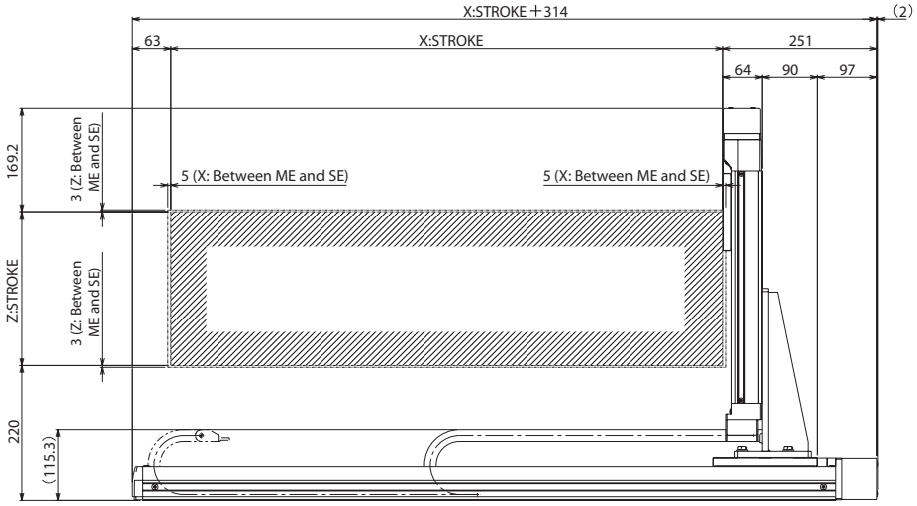
You can download CAD drawings from our website. www.robocylinder.de

2D CAD

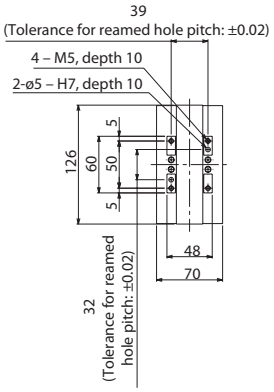
Note 1. The connected position shown in the drawing defines the home.
Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
Note 3. For details on the cable track, refer to P. 90.
Note 4. For details on the bracket on the moving end of the cable track, refer to P. 90.



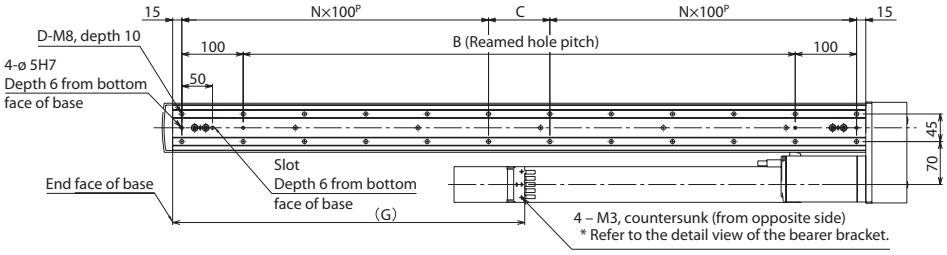




ME: Mechanical end
SE: Stroke end



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: 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. 90 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 — □ — □ □ — □ □ — □ — □ — □ — □ — K

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

Controllers
P1: PSEL
P3: MSEP

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)

* 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

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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

Cable track

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

Options

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

Specifications

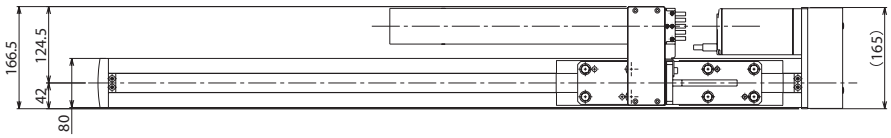
Item	X axis	Z axis
Axis model	RCP2-SS8R	RCP2-SA7R
Stroke (Can be set in 50-mm increments)	50-800mm	High-speed type: 300mm Medium-speed type: 300mm Low-speed type: 150-300mm
Maximum speed	High-speed type: 250mm/s	High-speed type: 400mm/s Medium-speed type: 200mm/s Low-speed type: 100mm/s
Motor size	56-square 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)	

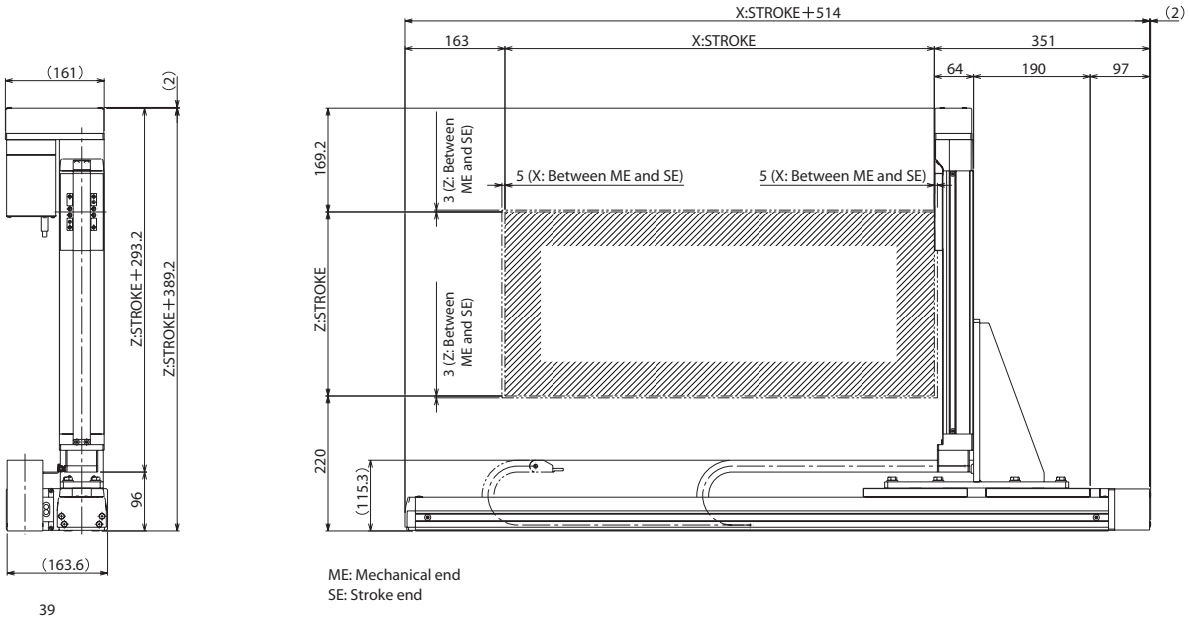
Dimensions

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

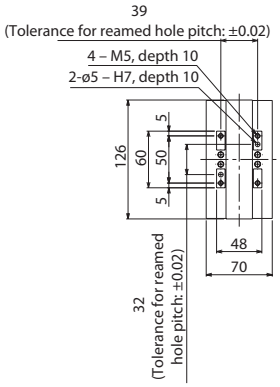
2D CAD

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.

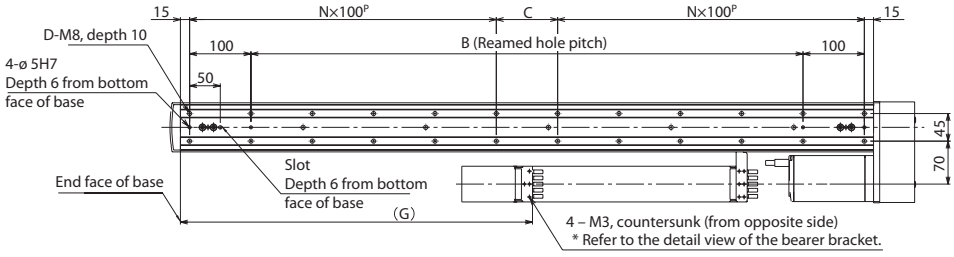




ME: Mechanical end
SE: Stroke end



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. 90 for the controllers.

IK2-PYBB1□□S

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

Model Details

IK2 — PYBB1□□S — □ — □ — □ — □ — □ — □ — □ — □ — K

Series: IK2

Type: PYBB1□□S
- 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

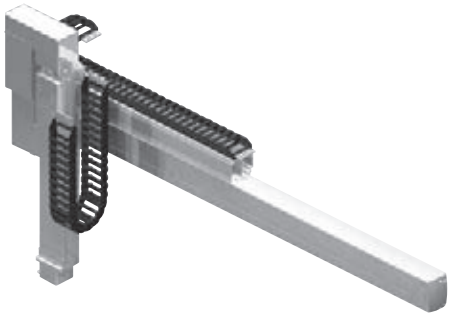
Axis 1 (Y axis) / Axis 2 (Z axis)
- Stroke (mm): 5: 50mm ~ (Can be set in 50-mm increments)
- Options: B: Brake; NM: Opposite-home specification; SR: Slider roller specification

Controllers: P1: PSEL; P3: MSEP

Cable
- 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)

* 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)

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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

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	–	–
				–	–

Options

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

Specifications

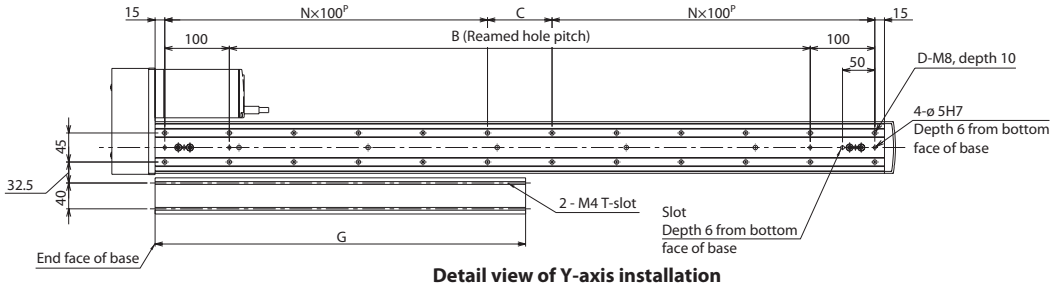
Item	Y axis	Z axis
Axis model	RCP2-SS8R	RCP2-SA7R
Stroke (Can be set in 50-mm increments)	50-1000mm	50-300mm
Maximum speed	High-speed type: 250mm/s	High-speed type: 360mm/s Medium-speed type: 180mm/s Low-speed type: 90mm/s
Motor size	56-square pulse motor	
Ball screw lead	High-speed type: 20mm	High-speed 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

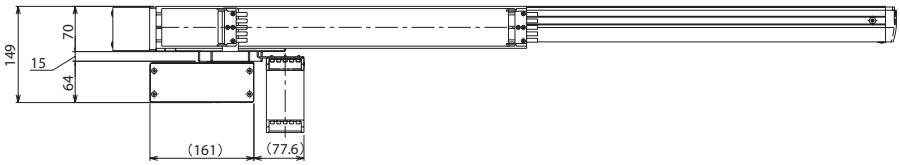
You can download CAD drawings from our website. www.robocylinder.de

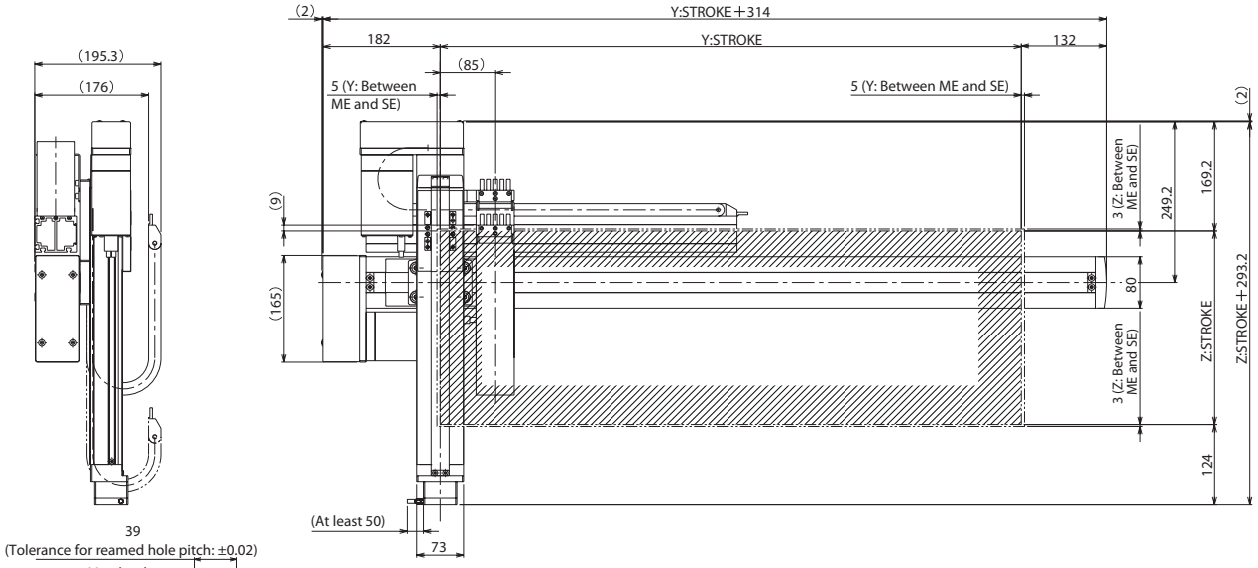
2D CAD

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





ME: Mechanical end
SE: Stroke end

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. 90 for the controllers.

IK2-SXBD1□□S

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

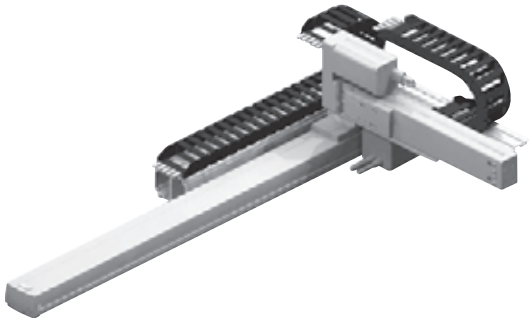
Model Details

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

IK2 – SXBD1□□S – □ – □ □ – □ □ – □ – □ – □ – □ – K

- 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-KE/KET; T2: SSEL, MSCON, 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)

* 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

*Max speed may be down depend on the stroke.
(Please refer below „Specifications“ for more details.)

	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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

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	–
		-	–

Options

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

Specifications

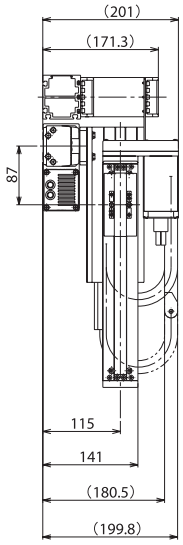
Item		X axis		Y axis
Axis model		RCS2-SS7R		RCS2-SA5R
Stroke (Can be set in 50-mm increments)		50-600mm		50-200mm
Maximum speed	Stroke	50-500mm	550-600mm	50-200mm
	High speed	600mm/s	470mm/s	800mm/s
	Medium speed	-	-	400mm/s
Motor output (W)		60W		20W
Ball screw lead		High-speed type: 12mm		High-speed 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)		

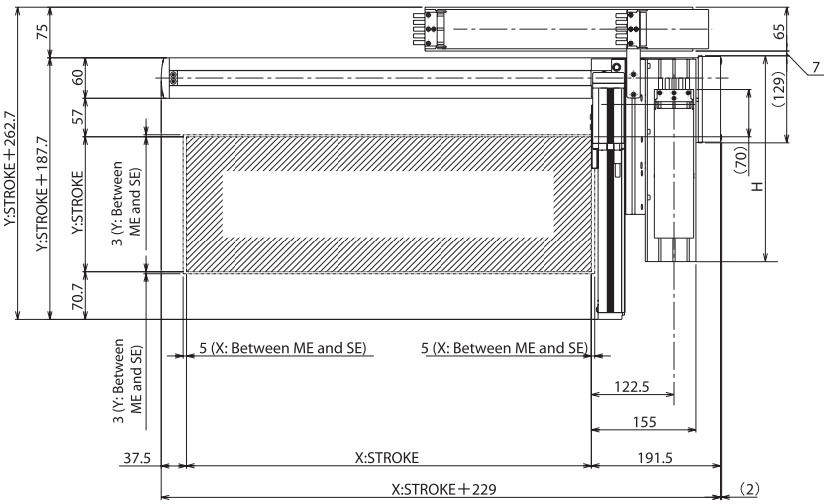
Dimensions

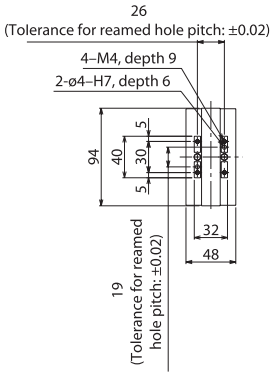
You can download CAD drawings from our website. www.robocylinder.de

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.

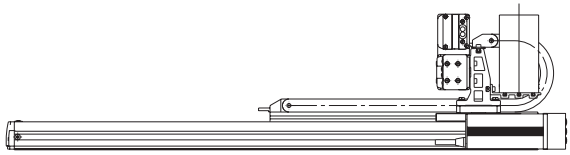




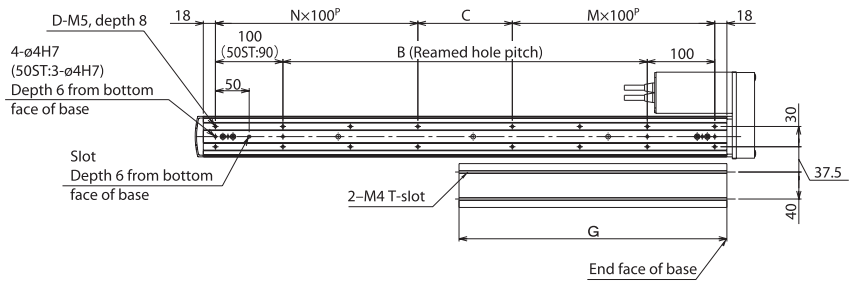


Detail view of Y-axis slider

ME: Mechanical end
SE: Stroke end



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

Y: Model	50	100	150	200
H	150	200	250	300

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-SXBD1□□D

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

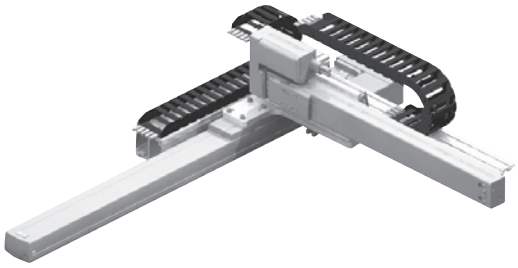
Model Details

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

IK2 – SXBD1 □□D – □ – □ □ – □ □ – □ – □ – □ – □ – K

- 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-KE/KET; T2: SSEL, MSCON, 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)

* 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

*Max speed may be down depend on the stroke.
(Please refer below „Specifications" for more details.)

	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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

Cable track

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

Options

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

Specifications

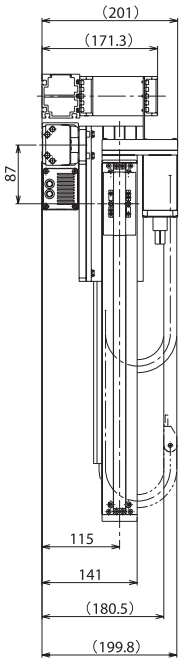
Item		X axis		Y axis
Axis model		RCS2-SS7R		RCS2-SA5R
Stroke (Can be set in 50-mm increments)		50-450mm		250-400mm
Maximum speed	Stroke	50-350mm	400-450mm	250-400mm
	High speed	600mm/s	470mm/s	800mm/s
	Medium speed	-	-	400mm/s
Motor output (W)		60W		20W
Ball screw lead		High-speed type: 12mm		High-speed 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)		

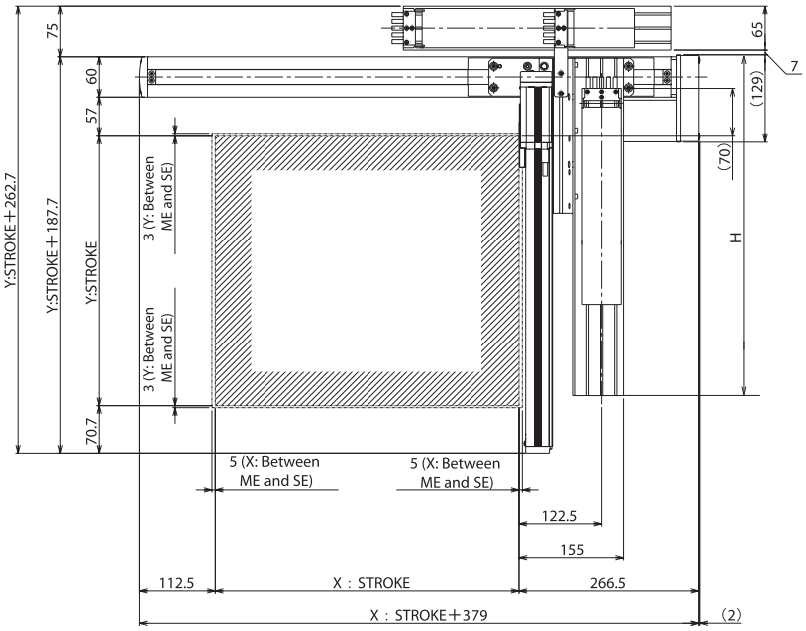
Dimensions

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

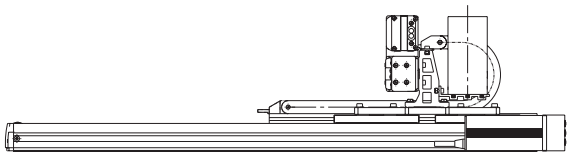
2D CAD

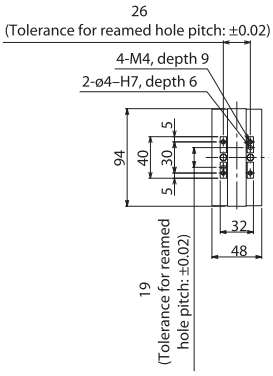
Note 1. The connected position shown in the drawing defines the home.
Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
Note 3. For details on the cable track, refer to P. 90.
Note 4. For details on the bracket on the moving end of the cable track, refer to P. 90.





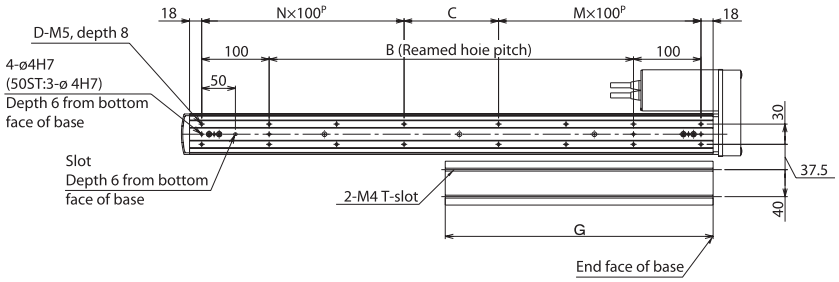
ME: Mechanical end
SE: Stroke end





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: 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

Y: Model	250	300	350	400
H	350	400	450	500

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-SXBD2□□S

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

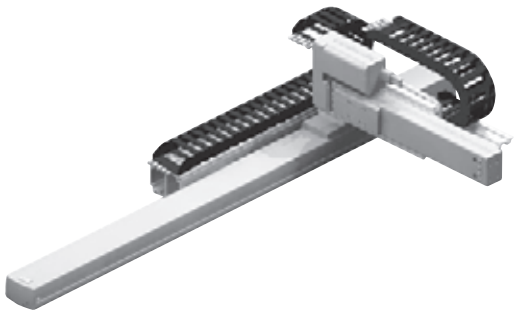
Model Details

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

IK2 — SXBD2□□S — □ — □ □ — □ □ — □ — □ — □ — K

- 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): 5: 50mm ~ (Can be set in 50-mm increments)
- Options: NM: Opposite-home specification; SR: Slider roller specification
- Controllers: T1: XSEL-KE/KET; T2: SSEL, MSCON, 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)

* 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

*Max speed may be down depend on the stroke.
(Please refer below „Specifications" for more details.)

	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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

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	–
		-	–

Options

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

Specifications

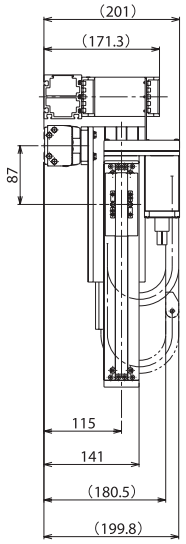
Item		X axis		Y axis
Axis model		RCS2-SS7C		RCS2-SA5R
Stroke (Can be set in 50-mm increments)		50-600mm		50-200mm
Maximum speed	Stroke	50-500mm	550-600mm	50-200mm
	High speed	600mm/s	470mm/s	800mm/s
	Medium speed	-	-	400mm/s
Motor output (W)		60W		20W
Ball screw lead		High-speed type: 12mm		High-speed 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)		

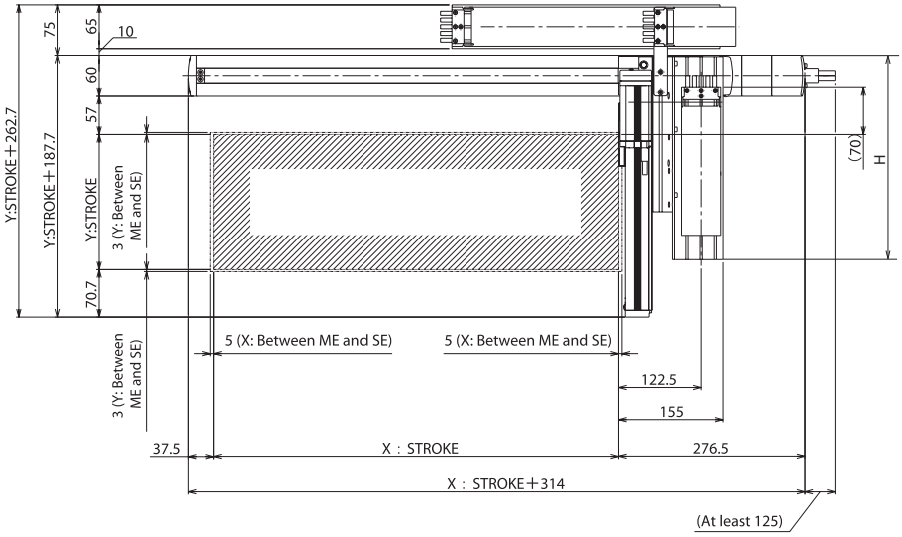
Dimensions

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

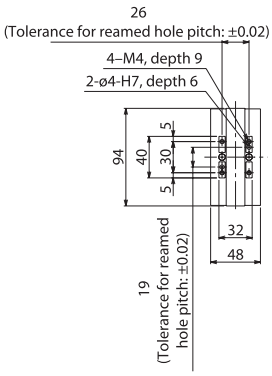
2D CAD

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.

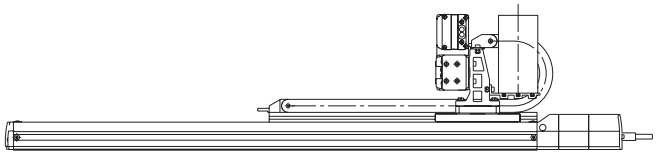




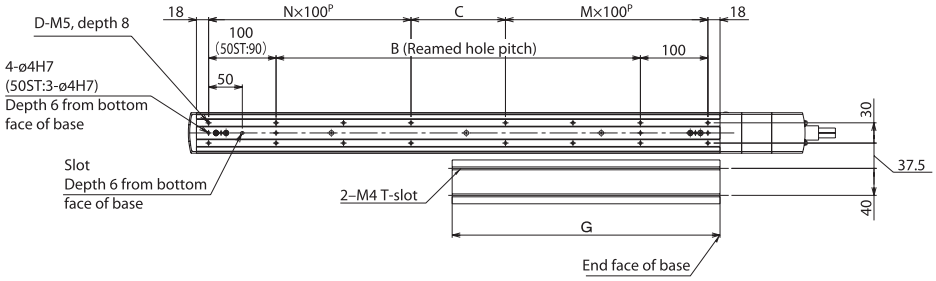
ME: Mechanical end
SE: Stroke end



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: 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

Y: Model	50	100	150	200
H	150	200	250	300

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-SXBD2□□D

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

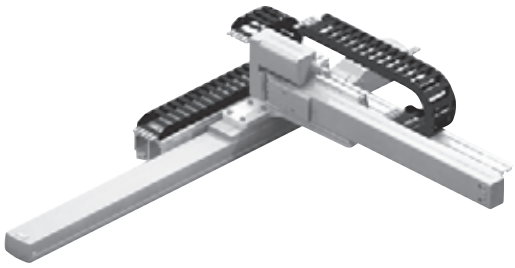
Model Details

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

IK2 — SXBD2 □□D — □ — □ □ — □ □ — □ — □ — □ — K

- 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): 5: 50mm ~ (Can be set in 50-mm increments)
- Options: NM: Opposite-home specification; SR: Slider roller specification
- Controllers: T1: XSEL-KE/KET; T2: SSEL, MSCON, 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)

* 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

*Max speed may be down depend on the stroke.
(Please refer below „Specifications" for more details.)

	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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

Cable track

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

Options

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

Specifications

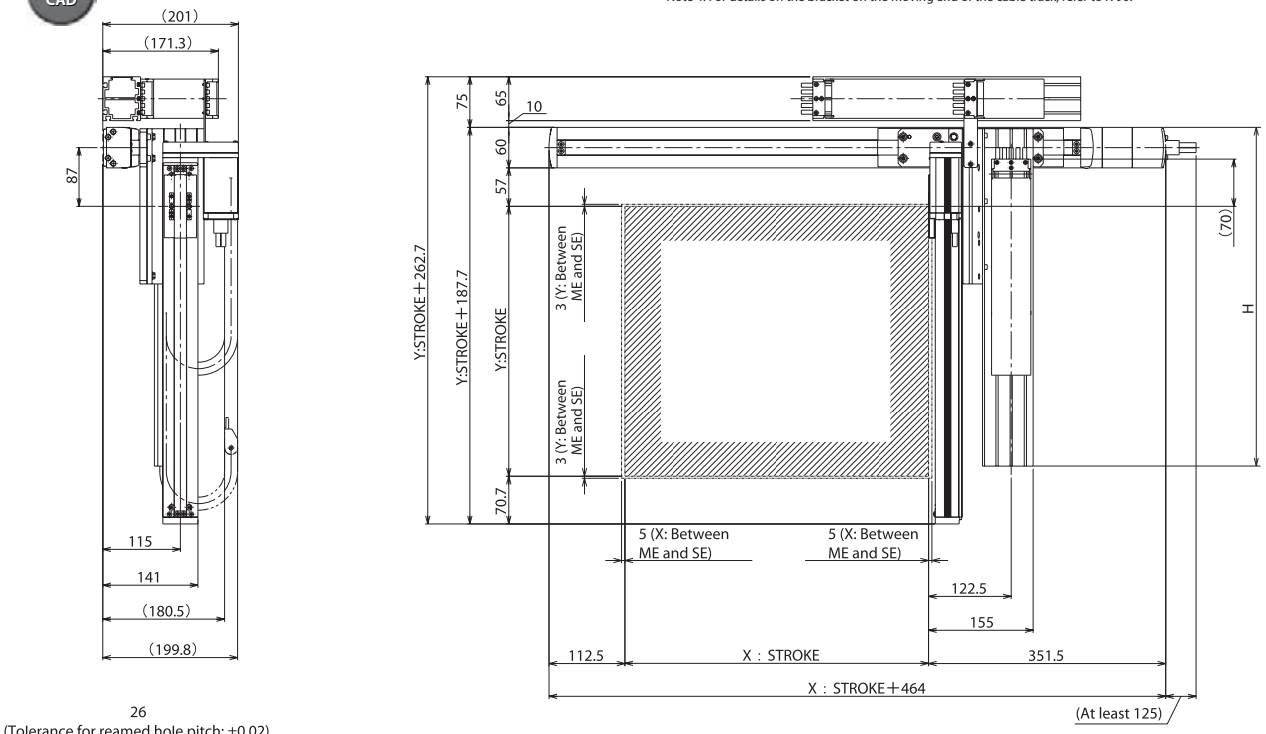
Item		X axis		Y axis
Axis model		RCS2-SS7C		RCS2-SA5R
Stroke (Can be set in 50-mm increments)		50-450mm		250-400mm
Maximum speed	Stroke	50-350mm	400-450mm	250-400mm
	High speed	600mm/s	470mm/s	800mm/s
	Medium speed	-	-	400mm/s
Motor output (W)		60W		20W
Ball screw lead		High-speed type: 12mm		High-speed 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

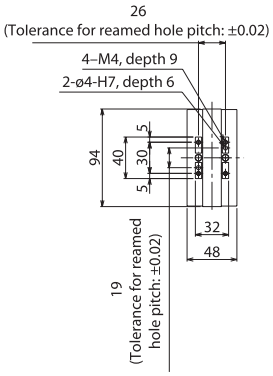
You can download CAD drawings from our website. www.robocylinder.de

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.

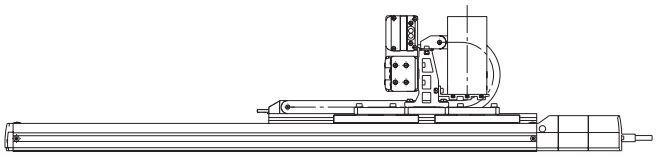


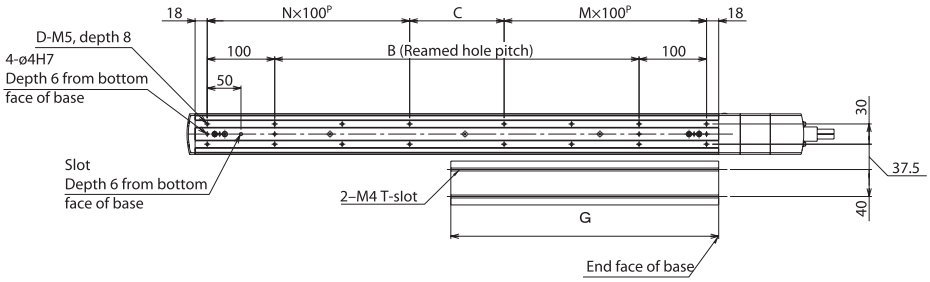
ME: Mechanical end
SE: Stroke end



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: 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

Y: Model	250	300	350	400
H	350	400	450	500

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-SXBC1□□S

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

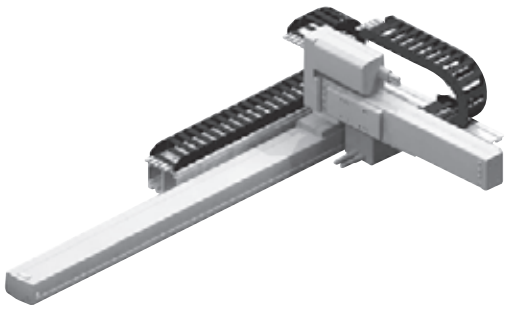
Model Details

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

IK2 – SXBC1□□S – □ – □ □ – □ □ – □ – □ – □ – K

- 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): 5: 50mm ~ (Can be set in 50-mm increments)
- Options: NM: Opposite-home specification; SR: Slider roller specification
- Controllers: T1: XSEL-KE/KET; T2: SSEL, MSCON, 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)

* 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

*Max speed may be down depend on the stroke.
(Please refer below „Specifications“ for more details.)

	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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

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	–
			–

Options

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

Specifications

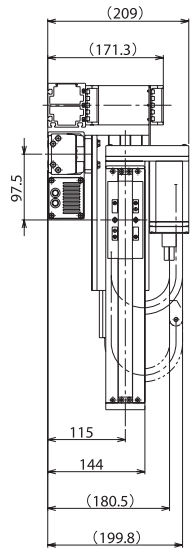
Item		X axis		Y axis
Axis model		RCS2-SS7R		RCS2-SA6R
Stroke (Can be set in 50-mm increments)		50-600mm		50-200mm
Maximum speed	Stroke	50-500mm	550-600mm	50-200mm
	High speed	600mm/s	470mm/s	800mm/s
	Medium speed	300mm/s	230mm/s	400mm/s
Motor output (W)		60W		30W
Ball screw lead		High-speed type: 12mm 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)		

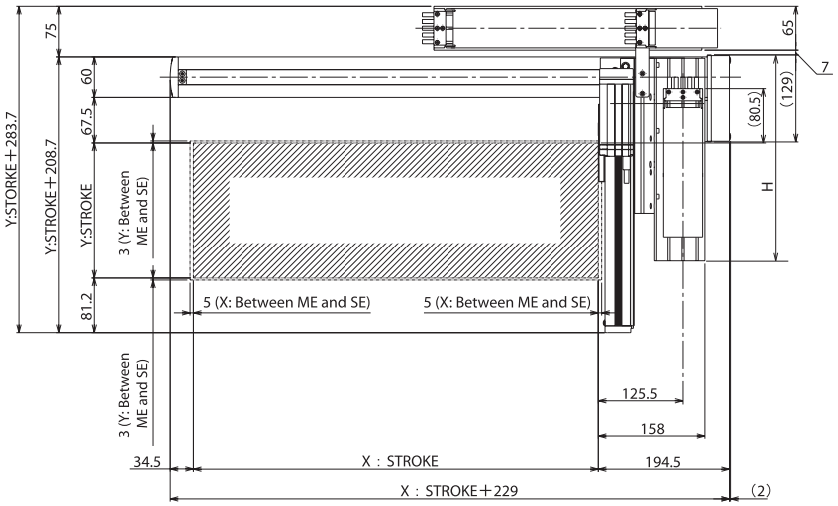
Dimensions

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

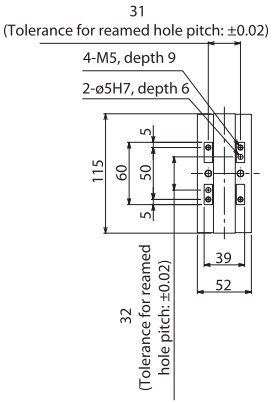
2D CAD

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.

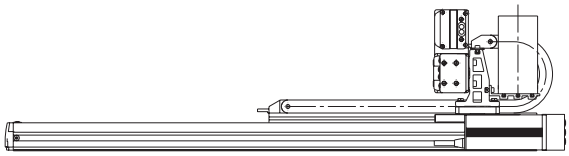




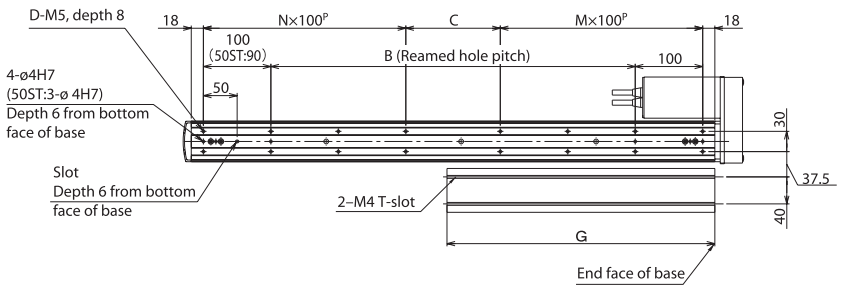
ME: Mechanical end
SE: Stroke end



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: 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

Y: Model	50	100	150	200
H	150	200	250	300

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-SXBC1□□D

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

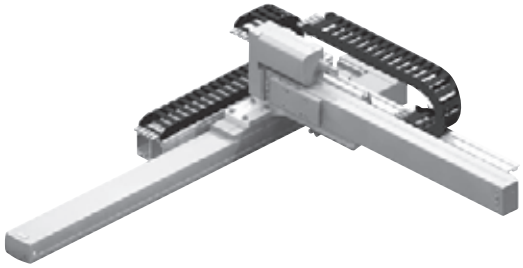
Model Details

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

IK2 — SXBC1 □□D — □ — □ □ — □ □ — □ — □ — □ — K

- 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): 5: 50mm ~ (Can be set in 50-mm increments)
- Options: NM: Opposite-home specification; SR: Slider roller specification
- Controllers: T1: XSEL-KE/KET; T2: SSEL, MSCON, 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)

* 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

*Max speed may be down depend on the stroke.
(Please refer below „Specifications“ for more details.)

	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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

Cable track

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

Options

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

Specifications

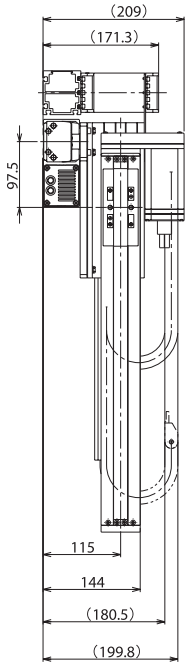
Item		X axis		Y axis
Axis model		RCS2-SS7R		RCS2-SA6R
Stroke (Can be set in 50-mm increments)		50-450mm		250-400mm
Maximum speed	Stroke	50-350mm	400-450mm	250-400mm
	High speed	600mm/s	470mm/s	800mm/s
	Medium speed	300mm/s	230mm/s	400mm/s
Motor output (W)		60W		30W
Ball screw lead		High-speed type: 12mm 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)		

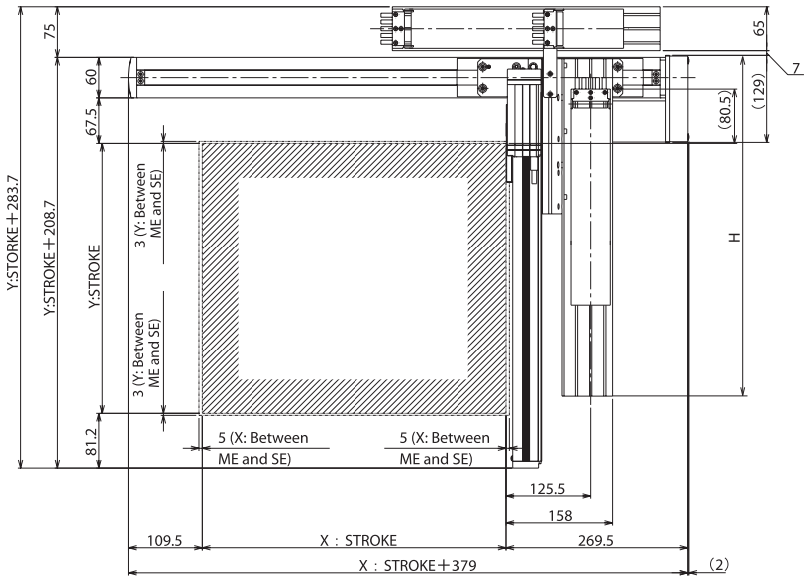
Dimensions

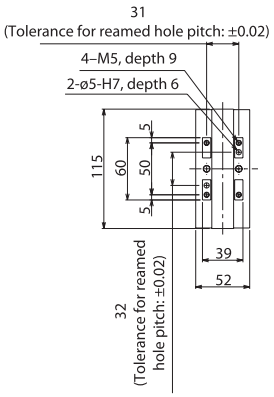
You can download CAD drawings from our website. www.robocylinder.de

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.



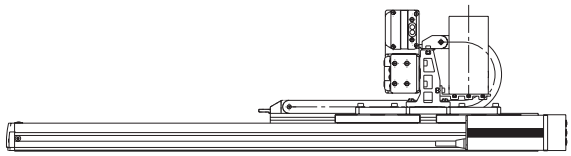


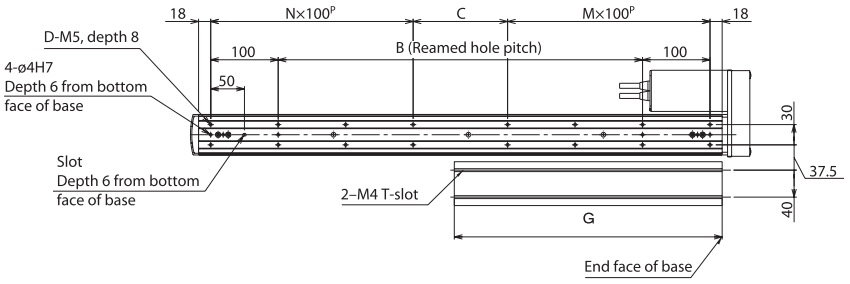


Detail view of Y-axis slider

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

Y: Model	250	300	350	400
H	350	400	450	500

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-SXBC2□□S

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

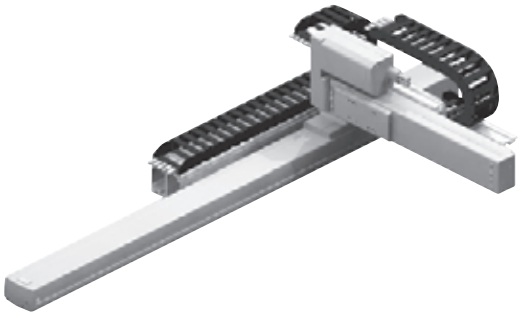
Model Details

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

IK2 — SXBC2 □□S — □ — □ □ — □ □ — □ — □ — □ — K

- 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; 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-KE/KET; T2: SSEL, MSCON, 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)

* 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

*Max speed may be down depend on the stroke.
(Please refer below „Specifications“ for more details.)

	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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

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	–
			–

Options

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

Specifications

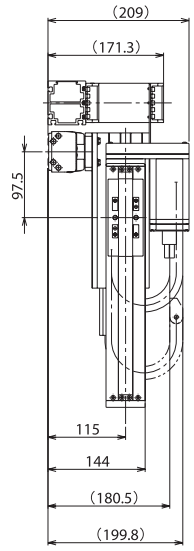
Item		X axis		Y axis
Axis model		RCS2-SS7C		RCS2-SA6R
Stroke (Can be set in 50-mm increments)		50-600mm		50-200mm
Maximum speed	Stroke	50-500mm	550-600mm	50-200mm
	High speed	600mm/s	470mm/s	800mm/s
	Medium speed	300mm/s	230mm/s	400mm/s
Motor output (W)		60W		30W
Ball screw lead		High-speed type: 12mm 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)		

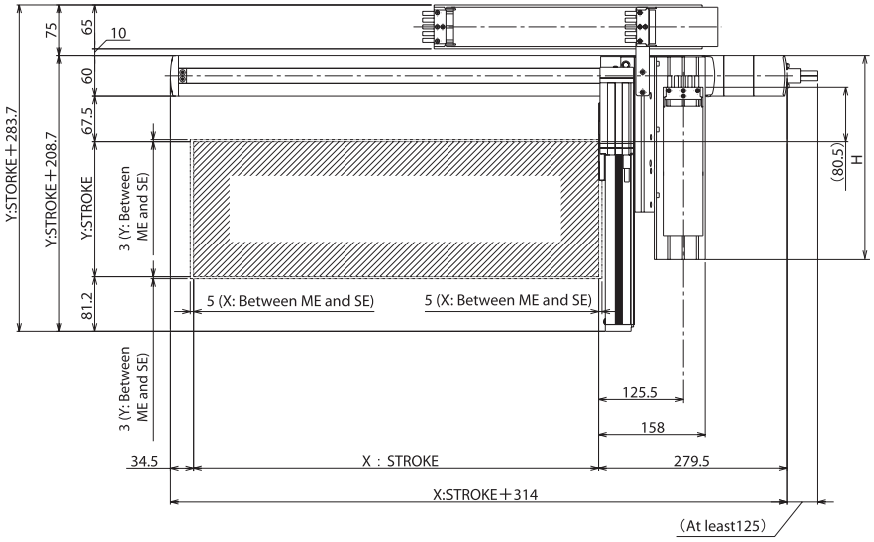
Dimensions

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

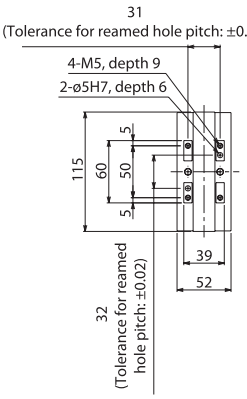
2D CAD

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.

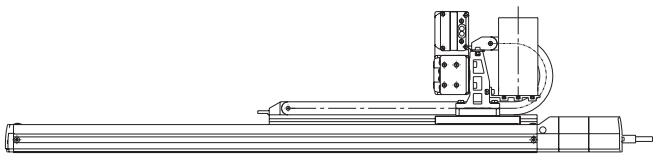




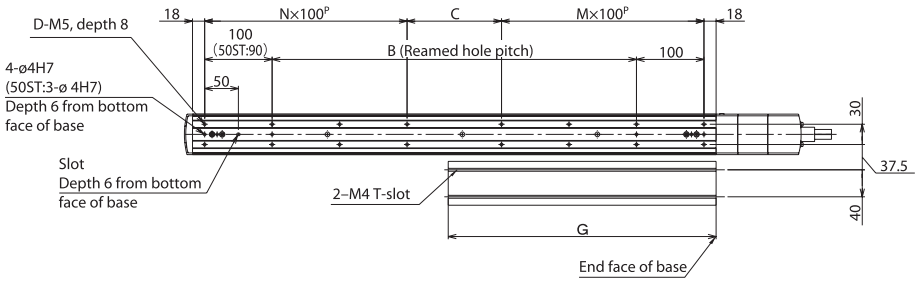
ME: Mechanical end
SE: Stroke end



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: 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

Y: Model	50	100	150	100
H	150	200	250	300

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-SXBC2□□D

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

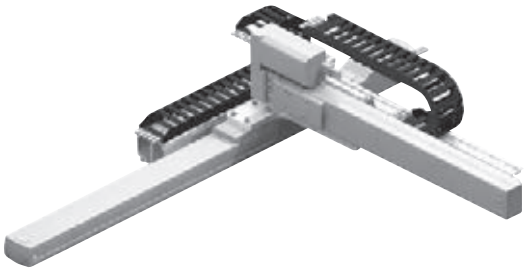
Model Details

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

IK2 – SXBC2 □□D – □ – □ □ – □ □ – □ – □ – □ – □ – K

- 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; 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-KE/KET; T2: SSEL, MSCON, 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)

* 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

*Max speed may be down depend on the stroke.
(Please refer below „Specifications" for more details.)

	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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

Cable track

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

Options

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

Specifications

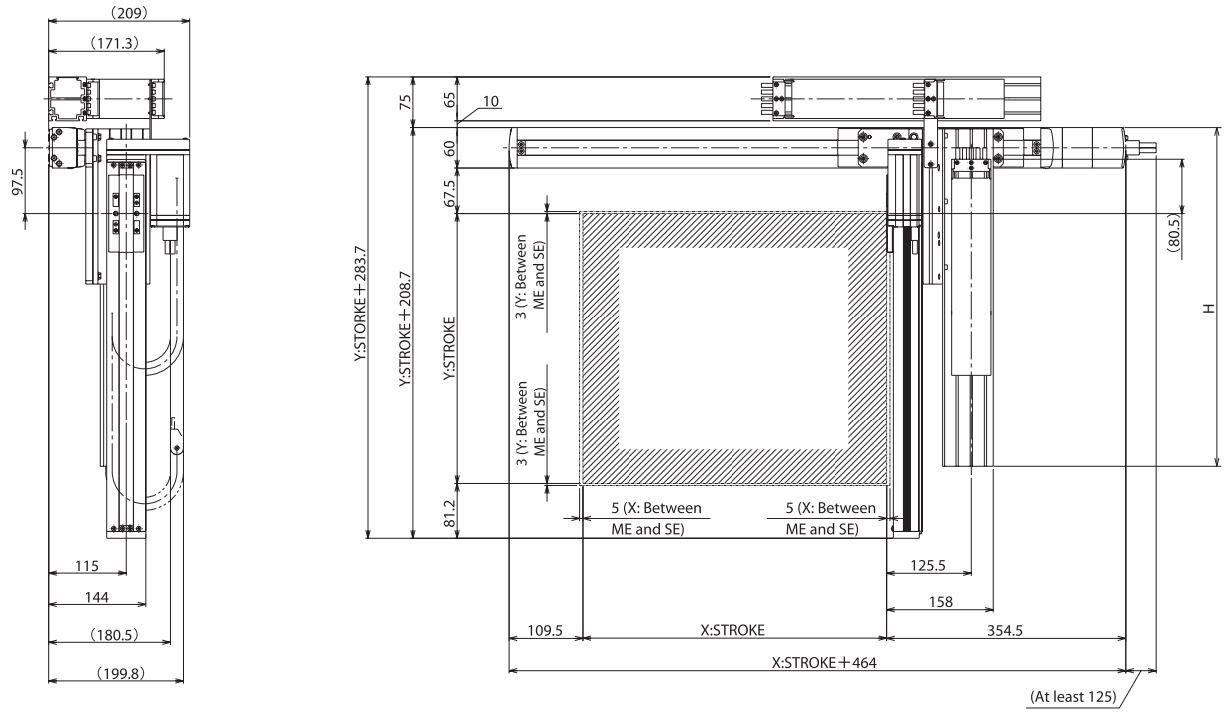
Item		X axis		Y axis
Axis model		RCS2-SS7C		RCS2-SA6R
Stroke (Can be set in 50-mm increments)		50-450mm		250-400mm
Maximum speed	Stroke	50-350mm	400-450mm	250-400mm
	High speed	600mm/s	470mm/s	800mm/s
	Medium speed	300mm/s	230mm/s	400mm/s
Motor output (W)		60W		30W
Ball screw lead		High-speed type: 12mm 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)		

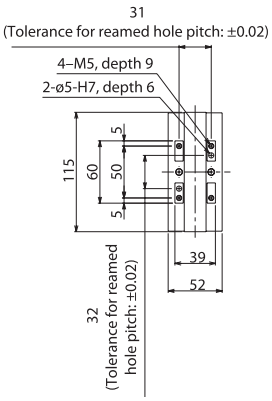
Dimensions

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

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.

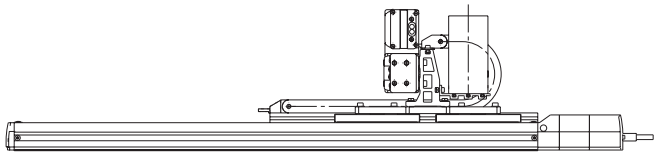


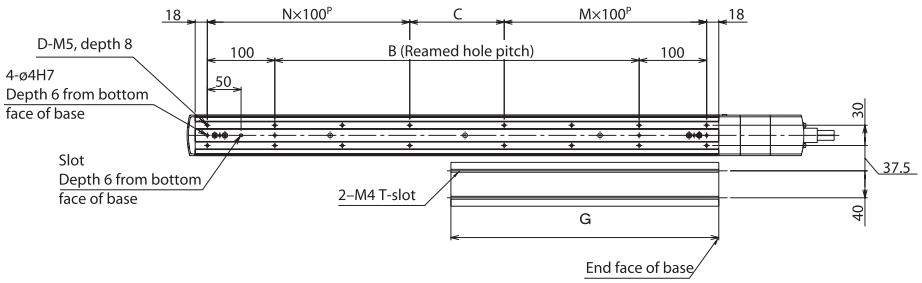


Detail view of Y-axis slider

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

Y: Model	250	300	350	400
H	350	400	450	500

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-SXBB1□□S

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

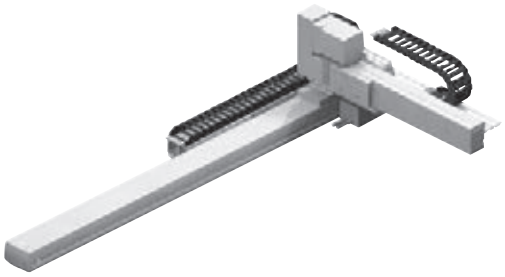
Model Details

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

IK2 – SXBB1□□S – □ – □ □ – □ □ – □ – □ – □ – □ – K

- 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): 5: 50mm ~ (Can be set in 50-mm increments)
- Options: NM: Opposite-home specification; SR: Slider roller specification
- Controllers: T1: XSEL-KE/KET; T2: SSEL, MSCON, 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)

* 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 300 mm

Axis 2

*Max speed may be down depend on the stroke.
(Please refer below „Specifications" for more details.)

	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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

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	–	–
				–	–

Options

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

Specifications

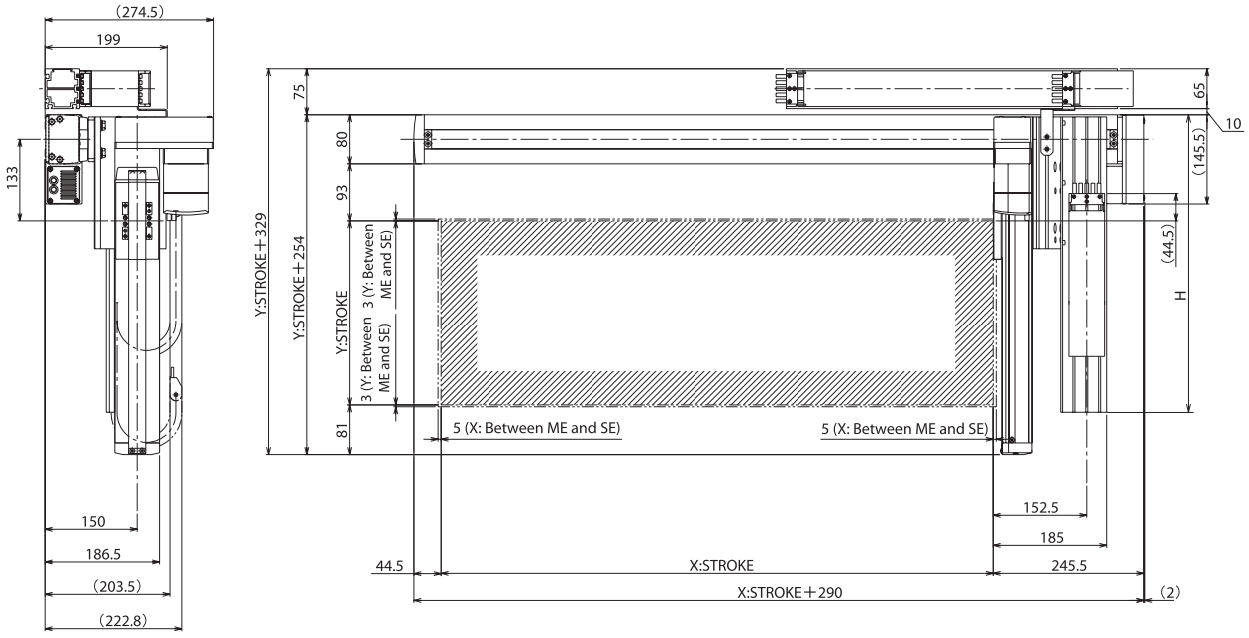
Item		X axis					Y axis
Axis model		RCS2-SS8R					RCS2-SA7R
Stroke (Can be set in 50-mm increments)		50-1000mm					50-300mm
Maximum speed	Stroke	50-600mm	650-700mm	750-800mm	850-900mm	950-1000mm	50-300mm
	High speed	1000mm/s	960mm/s	765mm/s	625mm/s	515mm/s	800mm/s
	Medium speed	500mm/s	480mm/s	380mm/s	310mm/s	255mm/s	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)					

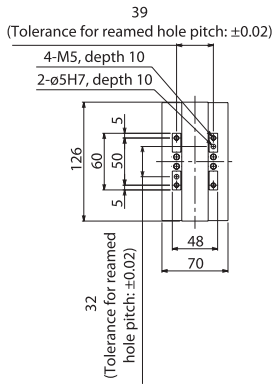
Dimensions

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

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.

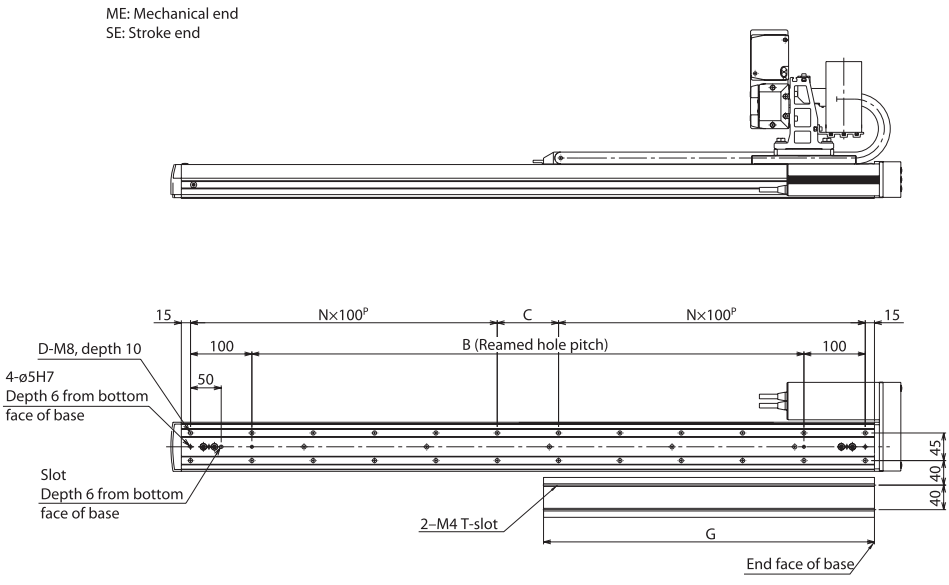




Detail view of Y-axis slider

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

Y: Model	50	100	150	200	250	300
H	231.5	281.5	331.5	381.5	431.5	481.5

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-SXBB1□□D

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

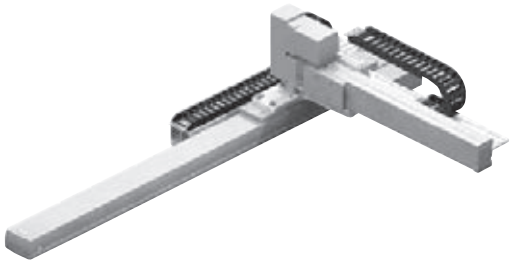
Model Details

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

IK2 — SXBB1□□D — □ — □ □ — □ □ — □ — □ — □ — K

- 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): 5: 50mm ~ (Can be set in 50-mm increments)
- Options: NM: Opposite-home specification; SR: Slider roller specification
- Controllers: T1: XSEL-KE/KET; T2: SSEL, MSCON, 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)

* 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

*Max speed may be down depend on the stroke.
(Please refer below „Specifications“ for more details.)

	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

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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

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	–
				–

Options

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

Specifications

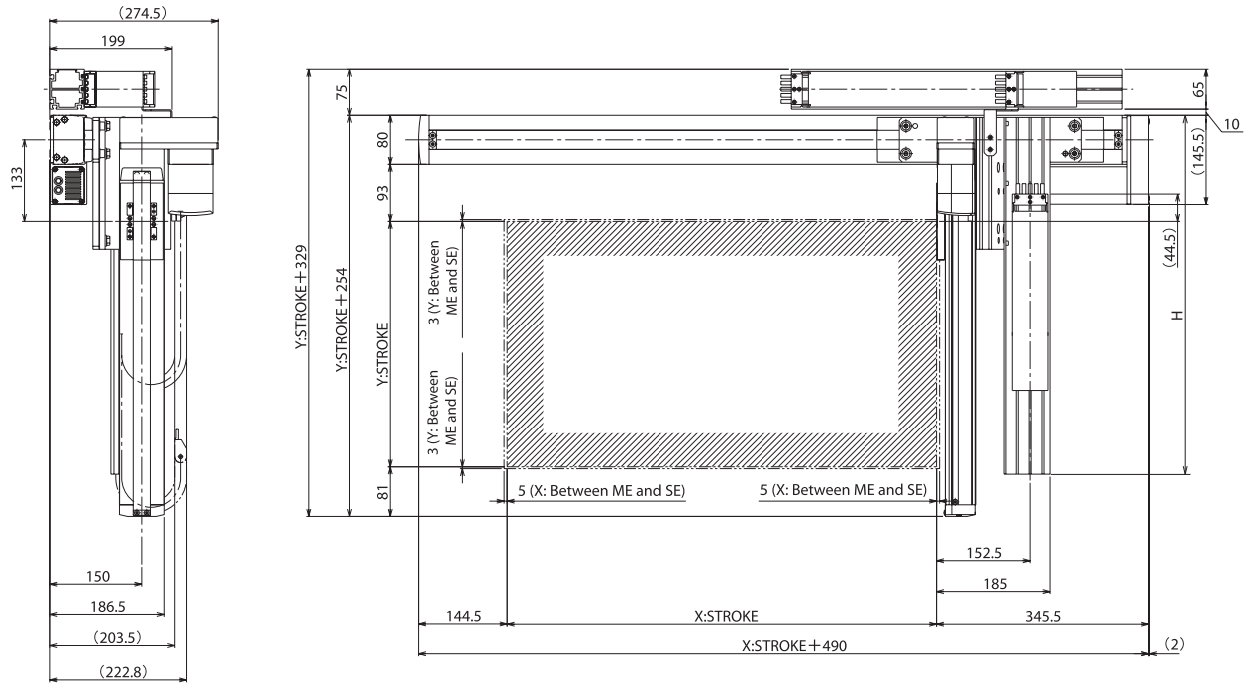
Item		X axis					Y axis
Axis model		RCS2-SS8R					RCS2-SA7R
Stroke (Can be set in 50-mm increments)		50-800mm					High-speed type: 350-400mm Medium-speed type: 200-400mm
Maximum speed	Stroke	50-400mm	450-500mm	550-600mm	650-700mm	750-800mm	200-400mm
	High speed	1000mm/s	960mm/s	765mm/s	625mm/s	515mm/s	800mm/s
	Medium speed	500mm/s	480mm/s	380mm/s	310mm/s	255mm/s	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)					

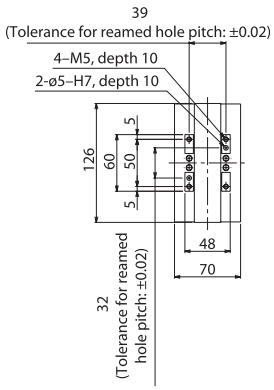
Dimensions

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

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.

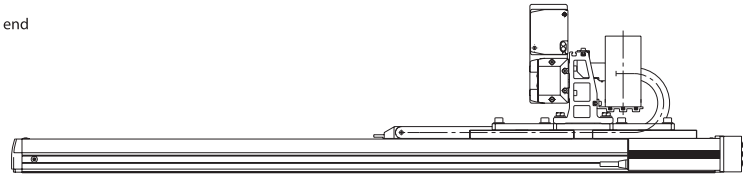


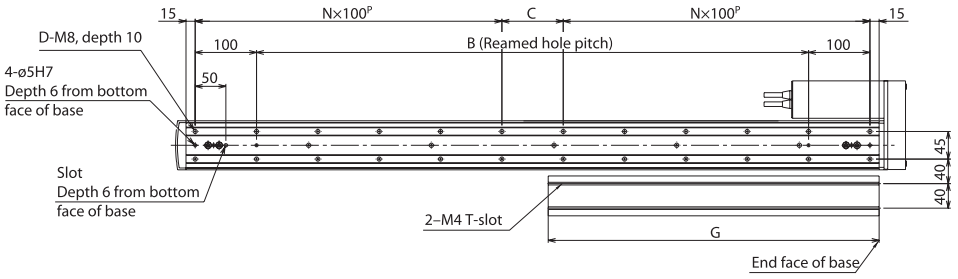


Detail view of Y-axis slider

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

Y: Model	200	250	300	350	400
H	381.5	431.5	481.5	531.5	581.5

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-SXBB2□□S

RCS2 2-axis Combinations X axis: SS8C (100W, Straight, 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 – SXBB2 □□S – □ – □ □ – □ □ – □ – □ – □ – □

- 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; 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-KE/KET; T2: SSEL, MSCON, 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)

* 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 300 mm

Axis 2

*Max speed may be down depend on the stroke.
(Please refer below „Specifications" for more details.)

	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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

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	–	–
				–	–

Options

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

Specifications

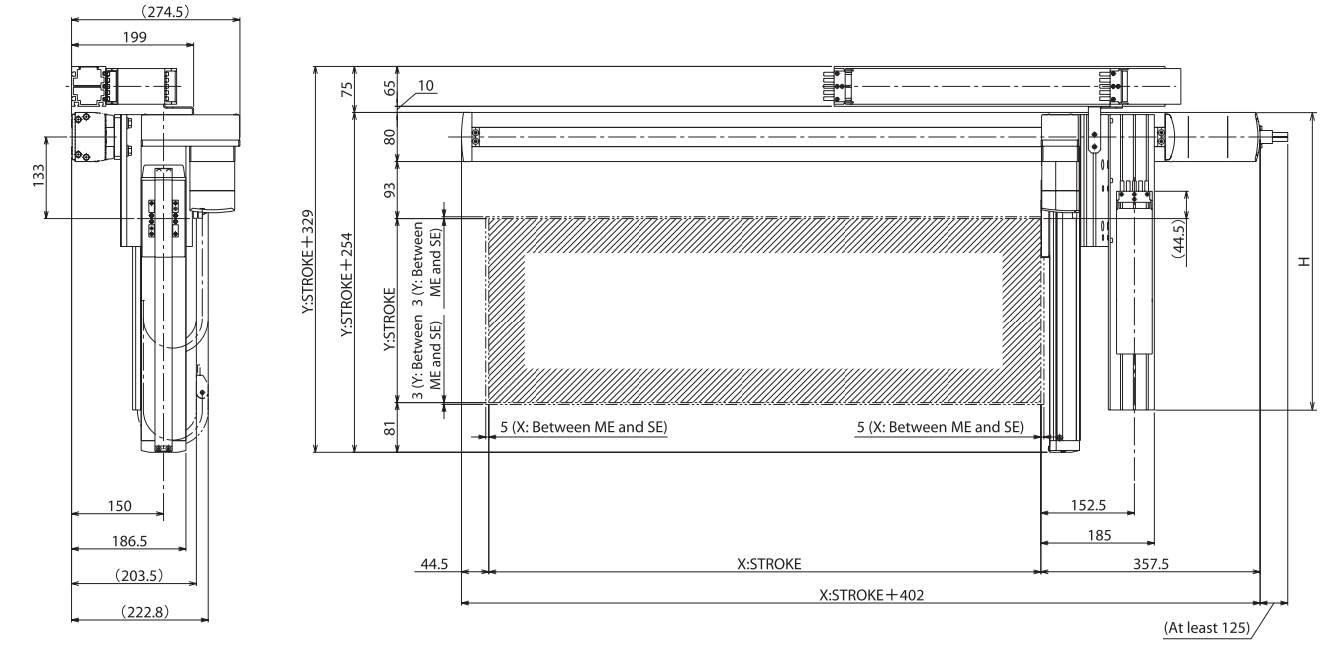
Item		X axis					Y axis
Axis model		RCS2-SS8C					RCS2-SA7R
Stroke (Can be set in 50-mm increments)		50-1000mm					50-300mm
Maximum speed	Stroke	50-600mm	650-700mm	750-800mm	850-900mm	950-1000mm	50-300mm
	High speed	1000mm/s	960mm/s	765mm/s	625mm/s	515mm/s	800mm/s
	Medium speed	500mm/s	480mm/s	380mm/s	310mm/s	255mm/s	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

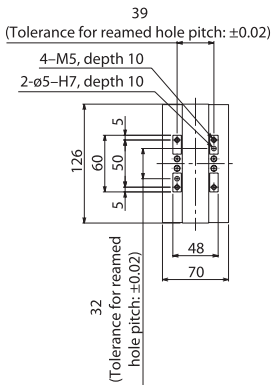
You can download CAD drawings from our website. www.robocylinder.de

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.

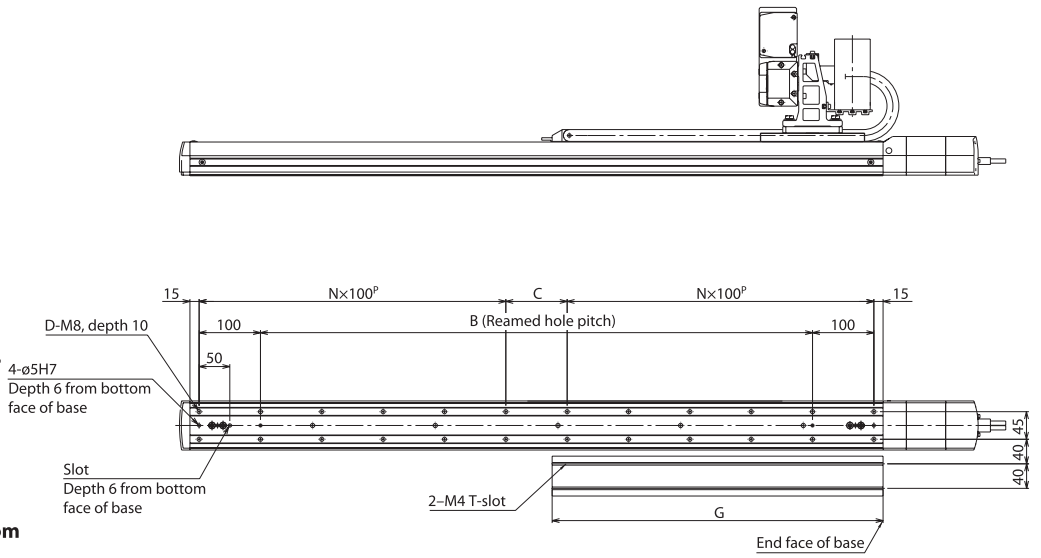


ME: Mechanical end
SE: Stroke end



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: 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

Y: Model	50	100	150	200	250	300
H	231.5	281.5	331.5	381.5	431.5	481.5

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-SXBB2□□D

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

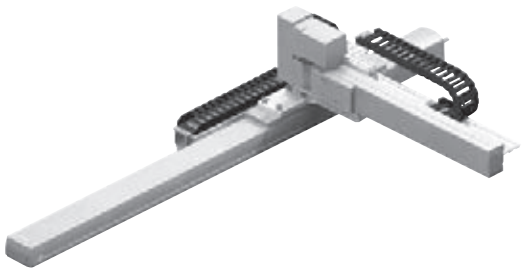
Model Details

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

IK2 — SXBB2 □□D — □ — □ □ — □ □ — □ — □ — □ — K

- 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; 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-KE/KET; T2: SSEL, MSCON, 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)

* 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

*Max speed may be down depend on the stroke.
(Please refer below „Specifications" for more details.)

	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

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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

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	–
				–

Options

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

Specifications

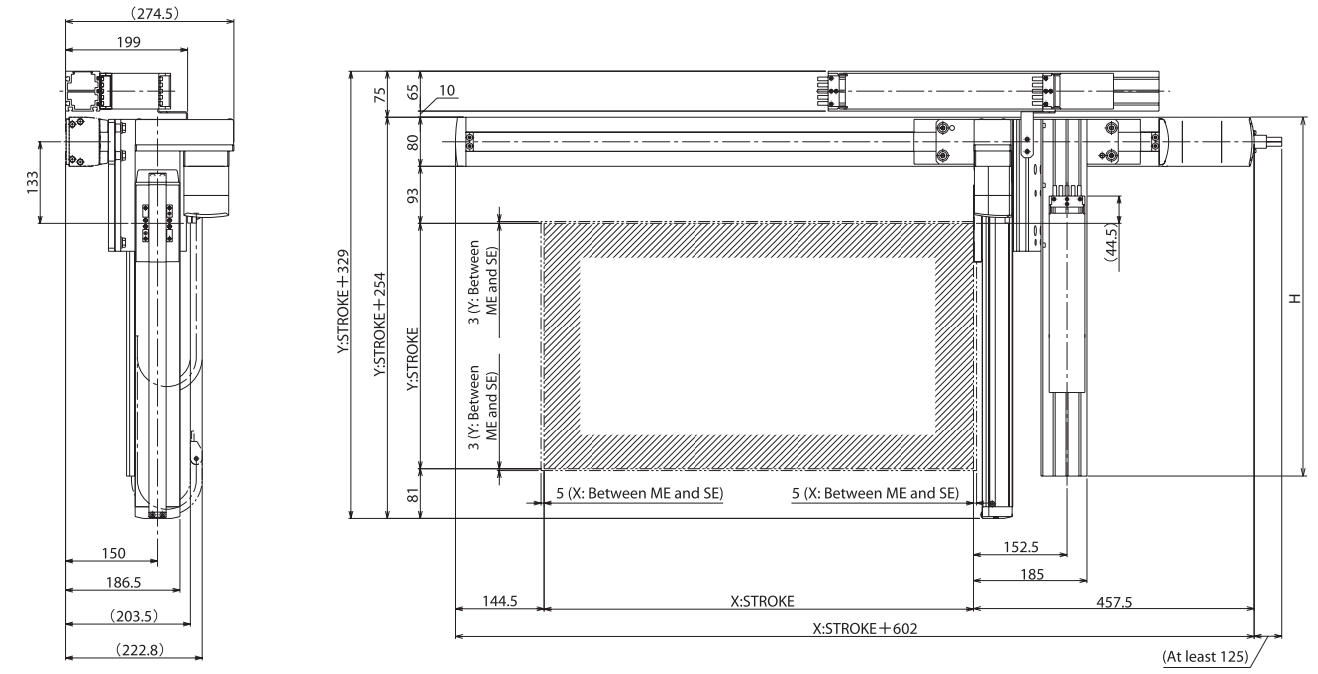
Item		X axis					Y axis
Axis model		RCS2-SS8C					RCS2-SA7R
Stroke (Can be set in 50-mm increments)		50-800mm					High-speed type: 350-400mm Medium-speed type: 200-400mm
Maximum speed	Stroke	50-400mm	450-500mm	550-600mm	650-700mm	750-800mm	200-400mm
	High speed	1000mm/s	960mm/s	765mm/s	625mm/s	515mm/s	800mm/s
	Medium speed	500mm/s	480mm/s	380mm/s	310mm/s	255mm/s	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

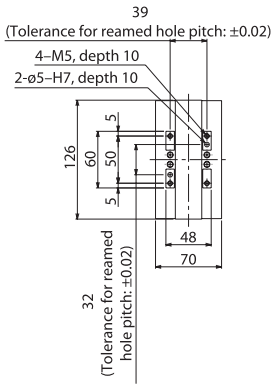
You can download CAD drawings from our website. www.robocylinder.de

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.

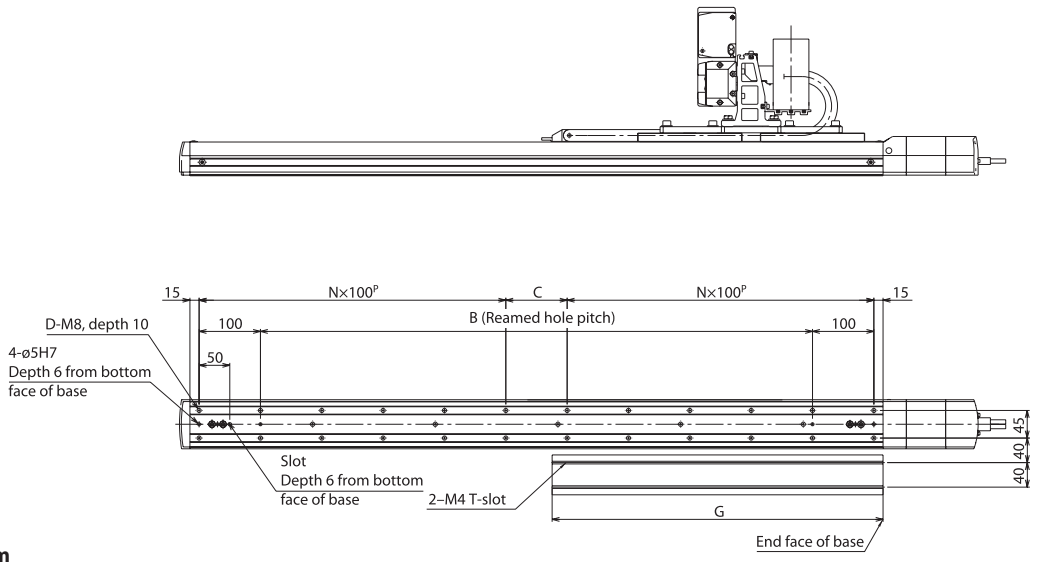


ME: Mechanical end
SE: Stroke end



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: 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

Y: Model	200	250	300	350	400
H	381.5	431.5	481.5	531.5	581.5

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-SXBA1□□S

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

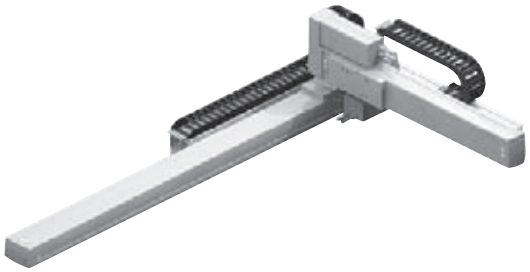
Model Details

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

IK2 – SXBA1□□S – □ – □ □ – □ □ – □ – □ – □ – K

- 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): 5: 50mm ~ (Can be set in 50-mm increments)
- Options: NM: Opposite-home specification; SR: Slider roller specification
- Controllers: T1: XSEL-KE/KET; T2: SSEL, MSCON, 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)

* 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

*Max speed may be down depend on the stroke.
(Please refer below „Specifications" for more details.)

	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	–

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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

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	–	–
				–	–

Options

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

Specifications

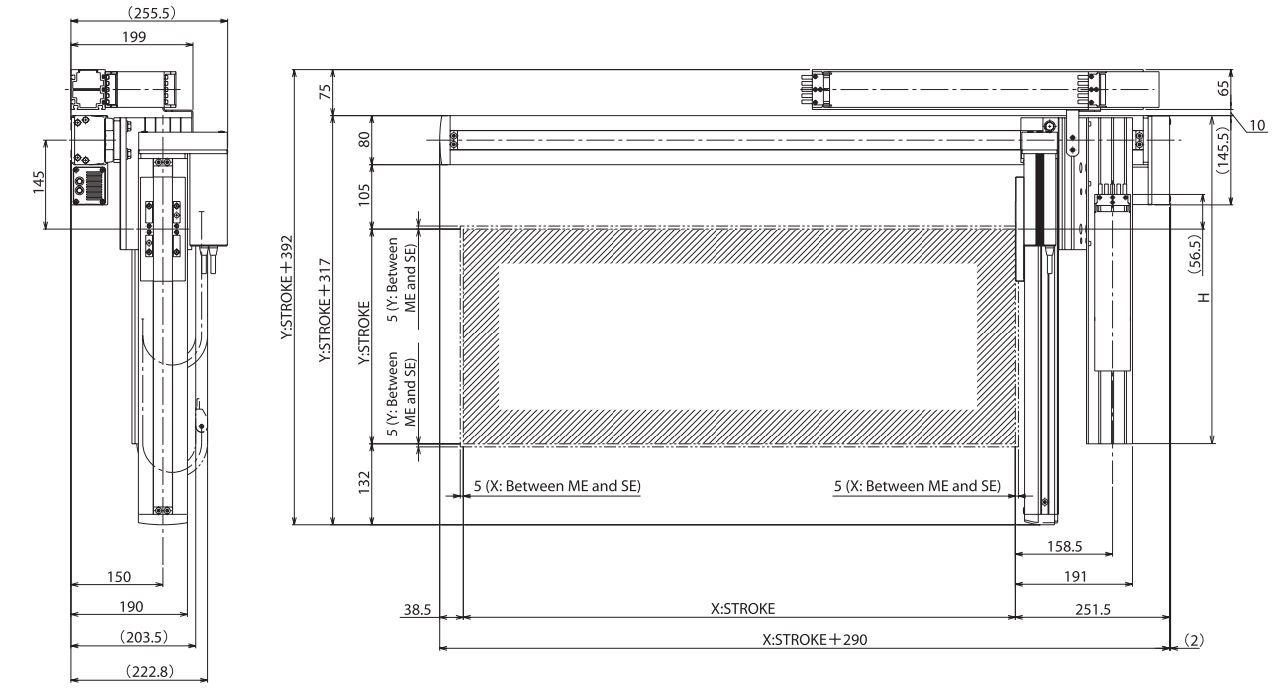
Item		X axis					Y axis
Axis model		RCS2-SS8R					RCS2-SS8R
Stroke (Can be set in 50-mm increments)		50-1000mm					High-speed type: 50-350mm Medium-speed type: 50-200mm
Maximum speed	Stroke	50-600mm	650-700mm	750-800mm	850-900mm	950-1000mm	50-350mm
	High speed	1000mm/s	960mm/s	765mm/s	625mm/s	515mm/s	1000mm/s
	Medium speed	500mm/s	480mm/s	380mm/s	310mm/s	255mm/s	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

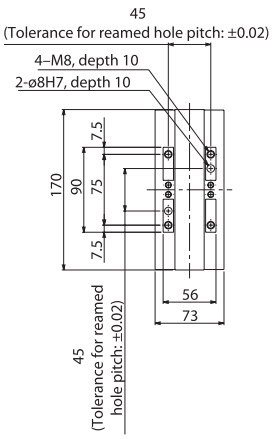
You can download CAD drawings from our website. www.robocylinder.de

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.

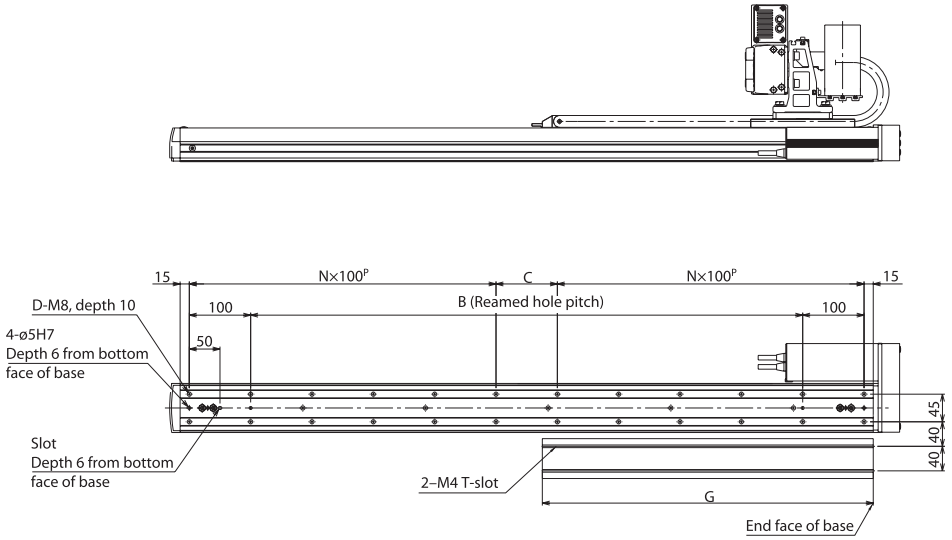


ME: Mechanical end
SE: Stroke end



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: 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

Y: Model	50	100	150	200	250	300	350
H	231.5	281.5	331.5	381.5	431.5	481.5	531.5

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-SXBA1□□D

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

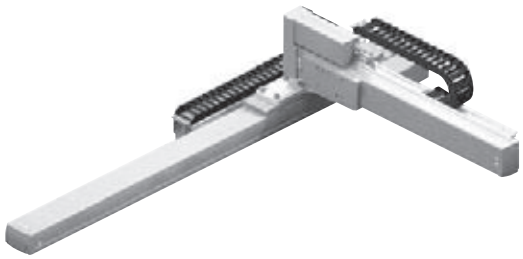
Model Details

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

IK2 – SXBA1 □□D – □ – □ □ – □ □ – □ – □ – □ – □ – K

- 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): 5: 50mm ~ (Can be set in 50-mm increments)
- Options: NM: Opposite-home specification; SR: Slider roller specification
- Controllers: T1: XSEL-KE/KET; T2: SSEL, MSCON, 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)

* 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

*Max speed may be down depend on the stroke.
(Please refer below „Specifications" for more details.)

	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

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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

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	–
				–

Options

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

Specifications

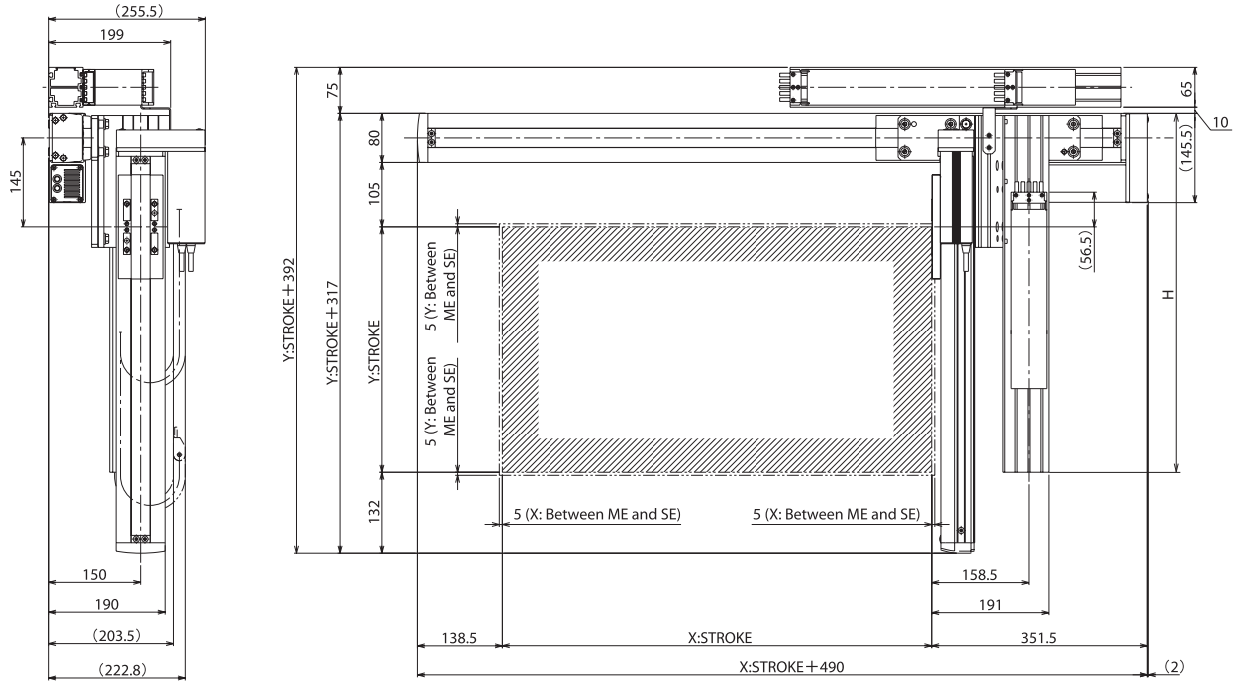
Item		X axis					Y axis
Axis model		RCS2-SS8R					RCS2-SS8R
Stroke (Can be set in 50-mm increments)		50-800mm					High-speed type: 300-400mm Medium speed type: 100-400mm
Maximum speed	Stroke	50-400mm	450-500mm	550-600mm	650-700mm	750-800mm	100-400mm
	High speed	1000mm/s	960mm/s	765mm/s	625mm/s	515mm/s	1000mm/s
	Medium speed	500mm/s	480mm/s	380mm/s	310mm/s	255mm/s	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

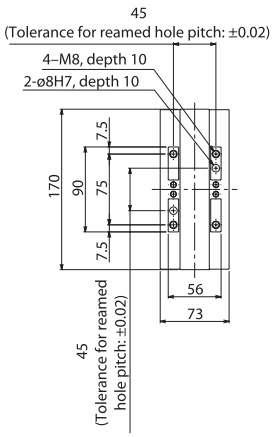
You can download CAD drawings from our website. www.robocylinder.de

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.

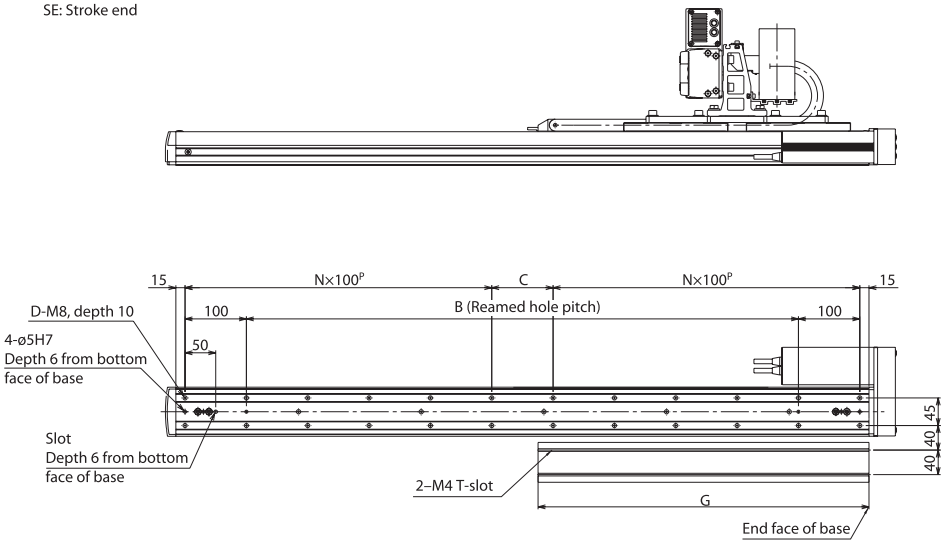


ME: Mechanical end
SE: Stroke end



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: 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

Y: Model	100	150	200	250	300	350	400
H	281.5	331.5	381.5	431.5	481.5	531.5	581.5

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-SXBA2□□S

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

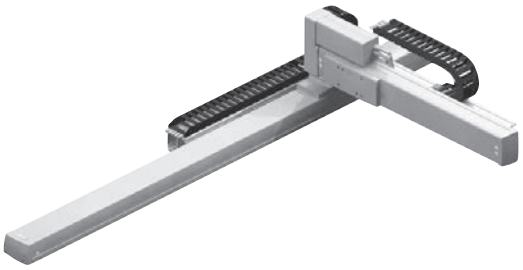
Model Details

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

IK2 – SXBA2□□S – □ – □ □ – □ □ – □ – □ – □ – □ – K

- 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; 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-KE/KET; T2: SSEL, MSCON, 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)

* 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

*Max speed may be down depend on the stroke.
(Please refer below „Specifications“ for more details.)

	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	–

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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

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	–	–
				–	–

Options

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

Specifications

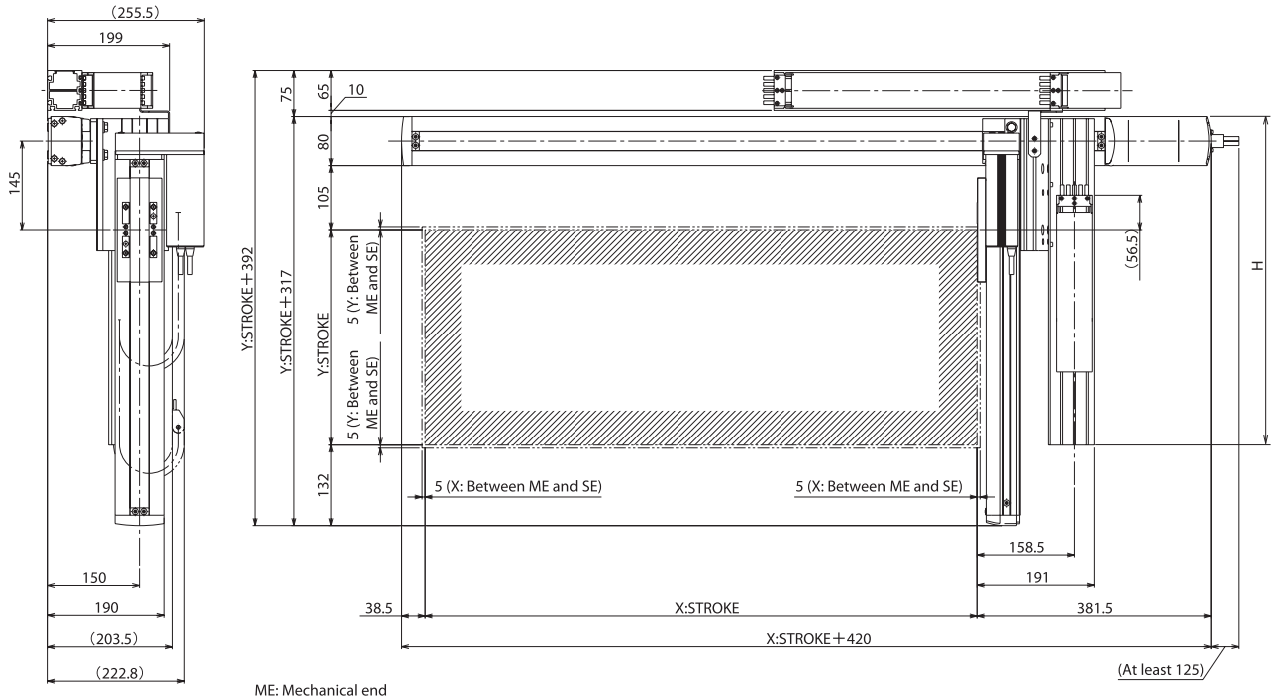
Item		X axis					Y axis
Axis model		RCS2-SS8C					RCS2-SS8R
Stroke (Can be set in 50-mm increments)		50-1000mm					High-speed type: 50-350mm Medium speed type: 50-200mm
Maximum speed	Stroke	50-600mm	650-700mm	750-800mm	850-900mm	950-1000mm	50-350mm
	High speed	1000mm/s	960mm/s	765mm/s	625mm/s	515mm/s	1000mm/s
	Medium speed	500mm/s	480mm/s	380mm/s	310mm/s	255mm/s	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

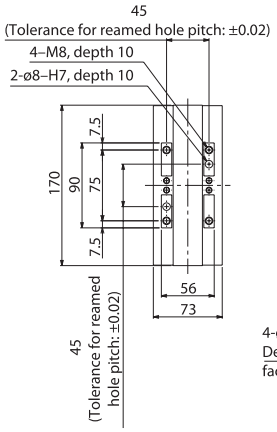
You can download CAD drawings from our website. www.robocylinder.de

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.

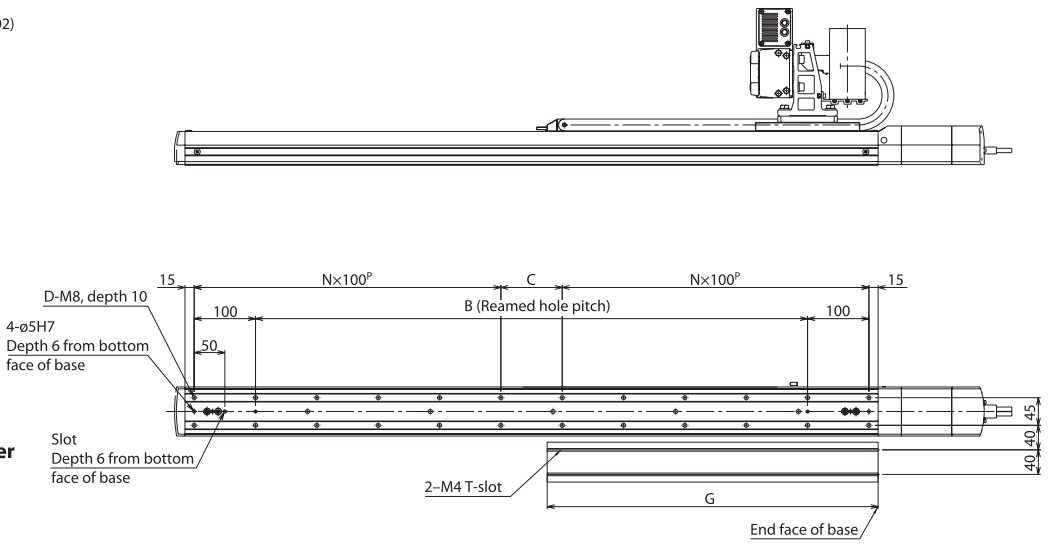


ME: Mechanical end
SE: Stroke end



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	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

Y: Model	50	100	150	200	250	300	350
H	231.5	281.5	331.5	381.5	431.5	481.5	531.5

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-SXBA2□□D

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

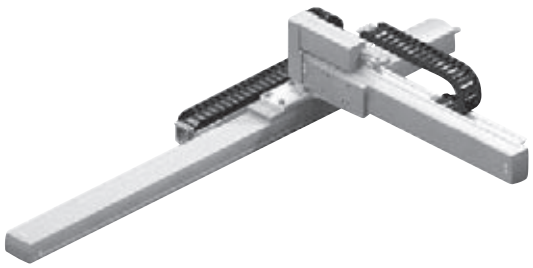
Model Details

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

IK2 – SXBA2 □□D – □ – □ □ – □ □ – □ – □ – □ – □ – K

- 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; 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-KE/KET; T2: SSEL, MSCON, 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)

* 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

*Max speed may be down depend on the stroke.
(Please refer below „Specifications" for more details.)

	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

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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

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	–
				–

Options

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

Specifications

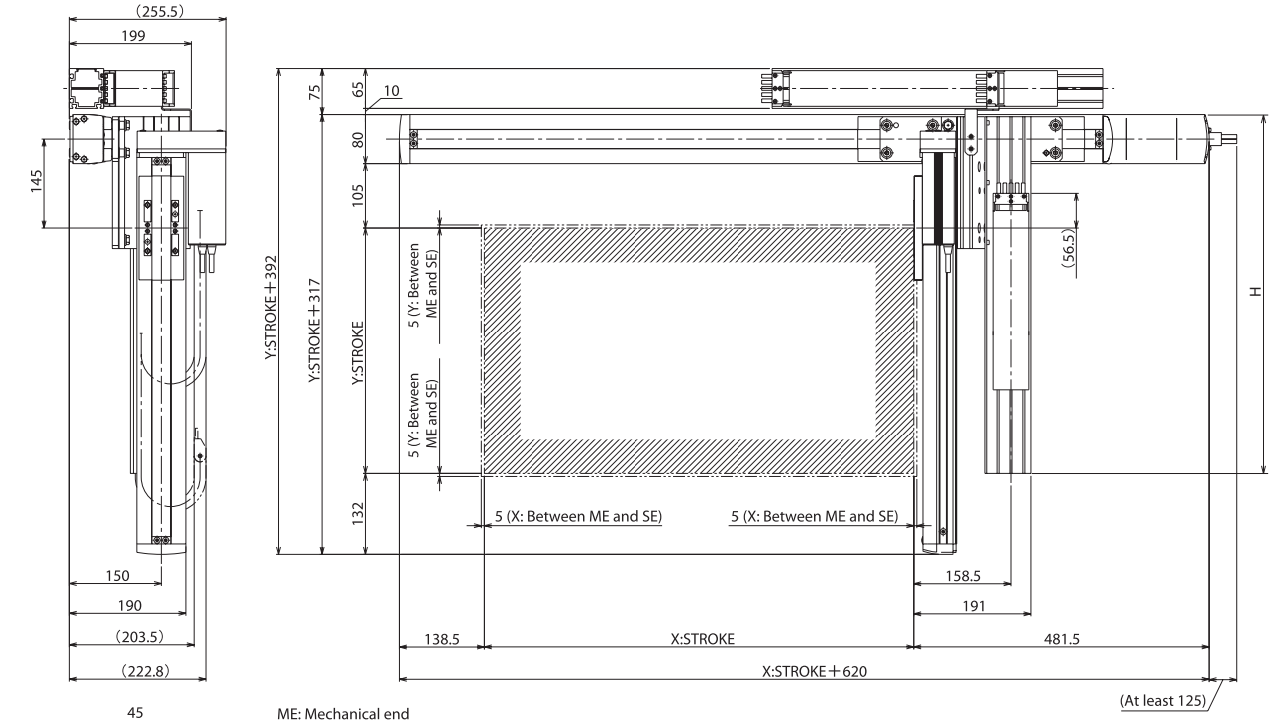
Item		X axis					Y axis
Axis model		RCS2-SS8C					RCS2-SS8R
Stroke (Can be set in 50-mm increments)		50-800mm					High-speed type: 300-400mm Medium speed type: 100-400mm
Maximum speed	Stroke	50-400mm	450-500mm	550-600mm	650-700mm	750-800mm	100-400mm
	High speed	1000mm/s	960mm/s	765mm/s	625mm/s	515mm/s	1000mm/s
	Medium speed	500mm/s	480mm/s	380mm/s	310mm/s	255mm/s	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

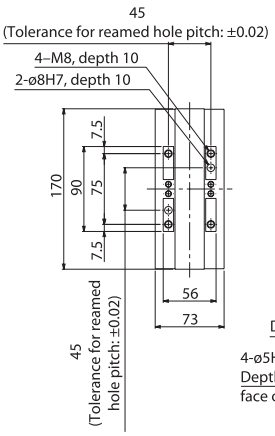
You can download CAD drawings from our website. www.robocylinder.de

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.

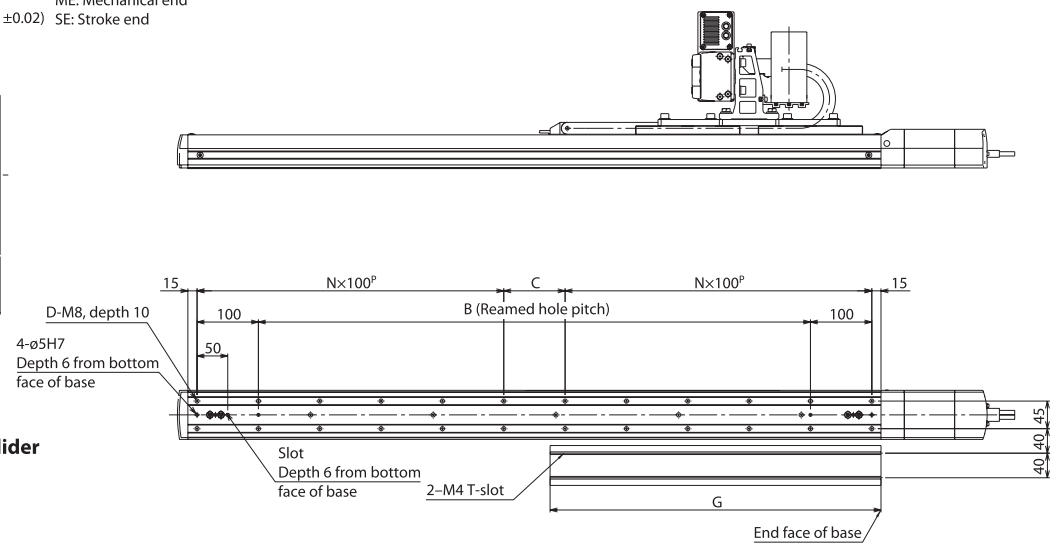


ME: Mechanical end
SE: Stroke end



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: 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

Y: Model	100	150	200	250	300	350	400
H	281.5	331.5	381.5	431.5	481.5	531.5	581.5

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-SXZB1□□S

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

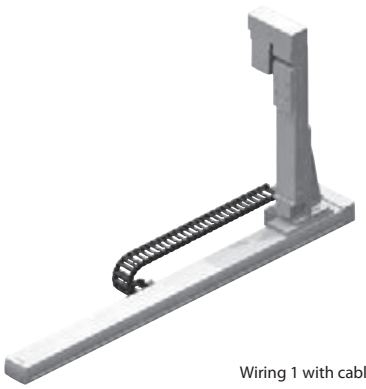
Model Details

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

IK2 – SXZB1 □□S – □ – □ □ – □ B□ – □ – □ – □ – □ – K

- 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-KE/KET; T2: SSEL, MSCON, 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)

* 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

*Max speed may be down depend on the stroke.
(Please refer below „Specifications" for more details.)

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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

Cable track

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

Options

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

Specifications

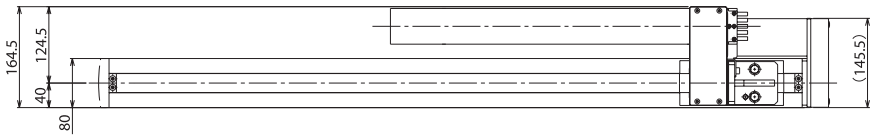
Item		X axis					Z axis
Axis model		RCS2-SS8R					RCS2-SA7R
Stroke (Can be set in 50-mm increments)		50-1000mm					50-250mm
Maximum speed	Stroke	50-600mm	650-700mm	750-800mm	850-900mm	950-1000mm	50-250mm
	High speed	1000mm/s	960mm/s	765mm/s	625mm/s	515mm/s	800mm/s
	Medium speed	-	-	-	-	-	400mm/s
	Low speed	-	-	-	-	-	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, 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)					

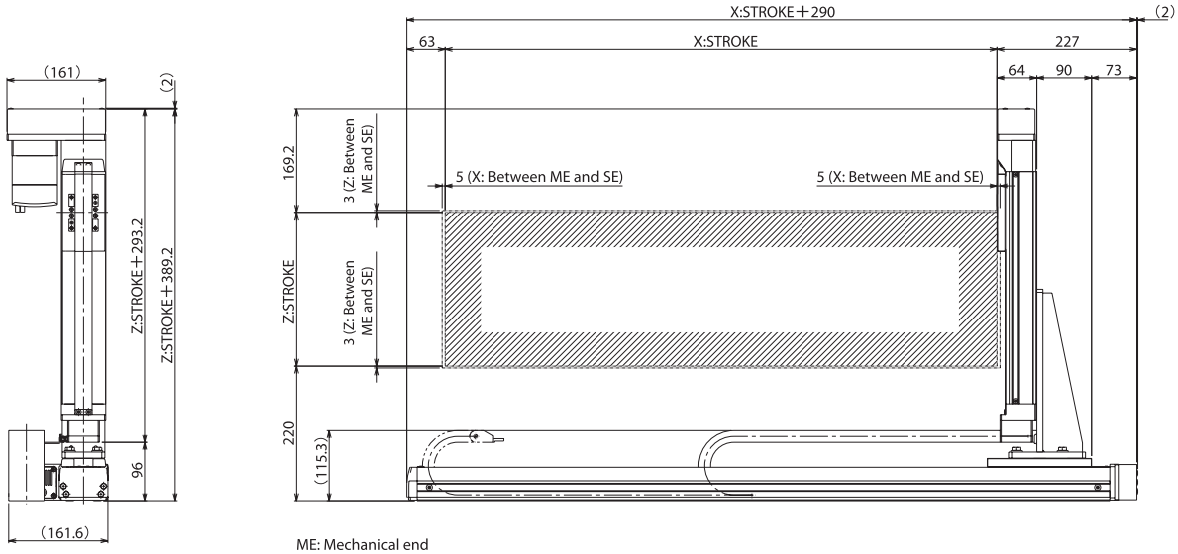
Dimensions

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

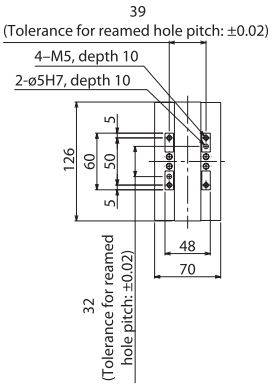
2D CAD

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.

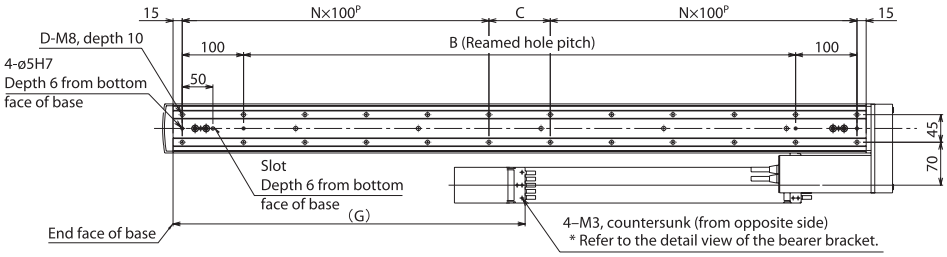




ME: Mechanical end
SE: Stroke end



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: 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. 90 for the controllers.

IK2-SXZB1□□D

RCS2 2-axis Combinations(XZ)

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

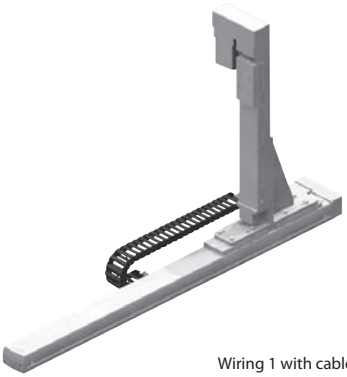
Model Details

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

IK2 – SXZB1 □□D – □ – □ □ – □ □ B□ – □ – □ – □ – □ – K

- 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-KE/KET; T2: SSEL, MSCON, 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)

* 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

*Max speed may be down depend on the stroke.
(Please refer below „Specifications" for more details.)

	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

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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

Cable track

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

Options

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

Specifications

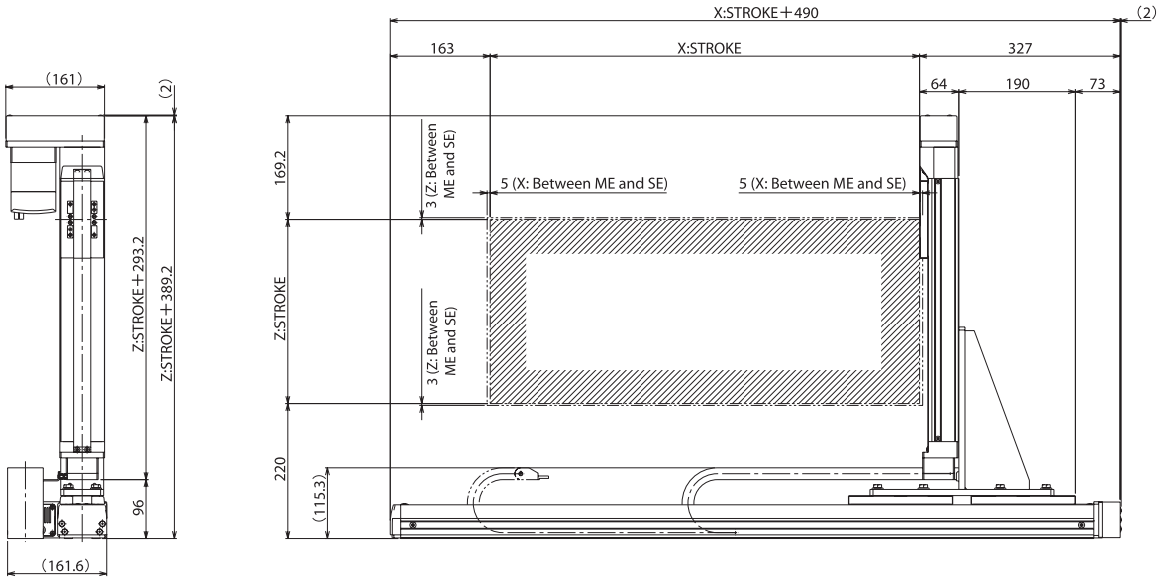
Item		X axis					Z axis
Axis model		RCS2-SS8R					RCS2-SA7R
Stroke (Can be set in 50-mm increments)		50-800mm					High-speed type: 300mm Medium-speed type: 300mm Low-speed type: 150-300mm
Maximum speed	Stroke	50-400mm	450-500mm	550-600mm	650-700mm	750-800mm	150-300mm
	High speed	1000mm/s	960mm/s	765mm/s	625mm/s	515mm/s	800mm/s
	Medium speed	-	-	-	-	-	400mm/s
	Low speed	-	-	-	-	-	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, 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

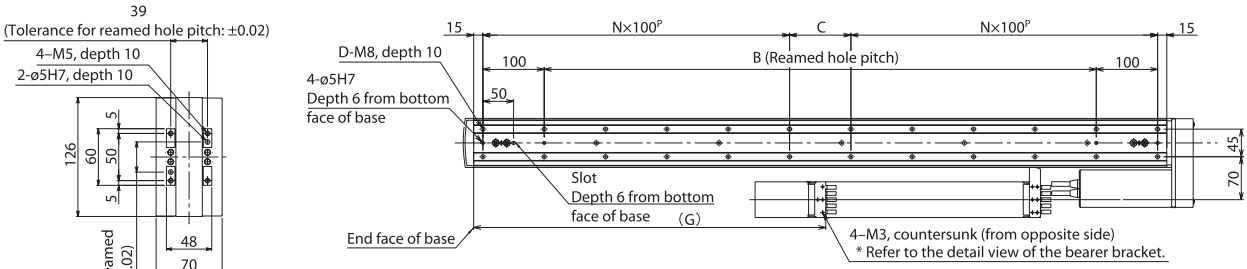
You can download CAD drawings from our website. www.robocylinder.de

2D CAD

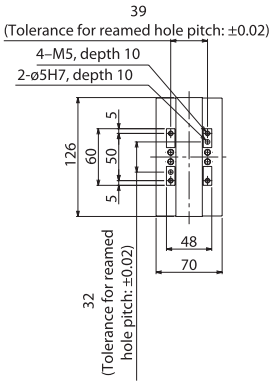
Note 1. The connected position shown in the drawing defines the home.
Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
Note 3. For details on the cable track, refer to P. 90.
Note 4. For details on the bracket on the moving end of the cable track, refer to P. 90.



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. 90 for the controllers.

IK2-SYBB1□□S

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

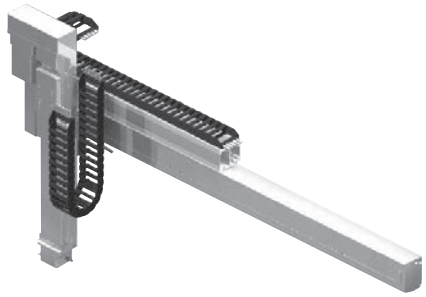
Model Details

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

IK2 – SYBB1 □□S – □ – □ □ – □ B□ – □ – □ – □ – □ – K

- 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; 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-KE/KET; T2: SSEL, MSCON, 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)

* 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

*Max speed may be down depend on the stroke. (Please refer below „Specifications" for more details.)

	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

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 for lengths other than those specified above.

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	–	–
				–	–

Options

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

Specifications

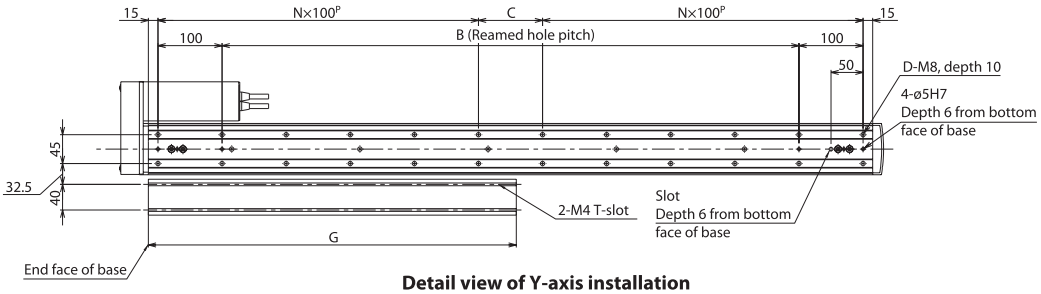
Item		Y axis					Z axis
Axis model		RCS2-SS8R					RCS2-SA7R
Stroke (Can be set in 50-mm increments)		50-1000mm					50-300mm
Maximum speed	Stroke	50-600mm	650-700mm	750-800mm	850-900mm	950-1000mm	50-300mm
	High speed	1000mm/s	960mm/s	765mm/s	625mm/s	515mm/s	800mm/s
	Medium speed	-	-	-	-	-	400mm/s
	Low speed	-	-	-	-	-	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, 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

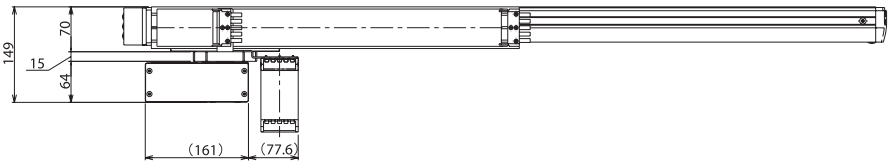
You can download CAD drawings from our website. www.robocylinder.de

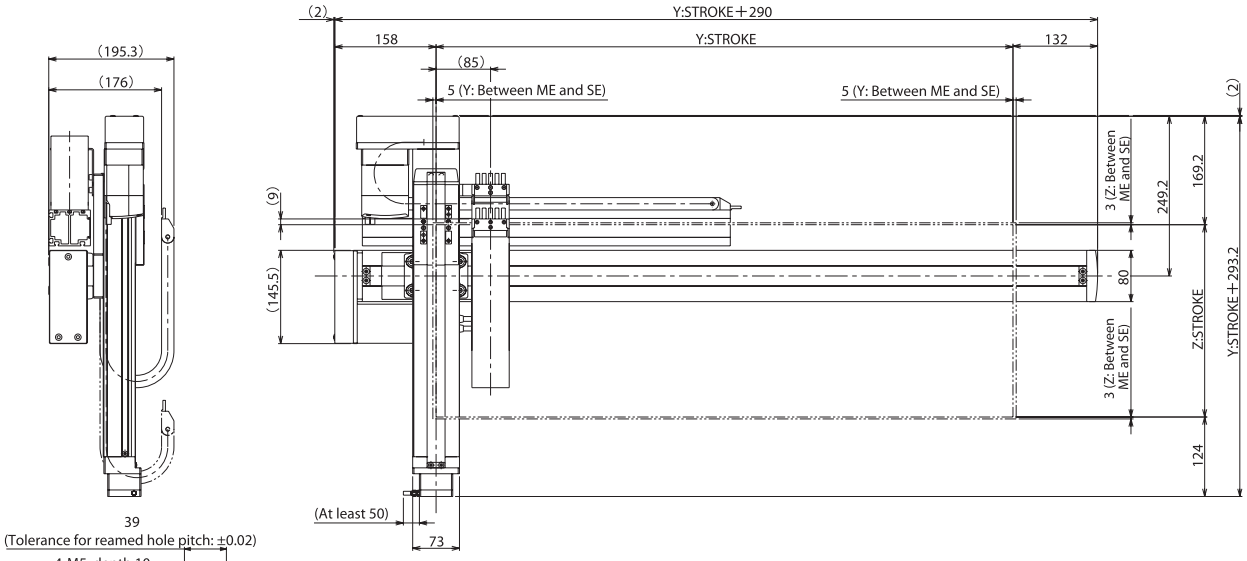
2D CAD

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.

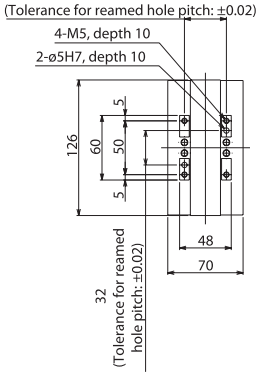


Detail view of Y-axis installation





ME: Mechanical end
SE: Stroke end



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. 90 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)

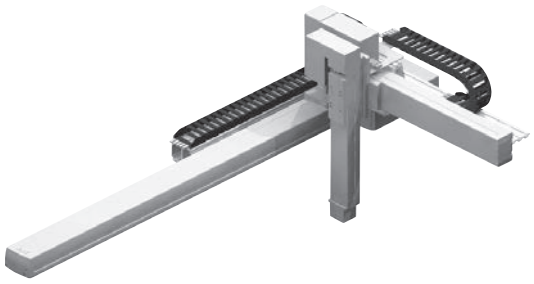
Model Details

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

IK3 – PBBG1□□S – □ – □ □ – □ □ – □ □ – B□ – □ – □ – □ – □ – K

- 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
- Controllers: P1: PSEL; P3: MSEP
- 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)

* 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			

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 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

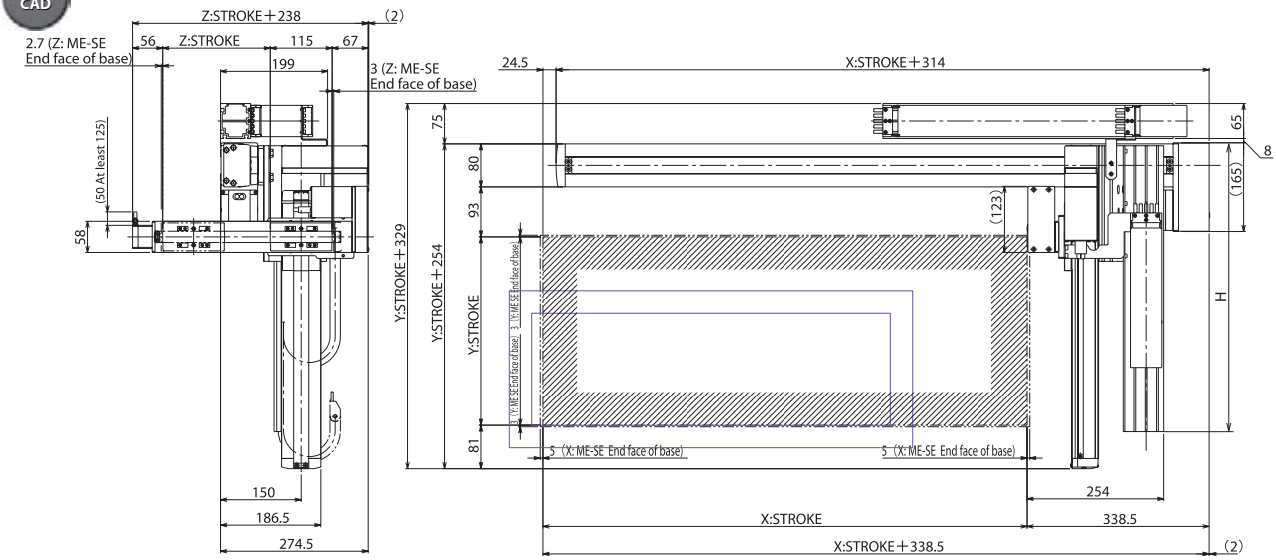
Item	X axis	Y axis	Z axis
Axis model	RCP2-SS8R	RCP2-SA7R	RCP2-SA6R
Stroke (Can be set in 50-mm increments)	50-1000mm	50-300mm	50-200mm
Maximum speed	High-speed type: 220mm/s	High-speed type: 420mm/s	High-speed type: 500mm/s Medium-speed type: 250mm/s Low-speed type: 125mm/s
Motor size	56-square pulse 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)		

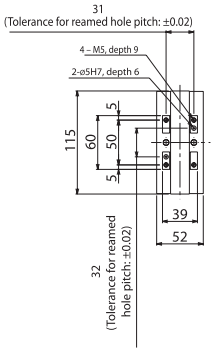
Dimensions

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

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.

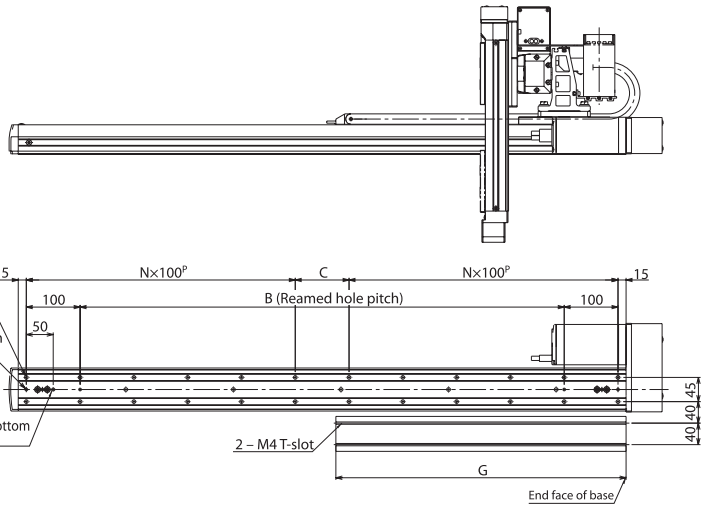




Detail view of Z-axis slider

Detail view of slot in bottom 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	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

Y: Model	50	100	150	200	250	300
H	231.5	281.5	331.5	381.5	431.5	481.5

Controllers

Applicable controller

Refer to P. 90 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)

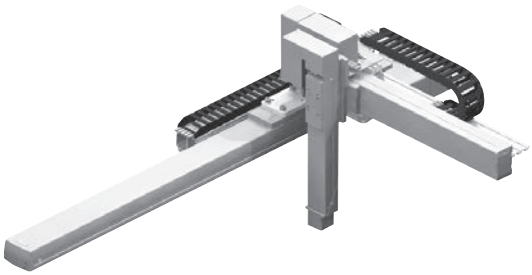
Model Details

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

IK3 – PBBG1□□D – □ – □ □ – □ □ – □ □ B□ – □ – □ – □ – □ – K

- 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
- Controllers: P1: PSEL; P3: MSEP
- 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)

* 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	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
350mm	1.0kg	2.0kg	4.0kg
400mm			

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 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.

Options

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

Specifications

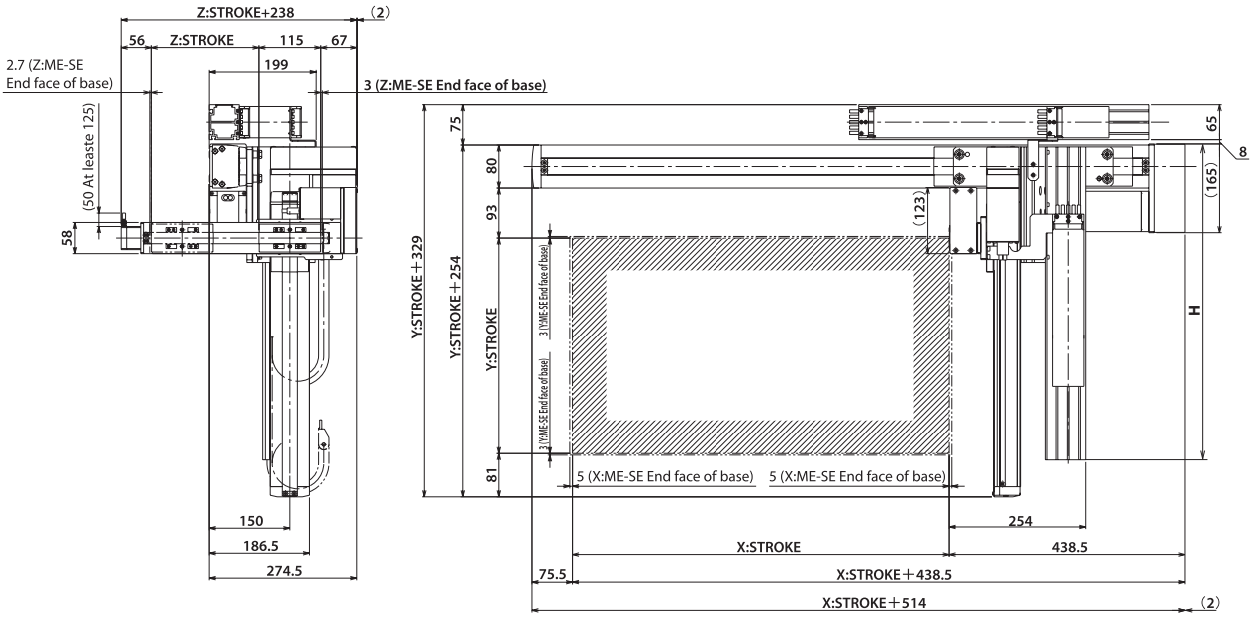
Item	X axis	Y axis	Z axis
Axis model	RCP2-SS8R	RCP2-SA7R	RCP2-SA6R
Stroke (Can be set in 50-mm increments)	50-800mm	350-400mm	50-200mm
Maximum speed	High-speed type: 220mm/s	High-speed type: 420mm/s	High-speed type: 500mm/s Medium-speed type: 250mm/s Low-speed type: 125mm/s
Motor size	56-square pulse 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)		

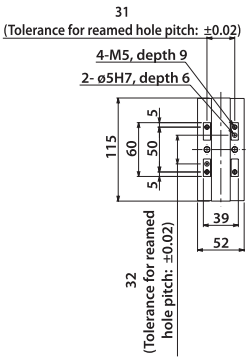
Dimensions

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

2D CAD

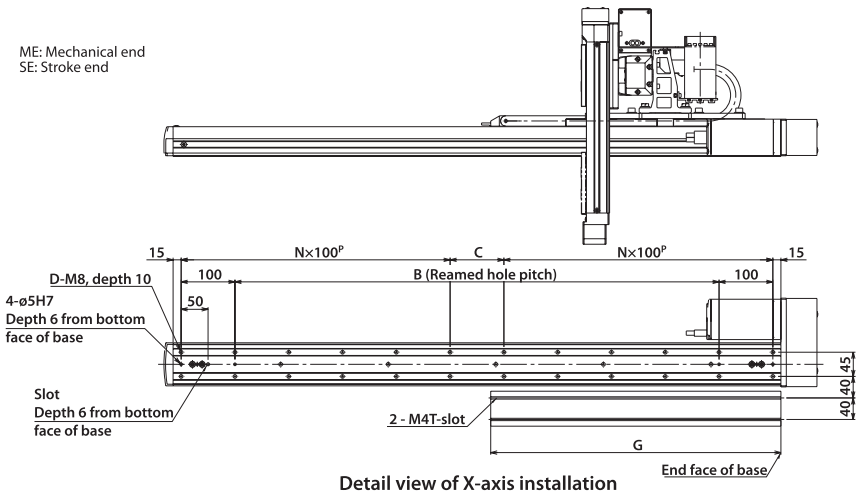
Note 1. The connected position shown in the drawing defines the home.
Note 2.The drawing below assumes that both wiring 1 and wiring 2 have a cable track.
Note 3. For details on the cable track, refer to P. 90.





Detail view of Z-axis slider

Detail view of slot in bottom



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

Y: Model	350	400
H	531.5	581.5

Controllers

Applicable controller

Refer to P. 90 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)

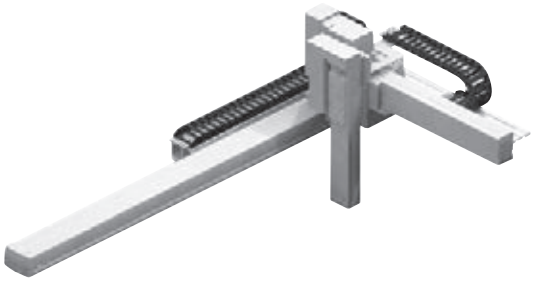
Model Details

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

IK3 – SBBG1□□S – □ – □ □ – □ □ – □ □ – □ B□ – □ – □ – □ – □ – K

- 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): 5: 50mm ~ (Can be set in 50-mm increments)
- Options: B: Brake; NM: Opposite-home specification; SR: Slider roller specification
- Controllers: T1: XSEL-KE/KET; T2: SSEL, MSCON, 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)

* 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

*Max speed may be down depend on the stroke. (Please refer below „Specifications" for more details.)

	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	800mms	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			

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 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

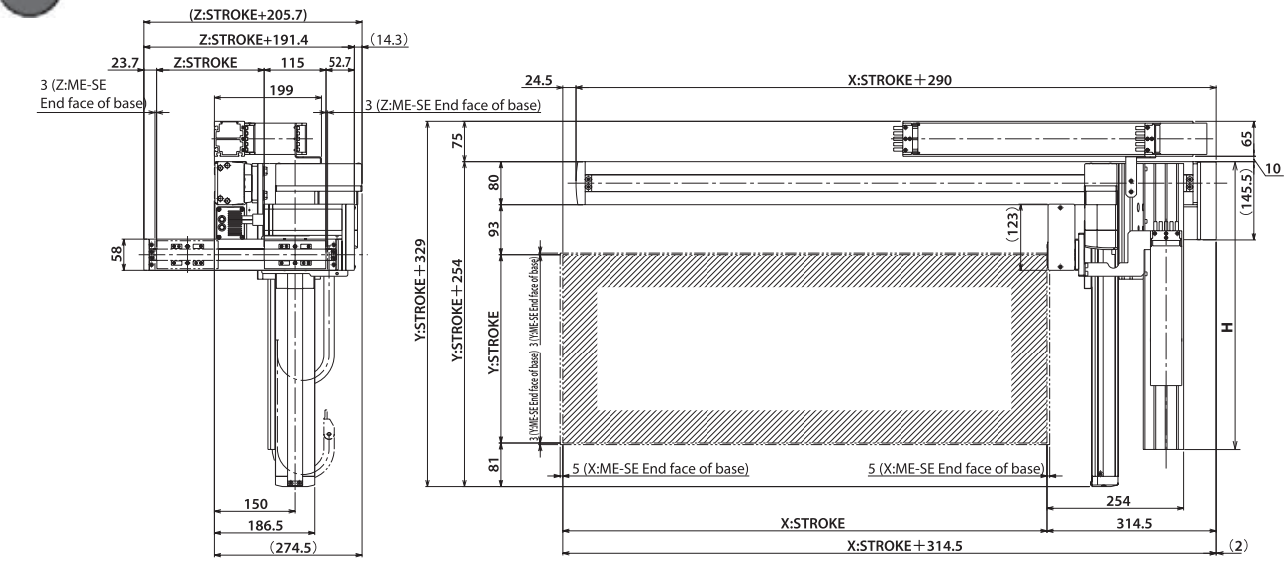
Item	X axis	Y axis	Z axis
Axis model	RCS2-SS8R	RCS2-SA7R	RCS2-SA6R
Stroke (Can be set in 50-mm increments)	50-1000mm	50-300mm	50-200mm
Maximum speed	High-speed type: 1000mm/s	High-speed type: 800mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s Low-speed type: 200mm/s
Motor output (W)	100W	60W	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)		

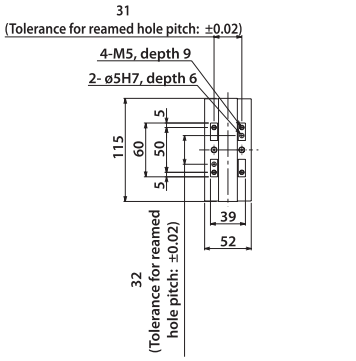
Dimensions

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

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.

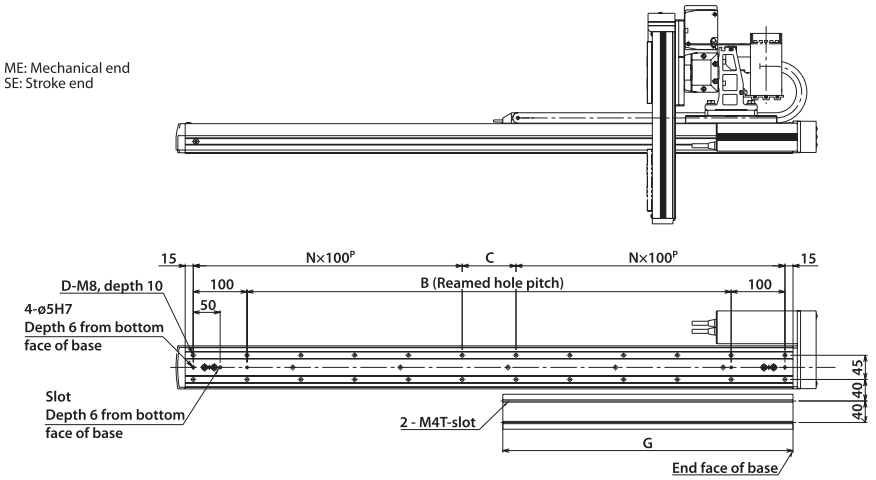




Detail view of Z-axis slider

Detail view of slot in bottom 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	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

Y: Model	50	100	150	200	250	300
H	231.5	281.5	331.5	381.5	431.5	481.5

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK3-SBBG1□□D

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

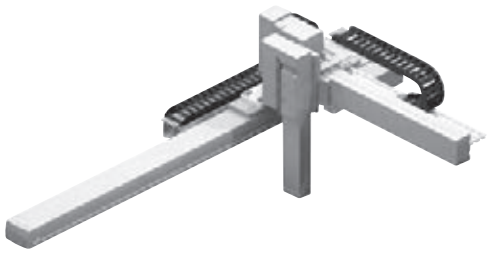
Model Details

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

IK3 – SBBG1□□D – □ – □ □ – □ □ – □ □ B□ – □ – □ – □ – □ – K

- 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): 5: 50mm ~ (Can be set in 50-mm increments)
- Options: B: Brake; NM: Opposite-home specification; SR: Slider roller specification
- Controllers: T1: XSEL-KE/KET; T2: SSEL, MSCON, 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)

* 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

*Max speed may be down depend on the stroke. (Please refer below „Specifications" for more details.)

	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	800mms	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
350mm 400mm	1.0kg	2.0kg	4.0kg

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.
** Cable length of second axis is defined by the length outside of cable track. If CT option is not choosed, longer cable is provided.
*** Refer to P. 89 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.

Options

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

Specifications

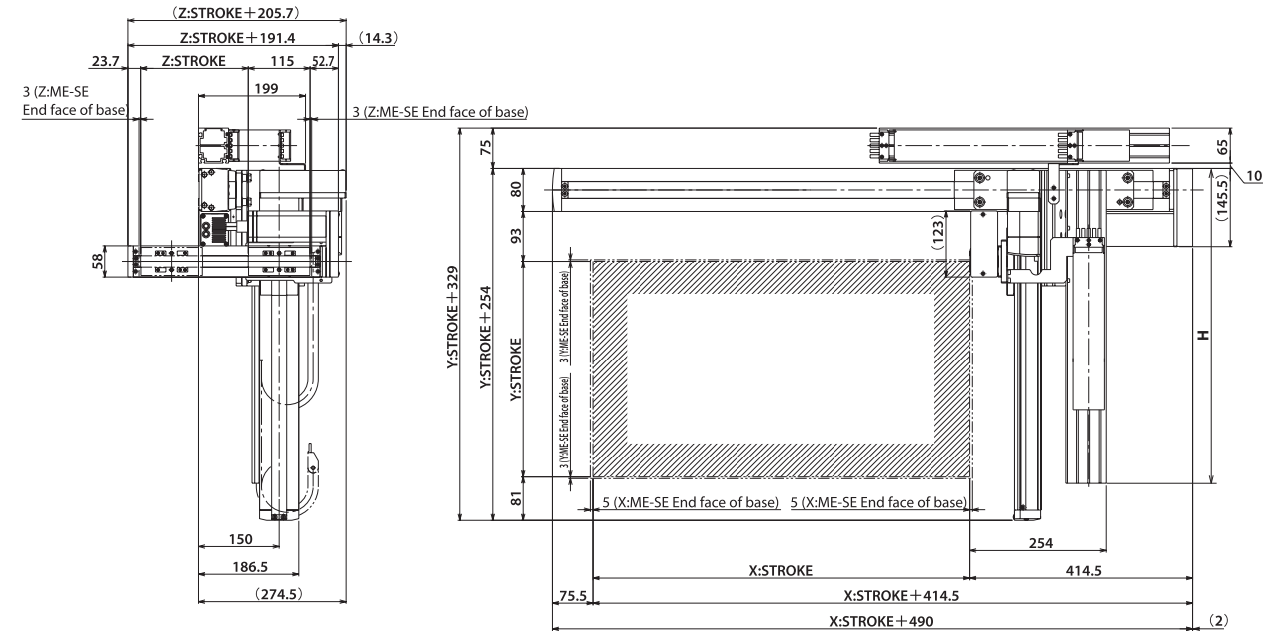
Item	X axis	Y axis	Z axis
Axis model	RCS2-SS8R	RCS2-SA7R	RCS2-SA6R
Stroke (Can be set in 50-mm increments)	50-800mm	350-400mm	50-200mm
Maximum speed	High-speed type: 1000mm/s	High-speed type: 800mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s Low-speed type: 200mm/s
Motor output (W)	100W	60W	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)		

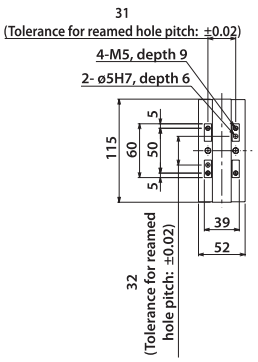
Dimensions

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

2D CAD

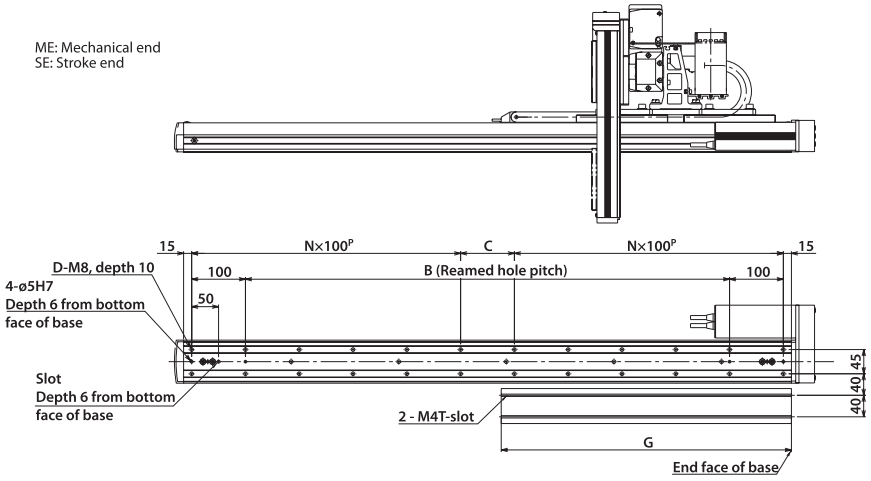
Note 1. The connected position shown in the drawing defines the home.
Note 2.The drawing below assumes that both wiring 1 and wiring 2 have a cable track.
Note 3. For details on the cable track, refer to P. 90.





Detail view of Z-axis slider

Detail view of slot in bottom 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

Y: Model	350	400
H	531.5	581.5

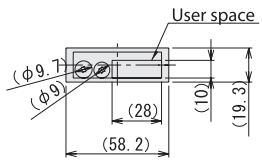
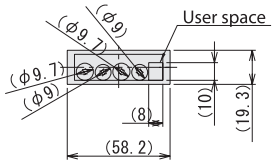
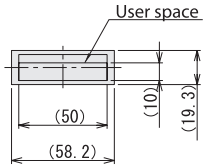
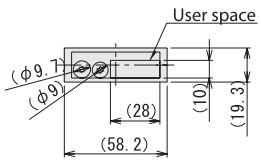
Controllers

Applicable controller

Refer to P. 90 for the controllers.

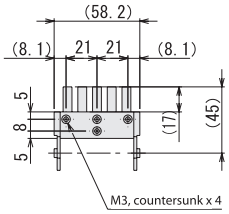
Reference

Cable Track

Section view of axis 1 cable storage		Detail view of axis 2 cable storage	
			
2-axis combination	3-axis combination	2-axis combination	3-axis combination

Detail View of Bracket on Moving End of Cable Track

Moving end of cable track for wiring 2 in XYB or YZ combination
Moving end of cable track for wiring 1 in XZ combination



Cable Length

Cable code	Length
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 2-axis program controller	PSEL-CA	91
SSEL	RCS2-series 2-axis program controller	SSEL-CA	101
MSEP	RCP2-series multi-axis position controller	MSEP-C	111
XSEL	RCS2-series multi-axis program controller	X-SEL-KE / KET / P / Q	121

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	CS	
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 1500 positioning points are supported. Push-motion operation and teaching operation are also possible.
Number of positions	1500	

Model

* 2nd axis specs not applicable to the single-axis model.

PSEL – CS – ☐ – ☐ I ☐ – ☐ I ☐ – ☐ – ☐ – 0 – ☐ – ☐

Series: PSEL
Type: CS
Number of Axes
(Specs for 1st axis): Motor / Encoder / Option
(Specs for 2nd axis): Motor / Encoder / Option
I/O Type
I/O Cable Length
Power Voltage: 0
Simple absolute unit
High acceleration type model

Number of Axes	
1	Single-axis model
2	2-axis model

Motor	
20P	20 ☐ pulse motor-compatible
28P	28 ☐ pulse motor-compatible
28SP	28 ☐ pulse motor-compatible (*)
35P	35 ☐ pulse motor-compatible
42P	42 ☐ pulse motor-compatible
56P	56 ☐ pulse motor-compatible

* If connecting to RCP2-RA3C/ RGD3C, the motor type is 28SP.

Encoder	
I	Incremental

Option	
B	Brake

(Specs for 2nd axis) Motor / Encoder / Option: same as (Specs for 1st axis).

I/O Type	
NP	PIO NPN
PN	PIO PNP (standard)
DV	DeviceNet
CC	CC-Link
PR	ProfiBus

I/O Cable Length	
0	No cable
2	2m (standard)
3	3m
5	5m

Power Voltage	
0	DC24V

Simple absolute unit	
Blank	Not used
ABU	Used

High acceleration type model	
Blank	Standard
H	High acceleration type model (*)

* If connecting to RCP3-SA4/ SA5/SA6 or RCP2-SA5/SA6, specify "H", for high-acceleration type model.

I/O Specifications

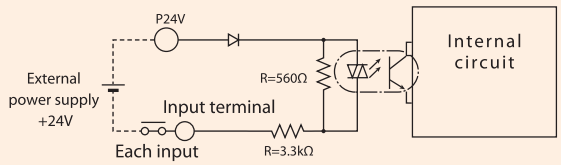
■Input External input specifications

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

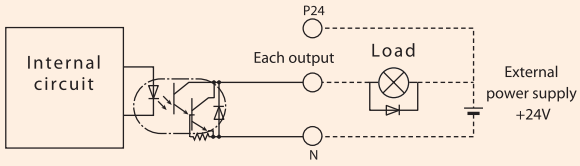
■Output External output specifications

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

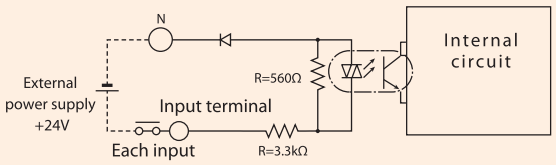
NPN specification



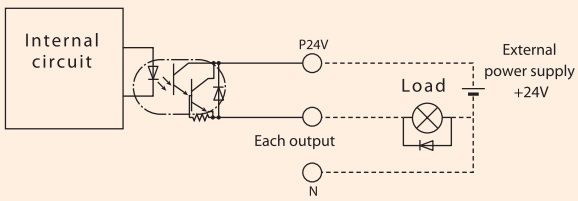
NPN specification



PNP specification



PNP specification



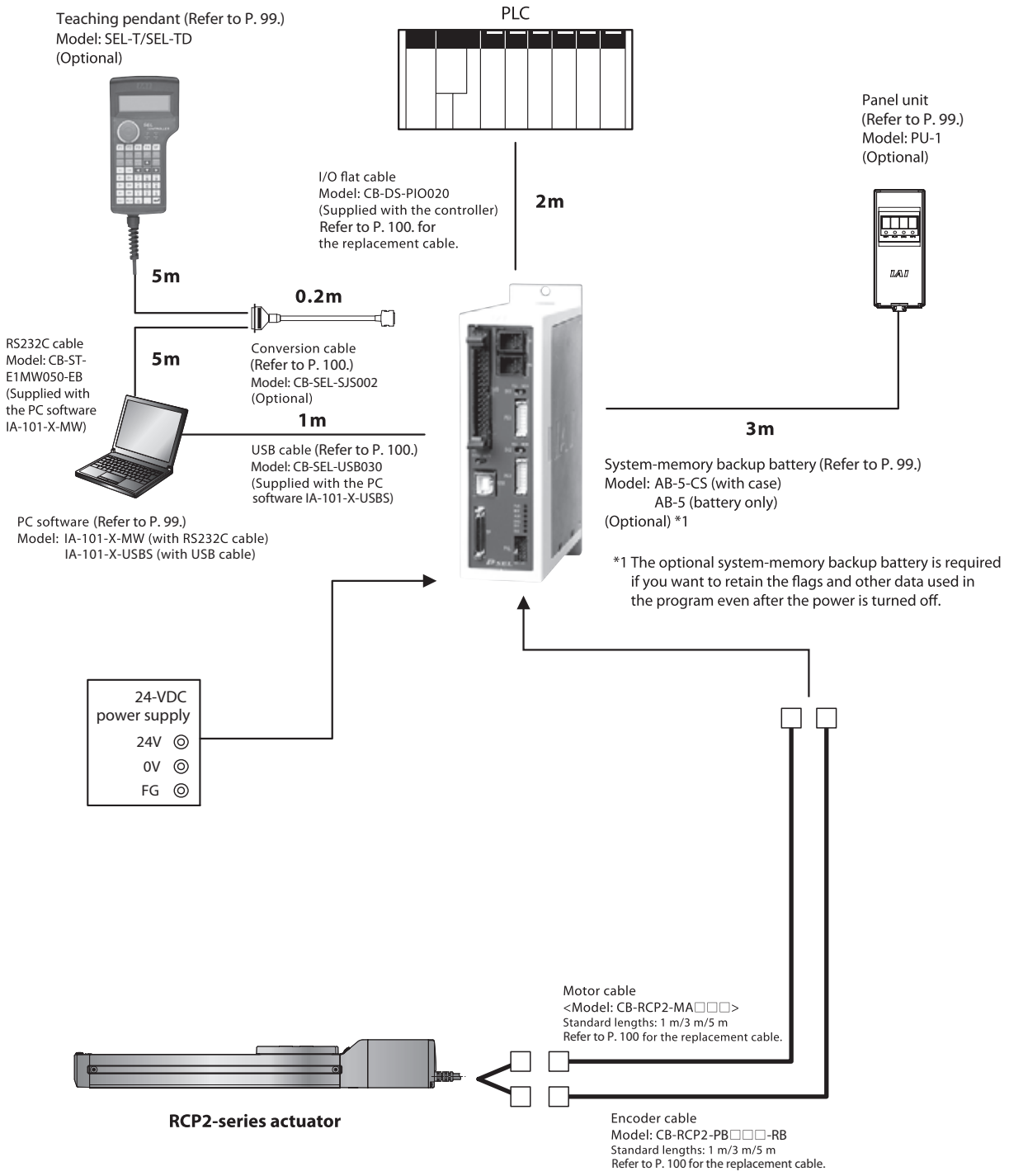
Explanation of I/O Functions

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



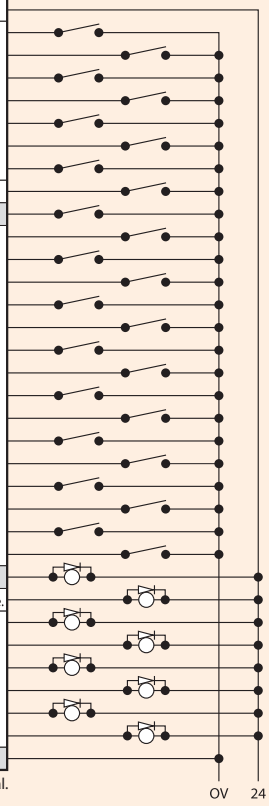
Explanation of I/O Functions

Program Mode

Pin No.	Category	Port No.	Program Mode	Function
1A	P24		24-V input	Connect 24 V.
1B	Input	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.

* With regard to PNP wiring diagram, please refer to PSEL manual.

Wiring diagram (NPN)*

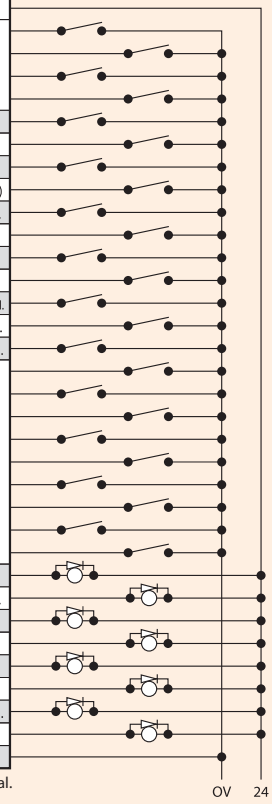


Positioner, Standard Mode

Pin No.	Category	Port No.	Standard Positioner Mode	Function
1A	P24		24-V input	Connect 24 V.
1B	Input	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		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	–	–
17B	N		OV input	Connect OV.

* With regard to PNP wiring diagram, please refer to PSEL manual.

Wiring diagram (NPN)*



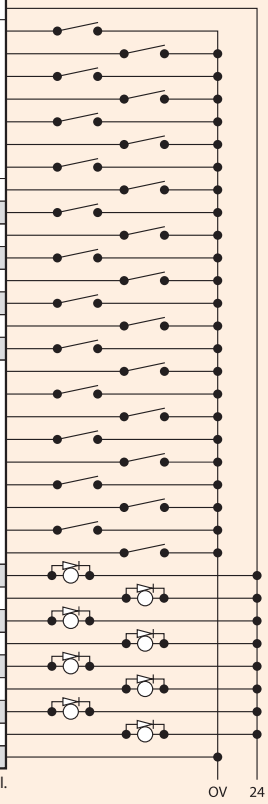
Explanation of I/O Functions

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 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.

* With regard to PNP wiring diagram, please refer to PSEL manual.

Wiring diagram (NPN)*

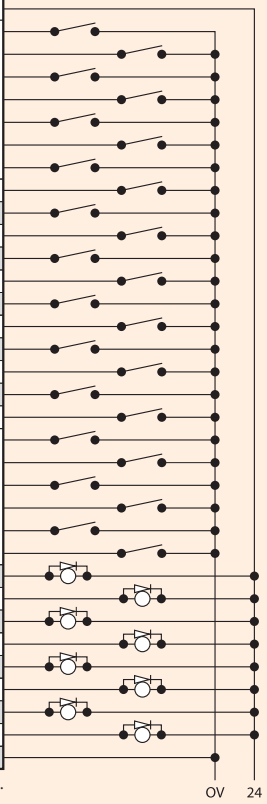


Positioner, 2-axes Independent Mode

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.

* With regard to PNP wiring diagram, please refer to PSEL manual.

Wiring diagram (NPN)*



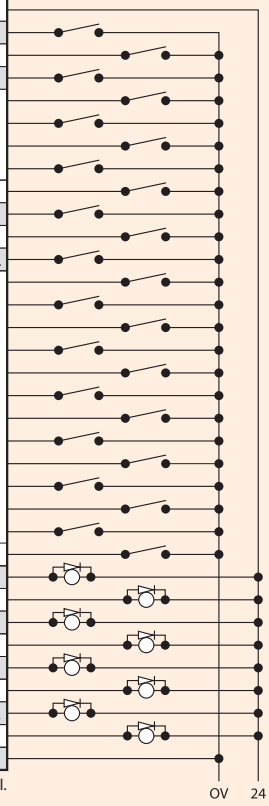
Explanation of I/O Functions

Positioner, Teach Mode

Pin No.	Category	Port No.	Type-switching Positioner Mode	Function
1A	P24		24-V input	Connect 24 V.
1B	Input	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. 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		015	Axis 1 JOG +	Axis 1 moves in the positive direction while this signal is 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	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.

* With regard to PNP wiring diagram, please refer to PSEL manual.

Wiring diagram (NPN)*

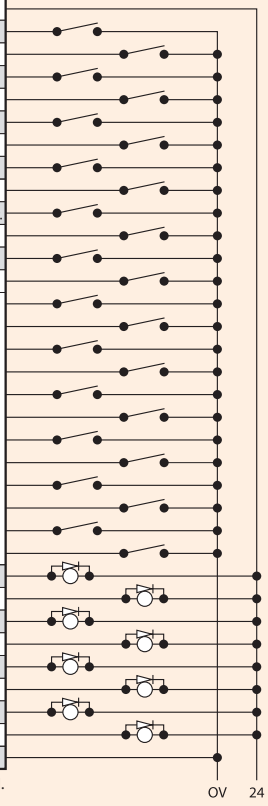


Positioner, DS-S-C1 Compatible Mode

Pin No.	Category	Port No.	Standard Positioner Mode	Function
1A	P24		24-V input	Connect 24 V.
1B	Input	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		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	Output	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.

* With regard to PNP wiring diagram, please refer to PSEL manual.

Wiring diagram (NPN)*



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), 0.0 75 mm (intermittent) 58 to 150 Hz: 4.9 m/sec2 (continuous), 9.8 m/sec2 (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.)
	Operation method	Program operation/positioner operation (switchable)
Program	Program language	Super SEL
	Number of programs	64
	Number of program steps	2000
	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.)
	Data input method	Teaching pendant or PC software
Communication related	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	ProfiBus, DeviceNet, CC-Link
	Motor cable	CB-RCP2-MA□□□ (max. 20 m)
	Encoder cable	CB-RCP2-PB□□□-RB (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)

(Note 1) The high-thrust type (RA10C), high-speed type (HS8C/HS8R) and waterproof type (RCP2W-SA16) are not operated.

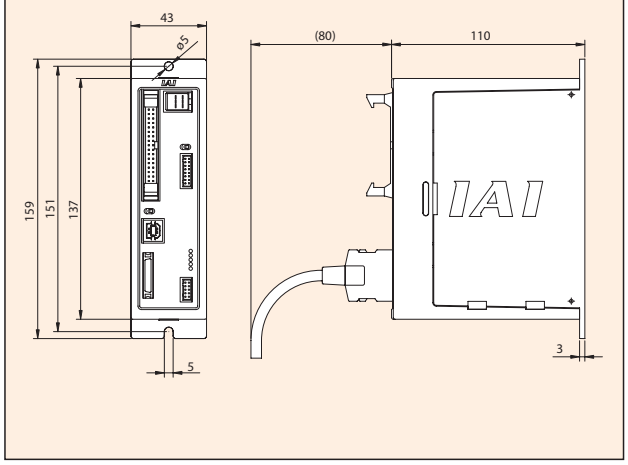
		1-axis specifications		2-axis specifications	
Motorpower supply Capacity (Note 2)	Motor type	Rated	Max. (Note 3)	Rated	Max. (Note 3)
	20P, 28P, 28SP motor	0.4 A	2.0 A	0.8 A	4.0 A
	35P, 42P, 56SP motor	1.2 A		2.4 A	

(Note 2) For both 1-axis and 2-axis specifications, approx. 30 A inrush current flows for 5 ms when the control power supply is turned on.

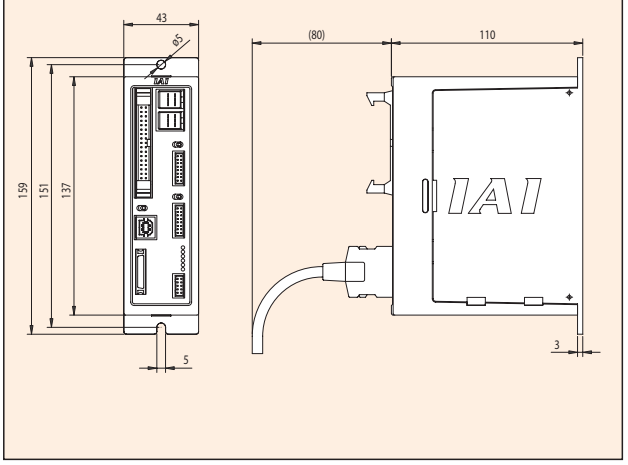
(Note 3) After Servo ON, excitation detection is performed. In that case, the current is maximized. (Approx. 100 msec)
However, if motor drive power supply is turned on after a shut-down, approx. 6.0 A and approx. 12.0 A current flows to axis-1 and axis-2 respectively. (Approx. 1 to 2 msec)

External Dimensions

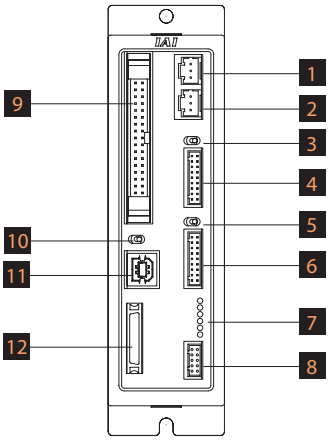
PSEL 1-axis controller

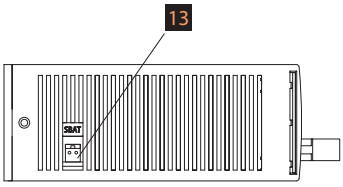


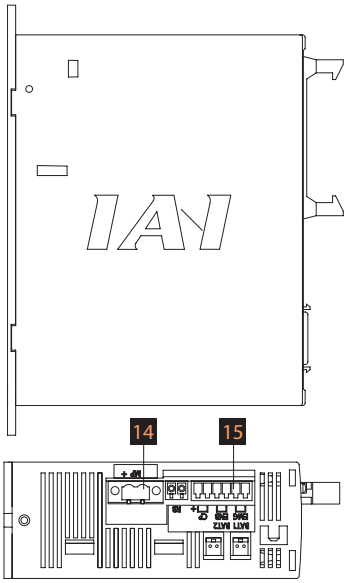
PSEL 2-axis controller



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.

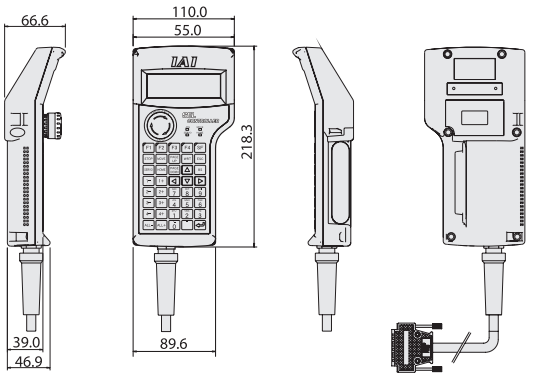
Options

■Teaching Pendant

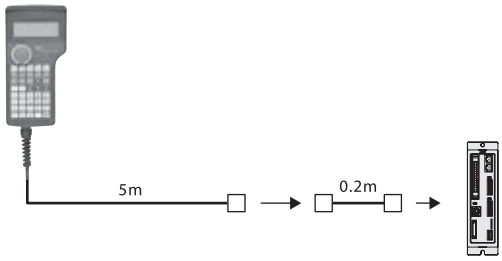
Features A teaching device offering functions for program/position input, test operation, monitoring, and more.

Model

Model	Description
SEL-T-JS	Standard type with connector conversion cable
SEL-TD-JS	Deadman switch type with connector conversion cable
SEL-TD-26H	Safety category type with connector conversion cable



Configuration



Conversion cable: CB-SEL-SJS002

Specification

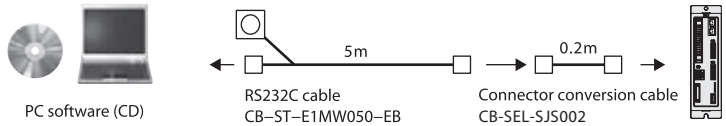
Item	SEL-T-JS	SEL-TD-JS	SEL-TD-26H
3-position enable switch	Not equipped	Equipped	Equipped
ANSI/UL standard	Not compliant	Compliant	Compliant
Safety category conformity	Not compliant	Not compliant	Compliant
Display	20 characters x 4 lines		
Surrounding air temperature/humidity	0–40°C 10–90%RH (non-condensing)		
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-JS** (with RS232C cable + connector conversion cable)

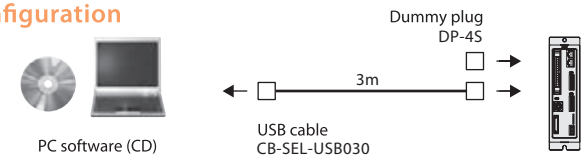
Configuration



PC software (CD)
RS232C cable
CB–ST–E1MW050–EB
Connector conversion cable
CB-SEL-SJS002

Model **IA-101-X-USBS** (with USB cable)

Configuration



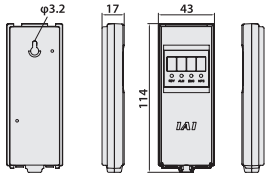
PC software (CD)
USB cable
CB-SEL-USB030

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-USBS.)

Model **DP-4S**

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-USB030** (cable length: 3 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-SJS002** (cable length: 0.2 m)

Replacement Parts

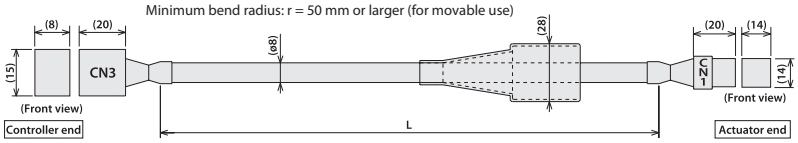
If you must order a replacement cable, etc., after the initial purchase of your product, specify the correct model by referring to the information below.

Motor Robot Cable for RCP2

Item CB-RCP2-MA□□□

* The standard motor cable is a robot cable.
(EU special version with suffix "-EU-SP" comes with metal connector.)

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



CN3			M cable	CN1			
Orange	Ā	A1		1	A	Yellow	
Gray	VMM	A2		2	VMM	Gray	
White	B̄	A3		3	Ā	Orange	SLP-06V (JST)
Yellow	A	B1		4	B	Orange (black 1)	
Pink	VMM	B2		5	VMM	Pink	
Orange (black 1)	B	B3		6	B̄	White	

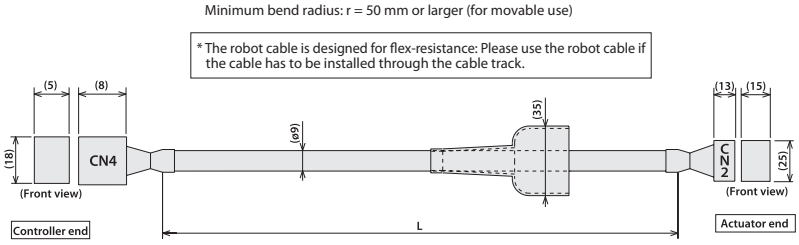
I-1318119-3 (AMP)

Encoder Cable / Encoder Robot Cable for RCP2

Item CB-RCP2-PB□□□ / CB-RCP2-PB□□□-RB

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

* The standard encoder cable is a plastic or robot cable. (EU special version with suffix "-RB-EU-SP" comes as robot cable with metal connector.)



CN4	Cable color	Signal name	Pin No.
PHDR-16VS (JST)	Orange (black2)	LS+	16
	Orange (red2)	LS–	15
	Orange (black1)	BK+	14
	Orange (red1)	BK–	13
	Grey (black1)	ENA	12
	Grey (red1)	ENA	11
	White (black1)	ENB	10
	White (red1)	ENB	9
	–	–	8
	Yellow (black1)	VPS	7
	Pink (red1)	VBB	6
	Pink (black1)	GND	5
	–	(N.C)	4
	–	(N.C)	3
	–	(N.C)	2
	Drain	F.G	1

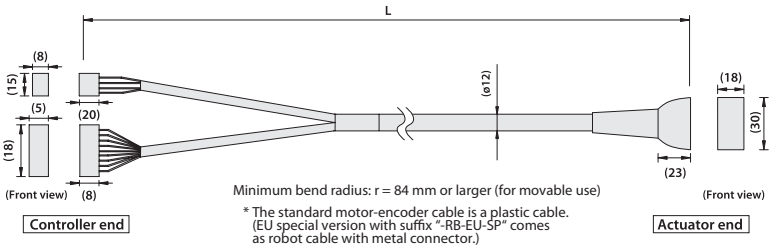
Shield wire
Drain wire

Pin No.	Signal name	Cable color	CN2
1	ENA	Grey (black1)	XMP-18V (JST)
2	ENA	Grey (red1)	
3	ENB	White (black1)	
4	ENB	White (red1)	
5	–	–	
6	–	–	
7	–	–	
8	–	–	
9	GND	Pink (black1)	
10	VBB	Pink (red1)	
11	VPS	Yellow (black1)	
12	–	–	
13	LS+	Orange (black2)	
14	LS–	Orange (red2)	
15	–	–	
16	BK+	Orange (black1)	
17	BK–	Orange (red1)	
18	F.G	Drain	

Integrated Motor-Encoder Cable for RCP3

Item CB-PCS-MPA□□□

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



Signal	Pin No.
A	B1
VMM	A2
/A	A1
B	B3
VMM	B2
/B	A3
BK+	14
BK-	13
LS+	16
LS-	15
A+	12
A-	11
B+	10
B-	9
NC	8
VPS	7
VCC	6
GND	5
NC	4
FG	1

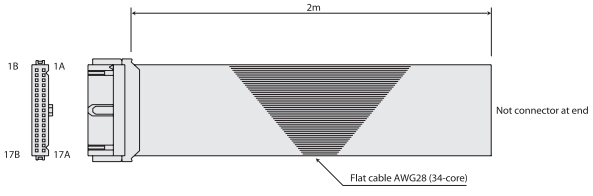
(Wire color)
Black
White
Red
Green
Yellow
Brown
Pink (Red.)
Pink (Blue.)
White (Red.)
White (Blue.)
Orange (Red.)
Orange (Blue.)
Gray (Red.)
Gray (Blue.)
Orange (Blue. continuous)
Gray (Red. continuous)
Gray (Blue. continuous)
Shield

Pin No.	Signal
A1	A
B1	VMM
A2	/A
B2	B
A3	VMM
B3	/B
A4	NC
B4	NC
A5	BK+
B5	BK-
A6	LS+
B6	LS-
A7	A+
B7	A-
A8	B+
B8	B-
A9	NC
B9	VPS
A10	VCC
B10	GND
A11	NC
B11	FG

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

A program controller capable of operating RCS2-series actuators. Various controls can be performed with a single unit.

Type	CS	
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 20000 positioning points are supported. Push-motion operation and teaching operation are also possible.
Number of positions	20000	

Model

* Details of axis 2 are not required if the controller is of 1-axis specification.

SSEL – CS – □ – □ – □ – □ – (□ – □ – □) – □ – □ – □

Series / Type / Number of connected axes / (Details of axis 1) Motor type / (Details of axis 1) Encoder type / (Details of axis 1) Options / (Details of axis 2) Motor type / (Details of axis 2) Encoder type / (Details of axis 2) Options / I/O type / I/O cable length / Power-supply voltage

Type	
CS	Standard type

Number of connected axes	
1	1-axis specification
2	2-axes specification

(Details of axis 1) Motor type	
20	20-watt servo motor
30D	30-watt servo motor for RCS2
30R	30-watt servo motor for RS
60	60-watt servo motor
100	100-watt servo motor
150	150-watt servo motor
200	200-watt servo motor
300	300-watt servo motor
400	400-watt servo motor
600	600-watt servo motor
750	750-watt servo motor

(Details of axis 1) Encoder type	
I	Incremental
A	Absolute

(Details of axis 1) Options	
B	Brake
C	Creep sensor
L	Home sensor/LS
M	Master axis specification

(Details of axis 2) Motor type	
20	20-watt servo motor
30D	30-watt servo motor for RCS2
30R	30-watt servo motor for RS
60	60-watt servo motor
100	100-watt servo motor
150	150-watt servo motor
200	200-watt servo motor
300	300-watt servo motor
400	400-watt servo motor
600	600-watt servo motor
750	750-watt servo motor

(Details of axis 2) Encoder type	
I	Incremental
A	Absolute

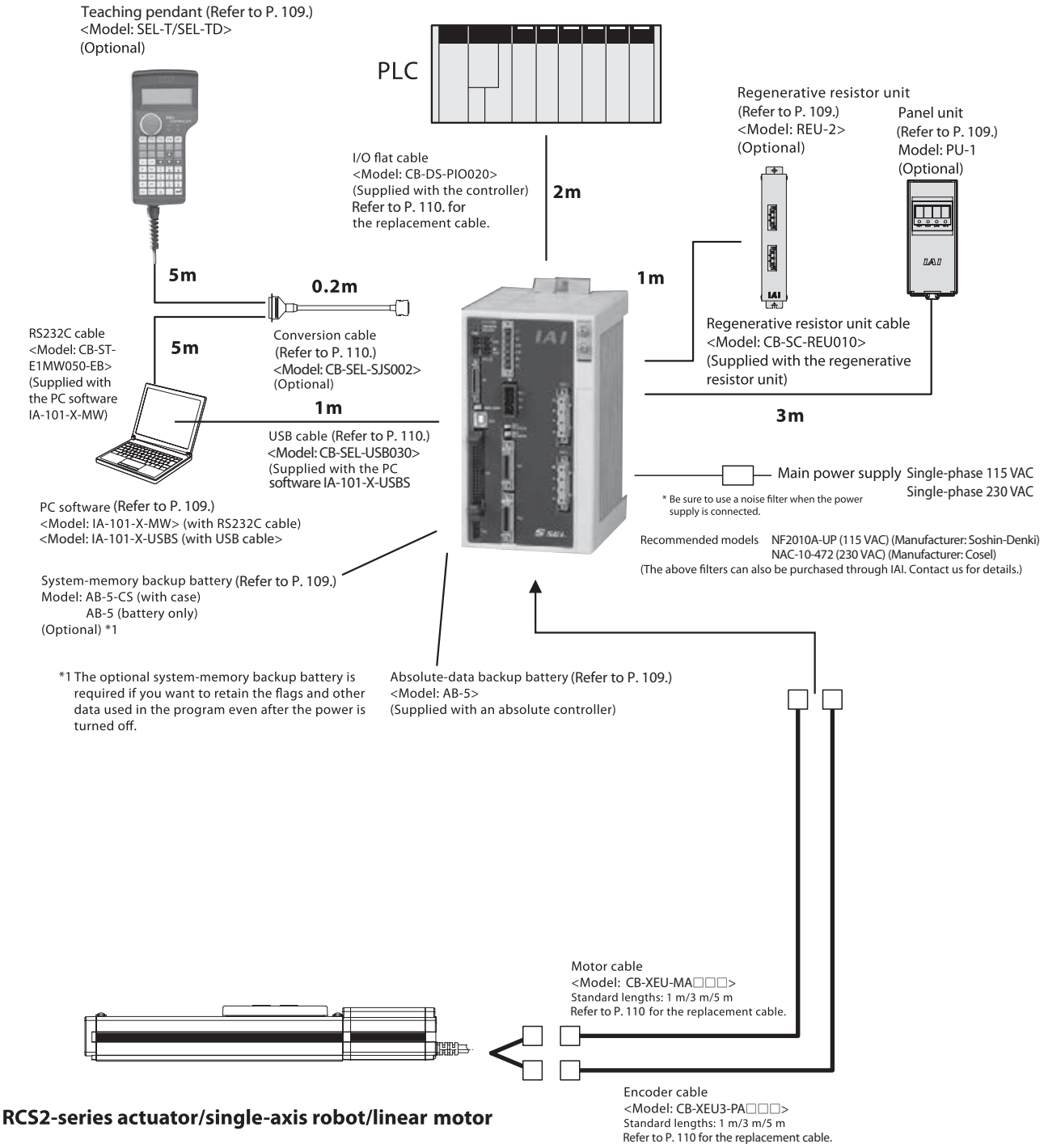
(Details of axis 2) Options	
B	Brake
C	Creep sensor
L	Home sensor/LS
S	Slave axis specification

I/O type	
NP	PIO NPN specification
PN	PIO PNP specification (standard)
DV	DeviceNet Connection specification
CC	CC-Link Connection specification
PR	ProfiBus Connection specification

I/O cable length	
0	No cable
2	2m
3	3m
5	5m

Power-supply voltage	
1	Single-phase 115 VAC
2	Single-phase 230 VAC

System Configuration



RCS2-series actuator/single-axis robot/linear motor

I/O Specifications

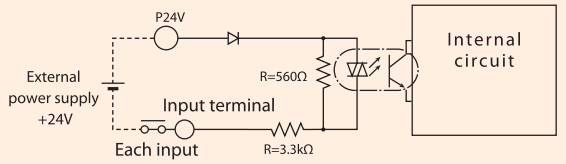
■Input External input specifications

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

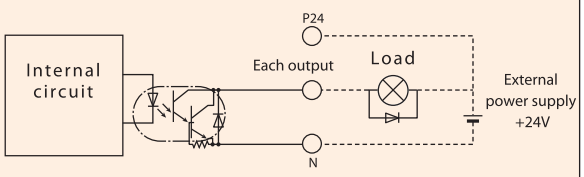
■Output External output specifications

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

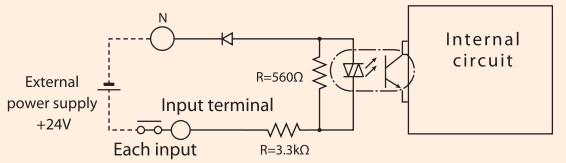
NPN specification



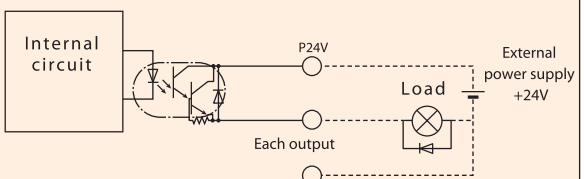
NPN specification



PNP 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 su pport 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 SSEL controller without having to change the host programs. * Compatibility with actuators is not assured.

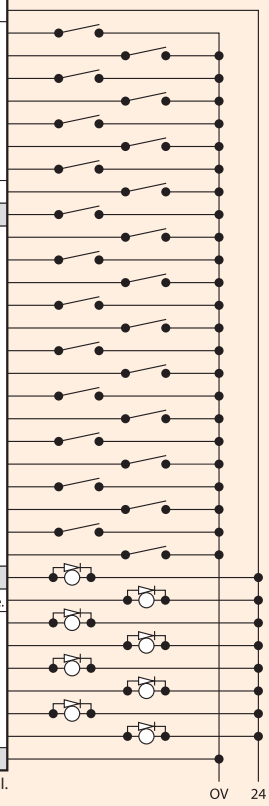
Explanation of I/O Functions

Program Mode

Pin No.	Category	Port No.	Program Mode	Function
1A	P24		24-V input	Connect 24 V.
1B	Input	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.

* With regard to PNP wiring diagram, please refer to SSEL manual.

Wiring diagram (NPN)*

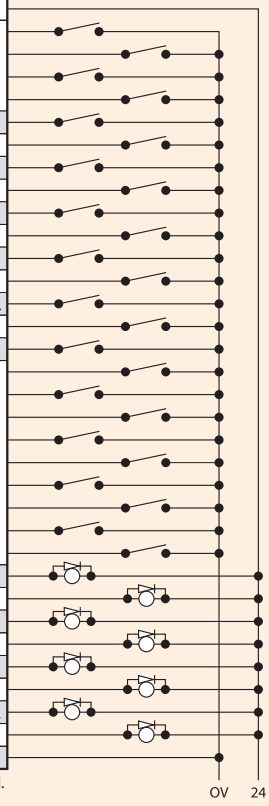


Positioner, Standard Mode

Pin No.	Category	Port No.	Standard Positioner Mode	Function
1A	P24		24-V input	Connect 24 V.
1B	Input	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		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	–	–
17B	N		OV input	Connect OV.

* With regard to PNP wiring diagram, please refer to SSEL manual.

Wiring diagram (NPN)*



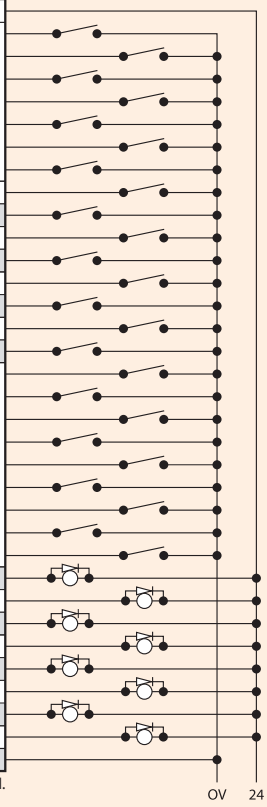
Explanation of I/O Functions

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 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.

* With regard to PNP wiring diagram, please refer to SSEL manual.

Wiring diagram (NPN)*

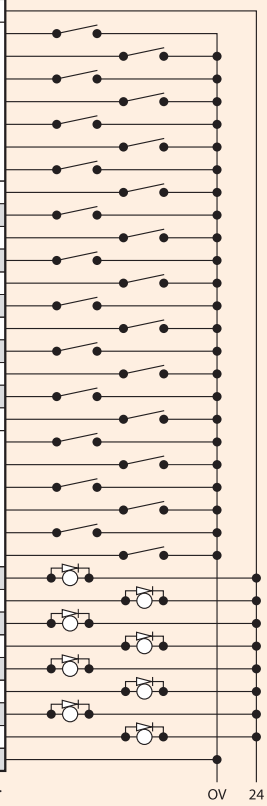


Positioner, 2-axes Independent Mode

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.

* With regard to PNP wiring diagram, please refer to SSEL manual.

Wiring diagram (NPN)*



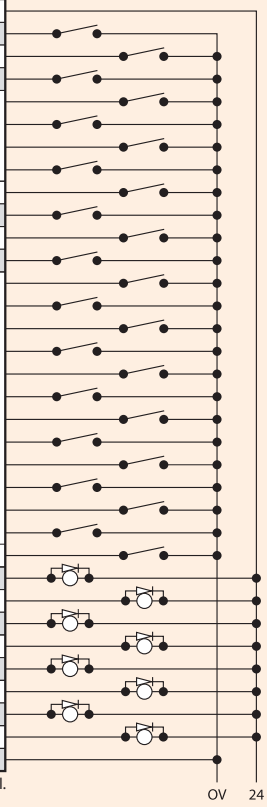
Explanation of I/O Functions

Positioner, Teaching Mode

Pin No.	Category	Port No.	Type-switching Positioner Mode	Function
1A	P24		24-V input	Connect 24 V.
1B	Input	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. 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		015	Axis 1 JOG +	Axis 1 moves in the positive direction while this signal is 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	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.

* With regard to PNP wiring diagram, please refer to SSEL manual.

Wiring diagram (NPN)*

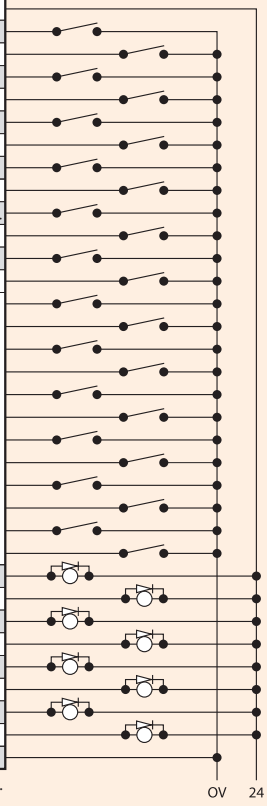


Positioner, DS-S-C1 Compatible Mode

Pin No.	Category	Port No.	Standard Positioner Mode	Function
1A	P24		24-V input	Connect 24 V.
1B	Input	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		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	Output	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.

* With regard to PNP wiring diagram, please refer to SSEL manual.

Wiring diagram (NPN)*

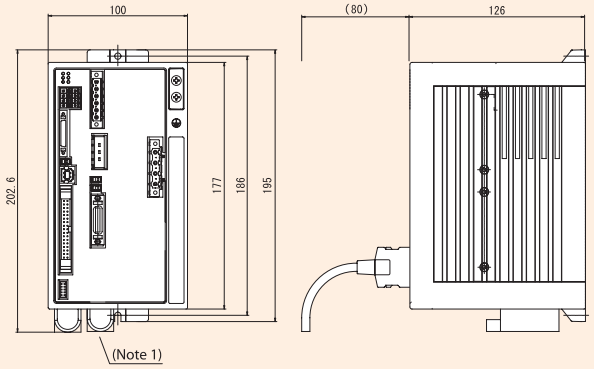


Specification Table

	Item	Specification	
Base specifications	Connected actuator	RCS2-series actuator/single-axis robot/linear motor	
	Input power supply	Single-phase 100 VAC ±10%	Single-phase 230 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/sec2 (continuous), 9.8 m/sec2 (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.)	
	Operation method	Program operation/positioner operation (switchable)	
Program	Program language	Super SEL	
	Number of programs	128	
	Number of program steps	9999	
	Number of multi-tasking programs	8	
	Number of positioning points	20000	
	Data storage device	Flash ROM (An optional system-memory backup battery can be added.)	
	Data input method	Teaching pendant or PC software	
Communication related	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	ProfiBus, DeviceNet, CC-Link	
	Motor cable	CB-XEU3-PA □□□ (max. 20 m)	
	Encoder cable	CB-XEU-MA □□□ (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)	

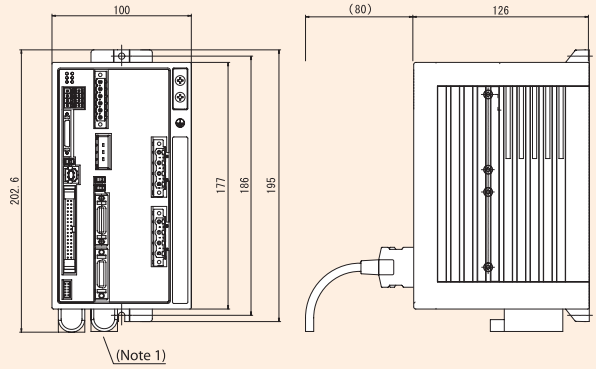
External Dimensions

SSEL 1-axis controller



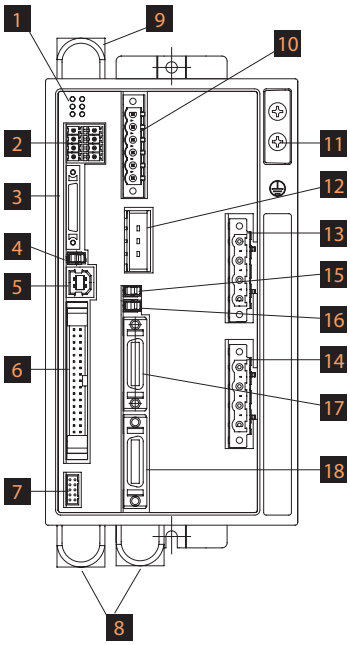
(Note 1) Absolute-data backup battery. This battery is not installed on incremental controllers.

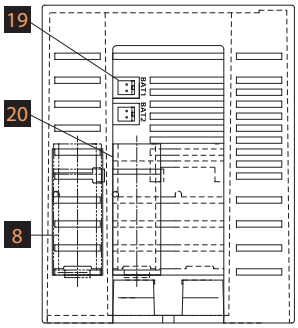
SSEL 2-axis controller

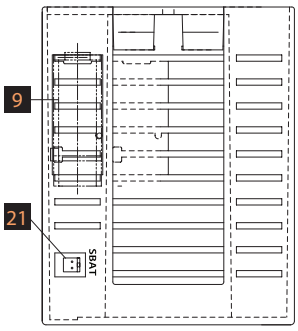


(Note 1) Absolute-data backup battery. This battery is not installed on incremental controllers.

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.

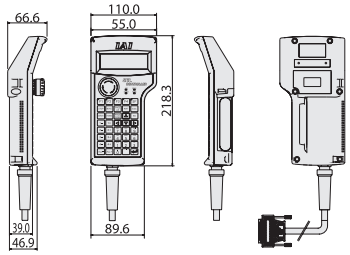
Options

Teaching Pendant

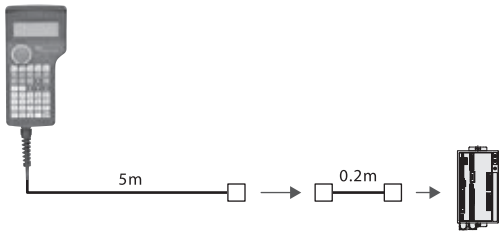
Features A teaching device offering functions for program/position input, test operation, monitoring, and more.

Model

Model	Description
SEL-T-JS	Standard type with connector conversion cable
SEL-TD-JS	Deadman switch type with connector conversion cable
SEL-TD-26H	Safety category type with connector conversion cable



Configuration



Conversion cable: CB-SEL-SJS002

Specification

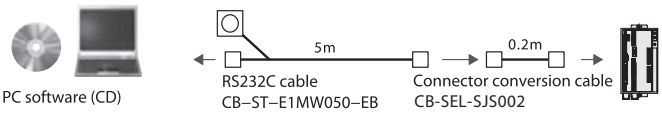
Item	SEL-T-JS	SEL-TD-JS	SEL-TD-26H
3-position enable switch	Not equipped	Equipped	Equipped
ANSI/UL standard	Not compliant	Compliant	Compliant
Safety category conformity	Not compliant	Not compliant	Compliant
Display	20 characters x 4 lines		
Surrounding air temperature/humidity	0–40°C 10–90%RH (non-condensing)		
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.

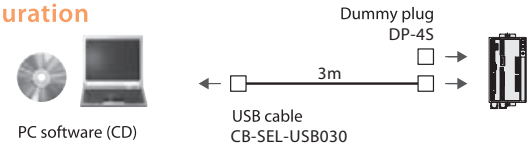
Model **IA-101-X-MW-JS** (with RS232C cable + connector conversion cable)
IA–101–X–MW (with RS232C cable)

Configuration



Model **IA-101-X-USBS** (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)

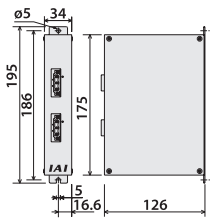
Guide for Determining Necessary Number of Regenerative Resistor Units

	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).

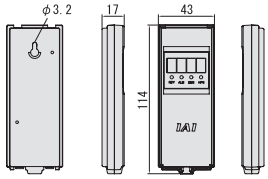
External Dimensions



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-USBS.)

Model **DP-4S**

USB cable

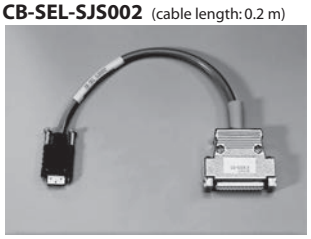
Features This cable is used to connect a controller with USB port to a PC.
To connect a controller without USB port (XSEL) to a PC, connect the controller's RS232C cable to a USB cable via a USB conversion adapter and connect the USB cable to the USB port on the PC.
(Refer to the PC software IA-101-X-USBMW.)

Model **CB-SEL-USB030** (cable length: 3 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-SJS002** (cable length: 0.2 m)



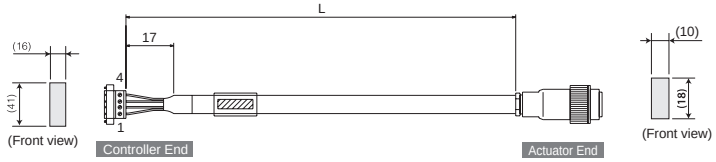
Replacement Parts

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.

EU Motor Robot Cable

Item CB-XEU-MA□□□

* □□□ indicates the cable length (L). A desired length up to 30 m can be specified. Example) 080 = 8 m

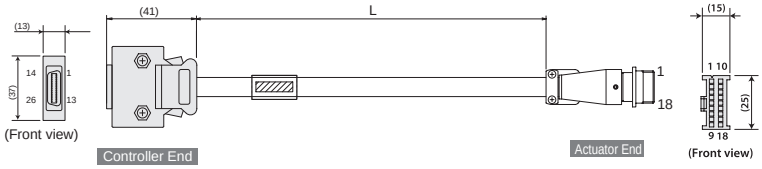


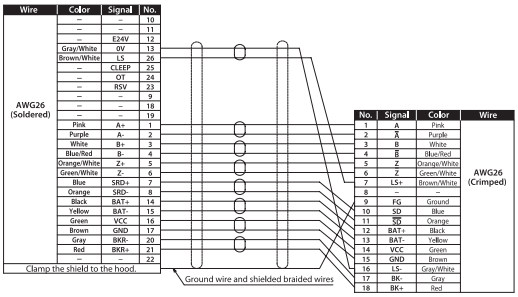
Wire	Color	Signal			Signal	Color	Wire
0.75sq	Green	PE	1	1	U	Red	0.75sq (Crimped)
	Red	U	2	2	V	White	
	White	V	3	3	W	Black	
	Black	W	4	4	PE	Green	

EU Encoder Robot Cable

Item CB-XEU3-PA□□□

* □□□ indicates the cable length (L). A desired length up to 30 m can be specified. Example) 080 = 8 m





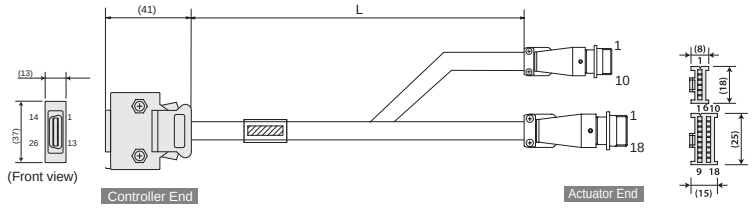
Wire	Color	Signal	No.
–	–	–	10
–	–	–	11
		E24V	12
Gray/White		0V	13
Brown/White		LS	26
–		CLEEP	25
–		OT	24
–		RSV	23
–		–	9
–		–	18
–		–	19
Pink		A+	1
Purple		A-	2
White		B+	3
Blue/Red		B-	4
Orange/White		Z+	5
Green/White		Z-	6
Blue		SRD+	7
Orange		SRD-	8
Black		BAT+	14
Yellow		BAT-	15
Green		VCC	16
Brown		GND	17
Gray		BKR-	20
Red		BKR+	21
–		–	22

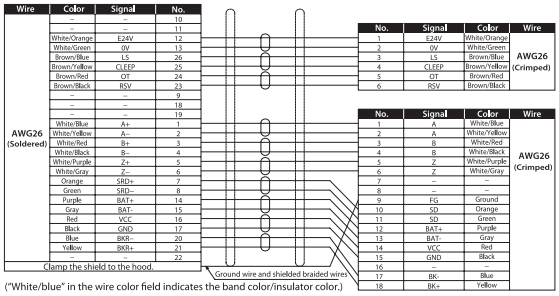
No.	Signal	Color	Wire
1	A	Pink	AWG26 (Crimped)
2	$\overline{A}$	Purple	
3	B	White	
4	$\overline{B}$	Blue/Red	
5	Z	Orange/White	
6	$\overline{Z}$	Green/White	
7	LS+	Brown/White	
8	–		
9	FG	Ground	
10	SD	Blue	
11	$\overline{SD}$	Orange	
12	BAT+	Black	
13	BAT-	Yellow	
14	VCC	Green	
15	GND	Brown	
16	LS-	Gray/White	
17	BK-	Gray	
18	BK+	Red	

EU Limit Switch Encoder Robot Cable for RCS2 Rotary & High-thrust types

Item CB-XEU2-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		0V	13
Brown/Blue		LS	26
Brown/Yellow		CLEEP	25
Brown/Red		OT	24
Brown/Black		RSV	23
–		–	9
–		–	18
–		–	19
White/Blue		A+	1
White/Yellow		A–	2
White/Red		B+	3
White/Black		B–	4
White/Purple		Z+	5
White/Gray		Z–	6
Orange		SRD+	7
Green		SRD–	8
Purple		BAT+	14
Gray		BAT-	15
Red		VCC	16
Black		GND	17
Blue		BKR–	20
Yellow		BKR+	21
–		–	22

No.	Signal	Color	Wire
1	E24V	White/Orange	AWG26 (Crimped)
2	0V	White/Green	
3	LS	Brown/Blue	
4	CLEEP	Brown/Yellow	
5	OT	Brown/Red	
6	RSV	Brown/Black	

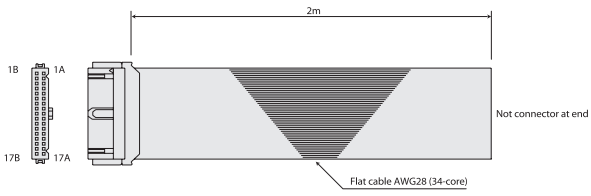
No.	Signal	Color	Wire
1	A	White/Blue	AWG26 (Crimped)
2	A–	White/Yellow	
3	B	White/Red	
4	B–	White/Black	
5	Z	White/Purple	
6	Z–	White/Gray	
7	–	–	
8	–	–	
9	FG	Ground	
10	SD	Orange	
11	SD	Green	
12	BAT+	Purple	
13	BAT-	Gray	
14	VCC	Red	
15	GND	Black	
16	–	–	
17	BK-	Blue	
18	BK+	Yellow	

("White/blue" in the wire color field indicates the band color/insulator color.)

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	

MSEP

RCP2-series
dedicated field network position controller

Model List

A multi-axis field network position controller capable of operating RCP2-series actuators. Up to eight axes can be controlled simultaneously.

Type	C									
I/O category	NP	PN	DV	CC	PR	CN	ML	EC	EP	PRT
Item name	PIO specification (NPN type)	PIO specification (PNP type)	DeviceNet Specification	CC-Link Specification	PROFIBUS-DP Specification	CompoNet Specification	MECHATROLINK Specification (*)	EtherCAT Specification	EtherNet/IP Specification	ProfiNet Specification
Exterior view	 * The picture shown is of the PIO specification. Depending on the I/O category, the PIO connector and field network joint connector changes. (*) Mechatrolink w/o CE conformity yet.									
Item description	Operates via digital signals from the PLC	Operates with any of the above field network connections. A choice of method either a serial communication with PIO specification control, or transmitting traveling position, velocity and acceleration by data is available.								
No. of positions	3 positions per axis	256 positions per axis (There is no limit if operated directly by transferring data)								

Model

MSEP – C – [Total number of axes] – [Motor type] (Description of the 1st axis) I [Encoder type] [Option] — ([Motor type] I [Encoder type] [Option]) (Description of the 2nd to 8th axis) — [I/O type] — [Type of I/O cable] — 0 — [Power-supply voltage] — [Absolute position encoder option]

* Representation of the 2nd to the 8th axis is depending on the total number of axes applied. (i.e. after the 2nd axis)

Series	Type	Total number of axes	Motor type	Encoder type	Option	Motor type	Encoder type	Option	I/O type	Type of I/O cable	Power-supply voltage	Absolute position encoder option
MSEP	C			I			I				0	

Total number of axes

1	1-axis specification
2	2-axis specification
3	3-axis specification
4	4-axis specification
5	5-axis specification
6	6-axis specification
7	7-axis specification
8	8-axis specification

Motor type

20P	20-frame pulse motor type	2	2-watt 24V servo motor type
20SP	20-frame pulse motor type (RCP3-RA2A□, RA2B□ exclusive)	5	5-watt 24V servo motor type
28P	28-frame pulse motor type	5S	5-watt 24V servo motor type (RCA2-SA2A□, RA2A□ excl.)
28SP	28-frame pulse motor type (RCP2-RA3C, RGD3C exclusive)	10	10-watt 24V servo motor type
		20	20-watt 24V servo motor type
35P	35-frame pulse motor type	20S	20-watt 24V servo motor type (RCA2-SA4□/TA5□, RCA-RA3/RGS3/RGD3□ excl.)
42P	42-frame pulse motor type		
56P	56-frame pulse motor type		
P	Unused pulse motor axis (*)	30	30-watt 24V servo motor type
N	Code for no connected axis (*)	A	Unused servo motor axis (*)

(*) Please refer to the instruction for completing a selected model description on the page at the right.

Encoder type

WAI	Incremental pulse motor specific.
SA	Simple absolute specification
I	Incremental 24V servo motor specific.

Option

HA	High acceleration/ deceleration capability
LA	Power-saving

* The above options are only available with the actuator.

I/O type

NP	PIO specification (NPN type)
PN	PIO specification (PNP type)
DV	DeviceNet connection specification
CC	CC-Link connection specification
PR	PROFIBUS-DP connection specification
CN	CompoNet connection specification
PRT	PROFINET-IO connection specification
EC	EtherCAT connection specification
EP	EtherNet/IP connection specification

Type of I/O cable

0	No cable
2	2m (standard)
3	3m
5	5m

Power-supply voltage

0	DC24V

Absolute position encoder option

ABB	Absolute position encoder type (with absolute data backup battery)
ABBN	Absolute position encoder type (without absolute data backup battery)
(Blank)	Incremental Type

Guide for the description of the selected configuration

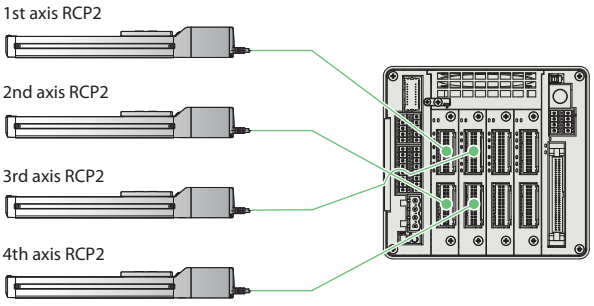
The description of the MSEP controller configuration varies depending on the type of actuator connected to the controller, and the total number of axes installed. Please see the following conditions to configure a desired controller.

Connect the SAME TYPE of actuators (either pulse motor type or 24V servo motor type)

Please indicate the motor type code of the actuator starting from the 1st axis respectively.

e.g.) MSEP — C — 4 — 42PI — 56PI — 42P — 56PI — NP — 2 — 0

Total number of axes: 4
1st axis: 42PI (Pulse motor)
2nd axis: 56PI (Pulse motor)
3rd axis: 42P (Pulse motor)
4th axis: 56PI (Pulse motor)



If the total number of axes is an odd count, please indicate an **[N]** following the last axis description (as shown after the 3rd axis below for example).

e.g.) MSEP — C — 3 — 42PI — 56PI — 42P — N — NP — 2 — 0

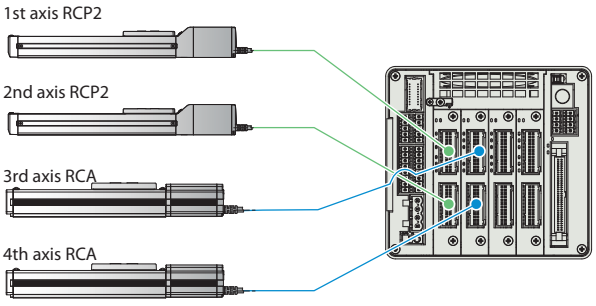
Total number of axes: 3
1st axis: 42PI (Pulse motor)
2nd axis: 56PI (Pulse motor)
3rd axis: 42P (No connected axis)

Connect a MIXTURE OF TYPES of actuators (both pulse motor type and 24V servo motor type)

Each board is designed to connect to a pair of axes, and two different types of motors cannot be connected to the same board. Please indicate the same types of motors for each pair of axes.

e.g.) MSEP — C — 4 — 42PI — 56PI — 20I — 20I — NP — 2 — 0

Total number of axes: 4
1st axis: 42PI (Pulse motor)
2nd axis: 56PI (Pulse motor)
3rd axis: 20I (Servo motor)
4th axis: 20I (Servo motor)



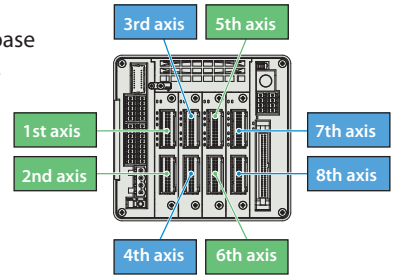
If either motor type is an odd count, please indicate an **[N]** following the last axis description per the corresponding board.

e.g.) MSEP — C — 3 — 42PI — N — 20SI — 30I — NP — 2 — 0

Total number of axes: 3
1st axis: 42PI (Pulse motor)
2nd axis: N (No connected axis)
3rd axis: 20SI (Servo motor)
4th axis: 30I (Servo motor)

<If you choose to operate the controller with fewer axes connections now but may add more in the future>

- If there's a possibility to increase connections, for example, to 6 or 8 axes in the future but would like to start with only 4 axes to operate the controller now, it is possible to keep the base board installed as is and leave room for the potential axes by indicating an **[UNUSED AXIS]**.
- When configuring unused axis/axes for the pulse motor, please indicate a **[P]** in the box for the motor type.
- When configuring unused axis/axes for the 24V servo motor, please indicate an **[A]** in the box for the motor type.
- When configuring unused axis/axes, please include number of unused axis/axes in the total number of axes.



e.g.) MSEP — C — 8 — 42PI — 56PI — 20I — 10I — PI — PI — AI — AI — NP — 2 — 0

Total number of axes: 8
1st axis: 42PI (Pulse motor)
2nd axis: 56PI (Pulse motor)
3rd axis: 20I (Servo motor)
4th axis: 10I (Servo motor)
5th axis: PI (Unused axis (Pulse motor))
6th axis: PI (Unused axis (Pulse motor))
7th axis: AI (Unused axis (Servo motor))
8th axis: AI (Unused axis (Servo motor))

Standard Price Chart

The standard price of the MSEP controller can be calculated by adding the 2 I/O type price, plus additional prices for the 3 absolute position encoder specification, and the 4 absolute data backup battery (Absolute-battery) option to the basic unit prices as listed in 1 below.

1	Basic unit price (Incremental specification + PIO specification)	The prices of combination patterns from page 9 (all incremental axes)
+		
2	Additional price by I/O type	For field network specification, please add the price.
+		
3	Additional price for the absolute position encoder specification	For the absolute position encoder specification, please add the price for the total number of axes in the controller.
+		
4	Additional battery price for the absolute position encoder specification	Please add the battery price for the absolute position encoder specification. If the battery is not necessary such as it is an extra module to the controller, (if configuration code ABBN for absolute position encoder specification is selected), please omit the price for 4.

1		+	2	+	3	+	4	=	
Pattern No	Unit price (Incremental specification/ PIO specification)		Additional I/O type price		Additional absolute position encoder specification price		Additional battery price for the absolute position encoder specification		Standard price
1			DeviceNet specification - CC-Link specification - PROFIBUS-DP - CompoNet specification - ProfiNet specification - EtherCAT specification - EtherNet/IP specification -		1st axis - 2nd axis - 3rd axis - 4th axis - 5th axis - 6th axis - 7th axis - 8th axis -		1st axis - 2nd axis - 3rd axis - 4th axis - 5th axis - 6th axis - 7th axis - 8th axis -		Specification specific standard price
2									
3									
4									
5									
6									
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39									
40									

System Configuration

Option
PC Software
(See P119)
RS232 connection version
Model RCM-101-MW-ENG
USB connection version
Model RCM-101-USB-ENG

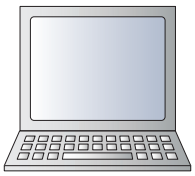
Option
Teaching pendant
(See P119)
Model CON-PTA-C-ENG

PLC

Field Network
DeviceNet
CC-Link
PROFIBUS-DP
MECHATROLINK
CompoNet
EtherCAT
EtherNet/IP
ProfiNet

* MSEP is supported by Ver.9.01.00.00 or later

* MSEP is supported by Ver.1.10 or later



PIO flat cable
(See P115)
Model CB-MSEP-PI0020
Standard length: 2 m
Supplied with the PIO specification controller

* There are choices of either the PIO specification or the field network specification

* In order to connect to the field network, the compatible PC software is necessary to provide the gateway parameter configuration tool to configure the communication with the controller. If you don't have the software, please add it to your order. (See P119)

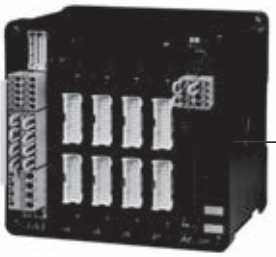
* Field network connection cable is not included.

5m

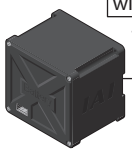
The cable is supplied with the PC Software

The cable is supplied with the absolute data backup battery

0.5m



DC24V
Power Supply
24V
0V
FG



Option
Absolute data backup battery
(See P119) Model MSEP-ABB

Replacement battery
(See P119) Model AB-7

* If the absolute position encoder specification is selected as a controller unit, the absolute data backup battery is included. (See P117 for the dimensions)

<Connectable actuators>

Actuators in green are according to the pulse motor specification
Actuators in blue are according to the 24 V servo motor specification

Motor-encoder integrated cable
Model CB-PSEP-MPA□□□
Standard 1 m/ 3 m/ 5 m
Supplied with the actuator

Actuator RCP2 series
Excluding RCP2-RTBS/ RTCS

Motor-encoder integrated cable
Model CB-RPSEP-MPA□□□
Standard 1 m/ 3 m/ 5 m
Supplied with the actuator

Actuator RCP2 compact rotary
(RCP2-RTBS/ RTCS)

* The rotary cannot operate with the 360-degree specifications (RCP2RT□SL/ RT□L/RT□BL)

Actuator RCP4 series

* When operating the RCP4, the actuator specification differs from those when operating with the PCON-CA. Please ask for details.

Motor-encoder integrated cable
Model CB-ASEP-MPA□□□
Standard 1 m/ 3 m/ 5 m
Supplied with the actuator

Actuator RCA series

Motor-encoder integrated cable
Model CB-APSEP-MPA□□□
Standard 1 m/ 3 m/ 5 m
Supplied with the actuator

Actuator
RCP3 series
RCP2-GRSS/GRLS/GRST series
RCP2-SRA4R/SRGS4R/SRGD4R series
RCA2 series
RCL series (Note 1)

(Note 1) RCL series are not compatible with the absolute position encoder specification.

Motor-encoder integrated cable
Model CB-CA -MPA□□□

Motor-encoder integrated ROBOT cable
Model CB-CA -MPA□□□ - RB
Standard 1 m/ 3 m/ 5 m
Supplied with the actuator

* The Motor/Encoder cable type varies depending on the actuator type. When ordering a replacement cable, please see P120.

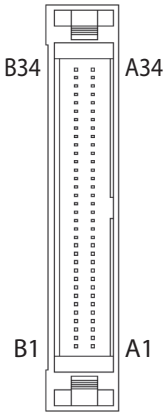
PIO Controlled Motion Mode

The MSEP controller with the PIO control specification offers the following six-motion modes. In addition, Mode No. 0 through 2 support both the single and double solenoid valves for signal configuration.

Motion Mode No.		0		1		2		3	4	5
Motion Mode Type		Standard 2-position motion		Speed change during movement		Position data change		2-input/ 3-position motion	3-input/ 3-position motion	Continuous cycle operation
Feature		2-position motion		2-position motion		2-position motion		3-position motion	3-position motion	2-position continuous motion
		Push		Push		Push		Push	Push	Push
		-		Speed change during movement		Travel position data change		-	-	-
Solenoid configurations		Single	Double	Single	Double	Single	Double	-	-	-
Input	0	Motion signal	Motion signal 1	Motion signal	Motion signal 1	Motion signal	Motion signal 1	Motion signal 1	Retract motion signal	Continuous motion signal
	1	Pause signal	Motion signal 2	Pause signal	Motion signal 2	Pause signal	Motion signal 2	Motion signal 2	Extend motion signal	Pause signal
	2	Reset signal		Speed change signal (Reset signal)		Target position change signal (Reset signal)		Reset signal	Intermediate point motion command signal (Reset signal)	Reset signal
	3	- /Servo-ON signal		- /Servo-ON signal		- /Servo-ON signal		- /Servo-ON signal	- /Servo-ON signal	- /Servo-ON signal
Output	0	Retract motion output signal		Retract motion output signal		Retract motion output signal		Retract motion output signal	Retract motion output signal	Retract motion output signal
	1	Extend motion output signal		Extend motion output signal		Extend motion output signal		Extend motion output signal	Extend motion output signal	Extend motion output signal
	2	Homing complete signal/ Servo-ON output signal		Homing complete signal/ Servo-ON output signal		Homing complete signal/ Servo-ON output signal		Intermediate point position output signal	Intermediate point position output signal	Homing complete signal/ Servo-ON output signal
	3	Alarm output signal/ Servo-ON output signal		Alarm output signal/ Servo-ON output signal		Alarm output signal/ Servo-ON output signal		Alarm output signal/ Servo-ON output signal	Alarm output signal/ Servo-ON output signal	Alarm output signal/ Servo-ON output signal

* Please refer to the controller operation instruction for the above signal information. (Download is available from our website)

PIO Plug Chart



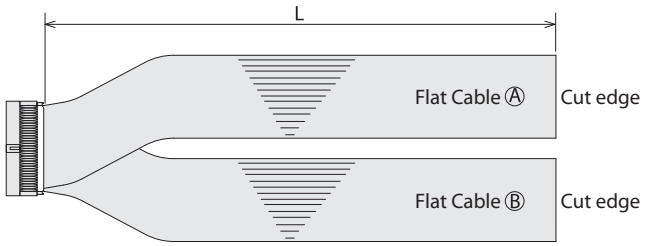
Connector name: HIF6-68PA-1.27DS(Hirose Electric)					
Pin No.	Category	Signal ID	Pin No.	Category	Signal ID
A1	24V	For I/O	A18	Output (Axis No. 0)	OUT0
A2	Input (Axis No. 0)	IN0	A19		OUT1
A3		IN1	A20		OUT2
A4		IN2	A21		OUT3
A5	Input (Axis No. 1)	IN3	A22	Output (Axis No. 1)	OUT4
A6		IN4	A23		OUT5
A7		IN5	A24		OUT6
A8		IN6	A25		OUT7
A9	Input (Axis No. 2)	IN7	A26	Output (Axis No. 2)	OUT8
A10		IN8	A27		OUT9
A11		IN9	A28		OUT10
A12		IN10	A29		OUT11
A13	Input (Axis No. 3)	IN11	A30	Output (Axis No. 3)	OUT12
A14		IN12	A31		OUT13
A15		IN13	A32		OUT14
A16		IN14	A33		OUT15
A17		IN15	A34	0V	For I/O

Connector name: HIF6-68PA-1.27DS(Hirose Electric)					
Pin No.	Category	Signal ID	Pin No.	Category	Signal ID
B1	24V	For I/O	B18	Output (Axis No. 4)	OUT16
B2	Input (Axis No. 4)	IN16	B19		OUT17
B3		IN17	B20		OUT18
B4		IN18	B21		OUT19
B5	Input (Axis No. 5)	IN19	B22	Output (Axis No. 5)	OUT20
B6		IN20	B23		OUT21
B7		IN21	B24		OUT22
B8		IN22	B25		OUT23
B9	Input (Axis No. 6)	IN23	B26	Output (Axis No. 6)	OUT24
B10		IN24	B27		OUT25
B11		IN25	B28		OUT26
B12		IN26	B29		OUT27
B13	Input (Axis No. 7)	IN27	B30	Output (Axis No. 7)	OUT28
B14		IN28	B31		OUT29
B15		IN29	B32		OUT30
B16		IN30	B33		OUT31
B17		IN31	B34	0V	For I/O

PIO Flat Cable

Mode **CB-MSEP-PIO□□□**

* Please indicate cable length (L) in □□□, maximum 10 m. e.g.) 020=2 m



Connector: HIF6-068D-1.27R

Connection Chart

Connector: HIF6-068D-1.27R

Pin No.	Signal name		Pin No.	Signal name
A1	For I/O +24V		B1	For I/O +24V
A2	IN0		B2	IN16
A3	IN1		B3	IN17
A4	IN2		B4	IN18
A5	IN3		B5	IN19
A6	IN4		B6	IN20
A7	IN5		B7	IN21
A8	IN6		B8	IN22
A9	IN7		B9	IN23
A10	IN8		B10	IN24
A11	IN9		B11	IN25
A12	IN10		B12	IN26
A13	IN11		B13	IN27
A14	IN12		B14	IN28
A15	IN13	Flat cable Ⓐ	B15	IN29
A16	IN14		B16	IN30
A17	IN15		B17	IN31
A18	OUT0		B18	OUT16
A19	OUT1		B19	OUT17
A20	OUT2		B20	OUT18
A21	OUT3		B21	OUT19
A22	OUT4		B22	OUT20
A23	OUT5		B23	OUT21
A24	OUT6		B24	OUT22
A25	OUT7		B25	OUT23
A26	OUT8		B26	OUT24
A27	OUT9		B27	OUT25
A28	OUT10		B28	OUT26
A29	OUT11		B29	OUT27
A30	OUT12		B30	OUT28
A31	OUT13		B31	OUT29
A32	OUT14		B32	OUT30
A33	OUT15		B33	OUT31
A34	GND for I/O		B34	GND for I/O

Flat cable Ⓑ

PIO Input/Output Interface

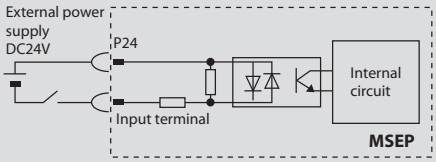
Input External Input Specification

Item	Specification
Input voltage	DC24V ±10%
Input current	5mA, 1 circuit
ON/OFF voltage	ON voltage min. DC18V OFF voltage max. DC6V

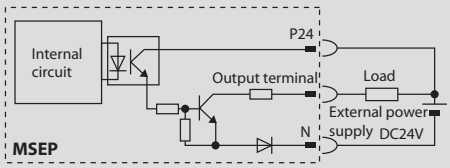
Output External Output Specification

Item	Specification
Load voltage	DC24V ±10%
Maximum load current	50mA, 1 circuit
Leakage current	max. 2mA/one point

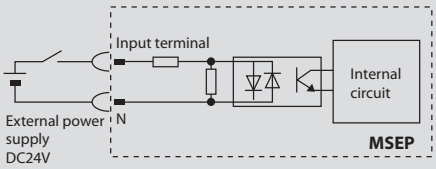
NPN specification



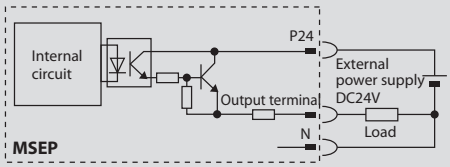
NPN specification



PNP specification



PNP specification



Field Network Control Motion Mode

There are five motion modes to choose from in the field network control mode with the MSEP controller as follows.

Motion pattern (*1)	Description	Outline
Positioner 1/ Simple numerical mode	Positioner 1 mode is programmable up to 256 positions of data to designate the stop position. The simple numerical control allows designating the target position numerically. They both have the capability of monitoring the current position.	PLC: Target position, Target position number, Control signal / Current position, End position number, Status signal — Communication via field network — Actuator
Direct numerical control mode	This mode allows designating the target position, velocity, acceleration, and current parameters for pushing. Also, it is capable of monitoring the current position, real-time velocity, and the electric current command value.	PLC: Target position, Positioning width, Velocity, Acceleration, Pushing percentage, Control signal / Current position, Current value (Designated value), Current velocity (Designated value), Alarm code, Status signal — Communication via field network — Actuator
Positioner 2 mode	Positioner 2 mode is programmable up to 256 positions of data to designate stop positions, and this mode does not allow monitoring of the current position. This mode has less in/out data transfer volume than the positioner 1 mode.	PLC: Target position number, Control signal / End position number, Status signal — Communication via field network — Actuator
Positioner 3 mode	Positioner 3 mode is programmable up to 256 positions of data to designate stop positions, and this mode does not allow monitoring of the current position. This mode has less in/out data transfer volume from the positioner 2 mode, and operates under minimum number of signals..	PLC: Target position number, Control signal / End position number, Status signal — Communication via field network — Actuator
SEP I/O	This mode allows the same functions with the field network as the PIO controlled motion mode 0 to 5 as described in the previous page.	Please refer to the PIO controlled motion mode.

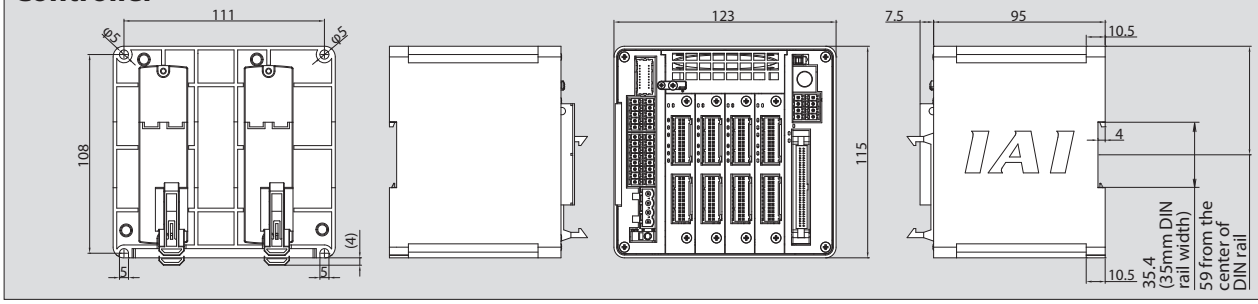
(*1) Only the positioner 3 mode and the SEP I/O mode are available with CompoNet.

Table of General Specification

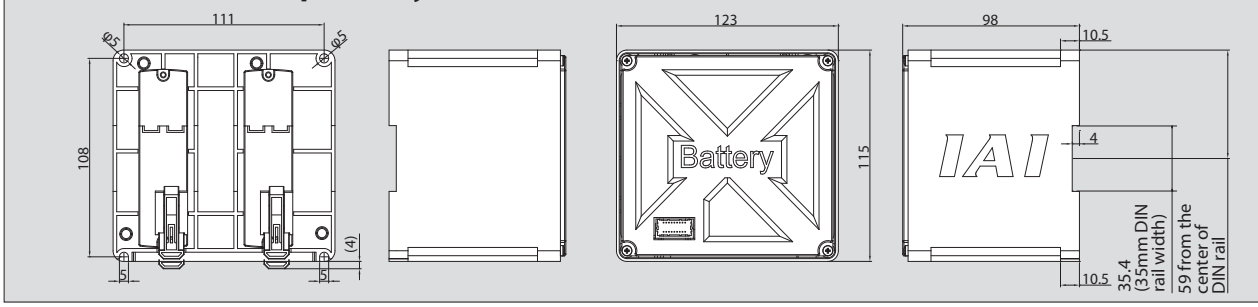
Specification item		Description						
Number of axes in the controller		Max. 8 axes						
Controller/ Motor input power		DC24V ±10%						
Controller power supply		2A						
Controller inrush current		Max. 5A, under 30 ms						
Motor consumption current		24V servo motor type	Rated current	Maximum		Pulse motor type	Rated current	Maximum
				Energy saver	Standard/ Hi-accel./decel.			
		2W	0.8A		4.6A	20P	1.0A	2.0A
		5W	1.0A		6.4A	28P	1.0A	2.0A
		10W(RCL)	1.3A		6.4A	35P	2.0A	2.0A
		10W(RCA/ RCA2)		2.5A	4.4A			
		20W	1.3A	2.5A	4.4A	42P	2.0A	2.0A
		20W(20S type)	1.7A	3.4A	5.1A			
		30W	1.3A	2.2A	4.4A	56P	2.0A	2.0A
Motor inrush current		Slot numbers x max. 10A, under 5ms						
Motor-encoder cable length		Maximum length 20m (max. length 10m for absolute position encoder type)						
Serial communication (SIO port: dedicated teaching)		RS485 1ch (Modbus protocol compatible) Velocity 9.6~230.4kbps						
External interface	PIO specification	PIO specification : DC24 V dedicated signal in/output; maximum input of 4 points/axis; maximum output of 4 points/ axis; maximum cable length 10 m						
	Field network specification	DeviceNet, CC-Link, PROFIBUS-DP, PROFINET-IO, CompoNet, EtherCAT, EtherNet/IP						
Data configuration and input method		PC software application, touch panel teaching pendant, gateway parameter configuration tool						
Data retention memory		Restore the position data and parameter in non-volatile memory (no limited input)						
Positioning points		PIO specification: 2 or 3 points Field network specification: 256 points (no limited input for the simple numerical control and the direct numerical control) (Note) The number of designated positions vary depending on the parameter configuration with motion mode selection.						
LED display (on the front panel)		LED for driver status, 8 LEDs (for each driver board) Status LED, 4 LEDs (PIO specification), 7 LEDs (Fieldbus specification)						
Electromagnetic brake force release		Enable to force-release by transmitting a deactivation signal to each axis (DC24 V input).						
Surge protection		Overcurrent protection (An interception semiconductor circuit is furnished on each slot)						
Electric shock protection		Class I basic insulation						
Insulation resistance		DC500V 10MΩ						
Weight		620g, 690g with the absolute position encoder specification plus 1950 g absolute data backup battery (8-axis specification)						
Cooling method		Forced-air cooling						
Required ambient temperature/ humidity for operation		0~40°C, under 85% RH (non-condensing)						
Vibration resistance		Frequency 10~57Hz/Amplitude 0.075mm Frequency 57~150Hz/Acceleration 9.8m/s^2 Each XYZ direction, sweep time 10 minutes, sweep count 10 times						
Shock resistance		150mm/s^2, 11 ms half sine wave pulse, each XYZ direction 3 times						
International protection code		IP20						

Exterior Dimensions

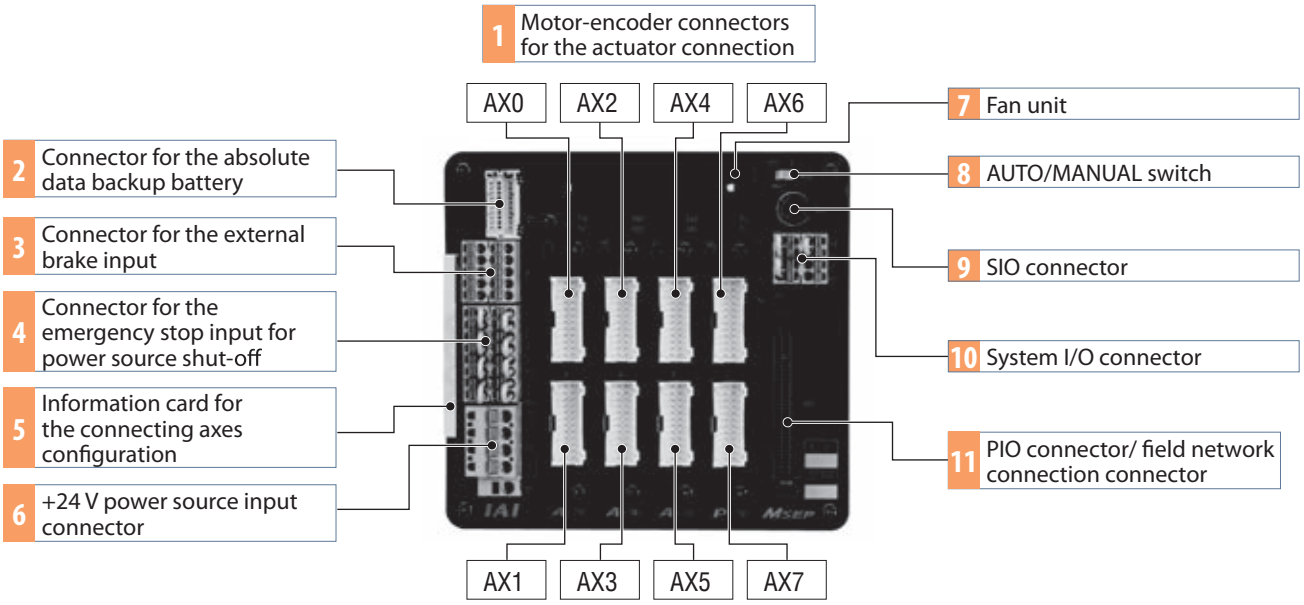
Controller



Absolute data backup battery box



Names of the MSEP Controller Components



(Note) All the connectors are represented as AX0 through AX7. Please be aware that the motor-encoder cable for the first axis is to be connected to AX0 and the second axis to AX1 respectively.

Descriptions of the components

1 Motor-encoder connectors for the actuator connection
Connect motor-encoder cable to the actuator.

2 Connector for the absolute data backup battery
Connect the absolute data backup battery if the controller has the absolute position encoder specification.

3 Connector for the external brake input
The connector to input a signal to release the brake for the actuator externally.

4 Connector for the emergency stop input for power source shut-off
The emergency stop input connector to connect in/output terminal of the external relay of the motor drive shut–off and each driver slot (*1).

5 Information card for configuration of the connecting axes
The information card contains information regarding the configuration of the controller axes which is removable to examine the contents.

6 +24 V power source input connector
The main power source connector for the controller: Motor drive source shut-down is possible while restoring the power source for the controller unit in case of an emergency shut-down; this is because the terminals for the power source of the motor and the controller are separate.

7 Fan unit
Easily replaceable fan unit. (Replacement fan unit: Model MSEP-FU)

8 AUTO/MANUAL switch
To switch automatic operation to/from manual operation.

9 SIO connector
To connect teaching box and the connecting cable for PC software.

10 System I/O connector
The connector for remote AUTO/MANU switch input and emergency stop input for the entire controller with functions including an external regeneration-resistance expansion terminal.

11 PIO connector/ field network connection connector
The PIO specification — connects to a 68-pin ribbon I/O cable.
The field network specification — connects to a field network type specified on the MSEP controller.

(*1) The shut-off feature is available on a single slot basis which is for two axes per slot. Please note that a single axis basis cannot be accommodated.

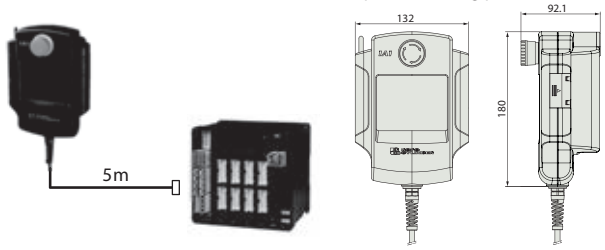
Options

Teaching pendant

Summary Teaching device for positioning input, test operation, and monitoring.

Model **CON-PTA-C-ENG** (Touch panel teaching pendant)

Setting



Specification

Item	CON-PTA-C-ENG
Data input	○
Actuator motion	○
Operating ambient temperature/humidity	Temperature 0 to 40°C, humidity 85%RH or less
Operating environment	Free from corrosive gas and especially, considerably dusty condition
Protection degree	IP40
Weight	Approximately 570g
Cable length	5m
Display	65536 color White LED back light

PC software (Windows only)

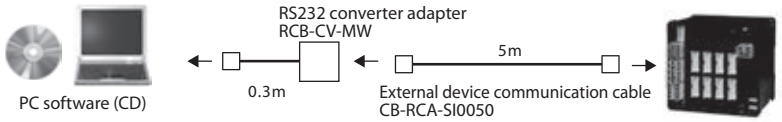
* For the field network specification, the PC software is required.

Summary A startup support software for inputting positions, performing test runs, and monitoring. With enhancements for adjustment functions, the startup time is shortened.

Model **RCM-101-MW-ENG** (External device communication cable + RS232 conversion unit)

MSEP is supported by Ver.9.01.00.00 or later

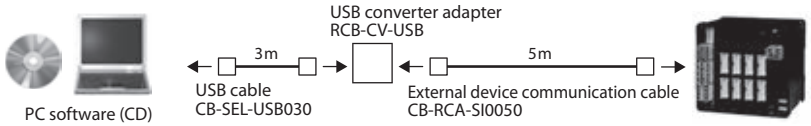
Setting



Model **RCM-101-USB-ENG** (External device communication cable + USB converter adapter + USB cable)

MSEP is supported by Ver.9.01.00.00 or later

Setting



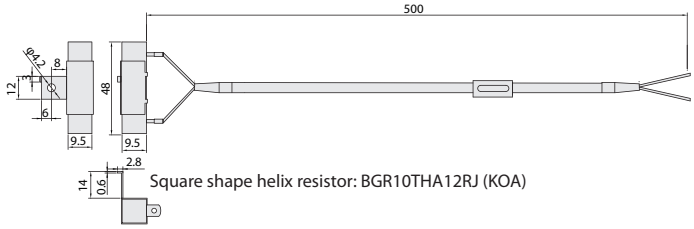
External regeneration resistor

Summary The regeneration resistor converts regenerated current dissipated during deceleration of the motor load into heat. The MSEP controller has an internal regeneration resistor for ordinary operations, however, depending on the operational condition, please install an external regeneration resistor if the internal regeneration resistor capacity is insufficient.

Note: When 3 or more servo actuators with the HA option are used then a regeneration resistor is recommended to convert the excess motor current into heat.

Model **RER-1**

Exterior dimensions



Square shape helix resistor: BGR10THA12RJ (KOA)

Driver board

Summary A supplement or modification to the driver board is feasible with the MSEP controller. When the actuator that control motions needs to be modified, just replacing the driver board would serve the purpose without changing the entire controller. (The parameters need to be adjusted when changing the driver board)

Model

Type			Model	
For the pulse motor	Incremental	1-axis	MSEP-PD1-W	
		2-axis	MSEP-PD2-W	
	Simple absolute	1-axis	MSEP-PD1-A	
		2-axis	MSEP-PD2-A	
For the 24V servo motor	Incremental	1-axis	MSEP-AD1-I	
		2-axis	MSEP-AD2-I	
	Simple absolute	1-axis	MSEP-AD1-A	
		2-axis	MSEP-AD2-A	

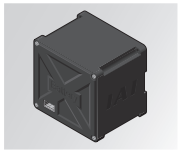
Box for the absolute data backup battery

Summary If the absolute position encoder specification is selected with code ABB, the absolute data backup battery box is included with the controller. However, if the battery box is ordered as a separate unit, it does not include the battery but just the box itself. If the battery is needed, please purchase it separately. (Model: AB-7).

Model **MSEP-ABB** (Battery not included)

Exterior dimensions **See P117**

* A cable (model CB-MSEP-AB005) that connects the absolute data backup battery box to the MSEP is included with the box.



Replacement battery

Summary The replacement battery for the absolute data backup battery box.

Model **AB-7**

Replacement fan unit

Model **MSEP-FU**

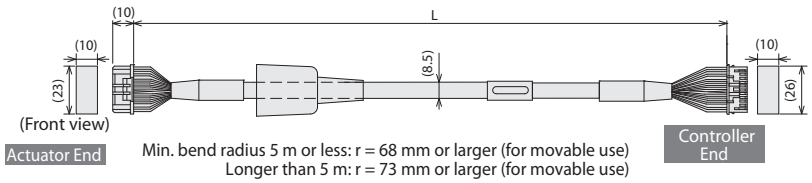
Replacement Parts

Integrated Motor-Encoder Cable / Motor-Encoder Robot Cable for RCP4

Item CB-CA-MPA□□□ / CB-CA-MPA□□□-RB

* Please indicate cable length (L) in □□□, maximum 20 m.
e.g.) 080=8 m

* The standard motor-encoder cable is a plastic or robot cable.
(EU special version with suffix "-RB-EU-SP" comes as robot cable with metal connector.)



Min. bend radius 5 m or less: r = 68 mm or larger (for movable use)
Longer than 5 m: r = 73 mm or larger (for movable use)

* The robot cable is designed for flex-resistance: Please use the robot cable if the cable has to be installed through the cable track.

Actuator side
1-1827863-1 (AMP)

Pin No.	Signal name	Color
A1	ØA/U	Blue(Black)
B1	VMM/V	Orange (White)
A2	Ø A/W	Green (Brown)
B2	ØB/-	Brown (Green)
A3	VMM/-	Gray (Yellow)
B3	Ø B/-	Red (Red)
A4	LS+/BK+	Black (Orange)
B4	LS-/BK-	Yellow (Gray)
A6	-/A+	Blue (White)
B6	-/A-	Orange (Yellow)
A7	A+/B+	Green (Red)
B7	A-/B-	Brown (White)
A8	B+/Z+	Gray (Black)
B8	B-/Z-	Red (Brown)
A5	BK+/LS+	Blue (Black)
B5	BK-/LS-	Orange (Brown)
A9	LS_GND	Green (Green)
B9	VPS	Brown (Red)
A10	VCC	Gray (White)
B10	GND	Red (Yellow)
A11	—	—
B11	FG	Black (—)

Controller side
PADP-24V-1-S (JST)

Pin No.	Signal name	Color
1	ØA/U	Blue (Black)
2	VMM/V	Orange (White)
5	Ø A/W	Green (Brown)
3	ØB/-	Brown (Green)
4	VMM/-	Gray (Yellow)
6	Ø B/-	Red (Red)
7	LS+/BK+	Black (Orange)
8	LS-/BK-	Yellow (Gray)
11	-/A+	Blue (White)
12	-/A-	Orange (Yellow)
13	A+/B+	Green (Red)
14	A-/B-	Brown (Green)
15	B+/Z+	Gray (Black)
16	B-/Z-	Red (Brown)
9	BK+/LS+	Blue (Black)
10	BK-/LS-	Orange (Brown)
20	LS_GND	Green (Green)
18	VPS	Brown (Red)
17	VCC	Gray (White)
19	GND	Red (Yellow)
21	—	—
22	—	—
23	—	—
24	FG	Black (—)

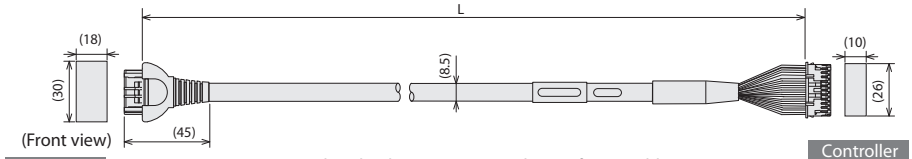
* Color in ( ) indicates color of robot cable

Integrated Motor-Encoder Robot Cable for RCP3/RCA2 and others

Item CB-APSEP-MPA□□□

* Please indicate cable length (L) in □□□, maximum 20 m. e.g.) 080=8 m

* The standard motor-encoder cable is a robot cable.
(EU special version with suffix "-EU-SP" comes with metal connector.)



Minimum bend radius: r = 68 mm or larger (for movable use)

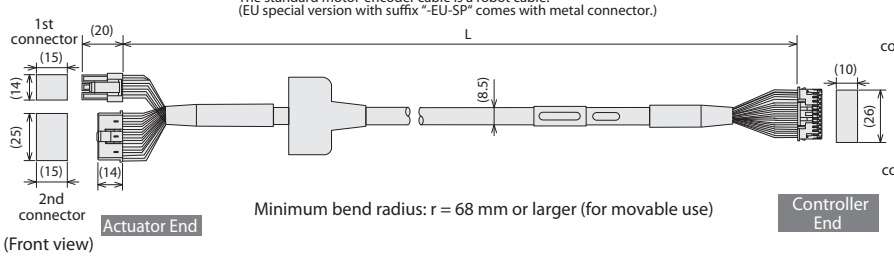
Actuator side Pin number	[PCON](ACON)	Controller side Pin number
A1	Black [ØA](U)	1
B1	White [VMM](V)	2
A2	Brown [Ø/A](W)	5
B2	Green [ØB](-)	3
A3	Yellow [VMM](-)	4
B3	Red [Ø/B](-)	6
A4	Orange [LS+](BK+)	7
B4	Gray [LS-](BK-)	8
A6	White [-](A+)	11
B6	Yellow [-](A-)	12
A7	Red [A+](B+)	13
B7	Green [A-](B-)	14
A8	Black [B+](Z+)	15
B8	Brown [B-](Z-)	16
A5	Black (label)[BK+](LS+)	9
B5	Brown (label)[BK-](LS-)	10
A9	Green (label)[GNDLs](GNDLs)	20
B9	Red (label)[VPS](VPS)	18
A10	White (label)[VCC](VCC)	17
B10	Yellow (label)[GND](GND)	19
A11	NC	21
B11	Shield [FG](FG)	24
	NC	22
	NC	23

Integrated Motor-Encoder Robot Cable for RCP2

Item CB-PSEP-MPA□□□

* Please indicate cable length (L) in □□□, maximum 20 m. e.g.) 080=8 m

* The standard motor-encoder cable is a robot cable.
(EU special version with suffix "-EU-SP" comes with metal connector.)



Minimum bend radius: r = 68 mm or larger (for movable use)

Actuator side Pin number		Controller side Pin number
1	Black [ØA]	1
2	White [VMM]	2
4	Red [ØB]	3
5	Green [VMM]	4
3	Brown [Ø/A]	5
6	Yellow [Ø/B]	6
16	Orange [BK+]	9
17	Gray [BK-]	10
5	NC	11
6	NC	12
13	Black [LS+]	7
14	Brown [LS-]	8
1	White [A+]	13
2	Yellow [A-]	14
3	Red [B+]	15
4	Green [B-]	16
10	White (label)[VCC]	17
11	Yellow (label)[VPS]	18
9	Red (label)[GND]	19
12	Green (label)[(Spare)]	20
15	NC	21
7	NC	22
8	NC	23
18	Shield [FG]	24

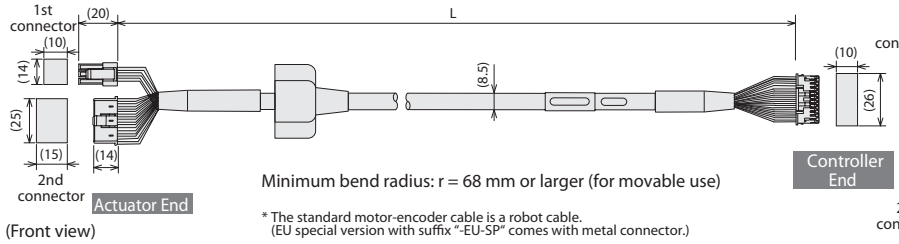
1st connector

2nd connector

Integrated Motor-Encoder Robot Cable for RCA

Item CB-ASEP-MPA□□□

* Please indicate cable length (L) in □□□, maximum 20 m. e.g.) 080=8 m



Minimum bend radius: r = 68 mm or larger (for movable use)

* The standard motor-encoder cable is a robot cable.
(EU special version with suffix "-EU-SP" comes with metal connector.)

Actuator side Pin number		Controller side Pin number
1	Red [U]	1
2	Yellow [V]	2
—	NC	3
—	NC	4
—	Black [W]	5
3	NC	6
—	Orange [BK+]	7
18	Gray [BK-]	8
17	Black [LS+]	9
7	Brown [LS-]	10
16	White [A+]	11
1	Yellow [A-]	12
2	Red [B+]	13
3	Green [B-]	14
4	Black (label)[Z+]	15
10	Brown (label)[Z-]	16
11	White (label)[VCC]	17
14	Yellow (label)[VPS]	18
13	Red (label)[GND]	19
15	Green (label)[(Spare)]	20
6	NC	21
5	NC	22
8	NC	23
12	Shield [FG]	24
9		

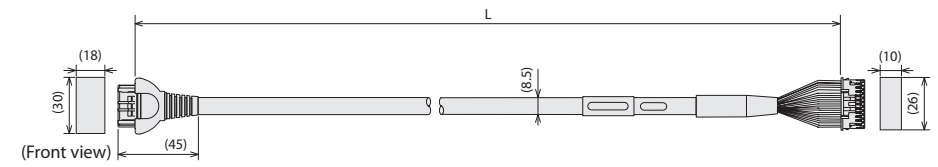
1st connector

2nd connector

Integrated Motor-Encoder Robot Cable for RCP2 Compact Rotary types

Item CB-RPSEP-MPA□□□

* Please indicate cable length (L) in □□□, maximum 20 m. e.g.) 080=8 m



Minimum bend radius: r = 68 mm or larger (for movable use)

* The standard motor-encoder cable is a robot cable.
(EU special version with suffix "-EU-SP" comes with metal connector.)

Actuator side Pin number		Controller side Pin number
A1	Black [ØA]	1
B1	White [VMM]	2
A2	Brown [Ø/A]	5
B2	Green [ØB]	3
A3	Yellow [VMM]	4
B3	Red [Ø/B]	6
A6	Orange [LS+]	7
B6	Gray [LS-]	8
A7	Red [A+]	13
B7	Green [A-]	14
A8	Black [B+]	15
B8	Brown [B-]	16
A4	NC	-
B4	NC	-
A5	Black (label)[BK+]	9
B5	Brown (label)[BK-]	10
A9	Green (label)[GNDLS]	20
B9	Red (label)[VPS]	18
A10	White (label)[VCC]	17
B10	Yellow (label)[GND]	19
A11	NC	21
B11	Shield [FG](FG)	24
	NC	22
	NC	23

X-SEL

RCS2-series program controller

Model List

A multi-axis program controller capable of operating RCS2-series actuators. Up to six axes can be controlled simultaneously.

Type	KE	KET	P	Q
Name	Standard type	Global type (conforming to safety category)	Large-capacity standard type	Large-capacity global type (conforming to safety category)
Exterior view				
Description	A general-purpose type offering great expandability	A general-purpose type that can be configured to meet safety category 4	A large-capacity type capable of operating up to six axes or 2400 W	A large-capacity type that can be configured to meet safety category 4
Maximum number of controlled axes	4		6	
Number of positions	3000		20000	
Total wattage of connectable axes	1600W		1600W/2400W	
Power supply	Single-phase 115 VAC, Single-phase 230 VAC		Single-phase 230 VAC, Three-phase 230 VAC	
Safety category	B	Be configered to meet safety category 4	B	Can be configured to meet category 4.
Safety standard	CE	CE, ANSI	CE	CE, ANSI
Standard price	Contact IAI.			

Model

[XSEL-KE/KET Types]

* If you are selecting multiple options, specify them in an alphabetical order. (Example: Brake + Home sensor = BL)

XSEL – [Series] – [Type] – [Number of connected axes] – [Motor type] – [(Details of axis 1) Encoder type] [Options] – ([Motor type] [(Details of axes 2 to 4) Encoder type] [Options]) – [(Slot 1) Standard I/O] – [(Slot 2) Expansion I/O] – [(Slot 3) Expansion I/O] – [(Slot 4) Expansion I/O] – [I/O cable length] – [Power-supply voltage]

* Specification of axes 2 to 4 varies depending on the number of axes used.

Series	
KE	Standard type
KET	Standard global type

Number of connected axes	
1	1-axis specification
2	2-axes specification
3	3-axes specification
4	4-axes specification

Motor type	
20	20-watt servo motor
30D	30-watt servo motor for RCS2
30R	30-watt servo motor for RS
60	60-watt servo motor
100	100-watt servo motor
150	150-watt servo motor
200	200-watt servo motor
300	300-watt servo motor
400	400-watt servo motor
600	600-watt servo motor
750	750-watt servo motor

(Details of axis 1) Encoder type	
I	Incremental
A	Absolute

Options	
B	Brake
C	Creep sensor
L	Home sensor/LS
M	Master axis specification
S	Slave axis specification

(Details of axes 2 to 4) Encoder type	
I	Incremental
A	Absolute

Options	
B	Brake
C	Creep sensor
L	Home sensor/LS
M	Master axis specification
S	Slave axis specification

(Slot 1) Standard I/O	
E	Not used
N1	32 inputs/16 outputs (NPN)
N2	16 inputs/32 outputs (NPN)
N3	48 inputs/48 outputs (NPN)
P1	32 inputs/16 outputs (PNP)
P2	16 inputs/32 outputs (PNP)
P3	48 inputs/48 outputs (PNP)
DV	DeviceNet connection board
CC	CC-Link connection board
PR	ProfiBus connection board
ET	Ethernet connection board
SA	Expansion SIO type A
SB	Expansion SIO type B
SC	Expansion SIO type C

* "E (not used)" can be specified only if an expansion I/O board is specified.

I/O cable length	
0	No cable
2	2m
3	3m
5	5m

* If "DV," "CC," "PR" or "ET" is selected for the standard or expansion I/O board, select "0 (no cable)" for the I/O cable length.

Power-supply voltage	
1	Single-phase 115 VAC
2	Single-phase 230 VAC

[XSEL-P/Q Types]

XSEL – [Series] – [Type] – [Number of connected axes] – [Motor type] – [(Details of axis 1) Encoder type] [Options] – ([Motor type] [(Details of axes 2 to 6) Encoder type] [Options]) – [Dedicated network slot] – [(Slot 1) Standard I/O] – [(Slot 2) Expansion I/O] – [(Slot 3) Expansion I/O] – [(Slot 4) Expansion I/O] – [I/O cable length] – [Power-supply voltage]

* Specification of axes 2 to 6 varies depending on the number of axes used.

Series	
P	Large-capacity type
Q	Large-capacity type conforming to safety category

Number of connected axes			
1	1-axis specification	4	4-axes specification
2	2-axes specification	5	5-axes specification
3	3-axes specification	6	6-axes specification

Motor type			
20	20-watt servo motor	200	200-watt servo motor
30D	30-watt servo motor for RCS2	300	300-watt servo motor
30R	30-watt servo motor for RS	400	400-watt servo motor
60	60-watt servo motor	600	600-watt servo motor
100	100-watt servo motor	750	750-watt servo motor
150	150-watt servo motor		

(Details of axis 1) Encoder type	
I	Incremental
A	Absolute

Options	
B	Brake
C	Creep sensor
L	Home sensor/LS
M	Master axis specification
S	Slave axis specification

(Details of axes 2 to 6) Encoder type	
I	Incremental
A	Absolute

Options	
B	Brake
C	Creep sensor
L	Home sensor/LS
M	Master axis specification
S	Slave axis specification

Dedicated network slot	
E	Not used
DV	DeviceNet connection board
CC	CC-Link connection board
PR	ProfiBus connection board
ET	Ethernet connection board
EP	Ethernet/IP connection board

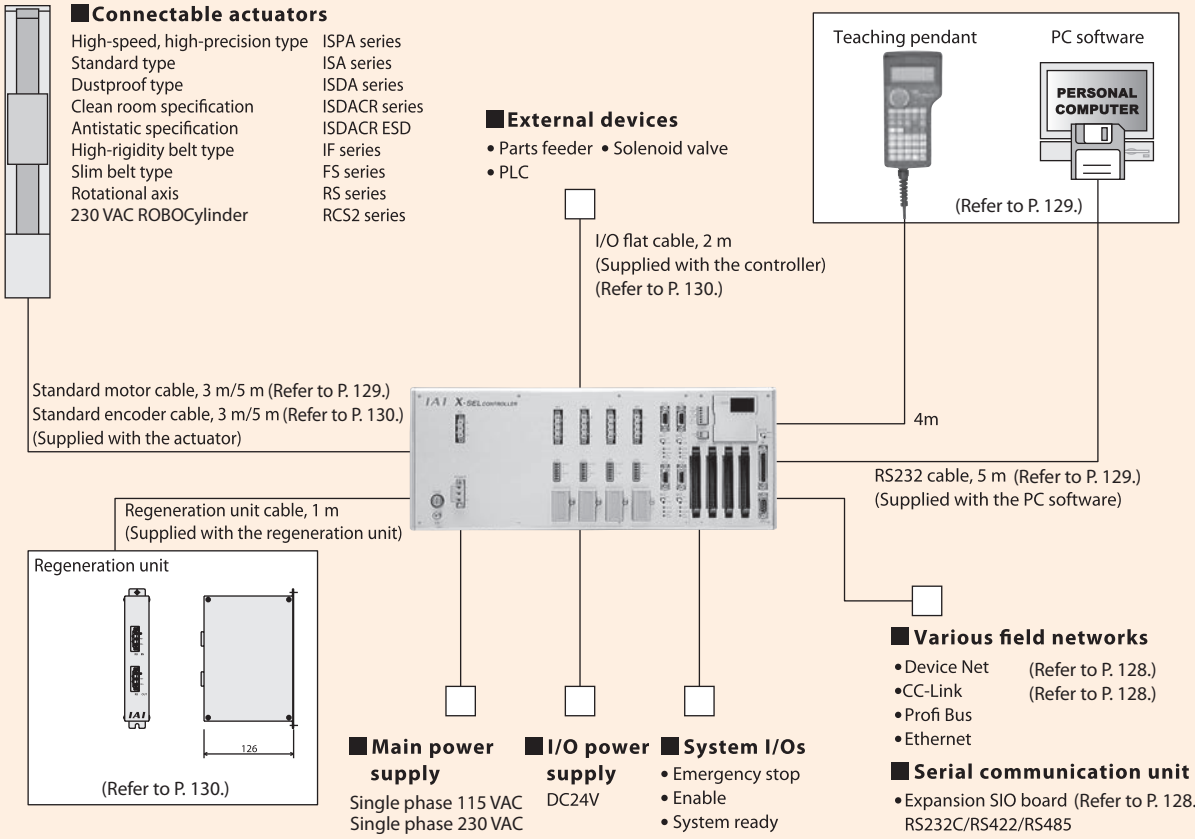
(Slot 1) Standard I/O	
E	Not used
N1	32 inputs/16 outputs (NPN)
N2	16 inputs/32 outputs (NPN)
N3	48 inputs/48 outputs (NPN)
P1	32 inputs/16 outputs (PNP)
P2	16 inputs/32 outputs (PNP)
P3	48 inputs/48 outputs (PNP)

I/O cable length	
0	No cable
2	2m
3	3m
5	5m

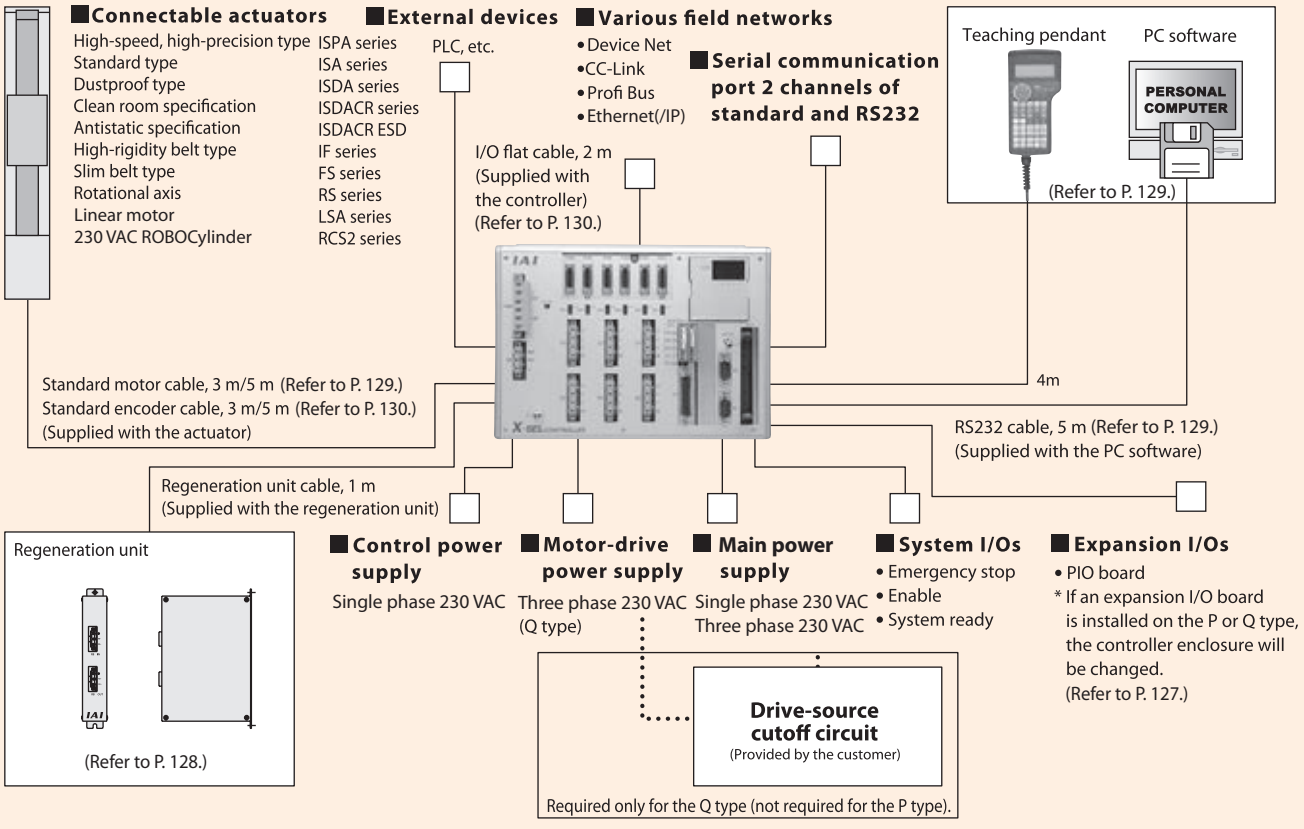
Power-supply voltage	
2	Single-phase 230 VAC
3	Three-phase 230 VAC

Regenerative resistor unit

KE (Standard type) / KET (Standard Global type)



P (Large capacity Standard Type)/Q (Large capacity Global Type)

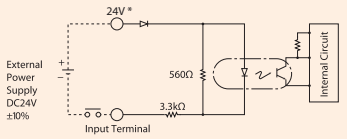


I/O Wiring

■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 circuit]



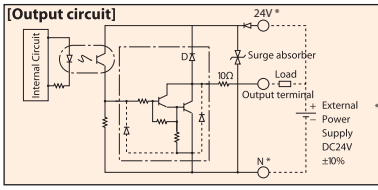
*

	K type	P/Q types
24V	IO24V connector 24 VIN	I/O interface Pin No. 1

■Output External output specifications (NPN specification)

Item	Specification	
Load voltage	DC24V	TD62084 (or equivalent) is used.
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	

[Output circuit]



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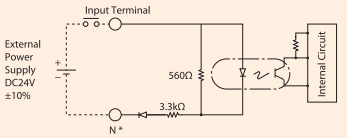
	K type	P/Q types
24V	IO24V connector 24 VIN	I/O interface Pin No. 1
N	IO24V connector 0 VIN	I/O interface Pin No. 50

■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)

[Input circuit]



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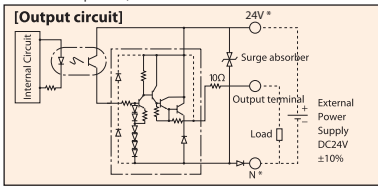
	K type	P/Q types
N	IO24V connector 0 VIN	I/O interface Pin No. 50

■Output External output specifications (PNP specification)

Item	Specification	
Load voltage	DC24V	TD62784 (or equivalent) is used.
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	

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.)

[Output circuit]



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	K type	P/Q types
24V	IO24V connector 24 VIN	I/O interface Pin No. 1
N	IO24V connector 0 VIN	I/O interface Pin No. 50

I/O Signal Tables

Standard I/O Signal Table (When N1 or P1 is selected)

Pin No.	Category	Port No.	Standard setting
1		—	(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		014	General-purpose input
17	Input	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		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	Output	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		—	(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		(P/Q types: 24-V connection / K type: NC)
2		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	Input	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		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	Output	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		(P/Q types: 0-V connection / K type: NC)

Expansion I/O Signal Table (When N2 or P2 is selected)

Pin No.	Category	Standard setting
1		(P/Q types: 24-V connection / K type: NC)
2		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	Input	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		(P/Q types: 0-V connection / K type: NC)

Specification Table

■ KE (General-purpose Type) / KET (General-purpose Type Confirming to Safety Category)

Item	Description							
Controller series/type	KE (standard)				KET (global)			
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 230 V) Max 400 (at power-supply voltage of 100 V)				Max 800	Max 1600 (at power-supply voltage of 230 V) Max 800 (at power-supply voltage of 230 V)		
Input power supply	100-V specification: Single-phase 100 to 115 VAC 230-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	6000 (total)							
Number of multi-tasking programs	16							
Number of positions	3000							
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							

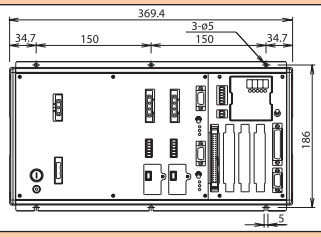
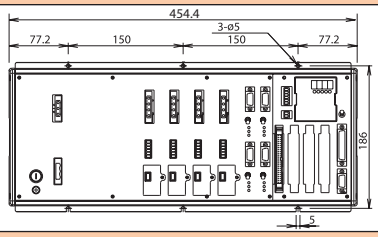
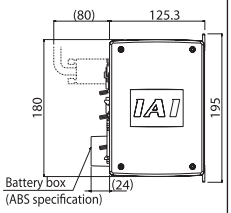
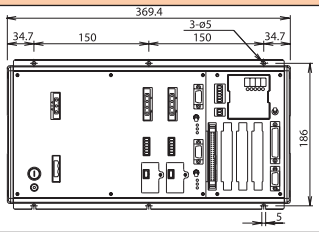
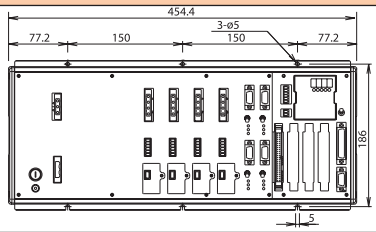
■ P (Large-capacity Type)/Q (Large-capacity Type Conforming to Safety Category)

Item	Description											
Controller series/type	P (standard)						Q (global)					
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 230-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	128											
Number of program steps	9999 (total)											
Number of multi-tasking programs	16											
Number of positions	20000 (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 overcurrnet, 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.

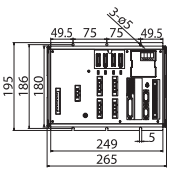
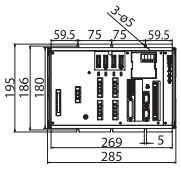
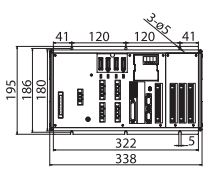
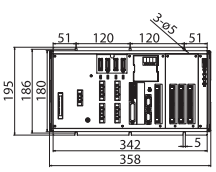
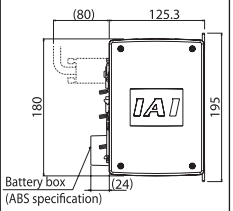
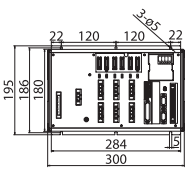
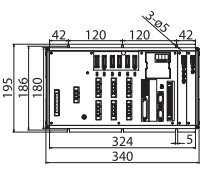
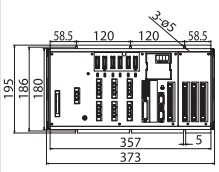
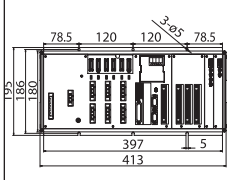
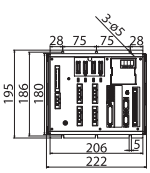
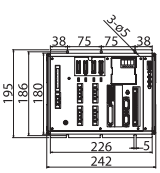
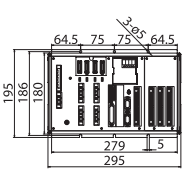
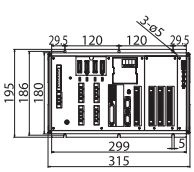
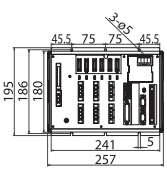
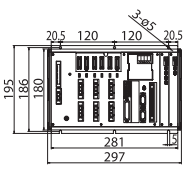
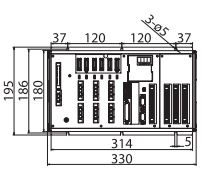
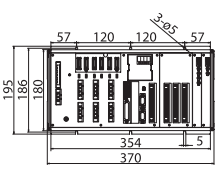
External Dimensions

■ KE (General-purpose Standard Type) / KET (General-purpose Global Type)

	1/2-axis specification	3/4-axis specification	Side view
KE type (General-purpose type)			
	1/2-axis specification	3/4-axis specification	
KET type (General-purpose type) conforming to safety standard)			

■ P (Large-capacity Standard Type)/Q (Large-capacity Global Type)

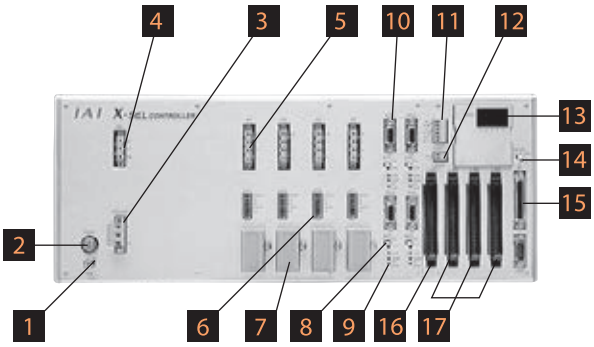
The shapes and dimensions of XSEL-P/Q types vary depending on the controller specifications (encoder type, with/without brake, and with/without I/O expansion).
The following four shapes are available. Check the applicable dimensions based on the desired type and number of axes to be connected.

		Base shape (incremental specification)	With brake/absolute unit	With I/O expansion base	With brake/absolute unit + I/O expansion base	Side view
Controller specification	Encoder	Incremental	Absolute	Incremental	Absolute	
	Brake	Not equipped	Equipped	Not equipped	Equipped	
	I/O	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					

* The dimensions of single-phase 230-VAC controllers conform to those of the P type.

Name of Each Part

KE/KET type



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

A half-cut fuse holder for protecting the AC input part from overcurrent.

3 Main-power input connector

A connector for 100/230-VAC single-phase input.
(This connector comes with a cable-end plug.)

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.)

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

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 IOs 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.

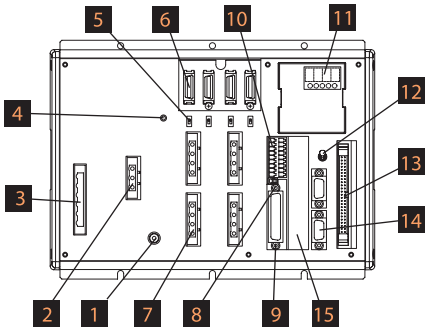
16 Standard I/O slot (slot 1)

The standard PIO board with 32 input points and 16 output points is installed in this slot.

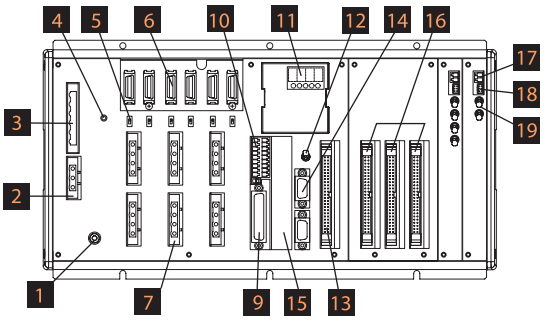
17 Expansion I/O slots (slot 2, slot 3, slot 4)

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 230-VAC 1-/3-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 IOs 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 theses 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

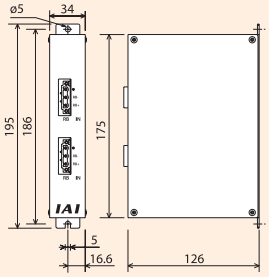
Installation Standards Determine the required number of unit(s) according to the total motor capacity of the connected vertical axes.

Horizontal application

Motor wattage	P/Q type	K type
~200W	Not required	Not required
~800W	1 unit	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	K type
~100W	Not required	Not required
~200W	1 unit	Not required
~400W	1 unit	Not required
~600W	1 unit	1 unit
~800W	1 unit	1 unit
~1200W	2 units	2 units
~1600W	3 units	Consult IAI.
~2000W	4 units	–
~2400W	5 units	–



■ Absolute-data Backup Battery (for XSEL-KE/KET)

Model **IA-XAB-BT**

Features 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.)

■ Absolute-data Backup Battery

Model **AB-5**

Features 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.)

■ Expansion SIO Board (for XSEL-KE/KET)

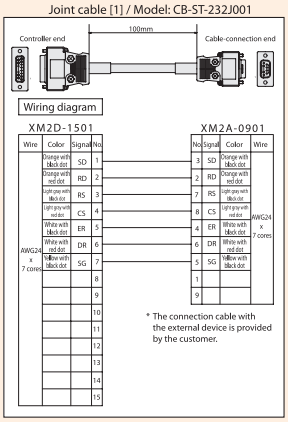
ModelSpecification

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)

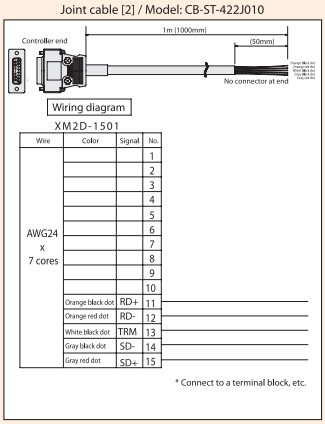
Description

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



■ 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			
	Insulation node of network-power operation type			
Communication specification	Master-slave connection	Bit strobe		
		Polling		
		Cyclic		
Baud rate	500k/250k/125kbps (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($X^{16}+X^{12}+X^5+X1$)					
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.

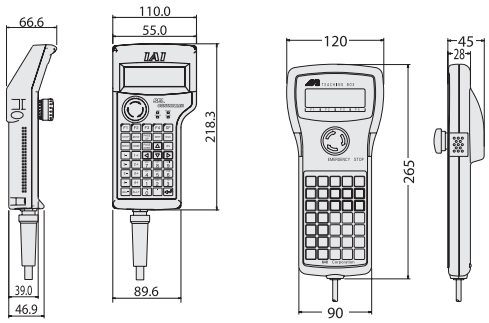
Options

Teaching Pendant

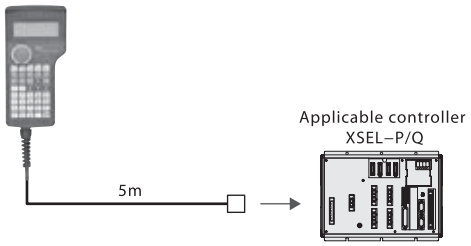
Features A teaching device offering functions for program/position input, test operation, monitoring, and more.

Model

Model	Description
SEL-T-JS	Standard type with connector conversion cable
SEL-TD-JS	Deadman switch type with connector conversion cable
SEL-TD-25	Safety category type with connector conversion cable



Configuration



Specification

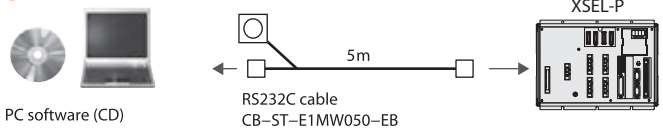
Item	SEL-T-JS	SEL-TD-JS	SEL-TD-25
3-position enable switch	Not equipped	Equipped	Equipped
ANSI/UL standard	Not compliant	Compliant	Compliant
Safety category conformity	Not compliant	Not compliant	Compliant
Display	20 characters x 4 lines		
Surrounding air temperature/humidity	0–40°C 10–90%RH (non-condensing)		
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.

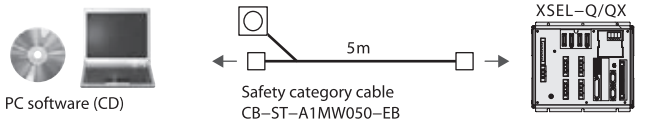
Model **IA–101–X–MW** (with RS232C cable)

Configuration



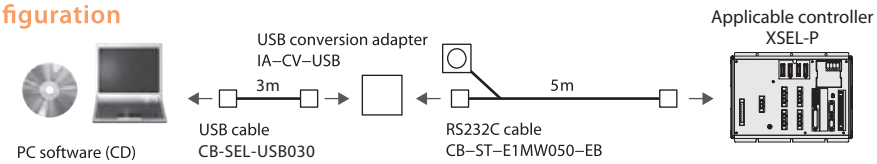
Model **IA–101–XA–MW** (with safety category 4 cable)

Configuration



Model **IA–101–X–USBMW** (with USB conversion adapter + cable)

Configuration



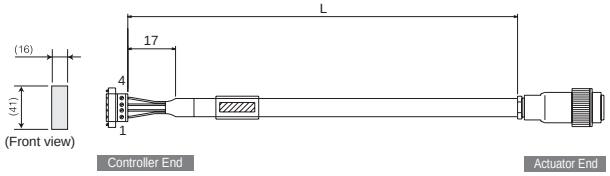
Replacement Parts

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.

EU Motor Robot Cable

Item CB-XEU-MA□□□

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



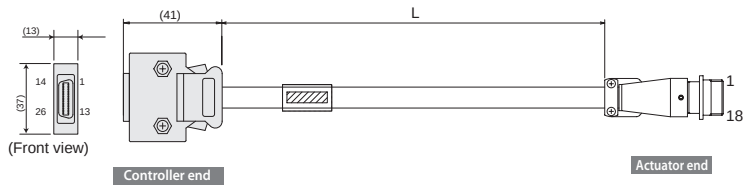
	Signal	No.	No.	Signal	Wire
0.75sq	PE	1	1	U	0.75sq (crimped)
	U	2	2	V	
	V	3	3	W	
	W	4	4	PE	

Replacement Parts

EU Encoder Robot Cable (for XSEL-K types)

Item CB-XEU-PA□□□

* □□□ indicates the cable length (L). A desired length up to 15 m can be specified. Example) 080 = 8 m



Wire	Signal	No.
0.15sq (Crimped)	A/U	1
	A/U	2
	B/V	3
	B/V	4
	Z/W	5
	Z/W	6
	SD	7
	SD	8
	BAT+	9
	BAT–	10
	VCC	11
	GND	12
	BK–	13
	BK+	14
	—	15

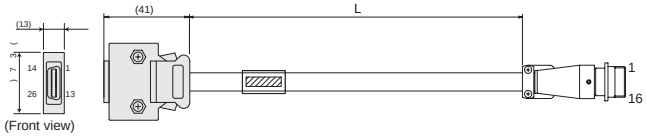
Clamp the shield to the hood.
Ground wire and shielded braided wires

No.	Signal	Wire
1	A/U	0.15sq (Crimped)
2	A/U	
3	B/V	
4	B/V	
5	Z/W	
6	Z/W	
7	—	
8	—	
9	FG	
10	SD	
11	SD	
12	BAT+	
13	BAT–	
14	VCC	
15	GND	
16	—	
17	BK–	
18	BK+	

EU Encoder Robot Cable (for XSEL-P/Q types)

Item CB-XEU3-PA□□□

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



Wire	Color	Signal	No.
AWG26 (soldered)	–	–	10
	–	–	11
	–	E24V	12
	Gray/White	0V	13
	Brown/White	LS	26
	–	CREEP	25
	–	OT	24
	–	RSV	23
	–	–	9
	–	–	18
	–	–	19
	Pink	A+	1
	Purple	A-	2
	White	B+	3
	Blue/Red	B-	4
	Orange/White	Z+	5
	Green/White	Z-	6
	Blue	SRD+	7
	Orange	SRD-	8
	Black	BAT+	14
	Yellow	BAT–	15
	Green	VCC	16
	Brown	GND	17
	Gray	BKR-	20
	Red	BKR+	21
	–	–	22

The shield is connected to the hood by a clamp.
Ground wire and shield braiding

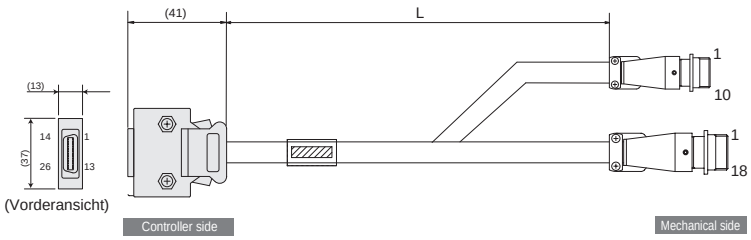
No.	Signal	Color	Wire
1	A	Pink	AWG26 (crimped)
2	A	Green	
3	B	White	
4	B	Blue/Red	
5	Z	Orange/White	
6	Z	Green/White	
7	LS+	Brown/White	
8	SD	Blue	
9	SD	Orange	
10	BAT+	Black	
11	BAT–	Yellow	
12	VCC	Green	
13	GND	Brown	
14	LS–	Gray/White	
15	BK–	Gray	
16	BK+	Red	

The shield is connected to the hood by a clamp.

EU Limit Switch Encoder Robot Cable for RCS2 Rotary & High-thrust Actuators

Item CB-XEU2-PLA□□□

* □□□ indicates the cable length (L). A desired length up to 30 m can be specified. Example) 080 = 8 m



Wire	Color	Signal	No.
AWG26 soldered)	–	–	10
	–	–	11
	White/Orange	E24V	12
	White/Green	0V	13
	Brown/Blue	LS	26
	Brown/Yellow	CLEEP	25
	Brown/Red	OT	24
	Brown/Black	RSV	23
	–	–	9
	–	–	18
	–	–	19
	White/Blue	A+	1
	White/Yellow	A–	2
	White/Red	B+	3
	White/Black	B–	4
	White/Purple	Z+	5
	White/Gray	Z–	6
	Orange	SRD+	7
	Green	SRD–	8
	Purple	BAT+	14
	Gray	BAT-	15
	Red	VCC	16
	Black	GND	17
	Blue	BKR–	20
	Yellow	BKR+	21
	–	–	22

Connect the shield to the hood via a clamp.
Drain wire and braided shield wire.
("White/Blue" and other designations under "Wire color" indicate the band color/insulator color.

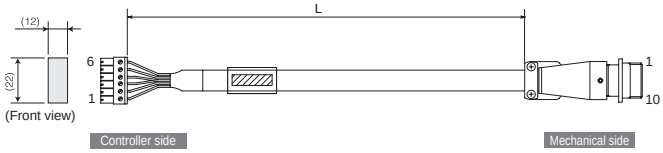
No.	Signal	Color	Wire
1	E24V	White/Blue	AWG26 (Crimped)
2	0V	White/Yellow	
3	LS	White/Red	
4	CLEEP	White/Black	
5	OT	White/Purple	
6	RSV	White/Gray	

No.	Signal	Color	Wire
1	A	White/Blue	AWG26 (Crimped)
2	A	White/Yellow	
3	B	White/Red	
4	B	White/Black	
5	Z	White/Purple	
6	Z	White/Gray	
7	–	–	
8	–	–	
9	FG	Drain	
10	SD	Orange	
11	SD	Green	
12	BAT+	Purple	
13	BAT-	Gray	
14	VCC	Red	
15	GND	Black	
16	–	–	
17	BK-	Blue	
18	BK+	Yellow	

EU Limit Switch Cable (for X-SEL-K types)

Item CB-XEU-LC□□□

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



Wire	Color	Signal	No.
AWG24	Sky blue	24VOUT	6
	Purple	N	5
	Lime green	LS	4
	Orange	CREEP	3
	Gray	OT	2
	1B/Sky blue	RSV	1

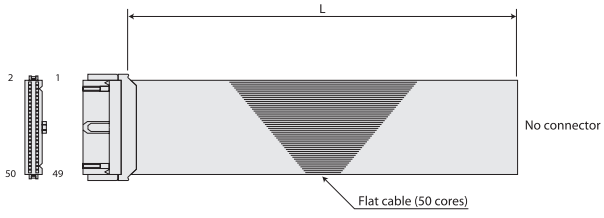
Note: "1B" means 1 black dot mark

No.	Signal	Color	Wire
1	24V OUT	Sky blue	AWG 24 (crimped)
2	n	Purple	
3	-	-	
4	LS	Lime green	
5	CREEP	Orange	
6	O.T.	Gray	
7	RSV	1B/Sky blue	
8	-	-	
9	-	-	
10	-	-	

I/O Flat Cable (for XSEL-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



No.	Color	Wire	No.	Color	Wire	No.	Color	Wire
1	Brown 1	Flat cable pressure-welded	18	Gray 2	Flat cable pressure-welded	35	Green 4	Flat cable pressure-welded
2	Red 1		19	White 2		36	Blue 4	
3	Orange 1		20	Black 2		37	Purple 4	
4	Yellow 1		21	Brown-3		38	Gray 4	
5	Green 1		22	Red 3		39	White 4	
6	Blue 1		23	Orange 3		40	Black 4	
7	Purple 1		24	Yellow 3		41	Brown-5	
8	Gray 1		25	Green 3		42	Red 5	
9	White 1		26	Blue 3		43	Orange 5	
10	Black 1		27	Purple 3		44	Yellow 5	
11	Brown-2		28	Gray 3		45	Green 5	
12	Red 2		29	White 3		46	Blue 5	
13	Orange 2		30	Black 3		47	Purple 5	
14	Yellow 2		31	Brown-4		48	Gray 5	
15	Green 2		32	Red 4		49	White 5	
16	Blue 2		33	Orange 4		50	Black 5	
17	Purple 2		34	Yellow 4				

IK-P/S Series V2
Catalogue No. 0114-E

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

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