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ROBO CYLINDER

ROBO Cylinder
IK-S Series Catalog Extract

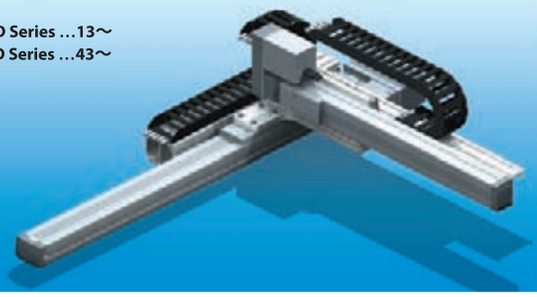
www.robocylinder.de

Wide-ranging Lineup
Lineup of IK Series

Combinations

XYB (XY, base mount)

Page
IK2-PXBD Series ...13〜
IK2-SXBD Series ...43〜



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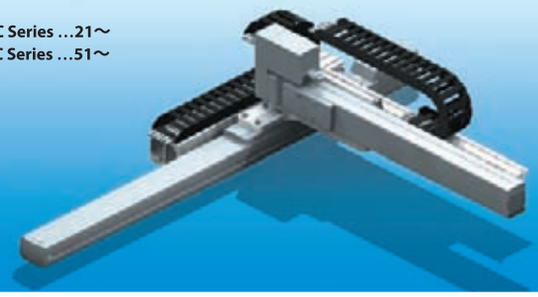
IK2-PXBC Series ...21〜
IK2-SXBC Series ...51〜



• IK2-PXBD Series • IK2-SXBD Series

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

• IK2-PXBC Series • IK2-SXBC Series

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

XZ (Upright type)

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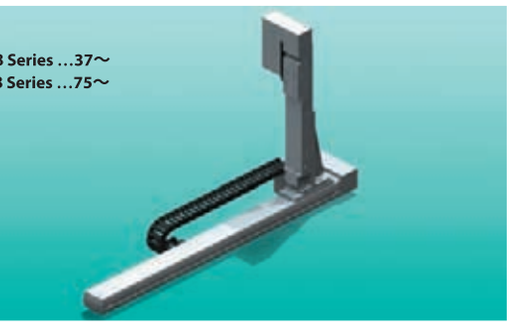
IK2-PXZB Series ...37〜
IK2-SXZB Series ...75〜



• IK2-PXZB Series • IK2-SXZB Series

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

YZB (Cross type, base mount)

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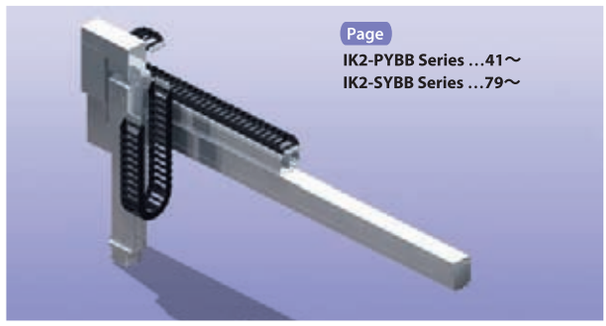
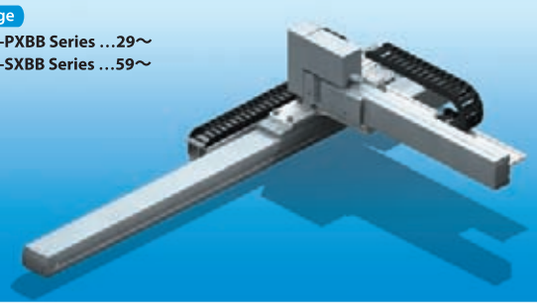
IK2-PYBB Series ...41〜
IK2-SYBB Series ...79〜



• IK2-PYBB Series • IK2-SYBB Series

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

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



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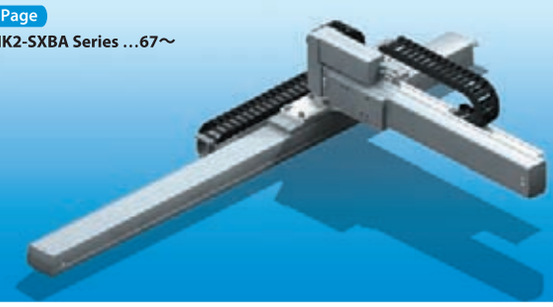
IK2-SXBA Series ...67～



• IK2-PXBB Series • IK2-SXBB Series

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

• IK2-SXBA Series

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

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

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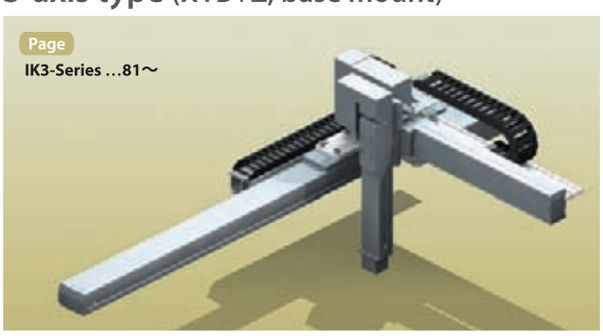
IK3-Series ...81～



• IK3 Series

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

2-axis combination – Axis configurations

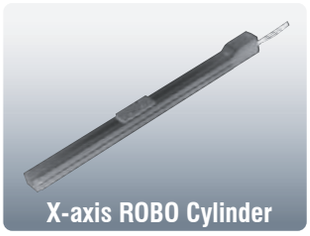
	Axis 1	Axis 2
IK2-PXBD IK2-SXBD	RCP2-SS7□ RCS2-SS7□	RCP2-SA5R RCS2-SA5R
IK2-PXBC IK2-SXBC	RCP2-SS7□ RCS2-SS7□	RCP2-SA6R RCS2-SA6R
IK2-PXBB IK2-SXBB	RCP2-SS8□ RCS2-SS8□ (100W)	RCP2-SA7R RCS2-SA7R
IK2-SXBA	RCS2-SS8□ (150W)	RCS2-SS8R (100W)
IK2-PXZB IK2-SXZB	RCP2-SS8□ RCS2-SS8□ (100W)	RCP2-SA7R RCS2-SA7R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

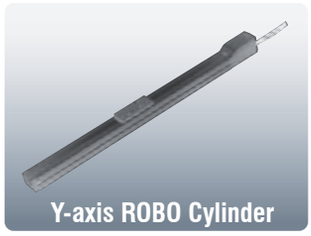
3-axis combination – Axis configurations

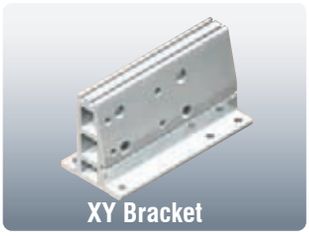
	X axis	Y axis	Z axis
IK3	RCP2-SS8□ RCS2-SS8□ (100W)	RCP2-SA7R RCS2-SA7R	RCP2-SA6R RCS2-SA6R

IK Series

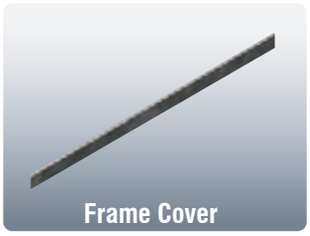
The IK Series is a set that includes the following components needed to assemble the cartesian robot.

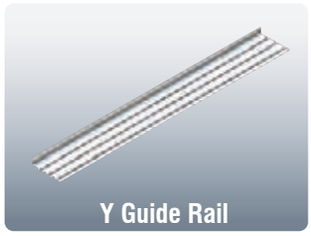

X-axis ROBO Cylinder

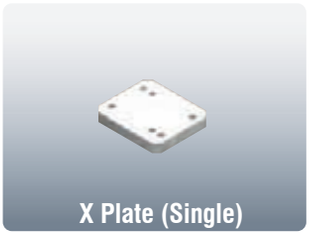

Y-axis ROBO Cylinder

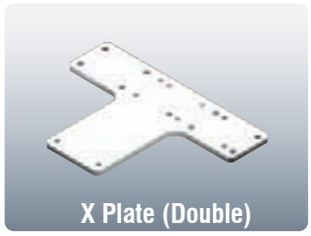

XY Bracket

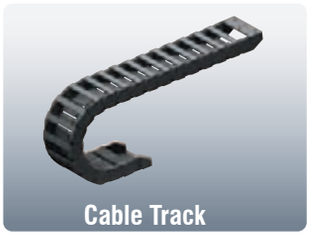

X Guide Rail


Frame Cover

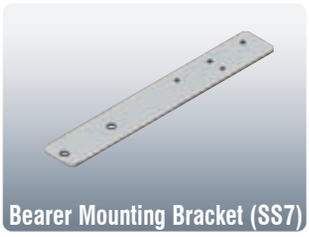

Y Guide Rail

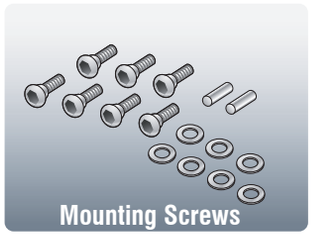

X Plate (Single)


X Plate (Double)

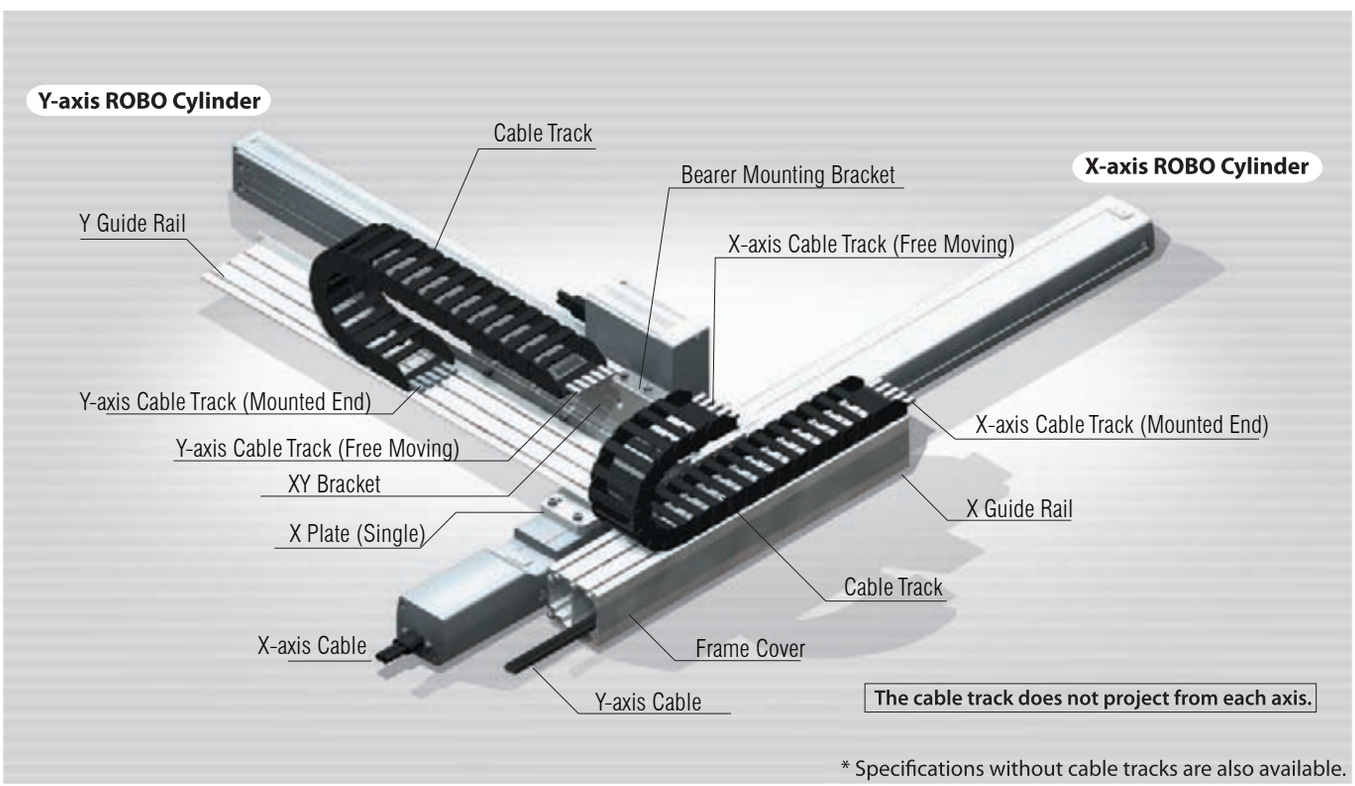

Cable Track


Bearer Mounting Bracket (SS8)


Bearer Mounting Bracket (SS7)


Mounting Screws

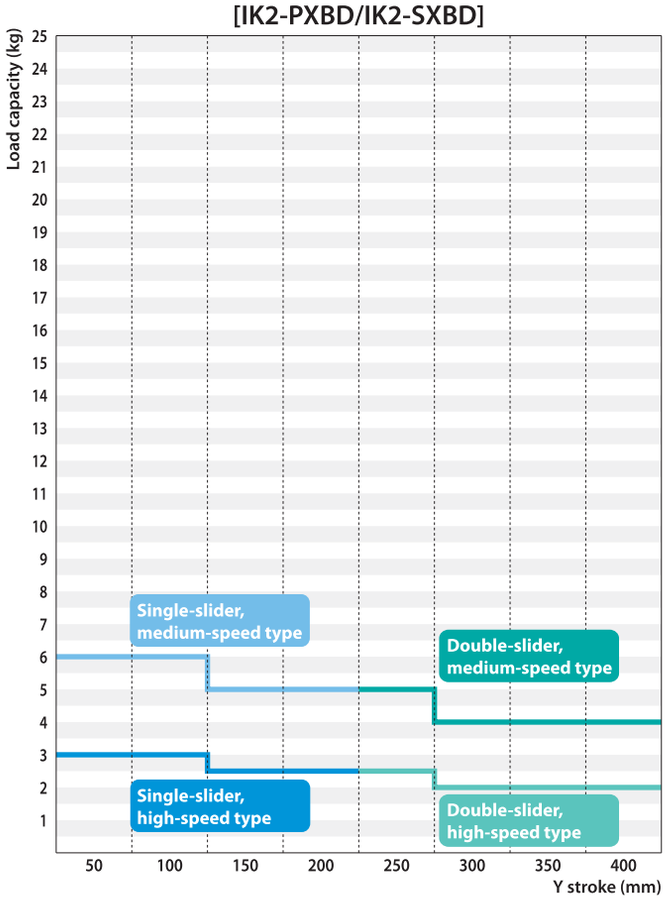
Note: The above images are provided for reference purposes only.
The actual components may vary depending on the combination type, direction, etc.



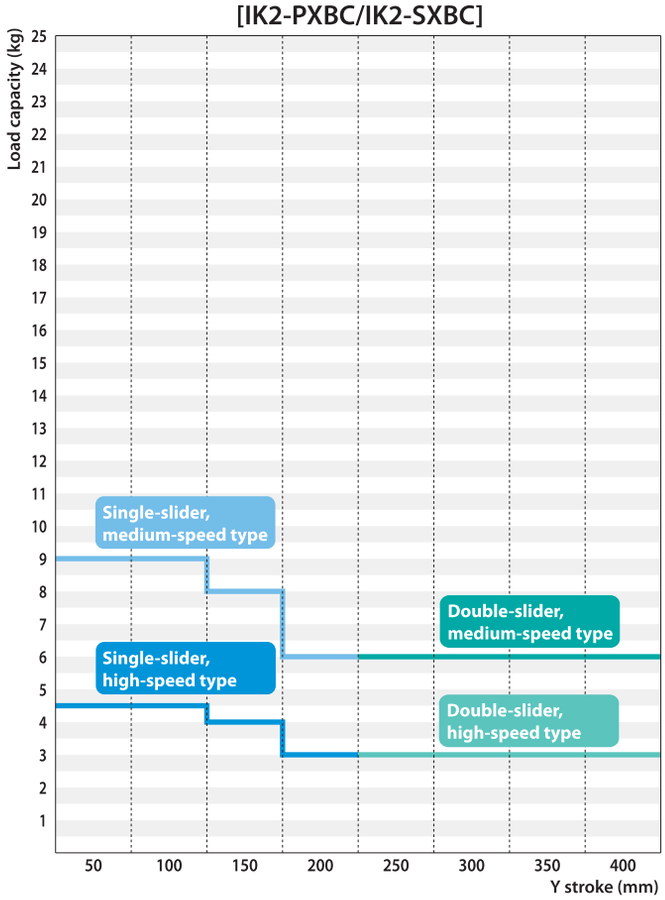
* Specifications without cable tracks are also available.

Load Capacity Graphs for XYB Combinations

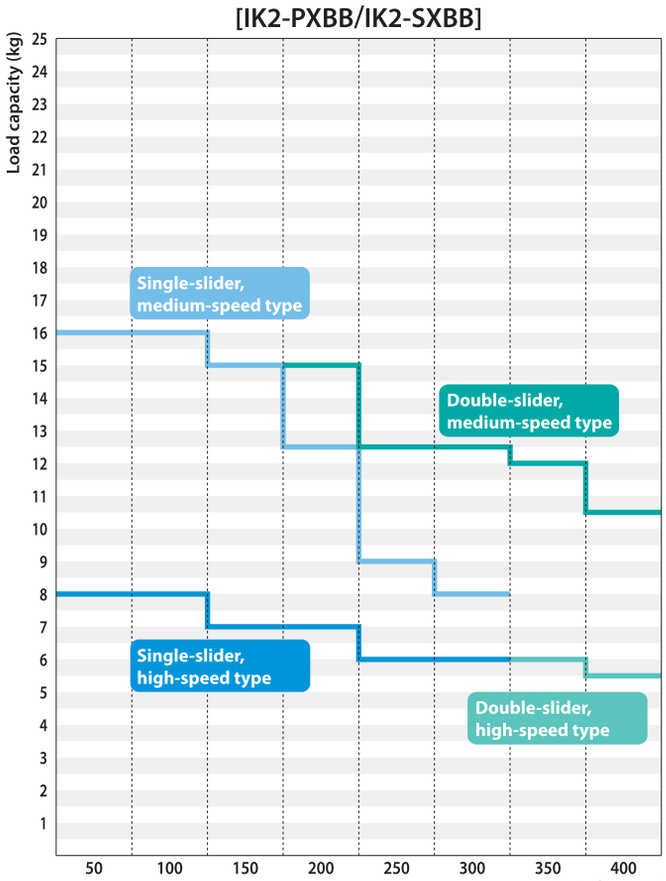
[IK2-PXBD/IK2-SXBD]



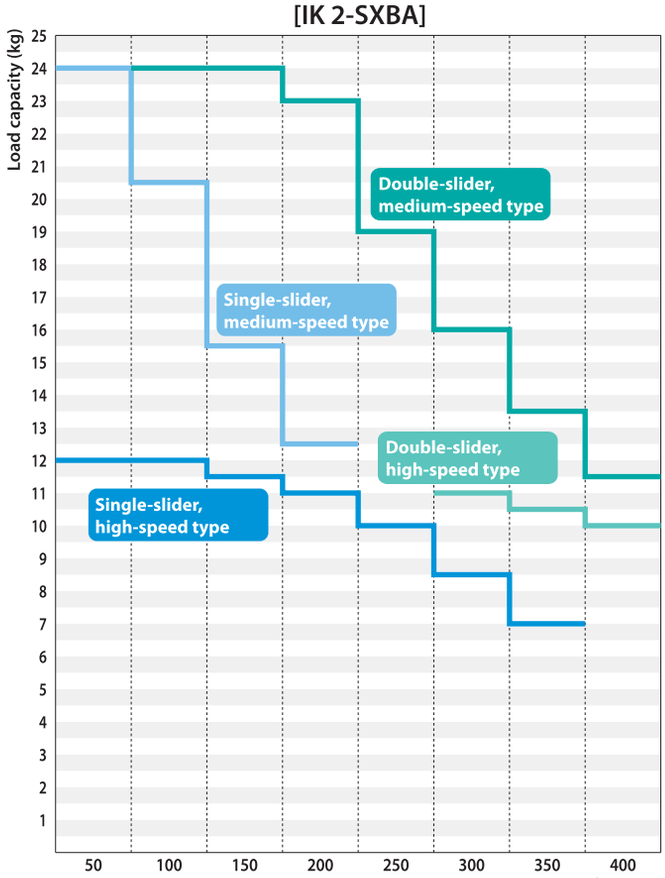
[IK2-PXBC/IK2-SXBC]



[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 IK3-PBBG1☐HHMS IK3-PBBG1☐HHLS	XYB+Z, base mount	SS8R Reversed, single-slider	56☐	20	220	50–1000	SA7R Reversed
83	IK3-PBBG1☐HHHD IK3-PBBG1☐HHMD IK3-PBBG1☐HHLD		SS8R Reversed, double-slider				50–800	

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 IK3-SBBG1☐HHMS IK3-SBBG1☐HHLS	XYB+Z, base mount	SS8R (100W) Reversed, single-slider	100	20	1000	50–1000	SA7R Reversed
88	IK3-SBBG1☐HHHD IK3-SBBG1☐HHMD IK3-SBBG1☐HHLD		SS8R (100W) Reversed, double-slider				50–800	

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

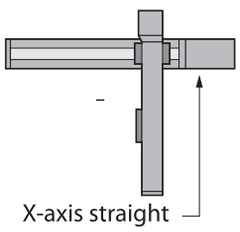
[1] Adopting a servo motor.

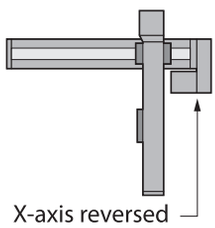
[2] Able to operate at a constant thrust regardless of the speed.

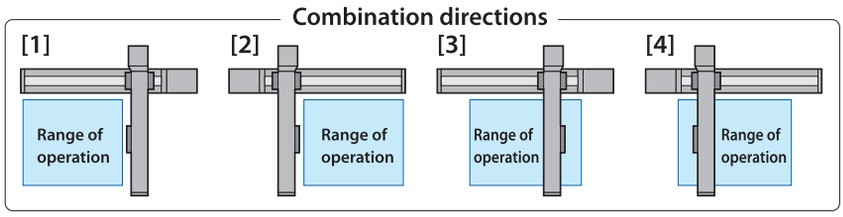
[3] Able to move at higher speeds than the RCP2.

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].

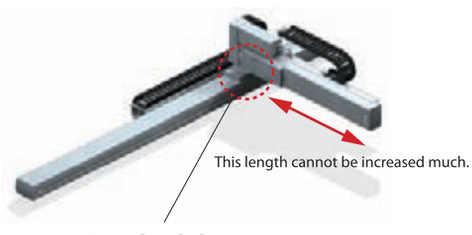


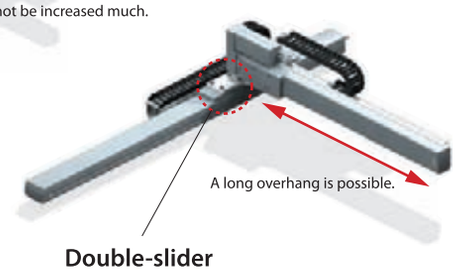




3. Differences between Single-slider and Double-slider Types

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

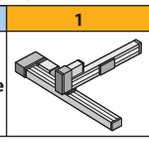
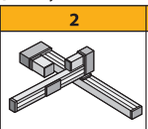
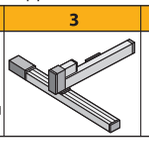
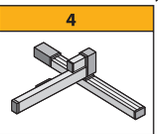
Code	Combined shape	Name
XB	XYB	XY, base mount
XZ	XZ	Upright type
YB	YZB	Cross type, base mount
BB	XYB+ZB	XYB+Z, base mount

[3]Configuration type

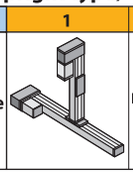
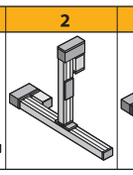
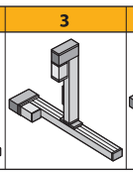
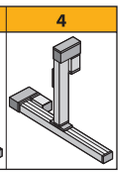
Code	Axis 1	Axis 2	Axis 3
A1	SS8R (150W)	SS8R (100W)	
A2	SS8C (150W)	SS8R (100W)	
B1	SS8R (100W)	SA7R	
B2	SS8C (100W)	SA7R	
C1	SS7R	SA6R	
C2	SS7C	SA6R	
D1	SS7R	SA5R	
D2	SS7C	SA5R	
G1	SS8R (100W)	SA7R	SA6R

[4]Combination directions

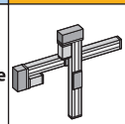
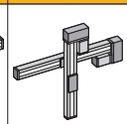
XYB (XY, base mount) *Only 1 and 2 are supported if the X-axis is of reversed type.

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
P1	PSEL, ROBONET

[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)
A	Finished assembly

IK2-SXBD1□□S

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

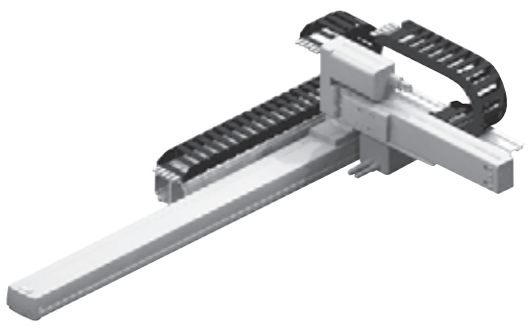
Model Details

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

IK2 – SXBD1□□S – □ — □ □ — □ □ — □ — □ — □ — □ — □

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

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



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

Maximum Stroke

X axis 600 mm Y axis 200 mm

Axis 2

*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

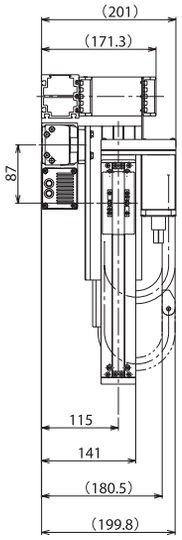
Item	X axis	Y axis
Axis model	RCS2-SS7R	RCS2-SA5R
Stroke (Can be set in 50-mm increments)	50-600mm	50-200mm
Axis 2	High-speed: 600mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s
Motor output (W)	60W	20W
Ball screw lead	High-speed type: 12mm	High-speed type: 12mm Medium-speed type: 6mm
Drive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

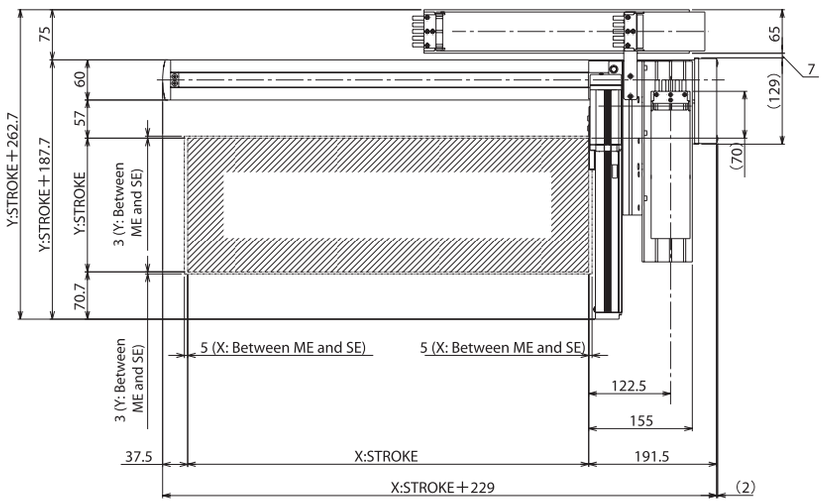
Dimensions

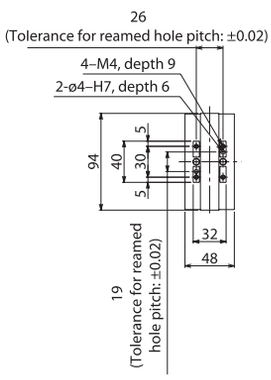
You can download CAD drawings from our website. www.robocylinder.de

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.

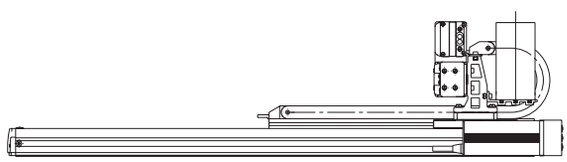




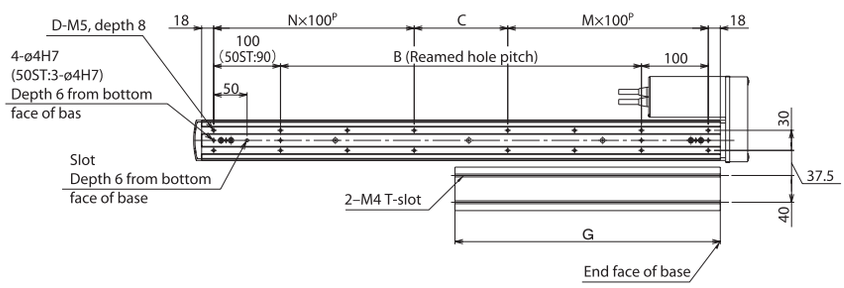


Detaii view of Y-axis siider

ME: Mechanical end
SE: Stroke end



Detaii view of siot in bottom face of X-axis base



Detaii view of X-axis instaiiation

■Dimensions by Stroke

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

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-SXBD1□□D

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

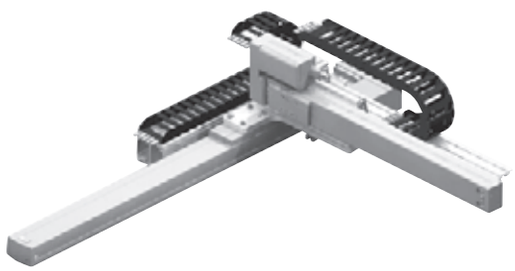
Model Details

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

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

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

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



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

Maximum Stroke

X axis 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

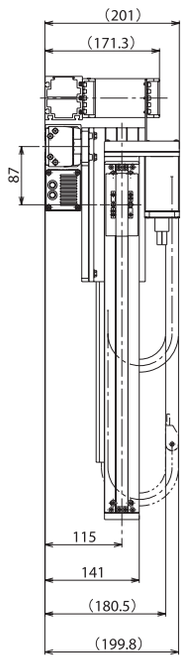
Item	X axis	Y axis
Axis model	RCS2-SS7R	RCS2-SA5R
Stroke (Can be set in 50-mm increments)	50-450mm	250-400mm
Axis 2	High-speed: 600mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s
Motor output (W)	60W	20W
Ball screw lead	High-speed type: 12mm	High-speed type: 12mm Medium-speed type: 6mm
Drive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

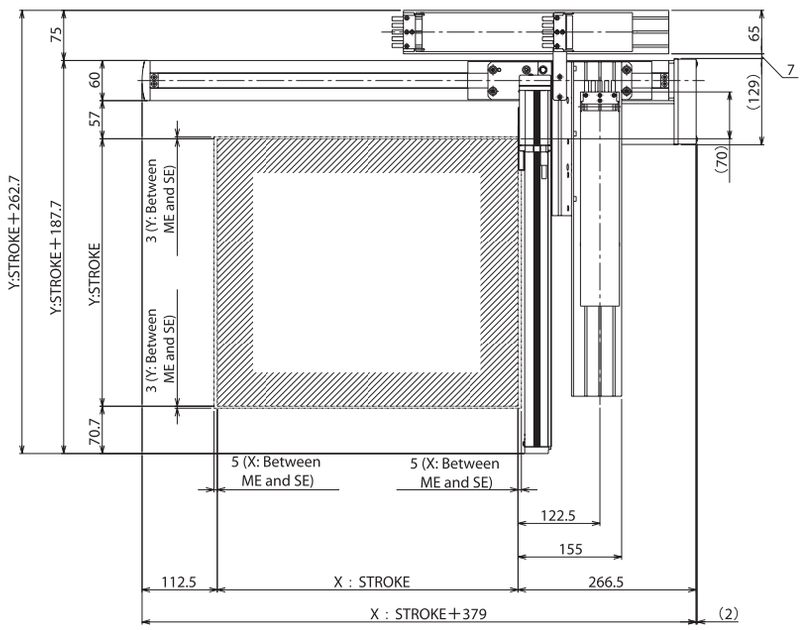
Dimensions

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

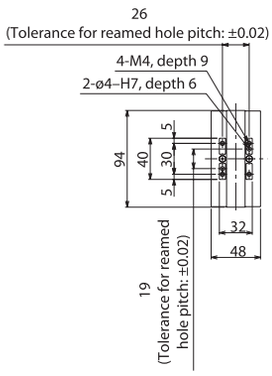
2D CAD

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.

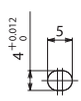




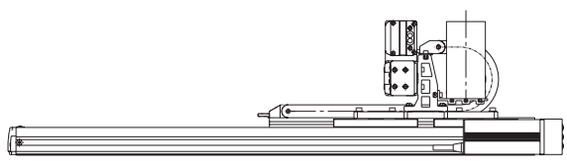
ME: Mechanicai end
SE: Stroke end

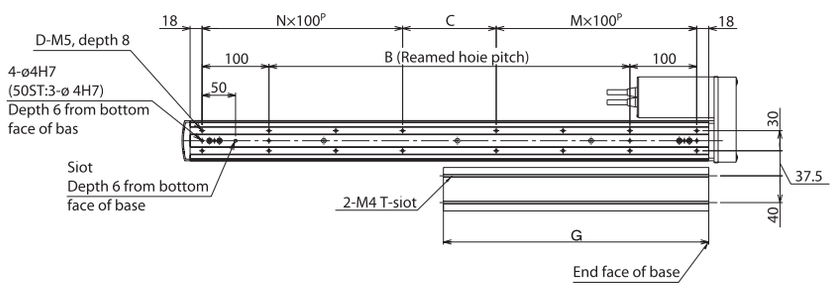


Detaii view of Y-axis siider



Detaii view of siot in bottom face of X-axis base





Detaii view of X-axis instaiiation

■Dimensions by Stroke

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

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-SXBD2□□S

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

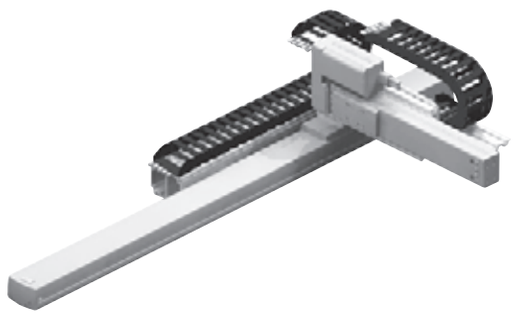
Model Details

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

IK2 – SXBD2□□S – □ – □ □ – □ □ – □ – □ – □ – □ – □

- 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-J/K; T2: SSEL, XSEL-P/Q
- Cable length: 1L: 1m; 3L: 3m; 5L: 5m; □L: □m
- Wiring 1: N: Cable only; CT: With cable track
- Wiring 2
- Shipping configuration: K: Individual components (kit); A: Assembled

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



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

Maximum Stroke

X axis 600 mm Y axis 200 mm

Axis 2

*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

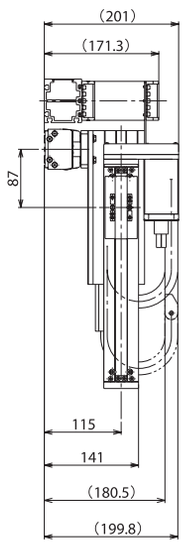
Item	X axis	Y axis
Axis model	RCS2-SS7C	RCS2-SA5R
Stroke (Can be set in 50-mm increments)	50-600mm	50-200mm
Axis 2	High-speed: 600mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s
Motor output (W)	60W	20W
Ball screw lead	High-speed type: 12mm	High-speed type: 12mm Medium-speed type: 6mm
Drive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

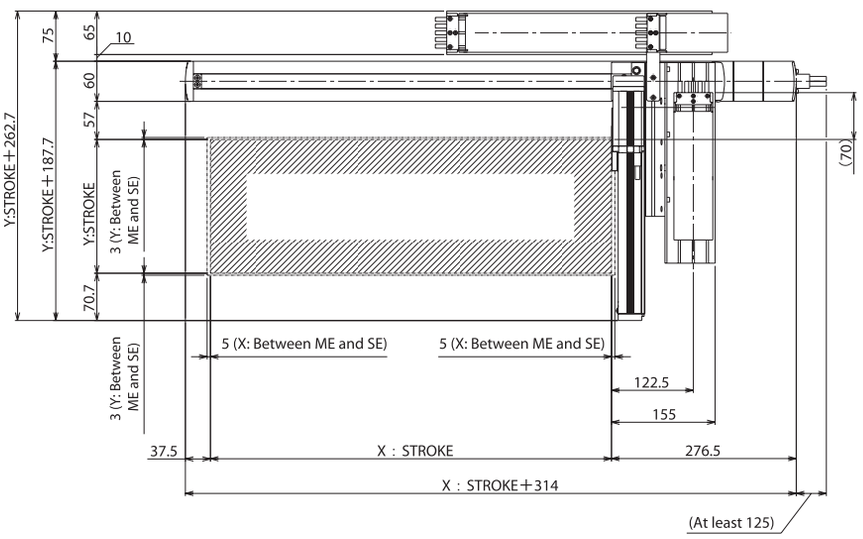
Dimensions

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

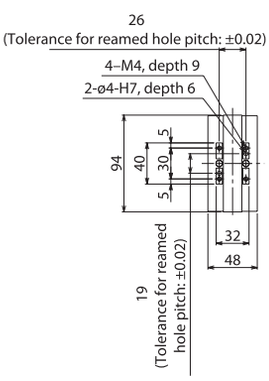
2D CAD

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.



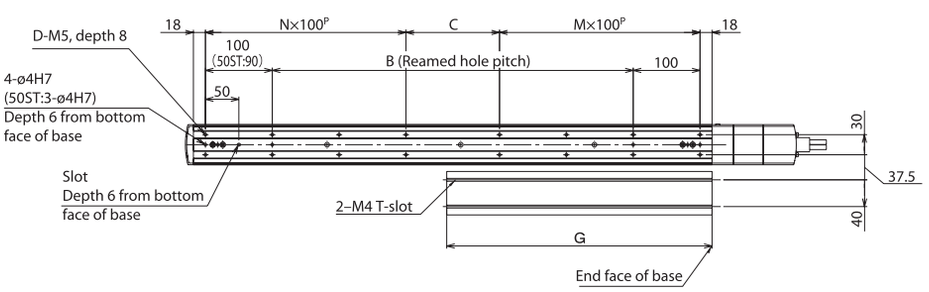


ME: Mechanical end
SE: Stroke end



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

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)

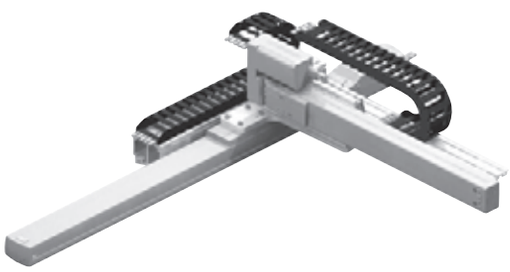
Model Details

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

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

- 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-J/K; T2: SSEL, XSEL-P/Q
- Cable length: 1L: 1m; 3L: 3m; 5L: 5m; □L: □m
- Wiring 1: N: Cable only; CT: With cable track
- Wiring 2
- Shipping configuration: K: Individual components (kit); A: Assembled

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



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

Maximum Stroke

X axis 450 mm　　Y axis 400 mm

Axis 2

*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

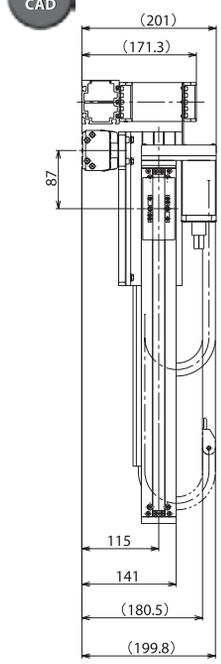
Item	X axis	Y axis
Axis model	RCS2-SS7C	RCS2-SA5R
Stroke (Can be set in 50-mm increments)	50-450mm	250-400mm
Axis 2	High-speed: 600mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s
Motor output (W)	60W	20W
Ball screw lead	High-speed type: 12mm	High-speed type: 12mm Medium-speed type: 6mm
Drive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

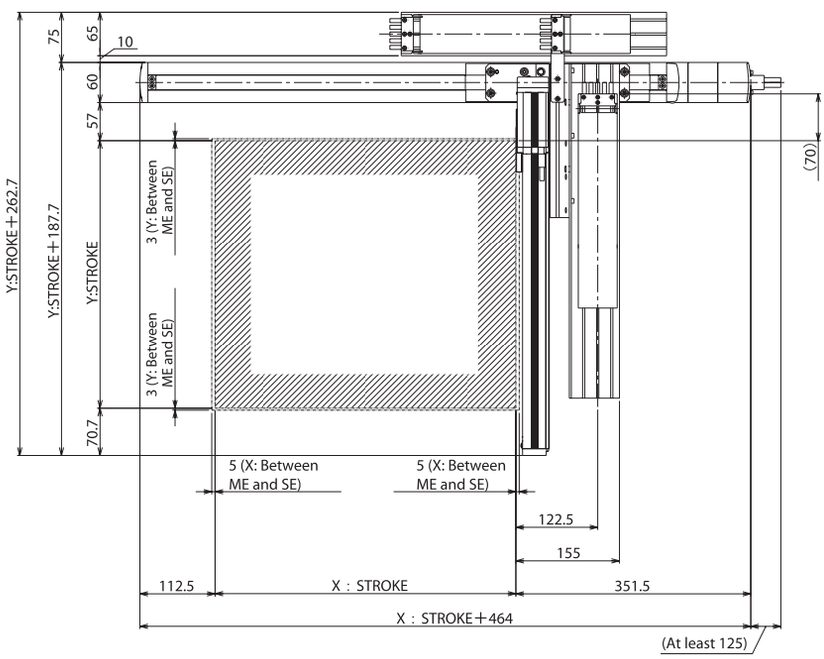
Dimensions

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

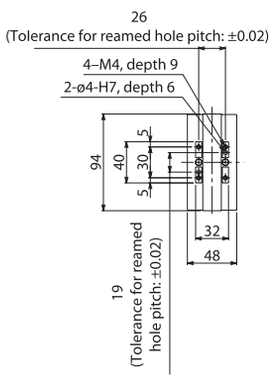
2D CAD

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.



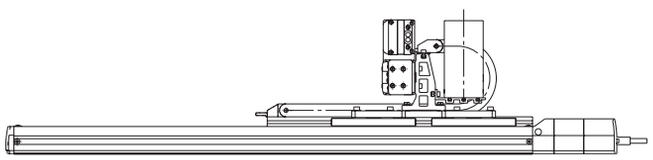


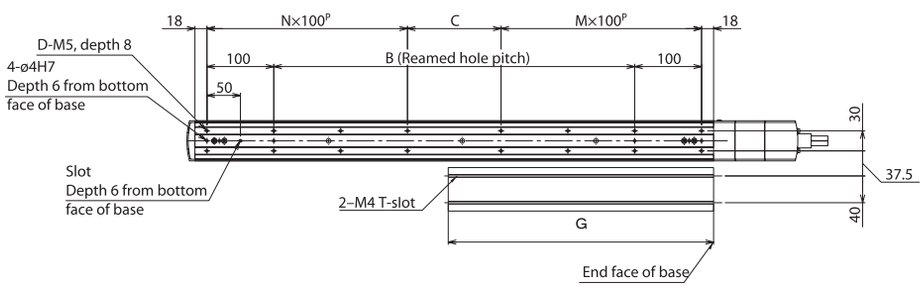
ME: Mechanical end
SE: Stroke end



Detaii view of Y-axis siider

Detaii view of siot in bottom face of X-axis base





Detaii view of X-axis instaiiation

■Dimensions by Stroke

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

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-SXBC1□□S

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

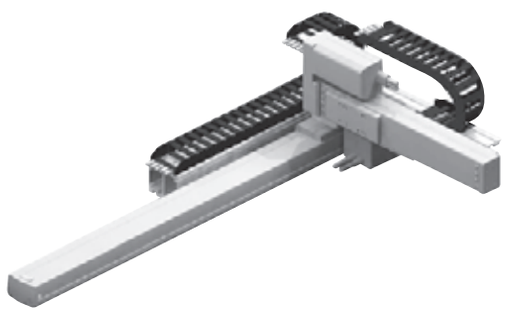
Model Details

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

IK2 — SXBC1 □□S — □ — □ □ — □ □ — □ — □ — □ — □ — □

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

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



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

Maximum Stroke

X axis 600 mm Y axis 200 mm

Axis 2

*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

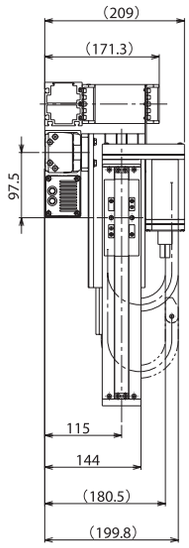
Item	X axis	Y axis
Axis model	RCS2-SS7C	RCS2-SA6R
Stroke (Can be set in 50-mm increments)	50-600mm	50-200mm
Axis 2	High-speed type: 600mm/s Medium-speed type: 300mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s
Motor output (W)	60W	30W
Ball screw lead	High-speed type: 12mm Medium-speed type: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

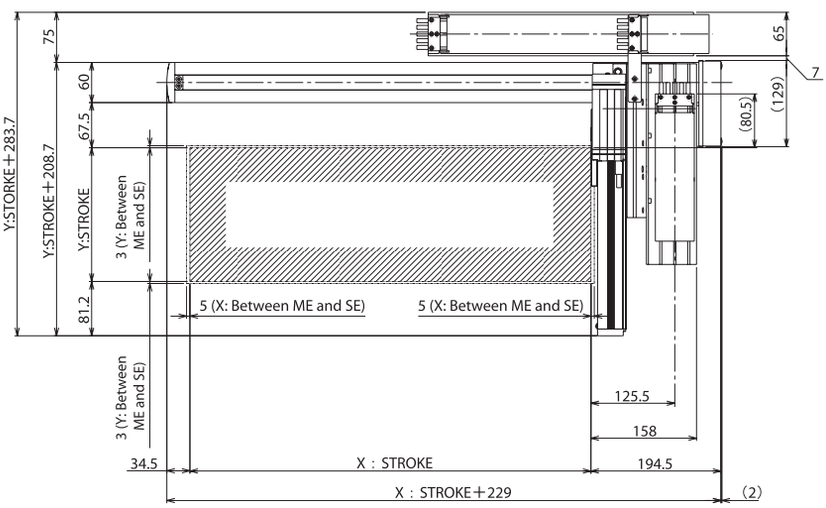
Dimensions

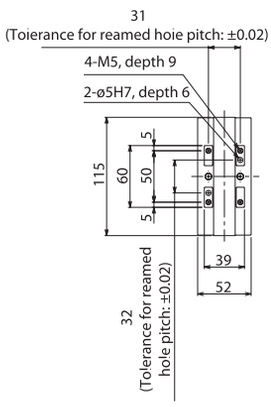
You can download CAD drawings from our website. www.robocylinder.de

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.

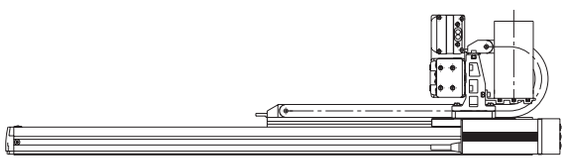


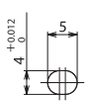




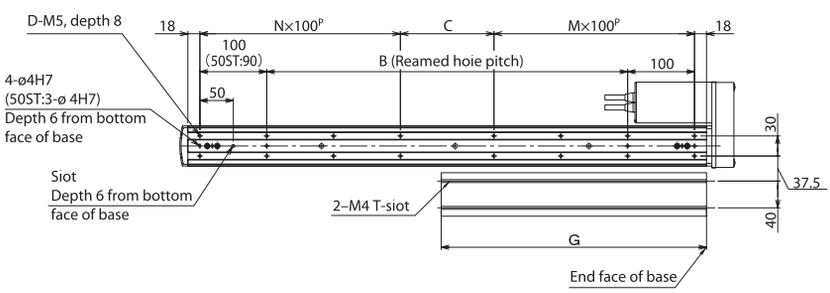
Detaii view of Y-axis siider

ME: Mechanicai end
SE: Stroke end





Detaii view of siot in bottom face of X-axis base



Detaii view of X-axis instaiiation

■Dimensions by Stroke

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

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-SXBC1□□D

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

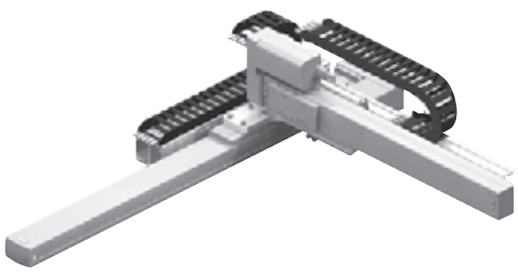
Model Details

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

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

- 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-J/K; T2: SSEL, XSEL-P/Q
- Cable length: 1L: 1m; 3L: 3m; 5L: 5m; □L: □m
- Wiring 1: N: Cable only; CT: With cable track
- Wiring 2
- Shipping configuration: K: Individual components (kit); A: Assembled

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



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

Maximum Stroke

X axis 450 mm Y axis 400 mm

Axis 2

*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

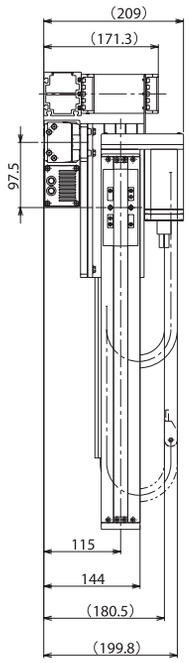
Item	X axis	Y axis
Axis model	RCS2-SS7C	RCS2-SA6R
Stroke (Can be set in 50-mm increments)	50-450mm	250-400mm
Axis 2	High-speed type: 600mm/s Medium-speed type: 300mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s
Motor output (W)	60W	30W
Ball screw lead	High-speed type: 12mm Medium-speed type: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

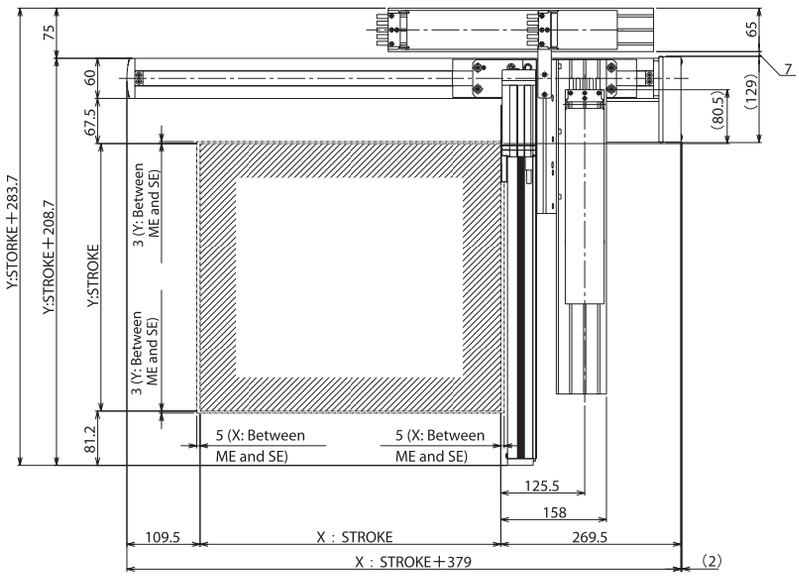
Dimensions

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

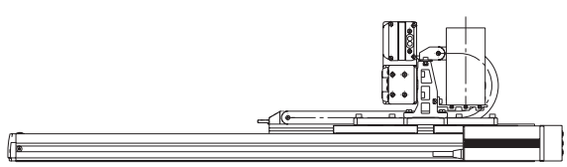
2D CAD

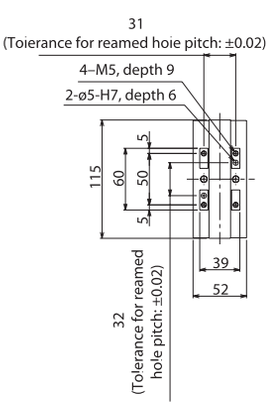
Note 1. The connected position shown in the drawing defines the home.
Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
Note 3. For details on the cable track, refer to P. 90.
Note 4. For details on the bracket on the moving end of the cable track, refer to P. 90.



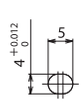


ME: Mechanical end
SE: Stroke end

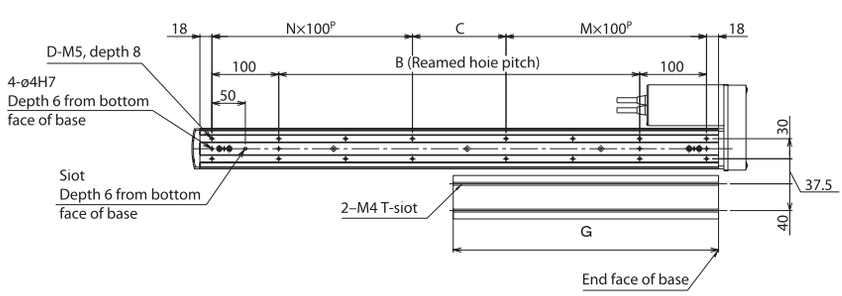




Detail view of Y-axis slider



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

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)

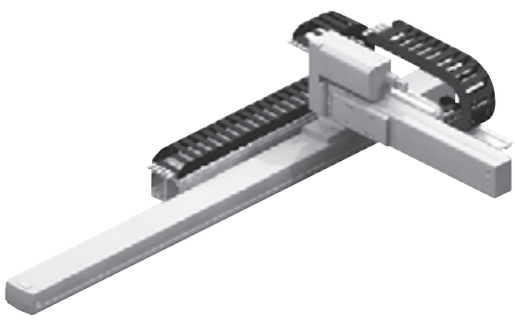
Model Details

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

IK2 — SXBC2 □□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-J/K; T2: SSEL, XSEL-P/Q
- Cable length: 1L: 1m; 3L: 3m; 5L: 5m; □L: □m
- Cable: Wiring 1 — N: Cable only; CT: With cable track; Wiring 2
- Shipping configuration: K: Individual components (kit); A: Assembled

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



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

Maximum Stroke

X axis 600 mm Y axis 200 mm

Axis 2

*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

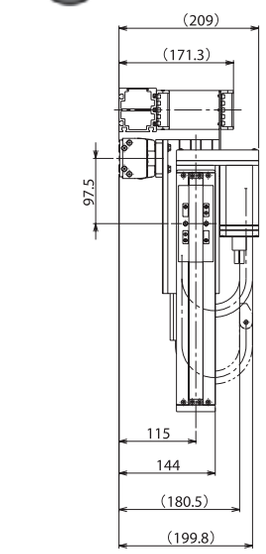
Item	X axis	Y axis
Axis model	RCS2-SS7C	RCS2-SA6R
Stroke (Can be set in 50-mm increments)	50-600mm	50-200mm
Axis 2	High-speed type: 600mm/s Medium-speed type: 300mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s
Motor output (W)	60W	30W
Ball screw lead	High-speed type: 12mm Medium-speed type: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

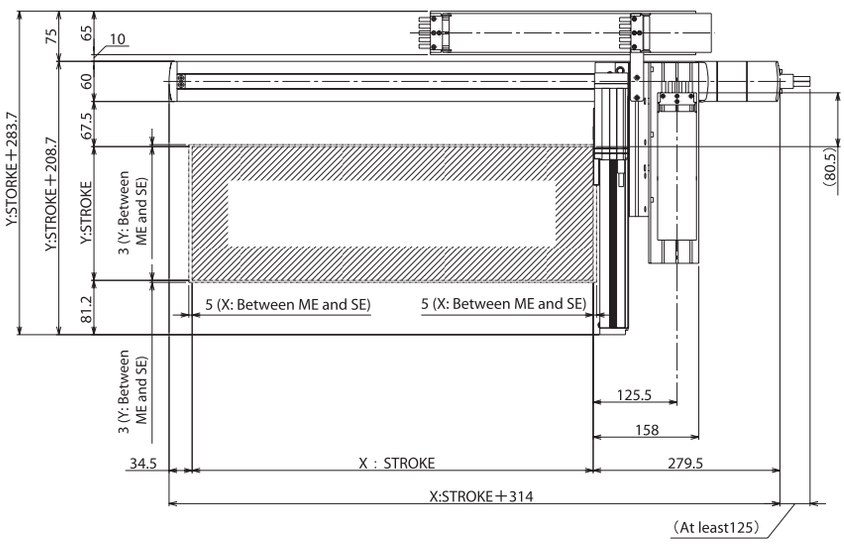
Dimensions

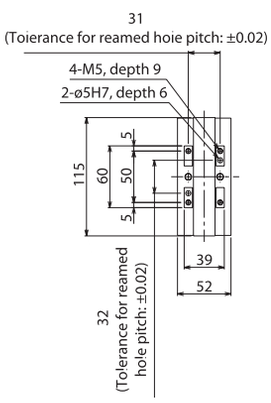
You can download CAD drawings from our website. www.robocylinder.de

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.

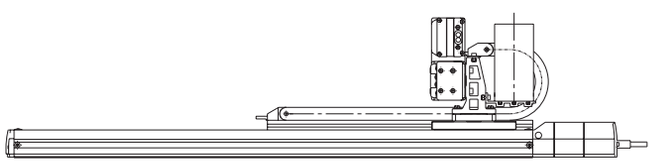




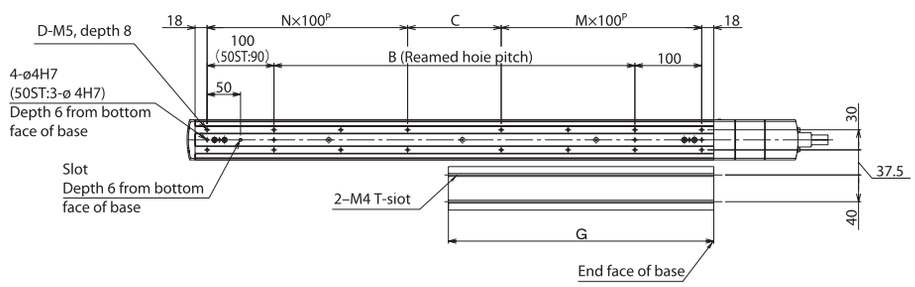


Detaii view of Y-axis siider

ME: Mechanicai end
SE: Stroke end



Detaii view of siot in bottom face of X-axis base



Detaii view of X-axis instaiiation

■Dimensions by Stroke

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

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-SXBC2□□D

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

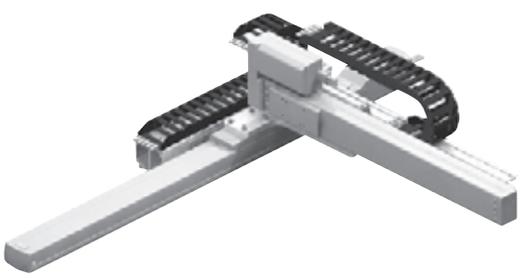
Model Details

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

IK2 — SXBC2 □□D — □ — □ □ — □ □ — □ — □ — □ — □ — □

- 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-J/K; T2: SSEL, XSEL-P/Q
- Cable length: 1L: 1m; 3L: 3m; 5L: 5m; □L: □m
- Wiring 1: N: Cable only; CT: With cable track
- Wiring 2
- Shipping configuration: K: Individual components (kit); A: Assembled

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



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

Maximum Stroke

X axis 450 mm　　Y axis 400 mm

Axis 2

*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

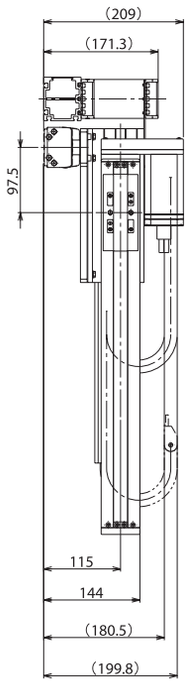
Item	X axis	Y axis
Axis model	RCS2-SS7C	RCS2-SA6R
Stroke (Can be set in 50-mm increments)	50-450mm	250-400mm
Axis 2	High-speed type: 600mm/s Medium-speed type: 300mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s
Motor output (W)	60W	30W
Ball screw lead	High-speed type: 12mm Medium-speed type: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

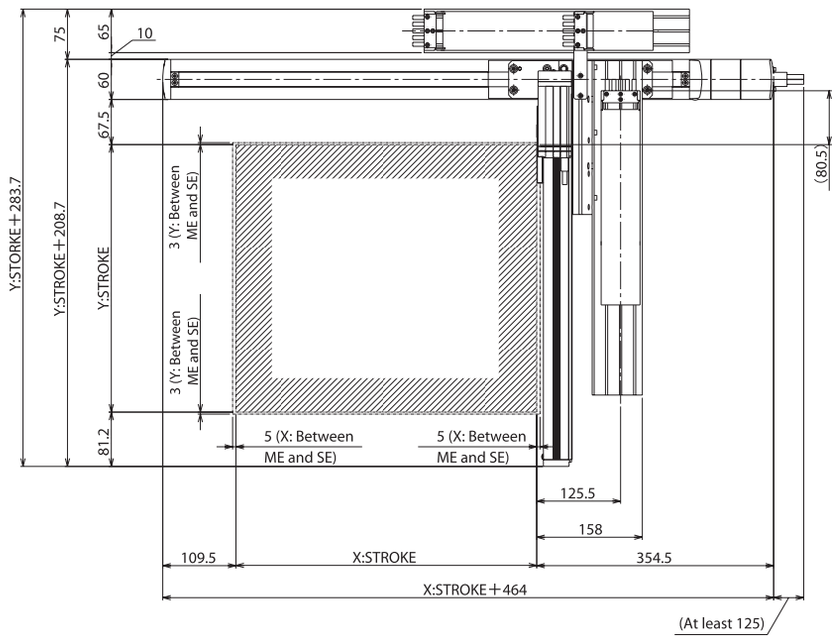
Dimensions

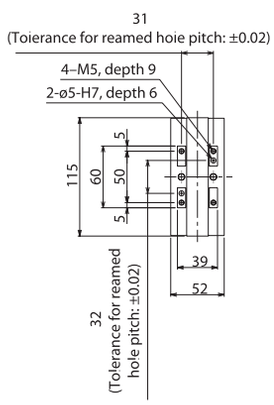
You can download CAD drawings from our website. www.robocylinder.de

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.

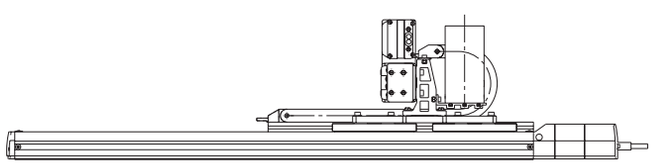




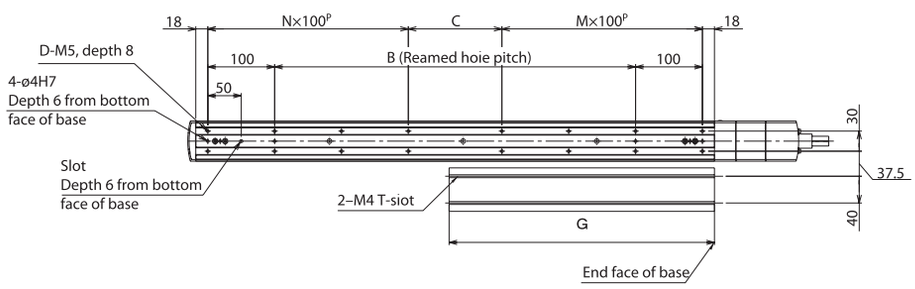


Detaii view of Y-axis siider

ME: Mechanicai end
SE: Stroke end



Detaii view of siot in bottom face of X-axis base



Detaii view of X-axis instaiiation

■Dimensions by Stroke

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

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-SXBB1□□S

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

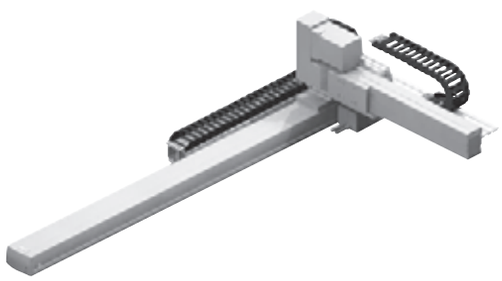
Model Details

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

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

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

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



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

Maximum Stroke

X axis 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

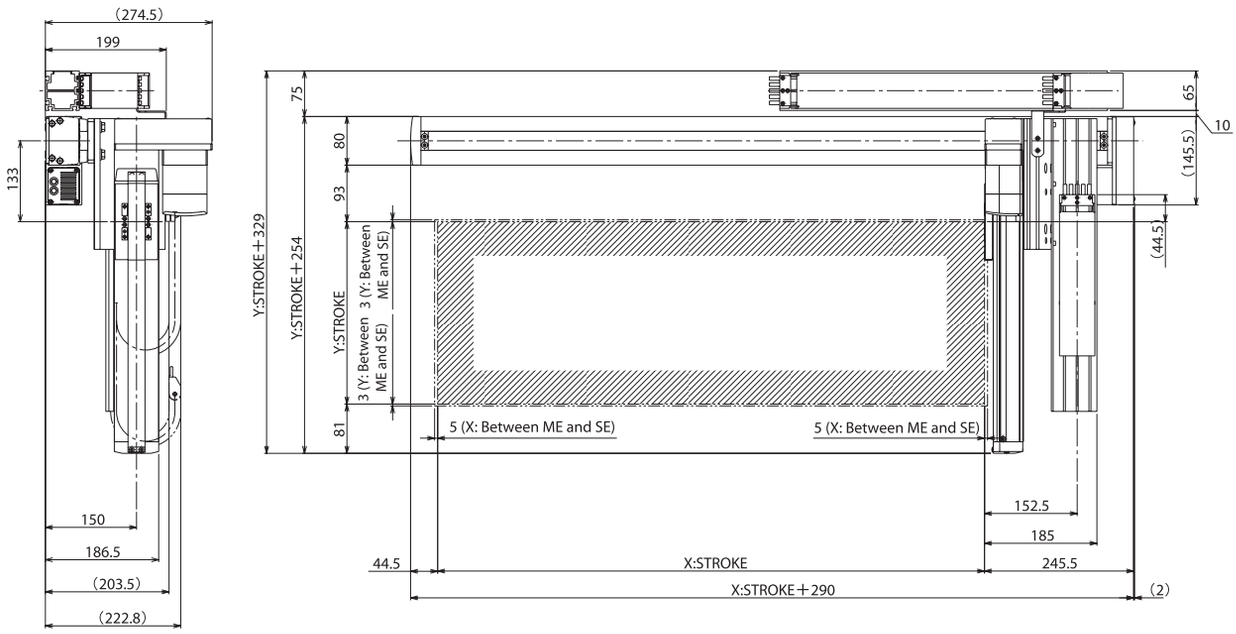
Item	X axis	Y axis
Axis model	RCS2-SS8R	RCS2-SA7R
Stroke (Can be set in 50-mm increments)	50-1000mm	50-300mm
Axis 2	High-speed type: 1000mm/s Medium-speed type: 500mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s
Motor output (W)	100W	60W
Ball screw lead	High-speed type: 20mm Medium-speed type: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

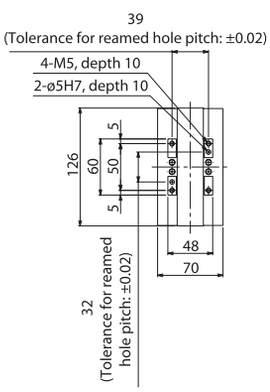
Dimensions

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

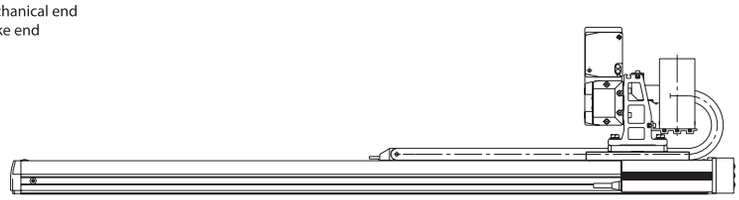


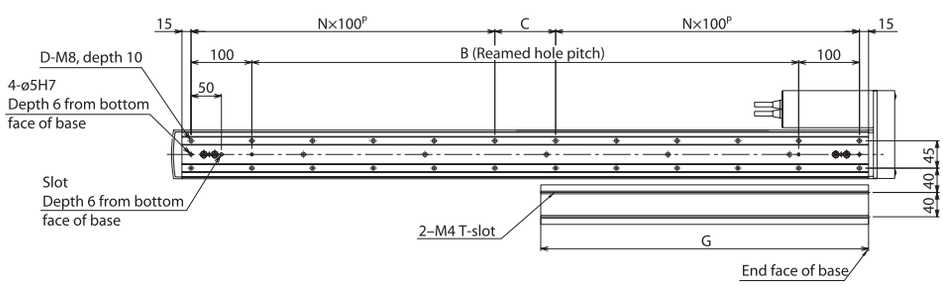


Detail view of Y-axis slider

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

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)

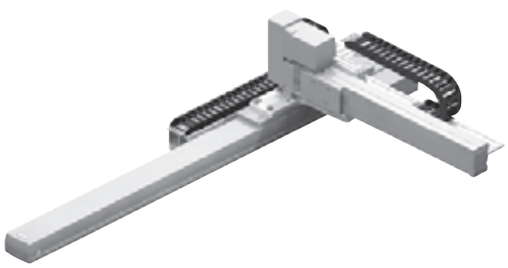
Model Details

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

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

- 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-J/K; T2: SSEL, XSEL-P/Q
- Cable length: 1L: 1m; 3L: 3m; 5L: 5m; □L: □m
- Wiring 1: N: Cable only; CT: With cable track
- Wiring 2
- Shipping configuration: K: Individual components (kit); A: Assembled

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



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

Maximum Stroke

X axis 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

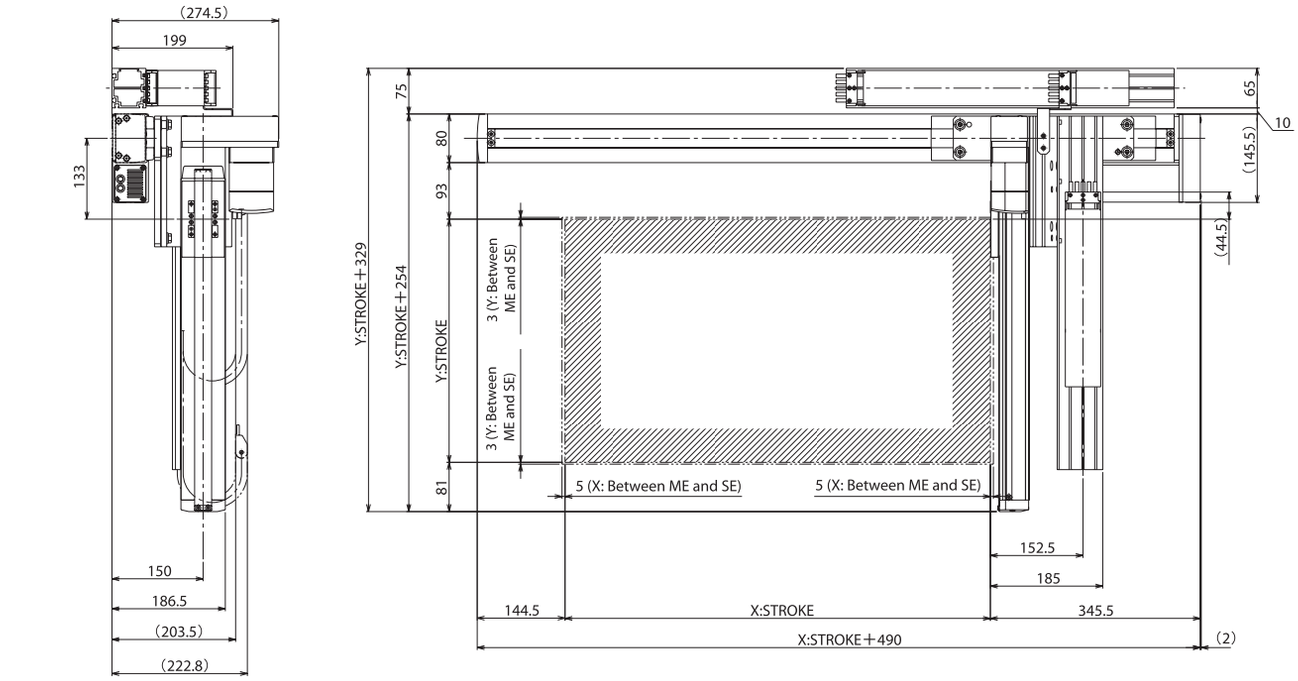
Item	X axis	Y axis
Axis model	RCS2-SS8R	RCS2-SA7R
Stroke (Can be set in 50-mm increments)	50-800mm	200-400mm
Axis 2	High-speed type: 1000mm/s Medium-speed type: 500mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s
Motor output (W)	100W	60W
Ball screw lead	High-speed type: 20mm Medium-speed type: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

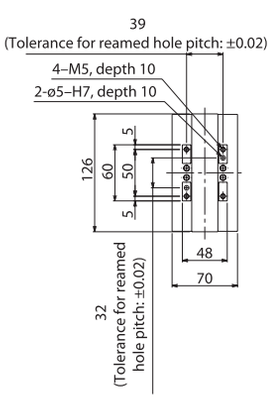
Dimensions

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

2D CAD

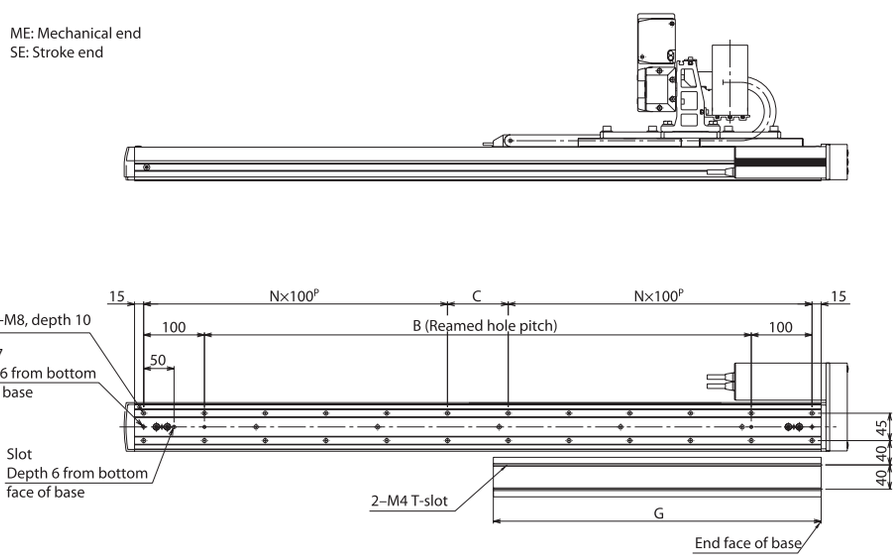
Note 1. The connected position shown in the drawing defines the home.
Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
Note 3. For details on the cable track, refer to P. 90.
Note 4. For details on the bracket on the moving end of the cable track, refer to P. 90.





Detail view of Y-axis slider

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



Detail view of X-axis installation

Dimensions by Stroke

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

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-SXBB2□□S

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

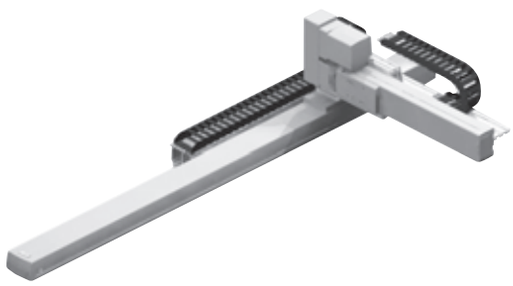
Model Details

Series — Type — Encoder type — Axis 1 (X axis) — Axis 2 (Y axis) — Controllres — 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-J/K; T2: SSEL, XSEL-P/Q
- Cable length: 1L: 1m; 3L: 3m; 5L: 5m; □L: □m
- Wiring 1: N: Cable only; CT: With cable track
- Wiring 2
- Shipping configuration: K: Individual components (kit); A: Assembled

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



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

Maximum Stroke

X axis 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

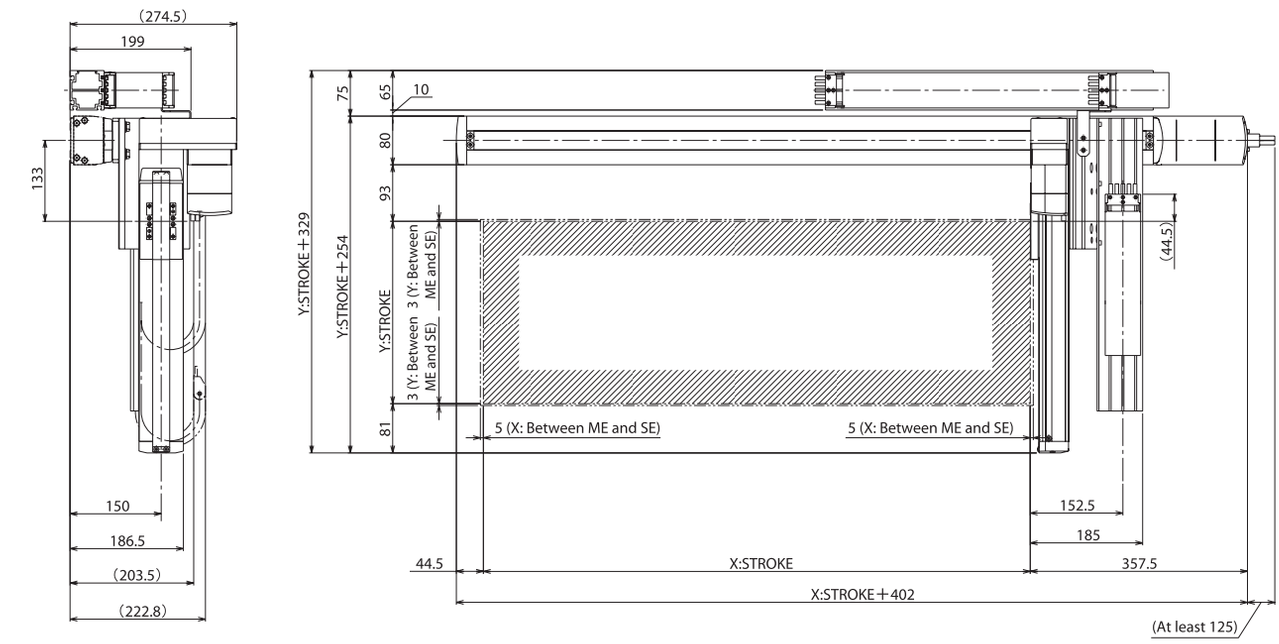
Item	X axis	Y axis
Axis model	RCS2-SS8C	RCS2-SA7R
Stroke (Can be set in 50-mm increments)	50-1000mm	50-300mm
Axis 2	High-speed type: 1000mm/s Medium-speed type: 500mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s
Motor output (W)	100W	60W
Ball screw lead	High-speed type: 20mm Medium-speed type: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

Dimensions

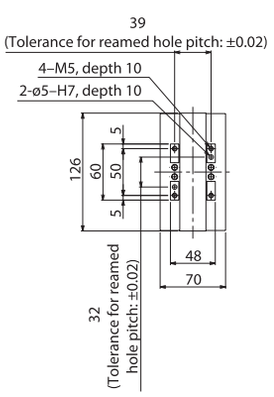
You can download CAD drawings from our website. www.robocylinder.de

2D CAD

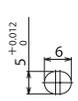
Note 1. The connected position shown in the drawing defines the home.
Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
Note 3. For details on the cable track, refer to P. 90.
Note 4. For details on the bracket on the moving end of the cable track, refer to P. 90.



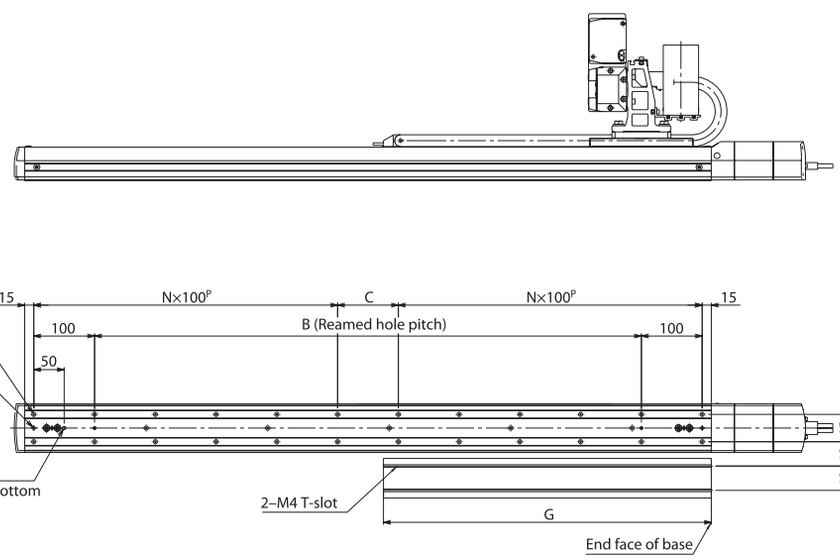
ME: Mechanical end
SE: Stroke end



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

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)

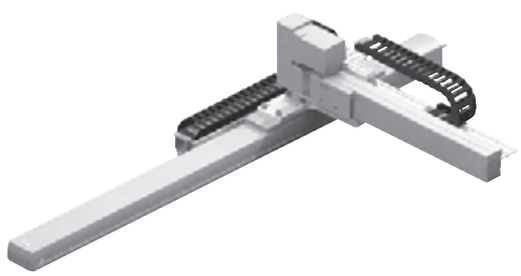
Model Details

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

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

- 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
- Cable length: 1L: 1m; 3L: 3m; 5L: 5m; □L: □m
- Wiring 1: N: Cable only; CT: With cable track
- Wiring 2
- Shipping configuration: K: Individual components (kit); A: Assembled

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



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

Maximum Stroke

X axis 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

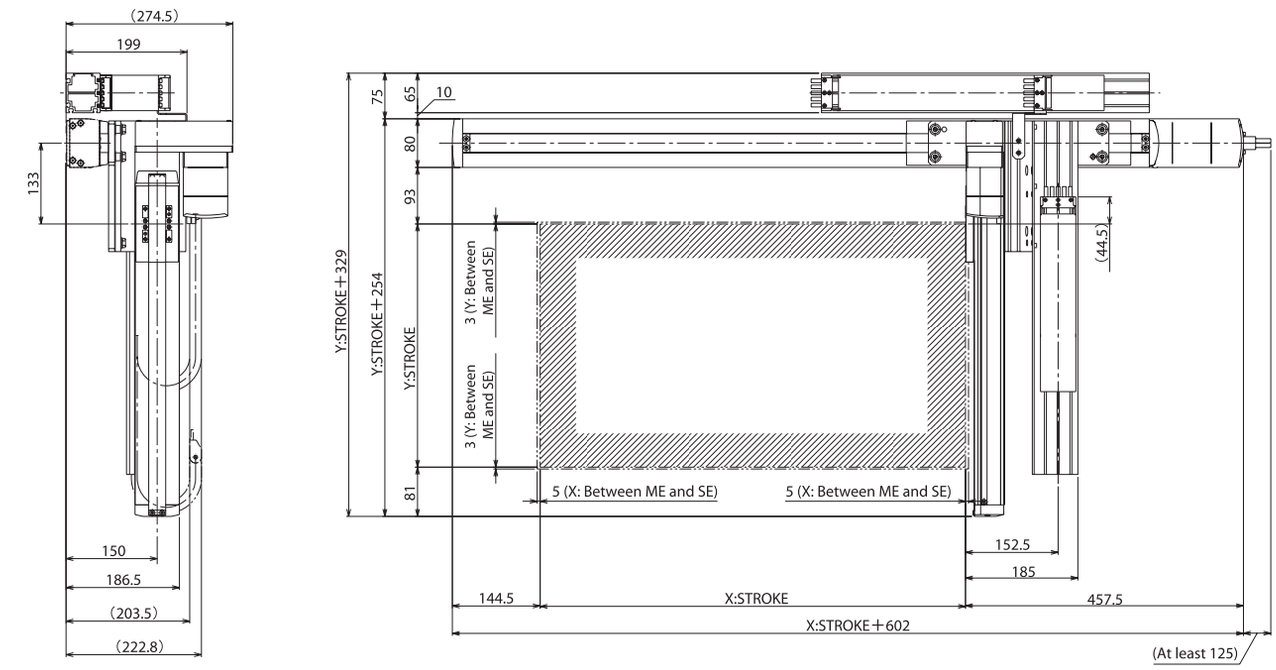
Item	X axis	Y axis
Axis model	RCS2-SS8C	RCS2-SA7R
Stroke (Can be set in 50-mm increments)	50-800mm	200-400mm
Axis 2	High-speed type: 1000mm/s Medium-speed type: 500mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s
Motor output (W)	100W	60W
Ball screw lead	High-speed type: 20mm Medium-speed type: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

Dimensions

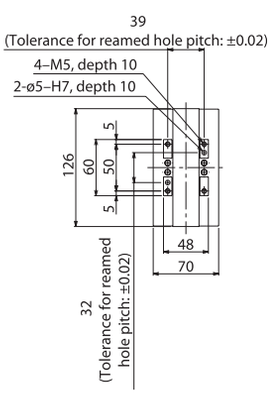
You can download CAD drawings from our website. www.robocylinder.de

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.

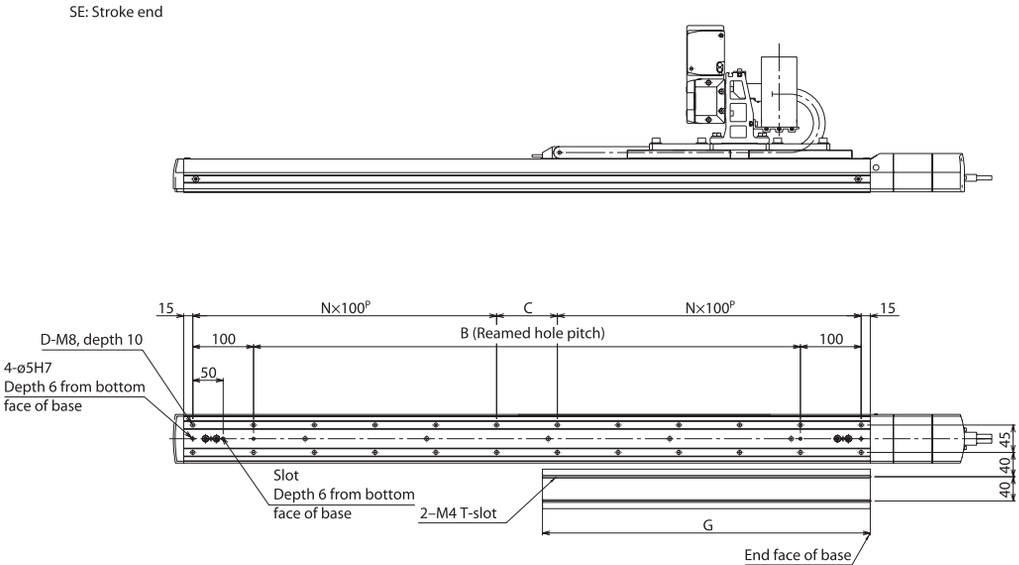


ME: Mechanical end
SE: Stroke end



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

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)

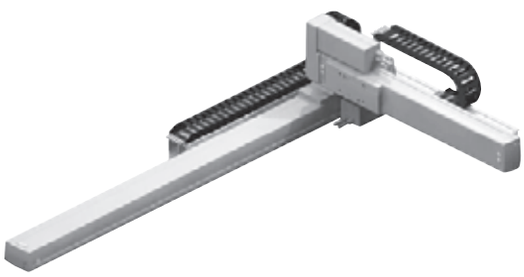
Model Details

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

IK2 — SXBA1□□S — □ — □ □ — □ □ — □ — □ — □ — □ — □

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

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



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

Maximum Stroke

X axis 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

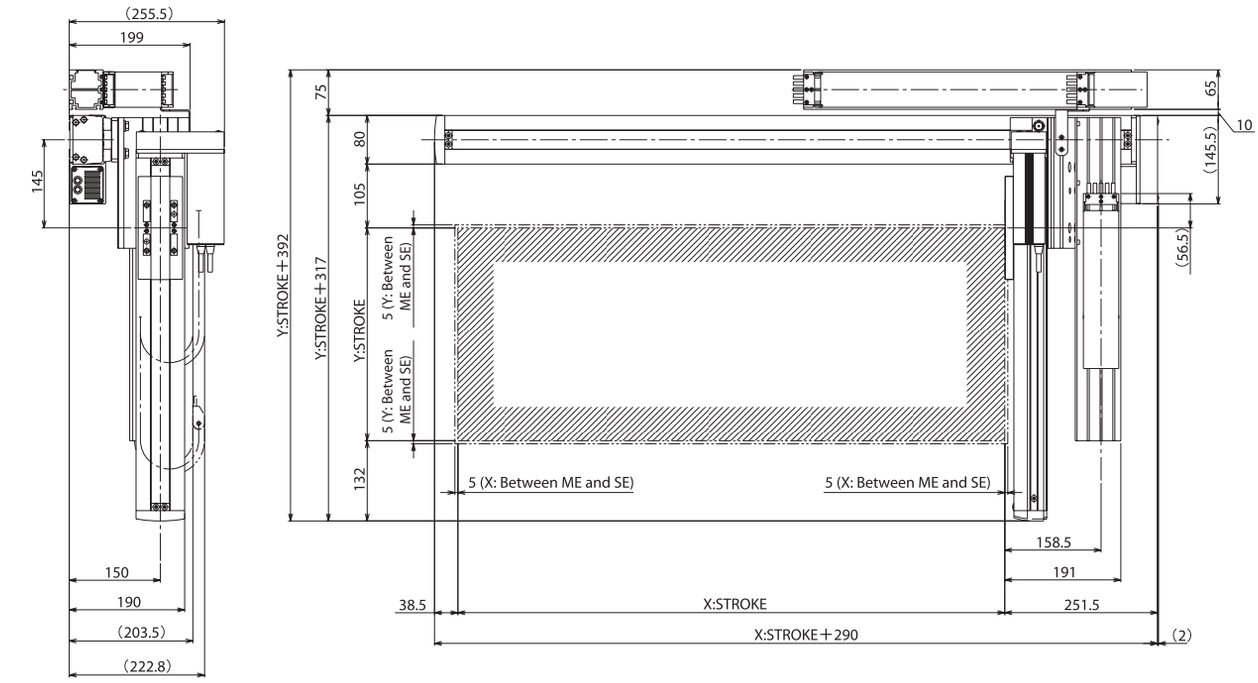
Item	X axis	Y axis
Axis model	RCS2-SS8R	RCS2-SS8R
Stroke (Can be set in 50-mm increments)	50-1000mm	50-350mm
Axis 2	High-speed type: 1000mm/s Medium-speed type: 500mm/s	High-speed type: 1000mm/s Medium-speed type: 500mm/s
Motor output (W)	150W	100W
Ball screw lead	High-speed type: 20mm Medium-speed type: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

Dimensions

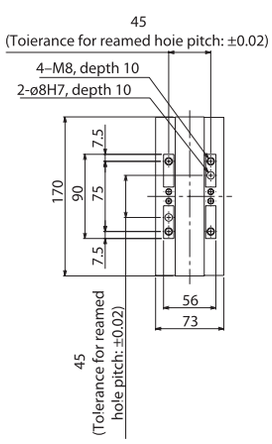
You can download CAD drawings from our website. www.robocylinder.de

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.

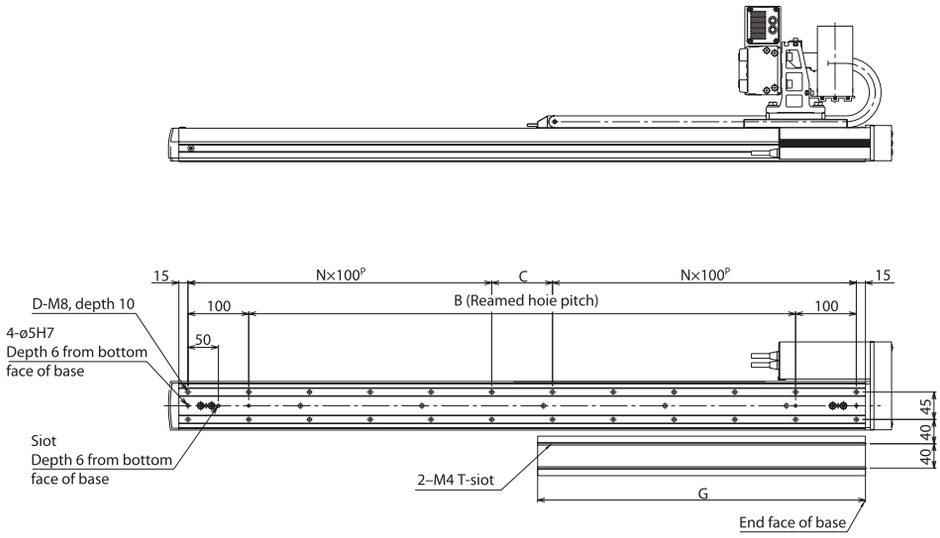


ME: Mechanicai end
SE: Stroke end



Detaii view of Y-axis siider

Detaii view of siot in bottom face of X-axis base



Detaii view of X-axis instaiiation

■Dimensions by Stroke

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

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-SXBA1□□D

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

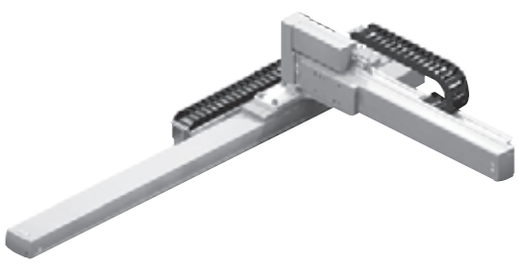
Model Details

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

IK2 – SXBA1 □□D – □ — □ □ – □ □ – □ – □ – □ – □

- 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-J/K; T2: SSEL, XSEL-P/Q
- Cable length: 1L: 1m; 3L: 3m; 5L: 5m; □L: □m
- Wiring 1: N: Cable only; CT: With cable track
- Wiring 2
- Shipping configuration: K: Individual components (kit); A: Assembled

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



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

Maximum Stroke

X axis 800 mm Y axis 400 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
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

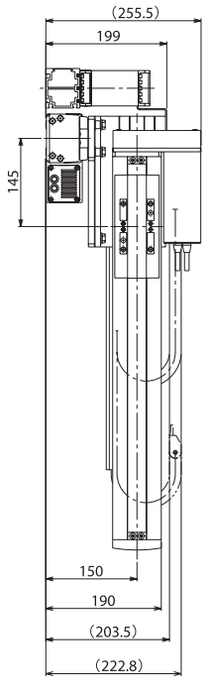
Item	X axis	Y axis
Axis model	RCS2-SS8R	RCS2-SS8R
Stroke (Can be set in 50-mm increments)	50-800mm	100-400mm
Axis 2	High-speed type: 1000mm/s Medium-speed type: 500mm/s	High-speed type: 1000mm/s Medium-speed type: 500mm/s
Motor output (W)	150W	100W
Ball screw lead	High-speed type: 20mm Medium-speed type: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

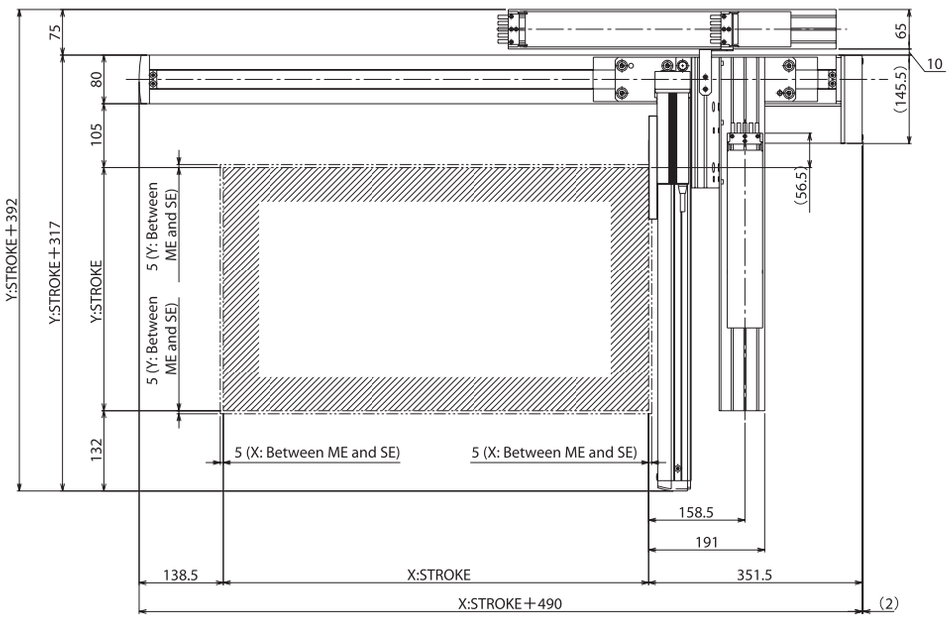
Dimensions

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

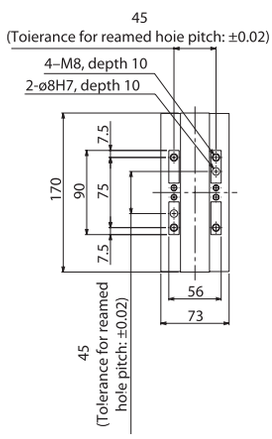
2D CAD

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.



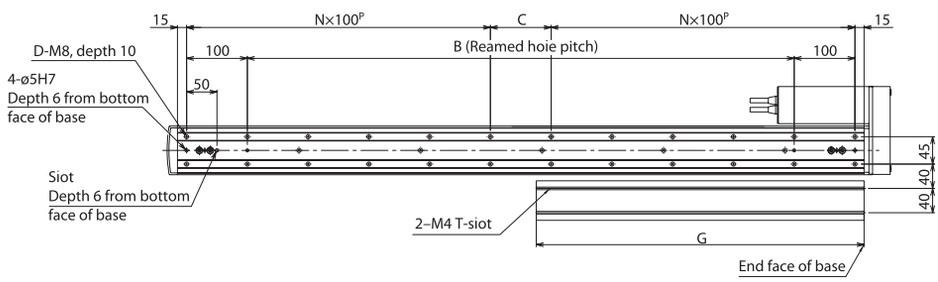


ME: Mechanical end
SE: Stroke end



Detaii view of Y-axis siider

Detaii view of siot in bottom face of X-axis base



Detaii view of X-axis instaiiation

■Dimensions by Stroke

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

Controllers

Applicable controller

Refer to P. 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) — Controllres — Cable — Shipping configuration

IK2 – SXBA2□□S – □ — □ □ – □ □ – □ – □ – □ – □ – □

- Type: 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
- Axis 1 (X axis) / Axis 2 (Y axis): Stroke (mm) 5: 50mm ~ (Can be set in 50-mm increments); Options — NM: Opposite-home specification; SR: Slider roller specification
- Controllres: Controllers T1: XSEL-J/K; T2: SSEL, XSEL-P/Q
- 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); A: Assembled

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

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

Maximum Stroke

X axis 1000 mm Y axis 350 mm

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

Axis 2

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

Maximum Load Capacity

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

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

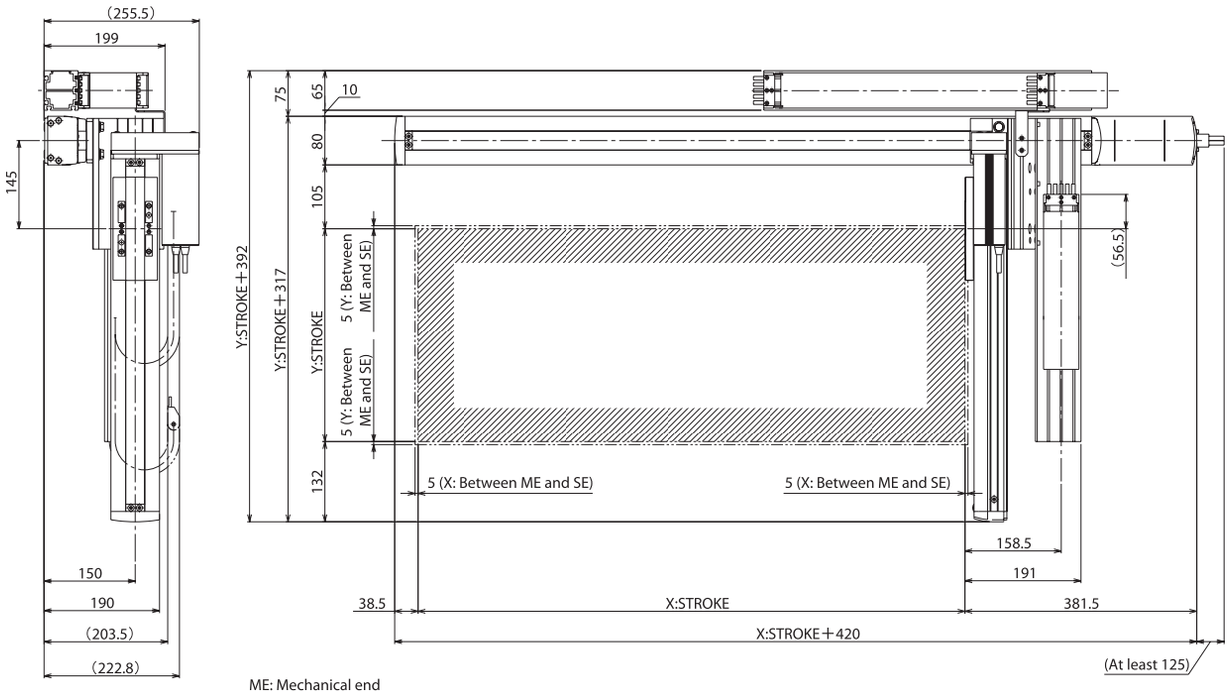
Item	X axis	Y axis
Axis model	RCS2-SS8C	RCS2-SS8R
Stroke (Can be set in 50-mm increments)	50-1000mm	50-350mm
Axis 2	High-speed type: 1000mm/s Medium-speed type: 500mm/s	High-speed type: 1000mm/s Medium-speed type: 500mm/s
Motor output (W)	150W	100W
Ball screw lead	High-speed type: 20mm Medium-speed type: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

Dimensions

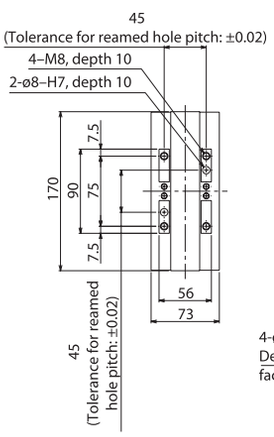
You can download CAD drawings from our website. www.robocylinder.de

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.

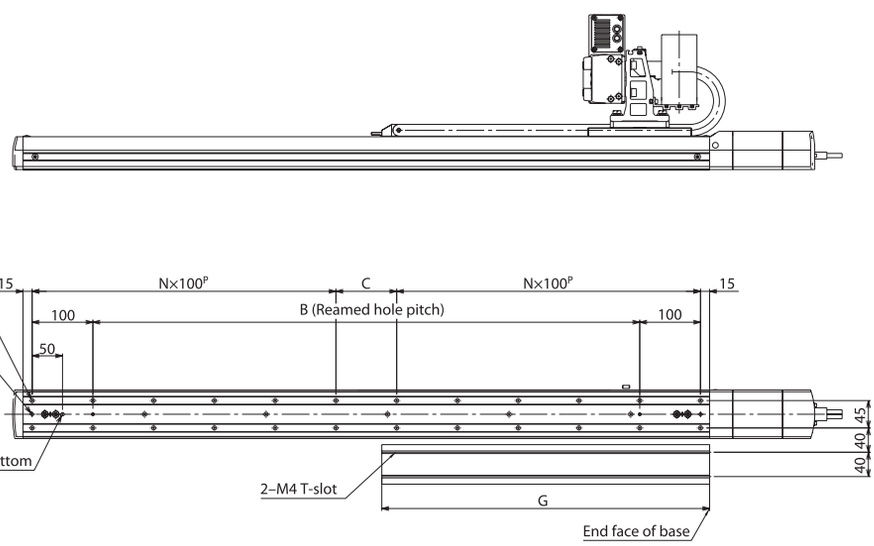


ME: Mechanical end
SE: Stroke end



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

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)

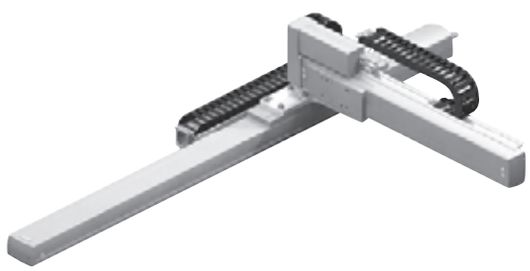
Model Details

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

IK2 — SXBA2 □□D — □ — □ □ — □ □ — □ — □ — □ — □ — □

- 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-J/K; T2: SSEL, XSEL-P/Q
- Cable length: 1L: 1m; 3L: 3m; 5L: 5m; □L: □m
- Wiring 1: N: Cable only; CT: With cable track
- Wiring 2
- Shipping configuration: K: Individual components (kit); A: Assembled

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



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

Maximum Stroke

X axis 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

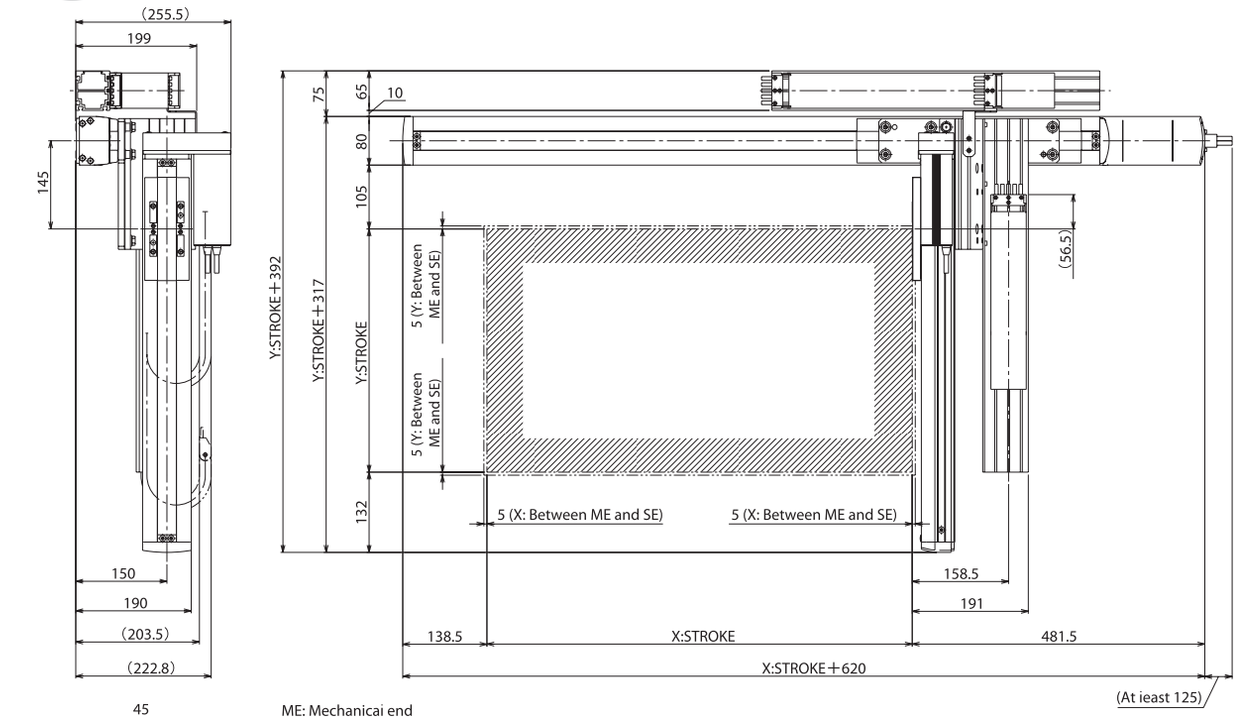
Item	X axis	Y axis
Axis model	RCS2-SS8C	RCS2-SS8R
Stroke (Can be set in 50-mm increments)	50-800mm	100-400mm
Axis 2	High-speed type: 1000mm/s Medium-speed type: 500mm/s	High-speed type: 1000mm/s Medium-speed type: 500mm/s
Motor output (W)	150W	100W
Ball screw lead	High-speed type: 20mm Medium-speed type: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

Dimensions

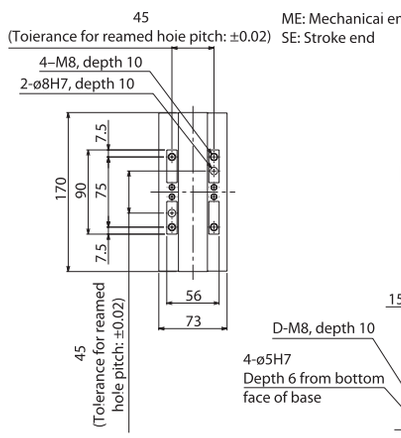
You can download CAD drawings from our website. www.robocylinder.de

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.

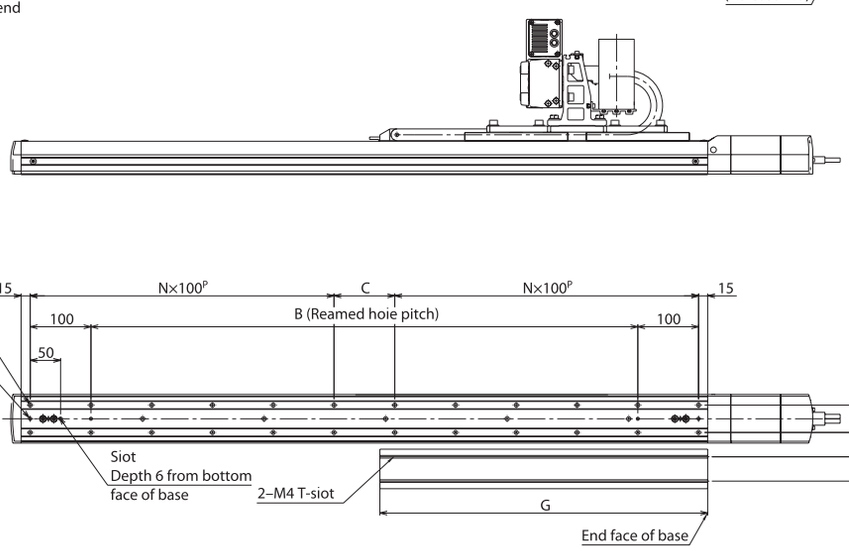


ME: Mechanicai end
SE: Stroke end



Detaii view of Y-axis siider

Detaii view of siot in bottom face of X-axis base



Detaii view of X-axis instaiiation

■Dimensions by Stroke

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

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK2-SXZB1□□S

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

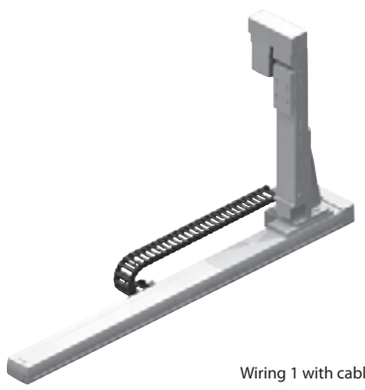
Model Details

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

IK2 — SXZB1 □□S — □ — □ □ — □ B□ — □ — □ — □ — □ — □

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

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



Wiring 1 with cable track

Maximum Stroke

X axis 1000 mm Z axis 250 mm

Axis 2

*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
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

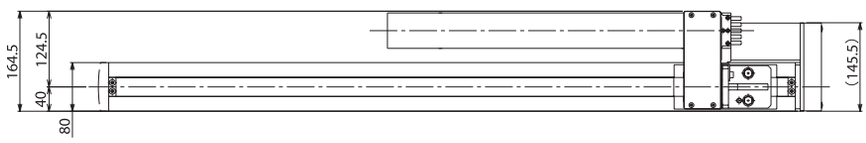
Item	X axis	Y axis
Axis model	RCS2-SS8R	RCS2-SA7R
Stroke (Can be set in 50-mm increments)	50-1000mm	50-250mm
Axis 2	High-speed type: 1000mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s Low-speed type: 200mm/s
Motor output (W)	100W	60W
Ball screw lead	High-speed type: 20mm	High-speed type: 16mm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

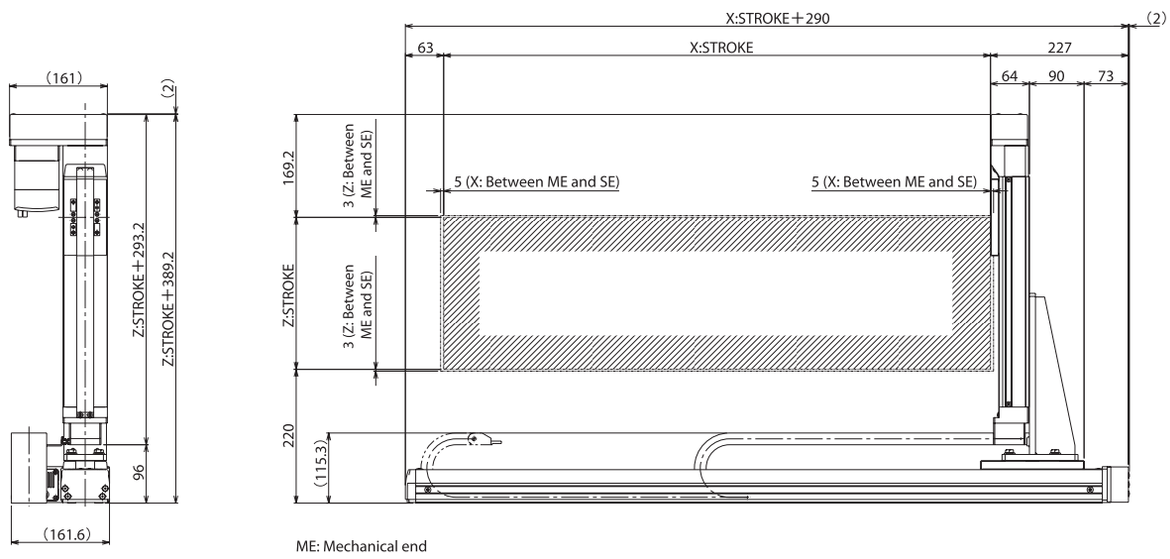
Dimensions

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

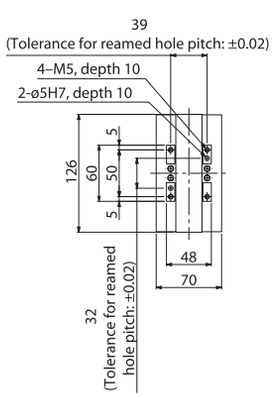
2D CAD

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.

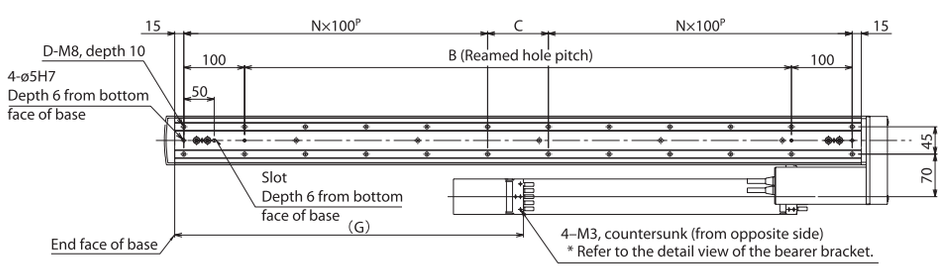




ME: Mechanical end
SE: Stroke end



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) — Controllres — Cable — Shipping configuration

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

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

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

Wiring 1 with cable track

Maximum Stroke

X axis 800 mm

Z axis 300 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
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

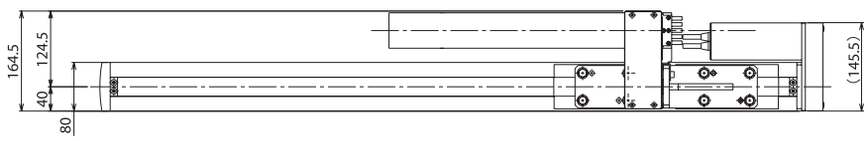
Item	X axis	Y axis
Axis model	RCS2-SS8R	RCS2-SA7R
Stroke (Can be set in 50-mm increments)	50-1000mm	50-250mm
Axis 2	High-speed type: 1000mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s Low-speed type: 200mm/s
Motor output (W)	100W	60W
Ball screw lead	High-speed type: 20mm	High-speed type: 16mm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

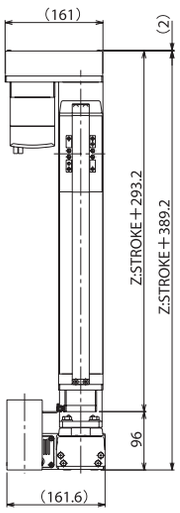
Dimensions

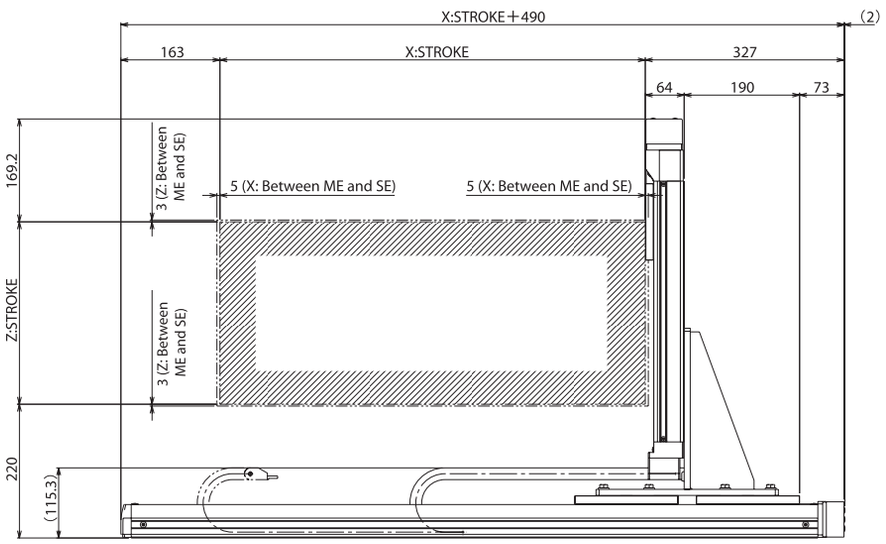
You can download CAD drawings from our website. www.robocylinder.de

2D CAD

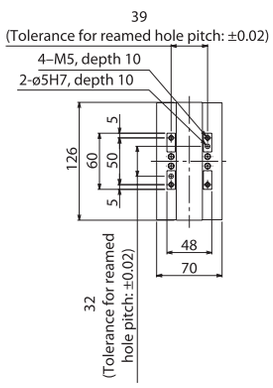
Note 1. The connected position shown in the drawing defines the home.
Note 2. Both wiring 1 and wiring 2 assume use of a cable track.
Note 3. For details on the cable track, refer to P. 90.
Note 4. For details on the bracket on the moving end of the cable track, refer to P. 90.



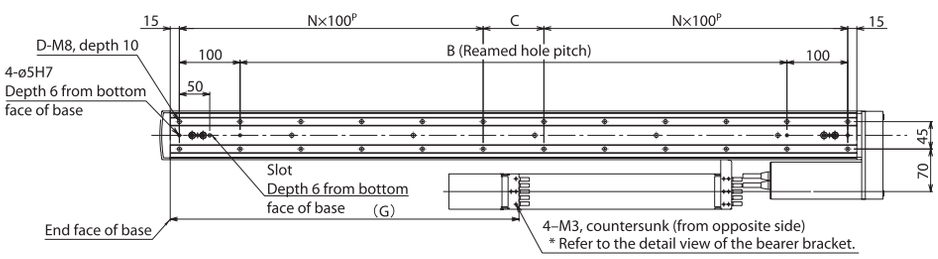




ME: Mechanical end
SE: Stroke end



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-SYBB1□□S

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

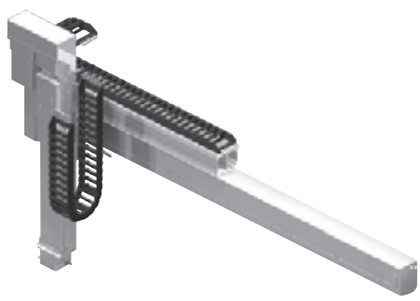
Model Details

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

IK2 — SYBB1 □□S — □ — □ □ — □ — B□ — □ — □ — □ — □ — □

- 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-J/K; T2: SSEL; XSEL-P/Q
- Cable length: 1L: 1m; 3L: 3m; 5L: 5m; □L: □m
- Wiring 1: N: Cable only; CT: With cable track
- Wiring 2
- Shipping configuration: K: Individual components (kit); A: Assembled

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



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

Maximum Stroke

Y axis 1000 mm Z axis 300 mm

Axis 2

*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

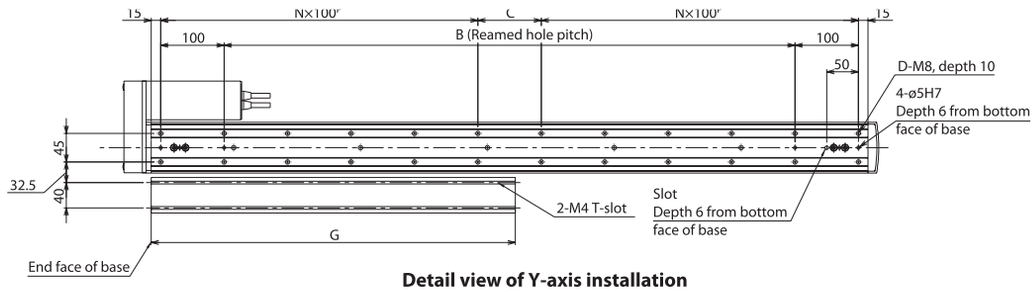
Item	X axis	Y axis
Axis model	RCS2-SS8R	RCS2-SA7R
Stroke (Can be set in 50-mm increments)	50-1000mm	50-300mm
Axis 2	High-speed type: 1000mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s Low-speed type: 200mm/s
Motor output (W)	100W	60W
Ball screw lead	High-speed type: 20mm	High-speed type: 16mm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

Dimensions

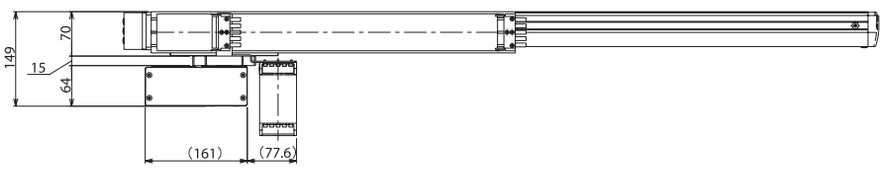
You can download CAD drawings from our website. www.robocylinder.de

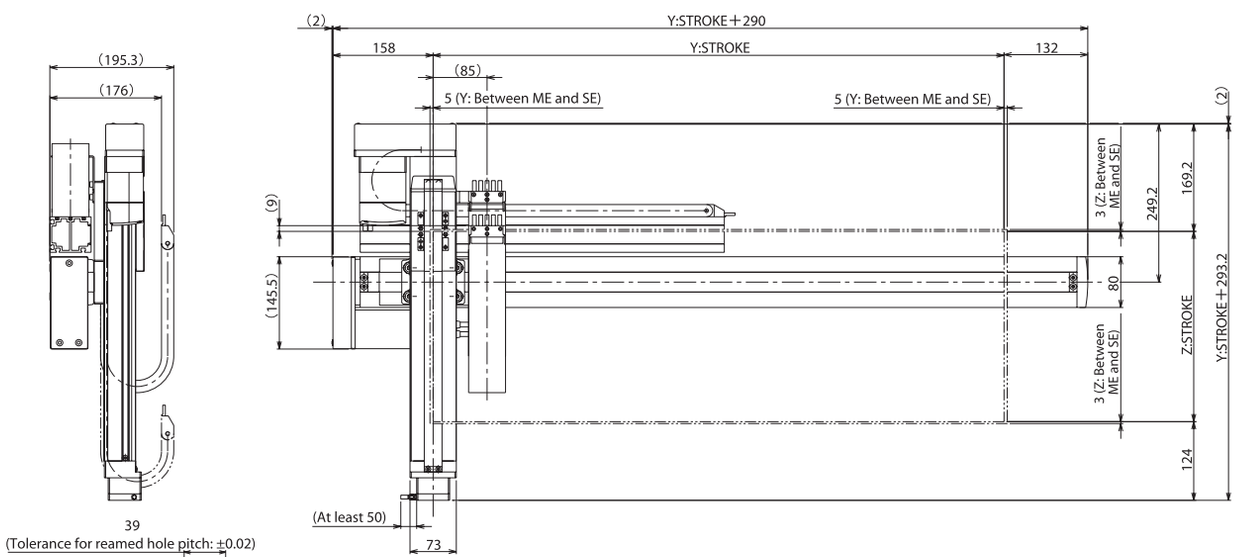
2D CAD

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.

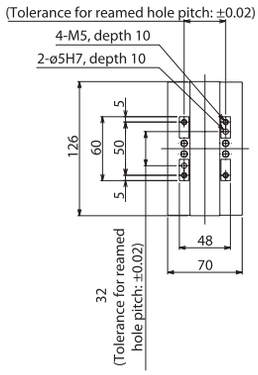


Detail view of Y-axis installation





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-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)

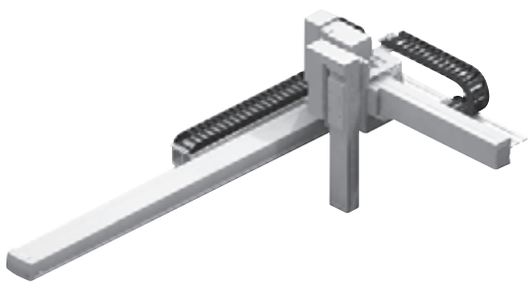
Model Details

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

IK3 — SBBG1□□S — □ — □ — □ — □ — □ — □ — B□ — □ — □ — □ — □

- 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-J/K; T2: XSEL, XSEL-P/Q
- Cable length: 1L: 1m; 3L: 3m; 5L: 5m; □L: □m
- Wiring 1: N: Cable only; CT: With cable track
- Wiring 2
- Shipping configuration: K: Individual components (kit); A: Assembled

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



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

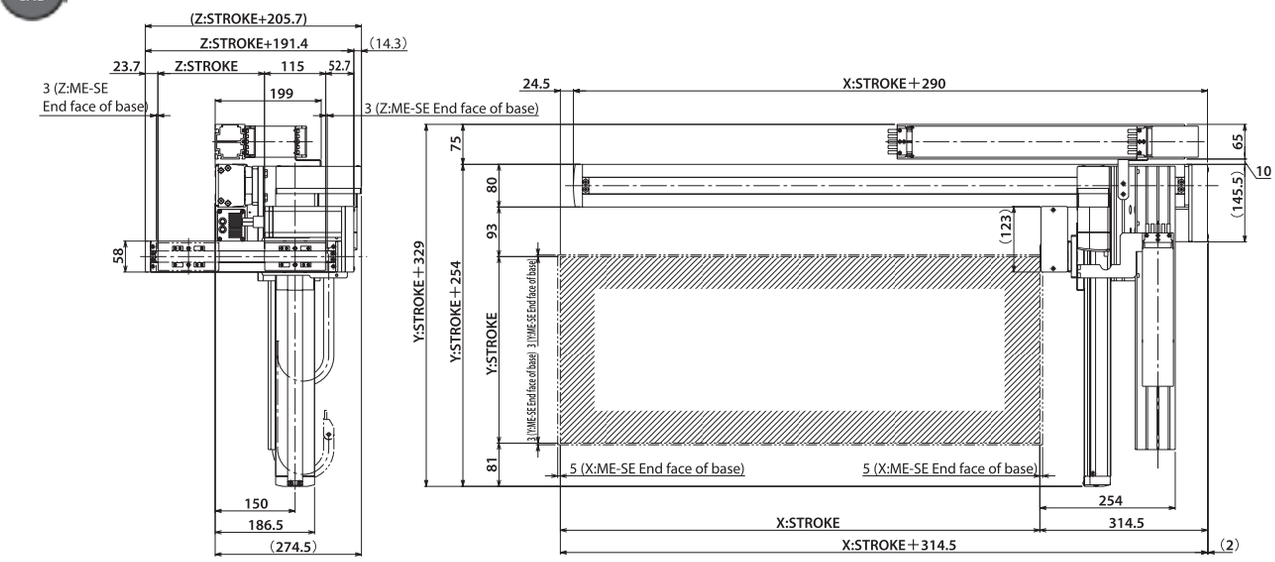
Item	X axis	Y axis	Z axis
Axis model	RCS2-SS8R	RCS2-SA7R	RCS2-SA6R
Stroke (Can be set in 50-mm increments)	50-1000mm	50-300mm	50-200mm
Axis 2	High-speed type: 1000mm/s	High-speed type: 800mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s Low-speed type: 200mm/s
Motor output (W)	100W	60W	30W
Ball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

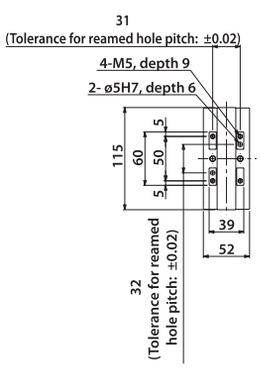
Dimensions

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

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

2D CAD

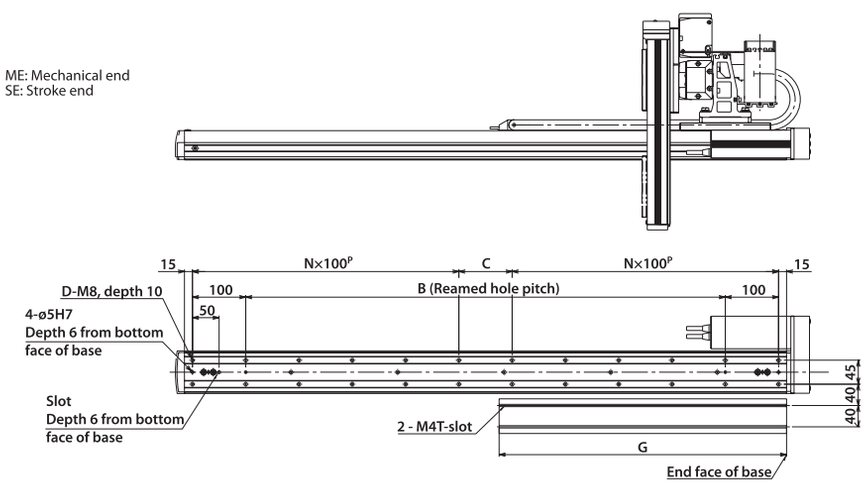




Detail view of Z-axis slider

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

ME: Mechanical end
SE: Stroke end



Detail view of X-axis installation

■Dimensions by Stroke

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

Controllers

Applicable controller

Refer to P. 90 for the controllers.

IK3-SBBG1□□D

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

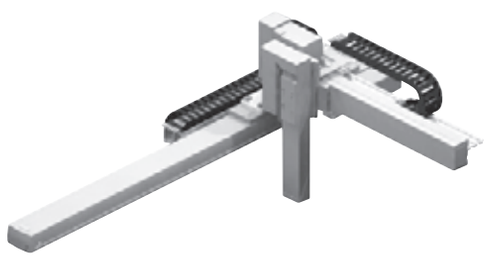
Model Details

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

IK3 — SBBG1□□D — □ — □ □ — □ □ — □ □ — B□ — □ — □ — □ — □

- 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-J/K; T2: SSEL; XSEL-P/Q
- Cable length: 1L: 1m; 3L: 3m; 5L: 5m; □L: □m
- Wiring 1: N: Cable only; CT: With cable track
- Wiring 2
- Shipping configuration: K: Individual components (kit); A: Assembled

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



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	1.0kg	2.0kg	4.0kg
400mm			

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	–
X-axis stroke 450-600	–
X-axis stroke 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.

Lis by Cable Length

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

Specifications

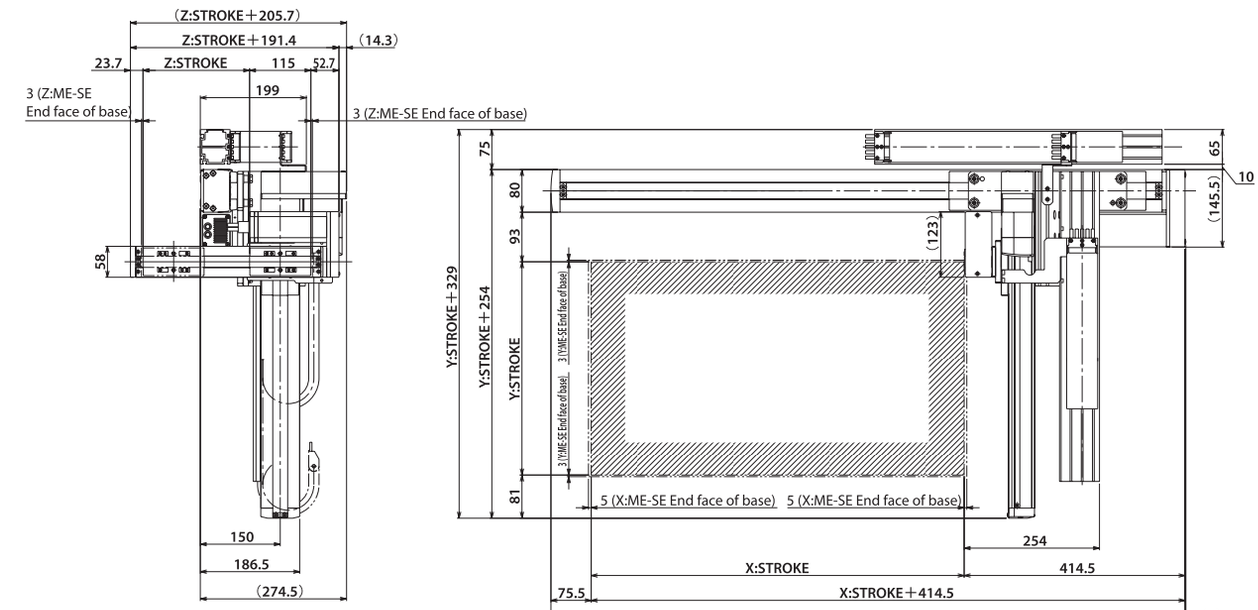
Item	X axis	Y axis	Z axis
Axis model	RCS2-SS8R	RCS2-SA7R	RCS2-SA6R
Stroke (Can be set in 50-mm increments)	50-800mm	350-400mm	50-200mm
Axis 2	High-speed type: 1000mm/s	High-speed type: 800mm/s	High-speed type: 800mm/s Medium-speed type: 400mm/s Low-speed type: 200mm/s
Motor output (W)	100W	60W	30W
Ball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

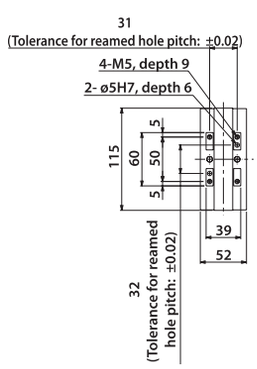
Dimensions

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

2D CAD

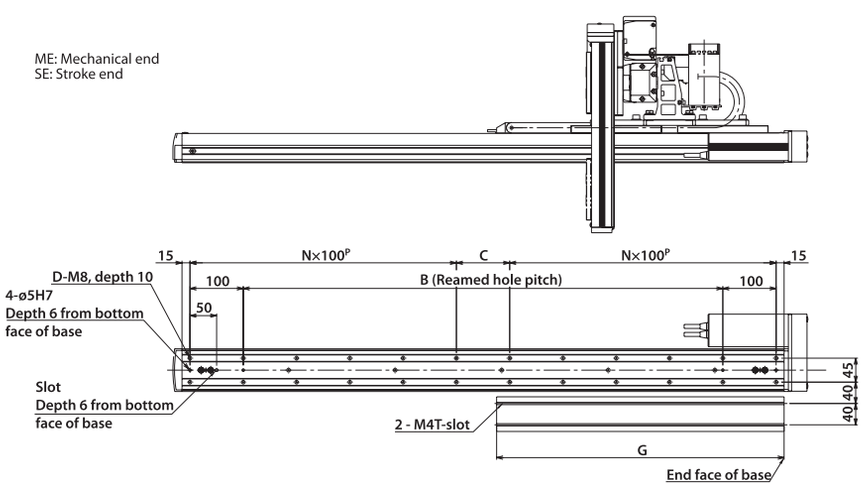
Note 1. The connected position shown in the drawing defines the home.
Note 2.The drawing below assumes that both wiring 1 and wiring 2 have a cable track.
Note 3. For details on the cable track, refer to P. 90.





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

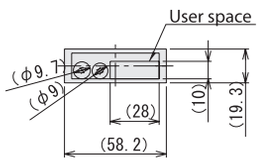
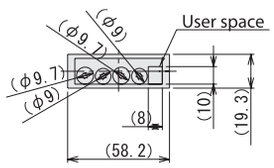
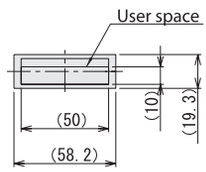
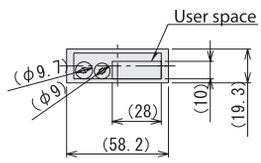
Controllers

Applicable controller

Refer to P. 90 for the controllers.

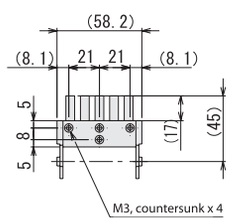
Reference

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

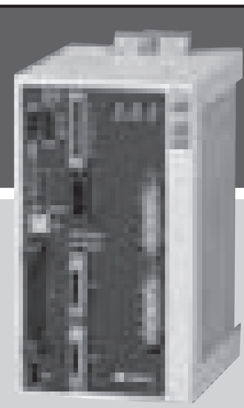
Cable code	Length
1L	1m
2L	2m
3L	3m
4L	4m
5L	5m
6L	6m
7L	7m
8L	8m
9L	9m
10L	10m
11L	11m
12L	12m
13L	13m
14L	14m
15L	15m
16L	16m
17L	17m
18L	18m
19L	19m
20L	20m

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

Controllers

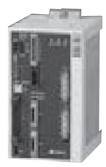
SSEL

RCS2-series
program controller



Model List/Pricing

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

Type	C	
Name	Program mode	Positioner mode
Exterior view		
Description	This controller can operate actuators and communicate with external devices without requiring any additional device. If two axes are operated, arc interpolation, path operation and synchronized operation can be performed.	Up to 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 – C – [Number of connected axes] – [Motor type] [Encoder type] [Options] – ([Motor type] [Encoder type] [Options]) – [I/O type] – [I/O cable length] – [Power-supply voltage]

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

Type

C	Standard type

Number of connected axes

1	1-axis specification
2	2-axes specification

Motor type (axis 1 / axis 2)

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		

Encoder type (axis 1 / axis 2)

I	Incremental
A	Absolute

Options (axis 1)

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

Options (axis 2)

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

I/O type

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

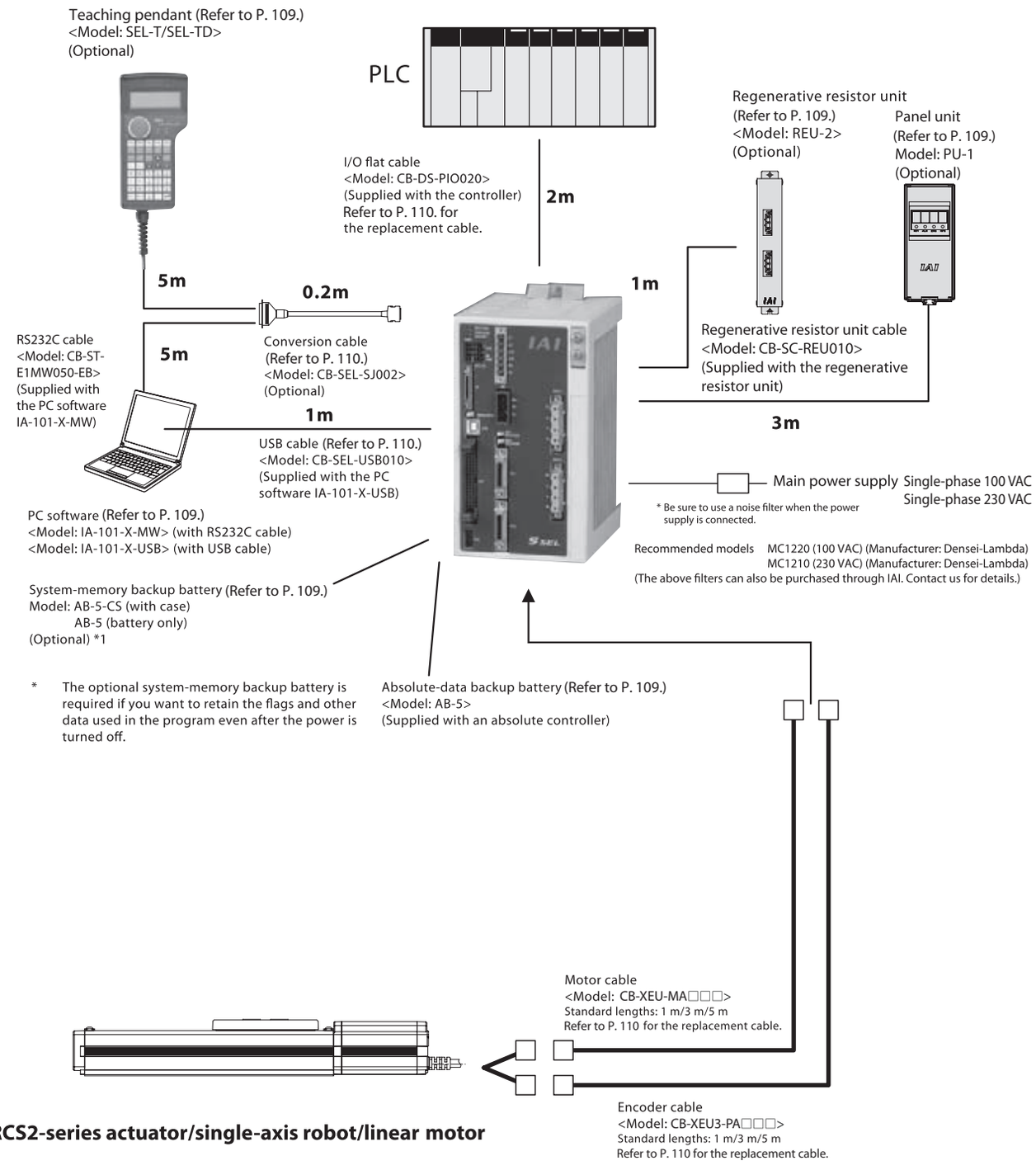
I/O cable length

0	No cable
2	2m
3	3m
5	5m

Power-supply voltage

1	Single-phase 100 VAC
2	Single-phase 230 VAC

System Configuration



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

I/O Specifications

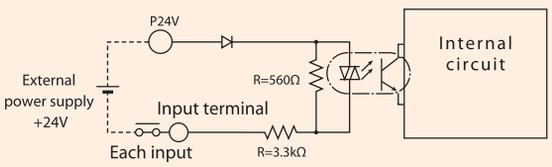
■Input External input specifications

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

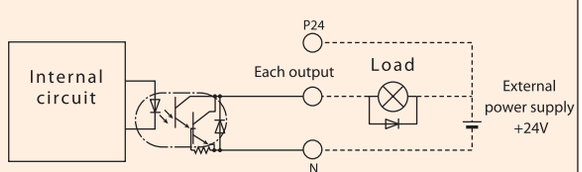
■Output External output specifications

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

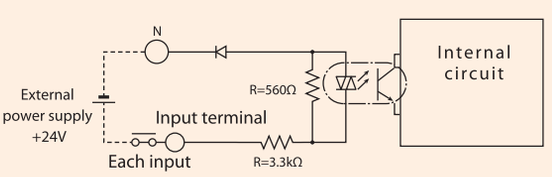
NPN specification



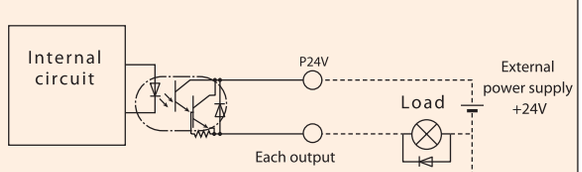
NPN specification



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.

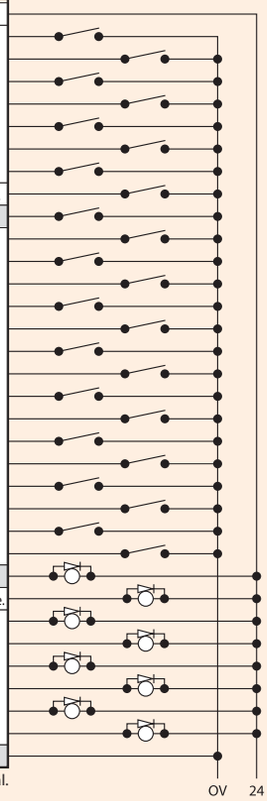
Explanation of I/O Functions

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)*

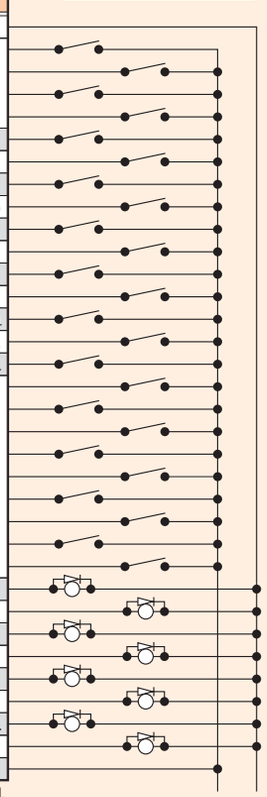


Positioner, Standard Mode

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)*



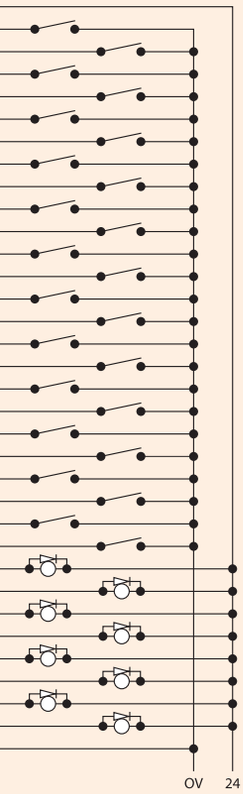
Explanation of I/O Functions

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)*

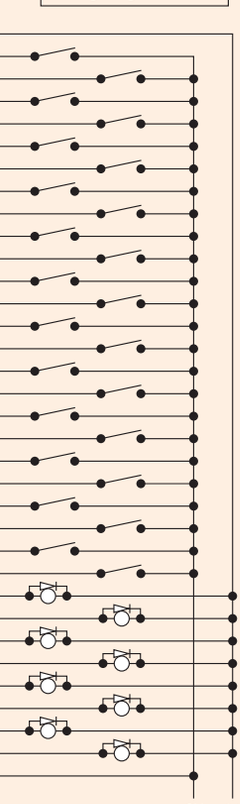


Positioner, 2-axes Independent Mode

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)*



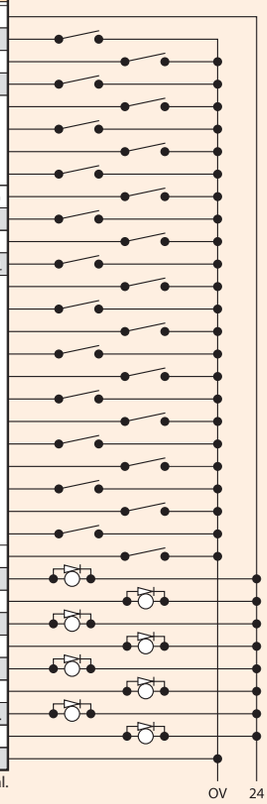
Explanation of I/O Functions

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)*

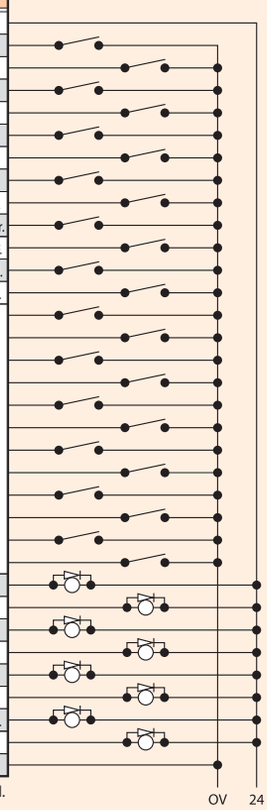


Positioner, DS-S-C1 Compatible Mode

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)*

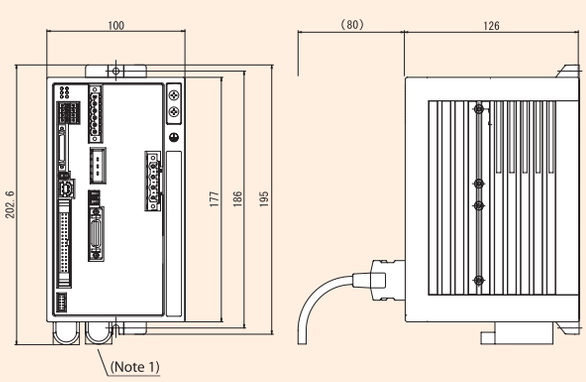


Specification Table

	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 cable	(To be supported in the future)	
	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)	

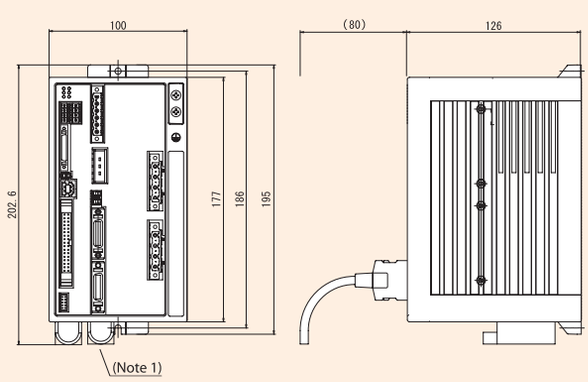
External Dimensions

SSEL 1-axis controller



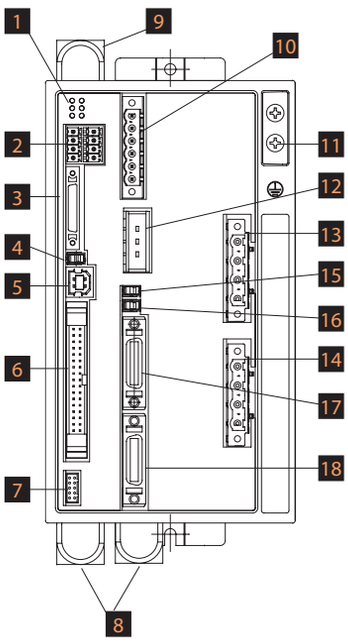
(Note 1) Absolute-data backup battery. This battery is not installed on incremental controllers.

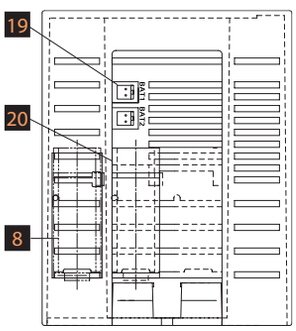
SSEL 2-axis controller

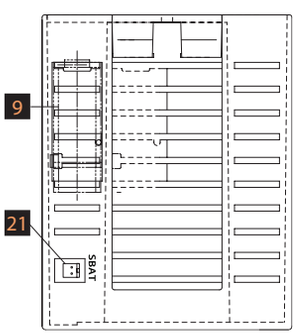


(Note 1) Absolute-data backup battery. This battery is not installed on incremental controllers.

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.

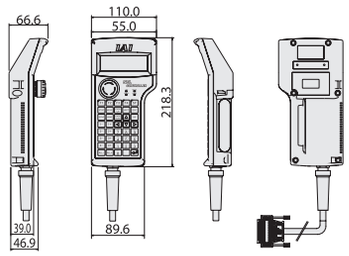
Options

Teaching Pendant

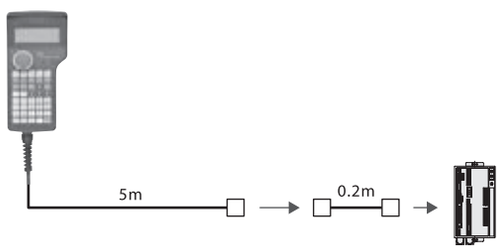
Features A teaching device offering functions for program/position input, test operation, monitoring, and more.

Model/Price

Model	Description
SEL–T–J	Standard type with connector conversion cable
SEL–TD–J	Deadman switch type with connector conversion cable



Configuration



Conversion cable: CB-SEL-SJ002

Specification

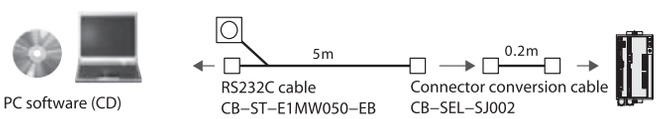
Item	SEL–T–J	SEL–TD–J
3-position enable switch	Not equipped	Equipped
ANSI/UL standard	Not compliant	Compliant
CE mark	Compliant	
Display	20 characters x 4 lines	
Surrounding air temperature/humidity	0–40°C 10–90%RH (non-condensing)	
Protection structure	IP54	
Weight	Approx. 0.4 kg (excluding cables)	

PC Software (Windows only)

Features A software program that assists the initial startup of your system, offering functions for program/position input, test operation, monitoring, and more. The enhanced debugging functions help reduce the startup time.

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

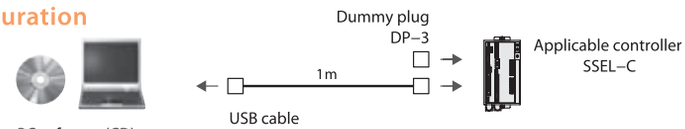
Configuration



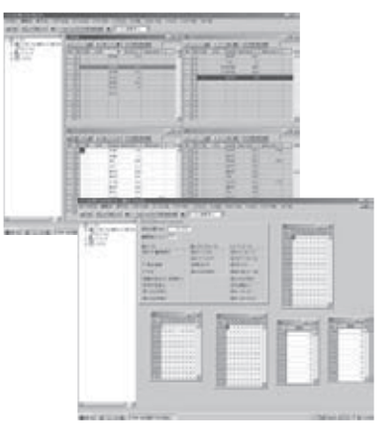
PC software (CD)
RS232C cable CB–ST–E1MW050–EB
Connector conversion cable CB–SEL–SJ002

Model **IA–101–X–USB** (with USB cable)

Configuration



PC software (CD)
USB cable CB–SEL–USB010



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)

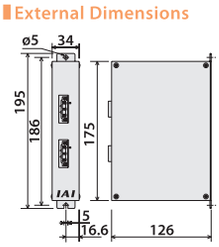
* If two regeneration units are required, order one REU-2 and one REU-1 (refer to P. 132).

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.

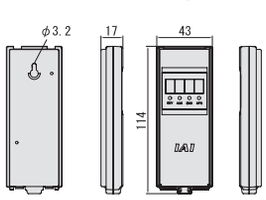
External Dimensions



Panel Unit

Features A display for checking controller error codes and the program number of the current program.

Model **PU–1** (cable length: 3 m)



Absolute-data Backup Battery

Features An absolute-data backup battery used when an absolute actuator is operated. The battery is the same as the system-memory backup battery.

Model **AB–5**

System memory backup battery

Features This battery is needed when global flags, etc., are used in the program and you want the data to be retained even after the power is turned off.

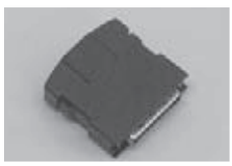
Model **AB–5–CS** (with case)
AB–5 (battery)

Options

Dummy plug

Features This plug is connected to the teaching pendant to cut off the enable circuit when connecting the SSEL controller to a PC via a USB cable.
(This plug is supplied with the PC software IA-101-X-USB.)

Model **DP–3**



USB cable

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

Model **CB–SEL–USB010** (cable length: 1 m)

Connector conversion cable

Features This conversion cable is used to connect the D-sub, 25-pin connector for teaching pendant or PC to the teaching connector (half-pitch) on the SSEL controller.

Model **CB–SEL–SJ002** (cable length: 0.2 m)

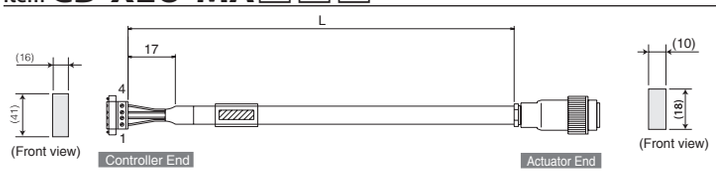
Replacement Parts

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

Motor Cable

Item CB-XEU-MA□□□

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

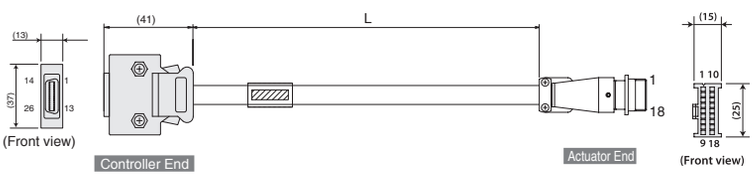


Wire	Color	Signal			Signal	Color	Wire
0.75sq	Green	PE	1	1	U	Red	0.75sq (Crimped)
	Red	U	2	2	V	White	
	White	V	3	3	W	Black	
	Black	W	4	4	PE	Green	

Encoder 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.
AWG26 (Soldered)	–	–	10
	–	–	11
	–	E24V	12
Gray/White	0V	0V	13
Brown/White	LS	LS	26
–	CLEEP	CLEEP	25
–	OT	OT	24
–	RSV	RSV	23
–	–	–	9
–	–	–	18
–	–	–	19
Pink	A+	A+	1
Purple	A-	A-	2
White	B+	B+	3
Blue/Red	B-	B-	4
Orange/White	Z+	Z+	5
Green/White	Z-	Z-	6
Blue	SRD+	SRD+	7
Orange	SRD-	SRD-	8
Black	BAT+	BAT+	14
Yellow	BAT-	BAT-	15
Green	VCC	VCC	16
Brown	GND	GND	17
Gray	BKR-	BKR-	20
Red	BKR+	BKR+	21
–	–	–	22

Clamp the shield to the hood.

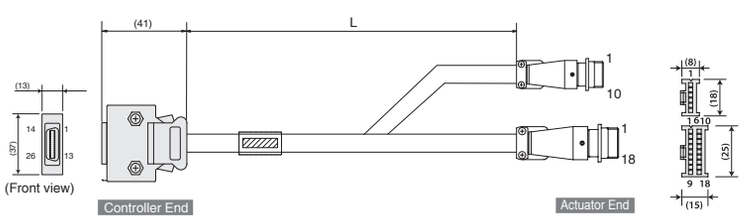
Ground wire and shielded braided wires

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

Encoder Cable for RCS2-RT6/RT6R/RT7R

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	E24V	12
White/Green	0V	0V	13
Brown/Blue	LS	LS	26
Brown/Yellow	CLEEP	CLEEP	25
Brown/Red	OT	OT	24
Brown/Black	RSV	RSV	23
–	–	–	9
–	–	–	18
–	–	–	19
White/Blue	A+	A+	1
White/Yellow	A–	A–	2
White/Red	B+	B+	3
White/Black	B–	B–	4
White/Purple	Z+	Z+	5
White/Gray	Z–	Z–	6
Orange	SRD+	SRD+	7
Green	SRD–	SRD–	8
Purple	BAT+	BAT+	14
Gray	BAT-	BAT-	15
Red	VCC	VCC	16
Black	GND	GND	17
Blue	BKR–	BKR–	20
Yellow	BKR+	BKR+	21
–	–	–	22

Clamp the shield to the hood.

Ground wire and shielded braided wires

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	

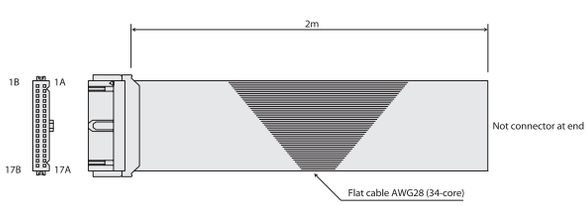
No.	Signal	Color	Wire
1	A	White/Blue	AWG26 (Crimped)
2	A	White/Yellow	
3	B	White/Red	
4	B	White/Black	
5	Z	White/Purple	
6	Z	White/Gray	
7	–	–	
8	–	–	
9	FG	Ground	
10	SD	Orange	
11	SD	Green	
12	BAT+	Purple	
13	BAT-	Gray	
14	VCC	Red	
15	GND	Black	
16	–	–	
17	BK-	Blue	
18	BK+	Yellow	

("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	

X-SEL

RCS2-series program controller

Model List/Pricing

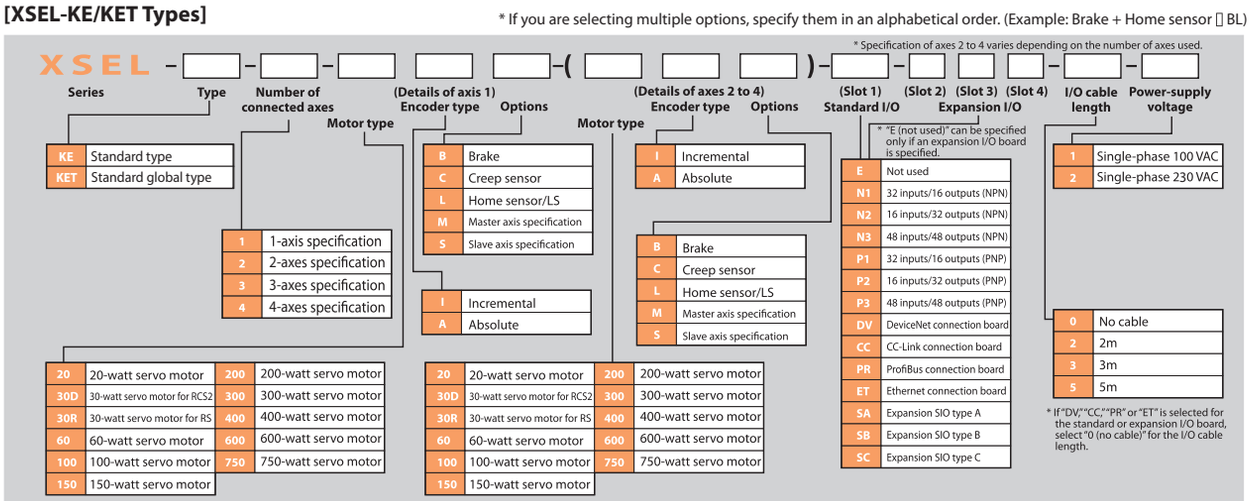
A multi-axis program controller capable of operating RCS2-series actuators. Up to six axes can be controlled simultaneously.

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 100 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.			

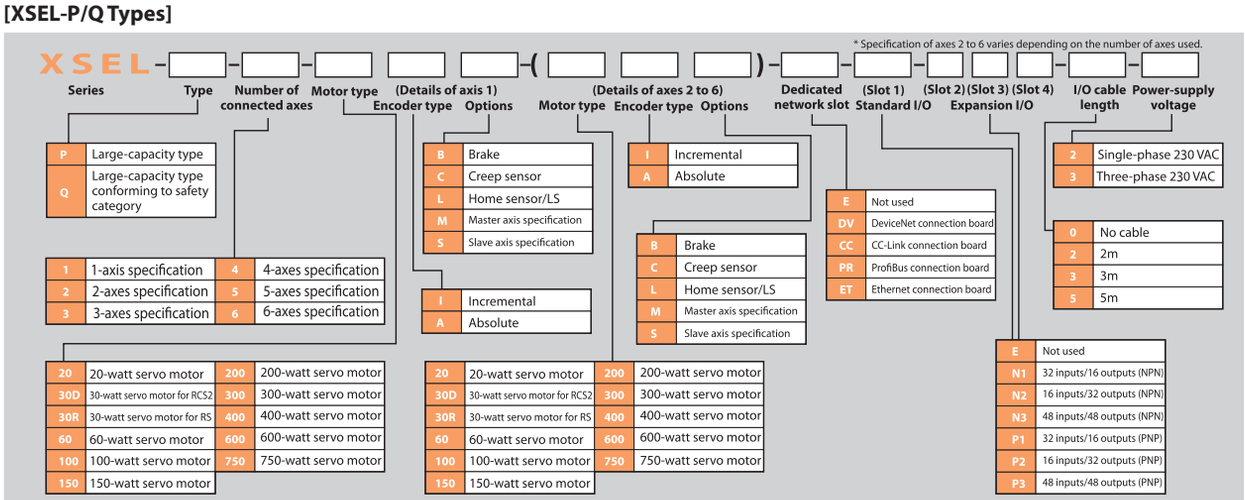
Model

[XSEL-KE/KET Types]

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

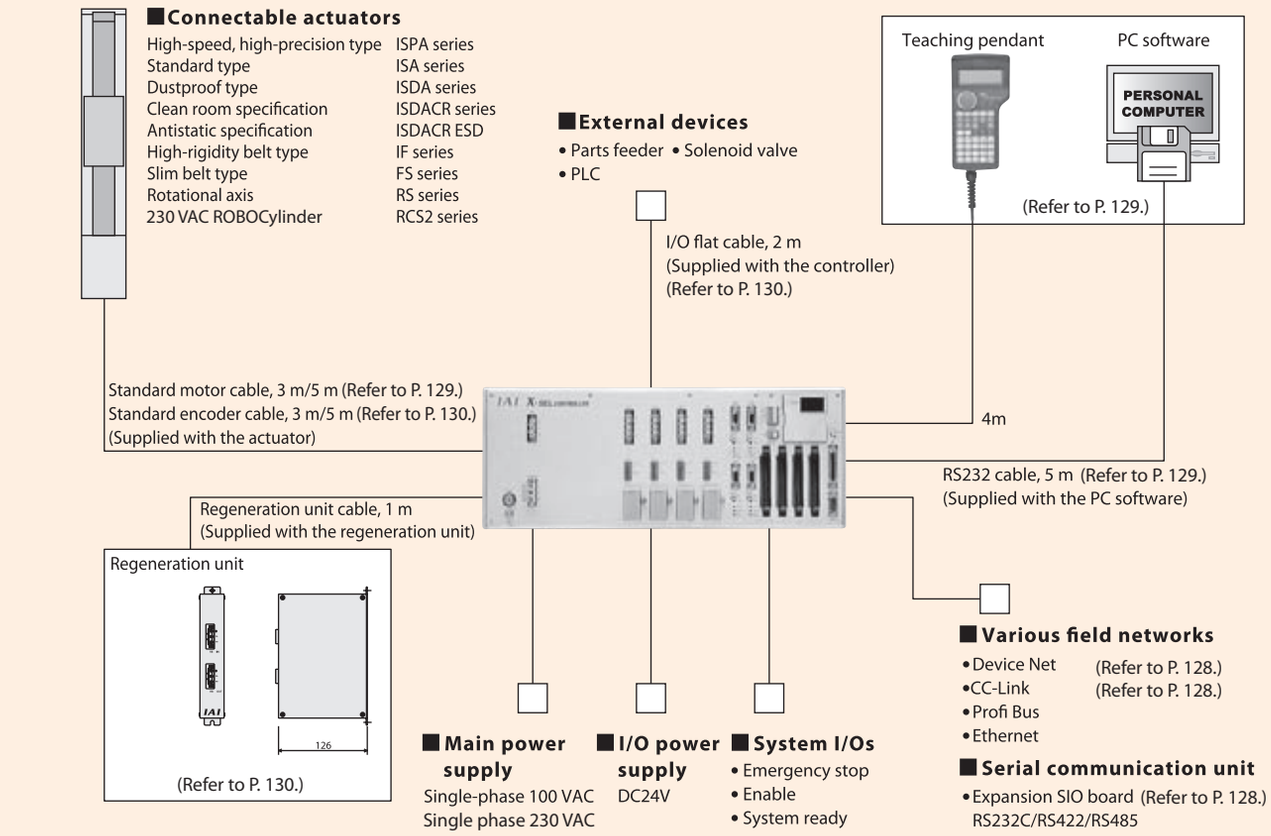


[XSEL-P/Q Types]

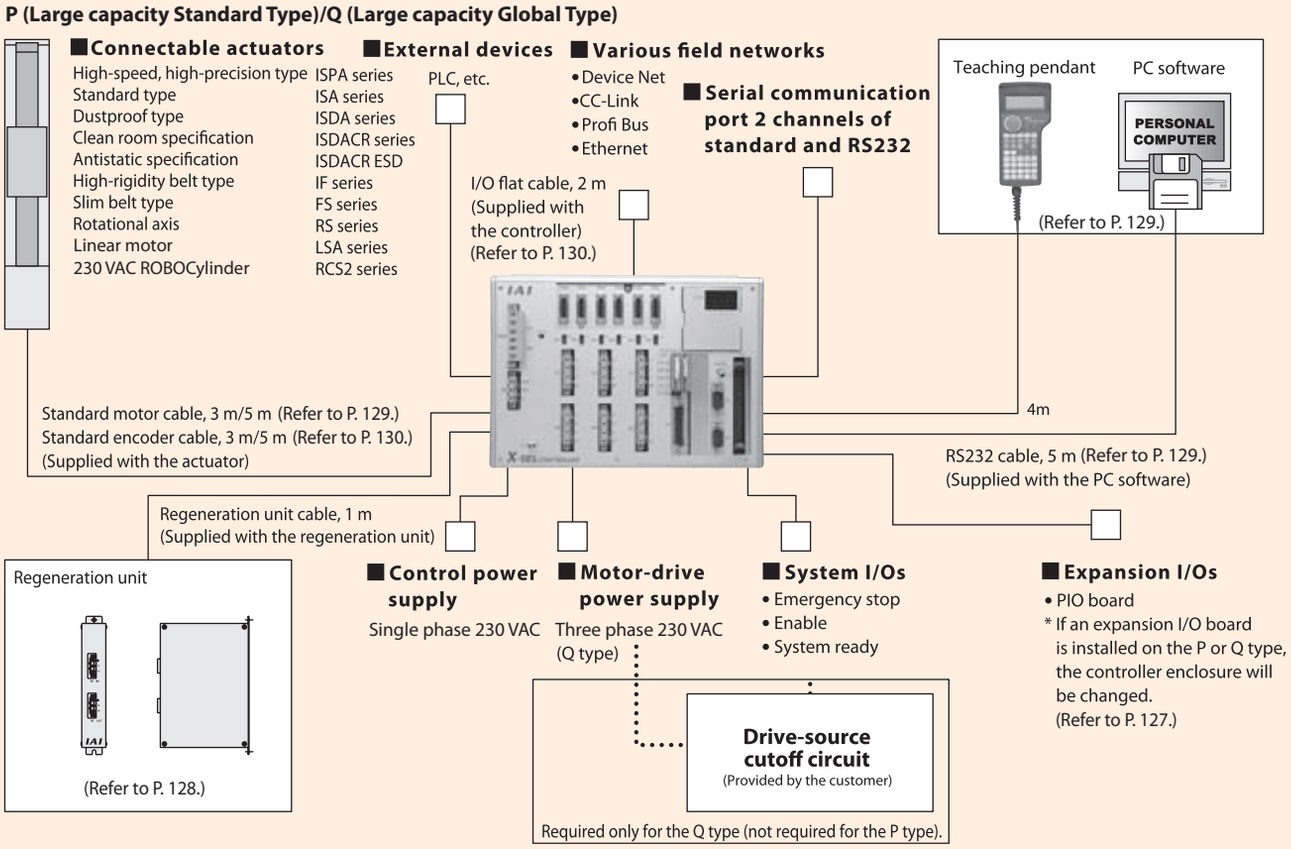


Regenerative resistor unit

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



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

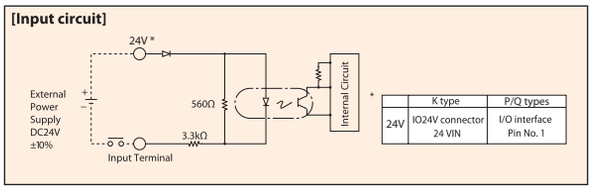


I/O Wiring

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]



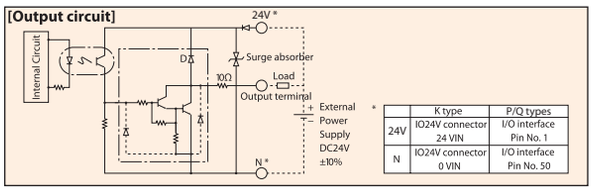
*

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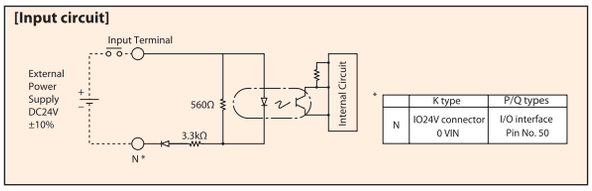
	K type	P/Q types
24V	IO24V connector 24 VIN	I/O interface Pin No. 1
N	IO24V connector 0 VIN	I/O interface Pin No. 50

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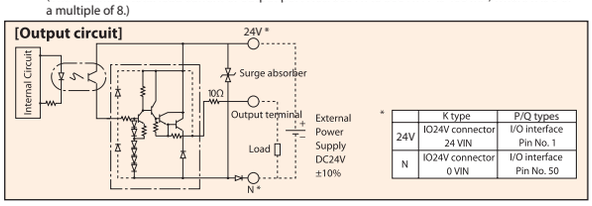
	K type	P/Q types
N	IO24V connector 0 VIN	I/O interface Pin No. 50

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		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							

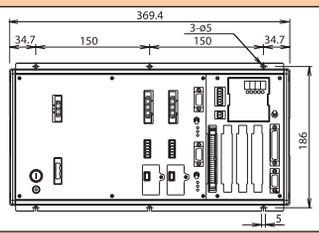
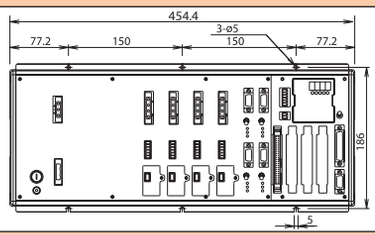
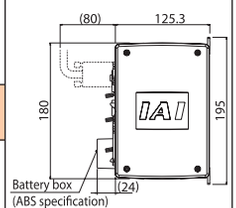
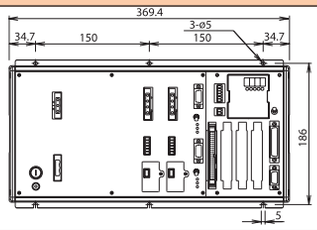
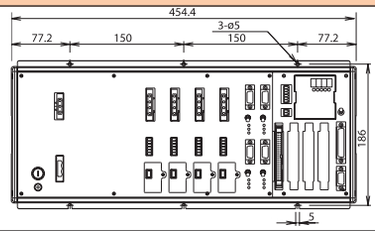
■ P (Large-capacity Type)/Q (Large-capacity Type Conforming to Safety Category)

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.

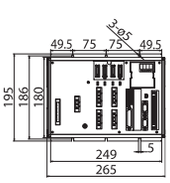
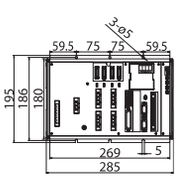
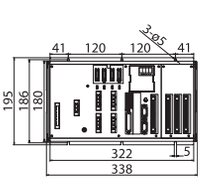
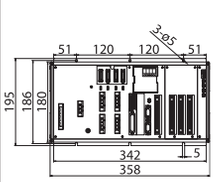
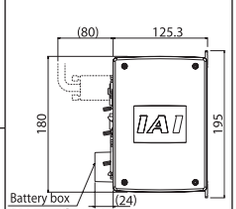
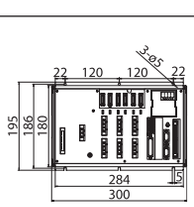
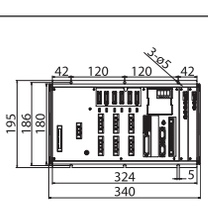
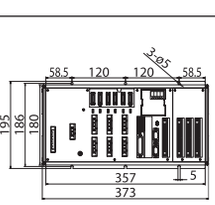
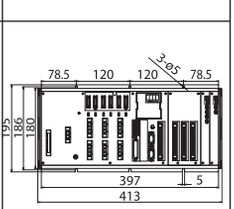
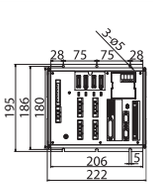
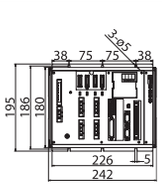
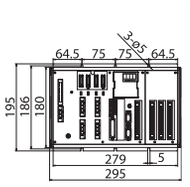
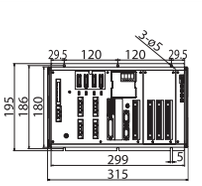
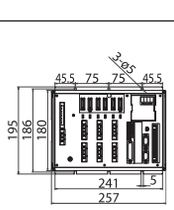
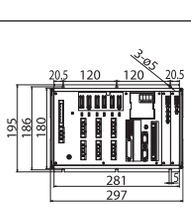
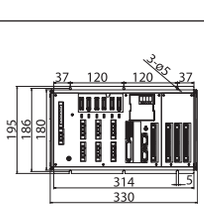
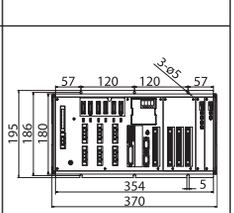
External Dimensions

■ 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)			

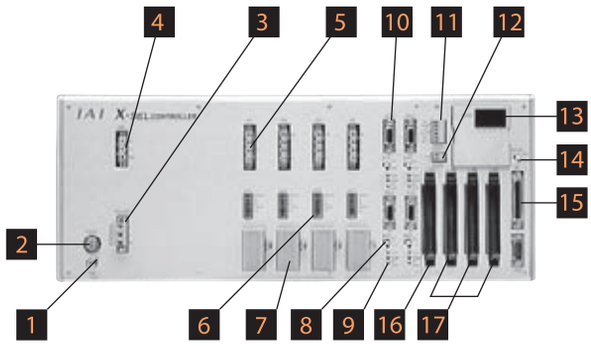
■ P (Large-capacity Standard Type)/Q (Large-capacity Global Type)

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) * The dimensions of single-phase 230-VAC controllers conform to those of the P type.	1 to 4-axis specification					
	5 to 6-axis specification					

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.

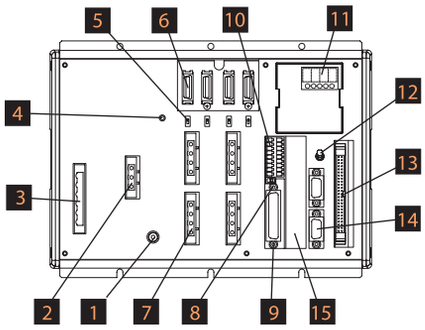
16 Standard I/O slot (slot 1)

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

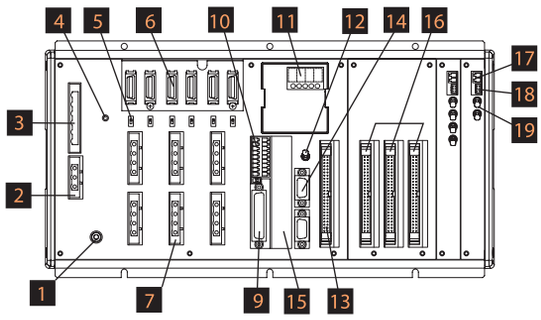
17 Expansion I/O slots (slot 2, slot 3, slot 4)

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

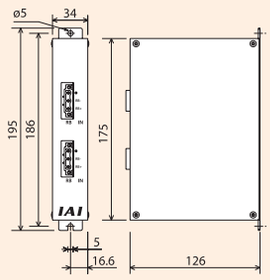
Installation Standards Determine the required number of unit(s) according to the total motor capacity of the connected vertical axes.

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)

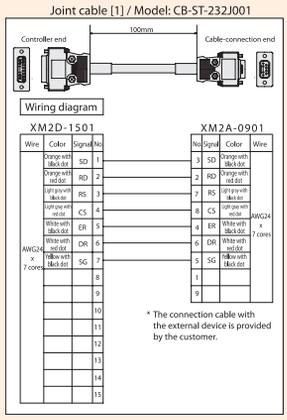
ModelSpecification

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)

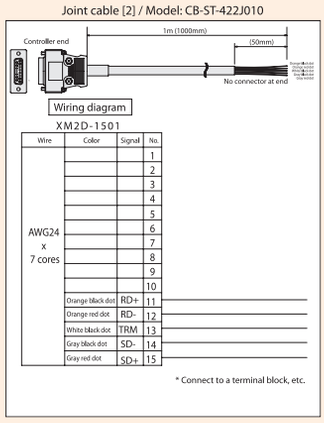
Description

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.

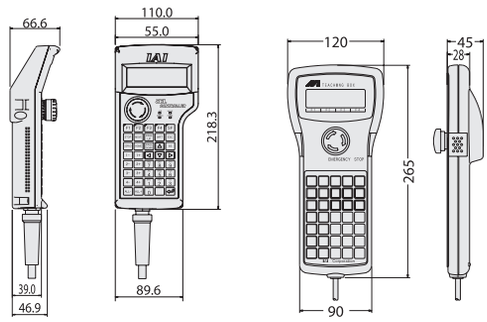
Options

Teaching Pendant

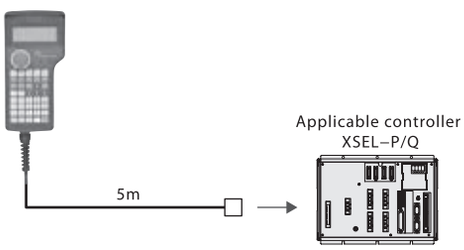
Features A teaching device offering functions for program/position input, test operation, monitoring, and more.

Model/Price

Model	Description
SEL–T	Standard type with connector conversion cable
SEL–TD	Deadman switch type with connector conversion cable



Configuration

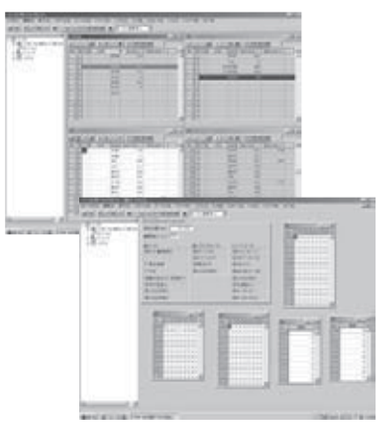


Specification

Item	SEL–T–J	SEL–TD–J
3-position enable switch	Not equipped	Equipped
ANSI/UL standard	Not compliant	Compliant
CE mark	Compliant	
Display	20 characters x 4 lines	
Surrounding air temperature/humidity	0–40°C 10–90%RH (non-condensing)	
Protection structure	IP54	
Weight	Approx. 0.4 kg (excluding cables)	

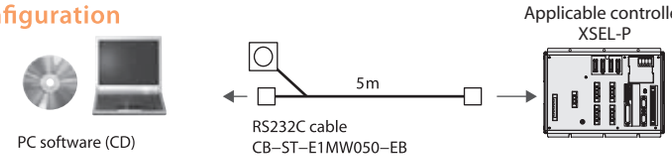
PC Software (Windows only)

Features A software program that assists the initial startup of your system, offering functions for program/position input, test operation, monitoring, and more. The enhanced debugging functions help reduce the startup time.



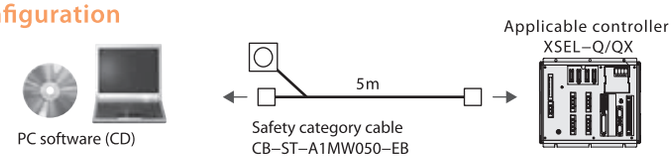
Model **IA–101–X–MW** (with RS232C cable)

Configuration



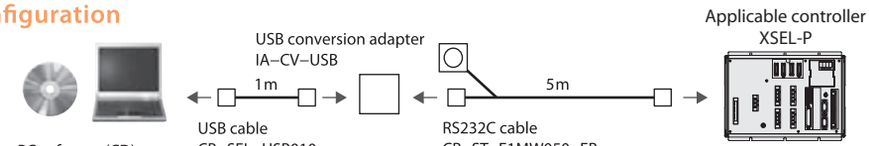
Model **IA–101–XA–MW** (with safety category 4 cable)

Configuration



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

Configuration



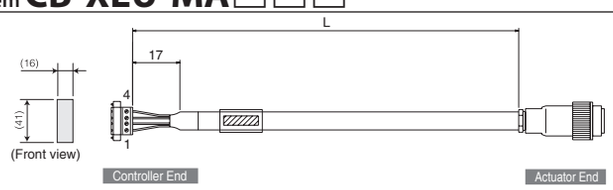
Replacement Parts

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

Motor Cable

Item CB-XEU-MA□□□

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



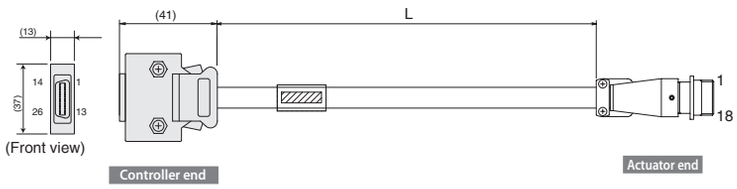
	Signal	No.	No.	Signal	Wire
0.75sq	PE	1	1	U	0.75sq (crimped)
	U	2	2	V	
	V	3	3	W	
	W	4	4	PE	

Replacement Parts

Encoder Cable (for XSEL-K types)

Item CB-XEU3-PA□□□

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



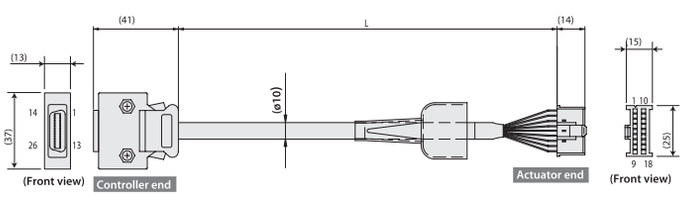
Wire	Signal	No.
0.15sq (Crimped)	A/U	1
	A/U	2
	B/V	3
	B/V	4
	Z/W	5
	Z/W	6
	SD	7
	SD	8
	BAT+	9
	BAT–	10
	VCC	11
	GND	12
	BK–	13
	BK+	14
	—	15
Clamp the shield to the hood.		
Ground wire and shielded braided wires		

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+	

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

Item CB-RCS2-PA□□□ / CB-X3-PA□□□

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



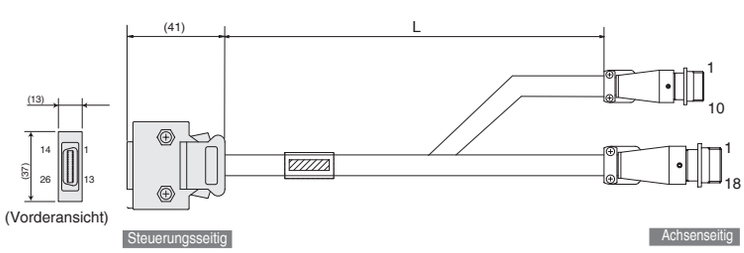
Wire	Color	Signal	No.
AWG26 (soldered)	–	–	10
	–	–	11
	–	E24V	12
	Gray/White	0V	13
	Brown/White	LS	26
	–	CLEEP	25
	–	OT	24
	–	RSV	23
	–	–	9
	–	–	18
	–	–	19
	Pink	A+	1
	Purple	A–	2
	White	B+	3
	Blue/Red	B–	4
	Orange/White	Z+	5
	Green/White	Z–	6
	Blue	SRD+	7
	Orange	SRD–	8
	Black	BAT+	14
	Yellow	BAT–	15
	Green	VCC	16
	Brown	GND	17
	Gray	BKD+	20
	Red	BKD+	21
	–	–	22
Connect the shield to the hood via a clamp.			
Drain wire and braided shield wire.			

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

Dedicated Encoder Cable for Rotary Robots

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.

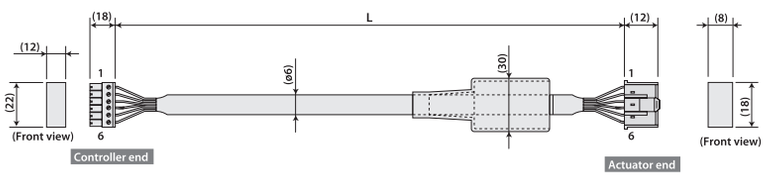
No.	Signal	Color	Wire
1	E24V	White/Blue	AWG26 (Crimped)
2	0V	White/Yellow	
3	LS	White/Red	
4	CLEEP	White/Black	
5	OT	White/Purple	
6	RSV	White/Gray	

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	

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

Item CB-X-LC□□□

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



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

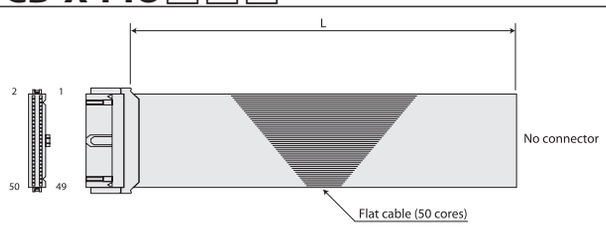
No.	Signal	Color	Wire
1	24VOUT	Light blue	AWG24 (Crimped)
2	N	Pink	
3	LS	Light green	
4	CREEP	Orange	
5	OT	Gray	
6	RSV	1B/light blue	

Note) "1B" indicates one black dot.

I/O Flat Cable (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-S Series
Extract Cat. No. 1108-E

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