

ROBO Cylinder® Configurations **IK Series**
Cartesian Robot

IK Series



Newest Additions to the Series

Z-axis Table Type



Type with ZR Unit
(Vertical/Rotation)



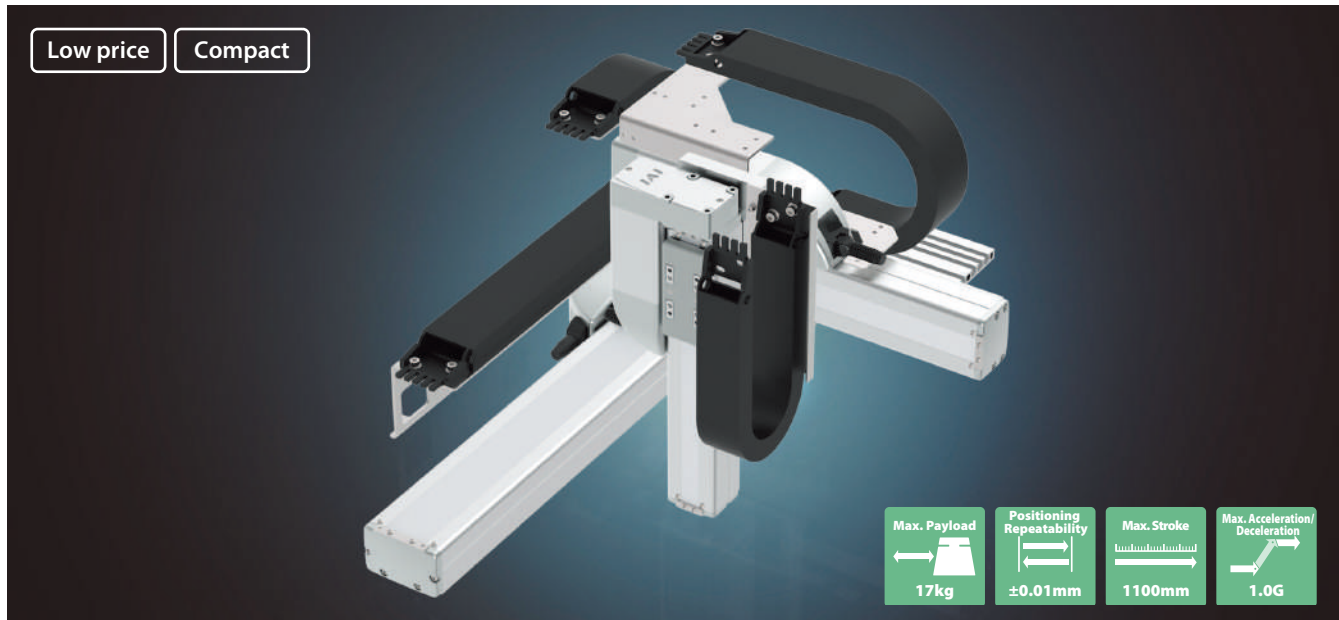
New RCON Controller information added

Cartesian Robots have never been more affordable.

Economical price & compact
ROBO Cylinder®
configuration

The ROBO Cylinder® equipped as standard with a Battery-less Absolute Encoder has been added to the "IK Series". It helps reduce the design and assembly steps.

The ROBO Cylinder® RCP6 Series has been adopted to achieve even higher speeds compared with conventional models.



1 Diverse Configurations

The available configurations have been greatly expanded from the conventional models, allowing the ideal selection to suit your needs from **516 options**.

New configurations include a table type (TA) with the Z-axis and a model with ZR unit (vertical/rotation).

2-axis configurations (X-axis/Y-axis)

- SA8 + SA7
- SA7 + SA6
- SA6 + SA4
- WSA16 + SA8
- WSA14 + SA7



2-axis configurations (Y-axis/Z-axis)

- SA8 + SA7
- SA7 + SA6
- SA6 + SA4
- NEW** SA8 + TA7
- NEW** SA7 + TA6
- NEW** SA6 + TA4



3-axis configurations (X-axis/Y-axis/Z-axis)

- SA8 + SA7 + SA6
- SA7 + SA6 + SA4
- WSA16 + SA8 + SA7
- WSA14 + SA7 + SA6
- NEW** SA8 + SA7 + TA6
- NEW** SA7 + SA6 + TA4



4-axis configurations (X-axis/Y-axis/ZR unit)

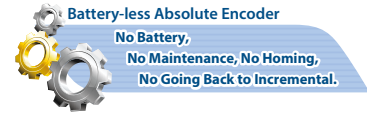
- NEW** SA8 + SA7 + ZR
- NEW** WSA14 + SA7 + ZR



NEW ... Newly added size combinations

2 Equipped with high resolution Battery-less Absolute Encoder as standard.

Equipped as standard with Battery-less Absolute Encoder for all configuration axes.
No battery maintenance is required since there is no battery.
Homing operation is not required at startup or after emergency stop or malfunction.
This reduces your operation time, resulting in reduced production costs.



The advantages of using an absolute encoder.

- (1) With an absolute encoder, home return is not required.
- (2) No external home sensor is required since home return is not necessary.
- (3) Removal of workpieces is not necessary, even after an emergency stop.
- (4) The troublesome creation of home-return programs is not necessary even when stopping inside of a complex machine.

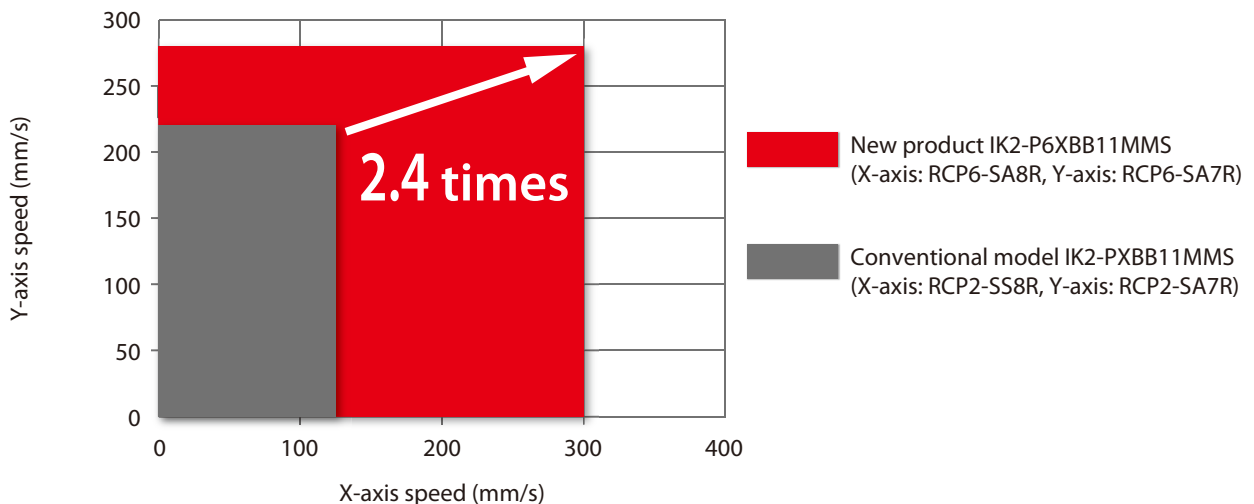
The advantages of battery-less.

- (1) No battery maintenance required.
- (2) No installation space for battery required.



3 Higher Speed

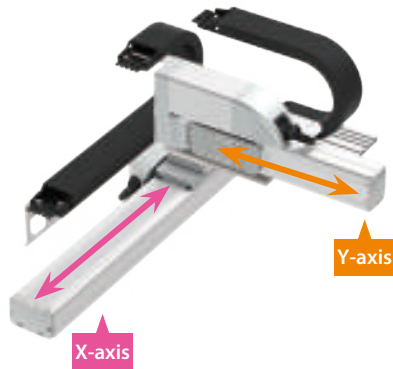
Compatible with PowerCON® which is equipped with a high-output driver.
The maximum speed has been increased with the use of PowerCON®.
This can reduce cycle time and help improve productivity.



Robot Type Descriptions

Each configuration pattern is available with an extensive range of sizes from light load to heavy load and short stroke to long stroke. Select the optimal model for your application.

XYB (Y-axis base mount) type



A basic configuration type in which the base of the Y-axis is fixed to the X-axis slider. It is operated by fixing equipment or a Z-axis on the Y-axis slider.

Point 1

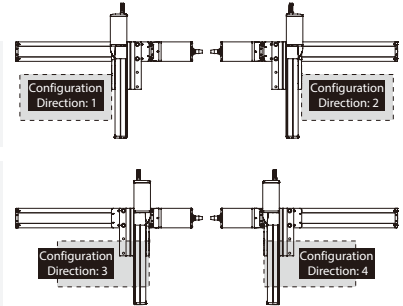
Select from 4 patterns of Y-axis configuration directions. (See the figure at right)

Point 2

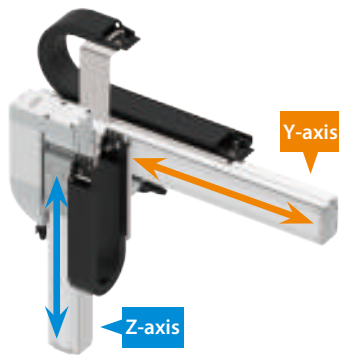
A cable track can be selected for Y-axis wiring. Select the cable track size from a maximum of 4 different sizes. You can also select a cable track for wiring by the user.

→ 2-axis configurations IK2-P6XB:
p5~34

Configuration Direction



YZB (Z-axis base mount) type



For this type, the base of the Z-axis (vertical axis) is fixed to the Y-axis slider with the Y-axis side-mounted. The Z-axis slider moves vertically, allowing mounting of jigs or chucks for transport, raising, or lowering of workpieces.

Point 1

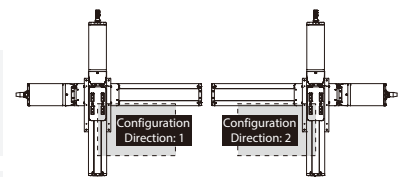
Select from 2 patterns of Z-axis configuration directions. (See the figure at right)

Point 2

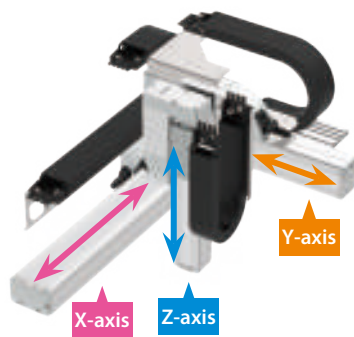
A cable track can be selected for Z-axis wiring. Select the cable track size from a maximum of 4 different sizes. You can also select a cable track for wiring by the user.

→ 2-axis configurations IK2-P6YB:
p35~70

Configuration Direction



XYB (Y-axis base mount) + Z-axis base mount type



For this type, the base surface of the Z-axis is fixed to the Y-axis slider of XYB type (Y-axis base is fixed to X-axis slider).

Point 1

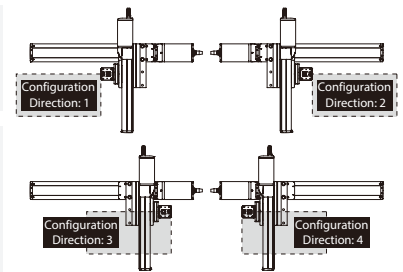
The Z-axis body is fixed and the slider moves vertically.

Point 2

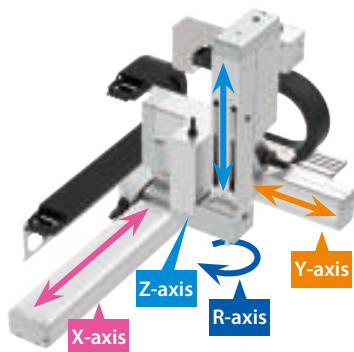
Cable tracks can be selected for Y-axis and Z-axis wiring. Select the cable track size from a maximum of 4 different sizes. You can also select a cable track for wiring by the user.

→ 3-axis configurations IK3-P6BB:
p71~118

Configuration Direction



XYB (Y-axis base mount) + ZR (vertical/rotation) unit type



This is an XYB (Y-axis base mount) type Y-axis slider equipped with a ZR unit that enables both vertical and rotational operation.

Point 1

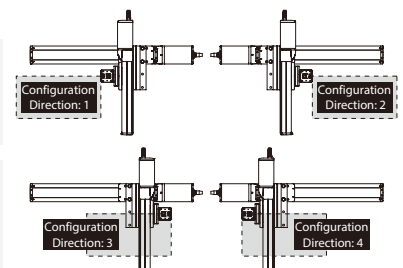
More compact with the integrated Z-axis and rotational axis.

Point 2

Cable tracks can be selected for Y-axis and Z-axis wiring. Select the cable track size from a maximum of 4 different sizes.

→ 4-axis configurations IK4-P6BB:
p119~133

Configuration direction



Cartesian Robot

ROBO Cylinder 2-axis Configurations

IK2-P6XBD1□□S	5
IK2-P6XBD2□□S	7
IK2-P6XBD3□□S	9
IK2-P6XBC1□□S	11
IK2-P6XBC2□□S	13
IK2-P6XBC3□□S	15
IK2-P6XBB1□□S	17
IK2-P6XBB2□□S	19
IK2-P6XBB3□□S	21
IK2-P6XBF1□□S	23
IK2-P6XBF2□□S	25
IK2-P6XBF3□□S	27
IK2-P6XBE1□□S	29
IK2-P6XBE2□□S	31
IK2-P6XBE3□□S	33
IK2-P6YBD1□□S	35
IK2-P6YBD2□□S	37
IK2-P6YBD3□□S	39
IK2-P6YBC1□□S	41
IK2-P6YBC2□□S	43
IK2-P6YBC3□□S	45
IK2-P6YBB1□□S	47
IK2-P6YBB2□□S	49
IK2-P6YBB3□□S	51
IK2-P6YBI1□□S	53
IK2-P6YBI2□□S	55
IK2-P6YBI3□□S	57
IK2-P6YBH1□□S	59
IK2-P6YBH2□□S	61
IK2-P6YBH3□□S	63
IK2-P6YBG1□□S	65
IK2-P6YBG2□□S	67
IK2-P6YBG3□□S	69

IK2
Stepper Motor



ROBO Cylinder 3-axis Configurations

IK3-P6BBC1□□S	71
IK3-P6BBC2□□S	74
IK3-P6BBC3□□S	77
IK3-P6BBB1□□S	80
IK3-P6BBB2□□S	83
IK3-P6BBB3□□S	86
IK3-P6BBF1□□S	89
IK3-P6BBF2□□S	92
IK3-P6BBF3□□S	95
IK3-P6BBE1□□S	98
IK3-P6BBE2□□S	101
IK3-P6BBE3□□S	104
IK3-P6BBH1□□S	107
IK3-P6BBH2□□S	109
IK3-P6BBH3□□S	111
IK3-P6BBG1□□S	113
IK3-P6BBG2□□S	115
IK3-P6BBG3□□S	117

IK3
Stepper Motor



ROBO Cylinder 4-axis Configurations

IK4-P6BBB1□□S	119
IK4-P6BBB2□□S	121
IK4-P6BBB3□□S	123
IK4-P6BBF1□□S	125
IK4-P6BBF2□□S	128
IK4-P6BBF3□□S	131

IK4
Stepper motor



Options

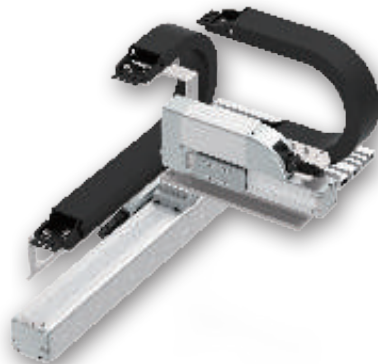
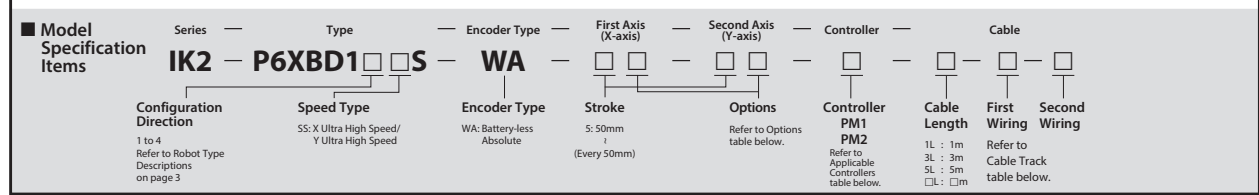
134

Controller

MSEL	MSEL	139
PCON	PCON-CB/CFB	149
MCON	MCON-C/LC	153

IK2-P6XBD1□□S RCP6 2-axis configurations

X-axis: SA6R (side-mounted)
Y-axis: SA4R (side-mounted)



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ SS type: X ultra high speed/Y ultra high speed (Unit: kg)

Acceleration/ deceleration (G)	Y-axis stroke (mm)	50~150 (Every 50mm)	200~300 (Every 50mm)
	0.1		3
0.3		3	
0.5		2	
0.7		1	—

* When both X and Y axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm)		50	100	150	200	250	300
X-axis stroke (mm)	50	○	○	○	○	○	○
	100	○	○	○	○	○	○
	150	○	○	○	○	○	○
	200	○	○	○	○	○	○
	250	○	○	○	○	○	○
	300	○	○	○	○	○	○
	350	○	○	○	○	○	○
	400	○	○	○	○	○	○
	450	○	○	○	○	○	○
	500	○	○	○	○	○	○
	550	○	○	○	○	○	○
	600	○	○	○	○	○	○
	650	○	○	○	○	○	○
	700	○	○	○	○	○	○
	750	○	○	○	○	○	○
	800	○	○	○	○	○	○

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : SA6R Y-axis : SA4R	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
PM2		MSEL	P-139
		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	N	See P.136	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item	X-axis	Y-axis
Axis configuration	RCP6-SA6R	RCP6-SA4R
Stroke (Every 50mm)	50~800mm	50~300mm
Max. speed *	640mm/s	560mm/s
Motor size	42□ Stepper motor	35□ Stepper motor
Ball screw lead	20mm	16mm
Drive system	Ball screw Ø10mm rolled C10	Ball screw Ø8mm rolled C10
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options

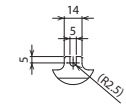
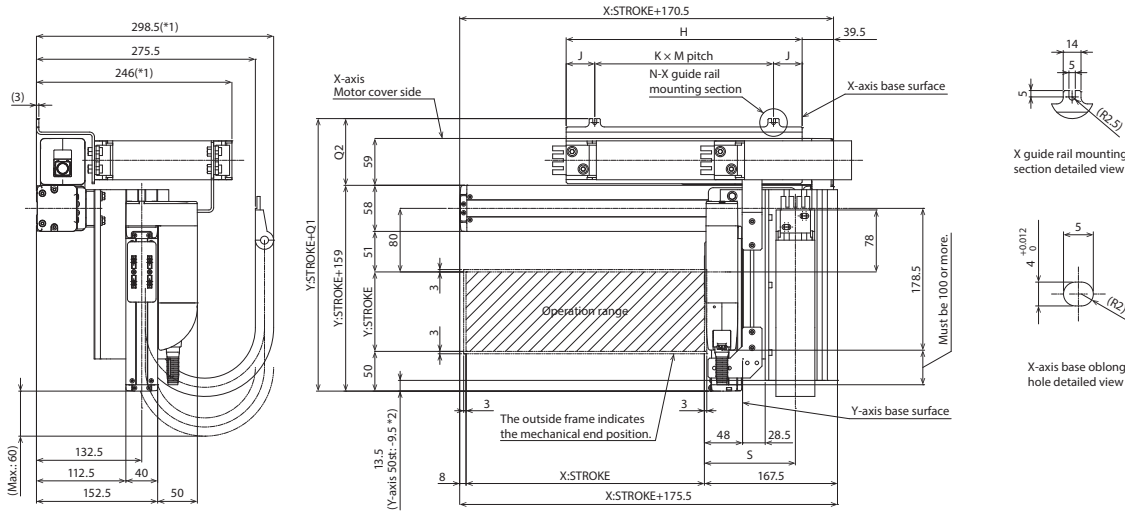
Type	Option code	Reference page	X-axis	Y-axis
Brake	B	See P.134	○	○
Non-motor end specification	NM	See P.135	○	○
Slider section roller specification	SR	See P.135	○	○

Dimensions

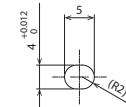
CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.

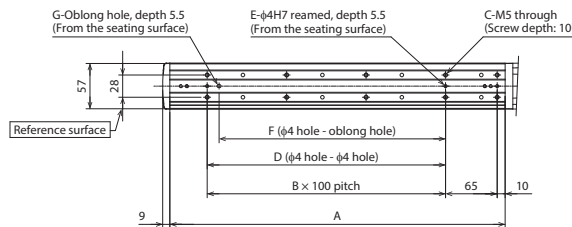
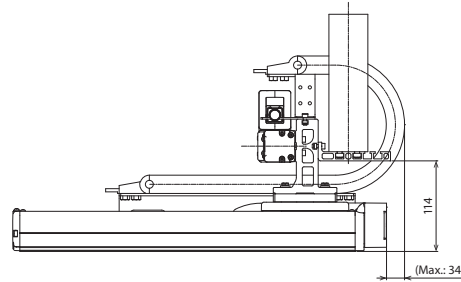


X guide rail mounting section detailed view

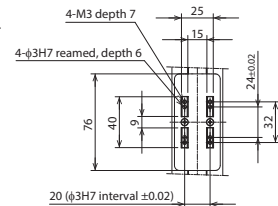


X-axis base oblong hole detailed view

*1: The cable track may swell, becoming slightly larger than the indicated dimensions.
*2: When the Y-axis is 50st, the Y guide rail overhangs the actuator tip.



Base mounting dimensions



Y-axis slider detailed view

(*) Notes

The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer.
Also, the moving end of the Y-axis cable track is to be fixed to a plate or the like mounted on the Y-axis slider by the customer. (See P.136)

■ Dimensions by Stroke

X:Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	172	197	222	247	272	297	322	347	372	397	422	447	472	497	522	547
J	23.5	36	23.5	36	23.5	36	61	23.5	36	48.5	26	23.5	36	48.5	61	48.5
K	1	1	1	1	1	1	1	3	3	2	2	2	2	2	2	3
M	125	125	175	175	225	225	200	100	100	150	185	200	200	200	200	150
N	2	2	2	2	2	2	2	4	4	3	3	3	3	3	3	4

Cable track size	CT	CTM	CTL	CTXL
Q1	243	256	269	286
Q2	84	97	110	127
S	114.5	121	127.5	-

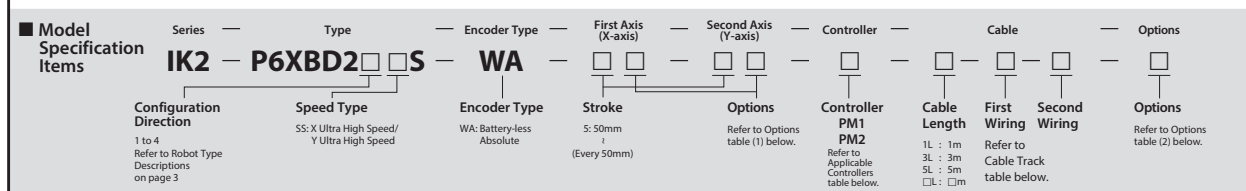
* Dimensions Q1, Q2 and S change depending on the size of the cable track.

IK2-P6XBD2□□S

RCP6 2-axis configurations

X-axis: SA6C (straight)

Y-axis: SA4R (side-mounted)



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ SS type: X ultra high speed/Y ultra high speed (Unit: kg)

Acceleration/ deceleration (G)	Y-axis stroke (mm)	200~300 (Every 50mm)
	50~150 (Every 50mm)	200~300 (Every 50mm)
0.1	3	3
0.3	3	3
0.5	2	2
0.7	1	-

* When both X and Y axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm)	50	100	150	200	250	300
50	○	○	○	○	○	○
100	○	○	○	○	○	○
150	○	○	○	○	○	○
200	○	○	○	○	○	○
250	○	○	○	○	○	○
300	○	○	○	○	○	○
350	○	○	○	○	○	○
400	○	○	○	○	○	○
450	○	○	○	○	○	○
500	○	○	○	○	○	○
550	○	○	○	○	○	○
600	○	○	○	○	○	○
650	○	○	○	○	○	○
700	○	○	○	○	○	○
750	○	○	○	○	○	○
800	○	○	○	○	○	○

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

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PM1	X-axis : SA6C Y-axis : SA4R	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
PM2		MSEL	P-139
		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	N	See P.136	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item	X-axis	Y-axis
Axis configuration	RCP6-SA6C	RCP6-SA4R
Stroke (Every 50mm)	50~800mm	50~300mm
Max. speed *	640mm/s	560mm/s
Motor size	42□ Stepper motor	35□ Stepper motor
Ball screw lead	20mm	16mm
Drive system	Ball screw Φ10mm rolled C10	Ball screw Φ8mm rolled C10
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options (1)

Type	Option code	Reference page	X-axis	Y-axis
Brake *	B	See P.134	○	○
Cable exit direction (Top)	CJT	See P.134	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.134	○	
Cable exit direction (Left)	CJL	See P.134	○	
Cable exit direction (Bottom)	CJB	See P.134	○	
Non-motor end specification	NM	See P.135	○	
Slider section roller specification	SR	See P.135	○	○

* Brake option for X-axis increases the length of the motor unit. Please contact IAI for more information.

Options (2)

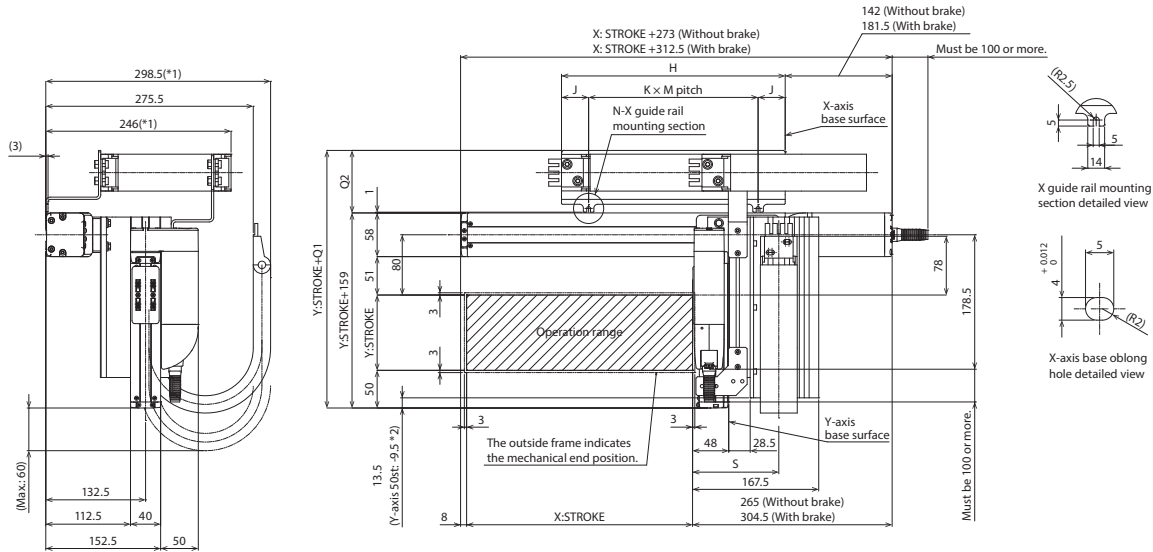
Type	Option code	Reference page
Foot plate	FTP	See P.134

Dimensions

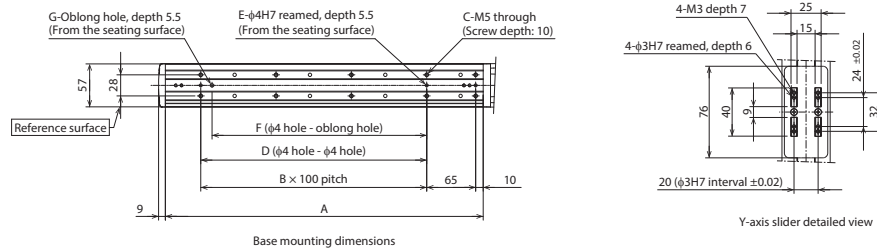
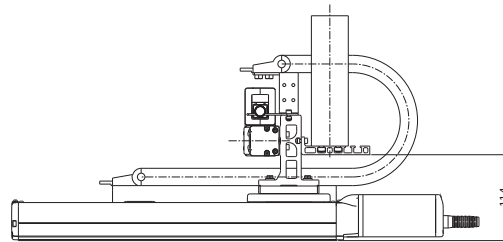
CAD drawings can be downloaded from our website.
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Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.
*2: When the Y-axis is 50st, the Y guide rail overhangs the actuator tip.



(* Notes

The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer.
When the foot plate option is selected, the unit will be shipped fixed on the foot plate. (See P.134)
Also, the moving end of the Y-axis cable track is to be fixed to a plate or the like mounted on the Y-axis slider by the customer. (See P.136)

■ Dimensions by Stroke

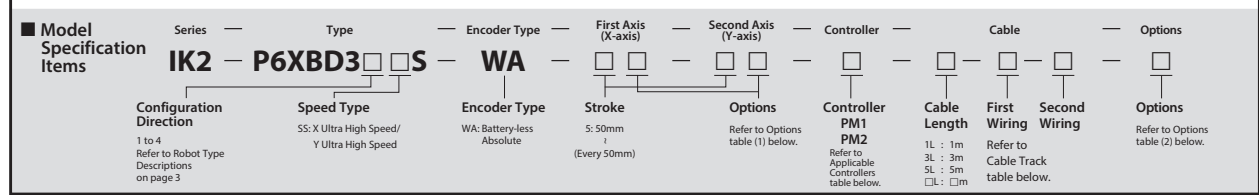
X:Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	172	197	227	247	272	297	322	347	372	397	422	447	472	497	522	547
J	23.5	36	23.5	36	23.5	36	61	23.5	36	48.5	26	23.5	36	48.5	61	48.5
K	1	1	1	1	1	1	1	3	3	2	2	2	2	2	2	3
M	125	125	175	175	225	225	200	100	100	150	185	200	200	200	200	150
N	2	2	2	2	2	2	2	4	4	3	3	3	3	3	3	4

Cable track size	CT	CTM	CTL	CTXL
Q1	242	255	268	285
Q2	83	96	109	126
S	114.5	121	127.5	-

* Dimensions Q1, Q2 and S change depending on the size of the cable track.

IK2-P6XBD3□□S RCP6 2-axis configurations

X-axis: SA6C (straight)
Y-axis: SA4C (straight)



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ SS type: X ultra high speed/Y ultra high speed (Unit: kg)

Acceleration/ deceleration (G)	Y-axis stroke (mm)	200~300 (Every 50mm)
	50~150 (Every 50mm)	200~300 (Every 50mm)
0.1	3	3
0.3	3	3
0.5	2	2
0.7	1	-

* When both X and Y axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm)	50	100	150	200	250	300
50	○	○	○	○	○	○
100	○	○	○	○	○	○
150	○	○	○	○	○	○
200	○	○	○	○	○	○
250	○	○	○	○	○	○
300	○	○	○	○	○	○
350	○	○	○	○	○	○
400	○	○	○	○	○	○
450	○	○	○	○	○	○
500	○	○	○	○	○	○
550	○	○	○	○	○	○
600	○	○	○	○	○	○
650	○	○	○	○	○	○
700	○	○	○	○	○	○
750	○	○	○	○	○	○
800	○	○	○	○	○	○

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : SA6C Y-axis : SA4C	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
PM2		MSEL	P-139
		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	N	See P.136	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item	X-axis	Y-axis
Axis configuration	RCP6-SA6C	RCP6-SA4C
Stroke (Every 50mm)	50~800mm	50~300mm
Max. speed *	640mm/s	560mm/s
Motor size	42□ Stepper motor	35□ Stepper motor
Ball screw lead	20mm	16mm
Drive system	Ball screw Φ10mm rolled C10	Ball screw Φ8mm rolled C10
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options (1)

Type	Option code	Reference page	X-axis	Y-axis
Brake *	B	See P.134	○	○
Cable exit direction (Top)	CJT	See P.134	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.134	○	
Cable exit direction (Left)	CJL	See P.134	○	
Cable exit direction (Bottom)	CJB	See P.134	○	
Non-motor end specification	NM	See P.135	○	
Slider section roller specification	SR	See P.135	○	○

* Brake option for X- and/or Y-axes increases the length of the motor unit(s). Please contact IAI for more information.

Options (2)

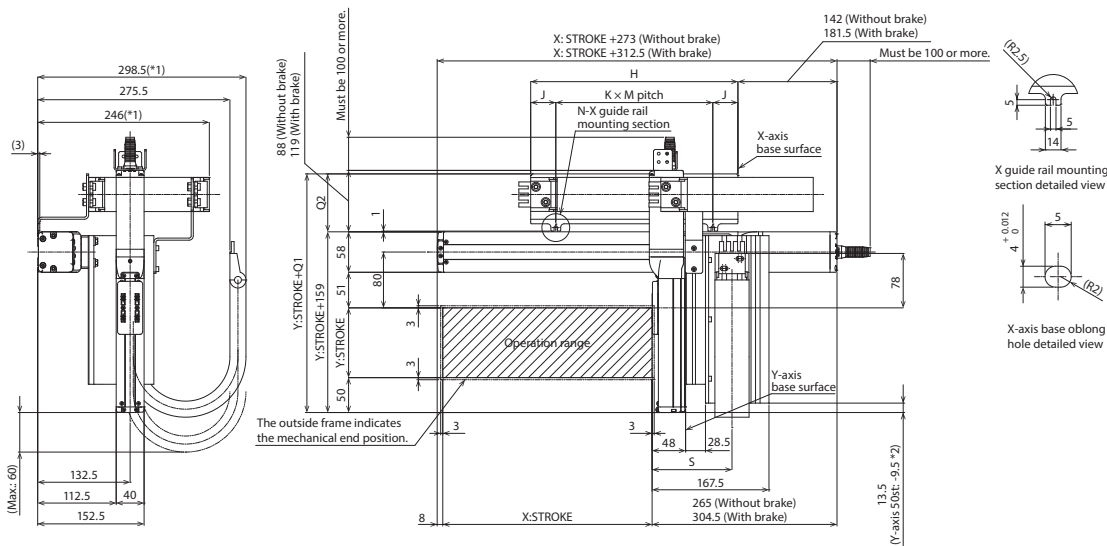
Type	Option code	Reference page
Foot plate	FTP	See P.134

Dimensions

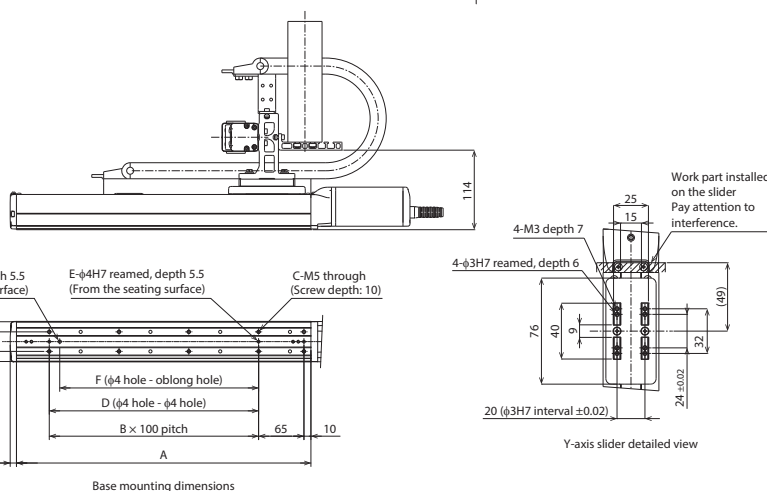
CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.
*2: When the Y-axis is 50st, the Y guide rail overhangs the actuator tip.



(* Notes

The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer.
When the foot plate option is selected, the unit will be shipped fixed on the foot plate. (See P.134)
Also, the moving end of the Y-axis cable track is to be fixed to a plate or the like mounted on the Y-axis slider by the customer. (See P.136)

■ Dimensions by Stroke

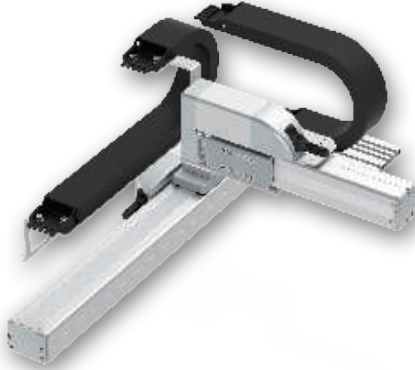
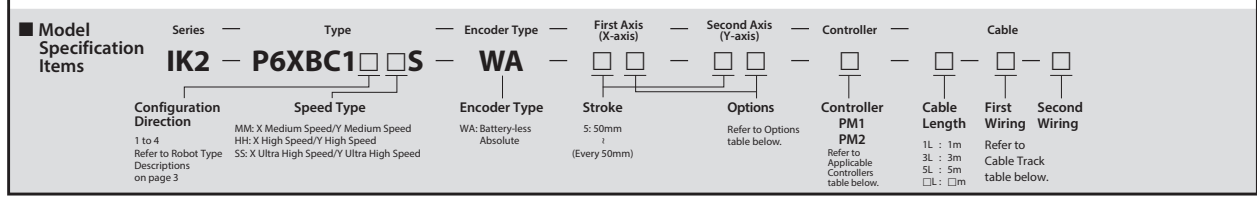
X:Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	172	197	222	247	272	297	322	347	372	397	422	447	472	497	522	547
J	23.5	36	23.5	36	23.5	36	61	23.5	36	48.5	26	23.5	36	48.5	61	48.5
K	1	1	1	1	1	1	1	3	3	2	2	2	2	2	2	3
M	125	125	175	175	225	225	200	100	100	150	185	200	200	200	200	150
N	2	2	2	2	2	2	2	4	4	3	3	3	3	3	3	4
Cable track size	CT	CTM	CTL	CTXL												
Q1	242	255	268	285												
Q2	83	96	109	126												
S	114.5	121	127.5	-												

* Dimensions Q1, Q2 and S change depending on the size of the cable track.

IK2-P6XBC1□□S

RCP6 2-axis configurations

X-axis: SA7R (side-mounted)
Y-axis: SA6R (side-mounted)



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

MM type: X medium speed/Y medium speed (Unit: kg)

Acceleration/deceleration (G)	Y-axis stroke (mm) 50~100 (Every 50mm)	150	200	250~400 (Every 50mm)
0.1	9	8		6
0.3	9	8		6
0.5		7		6
0.7		6		—
1		4		—

HH type: X high speed/Y high speed SS type: X ultra high speed/Y ultra high speed

Acceleration/deceleration (G)	Y-axis stroke (mm)		Acceleration/deceleration (G)	Y-axis stroke (mm)		
	50~200 (Every 50mm)	250~400 (Every 50mm)		50	100~200 (Every 50mm)	250~400 (Every 50mm)
0.1	5		0.1		4	
0.3	5		0.3		4	
0.5		4	0.5	3	2.5	
0.7	2	—	0.7	2	1.5	
1			1	1	—	

* When both X and Y axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm)	50	100	150	200	250	300	350	400
50	○	○	○	○	○	○	○	○
100	○	○	○	○	○	○	○	○
150	○	○	○	○	○	○	○	○
200	○	○	○	○	○	○	○	○
250	○	○	○	○	○	○	○	○
300	○	○	○	○	○	○	○	○
350	○	○	○	○	○	○	○	○
400	○	○	○	○	○	○	○	○
450	○	○	○	○	○	○	○	○
500	○	○	○	○	○	○	○	○
550	○	○	○	○	○	○	○	○
600	○	○	○	○	○	○	○	○
650	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○
750	○	○	○	○	○	○	○	○
800	○	○	○	○	○	○	○	○

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : SA7R Y-axis : SA6R	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
PM2		MSEL	P-139
		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	N	See P.136	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item	X-axis	Y-axis
Axis configuration	RCP6-SA7R	RCP6-SA6R
Stroke (Every 50mm)	50~800mm	50~400mm
Max. speed *	MM	280mm/s
	HH	560mm/s
	SS	640mm/s
Motor size	56□ Stepper motor	42□ Stepper motor
	Ball screw lead	MM: 8mm HH: 16mm SS: 24mm
Drive system	Ball screw Φ12mm rolled C10	Ball screw Φ10mm rolled C10
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options

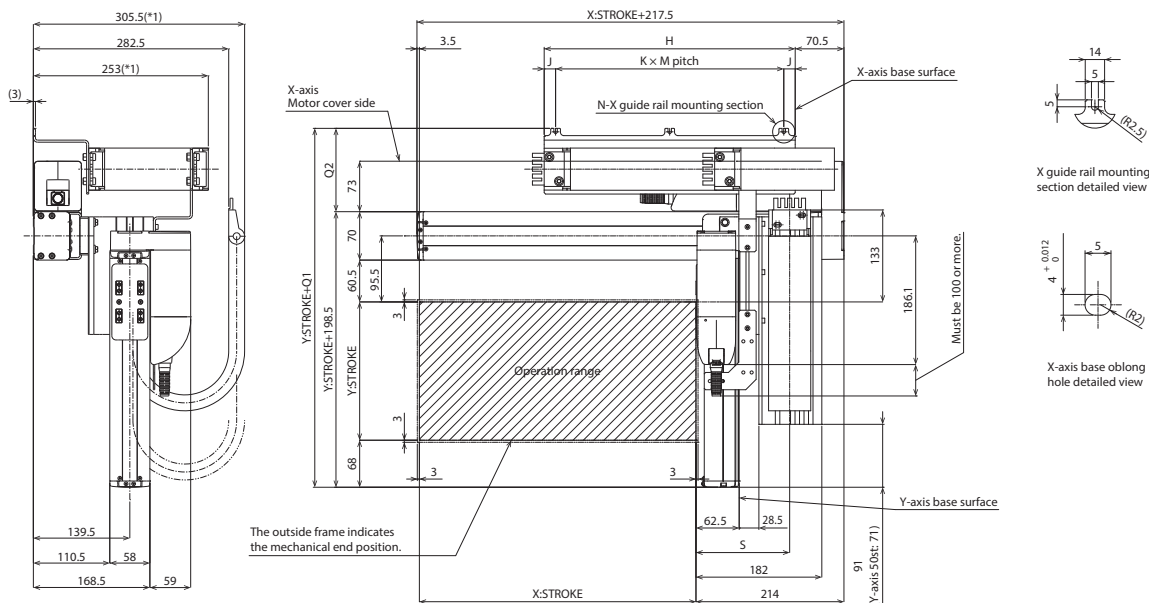
Type	Option code	Reference page	X-axis	Y-axis
Brake	B	See P.134	○	○
Non-motor end specification	NM	See P.135	○	○
Slider section roller specification	SR	See P.135	○	○

Dimensions

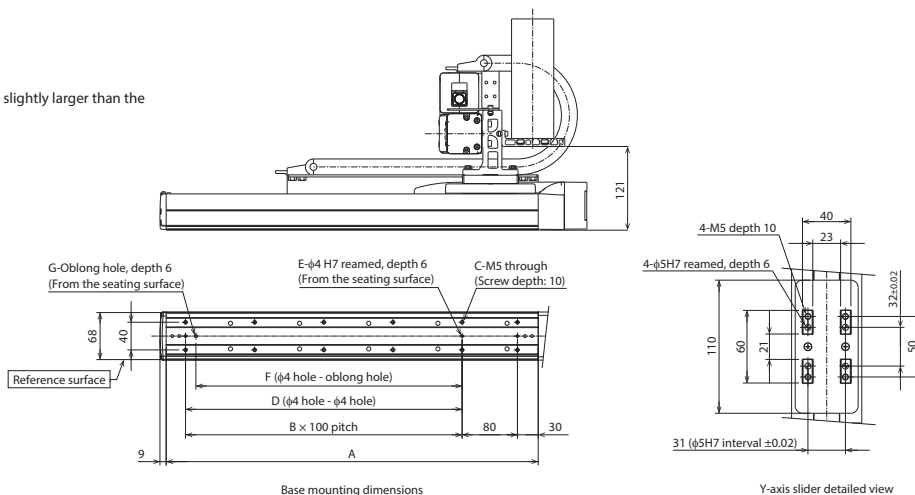
CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(* Notes

The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer.
Also, the moving end of the Y-axis cable track is to be fixed to a plate or the like mounted on the Y-axis slider by the customer. (See P.136)

■ Dimensions by Stroke

X:Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	0	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	188	213	238	263	288	313	338	363	388	413	438	463	488	513	538	563
J	16.5	16.5	14	16.5	16.5	16.5	14	16.5	14	16	15	66.5	44	56.5	69	16
K	1	1	1	2	2	2	2	2	2	3	3	3	2	2	2	3
M	155	180	210	115	127.5	140	155	165	180	127	136	110	200	200	200	177
N	2	2	2	3	3	3	3	3	3	4	4	4	3	3	3	4

Cable track size	CT	CTM	CTL	CTXL
Q1	306	319	332	349
Q2	107.5	120.5	133.5	150.5
S	129	135.5	142	-

* Dimensions Q1, Q2 and S change depending on the size of the cable track.

IK2-P6XBC2□□S

RCP6 2-axis configurations

X-axis: SA7C (straight)

Y-axis: SA6R (side-mounted)

Model Specification Items

Series: **IK2** Type: **P6XBC2□□S** Encoder Type: **WA**

Configuration Direction: 1 to 4 (Refer to Robot Type Descriptions on page 3)

Speed Type: MM: X Medium Speed/Y Medium Speed, HH: X High Speed/Y High Speed, SS: X Ultra High Speed/Y Ultra High Speed

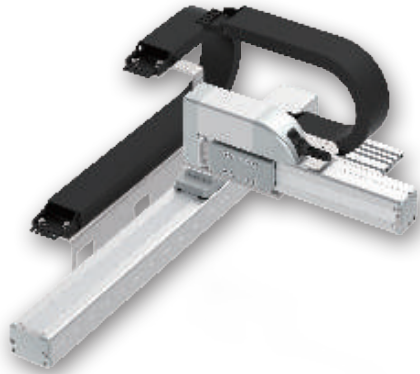
Encoder Type: WA: Battery-less Absolute

First Axis (X-axis): Stroke: 5: 50mm (Every 50mm), Options: Refer to Options table (1) below.

Second Axis (Y-axis): Controller: **PM1**, **PM2** (Refer to Applicable Controllers table below).

Cable: Cable Length: 1L: 1m, 3L: 3m, 5L: 5m, □L: □m. First Wiring, Second Wiring: Refer to Cable Track table below.

Options: Refer to Options table (2) below.



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

MM type: X medium speed/Y medium speed (Unit: kg)

Acceleration/deceleration (G)	Y-axis stroke (mm) (Every 50mm)	50~100 (Every 50mm)	150	200	250~400 (Every 50mm)
0.1		9	8		6
0.3		9	8		6
0.5		7			6
0.7			6		-
1			4		-

HH type: X high speed/Y high speed

Acceleration/deceleration (G)	Y-axis stroke (mm) (Every 50mm)	50~200 (Every 50mm)	250~400 (Every 50mm)
0.1		5	
0.3		5	
0.5		4	
0.7		2	-

SS type: X ultra high speed/Y ultra high speed

Acceleration/deceleration (G)	Y-axis stroke (mm) (Every 50mm)	50	100~200 (Every 50mm)	250~400 (Every 50mm)
0.1			4	
0.3			4	
0.5		3		2.5
0.7		2	1.5	-
1			1	-

* When both X and Y axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm)	50	100	150	200	250	300	350	400
50	○	○	○	○	○	○	○	○
100	○	○	○	○	○	○	○	○
150	○	○	○	○	○	○	○	○
200	○	○	○	○	○	○	○	○
250	○	○	○	○	○	○	○	○
300	○	○	○	○	○	○	○	○
350	○	○	○	○	○	○	○	○
400	○	○	○	○	○	○	○	○
450	○	○	○	○	○	○	○	○
500	○	○	○	○	○	○	○	○
550	○	○	○	○	○	○	○	○
600	○	○	○	○	○	○	○	○
650	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○
750	○	○	○	○	○	○	○	○
800	○	○	○	○	○	○	○	○

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : SA7C Y-axis : SA6R	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
PM2		MSEL	P-139
		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	N	See P.136	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item	X-axis	Y-axis
Axis configuration	RCP6-SA7C	RCP6-SA6R
Stroke (Every 50mm)	50~800mm	50~400mm
Max. speed *	MM	280mm/s
	HH	560mm/s
	SS	640mm/s
Motor size	56□ Stepper motor	42□ Stepper motor
	Ball screw lead	MM: 8mm, HH: 16mm, SS: 24mm
Drive system	Ball screw Φ12mm rolled C10	Ball screw Φ10mm rolled C10
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options (1)

Type	Option code	Reference page	X-axis	Y-axis
Brake *	B	See P.134	○	○
Cable exit direction (Top)	CJT	See P.134	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.134	○	
Cable exit direction (Left)	CJL	See P.134	○	
Cable exit direction (Bottom)	CJB	See P.134	○	
Non-motor end specification	NM	See P.135	○	○
Slider section roller specification	SR	See P.135	○	○

* Brake option for X-axis increases the length of the motor unit. Please contact IAI for more information.

Options (2)

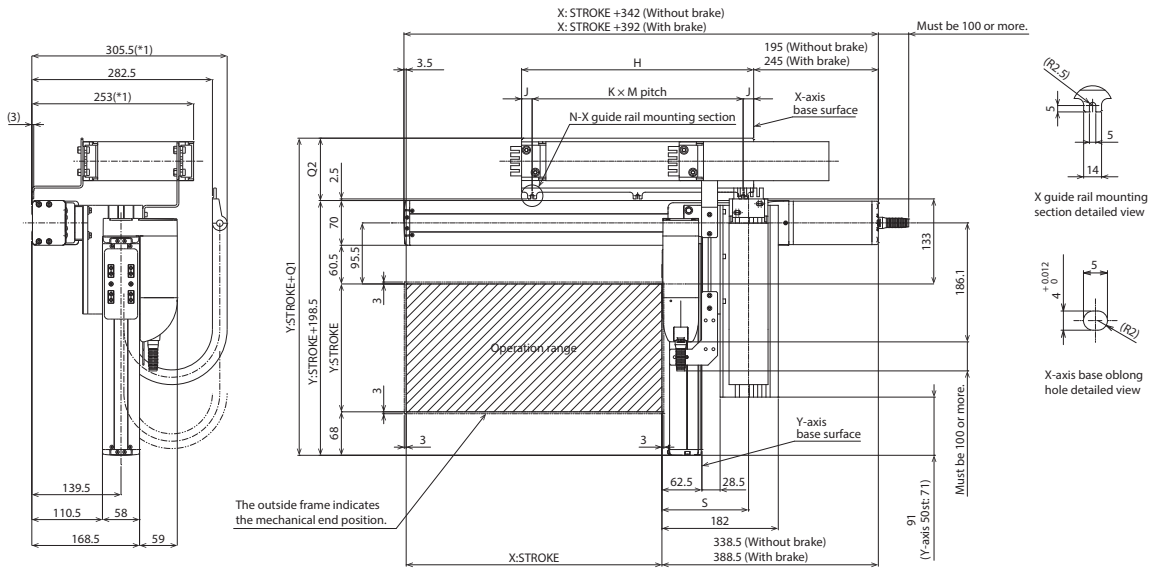
Type	Option code	Reference page
Foot plate	FTP	See P.134

Dimensions

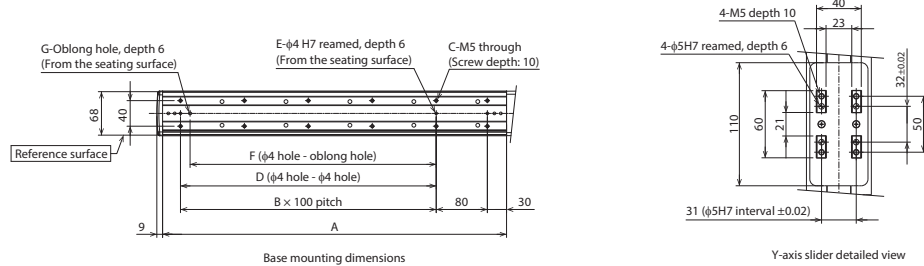
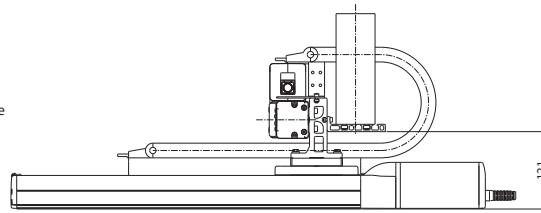
CAD drawings can be downloaded from our website.
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Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(* Notes

The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer.
When the foot plate option is selected, the unit will be shipped fixed on the foot plate. (See P.134)
Also, the moving end of the Y-axis cable track is to be fixed to a plate or the like mounted on the Y-axis slider by the customer. (See P.136)

■ Dimensions by Stroke

X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	0	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	188	213	238	263	288	313	338	363	388	413	438	463	488	513	538	563
J	16.5	16.5	14	16.5	16.5	16.5	14	16.5	14	16	15	66.5	44	56.5	69	16
K	1	1	1	2	2	2	2	2	2	3	3	3	2	2	2	3
M	155	180	210	115	127.5	140	155	165	180	127	136	110	200	200	200	177
N	2	2	2	3	3	3	3	3	3	4	4	4	3	3	3	4

Cable track size	CT	CTM	CTL	CTXL
Q1	283	296	309	326
Q2	84.5	97.5	110.5	127.5
S	129	135.5	142	-

* Dimensions Q1, Q2 and S change depending on the size of the cable track.

IK2-P6XBC3□□S

RCP6 2-axis configurations

X-axis: SA7C (straight)
Y-axis: SA6C (straight)

Model Specification Items

Series: **IK2** | Type: **P6XBC3□□S** | Encoder Type: **WA**

Configuration Direction: 1 to 4 (Refer to Robot Type Descriptions on page 3)

Speed Type: MM: X Medium Speed/Y Medium Speed; HH: X High Speed/Y High Speed; SS: X Ultra High Speed/Y Ultra High Speed

Encoder Type: WA: Battery-less Absolute

Stroke: 5: 50mm; 7: (Every 50mm)

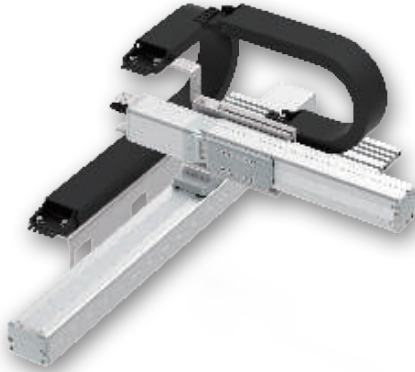
Options: Refer to Options table (1) below.

Controller: **PM1**, **PM2** (Refer to Applicable Controllers table below)

Cable Length: 1L: 1m; 3L: 3m; 5L: 5m; □L: □m

First Wiring, Second Wiring: Refer to Cable Track table below.

Options: Refer to Options table (2) below.



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

MM type: X medium speed/Y medium speed (Unit: kg)

Acceleration/deceleration (G)	Y-axis stroke (mm) 50~100 (Every 50mm)	150	200	250~400 (Every 50mm)
0.1	9	8		6
0.3	9	8		6
0.5		7		6
0.7		6		—
1		4		—

HH type: X high speed/Y high speed | SS type: X ultra high speed/Y ultra high speed

Acceleration/deceleration (G)	Y-axis stroke (mm)	MM type		SS type		
		50~200 (Every 50mm)	250~400 (Every 50mm)	50	100~200 (Every 50mm)	250~400 (Every 50mm)
0.1		5			4	
0.3		5			4	
0.5		4		3		2.5
0.7	2		—	2	1.5	—
1				1		—

* When both X and Y axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm)	50	100	150	200	250	300	350	400
50	○	○	○	○	○	○	○	○
100	○	○	○	○	○	○	○	○
150	○	○	○	○	○	○	○	○
200	○	○	○	○	○	○	○	○
250	○	○	○	○	○	○	○	○
300	○	○	○	○	○	○	○	○
350	○	○	○	○	○	○	○	○
400	○	○	○	○	○	○	○	○
450	○	○	○	○	○	○	○	○
500	○	○	○	○	○	○	○	○
550	○	○	○	○	○	○	○	○
600	○	○	○	○	○	○	○	○
650	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○
750	○	○	○	○	○	○	○	○
800	○	○	○	○	○	○	○	○

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : SA7C Y-axis : SA6C	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
PM2		MSEL	P-139
		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	N	See P.136	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item	X-axis	Y-axis
Axis configuration	RCP6-SA7C	RCP6-SA6C
Stroke (Every 50mm)	50~800mm	50~400mm
Max. speed *	MM	280mm/s
	HH	560mm/s
	SS	640mm/s
Motor size	56□ Stepper motor	42□ Stepper motor
	Ball screw lead	8mm
Drive system	MM	8mm
	HH	16mm
	SS	24mm
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options (1)

Type	Option code	Reference page	X-axis	Y-axis
Brake *	B	See P.134	○	○
Cable exit direction (Top)	CJT	See P.134	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.134	○	
Cable exit direction (Left)	CJL	See P.134	○	
Cable exit direction (Bottom)	CJB	See P.134	○	
Non-motor end specification	NM	See P.135	○	○
Slider section roller specification	SR	See P.135	○	○

* Brake option for X- and/or Y-axes increases the length of the motor unit(s). Please contact IAI for more information.

Options (2)

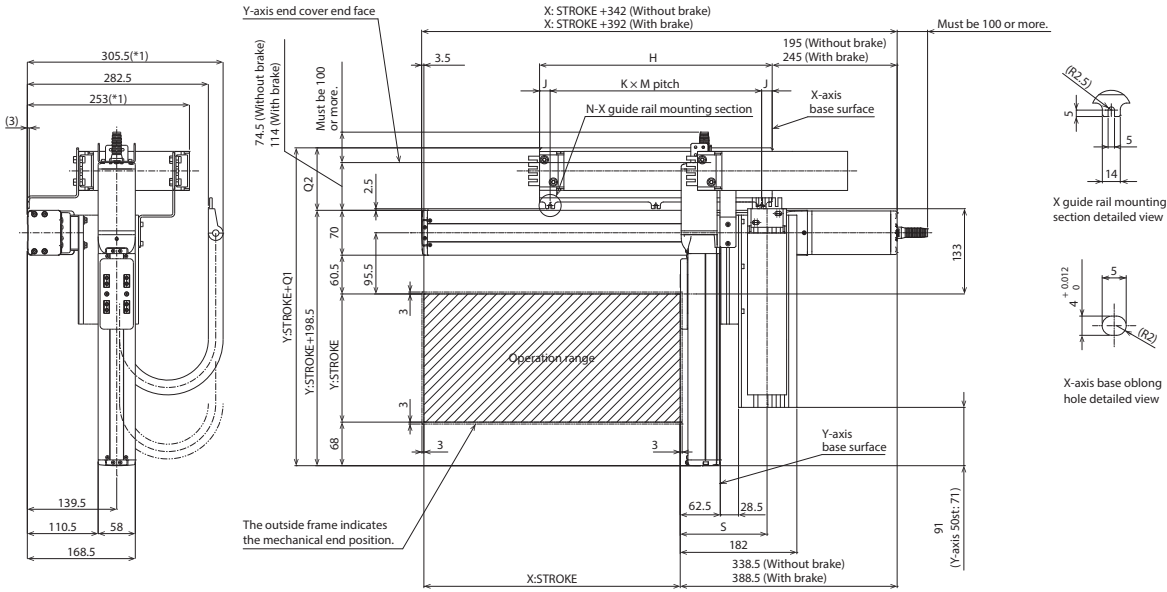
Type	Option code	Reference page
Foot plate	FTP	See P.134

Dimensions

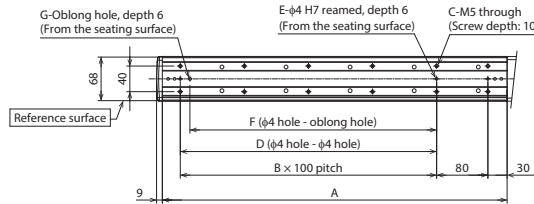
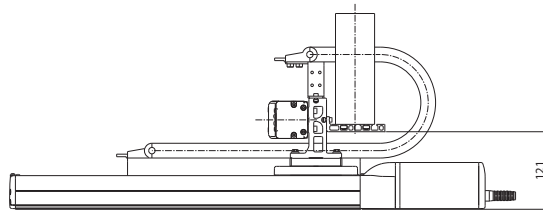
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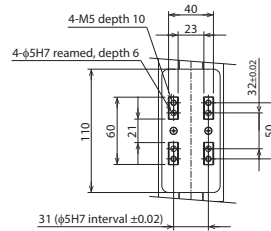
Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



Base mounting dimensions



Y-axis slider detailed view

(* Notes

The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer.
When the foot plate option is selected, the unit will be shipped fixed on the foot plate. (See P.134)
Also, the moving end of the Y-axis cable track is to be fixed to a plate or the like mounted on the Y-axis slider by the customer. (See P.136)

■ Dimensions by Stroke

X:Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	0	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	188	213	238	263	288	313	338	363	388	413	438	463	488	513	538	563
J	16.5	16.5	14	16.5	16.5	16.5	14	16.5	14	16	15	66.5	44	56.5	69	16
K	1	1	1	2	2	2	2	2	2	3	3	3	2	2	2	3
M	155	180	210	115	127.5	140	155	165	180	127	136	110	200	200	200	177
N	2	2	2	3	3	3	3	3	3	4	4	4	3	3	3	4

Cable track size	CT	CTM	CTL	CTXL
Q1	283	296	309	326
Q2	84.5	97.5	110.5	127.5
S	129	135.5	142	-

* Dimensions Q1, Q2 and S change depending on the size of the cable track.

IK2-P6XBB1□□S

RCP6 2-axis configurations

X-axis: SA8R (side-mounted)

Y-axis: SA7R (side-mounted)

Model Specification Items

Series: **IK2** | Type: **P6XBB1□□S** | Encoder Type: **WA**

Configuration Direction: 1 to 4 (Refer to Robot Type Descriptions on page 3)

Speed Type: MM: X Medium Speed/Y Medium Speed; HH: X High Speed/Y High Speed; SS: X Ultra High Speed/Y Ultra High Speed

Encoder Type: WA: Battery-less Absolute

Stroke: 5: 50mm (Every 50mm)

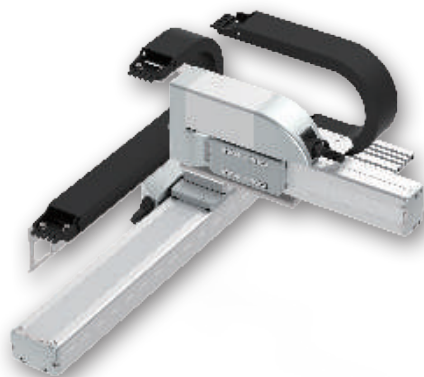
Options: Refer to Options table below.

Controller: PM1 (Refer to Applicable Controllers table below); PM2 (Refer to Applicable Controllers table below)

Cable Length: 1L: 1m; 3L: 3m; 5L: 5m; □L: □m

First Wiring: Refer to Cable Track table below.

Second Wiring: Refer to Cable Track table below.



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

MM type: X medium speed/Y medium speed (Unit: kg)

Acceleration/deceleration (G)	Y-axis stroke (mm)	50~100 (Every 50mm)	150	200	250	300~400 (Every 50mm)
0.1		16	15	12.5	9	8
0.3		16	15	12.5	9	8
0.5			10		9	8
0.7		6		5.5		—
1		6		5.5		—

HH type: X high speed/Y high speed

Acceleration/deceleration (G)	Y-axis stroke (mm)	50~150 (Every 50mm)	200	250	300~400 (Every 50mm)
0.1		11	10.5	9	8
0.3			8		
0.5			5		
0.7		4			—

SS type: X ultra high speed/Y ultra high speed

Acceleration/deceleration (G)	Y-axis stroke (mm)	50~400 (Every 50mm)
0.1		3
0.3		1.5

* When both X and Y axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm)	50	100	150	200	250	300	350	400
50	○	○	○	○	○	○	○	○
100	○	○	○	○	○	○	○	○
150	○	○	○	○	○	○	○	○
200	○	○	○	○	○	○	○	○
250	○	○	○	○	○	○	○	○
300	○	○	○	○	○	○	○	○
350	○	○	○	○	○	○	○	○
400	○	○	○	○	○	○	○	○
450	○	○	○	○	○	○	○	○
500	○	○	○	○	○	○	○	○
550	○	○	○	○	○	○	○	○
600	○	○	○	○	○	○	○	○
650	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○
750	○	○	○	○	○	○	○	○
800	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○
900	○	○	○	○	○	○	○	○
950	○	○	○	○	○	○	○	○
1000	○	○	○	○	○	○	○	○
1050	○	○	○	○	○	○	○	○
1100	○	○	○	○	○	○	○	○

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : SA8R	PCON-CFB/CGFB	P-149
		MSEL-PCF/PGF	P-139
	Y-axis : SA7R	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
MCON-LC/LCG			
PM2	X-axis : SA8R	RCON-PCF	P-159
	Y-axis : SA7R	RCON-PC	

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

- Note 1. All-axis standard cable is used.
- Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
- Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	N	See P.136	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item	X-axis	Y-axis
Axis configuration	RCP6-SA8R	RCP6-SA7R
Stroke (Every 50mm)	50~1100mm	50~400mm
Max. speed *	MM	300mm/s
	HH	400mm/s
	SS	650mm/s
Motor size	56□ High thrust stepper motor	56□ Stepper motor
Ball screw lead	MM	10mm
	HH	20mm
	SS	30mm
Drive system	Ball screw Ø16mm rolled C10	Ball screw Ø12mm rolled C10
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options

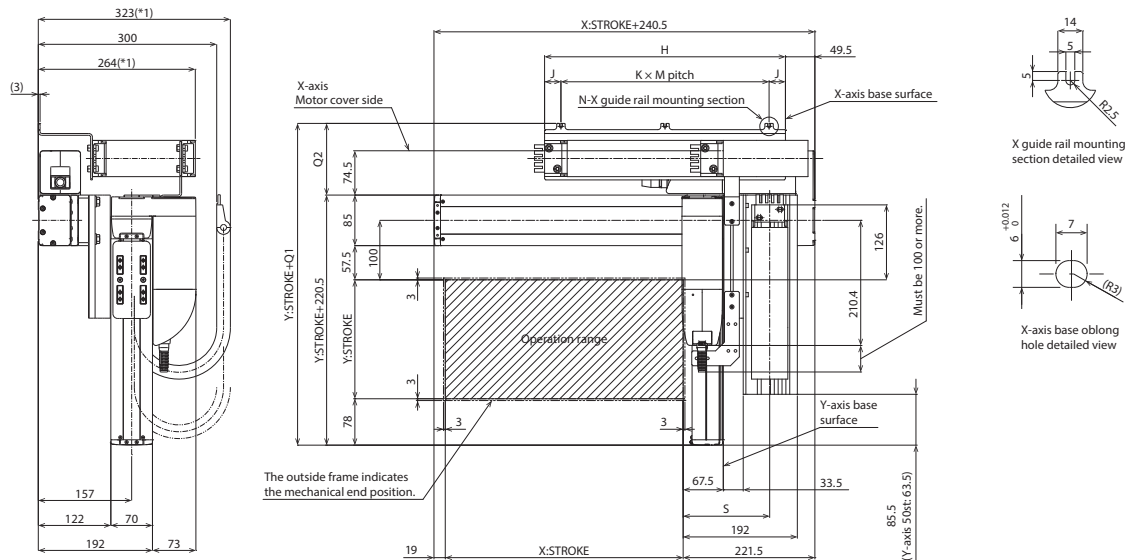
Type	Option code	Reference page	X-axis	Y-axis
Brake	B	See P.134	○	○
Non-motor end specification	NM	See P.135	○	○
Slider section roller specification	SR	See P.135	○	○

Dimensions

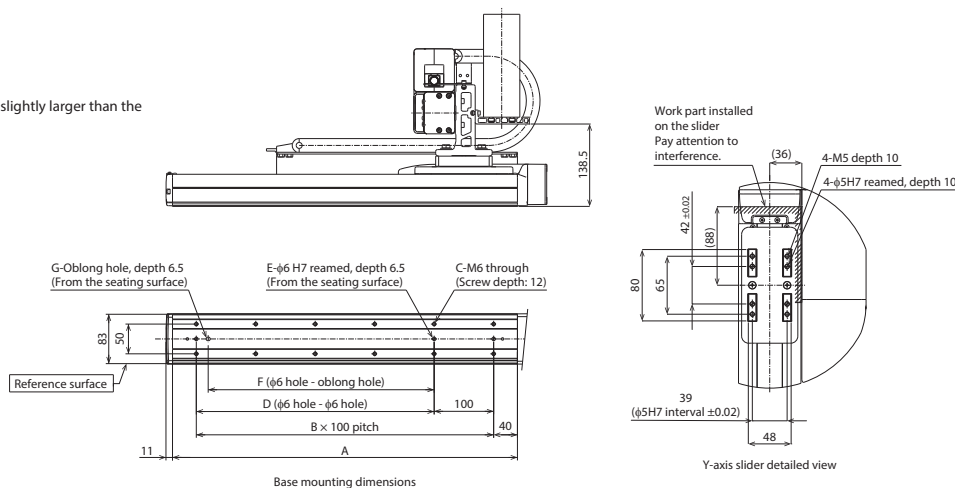
CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(*) Notes

The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer.
Also, the moving end of the Y-axis cable track is to be fixed to a plate or the like mounted on the Y-axis slider by the customer. (See P.136)

■ Dimensions by Stroke

X:Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280
B	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1000	1000	1100
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980	1080
G	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	230	255	280	305	330	355	380	405	430	455	480	505	530	555	580	605	630	655	680	705	730	755
J	30	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5
K	1	1	1	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4
M	170	200	225	125	137.5	150	162.5	175	187.5	200	145	150	125	150	150	150	175	200	175	165	155	175
N	2	2	2	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5	5	5

Cable track size	CT	CTM	CTL	CTXL
Q1	328	341	354	371
Q2	107.5	120.5	133.5	150.5
S	139	145.5	152	-

* Dimensions Q1, Q2 and S change depending on the size of the cable track.

IK2-P6XBB2□□S

RCP6 2-axis configurations

X-axis: SA8C (straight)

Y-axis: SA7R (side-mounted)

Model Specification Items

Series: **IK2** | Type: **P6XBB2□□S** | Encoder Type: **WA**

Configuration Direction: 1 to 4 (Refer to Robot Type Descriptions on page 3)

Speed Type: MM: X Medium Speed/Y Medium Speed; HH: X High Speed/Y High Speed; SS: X Ultra High Speed/Y Ultra High Speed

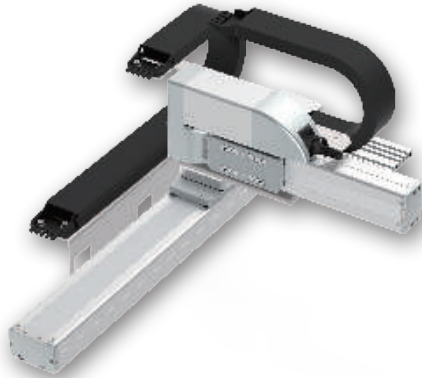
Encoder Type: WA: Battery-less Absolute

First Axis (X-axis): Stroke: 5: 50mm; Options: Refer to Options table (1) below.

Second Axis (Y-axis): Controller: **PM1** (Refer to Applicable Controllers table below); **PM2** (Refer to Applicable Controllers table below).

Cable: Cable Length: 1L: 1m; 3L: 3m; 5L: 5m; □L: □m

Options: Refer to Options table (2) below.



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

MM type: X medium speed/Y medium speed (Unit: kg)

Acceleration/deceleration (G)	Y-axis stroke (mm)	50~100 (Every 50mm)	150	200	250	300~400 (Every 50mm)
0.1		16	15	12.5	9	8
0.3		16	15	12.5	9	8
0.5			10		9	8
0.7		6		5.5		-
1		6		5.5		-

HH type: X high speed/Y high speed

Acceleration/deceleration (G)	Y-axis stroke (mm)	50~150 (Every 50mm)	200	250	300~400 (Every 50mm)
0.1		11	10.5	9	8
0.3			8		
0.5			5		
0.7		4			-

SS type: X ultra high speed/Y ultra high speed

Acceleration/deceleration (G)	Y-axis stroke (mm)	50~400 (Every 50mm)
0.1		3
0.3		1.5

* When both X and Y axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke		50	100	150	200	250	300	350	400
Y-axis stroke (mm)	50	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○	○
	750	○	○	○	○	○	○	○	○
	800	○	○	○	○	○	○	○	○
	850	○	○	○	○	○	○	○	○
	900	○	○	○	○	○	○	○	○
	950	○	○	○	○	○	○	○	○
1000	○	○	○	○	○	○	○	○	
1050	○	○	○	○	○	○	○	○	
1100	○	○	○	○	○	○	○	○	

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : SA8C	PCON-CFB/CGFB	P-149
		MSEL-PCF/PGF	P-139
	Y-axis : SA7R	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
PM2	X-axis : SA8C	MCON-LC/LCG	P-139
		MSEL	P-139
	Y-axis : SA7R	RCON-PCF	P-159
		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length		
Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track					
Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)	
Without cable track (cable only)	N	See P.136	○	○	
Cable track S size (inner width: 38mm)	CT		○	○	
Cable track M size (inner width: 50mm)	CTM		○	○	
Cable track L size (inner width: 63mm)	CTL		○	○	
Cable track XL size (inner width: 80mm) *	CTXL		○		Cannot be selected *

* Only the first wiring can be selected

Specifications		
Item	X-axis	Y-axis
Axis configuration	RCP6-SA8C	RCP6-SA7R
Stroke (Every 50mm)	50~1100mm	50~400mm
Max. speed *	MM	300mm/s
	HH	400mm/s
	SS	650mm/s
Motor size	56□ High thrust stepper motor	56□ Stepper motor
	640mm/s	640mm/s
Ball screw lead	MM	10mm
	HH	20mm
	SS	30mm
Drive system	Ball screw Ø16mm rolled C10	Ball screw Ø12mm rolled C10
	Ball screw Ø16mm rolled C10	Ball screw Ø12mm rolled C10
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options (1)				
Type	Option code	Reference page	X-axis	Y-axis
Brake *	B	See P.134	○	○
Cable exit direction (Top)	CJT	See P.134	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.134	○	
Cable exit direction (Left)	CJL	See P.134	○	
Cable exit direction (Bottom)	CJB	See P.134	○	
Non-motor end specification	NM	See P.135	○	○
Slider section roller specification	SR	See P.135	○	○

* Brake option for X-axis increases the length of the motor unit. Please contact IAI for more information.

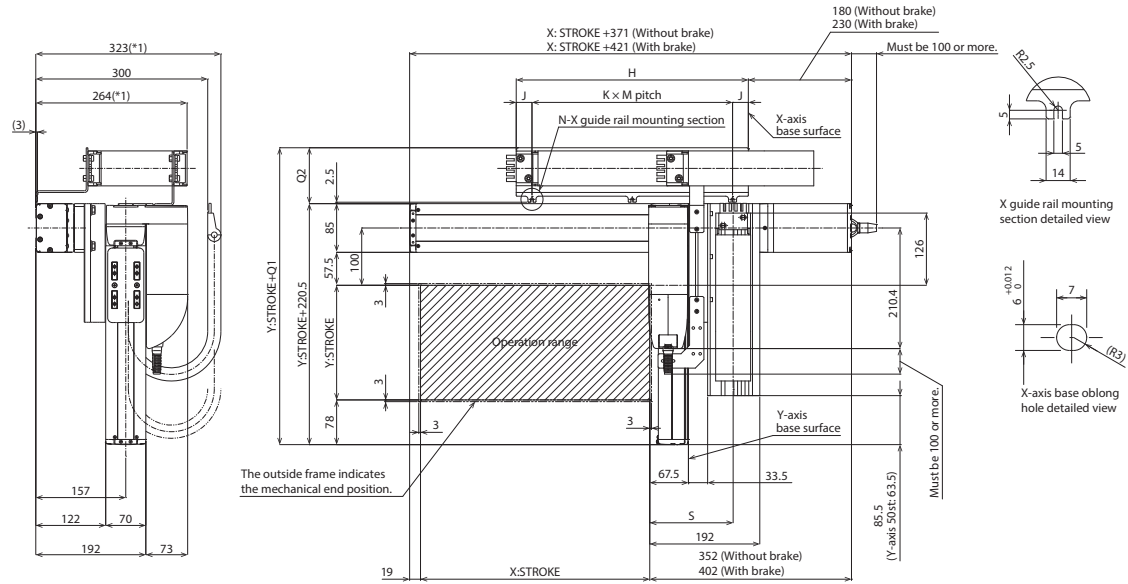
Options (2)		
Type	Option code	Reference page
Foot plate	FTP	See P.134

Dimensions

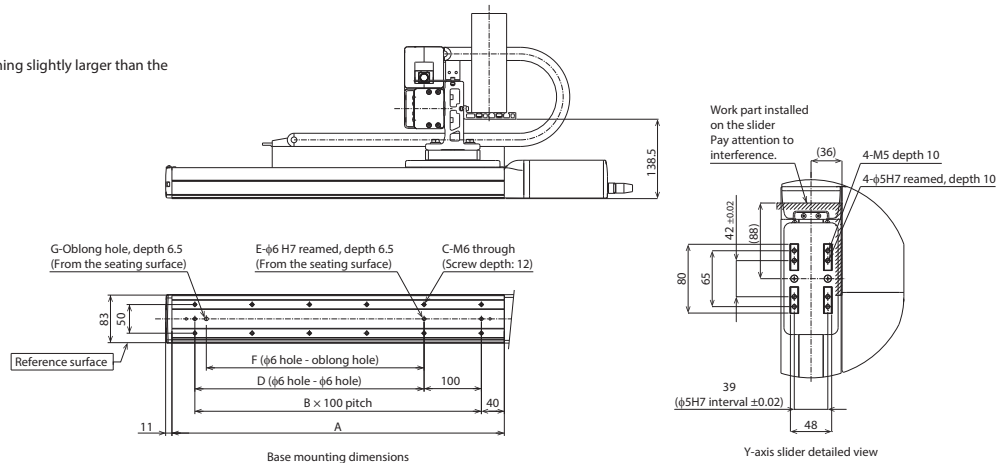
CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(* Notes

The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer.
When the foot plate option is selected, the unit will be shipped fixed on the foot plate. (See P.134)
Also, the moving end of the Y-axis cable track is to be fixed to a plate or the like mounted on the Y-axis slider by the customer. (See P.136)

■ Dimensions by Stroke

X:Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280
B	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1000	1000	1100
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980	1080
G	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	230	255	280	305	330	355	380	405	430	455	480	505	530	555	580	605	630	655	680	705	730	755
J	30	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	22.5	27.5	27.5	27.5	22.5	27.5	27.5	27.5	27.5	22.5	27.5	27.5
K	1	1	1	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4
M	170	200	225	125	137.5	150	162.5	175	187.5	200	145	150	125	150	150	150	175	200	175	165	155	175
N	2	2	2	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5	5	5

Cable track size	CT	CTM	CTL	CTXL
Q1	305	318	331	348
Q2	84.5	97.5	110.5	127.5
S	139	145.5	152	-

* Dimensions Q1, Q2 and S change depending on the size of the cable track.

IK2-P6XBB3□□S

RCP6 2-axis configurations

X-axis: SA8C (straight)
Y-axis: SA7C (straight)

Model Specification Items

Series: **IK2** | Type: **P6XBB3□□S** | Encoder Type: **WA**

Configuration Direction: 1 to 4 (Refer to Robot Type Descriptions on page 3)

Speed Type: MM: X Medium Speed/Y Medium Speed; HH: X High Speed/Y High Speed; SS: X Ultra High Speed/Y Ultra High Speed

Encoder Type: WA: Battery-less Absolute

Stroke: 5: 50mm (Every 50mm)

Options: Refer to Options table (1) below.

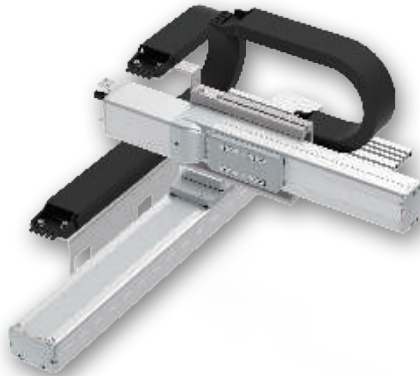
Controller: **PM1** (Refer to Applicable Controllers table below); **PM2** (Refer to Applicable Controllers table below)

Cable Length: 1L: 1m; 3L: 3m; 5L: 5m; □L: □m

First Wiring: Refer to Cable Track table below.

Second Wiring: Refer to Cable Track table below.

Options: Refer to Options table (2) below.



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ **MM type: X medium speed/Y medium speed** (Unit: kg)

Acceleration/deceleration (G)	Y-axis stroke (mm)	50~100 (Every 50mm)	150	200	250	300~400 (Every 50mm)
0.1		16	15	12.5	9	8
0.3		16	15	12.5	9	8
0.5			10		9	8
0.7		6		5.5		—
1		6		5.5		—

■ **HH type: X high speed/Y high speed**

Acceleration/deceleration (G)	Y-axis stroke (mm)	50~150 (Every 50mm)	200	250	300~400 (Every 50mm)
0.1		11	10.5	9	8
0.3			8		
0.5			5		
0.7		4			—

■ **SS type: X ultra high speed/Y ultra high speed**

Acceleration/deceleration (G)	Y-axis stroke (mm)	50~400 (Every 50mm)
0.1		3
0.3		1.5

* When both X and Y axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm)	50	100	150	200	250	300	350	400
50	○	○	○	○	○	○	○	○
100	○	○	○	○	○	○	○	○
150	○	○	○	○	○	○	○	○
200	○	○	○	○	○	○	○	○
250	○	○	○	○	○	○	○	○
300	○	○	○	○	○	○	○	○
350	○	○	○	○	○	○	○	○
400	○	○	○	○	○	○	○	○
450	○	○	○	○	○	○	○	○
500	○	○	○	○	○	○	○	○
550	○	○	○	○	○	○	○	○
600	○	○	○	○	○	○	○	○
650	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○
750	○	○	○	○	○	○	○	○
800	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○
900	○	○	○	○	○	○	○	○
950	○	○	○	○	○	○	○	○
1000	○	○	○	○	○	○	○	○
1050	○	○	○	○	○	○	○	○
1100	○	○	○	○	○	○	○	○

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : SA8C	PCON-CFB/CGFB	P-149
		MSEL-PCF/PGF	P-139
	Y-axis : SA7C	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
PM2	X-axis : SA8C	MCON-LC/LCG	P-139
		MSEL	P-139
	Y-axis : SA7C	RCON-PCF	P-159
		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	N	See P.136	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item	X-axis	Y-axis
Axis configuration	RCP6-SA8C	RCP6-SA7C
Stroke (Every 50mm)	50~1100mm	50~400mm
Max. speed *	MM	300mm/s
	HH	400mm/s
	SS	650mm/s
Motor size	56□ High thrust stepper motor	56□ Stepper motor
	640mm/s	640mm/s
Ball screw lead	MM	10mm
	HH	20mm
	SS	30mm
Drive system	Ball screw Φ 16mm rolled C10	Ball screw Φ 12mm rolled C10
	Positioning repeatability	\pm 0.01mm
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options (1)

Type	Option code	Reference page	X-axis	Y-axis
Brake *	B	See P.134	○	○
Cable exit direction (Top)	CJT	See P.134	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.134	○	
Cable exit direction (Left)	CJL	See P.134	○	
Cable exit direction (Bottom)	CJB	See P.134	○	
Non-motor end specification	NM	See P.135	○	○
Slider section roller specification	SR	See P.135	○	○

* Brake option for X- and/or Y-axes increases the length of the motor unit(s). Please contact IAI for more information.

Options (2)

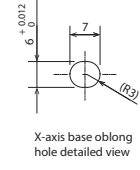
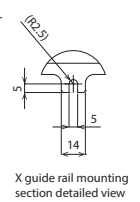
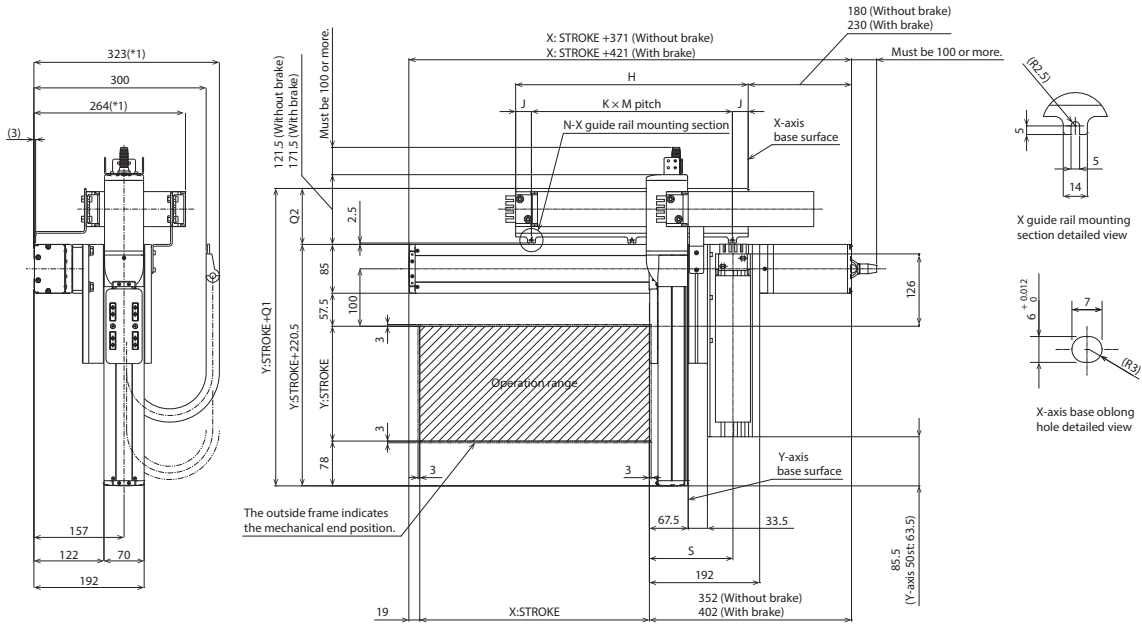
Type	Option code	Reference page
Foot plate	FTP	See P.134

Dimensions

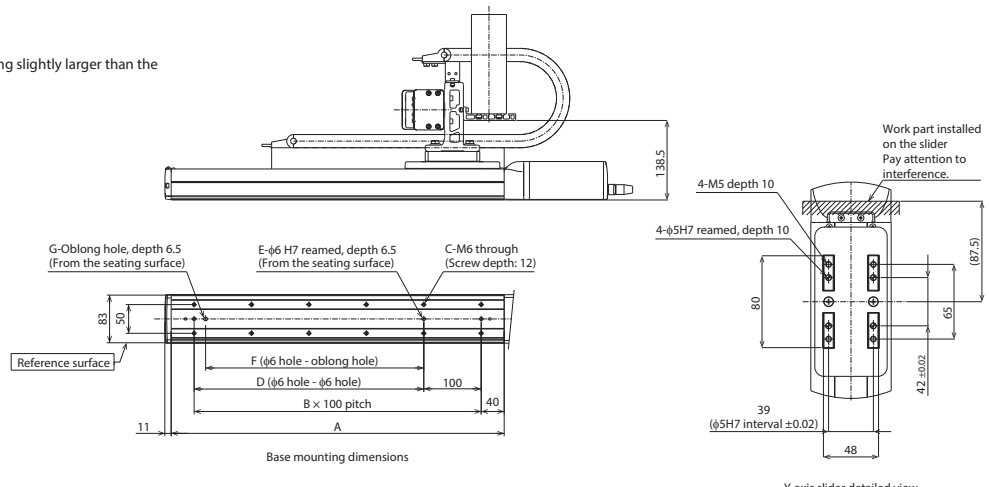
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www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(* Notes)
 The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer.
 When the foot plate option is selected, the unit will be shipped fixed on the foot plate. (See P.134)
 Also, the moving end of the Y-axis cable track is to be fixed to a plate or the like mounted on the Y-axis slider by the customer. (See P.136)

■ Dimensions by Stroke

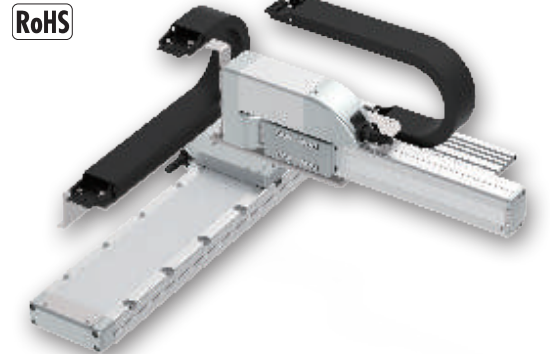
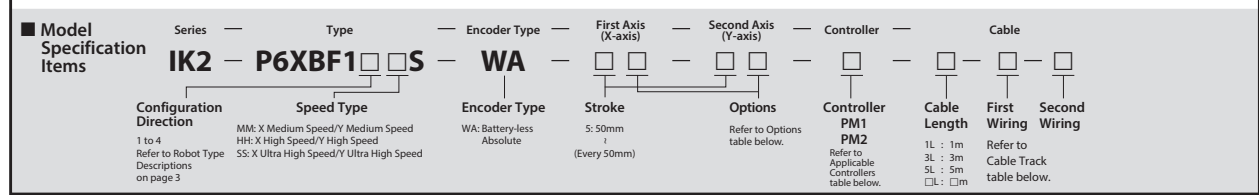
X:Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280
B	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1000	1000	1100
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980	1080
G	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	230	255	280	305	330	355	380	405	430	455	480	505	530	555	580	605	630	655	680	705	730	755
J	30	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	22.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	22.5	27.5
K	1	1	1	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4
M	170	200	225	125	137.5	150	162.5	175	187.5	200	145	150	125	150	150	150	175	200	175	165	155	175
N	2	2	2	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5	5	5

Cable track size	CT	CTM	CTL	CTXL
Q1	305	318	331	348
Q2	84.5	97.5	110.5	127.5
S	139	145.5	152	-

* Dimensions Q1, Q2 and S change depending on the size of the cable track.

IK2-P6XBF1□□S RCP6 2-axis configurations

X-axis: WSA14R (side-mounted)
Y-axis: SA7R (side-mounted)



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Stroke

Y-axis stroke (mm)	50	100	150	200	250	300	350	400
50	○	○	○	○	○	○	○	○
100	○	○	○	○	○	○	○	○
150	○	○	○	○	○	○	○	○
200	○	○	○	○	○	○	○	○
250	○	○	○	○	○	○	○	○
300	○	○	○	○	○	○	○	○
350	○	○	○	○	○	○	○	○
400	○	○	○	○	○	○	○	○
450	○	○	○	○	○	○	○	○
500	○	○	○	○	○	○	○	○
550	○	○	○	○	○	○	○	○
600	○	○	○	○	○	○	○	○
650	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○
750	○	○	○	○	○	○	○	○
800	○	○	○	○	○	○	○	○

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Specifications

Item	X-axis	Y-axis
Axis configuration	RCP6-WSA14R	RCP6-SA7R
Stroke (Every 50mm)	50~800mm	50~400mm
Max. speed *	MM	210mm/s
	HH	420mm/s
	SS	560mm/s
	56□ Stepper motor	56□ Stepper motor
Ball screw lead	MM	8mm
	HH	16mm
	SS	24mm
Drive system	Ball screw Φ12mm rolled C10	Ball screw Φ12mm rolled C10
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Payload by Acceleration

MM type: X medium speed/Y medium speed (Unit: kg)

Acceleration/deceleration (G)	Y-axis stroke (mm)	50~100	150~200	250~300	350	400
		(Every 50mm)	(Every 50mm)	(Every 50mm)		
0.1		16	15	12.5	12	10.5
0.3		16	15	12.5	12	10.5
0.5		12				10.5
0.7		9.5				

HH type: X high speed/Y high speed

Acceleration/deceleration (G)	Y-axis stroke (mm)	50~100	150~200	350~400
		(Every 50mm)	(Every 50mm)	(Every 50mm)
0.1		8	7.5	
0.3		8	7.5	
0.5		5	4.5	4
0.7		3	2.5	2

SS type: X ultra high speed/Y ultra high speed

Acceleration/deceleration (G)	Y-axis stroke (mm)	50~100	150~300	350~400
		(Every 50mm)	(Every 50mm)	(Every 50mm)
0.1		6	5.5	5
0.3		5.5	5	4.5
0.5		3	2.5	2

* When both X and Y axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis: WSA14R	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
	Y-axis: SA7R	MCON-C/CG	P-153
		MCON-LC/LCG	
PM2	SA7R	MSEL	P-139
		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	N	See P.136	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Options

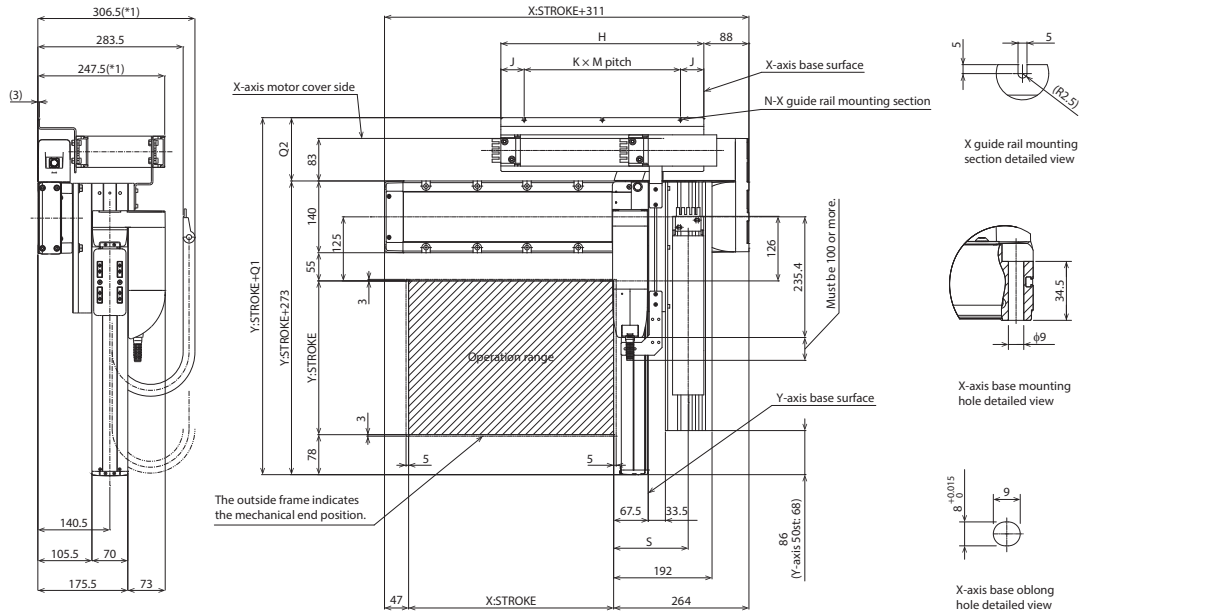
Type	Option code	Reference page	X-axis	Y-axis
Brake	B	See P.134	○	○
Non-motor end specification	NM	See P.135	○	○
Slider section roller specification	SR	See P.135	○	○

Dimensions

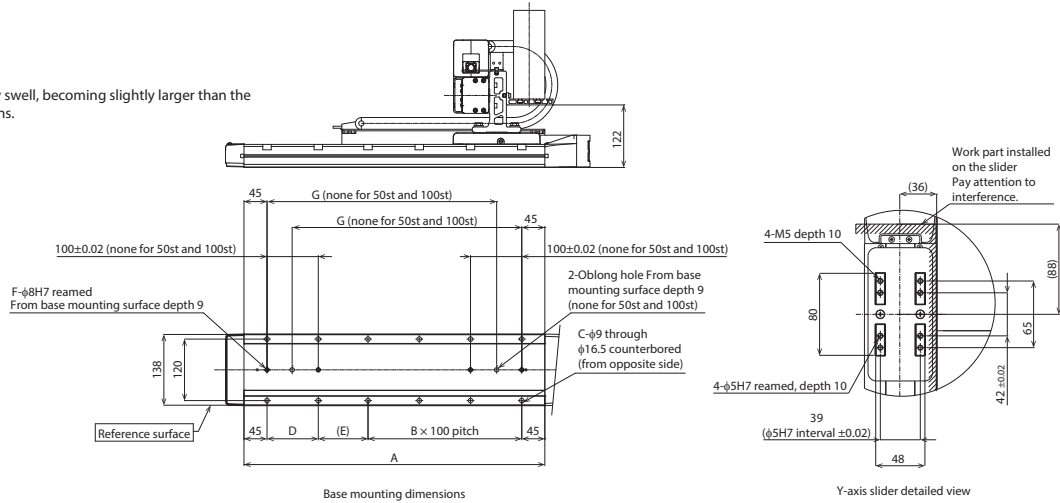
CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(* Notes

The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer.
Also, the moving end of the Y-axis cable track is to be fixed to a plate or the like mounted on the Y-axis slider by the customer. (See P.136)

■ Dimensions by Stroke

X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	237	287	337	387	437	487	537	587	637	687	737	787	837	887	937	987
B	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
C	4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20
D	-	-	100	100	100	100	100	100	100	100	100	100	100	100	100	100
E	147	197	47	97	47	97	47	97	47	97	47	97	47	97	47	97
F	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4
G	-	-	198	248	298	348	398	448	498	548	598	648	698	748	798	848
H	221	246	271	296	321	346	371	396	421	446	471	496	521	546	571	596
J	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	43	48	45.5	43	43	45.5	43
K	1	1	2	2	2	2	2	2	3	3	3	3	3	4	4	4
M	130	155	90	102.5	115	127.5	140	152.5	110	120	125	135	145	115	120	127.5
N	2	2	3	3	3	3	3	3	4	4	4	4	4	5	5	5

Cable track size	CT	CTM	CTL	CTXL
Q1	383.5	396.5	409.5	426.5
Q2	110.5	123.5	136.5	153.5
S	139	145.5	152	-

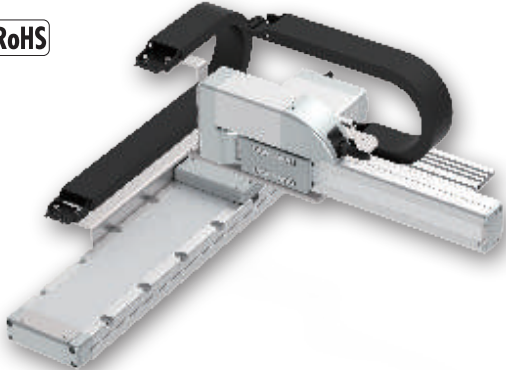
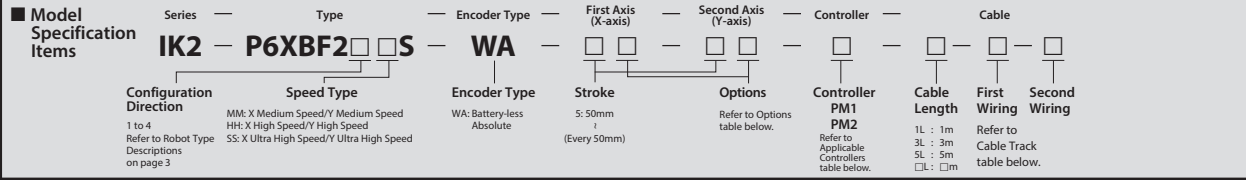
* Dimensions Q1, Q2 and S change depending on the size of the cable track.

IK2-P6XBF2□□S

RCP6 2-axis configurations

X-axis: WSA14C (straight)

Y-axis: SA7R (side-mounted)



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

MM type: X medium speed/Y medium speed

(Unit: kg)

Acceleration/deceleration (G)	Y-axis stroke (mm)	50~100	150~200	250~300	350	400
		(Every 50mm)	(Every 50mm)	(Every 50mm)		
0.1		16	15	12.5	12	10.5
0.3		16	15	12.5	12	10.5
0.5		12				10.5
0.7		9.5				

HH type: X high speed/Y high speed

SS type: X ultra high speed/Y ultra high speed

Acceleration/deceleration (G)	Y-axis stroke (mm)	50~100	150~200	350~400	Y-axis stroke (mm)	50~100	150~300	350~400
		(Every 50mm)	(Every 50mm)	(Every 50mm)		(Every 50mm)	(Every 50mm)	(Every 50mm)
0.1		8		7.5	0.1	6	5.5	5
0.3		8		7.5	0.3	5.5	5	4.5
0.5		5	4.5	4	0.5	3	2.5	2
0.7		3	2.5	2				

* When both X and Y axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke		50	100	150	200	250	300	350	400
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○	○
	750	○	○	○	○	○	○	○	○
	800	○	○	○	○	○	○	○	○

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis: WSA14C	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
PM2	Y-axis: SA7R	MSEL	P-139
		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length		
Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track				
Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	N	See P.136	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications		
Item	X-axis	Y-axis
Axis configuration	RCP6-WSA14C	RCP6-SA7R
Stroke (Every 50mm)	50~800mm	50~400mm
Max. speed *	MM	210mm/s
	HH	420mm/s
	SS	560mm/s
		640mm/s
Motor size	56□ Stepper motor	56□ Stepper motor
Ball screw lead	MM	8mm
	HH	16mm
	SS	24mm
Drive system	Ball screw Φ12mm rolled C10	Ball screw Φ12mm rolled C10
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options				
Type	Option code	Reference page	X-axis	Y-axis
Brake *	B	See P.134	○	○
Cable exit direction (Top)	CJT	See P.134	○	○
Cable exit direction (Right)	CJR	See P.134	○	Cannot be selected
Cable exit direction (Left)	CJL	See P.134	○	
Cable exit direction (Bottom)	CJB	See P.134	○	
Non-motor end specification	NM	See P.135	○	
Slider section roller specification	SR	See P.135	○	○

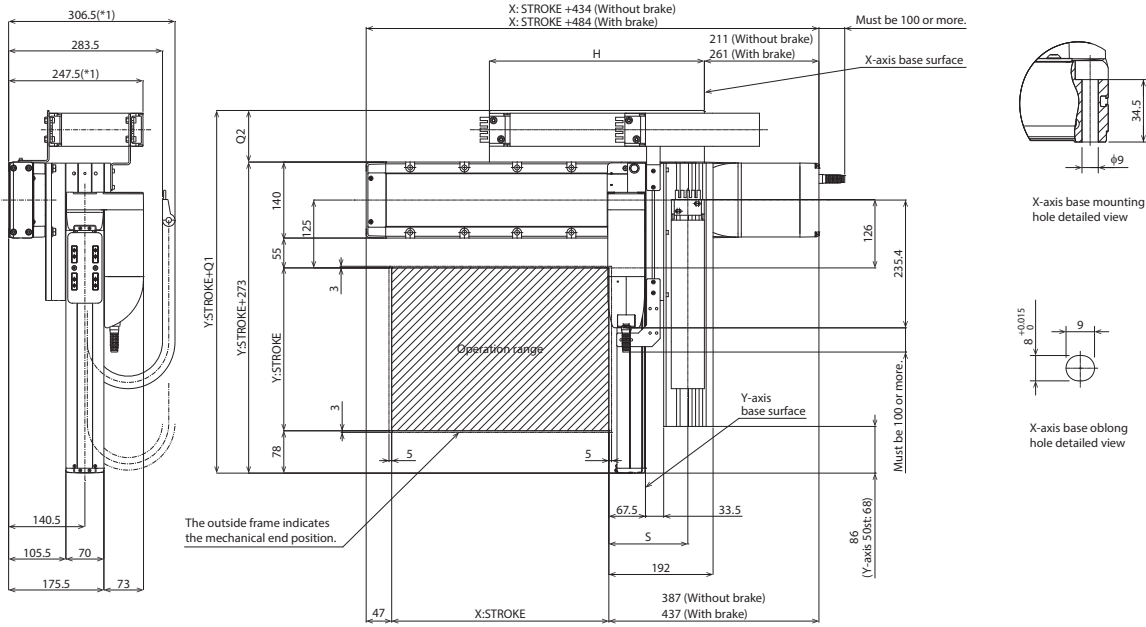
* Brake option for X-axis increases the length of the motor unit. Please contact IAI for more information.

Dimensions

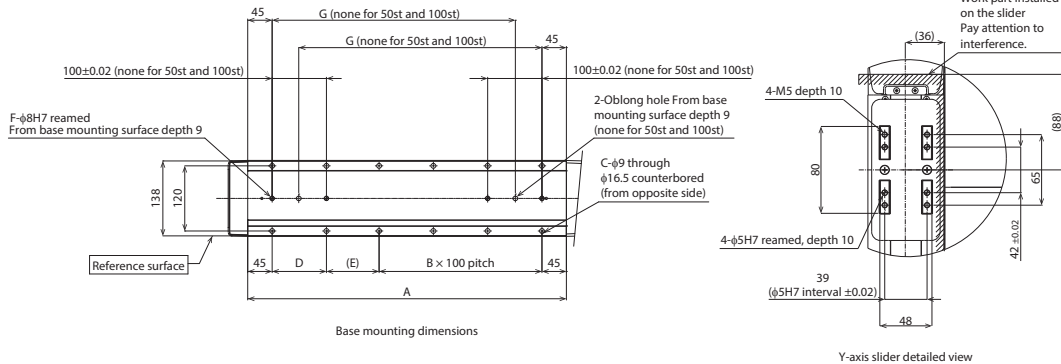
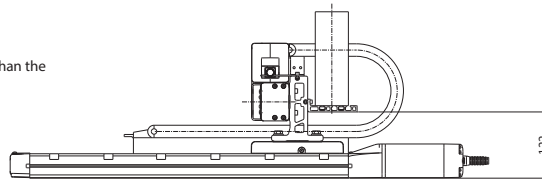
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Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(*) Notes

The X-axis cable track guide rail is fixed on the X-axis body. Also, the moving end of the Y-axis cable track is to be fixed to a plate or the like mounted on the Y-axis slider by the customer. (See P.136)

■ Dimensions by Stroke

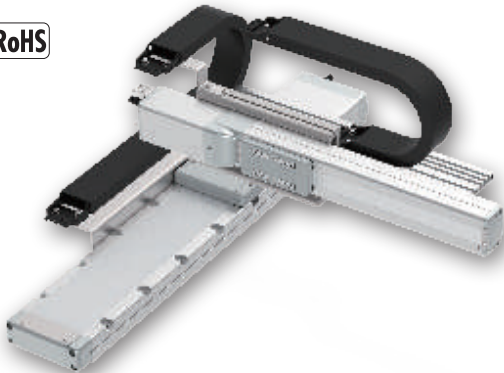
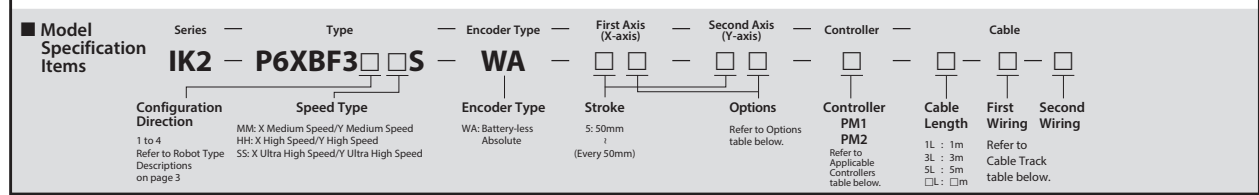
X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	237	287	337	387	437	487	537	587	637	687	737	787	837	887	937	987
B	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
C	4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20
D	-	-	100	100	100	100	100	100	100	100	100	100	100	100	100	100
E	147	197	47	97	47	97	47	97	47	97	47	97	47	97	47	97
F	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4
G	-	-	198	248	298	348	398	448	498	548	598	648	698	748	798	848
H	221	246	271	296	321	346	371	396	421	446	471	496	521	546	571	596

Cable track size	CT	CTM	CTL	CTXL
Q1	356	368	383	401
Q2	83	95	110	128
S	139	145.5	152	-

* Dimensions Q1, Q2 and S change depending on the size of the cable track.

IK2-P6XBF3□□S

RCP6 2-axis configurations X-axis: WSA14C (straight) Y-axis: SA7C (straight)



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

MM type: X medium speed/Y medium speed (Unit: kg)

Acceleration/deceleration (G)	Y-axis stroke (mm)	50~100	150~200	250~300	350	400
		(Every 50mm)	(Every 50mm)	(Every 50mm)		
0.1		16	15	12.5	12	10.5
0.3		16	15	12.5	12	10.5
0.5		12				10.5
0.7		9.5				

HH type: X high speed/Y high speed SS type: X ultra high speed/Y ultra high speed

Acceleration/deceleration (G)	Y-axis stroke (mm)	50~100	150~200	350~400	Y-axis stroke (mm)	50~100	150~300	350~400
		(Every 50mm)	(Every 50mm)	(Every 50mm)		(Every 50mm)	(Every 50mm)	(Every 50mm)
0.1		8	7.5		0.1	6	5.5	5
0.3		8	7.5		0.3	5.5	5	4.5
0.5		5	4.5	4	0.5	3	2.5	2
0.7		3	2.5	2				

* When both X and Y axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm)	50	100	150	200	250	300	350	400
50	○	○	○	○	○	○	○	○
100	○	○	○	○	○	○	○	○
150	○	○	○	○	○	○	○	○
200	○	○	○	○	○	○	○	○
250	○	○	○	○	○	○	○	○
300	○	○	○	○	○	○	○	○
350	○	○	○	○	○	○	○	○
400	○	○	○	○	○	○	○	○
450	○	○	○	○	○	○	○	○
500	○	○	○	○	○	○	○	○
550	○	○	○	○	○	○	○	○
600	○	○	○	○	○	○	○	○
650	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○
750	○	○	○	○	○	○	○	○
800	○	○	○	○	○	○	○	○

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis: WSA14C	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
	Y-axis: SA7C	MCON-C/CG	P-153
		MCON-LC/LCG	
PM2		MSEL	P-139
		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	N	See P.136	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item	X-axis	Y-axis
Axis configuration	RCP6-WSA14C	RCP6-SA7C
Stroke (Every 50mm)	50~800mm	50~400mm
Max. speed *	MM	210mm/s
	HH	420mm/s
	SS	560mm/s
		640mm/s
Motor size	56□ Stepper motor	56□ Stepper motor
Ball screw lead	MM	8mm
	HH	16mm
	SS	24mm
		24mm
Drive system	Ball screw Φ12mm rolled C10	Ball screw Φ12mm rolled C10
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options

Type	Option code	Reference page	X-axis	Y-axis
Brake *	B	See P.134	○	○
Cable exit direction (Top)	CJT	See P.134	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.134	○	
Cable exit direction (Left)	CJL	See P.134	○	
Cable exit direction (Bottom)	CJB	See P.134	○	
Non-motor end specification	NM	See P.135	○	○
Slider section roller specification	SR	See P.135	○	○

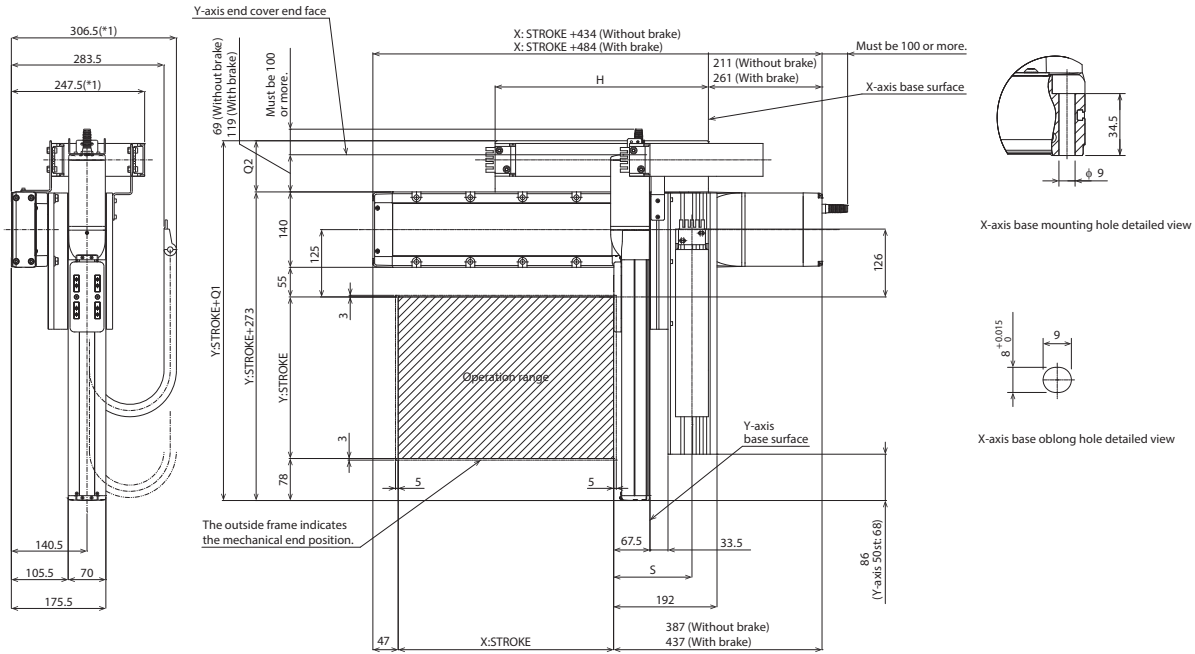
* Brake option for X- and/or Y-axes increases the length of the motor unit(s). Please contact IAI for more information.

Dimensions

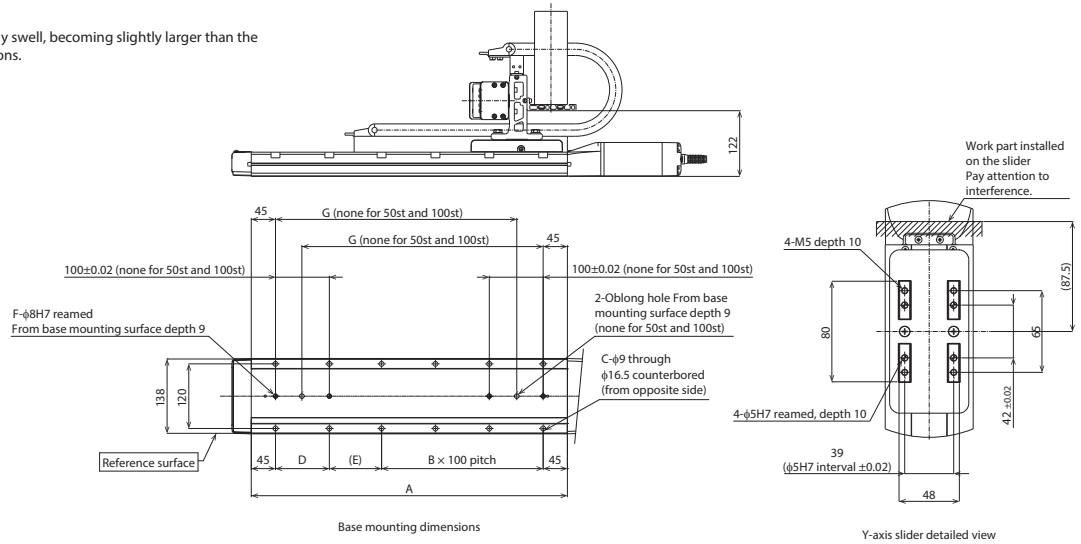
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Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(*) Notes

The X-axis cable track guide rail is fixed on the X-axis body.
Also, the moving end of the Y-axis cable track is to be fixed to a plate or the like mounted on the Y-axis slider by the customer. (See P.136)

■ Dimensions by Stroke

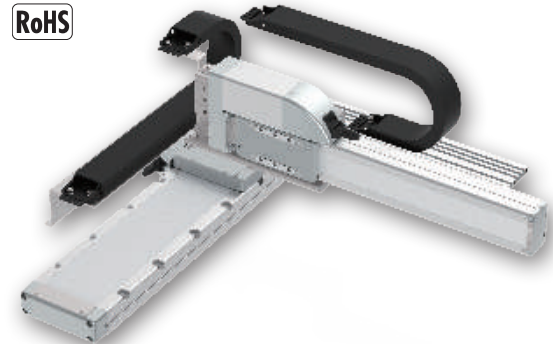
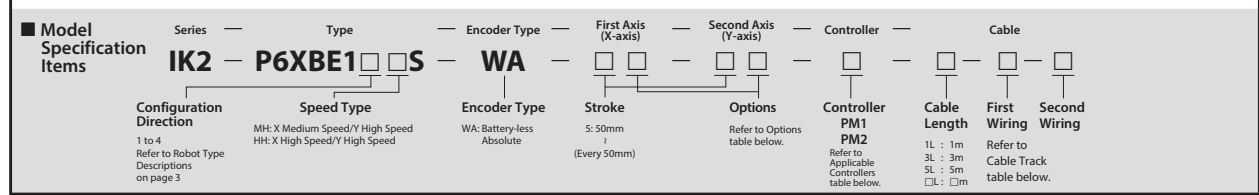
X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	237	287	337	387	437	487	537	587	637	687	737	787	837	887	937	987
B	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
C	4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20
D	-	-	100	100	100	100	100	100	100	100	100	100	100	100	100	100
E	147	197	247	297	347	397	447	497	547	597	647	697	747	797	847	897
F	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4
G	-	-	198	248	298	348	398	448	498	548	598	648	698	748	798	848
H	221	246	271	296	321	346	371	396	421	446	471	496	521	546	571	596

Cable track size	CT	CTM	CTL	CTXL
Q1	356	368	383	401
Q2	83	95	110	128
S	139	145.5	152	-

* Dimensions Q1, Q2 and S change depending on the size of the cable track.

IK2-P6XBE1□□S

RCP6 2-axis configurations X-axis: WSA16R (side-mounted) Y-axis: SA8R (side-mounted)



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

MH type: X medium speed/Y high speed (Unit: kg)

Acceleration/deceleration (G)	Y-axis stroke (mm)				450	500
	50~100 (Every 50mm)	150~200 (Every 50mm)	250~300 (Every 50mm)	350~400 (Every 50mm)		
0.1	17	16	15	14	12	10
0.3	17	16	15	14	12	10
0.5	11		10.5		10	

HH type: X high speed/Y high speed

Acceleration/deceleration (G)	Y-axis stroke (mm)			
	50~100 (Every 50mm)	150~250 (Every 50mm)	300~400 (Every 50mm)	450~500 (Every 50mm)
0.1	10	9.5	9	8.5
0.3	9	8.5	8	7.5
0.5	4	3.5	3	2.5

* When both X and Y axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500
50	○	○	○	○	○	○	○	○	○	○
100	○	○	○	○	○	○	○	○	○	○
150	○	○	○	○	○	○	○	○	○	○
200	○	○	○	○	○	○	○	○	○	○
250	○	○	○	○	○	○	○	○	○	○
300	○	○	○	○	○	○	○	○	○	○
350	○	○	○	○	○	○	○	○	○	○
400	○	○	○	○	○	○	○	○	○	○
450	○	○	○	○	○	○	○	○	○	○
500	○	○	○	○	○	○	○	○	○	○
550	○	○	○	○	○	○	○	○	○	○
600	○	○	○	○	○	○	○	○	○	○
650	○	○	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○	○	○
750	○	○	○	○	○	○	○	○	○	○
800	○	○	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○	○	○
900	○	○	○	○	○	○	○	○	○	○
950	○	○	○	○	○	○	○	○	○	○
1000	○	○	○	○	○	○	○	○	○	○
1050	○	○	○	○	○	○	○	○	○	○
1100	○	○	○	○	○	○	○	○	○	○

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis: WSA16R	PCON-CFB/CGFB	P-149
	Y-axis: SA8R	MSEL-PCF/PGF	P-139
PM2	SA8R	RCON-PCF	P-159

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	N	See P.136	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item	X-axis	Y-axis
Axis configuration	RCP6-WSA16R	RCP6-SA8R
Stroke (Every 50mm)	50~1100mm	50~500mm
Max. speed *	MH: 210mm/s	400mm/s
	HH: 365mm/s	650mm/s
Motor size	56□ High thrust stepper motor	56□ High thrust stepper motor
Ball screw lead	MH: 10mm HH: 20mm	20mm
Drive system	Ball screw Ø16mm rolled C10	Ball screw Ø16mm rolled C10
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options

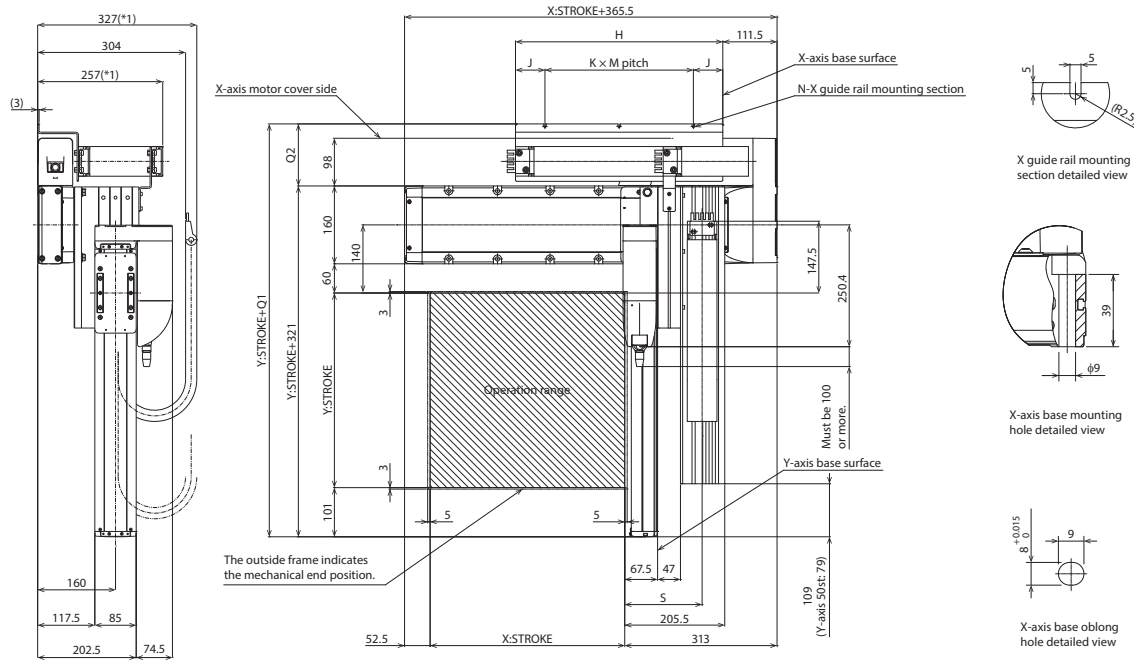
Type	Option code	Reference page	X-axis	Y-axis
Brake	B	See P.134	○	○
Non-motor end specification	NM	See P.135	○	○
Slider section roller specification	SR	See P.135	○	○

Dimensions

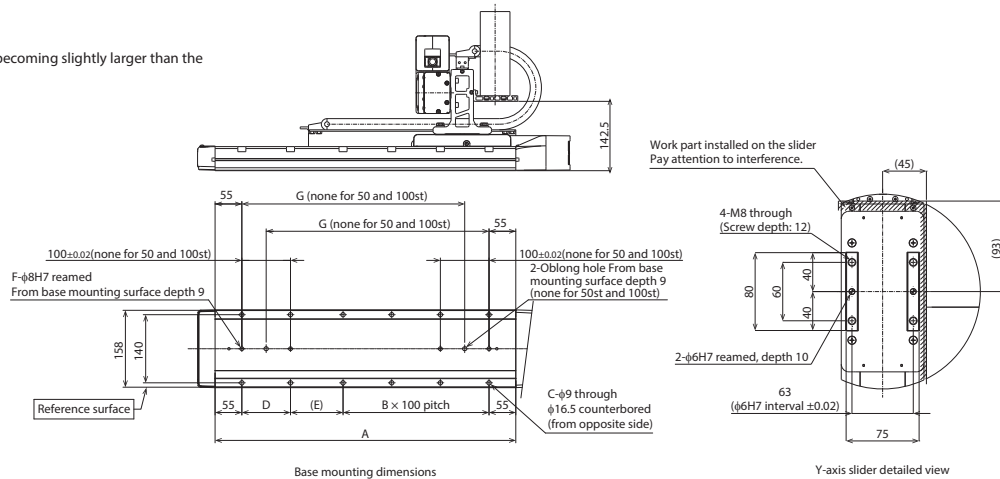
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Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(* Notes

The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer.
Also, the moving end of the Y-axis cable track is to be fixed to a plate or the like mounted on the Y-axis slider by the customer. (See P.136)

■ Dimensions by Stroke

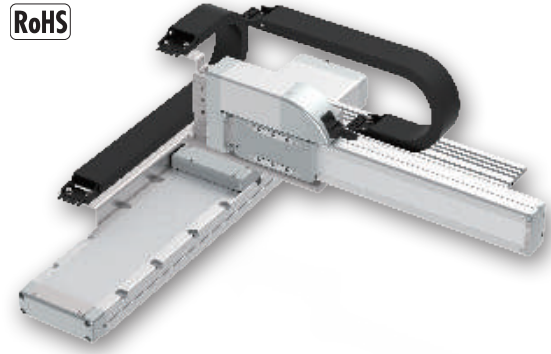
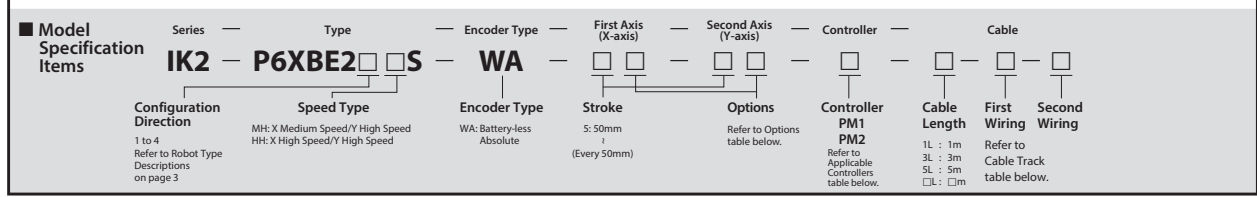
X:Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318
B	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
C	4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
D	-	-	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
E	158	208	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108
F	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
G	-	-	208	258	308	358	408	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158
H	251	276	301	326	351	376	401	426	451	476	501	526	551	576	601	626	651	676	701	726	751	776
J	60.5	60.5	60.5	60.5	60.5	60.5	60.5	60.5	60.5	58	63	60.5	58	58	60.5	58	60.5	58	60.5	58	60.5	63
K	1	1	2	2	2	2	2	2	3	3	3	3	3	4	4	4	4	4	4	4	5	5
M	130	155	90	102.5	115	127.5	140	152.5	110	120	125	135	145	115	120	127.5	132.5	140	145	120	125	130
N	2	2	3	3	3	3	3	3	4	4	4	4	4	5	5	5	5	5	5	6	6	6

Cable track size	CT	CTM	CTL	CTXL
Q1	448.5	448.5	448.5	465.5
Q2	127.5	127.5	127.5	144.5
S	152.5	159	165.5	-

* Dimensions Q1, Q2 and S change depending on the size of the cable track.

IK2-P6XBE2□□S

RCP6 2-axis configurations X-axis: WSA16C (straight) Y-axis: SA8R (side-mounted)



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

MH type: X medium speed/Y high speed (Unit: kg)

Acceleration/deceleration (G)	Y-axis stroke (mm)				450	500
	50~100 (Every 50mm)	150~200 (Every 50mm)	250~300 (Every 50mm)	350~400 (Every 50mm)		
0.1	17	16	15	14	12	10
0.3	17	16	15	14	12	10
0.5	11		10.5		10	

HH type: X high speed/Y high speed

Acceleration/deceleration (G)	Y-axis stroke (mm)			
	50~100 (Every 50mm)	150~250 (Every 50mm)	300~400 (Every 50mm)	450~500 (Every 50mm)
0.1	10	9.5	9	8.5
0.3	9	8.5	8	7.5
0.5	4	3.5	3	2.5

* When both X and Y axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500
50	○	○	○	○	○	○	○	○	○	○
100	○	○	○	○	○	○	○	○	○	○
150	○	○	○	○	○	○	○	○	○	○
200	○	○	○	○	○	○	○	○	○	○
250	○	○	○	○	○	○	○	○	○	○
300	○	○	○	○	○	○	○	○	○	○
350	○	○	○	○	○	○	○	○	○	○
400	○	○	○	○	○	○	○	○	○	○
450	○	○	○	○	○	○	○	○	○	○
500	○	○	○	○	○	○	○	○	○	○
550	○	○	○	○	○	○	○	○	○	○
600	○	○	○	○	○	○	○	○	○	○
650	○	○	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○	○	○
750	○	○	○	○	○	○	○	○	○	○
800	○	○	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○	○	○
900	○	○	○	○	○	○	○	○	○	○
950	○	○	○	○	○	○	○	○	○	○
1000	○	○	○	○	○	○	○	○	○	○
1050	○	○	○	○	○	○	○	○	○	○
1100	○	○	○	○	○	○	○	○	○	○

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : WSA16C	PCON-CFB/CGFB	P-149
		MSEL-PCF/PGF	P-139
PM2	Y-axis : SA8R	RCON-PCF	P-159

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	N	See P.136	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item	X-axis	Y-axis
Axis configuration	RCP6-WSA16C	RCP6-SA8R
Stroke (Every 50mm)	50~1100mm	50~500mm
Max. speed *	MH	210mm/s
	HH	365mm/s
Motor size	56□ High thrust stepper motor	56□ High thrust stepper motor
	Ball screw lead	MH: 10mm HH: 20mm
Drive system	Ball screw Ø16mm rolled C10	Ball screw Ø16mm rolled C10
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options

Type	Option code	Reference page	X-axis	Y-axis
Brake *	B	See P.134	○	○
Cable exit direction (Top)	CJT	See P.134	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.134	○	
Cable exit direction (Left)	CJL	See P.134	○	
Cable exit direction (Bottom)	CJB	See P.134	○	
Non-motor end specification	NM	See P.135	○	○
Slider section roller specification	SR	See P.135	○	○

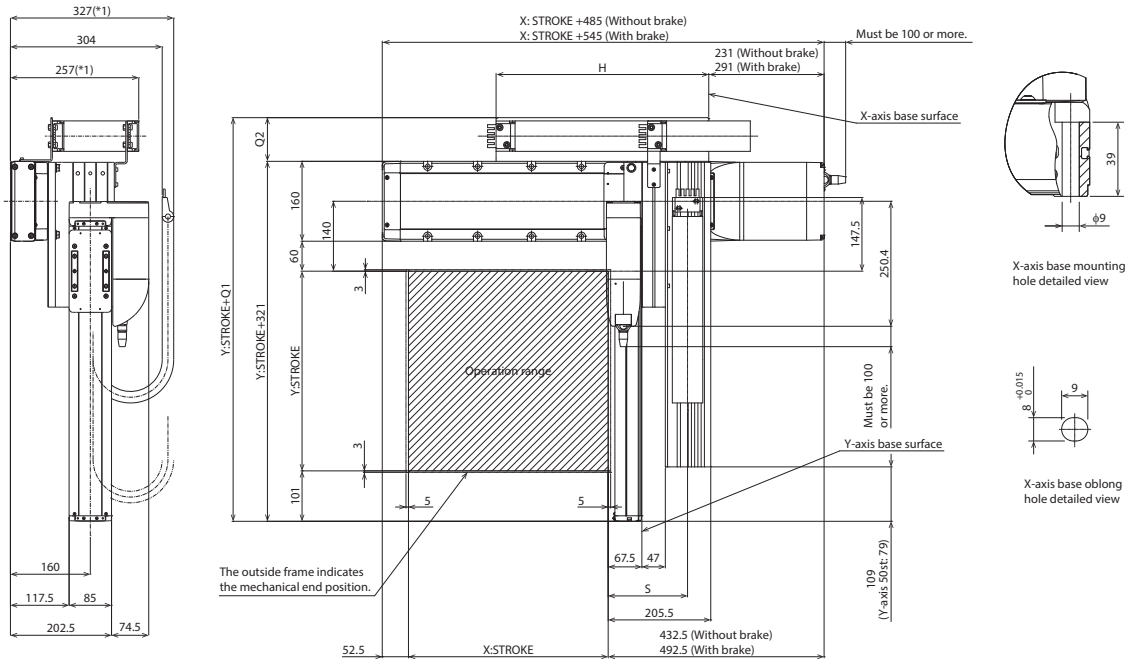
* Brake option for X-axis increases the length of the motor unit. Please contact IAI for more information.

Dimensions

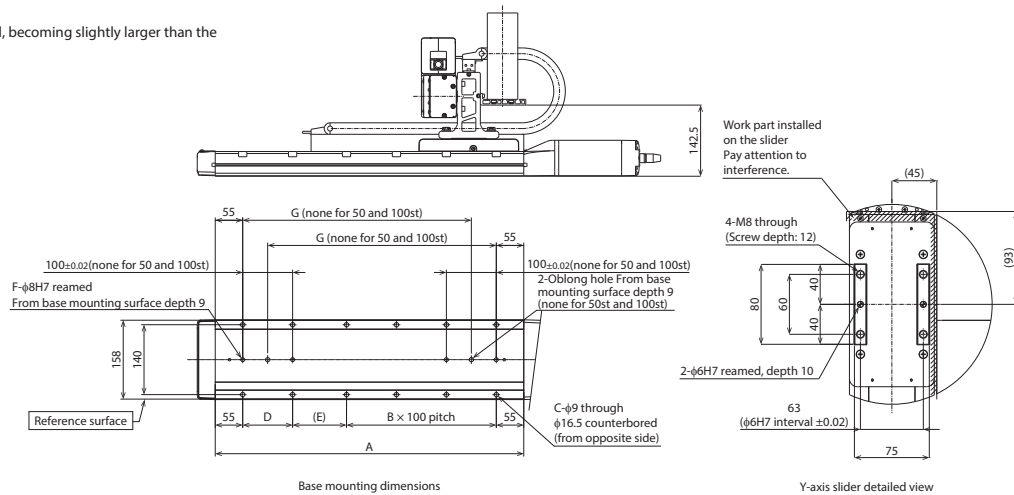
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Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(*) Notes

The X-axis cable track guide rail is fixed on the X-axis body.
Also, the moving end of the Y-axis cable track is to be fixed to a plate or the like mounted on the Y-axis slider by the customer. (See P.136)

■ Dimensions by Stroke

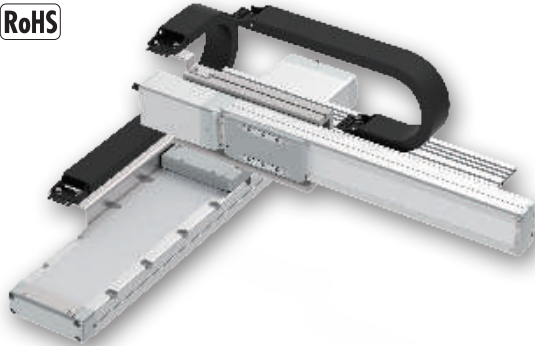
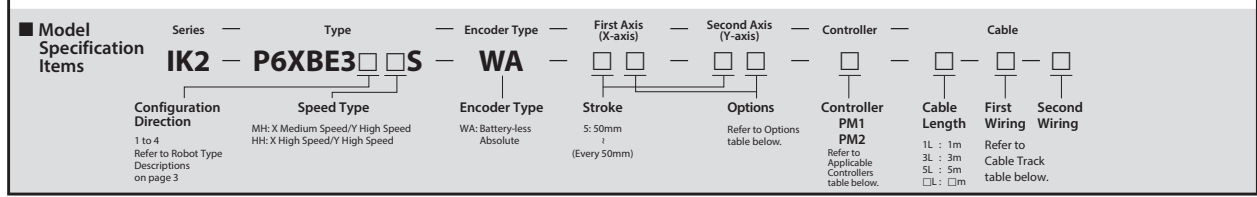
X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318
B	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
C	4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
D	-	-	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
E	158	208	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108
F	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
G	-	-	208	258	308	358	408	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158
H	251	276	301	326	351	376	401	426	451	476	501	526	551	576	601	626	651	676	701	726	751	776

Cable track size	CT	CTM	CTL	CTLX
Q1	396.5	408.5	423.5	441.5
Q2	75.5	87.5	102.5	120.5
S	152.5	159	165.5	-

* Dimensions Q1, Q2 and S change depending on the size of the cable track.

IK2-P6XBE3□□S

RCP6 2-axis configurations X-axis: WSA16C (straight) Y-axis: SA8C (straight)



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

MH type: X medium speed/Y high speed (Unit: kg)

Acceleration/deceleration (G)	Y-axis stroke (mm)				450	500
	50~100 (Every 50mm)	150~200 (Every 50mm)	250~300 (Every 50mm)	350~400 (Every 50mm)		
0.1	17	16	15	14	12	10
0.3	17	16	15	14	12	10
0.5	11		10.5		10	

HH type: X high speed/Y high speed

Acceleration/deceleration (G)	Y-axis stroke (mm)			
	50~100 (Every 50mm)	150~250 (Every 50mm)	300~400 (Every 50mm)	450~500 (Every 50mm)
0.1	10	9.5	9	8.5
0.3	9	8.5	8	7.5
0.5	4	3.5	3	2.5

* When both X and Y axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke		50	100	150	200	250	300	350	400	450	500
Y-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○	○	○	○
	750	○	○	○	○	○	○	○	○	○	○
	800	○	○	○	○	○	○	○	○	○	○
	850	○	○	○	○	○	○	○	○	○	○
900	○	○	○	○	○	○	○	○	○	○	
950	○	○	○	○	○	○	○	○	○	○	
1000	○	○	○	○	○	○	○	○	○	○	
1050	○	○	○	○	○	○	○	○	○	○	
1100	○	○	○	○	○	○	○	○	○	○	
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○	○	○	○
	750	○	○	○	○	○	○	○	○	○	○
	800	○	○	○	○	○	○	○	○	○	○
	850	○	○	○	○	○	○	○	○	○	○
900	○	○	○	○	○	○	○	○	○	○	
950	○	○	○	○	○	○	○	○	○	○	
1000	○	○	○	○	○	○	○	○	○	○	
1050	○	○	○	○	○	○	○	○	○	○	
1100	○	○	○	○	○	○	○	○	○	○	

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : WSA16C	PCON-CFB/CGFB	P-149
		MSEL-PCF/PGF	P-139
PM2	Y-axis : SA8C	RCON-PCF	P-159

Cable Length		
Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track				
Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	N	See P.136	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications		
Item	X-axis	Y-axis
Axis configuration	RCP6-WSA16C	RCP6-SA8C
Stroke (Every 50mm)	50~1100mm	50~500mm
Max. speed *	MH	210mm/s
	HH	365mm/s
Motor size	56□ High thrust stepper motor	
	56□ High thrust stepper motor	
Ball screw lead	MH	10mm
	HH	20mm
Drive system	Ball screw Φ 16mm rolled C10	Ball screw Φ 16mm rolled C10
Positioning repeatability	\pm 0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options				
Type	Option code	Reference page	X-axis	Y-axis
Brake *	B	See P.134	○	○
Cable exit direction (Top)	CJT	See P.134	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.134	○	
Cable exit direction (Left)	CJL	See P.134	○	
Cable exit direction (Bottom)	CJB	See P.134	○	
Non-motor end specification	NM	See P.135	○	○
Slider section roller specification	SR	See P.135	○	○

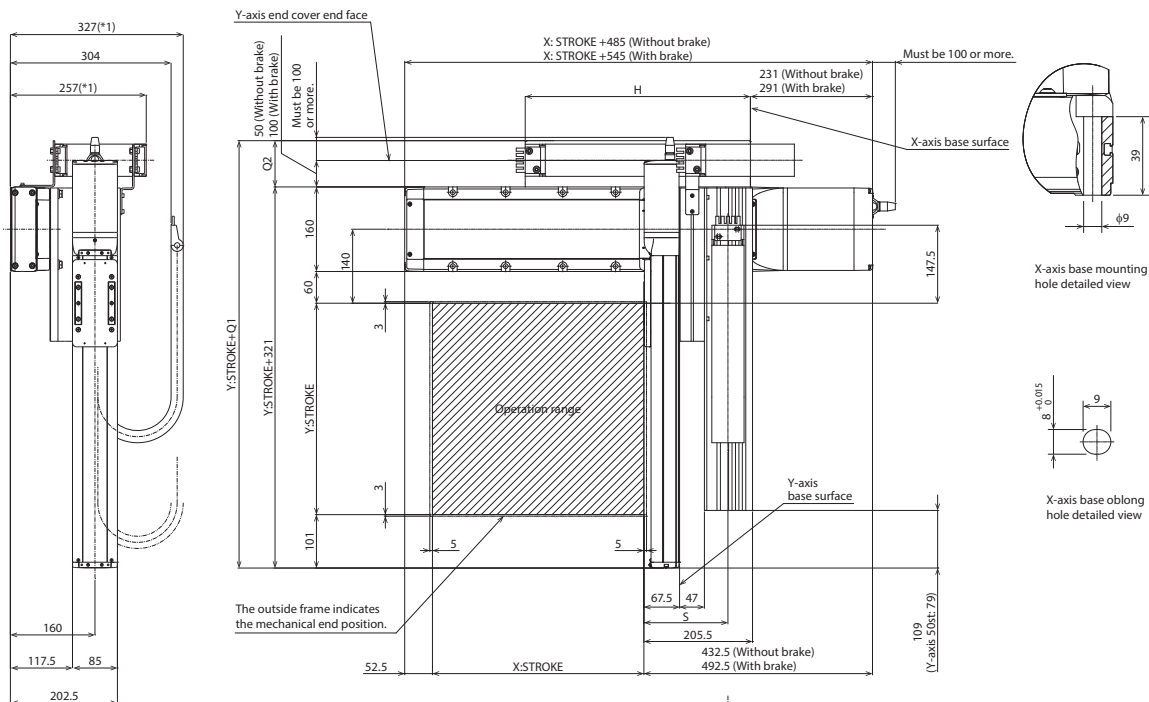
* Brake option for X- and/or Y-axes increases the length of the motor unit(s). Please contact IAI for more information.

Dimensions

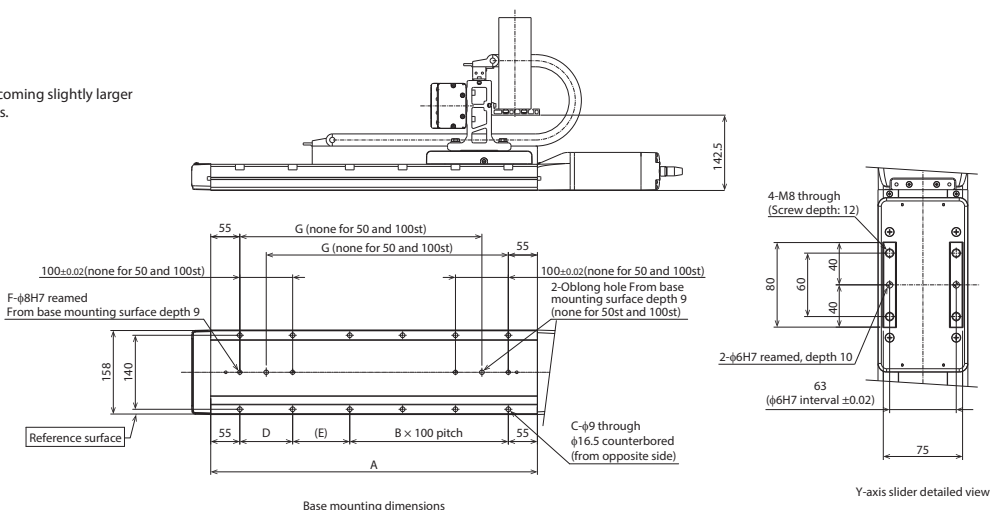
CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(*) Notes

The X-axis cable track guide rail is fixed on the X-axis body.
Also, the moving end of the Y-axis cable track is to be fixed to a plate or the like mounted on the Y-axis slider by the customer. (See P.136)

■ Dimensions by Stroke

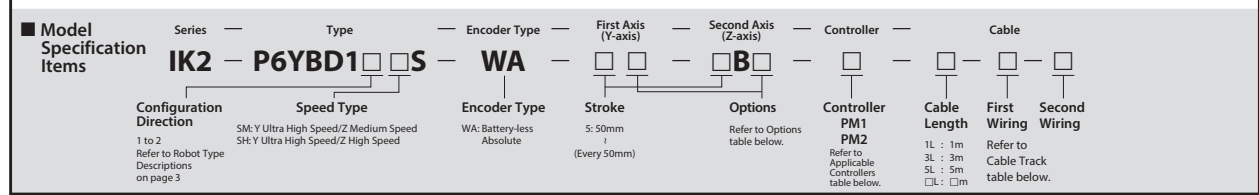
X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	
A	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	
B	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	8	8	9	9	10	10	10	
C	4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	
D	-	-	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
E	158	208	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	108
F	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
G	-	-	208	258	308	358	408	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158	
H	251	276	301	326	351	376	401	426	451	476	501	526	551	576	601	626	651	676	701	726	751	776	

Cable track size	CT	CTM	CTL	CTLX
Q1	396.5	408.5	423.5	441.5
Q2	75.5	87.5	102.5	120.5
S	152.5	159	165.5	-

* Dimensions Q1, Q2 and S change depending on the size of the cable track.

IK2-P6YBD1□□S RCP6 2-axis configurations

Y-axis: SA6R (side-mounted)
Z-axis: SA4R (side-mounted)



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ SM type: Y ultra high speed/Z medium speed (Unit: kg)

Acceleration/ deceleration (G)	Z-axis stroke (mm)	50~150 (Every 50mm)
	0.1	
0.3	1.5	
0.5	1.5	

■ SH type: Y ultra high speed/Z high speed

Acceleration/ deceleration (G)	Z-axis stroke (mm)	50~150 (Every 50mm)
	0.1	
0.3	1	
0.5	1	

* When both Y and Z axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Z-axis stroke (mm)	50	100	150
50	○	○	○
100	○	○	○
150	○	○	○
200	○	○	○
250	○	○	○
300	○	○	○
350	○	○	○
400	○	○	○
450	○	○	○
500	○	○	○
550	○	○	○
600	○	○	○
650	○	○	○
700	○	○	○
750	○	○	○
800	○	○	○

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	Y-axis : SA6R Z-axis : SA4R	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
PM2		MSEL	P-139
		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (Y-axis lateral)	Second wiring (Z-axis lateral)
Without cable track (cable only)	N	See P.136	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item	Y-axis	Z-axis
Axis configuration	RCP6-SA6R	RCP6-SA4R
Stroke (Every 50mm)	50~800mm	50~150mm
Max. speed *	SM	350mm/s
	SH	610mm/s
Motor size	42□ Stepper motor	35□ Stepper motor
Ball screw lead	SM	5mm
	SH	10mm
Drive system	Ball screw Ø10mm rolled C10	Ball screw Ø8mm rolled C10
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options

Type	Option code	Reference page	Y-axis	Z-axis
Brake	B	See P.134	○	Standard equipment *
Cable exit direction (Outside)	CJO	See P.134	○	Cannot be selected
Non-motor end specification	NM	See P.135	○	○
Slider section roller specification	SR	See P.135	○	○

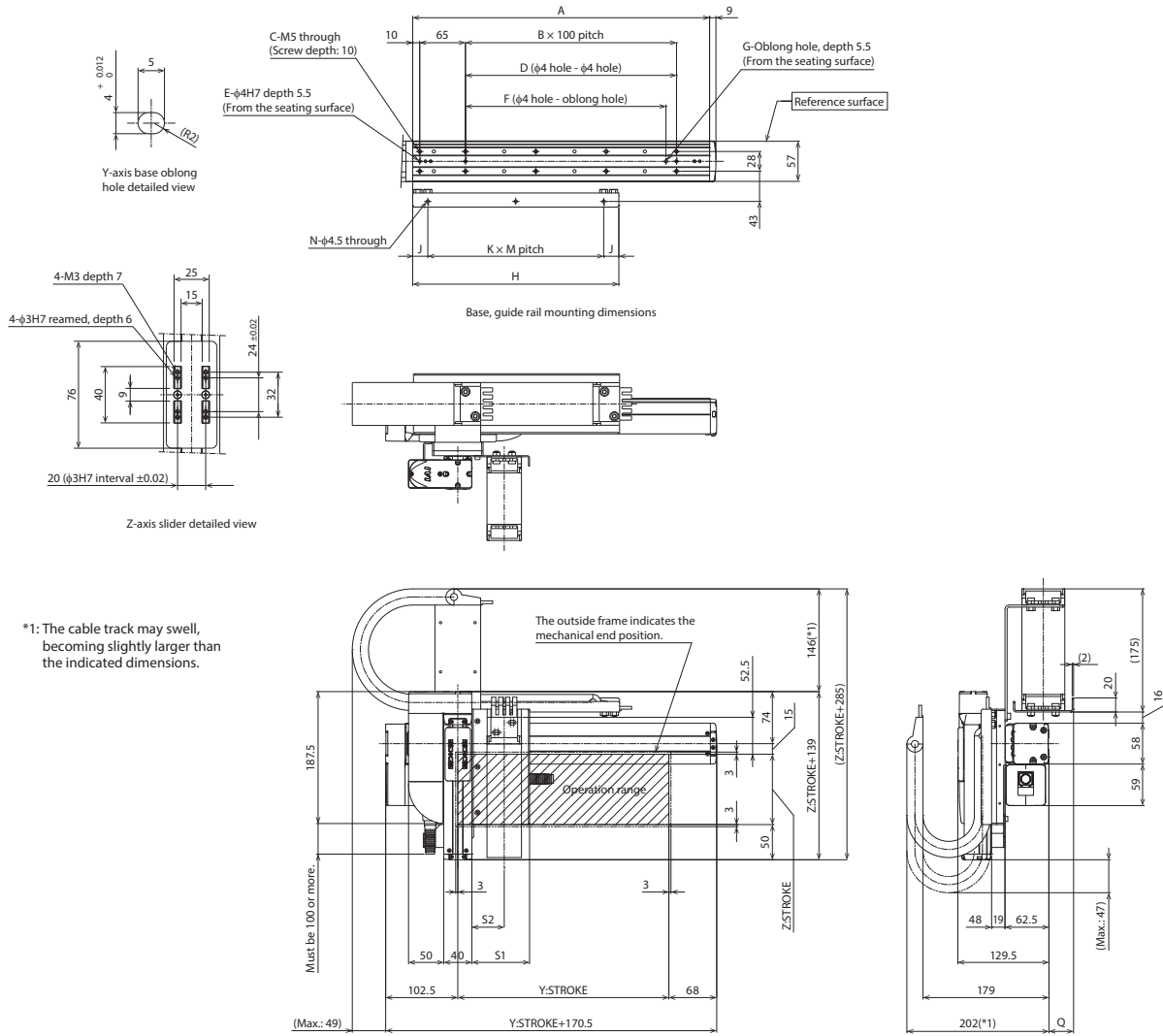
* Be sure to specify.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



(* Notes

The Y-axis cable track guide rail is to be fixed to the Y-axis mounting surface by the customer. Please note that there will be an overhang outside the Y-axis mounting surface. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis slider by the customer.

■ Dimensions by Stroke

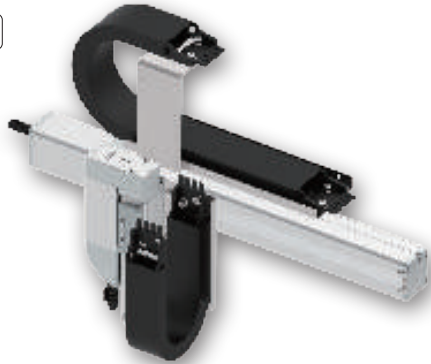
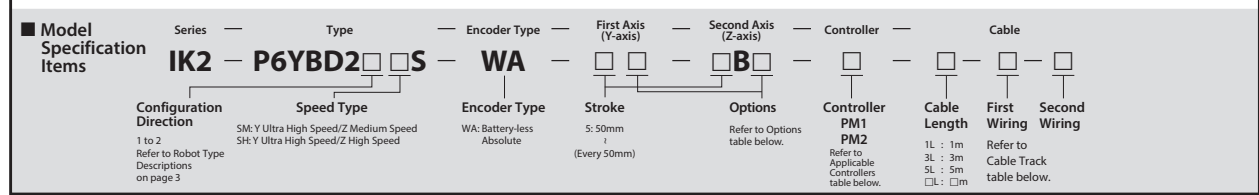
Y: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	168	193	218	243	268	293	318	343	368	393	418	443	468	493	518	543
J	9	21.5	9	21.5	9	21.5	9	21.5	9	21.5	9	21.5	9	21.5	34	9
K	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3	3
M	150	150	200	200	125	125	150	150	175	175	200	200	150	150	150	175
N	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4

Cable track size	CT	CTM	CTL	CTXL
Q	23	35	50	68
S1	82	94	107	-
S2	46	52.5	59	-

* Dimensions Q, S1 and S2 change depending on the size of the cable track.

IK2-P6YBD2□□S RCP6 2-axis configurations

Y-axis: SA6C (straight)
Z-axis: SA4R (side-mounted)



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ SM type: Y ultra high speed/Z medium speed (Unit: kg)

Acceleration/ deceleration (G)	Z-axis stroke (mm)	
	50~100 (Every 50mm)	100~150 (Every 50mm)
0.1	1.5	1.5
0.3	1.5	1.5
0.5	1.5	1.5

■ SH type: Y ultra high speed/Z high speed

Acceleration/ deceleration (G)	Z-axis stroke (mm)	
	50~100 (Every 50mm)	100~150 (Every 50mm)
0.1	1	1
0.3	1	1
0.5	1	1

* When both Y and Z axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Z-axis stroke (mm)	50	100	150
50	○	○	○
100	○	○	○
150	○	○	○
200	○	○	○
250	○	○	○
300	○	○	○
350	○	○	○
400	○	○	○
450	○	○	○
500	○	○	○
550	○	○	○
600	○	○	○
650	○	○	○
700	○	○	○
750	○	○	○
800	○	○	○

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	Y-axis : SA6C Z-axis : SA4R	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
PM2		MSEL	P-139
		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (Y-axis lateral)	Second wiring (Z-axis lateral)
Without cable track (cable only)	N	See P.136	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item	Y-axis	Z-axis
Axis configuration	RCP6-SA6C	RCP6-SA4R
Stroke (Every 50mm)	50~800mm	50~150mm
Max. speed *	SM	350mm/s
	SH	610mm/s
Motor size	42□ Stepper motor	35□ Stepper motor
Ball screw lead	SM	5mm
	SH	10mm
Drive system	Ball screw Ø10mm rolled C10	Ball screw Ø8mm rolled C10
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options

Type	Option code	Reference page	Y-axis	Z-axis
Brake *	B	See P.134	○	Standard equipment *
Cable exit direction (Top)	CJT	See P.134	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.134	○	
Cable exit direction (Left)	CJL	See P.134	○	
Cable exit direction (Bottom)	CJB	See P.134	○	
Non-motor end specification	NM	See P.135	○	○
Slider section roller specification	SR	See P.135	○	○

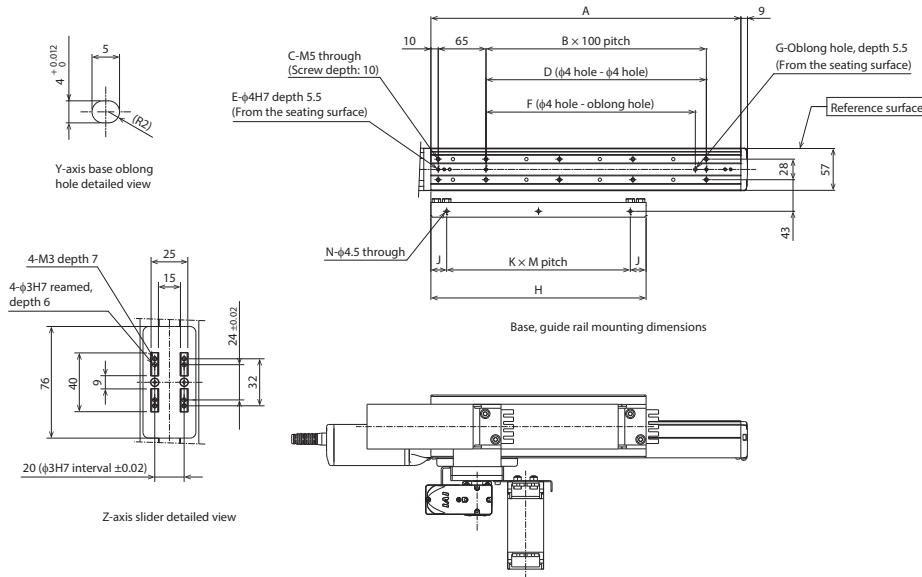
* Be sure to specify.
* Brake option for Y-axis increases the length of the motor unit. Please contact IAI for more information.

Dimensions

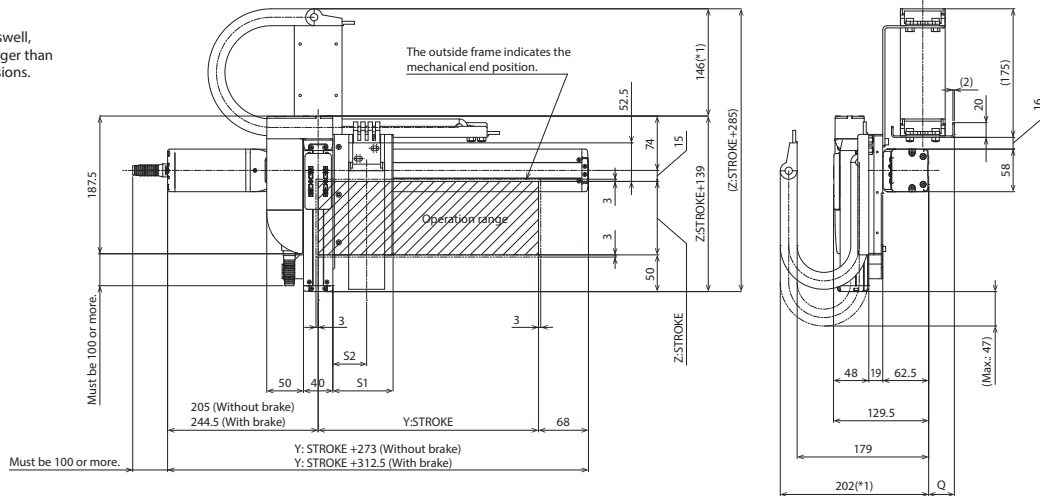
CAD drawings can be downloaded from our website.
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Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(* Notes

The Y-axis cable track guide rail is to be fixed to the Y-axis mounting surface by the customer. Please note that there will be an overhang outside the Y-axis mounting surface. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis slider by the customer.

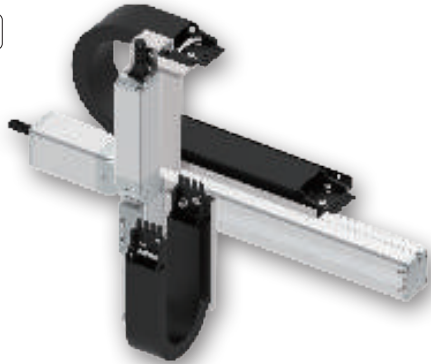
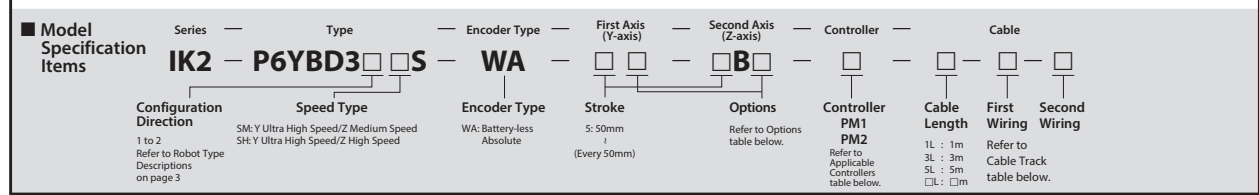
■ Dimensions by Stroke

Y: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	168	193	218	243	268	293	318	343	368	393	418	443	468	493	518	543
J	9	21.5	9	21.5	9	21.5	9	21.5	9	21.5	9	21.5	9	21.5	34	9
K	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3
M	150	150	200	200	125	125	150	150	175	175	200	200	150	150	150	175
N	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4
Cable track size	CT	CTM	CTL	CTXL												
Q	23	35	50	68												
S1	82	94	107	-												
S2	46	52.5	59	-												

* Dimensions Q, S1 and S2 change depending on the size of the cable track.

IK2-P6YBD3□□S RCP6 2-axis configurations

Y-axis: SA6C (straight)
Z-axis: SA4C (straight)



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ SM type: Y ultra high speed/Z medium speed (Unit: kg)

Acceleration/ deceleration (G)	Z-axis stroke (mm)	
	50~100 (Every 50mm)	100~150 (Every 50mm)
0.1	1.5	1.5
0.3	1.5	1.5
0.5	1.5	1.5

■ SH type: Y ultra high speed/Z high speed

Acceleration/ deceleration (G)	Z-axis stroke (mm)	
	50~100 (Every 50mm)	100~150 (Every 50mm)
0.1	1	1
0.3	1	1
0.5	1	1

* When both Y and Z axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Z-axis stroke (mm)	50	100	150
50	○	○	○
100	○	○	○
150	○	○	○
200	○	○	○
250	○	○	○
300	○	○	○
350	○	○	○
400	○	○	○
450	○	○	○
500	○	○	○
550	○	○	○
600	○	○	○
650	○	○	○
700	○	○	○
750	○	○	○
800	○	○	○

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	Y-axis : SA6C Z-axis : SA4C	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
PM2		MSEL	P-139
		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (Y-axis lateral)	Second wiring (Z-axis lateral)
Without cable track (cable only)	N	See P.136	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item	Y-axis	Z-axis
Axis configuration	RCP6-SA6C	RCP6-SA4C
Stroke (Every 50mm)	50~800mm	50~150mm
Max. speed *	SM	350mm/s
	SH	610mm/s
Motor size	42□ Stepper motor	35□ Stepper motor
Ball screw lead	SM	5mm
	SH	10mm
Drive system	Ball screw Ø10mm rolled C10	Ball screw Ø8mm rolled C10
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options

Type	Option code	Reference page	Y-axis	Z-axis
Brake *	B	See P.134	○	Standard equipment *
Cable exit direction (Top)	CJT	See P.134	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.134	○	
Cable exit direction (Left)	CJL	See P.134	○	
Cable exit direction (Bottom)	CJB	See P.134	○	
Non-motor end specification	NM	See P.135	○	○
Slider section roller specification	SR	See P.135	○	○

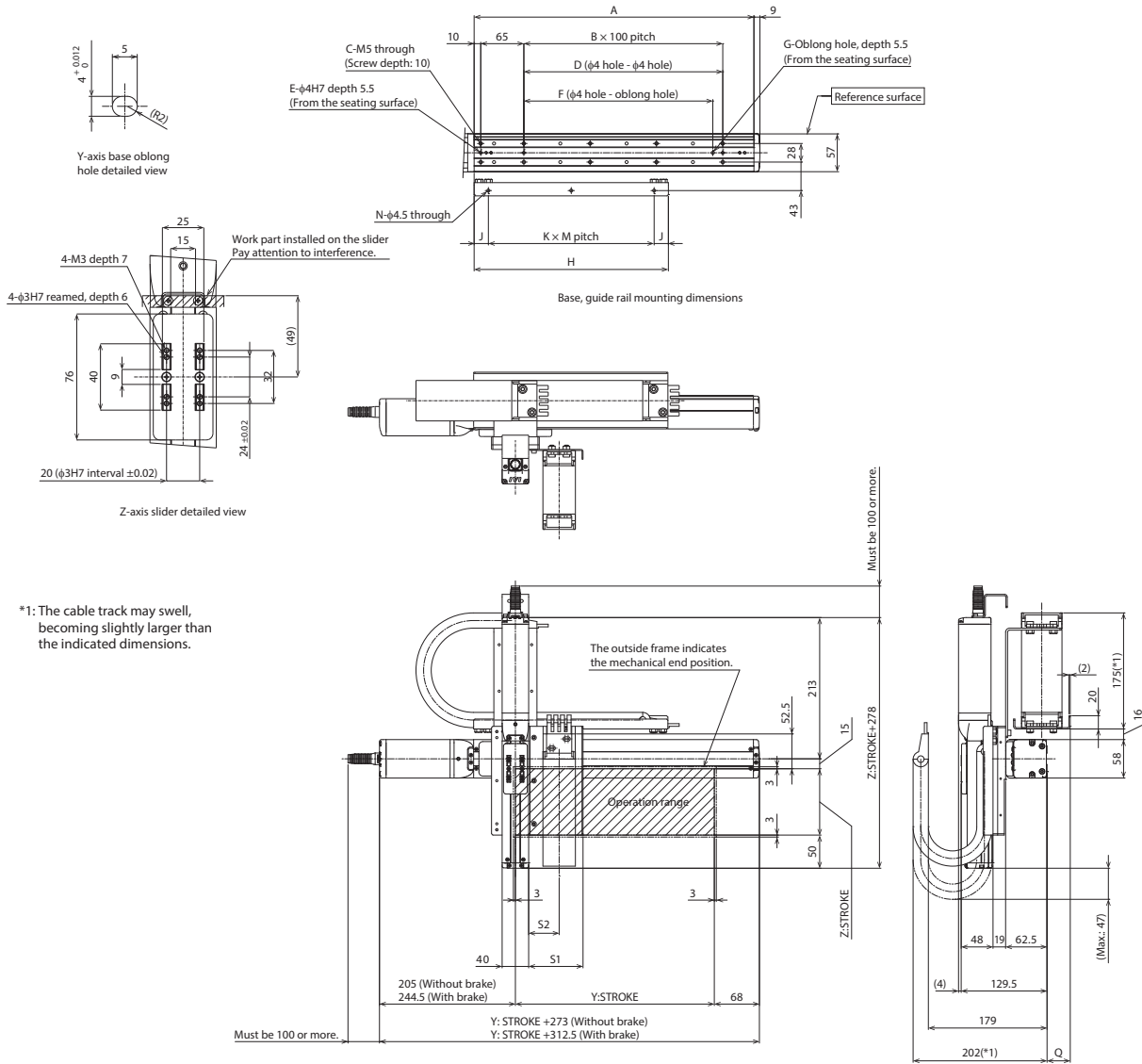
* Be sure to specify.
* Brake option for Y-axis increases the length of the motor unit. Please contact IAI for more information.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.

(*) Notes

The Y-axis cable track guide rail is to be fixed to the Y-axis mounting surface by the customer. Please note that there will be an overhang outside the Y-axis mounting surface. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis slider by the customer.

■ Dimensions by Stroke

Y: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	168	193	218	243	268	293	318	343	368	393	418	443	468	493	518	543
J	9	21.5	9	21.5	9	21.5	9	21.5	9	21.5	9	21.5	9	21.5	34	9
K	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3
M	150	150	200	200	125	125	150	150	175	175	200	200	150	150	150	175
N	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4

Cable track size	CT	CTM	CTL	CTXL
Q	23	35	50	68
S1	82	94	107	-
S2	46	52.5	59	-

* Dimensions Q, S1 and S2 change depending on the size of the cable track.

IK2-P6YBC1□□S RCP6 2-axis configurations

Y-axis: SA7R (side-mounted)
Z-axis: SA6R (side-mounted)

Model Specification Items

Series: **IK2** Type: **P6YBC1□□S** Encoder Type: **WA** First Axis (Y-axis): **□□** Second Axis (Z-axis): **□B□** Controller: **□** Cable: **□□□**

Configuration Direction
1 to 2 Refer to Robot Type Descriptions on page 3

Speed Type
SL: Y Ultra High Speed/Z Low Speed
SM: Y Ultra High Speed/Z Medium Speed
SH: Y Ultra High Speed/Z High Speed
SS: Y Ultra High Speed/Z Ultra High Speed

Encoder Type
WA: Battery-less Absolute

Stroke
S: 50mm (Every 50mm)

Options
Refer to Options table below.

Controller
PM1 Refer to Applicable Controllers table below.
PM2 Refer to Applicable Controllers table below.

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

First Wiring
Refer to Cable Track table below.

Second Wiring
Refer to Cable Track table below.



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ SL type: Y ultra high speed/ Z low speed		■ SM type: Y ultra high speed/ Z medium speed	
Acceleration/ deceleration (G)	Z-axis stroke (mm) 50~200 (Every 50mm)	Acceleration/ deceleration (G)	Z-axis stroke (mm) 50~200 (Every 50mm)
0.1	3	0.1	2
0.3	3	0.3	2
0.5	2.5	0.5	2

(Unit: kg)

■ SH type: Y ultra high speed/ Z high speed		■ SS type: Y ultra high speed/ Z ultra high speed	
Acceleration/ deceleration (G)	Z-axis stroke (mm) 50~200 (Every 50mm)	Acceleration/ deceleration (G)	Z-axis stroke (mm) 50~200 (Every 50mm)
0.1	1	0.1	0.5
0.3	1	0.3	0.5
0.5	1	0.5	0.5

* When both Y and Z axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke					
Z-axis stroke (mm)		50	100	150	200
Y-axis stroke (mm)	50	○	○	○	○
	100	○	○	○	○
	150	○	○	○	○
	200	○	○	○	○
	250	○	○	○	○
	300	○	○	○	○
	350	○	○	○	○
	400	○	○	○	○
	450	○	○	○	○
	500	○	○	○	○
	550	○	○	○	○
	600	○	○	○	○
	650	○	○	○	○
	700	○	○	○	○
	750	○	○	○	○
	800	○	○	○	○

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	Y-axis : SA7R Z-axis : SA6R	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	P-153
PM2		MSEL	P-139
		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Specifications

Item	Y-axis	Z-axis
Axis configuration	RCP6-SA7R	RCP6-SA6R
Stroke (Every 50mm)	50~800mm	50~200mm
Max. speed *	SL	170mm/s
	SM	340mm/s
	SH	680mm/s
	SS	800mm/s
Motor size	56□ Stepper motor	42□ Stepper motor
Ball screw lead	SL	3mm
	SM	6mm
	SH	12mm
	SS	20mm
Drive system	Ball screw Φ12mm rolled C10	Ball screw Φ10mm rolled C10
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Cable Track

Type	Model	Reference page	First wiring (Y-axis lateral)	Second wiring (Z-axis lateral)
Without cable track (cable only)	N	See P.136	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Options

Type	Option code	Reference page	Y-axis	Z-axis
Brake	B	See P.134	○	Standard equipment *
Cable exit direction (Outside)	CJO	See P.134	○	Cannot be selected
Non-motor end specification	NM	See P.135	○	○
Slider section roller specification	SR	See P.135	○	○

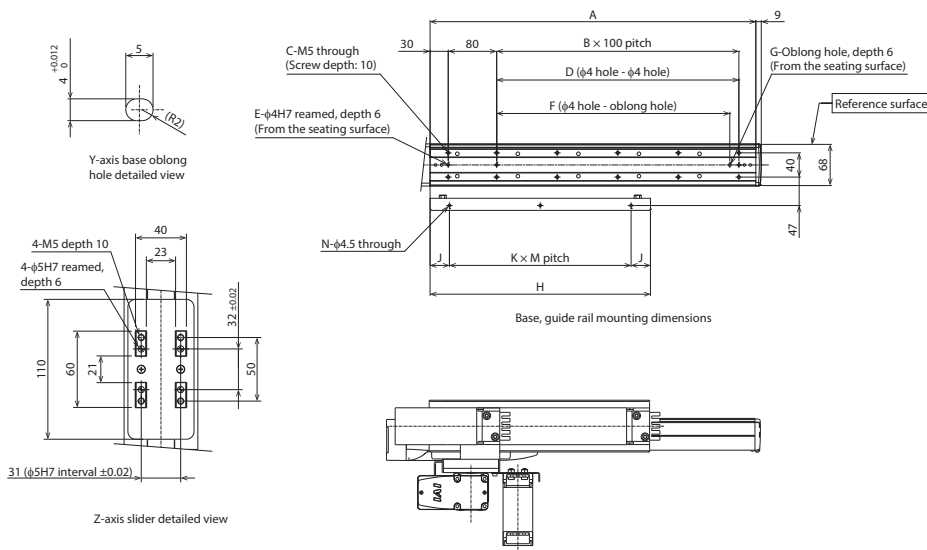
* Be sure to specify.

Dimensions

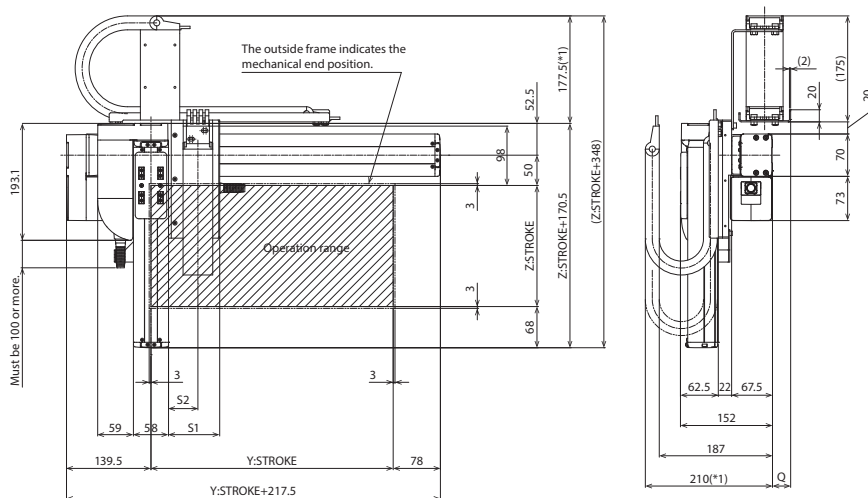
CAD drawings can be downloaded from our website.
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Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(*) Notes

The Y-axis cable track guide rail is to be fixed to the Y-axis mounting surface by the customer. Please note that there will be an overhang outside the Y-axis mounting surface. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis slider by the customer.

■ Dimensions by Stroke

Y: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	0	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	189	214	239	264	289	314	339	364	389	414	439	464	489	514	539	564
J	19.5	32	19.5	32	19.5	32	19.5	32	19.5	32	19.5	32	19.5	32	44.5	19.5
K	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3
M	150	150	200	200	250	250	150	150	175	175	200	200	150	150	150	175
N	2	2	2	2	2	2	3	3	3	3	3	3	4	4	4	4

Cable track size	CT	CTM	CTL	CTXL
Q	18	30	45	63
S1	84.5	96.5	109.5	-
S2	48.5	55	61.5	-

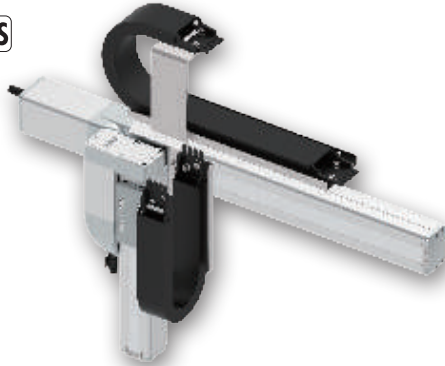
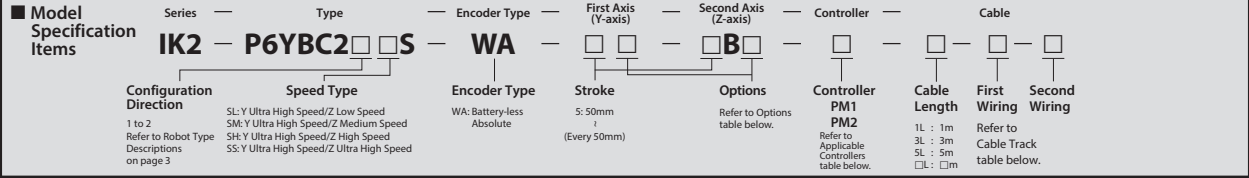
* Dimensions Q, S1 and S2 change depending on the size of the cable track.

IK2-P6YBC2□□S

RCP6 2-axis configurations

Y-axis: SA7C (straight)

Z-axis: SA6R (side-mounted)



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ **SL type: Y ultra high speed/ Z low speed**

Acceleration/ deceleration (G)	Z-axis stroke (mm)	50~200 (Every 50mm)
	0.1	3
0.3	3	3
0.5	2.5	2.5

■ **SM type: Y ultra high speed/ Z medium speed** (Unit: kg)

Acceleration/ deceleration (G)	Z-axis stroke (mm)	50~200 (Every 50mm)
	0.1	2
0.3	2	2
0.5	2	2

■ **SH type: Y ultra high speed/ Z high speed**

Acceleration/ deceleration (G)	Z-axis stroke (mm)	50~200 (Every 50mm)
	0.1	1
0.3	1	1
0.5	1	1

■ **SS type: Y ultra high speed/ Z ultra high speed**

Acceleration/ deceleration (G)	Z-axis stroke (mm)	50~200 (Every 50mm)
	0.1	0.5
0.3	0.5	0.5
0.5	0.5	0.5

* When both Y and Z axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke		50	100	150	200
Y-axis stroke (mm)	Z-axis stroke (mm)	50	100	150	200
	50	○	○	○	○
	100	○	○	○	○
	150	○	○	○	○
	200	○	○	○	○
	250	○	○	○	○
	300	○	○	○	○
	350	○	○	○	○
	400	○	○	○	○
	450	○	○	○	○
	500	○	○	○	○
	550	○	○	○	○
	600	○	○	○	○
	650	○	○	○	○
	700	○	○	○	○
	750	○	○	○	○
800	○	○	○	○	

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	Y-axis : SA7C Z-axis : SA6R	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
PM2		MSEL	P-139
		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length		
Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Specifications			
Item	Y-axis	Z-axis	
Axis configuration	RCP6-SA7C	RCP6-SA6R	
Stroke (Every 50mm)	50~800mm	50~200mm	
Max. speed *	640mm/s	SL	170mm/s
		SM	340mm/s
		SH	680mm/s
		SS	800mm/s
Motor size	56□ Stepper motor	42□ Stepper motor	
Ball screw lead	24mm	SL	3mm
		SM	6mm
		SH	12mm
		SS	20mm
Drive system	Ball screw Φ12mm rolled C10	Ball screw Φ10mm rolled C10	
Positioning repeatability	±0.01mm		
Base material	Aluminum		
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)		

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Cable Track				
Type	Model	Reference page	First wiring (Y-axis lateral)	Second wiring (Z-axis lateral)
Without cable track (cable only)	N	See P.136	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Options				
Type	Option code	Reference page	Y-axis	Z-axis
Brake *	B	See P.134	○	Standard equipment *
Cable exit direction (Top)	CJT	See P.134	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.134	○	
Cable exit direction (Left)	CJL	See P.134	○	
Cable exit direction (Bottom)	CJB	See P.134	○	
Non-motor end specification	NM	See P.135	○	○
Slider section roller specification	SR	See P.135	○	○

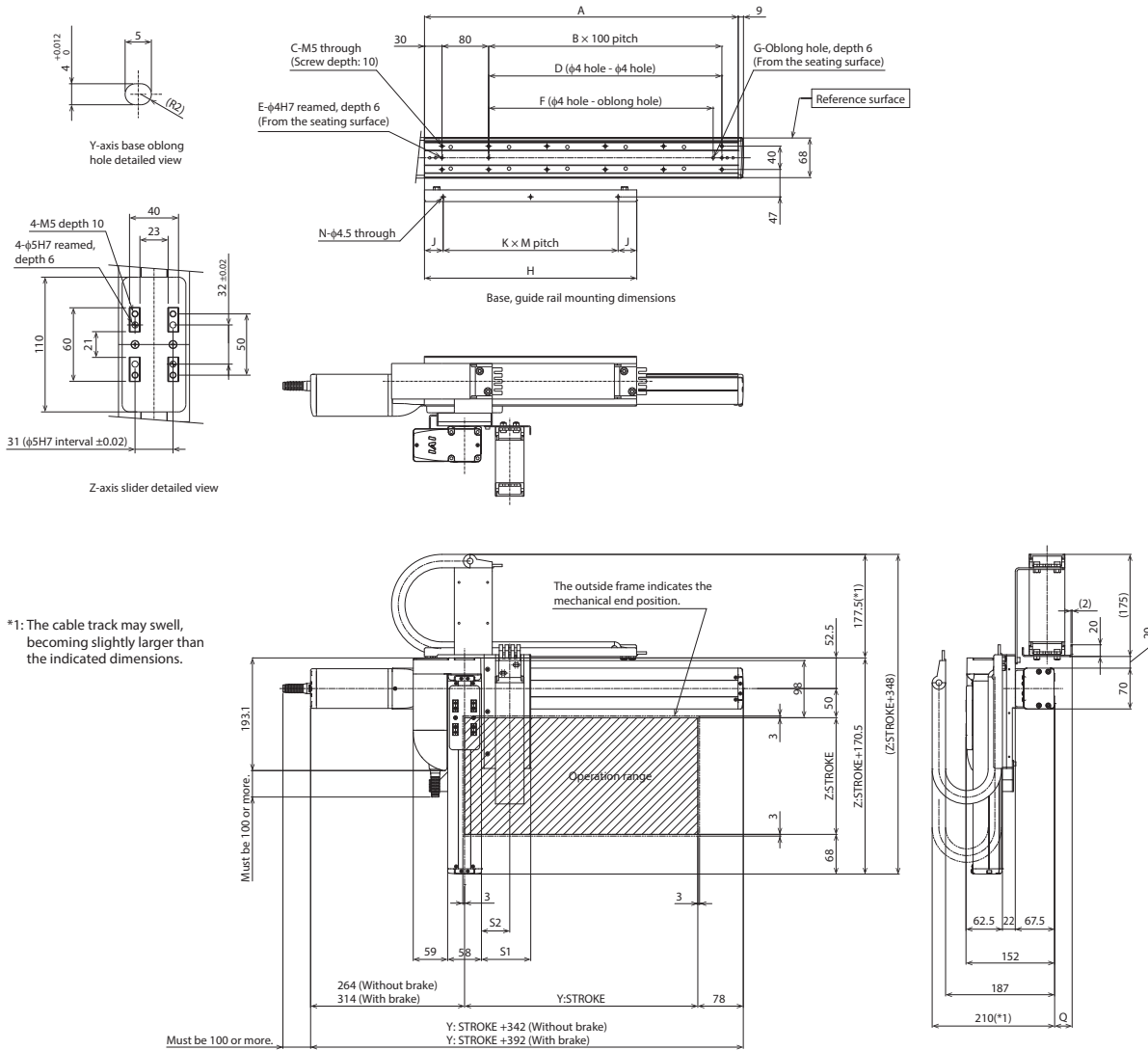
* Be sure to specify.
* Brake option for Y-axis increases the length of the motor unit. Please contact IAI for more information.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



(* Notes

The Y-axis cable track guide rail is to be fixed to the Y-axis mounting surface by the customer. Please note that there will be an overhang outside the Y-axis mounting surface. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis slider by the customer.

■ Dimensions by Stroke

Y: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	0	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	189	214	239	264	289	314	339	364	389	414	439	464	489	514	539	564
J	19.5	32	19.5	32	19.5	32	19.5	32	19.5	32	19.5	32	19.5	32	44.5	19.5
K	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3
M	150	150	200	200	250	250	150	150	175	175	200	200	150	150	150	175
N	2	2	2	2	2	2	3	3	3	3	3	3	4	4	4	4

Cable track size	CT	CTM	CTL	CTXL
Q	18	30	45	63
S1	84.5	96.5	109.5	-
S2	48.5	55	61.5	-

* Dimensions Q, S1 and S2 change depending on the size of the cable track.

IK2-P6YBC3□□S

RCP6 2-axis configurations

Y-axis: SA7C (straight)
Z-axis: SA6C (straight)

Model Specification Items

Series: **IK2** | Type: **P6YBC3□□S** | Encoder Type: **WA** | First Axis (Y-axis): **□□** | Second Axis (Z-axis): **□B□** | Controller: **□** | Cable: **□□□**

Configuration Direction
1 to 2 Refer to Robot Type Descriptions on page 3

Speed Type
SL: Y Ultra High Speed/Z Low Speed
SM: Y Ultra High Speed/Z Medium Speed
SH: Y Ultra High Speed/Z High Speed
SS: Y Ultra High Speed/Z Ultra High Speed

Encoder Type
WA: Battery-less Absolute

Stroke
S: 50mm (Every 50mm)

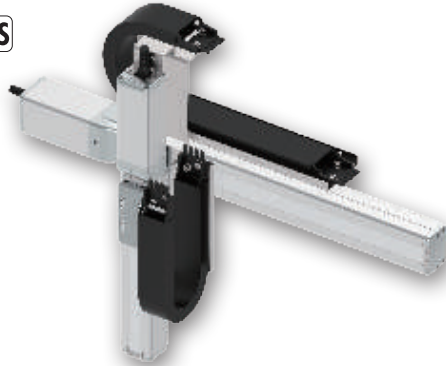
Options
Refer to Options table below.

Controller
PM1 Refer to Applicable Controllers table below.
PM2 Refer to Applicable Controllers table below.

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

First Wiring
Refer to Cable Track table below.

Second Wiring
Refer to Cable Track table below.



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ SL type: Y ultra high speed/ Z low speed		■ SM type: Y ultra high speed/ Z medium speed	
Acceleration/ deceleration (G)	Z-axis stroke (mm) 50~200 (Every 50mm)	Acceleration/ deceleration (G)	Z-axis stroke (mm) 50~200 (Every 50mm)
0.1	3	0.1	2
0.3	3	0.3	2
0.5	2.5	0.5	2

(Unit: kg)

■ SH type: Y ultra high speed/ Z high speed		■ SS type: Y ultra high speed/ Z ultra high speed	
Acceleration/ deceleration (G)	Z-axis stroke (mm) 50~200 (Every 50mm)	Acceleration/ deceleration (G)	Z-axis stroke (mm) 50~200 (Every 50mm)
0.1	1	0.1	0.5
0.3	1	0.3	0.5
0.5	1	0.5	0.5

* When both Y and Z axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Z-axis stroke (mm)	50	100	150	200
50	○	○	○	○
100	○	○	○	○
150	○	○	○	○
200	○	○	○	○
250	○	○	○	○
300	○	○	○	○
350	○	○	○	○
400	○	○	○	○
450	○	○	○	○
500	○	○	○	○
550	○	○	○	○
600	○	○	○	○
650	○	○	○	○
700	○	○	○	○
750	○	○	○	○
800	○	○	○	○

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	Y-axis : SA7C Z-axis : SA6C	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
PM2		MSEL	P-139
		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (Y-axis lateral)	Second wiring (Z-axis lateral)
Without cable track (cable only)	N	See P.136	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item	Y-axis	Z-axis	
Axis configuration	RCP6-SA7C	RCP6-SA6C	
Stroke (Every 50mm)	50~800mm	50~200mm	
Max. speed *	640mm/s	SL	170mm/s
		SM	340mm/s
		SH	680mm/s
		SS	800mm/s
Motor size	56□ Stepper motor	42□ Stepper motor	
Ball screw lead	24mm	SL	3mm
		SM	6mm
		SH	12mm
		SS	20mm
Drive system	Ball screw Φ12mm rolled C10	Ball screw Φ10mm rolled C10	
Positioning repeatability	±0.01mm		
Base material	Aluminum		
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)		

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options

Type	Option code	Reference page	Y-axis	Z-axis
Brake *	B	See P.134	○	Standard equipment *
Cable exit direction (Top)	CJT	See P.134	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.134	○	
Cable exit direction (Left)	CJL	See P.134	○	
Cable exit direction (Bottom)	CJB	See P.134	○	
Non-motor end specification	NM	See P.135	○	○
Slider section roller specification	SR	See P.135	○	○

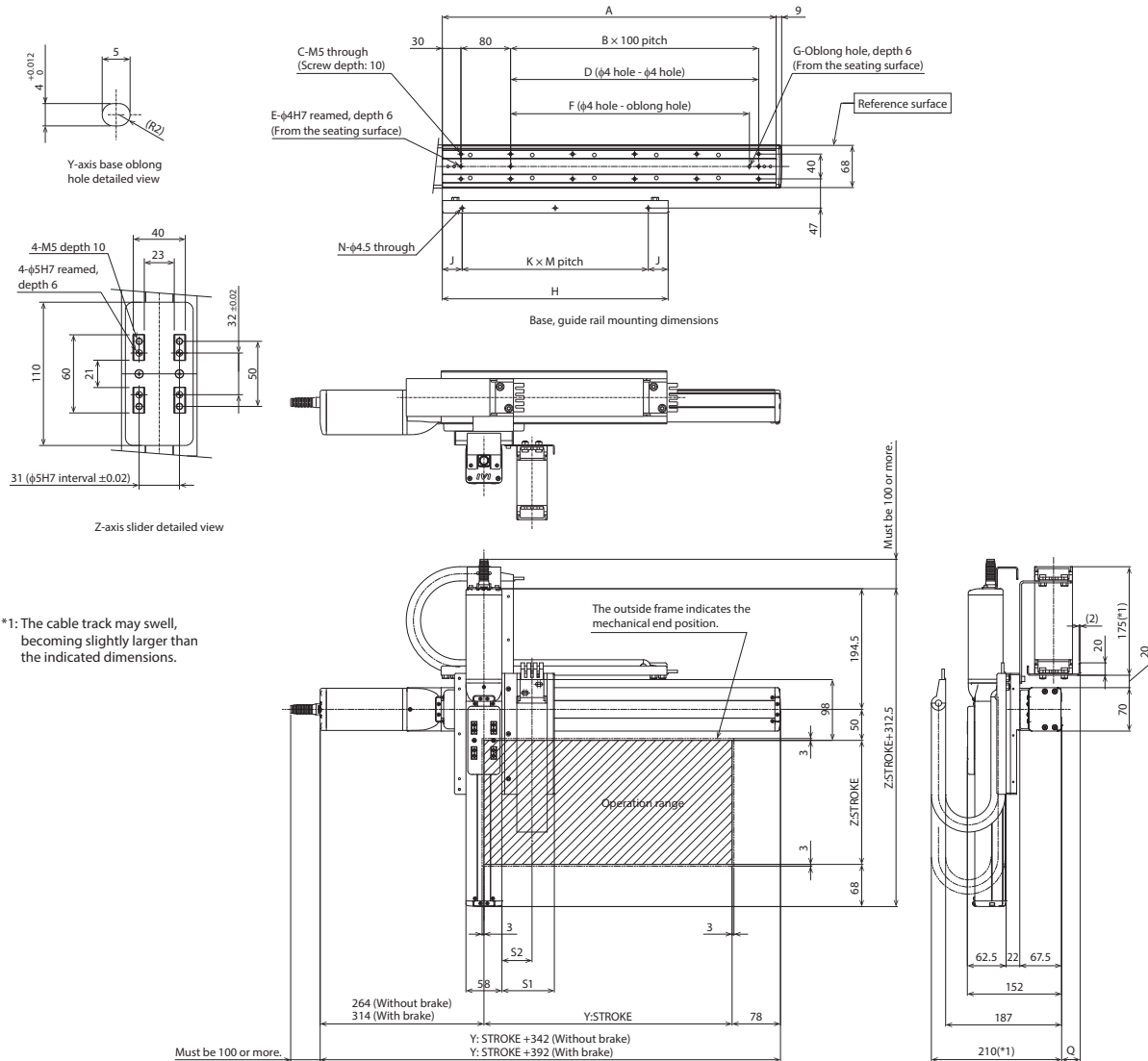
* Be sure to specify.
* Brake option for Y-axis increases the length of the motor unit. Please contact IAI for more information.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



(*) Notes
The Y-axis cable track guide rail is to be fixed to the Y-axis mounting surface by the customer. Please note that there will be an overhang outside the Y-axis mounting surface. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis slider by the customer.

■ Dimensions by Stroke

Y: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	0	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	189	214	239	264	289	314	339	364	389	414	439	464	489	514	539	564
J	19.5	32	19.5	32	19.5	32	19.5	32	19.5	32	19.5	32	19.5	32	44.5	19.5
K	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3
M	150	150	200	200	250	250	150	150	175	175	200	200	150	150	150	175
N	2	2	2	2	2	2	3	3	3	3	3	3	4	4	4	4

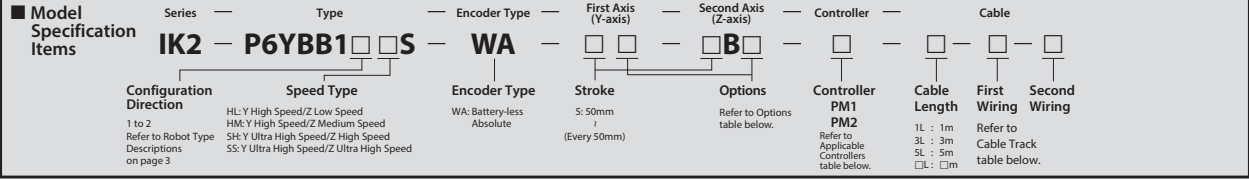
Cable track size	CT	CTM	CTL	CTXL
Q	18	30	45	63
S1	84.5	96.5	109.5	—
S2	48.5	55	61.5	—

* Dimensions Q, S1 and S2 change depending on the size of the cable track.

IK2-P6YBB1□□S

RCP6 2-axis configurations

Y-axis: SA8R (side-mounted)
Z-axis: SA7R (side-mounted)



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

HL type: Y high speed/ Z low speed		HM type: Y high speed/ Z medium speed (Unit: kg)	
Acceleration/ deceleration (G)	Z-axis stroke (mm) 50~300 (Every 50mm)	Acceleration/ deceleration (G)	Z-axis stroke (mm) 50~300 (Every 50mm)
0.1	9	0.1	4.5
0.3	8	0.3	4
0.5	7	0.5	3.5

SH type: Y ultra high speed/ Z high speed		SS type: Y ultra high speed/ Z ultra high speed	
Acceleration/ deceleration (G)	Z-axis stroke (mm) 50~300 (Every 50mm)	Acceleration/ deceleration (G)	Z-axis stroke (mm) 50~200 (Every 50mm) / 250~300 (Every 50mm)
0.1	3	0.1	1.5
0.3	2	0.3	1.5
0.5	1.5	0.5	1.5 1

* When both Y and Z axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke		50	100	150	200	250	300
Y-axis stroke (mm)	50	○	○	○	○	○	○
	100	○	○	○	○	○	○
	150	○	○	○	○	○	○
	200	○	○	○	○	○	○
	250	○	○	○	○	○	○
	300	○	○	○	○	○	○
	350	○	○	○	○	○	○
	400	○	○	○	○	○	○
	450	○	○	○	○	○	○
	500	○	○	○	○	○	○
	550	○	○	○	○	○	○
	600	○	○	○	○	○	○
	650	○	○	○	○	○	○
	700	○	○	○	○	○	○
	750	○	○	○	○	○	○
	800	○	○	○	○	○	○
	850	○	○	○	○	○	○
	900	○	○	○	○	○	○
	950	○	○	○	○	○	○
	1000	○	○	○	○	○	○
1050	○	○	○	○	○	○	
1100	○	○	○	○	○	○	

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	Y-axis : SA8R	PCON-CFB/CGFB	P-149
		MSEL-PCF/PGF	P-139
	Z-axis : SA7R	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG MCON-LC/LCG	P-153
PM2	Y-axis : SA8R	RCON-PCF	P-159
	Z-axis : SA7R	RCON-PC	

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length		
Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track				
Type	Model	Reference page	First wiring (Y-axis lateral)	Second wiring (Z-axis lateral)
Without cable track (cable only)	N	See P.136	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications		
Item	Y-axis	Z-axis
Axis configuration	RCP6-SA8R	RCP6-SA7R
Stroke (Every 50mm)	50~1100mm	50~300mm
Max. speed *	HL	105mm/s
	HM	280mm/s
	SH	560mm/s
	SS	640mm/s
Motor size	56□ High thrust stepper motor	56□ Stepper motor
Ball screw lead	HL	4mm
	HM	8mm
	SH	16mm
	SS	24mm
Drive system	Ball screw Φ16mm rolled C10	Ball screw Φ12mm rolled C10
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options				
Type	Option code	Reference page	Y-axis	Z-axis
Brake	B	See P.134	○	Standard equipment *
Cable exit direction (Outside)	CJO	See P.134	○	Cannot be selected
Non-motor end specification	NM	See P.135	○	○
Slider section roller specification	SR	See P.135	○	○

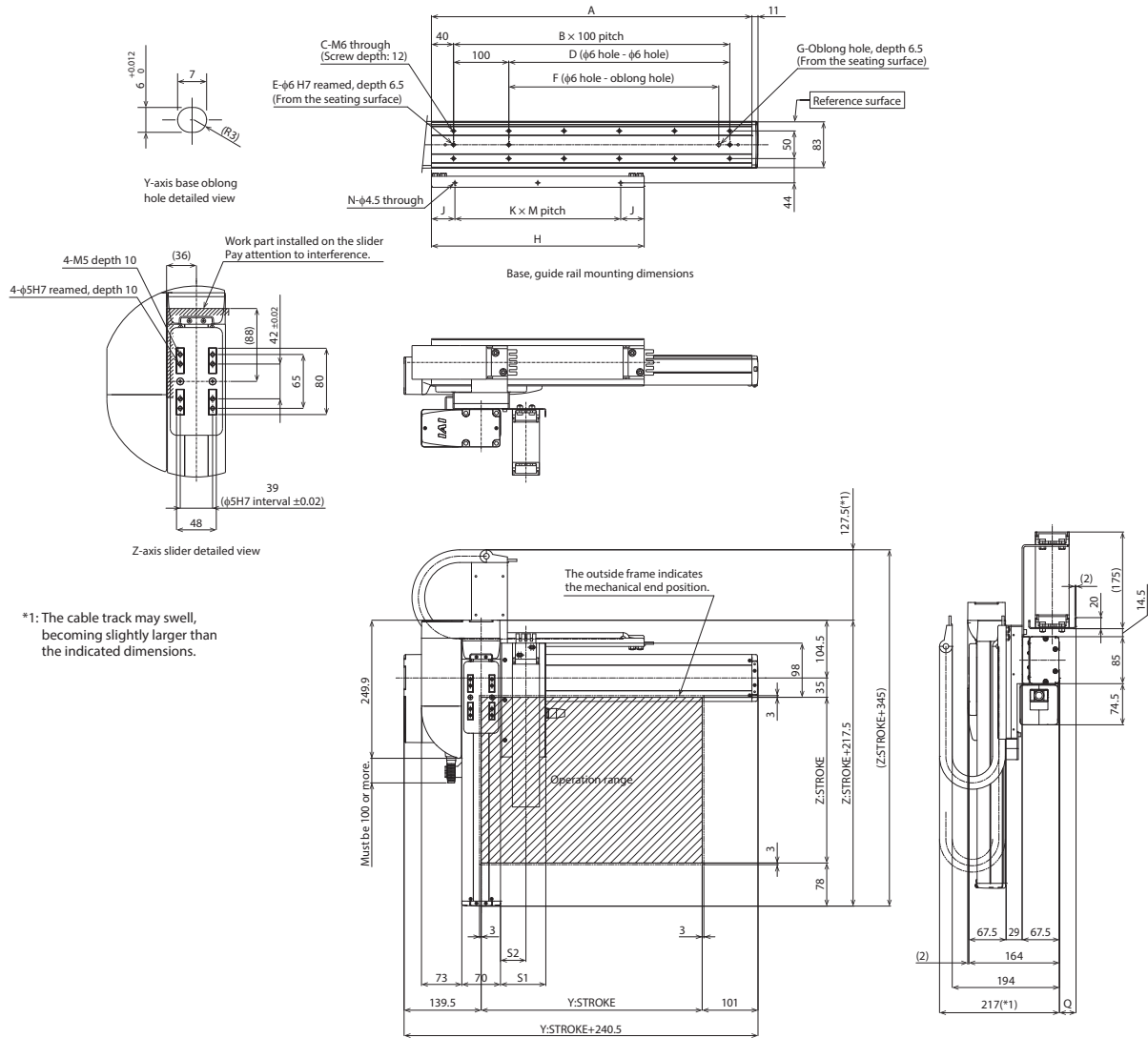
* Be sure to specify.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



(* Notes

The Y-axis cable track guide rail is to be fixed to the Y-axis mounting surface by the customer. Please note that there will be an overhang outside the Y-axis mounting surface. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis slider by the customer.

■ Dimensions by Stroke

Y: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280
B	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1000	1000	1100
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980	1080
G	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	210	235	260	285	310	335	360	385	410	435	460	485	510	535	560	585	610	635	660	685	710	735
J	30	42.5	30	42.5	30	42.5	30	42.5	30	42.5	30	42.5	30	42.5	55	30	42.5	55	30	42.5	55	17.5
K	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4
M	150	150	200	200	125	125	150	150	175	175	200	200	150	150	150	175	175	175	200	200	200	175
N	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5

Cable track size	CT	CTM	CTL	CTXL
Q	18	30	45	63
S1	82	94	107	-
S2	46	52.5	59	-

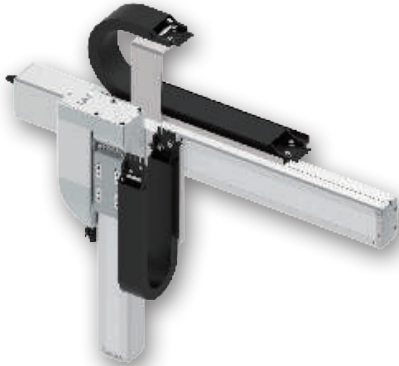
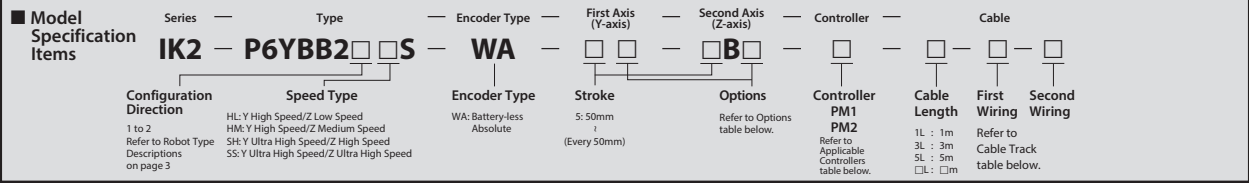
* Dimensions Q, S1 and S2 change depending on the size of the cable track.

IK2-P6YBB2□□S

RCP6 2-axis configurations

Y-axis: SA8C (straight)

Z-axis: SA7R (side-mounted)



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

HL type: Y high speed/
Z low speed

Acceleration/ deceleration (G)	Z-axis stroke (mm)	50~300 (Every 50mm)
	0.1	9
0.3	8	
0.5	7	

HM type: Y high speed/
Z medium speed

Acceleration/ deceleration (G)	Z-axis stroke (mm)	50~300 (Every 50mm)
	0.1	4.5
0.3	4	
0.5	3.5	

SH type: Y ultra high speed/
Z high speed

Acceleration/ deceleration (G)	Z-axis stroke (mm)	50~300 (Every 50mm)
	0.1	3
0.3	2	
0.5	1.5	

SS type: Y ultra high speed/
Z ultra high speed

Acceleration/ deceleration (G)	Z-axis stroke (mm)	50~200 (Every 50mm)	250~300 (Every 50mm)
	0.1	1.5	
0.3	1.5		
0.5	1.5	1.5	1

* When both Y and Z axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke		50	100	150	200	250	300
Y-axis stroke (mm)	50	○	○	○	○	○	○
	100	○	○	○	○	○	○
	150	○	○	○	○	○	○
	200	○	○	○	○	○	○
	250	○	○	○	○	○	○
	300	○	○	○	○	○	○
	350	○	○	○	○	○	○
	400	○	○	○	○	○	○
	450	○	○	○	○	○	○
	500	○	○	○	○	○	○
	550	○	○	○	○	○	○
	600	○	○	○	○	○	○
	650	○	○	○	○	○	○
	700	○	○	○	○	○	○
	750	○	○	○	○	○	○
	800	○	○	○	○	○	○
	850	○	○	○	○	○	○
	900	○	○	○	○	○	○
	950	○	○	○	○	○	○
	1000	○	○	○	○	○	○
1050	○	○	○	○	○	○	
1100	○	○	○	○	○	○	

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	Y-axis : SA8C	PCON-CFB/CGFB	P-149
		MSEL-PCF/PGF	P-139
	Z-axis : SA7R	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
PM2	Y-axis : SA8C	MCON-LC/LCG	P-139
		MSEL	P-139
	Z-axis : SA7R	RCON-PCF	P-159
		RCON-PC	

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length		
Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track				
Type	Model	Reference page	First wiring (Y-axis lateral)	Second wiring (Z-axis lateral)
Without cable track (cable only)	N	See P.136	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications		
Item	Y-axis	Z-axis
Axis configuration	RCP6-SA8C	RCP6-SA7R
Stroke (Every 50mm)	50~1100mm	50~300mm
Max. speed *	HL	105mm/s
	HM	280mm/s
	SH	560mm/s
	SS	640mm/s
Motor size	56□ High thrust stepper motor	56□ Stepper motor
Ball screw lead	HL	4mm
	HM	8mm
	SH	16mm
	SS	24mm
Drive system	Ball screw Φ16mm rolled C10	Ball screw Φ12mm rolled C10
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options				
Type	Option code	Reference page	Y-axis	Z-axis
Brake *	B	See P.134	○	Standard equipment *
Cable exit direction (Top)	CJT	See P.134	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.134	○	
Cable exit direction (Left)	CJL	See P.134	○	
Cable exit direction (Bottom)	CJB	See P.134	○	
Non-motor end specification	NM	See P.135	○	○
Slider section roller specification	SR	See P.135	○	○

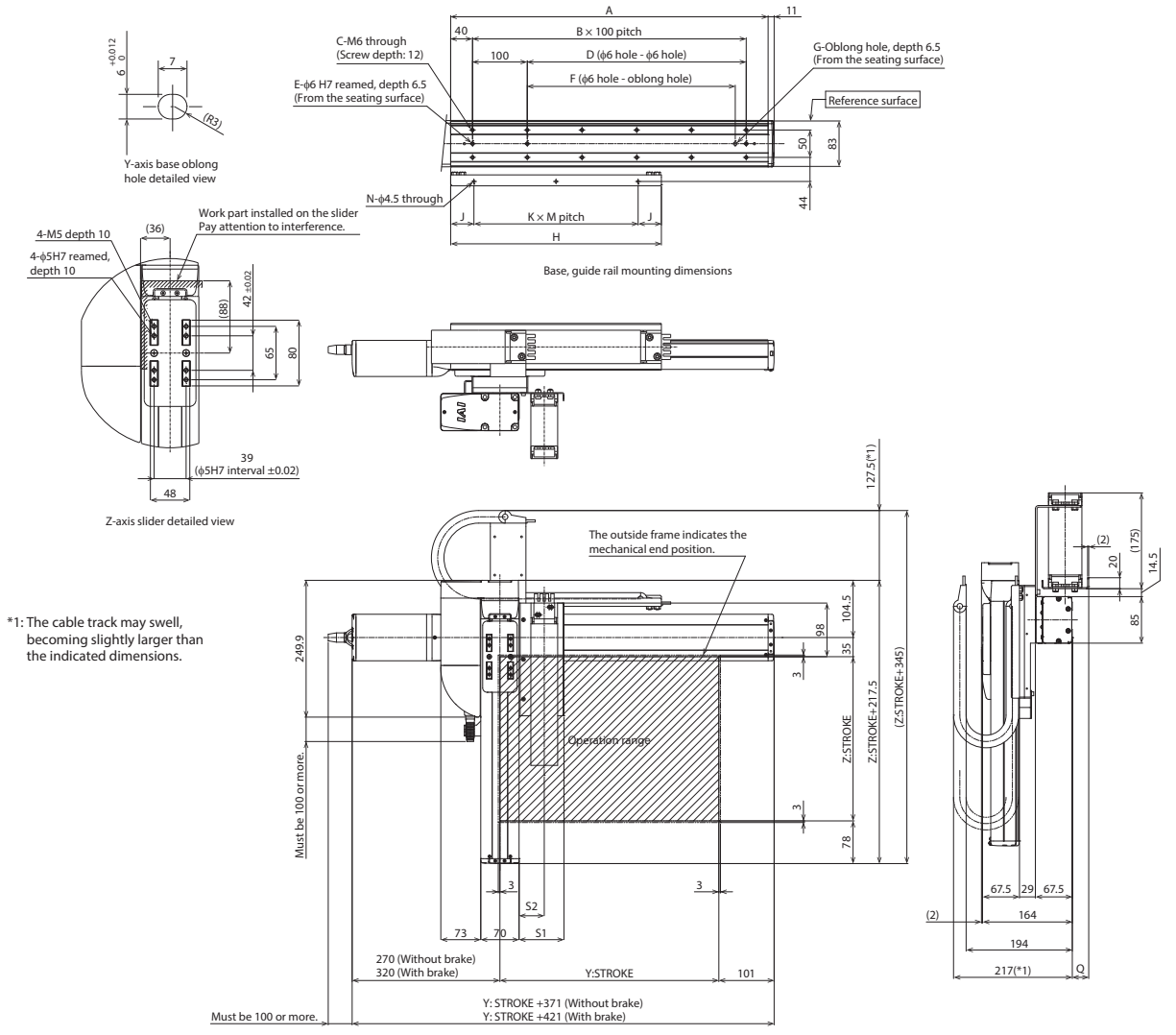
* Be sure to specify.
 * Brake option for Y-axis increases the length of the motor unit. Please contact IAI for more information.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



(*) Notes

The Y-axis cable track guide rail is to be fixed to the Y-axis mounting surface by the customer. Please note that there will be an overhang outside the Y-axis mounting surface. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis slider by the customer.

■ Dimensions by Stroke

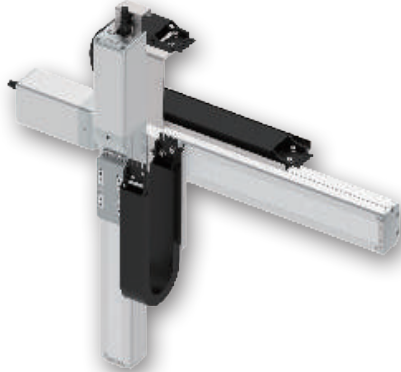
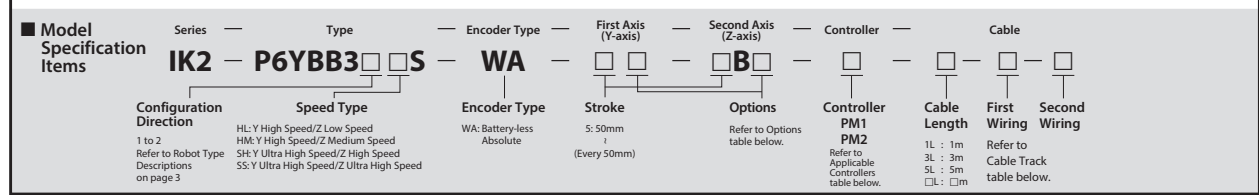
Y: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280
B	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1000	1000	1100
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980	1080
G	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	210	235	260	285	310	335	360	385	410	435	460	485	510	535	560	585	610	635	660	685	710	735
J	30	42.5	30	42.5	30	42.5	30	42.5	30	42.5	30	42.5	30	42.5	55	30	42.5	55	30	42.5	55	17.5
K	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4
M	150	150	200	200	125	125	150	150	175	175	200	200	150	150	150	175	175	175	200	200	200	175
N	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5
Cable track size	CT	CTM	CTL	CTXL																		
Q	18	30	45	63																		
S1	82	94	107	-																		
S2	46	52.5	59	-																		

* Dimensions Q, S1 and S2 change depending on the size of the cable track.

IK2-P6YBB3□□S

RCP6 2-axis configurations

Y-axis: SA8C (straight)
Z-axis: SA7C (straight)



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

HL type: Y high speed/ Z low speed		HM type: Y high speed/ Z medium speed (Unit: kg)	
Acceleration/ deceleration (G)	Z-axis stroke (mm) 50~300 (Every 50mm)	Acceleration/ deceleration (G)	Z-axis stroke (mm) 50~300 (Every 50mm)
0.1	9	0.1	4.5
0.3	8	0.3	4
0.5	7	0.5	3.5

SH type: Y ultra high speed/ Z high speed		SS type: Y ultra high speed/ Z ultra high speed		
Acceleration/ deceleration (G)	Z-axis stroke (mm) 50~300 (Every 50mm)	Acceleration/ deceleration (G)	Z-axis stroke (mm) 50~200 (Every 50mm)	Z-axis stroke (mm) 250~300 (Every 50mm)
0.1	3	0.1	1.5	
0.3	2	0.3	1.5	
0.5	1.5	0.5	1.5	1

* When both Y and Z axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Z-axis stroke (mm)	50	100	150	200	250	300
50	○	○	○	○	○	○
100	○	○	○	○	○	○
150	○	○	○	○	○	○
200	○	○	○	○	○	○
250	○	○	○	○	○	○
300	○	○	○	○	○	○
350	○	○	○	○	○	○
400	○	○	○	○	○	○
450	○	○	○	○	○	○
500	○	○	○	○	○	○
550	○	○	○	○	○	○
600	○	○	○	○	○	○
650	○	○	○	○	○	○
700	○	○	○	○	○	○
750	○	○	○	○	○	○
800	○	○	○	○	○	○
850	○	○	○	○	○	○
900	○	○	○	○	○	○
950	○	○	○	○	○	○
1000	○	○	○	○	○	○
1050	○	○	○	○	○	○
1100	○	○	○	○	○	○

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second axis cable is from the exit of the cable track.
 A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Specifications

Item	Y-axis	Z-axis
Axis configuration	RCP6-SA8C	RCP6-SA7C
Stroke (Every 50mm)	50~1100mm	50~300mm
Max. speed *	HL	105mm/s
	HM	280mm/s
	SH	560mm/s
	SS	640mm/s
Motor size	56□ High thrust stepper motor	56□ Stepper motor
Ball screw lead	HL	4mm
	HM	8mm
	SH	16mm
	SS	24mm
Drive system	Ball screw Φ16mm rolled C10	Ball screw Φ12mm rolled C10
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	Y-axis : SA8C	PCON-CFB/CGFB	P-149
		MSEL-PCF/PGF	P-139
	Z-axis : SA7C	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG MCON-LC/LCG	P-153
PM2	Y-axis : SA8C	RCON-PCF	P-159
	Z-axis : SA7C	RCON-PC	

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Track

Type	Model	Reference page	First wiring (Y-axis lateral)	Second wiring (Z-axis lateral)
Without cable track (cable only)	N	See P.136	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Options

Type	Option code	Reference page	Y-axis	Z-axis
Brake *	B	See P.134	○	Standard equipment *
Cable exit direction (Top)	CJT	See P.134	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.134	○	
Cable exit direction (Left)	CJL	See P.134	○	
Cable exit direction (Bottom)	CJB	See P.134	○	
Non-motor end specification	NM	See P.135	○	○
Slider section roller specification	SR	See P.135	○	○

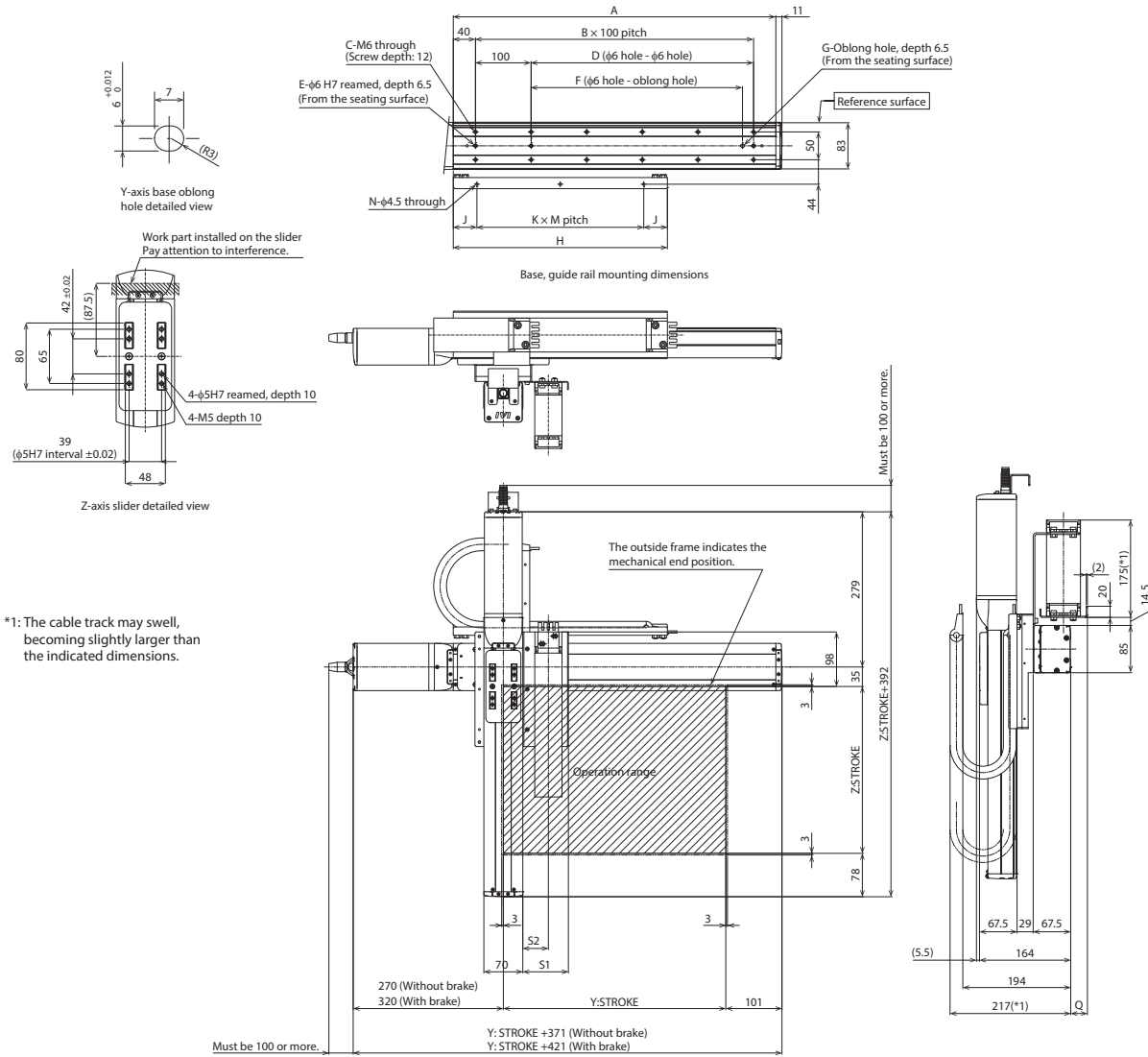
* Be sure to specify.
 * Brake option for Y-axis increases the length of the motor unit. Please contact IAI for more information.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.

(* Notes

The Y-axis cable track guide rail is to be fixed to the Y-axis mounting surface by the customer. Please note that there will be an overhang outside the Y-axis mounting surface. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis slider by the customer.

■ Dimensions by Stroke

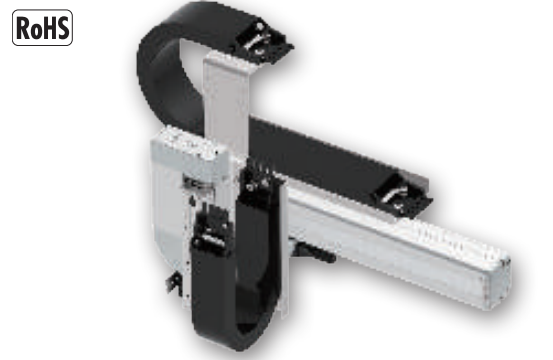
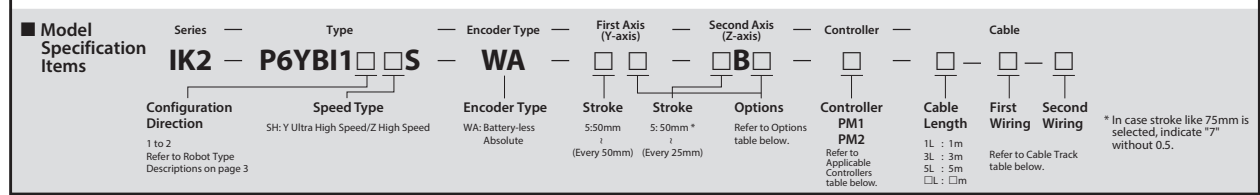
Y: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280
B	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1000	1000	1100
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980	1080
G	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	210	235	260	285	310	335	360	385	410	435	460	485	510	535	560	585	610	635	660	685	710	735
J	30	42.5	30	42.5	30	42.5	30	42.5	30	42.5	30	42.5	30	42.5	55	30	42.5	55	30	42.5	55	30
K	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4
M	150	150	200	200	125	125	150	150	175	175	200	200	150	150	150	175	175	175	200	200	200	175
N	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5

Cable track size	CT	CTM	CTL	CTXL
Q	18	30	45	63
S1	82	94	107	-
S2	46	52.5	59	-

* Dimensions Q, S1 and S2 change depending on the size of the cable track.

IK2-P6YBI1□□S RCP6 2-axis configurations

Y-axis: SA6R (side-mounted)
Z-axis: TA4R (side-mounted)



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

SH type: Y ultra high speed/Z high speed (Unit: kg)

Acceleration/deceleration (G)	Z-axis stroke (mm)	50~150 (Every 25mm)
	0.1	○
0.3	○	1
0.5	○	1

* When both Y and Z axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Z-axis stroke (mm)	50	75	100	125	150
50	○	○	○	○	○
100	○	○	○	○	○
150	○	○	○	○	○
200	○	○	○	○	○
250	○	○	○	○	○
300	○	○	○	○	○
350	○	○	○	○	○
400	○	○	○	○	○
450	○	○	○	○	○
500	○	○	○	○	○
550	○	○	○	○	○
600	○	○	○	○	○
650	○	○	○	○	○
700	○	○	○	○	○
750	○	○	○	○	○
800	○	○	○	○	○

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	Y-axis : SA6R Z-axis : TA4R	PCON-CFB/CGFB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
PM2		MSEL	P-139
		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (Y-axis side)	Second wiring (Z-axis side)
Without cable track (cable only)	N	See P.136	—	—
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item	Y-axis	Z-axis
Axis configuration	RCP6-SA6R	RCP6-TA4R
Stroke	50 ~ 800mm (Every 50mm)	50 ~ 150mm (Every 25mm)
Max speed *	800mm/s	350mm/s
Motor size	42□ Stepper motor	35□ Stepper motor
Ball screw lead	20mm	10mm
Drive system	Ball screw Φ10mm rolled C10	Ball screw Φ8mm rolled C10
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options

Type	Option code	Reference page	Y-axis	Z-axis
Brake	B	See P.134	○	Standard equipment *
Cable exit direction (Outside)	CJO	See P.134	○	Cannot be selected
Non-motor end specification	NM	See P.135	○	○
Slider section roller specification	SR	See P.135	○	Cannot be selected

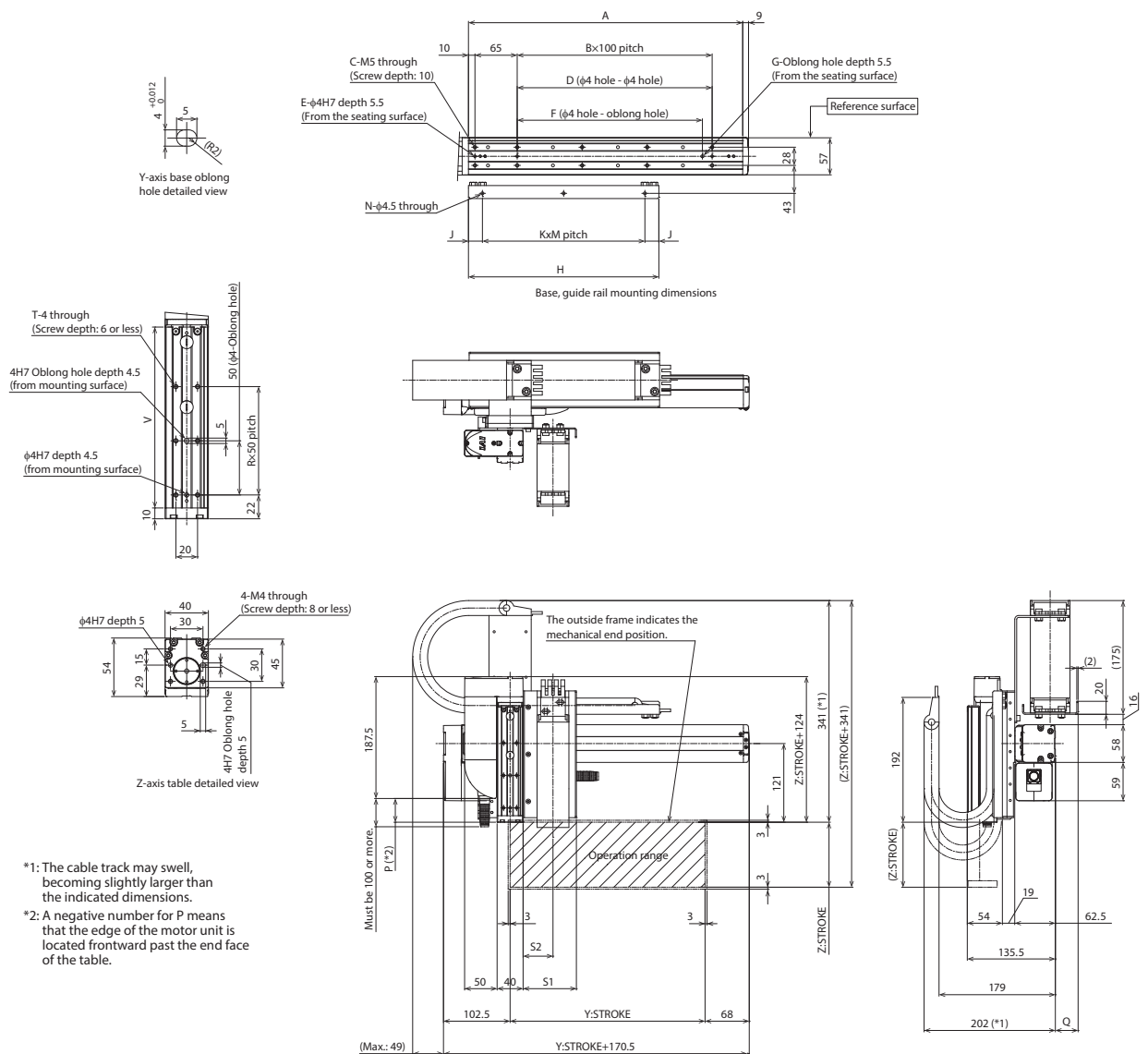
* Be sure to specify.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.
*2: A negative number for P means that the edge of the motor unit is located forward past the end face of the table.

(* Notes

The Y-axis cable track guide rail is to be fixed to the Y-axis mounting surface by the customer. Please note that there will be an overhang outside the Y-axis mounting surface. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis table by the customer.

■ Dimensions by Stroke

Y: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	168	193	218	243	268	293	318	343	368	393	418	443	468	493	518	543
J	9	21.5	9	21.5	9	21.5	9	21.5	9	21.5	9	21.5	9	21.5	34	9
K	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3
M	150	150	200	200	125	125	150	150	175	175	200	200	150	150	150	175
N	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4

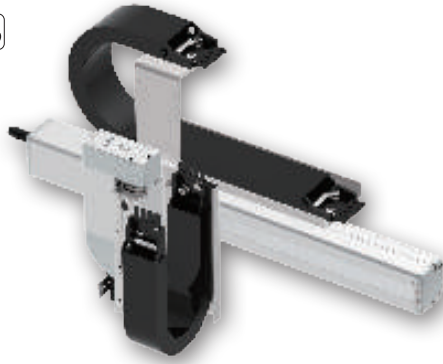
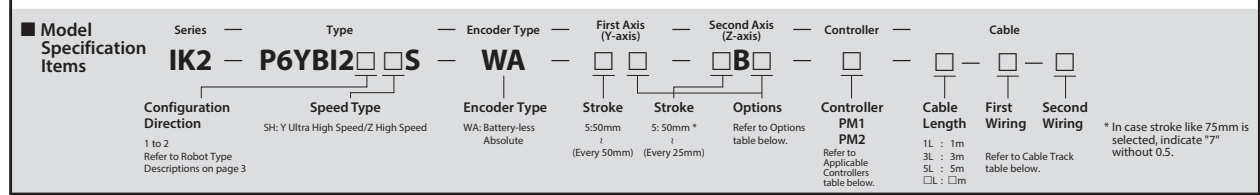
Z: Stroke	50	75	100	125	150
P (*2)	-13.5	11.5	36.5	61.5	86.5
R	1	2	2	3	3
T	4	6	6	8	8
V	117	142	167	192	217

Cable track size	CT	CTM	CTL	CTLX
Q	23	35	50	68
S1	82	94	107	-
S2	46	52.5	59	-

* Dimensions Q, S1 and S2 change depending on the size of the cable track.

IK2-P6YBI2□□S RCP6 2-axis configurations

Y-axis: SA6C (straight)
Z-axis: TA4R (side-mounted)



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ SH type: Y ultra high speed/Z high speed (Unit: kg)

Acceleration/deceleration (G)	Z-axis stroke (mm)	50~150 (Every 25mm)
	0.1	1
0.3	1	
0.5	1	

* When both Y and Z axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Z-axis stroke (mm)		50	75	100	125	150
Y-axis stroke (mm)	50	○	○	○	○	○
	100	○	○	○	○	○
	150	○	○	○	○	○
	200	○	○	○	○	○
	250	○	○	○	○	○
	300	○	○	○	○	○
	350	○	○	○	○	○
	400	○	○	○	○	○
	450	○	○	○	○	○
	500	○	○	○	○	○
	550	○	○	○	○	○
	600	○	○	○	○	○
	650	○	○	○	○	○
	700	○	○	○	○	○
	750	○	○	○	○	○
	800	○	○	○	○	○

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	Y-axis : SA6C Z-axis : TA4R	PCON-CFB/CGFB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
PM2		MSEL	P-139
		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (Y-axis side)	Second wiring (Z-axis side)
Without cable track (cable only)	N	See P.136	—	—
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item	Y-axis	Z-axis
Axis configuration	RCP6-SA6C	RCP6-TA4R
Stroke	50 ~ 800mm (Every 50mm)	50 ~ 150mm (Every 25mm)
Max speed *	800mm/s	350mm/s
Motor size	42□ Stepper motor	35□ Stepper motor
Ball screw lead	20mm	10mm
Drive system	Ball screw Φ10mm rolled C10	Ball screw Φ8mm rolled C10
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options

Type	Option code	Reference page	Y-axis	Z-axis
Brake *	B	See P.134	○	Standard equipment *
Cable exit direction (Top)	CJT	See P.134	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.134	○	
Cable exit direction (Left)	CJL	See P.134	○	
Cable exit direction (Bottom)	CJB	See P.134	○	
Non-motor end specification	NM	See P.135	○	○
Slider section roller specification	SR	See P.135	○	Cannot be selected

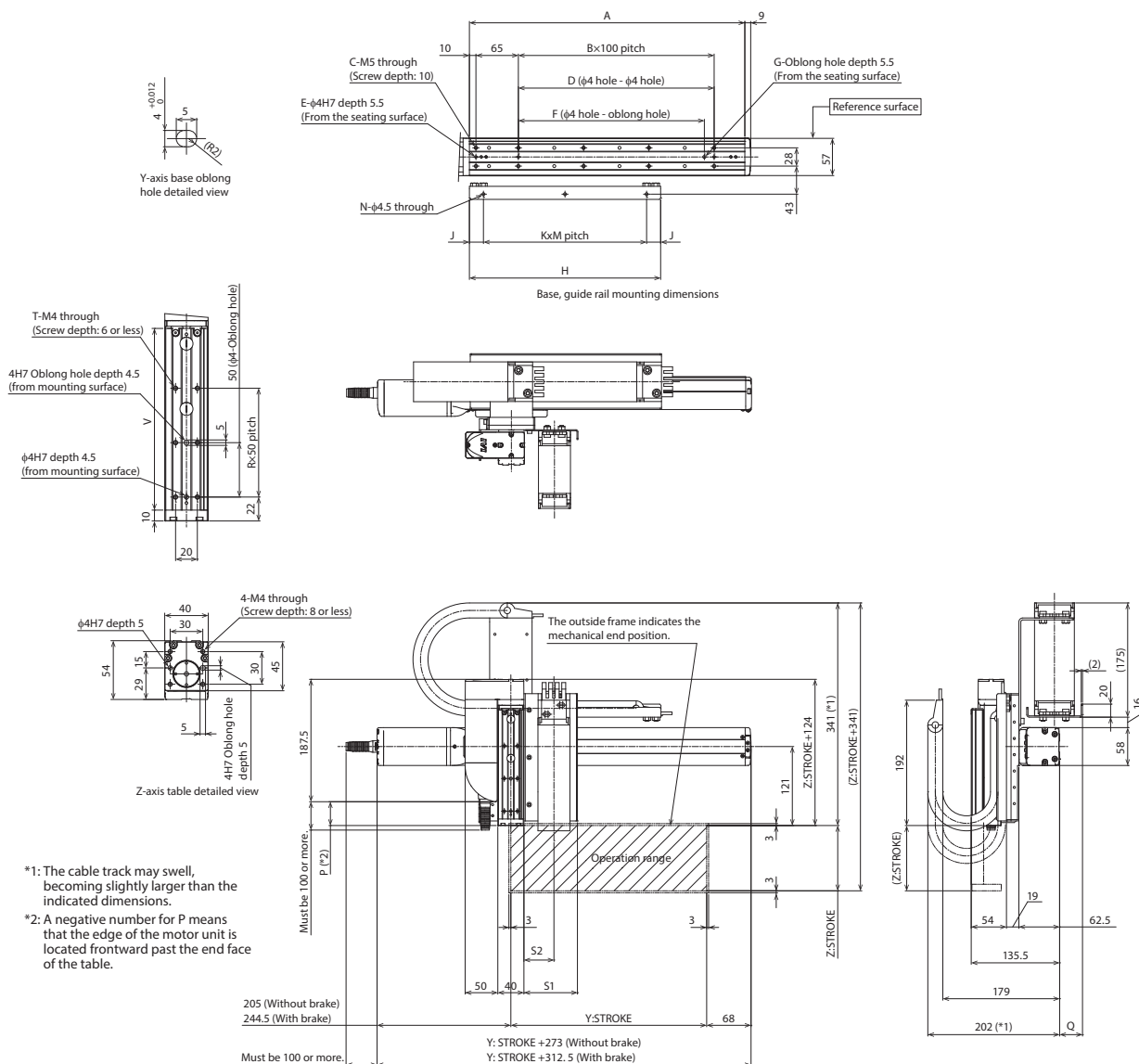
* Be sure to specify.
* Brake option for Y-axis increases the length of the motor unit. Please contact IAI for more information.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



(* Notes

The Y-axis cable track guide rail is to be fixed to the Y-axis mounting surface by the customer. Please note that there will be an overhang outside the Y-axis mounting surface. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis table by the customer.

■ Dimensions by Stroke

Y: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	168	193	218	243	268	293	318	343	368	393	418	443	468	493	518	543
J	9	21.5	9	21.5	9	21.5	9	21.5	9	21.5	9	21.5	9	21.5	34	9
K	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3
M	150	150	200	200	125	125	150	150	175	175	200	200	150	150	150	175
N	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4

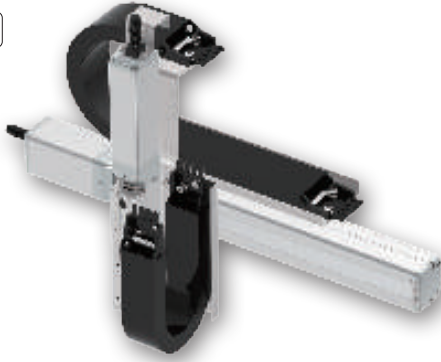
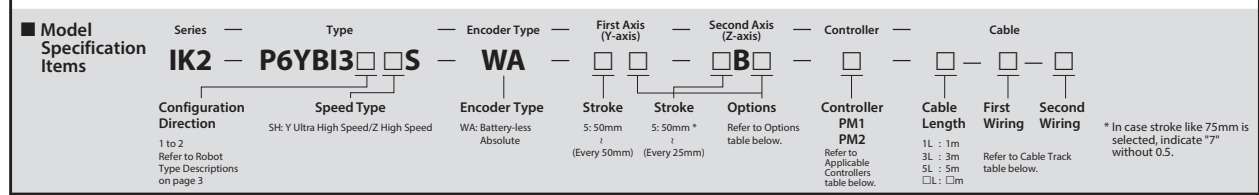
Cable track size	CT	CTM	CTL	CTLX
Q	23	35	50	68
S1	82	94	107	-
S2	46	52.5	59	-

* Dimensions Q, S1 and S2 change depending on the size of the cable track.

IK2-P6YBI3□□S

RCP6 2-axis configurations

Y-axis: SA6C (straight)
Z-axis: TA4C (straight)



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ SH type: Y ultra high speed/Z high speed (Unit: kg)

Acceleration/ deceleration (G)	Z-axis stroke (mm)	50~150 (Every 25mm)
	0.1	
0.3		1
0.5		1

* When both Y and Z axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Z-axis stroke (mm)		50	75	100	125	150
Y-axis stroke (mm)	50	○	○	○	○	○
	100	○	○	○	○	○
	150	○	○	○	○	○
	200	○	○	○	○	○
	250	○	○	○	○	○
	300	○	○	○	○	○
	350	○	○	○	○	○
	400	○	○	○	○	○
	450	○	○	○	○	○
	500	○	○	○	○	○
	550	○	○	○	○	○
	600	○	○	○	○	○
	650	○	○	○	○	○
	700	○	○	○	○	○
	750	○	○	○	○	○
	800	○	○	○	○	○

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	Y-axis : SA6C Z-axis : TA4C	PCON-CFB/CGFB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
PM2		MSEL	P-139
		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Specifications

Item	Y-axis	Z-axis
Axis configuration	RCP6-SA6C	RCP6-TA4C
Stroke	50 ~ 800mm (Every 50mm)	50 ~ 150mm (Every 25mm)
Max speed *	800mm/s	350mm/s
Motor size	42□ Stepper motor	35□ Stepper motor
Ball screw lead	20mm	10mm
Drive system	Ball screw Φ10mm rolled C10	Ball screw Φ8mm rolled C10
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Cable Track

Type	Model	Reference page	First wiring (Y-axis side)	Second wiring (Z-axis side)
Without cable track (cable only)	N	See P.136	—	—
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Options

Type	Option code	Reference page	Y-axis	Z-axis
Brake *	B	See P.134	○	Standard equipment *
Cable exit direction (Top)	CJT	See P.134	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.134	○	
Cable exit direction (Left)	CJL	See P.134	○	
Cable exit direction (Bottom)	CJB	See P.134	○	
Non-motor end specification	NM	See P.135	○	○
Slider section roller specification	SR	See P.135	○	Cannot be selected

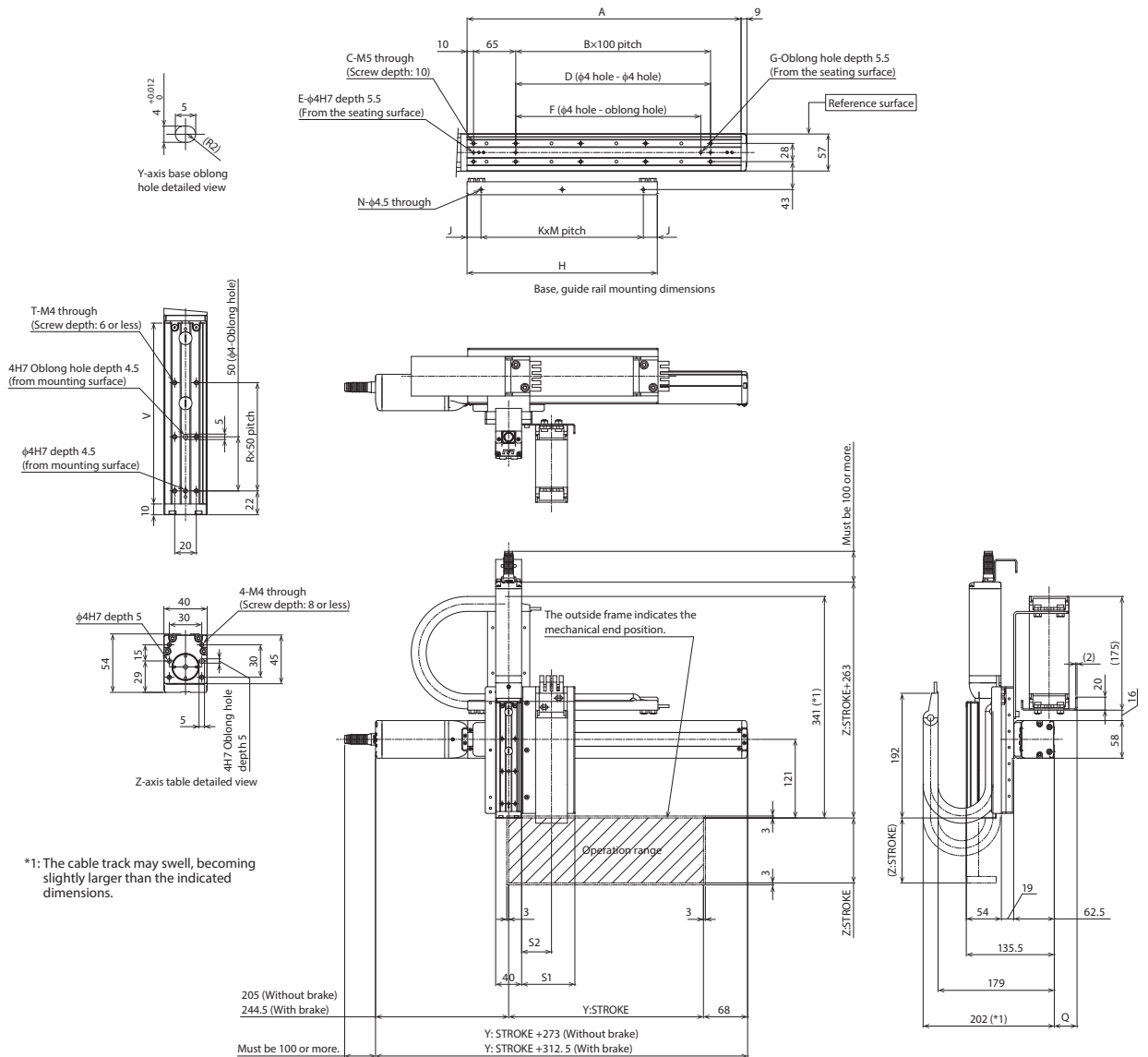
* Be sure to specify.
* Brake option for Y-axis increases the length of the motor unit. Please contact IAI for more information.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



(* Notes

The Y-axis cable track guide rail is to be fixed to the Y-axis mounting surface by the customer. Please note that there will be an overhang outside the Y-axis mounting surface. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis table by the customer.

■ Dimensions by Stroke

Y: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	168	193	218	243	268	293	318	343	368	393	418	443	468	493	518	543
J	9	21.5	9	21.5	9	21.5	9	21.5	9	21.5	9	21.5	9	21.5	34	9
K	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3
M	150	150	200	200	125	125	150	150	175	175	200	200	150	150	150	175
N	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4

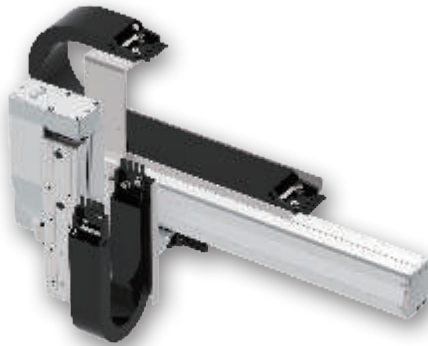
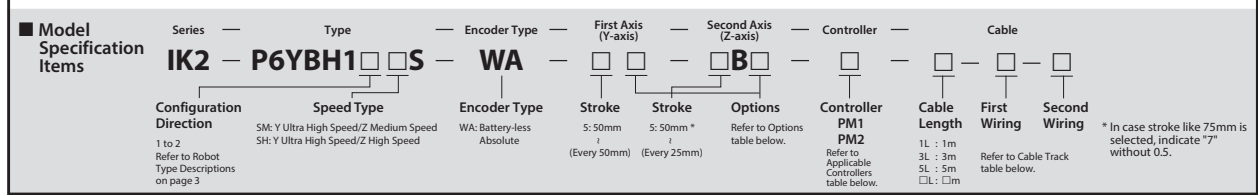
Z: Stroke	50	75	100	125	150
R	1	2	2	3	3
T	4	6	6	8	8
V	117	142	167	192	217

Cable track size	CT	CTM	CTL	CTLX
Q	23	35	50	68
S1	82	94	107	-
S2	46	52.5	59	-

* Dimensions Q, S1 and S2 change depending on the size of the cable track.

IK2-P6YBH1□□S RCP6 2-axis configurations

Y-axis: SA7R (side-mounted)
Z-axis: TA6R (side-mounted)



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ SM type: Y ultra high speed/Z medium speed (Unit: kg)

Acceleration/deceleration (G)	Z-axis stroke (mm) 50~200 (Every 25mm)
0.1	3
0.3	2.5
0.5	2.5

■ SH type: Y ultra high speed/Z high speed

Acceleration/deceleration (G)	Z-axis stroke (mm) 50~200 (Every 25mm)
0.1	1.5
0.3	1.5
0.5	1.5

* When both Y and Z axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke		50	75	100	125	150	175	200
Y-axis stroke (mm)	50	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○
	750	○	○	○	○	○	○	○
	800	○	○	○	○	○	○	○

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	Y-axis : SA7R Z-axis : TA6R	PCON-CFB/CGFB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
PM2		MSEL	P-139
		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length		
Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track				
Type	Model	Reference page	First wiring (Y-axis side)	Second wiring (Z-axis side)
Without cable track (cable only)	N	See P.136	—	—
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications		
Item	Y-axis	Z-axis
Axis configuration	RCP6-SA7R	RCP6-TA6R
Stroke	50 ~ 800mm (Every 50mm)	50 ~ 200mm (Every 25mm)
Max speed *	SM: 640mm/s SH: 440mm/s	280mm/s 440mm/s
Motor size	56□ Stepper motor	42□ Stepper motor
Ball screw lead	SM: 24mm SH: 12mm	6mm 12mm
Drive system	Ball screw Φ12mm rolled C10	Ball screw Φ10mm rolled C10
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options				
Type	Option code	Reference page	Y-axis	Z-axis
Brake	B	See P.134	○	Standard equipment *
Cable exit direction (Outside)	CJO	See P.134	○	Cannot be selected
Non-motor end specification	NM	See P.135	○	○
Slider section roller specification	SR	See P.135	○	Cannot be selected

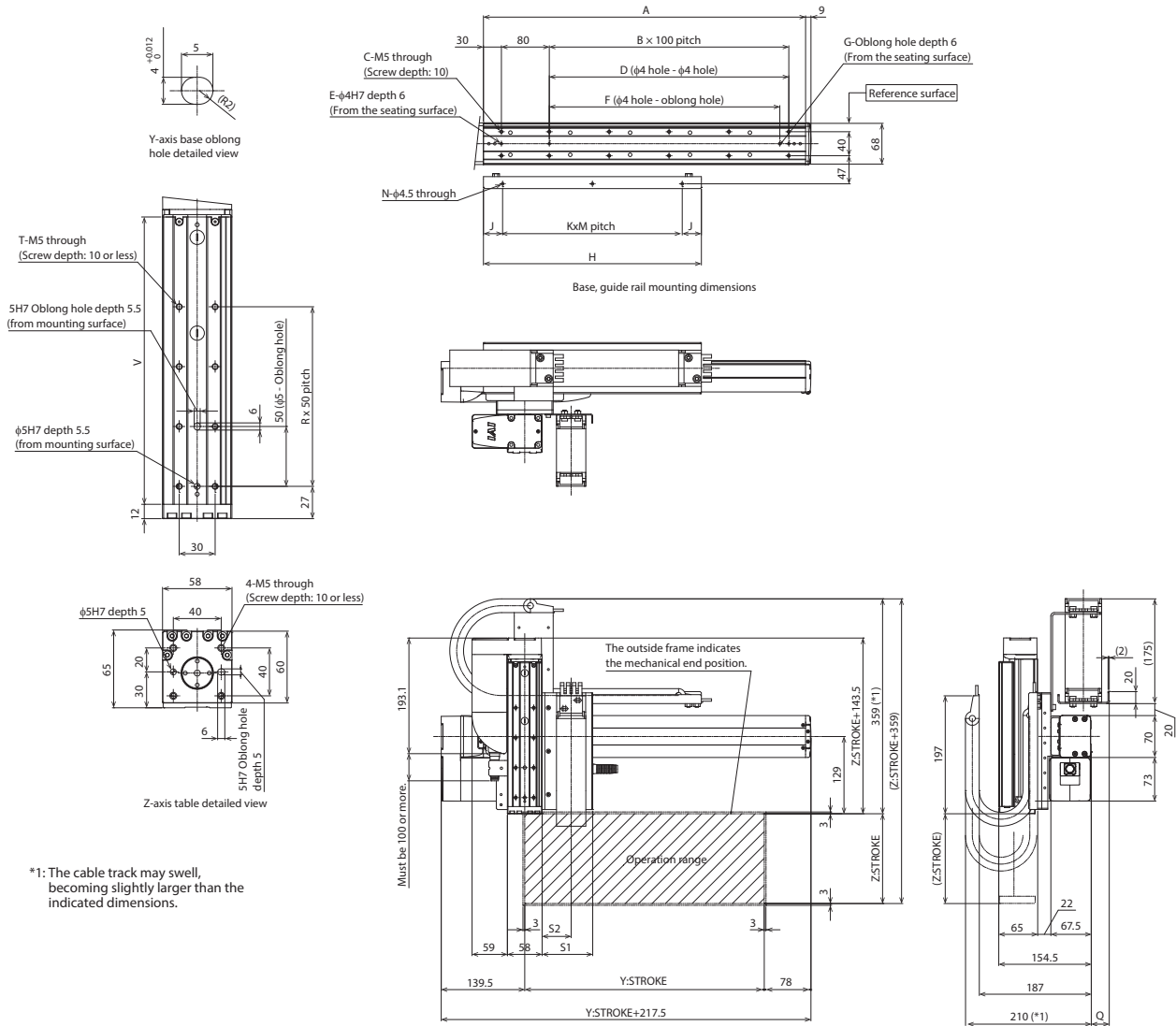
* Be sure to specify.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



(* Notes

The Y-axis cable track guide rail is to be fixed to the Y-axis mounting surface by the customer. Please note that there will be an overhang outside the Y-axis mounting surface. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis table by the customer.

■ Dimensions by Stroke

Y: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	0	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	189	214	239	264	289	314	339	364	389	414	439	464	489	514	539	564
J	19.5	32	19.5	32	19.5	32	19.5	32	19.5	32	19.5	32	19.5	32	44.5	19.5
K	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3
M	150	150	200	200	250	250	150	150	175	175	200	200	150	150	150	175
N	2	2	2	2	2	2	3	3	3	3	3	3	4	4	4	4

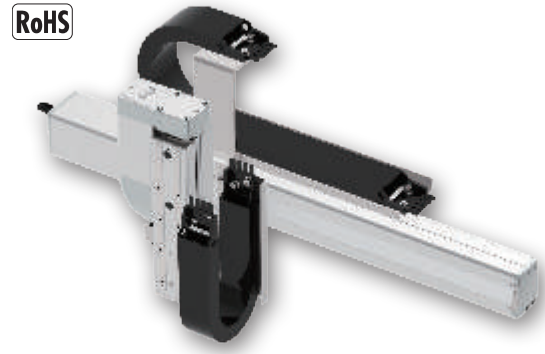
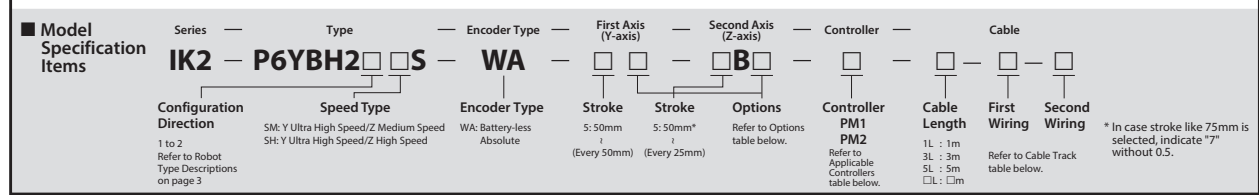
Z: Stroke	50	75	100	125	150	175	200
R	1	2	2	3	3	4	4
T	4	6	6	8	8	10	10
V	140	165	190	215	240	265	290

Cable track size	CT	CTM	CTL	CTXL
Q	18	30	45	63
S1	84.5	96.5	109.5	—
S2	48.5	55	61.5	—

* Dimensions Q, S1 and S2 change depending on the size of the cable track.

IK2-P6YBH2□□S RCP6 2-axis configurations

Y-axis: SA7C (straight)
Z-axis: TA6R (side-mounted)



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ SM type: Y ultra high speed/Z medium speed (Unit: kg)

Acceleration/ deceleration (G)	Z-axis stroke (mm)	
	50~200 (Every 25mm)	200~
0.1	3	
0.3	2.5	
0.5	2.5	

■ SH type: Y ultra high speed/Z high speed

Acceleration/ deceleration (G)	Z-axis stroke (mm)	
	50~200 (Every 25mm)	200~
0.1	1.5	
0.3	1.5	
0.5	1.5	

* When both Y and Z axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Z-axis stroke (mm)	50	75	100	125	150	175	200
50	○	○	○	○	○	○	○
100	○	○	○	○	○	○	○
150	○	○	○	○	○	○	○
200	○	○	○	○	○	○	○
250	○	○	○	○	○	○	○
300	○	○	○	○	○	○	○
350	○	○	○	○	○	○	○
400	○	○	○	○	○	○	○
450	○	○	○	○	○	○	○
500	○	○	○	○	○	○	○
550	○	○	○	○	○	○	○
600	○	○	○	○	○	○	○
650	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○
750	○	○	○	○	○	○	○
800	○	○	○	○	○	○	○

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	Y-axis : SA7C Z-axis : TA6R	PCON-CFB/CGFB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
PM2		MSEL	P-139
		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (Y-axis side)	Second wiring (Z-axis side)
Without cable track (cable only)	N	See P.136	—	—
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item	Y-axis	Z-axis
Axis configuration	RCP6-SA7C	RCP6-TA6R
Stroke	50 ~ 800mm (Every 50mm)	50 ~ 200mm (Every 25mm)
Max speed *	SM	280mm/s
	SH	440mm/s
Motor size	56□ Stepper motor	42□ Stepper motor
Ball screw lead	SM	6mm
	SH	12mm
Drive system	Ball screw Φ12mm rolled C10	Ball screw Φ10mm rolled C10
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low.
Maximum speed may change depending on the stroke.
For details, refer to the Maximum Speed by Stroke table on P.137.

Options

Type	Option code	Reference page	Y-axis	Z-axis
Brake *	B	See P.134	○	Standard equipment *
Cable exit direction (Top)	CJT	See P.134	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.134	○	
Cable exit direction (Left)	CJL	See P.134	○	
Cable exit direction (Bottom)	CJB	See P.134	○	
Non-motor end specification	NM	See P.135	○	○
Slider section roller specification	SR	See P.135	○	Cannot be selected

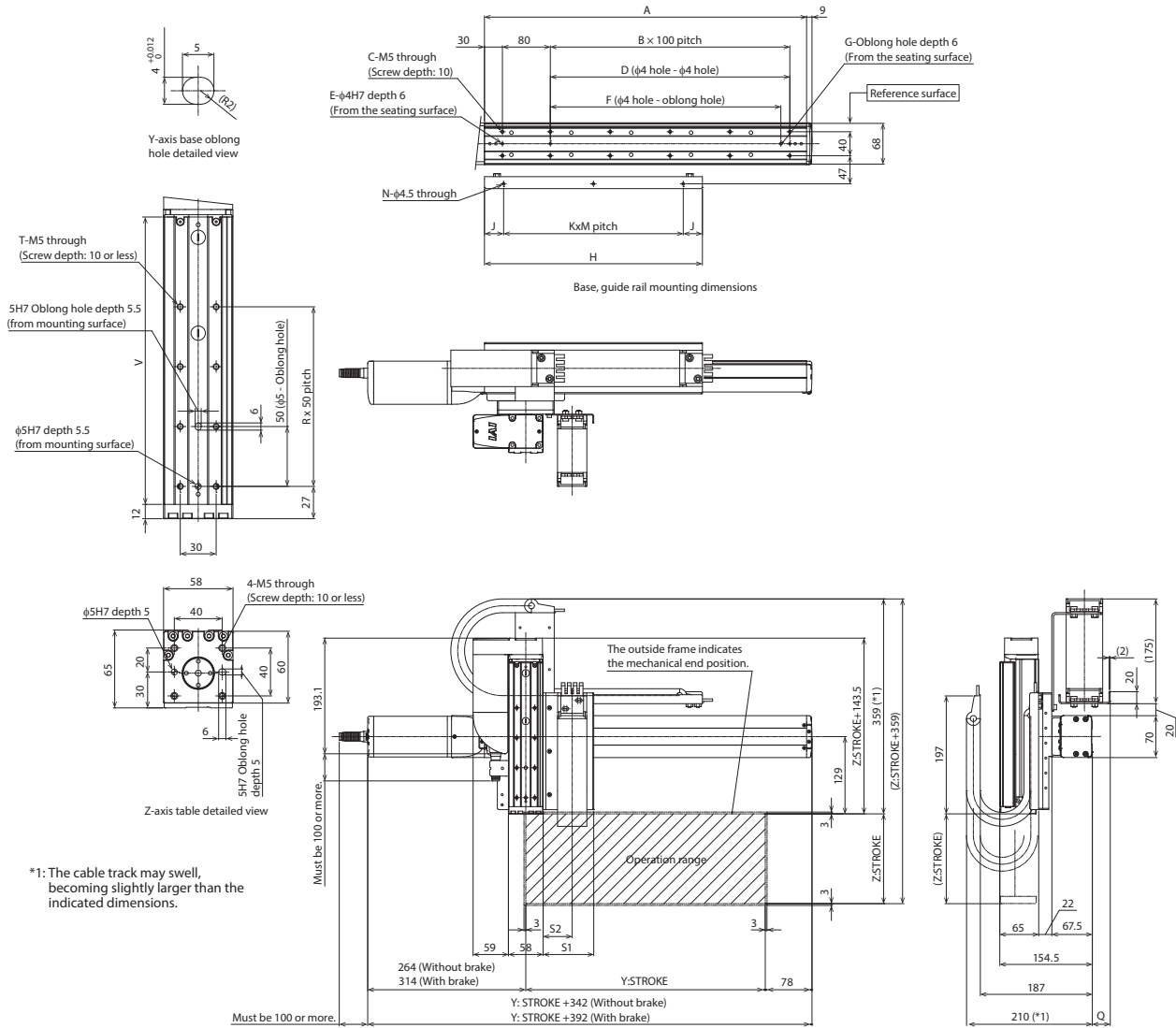
* Be sure to specify.
* Brake option for Y-axis increases the length of the motor unit. Please contact IAI for more information.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



(* Notes

The Y-axis cable track guide rail is to be fixed to the Y-axis mounting surface by the customer. Please note that there will be an overhang outside the Y-axis mounting surface. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis table by the customer.

■ Dimensions by Stroke

Y: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	0	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	189	214	239	264	289	314	339	364	389	414	439	464	489	514	539	564
J	19.5	32	19.5	32	19.5	32	19.5	32	19.5	32	19.5	32	19.5	32	44.5	19.5
K	1	1	1	1	1	1	2	2	2	2	2	2	2	3	3	3
M	150	150	200	200	250	250	150	150	175	175	200	200	150	150	150	175
N	2	2	2	2	2	2	3	3	3	3	3	3	4	4	4	4

Z: Stroke	50	75	100	125	150	175	200
R	1	2	2	3	3	4	4
T	4	6	6	8	8	10	10
V	140	165	190	215	240	265	290

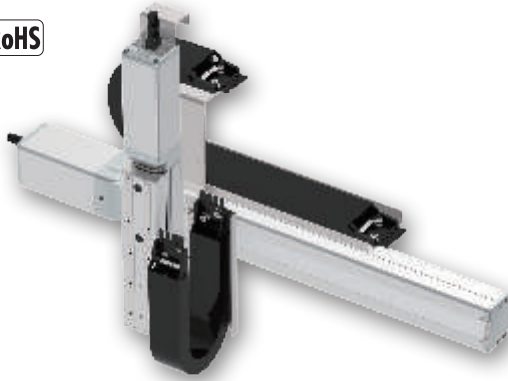
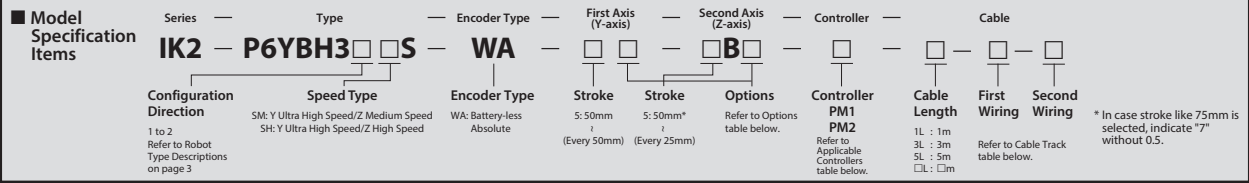
Cable track size	CT	CTM	CTL	CTXL
Q	18	30	45	63
S1	84.5	96.5	109.5	-
S2	48.5	55	61.5	-

* Dimensions Q, S1 and S2 change depending on the size of the cable track.

IK2-P6YBH3□□S

RCP6 2-axis configurations

Y-axis: SA7C (straight)
Z-axis: TA6C (straight)



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

SM type: Y ultra high speed/Z medium speed (Unit: kg)

Acceleration/ deceleration (G)	Z-axis stroke (mm)	
	50~200 (Every 25mm)	
0.1	3	
0.3	2.5	
0.5	2.5	

SH type: Y ultra high speed/Z high speed

Acceleration/ deceleration (G)	Z-axis stroke (mm)	
	50~200 (Every 25mm)	
0.1	1.5	
0.3	1.5	
0.5	1.5	

* When both Y and Z axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke		50	75	100	125	150	175	200
Y-axis stroke (mm)	50	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○
	750	○	○	○	○	○	○	○
	800	○	○	○	○	○	○	○

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	Y-axis : SA7C Z-axis : TA6C	PCON-CFB/CGFB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
PM2		MSEL	P-139
		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length		
Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track				
Type	Model	Reference page	First wiring (Y-axis side)	Second wiring (Z-axis side)
Without cable track (cable only)	N	See P.136	—	—
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications		
Item	Y-axis	Z-axis
Axis configuration	RCP6-SA7C	RCP6-TA6C
Stroke	50 ~ 800mm (Every 50mm)	50 ~ 200mm (Every 25mm)
Max speed *	SM	280mm/s
	SH	440mm/s
Motor size	56□ Stepper motor	42□ Stepper motor
Ball screw lead	SM	6mm
	SH	12mm
Drive system	Ball screw Φ12mm rolled C10	Ball screw Φ10mm rolled C10
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options				
Type	Option code	Reference page	Y-axis	Z-axis
Brake *	B	See P.134	○	Standard equipment *
Cable exit direction (Top)	CJT	See P.134	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.134	○	
Cable exit direction (Left)	CJL	See P.134	○	
Cable exit direction (Bottom)	CJB	See P.134	○	
Non-motor end specification	NM	See P.135	○	○
Slider section roller specification	SR	See P.135	○	Cannot be selected

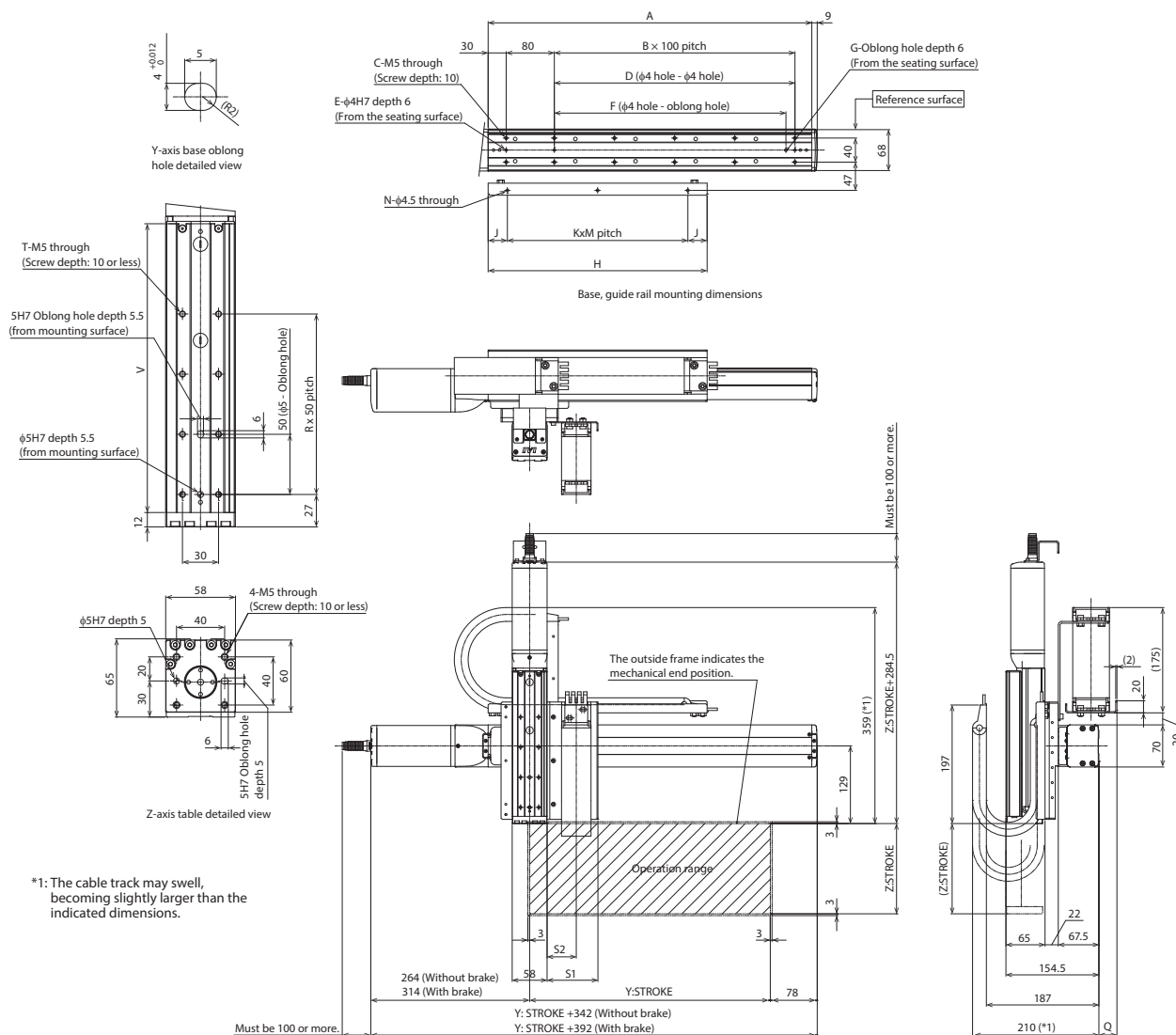
* Be sure to specify.
* Brake option for Y-axis increases the length of the motor unit. Please contact IAI for more information.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.

(* Notes

The Y-axis cable track guide rail is to be fixed to the Y-axis mounting surface by the customer. Please note that there will be an overhang outside the Y-axis mounting surface. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis table by the customer.

■ Dimensions by Stroke

Y: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	0	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	189	214	239	264	289	314	339	364	389	414	439	464	489	514	539	564
J	19.5	32	19.5	32	19.5	32	19.5	32	19.5	32	19.5	32	19.5	32	44.5	19.5
K	1	1	1	1	1	1	2	2	2	2	2	2	2	3	3	3
M	150	150	200	200	250	250	150	150	175	175	200	200	150	150	150	175
N	2	2	2	2	2	2	3	3	3	3	3	3	4	4	4	4

Z: Stroke	50	75	100	125	150	175	200
R	1	2	2	3	3	4	4
T	4	6	6	8	8	10	10
V	140	165	190	215	240	265	290

Cable track size	CT	CTM	CTL	CTXL
Q	18	30	45	63
S1	84.5	96.5	109.5	-
S2	48.5	55	61.5	-

* Dimensions Q, S1 and S2 change depending on the size of the cable track.

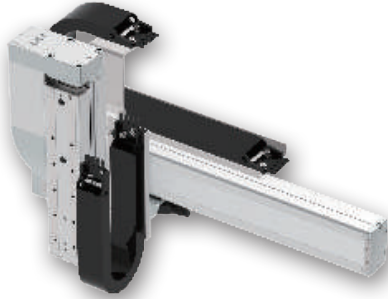
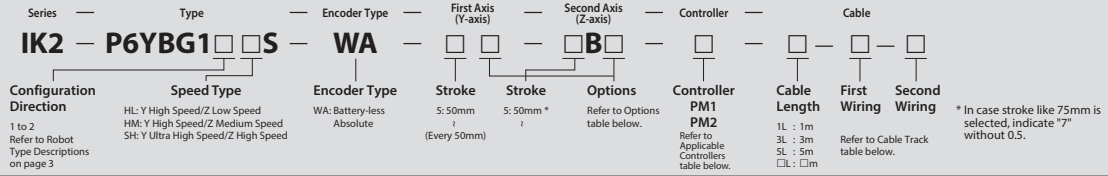
IK2-P6YBG1□□S

RCP6 2-axis configurations

Y-axis: SA8R (side-mounted)

Z-axis: TA7R (side-mounted)

Model Specification Items



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

HL type: Y high speed/ Z low speed

Acceleration/deceleration (G)	Z-axis stroke (mm)		250	300
	50~200 (Every 25mm)			
0.1	8			
0.3	6			

HM type: Y high speed/ Z medium speed

Acceleration/deceleration (G)	Z-axis stroke (mm)		250	300
	50~200 (Every 25mm)			
0.1	4			
0.3	3			
0.5	3			

SH type: Y ultra high speed/ Z high speed

Acceleration/deceleration (G)	Z-axis stroke (mm)		250	300
	50~200 (Every 25mm)			
0.1	3			
0.3	2.5			

* When both Y and Z axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Z-axis stroke (mm)	50	75	100	125	150	175	200	250	300
50	○	○	○	○	○	○	○	○	○
100	○	○	○	○	○	○	○	○	○
150	○	○	○	○	○	○	○	○	○
200	○	○	○	○	○	○	○	○	○
250	○	○	○	○	○	○	○	○	○
300	○	○	○	○	○	○	○	○	○
350	○	○	○	○	○	○	○	○	○
400	○	○	○	○	○	○	○	○	○
450	○	○	○	○	○	○	○	○	○
500	○	○	○	○	○	○	○	○	○
550	○	○	○	○	○	○	○	○	○
600	○	○	○	○	○	○	○	○	○
650	○	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○	○
750	○	○	○	○	○	○	○	○	○
800	○	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○	○
900	○	○	○	○	○	○	○	○	○
950	○	○	○	○	○	○	○	○	○
1000	○	○	○	○	○	○	○	○	○
1050	○	○	○	○	○	○	○	○	○
1100	○	○	○	○	○	○	○	○	○

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	Y-axis : SA8R	PCON-CFB/CGFB	P-149
		MSEL-PCF/PGF	P-139
	Z-axis : TA7R	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
PM2	Y-axis : SA8R	MCON-C/CG	P-153
		MCON-LC/LCG	
	Z-axis : TA7R	MSEL	P-139
		RCON-PFC	P-159
RCON-PC			

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Specifications

Item	Y-axis	Z-axis
Axis configuration	RCP6-SA8R	RCP6-TA7R
Stroke	50 ~ 1100mm (Every 50mm)	50 ~ 200 (Every 25mm), 250, 300mm
Max speed *	HL	140mm/s
	HM	280mm/s
	SH	420mm/s
Motor size	56□ High thrust stepper motor	56□ Stepper motor
Ball screw lead	HL	4mm
	HM	8mm
	SH	16mm
Drive system	Ball screw Φ16mm rolled C10	Ball screw Φ12mm rolled C10
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Cable Track

Type	Model	Reference page	First wiring (Y-axis side)	Second wiring (Z-axis side)
Without cable track (cable only)	N	See P.136	-	-
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Options

Type	Option code	Reference page	Y-axis	Z-axis
Brake	B	See P.134	○	Standard equipment *
Cable exit direction (Outside)	CJO	See P.134	○	Cannot be selected
Non-motor end specification	NM	See P.135	○	○
Slider section roller specification	SR	See P.135	○	Cannot be selected

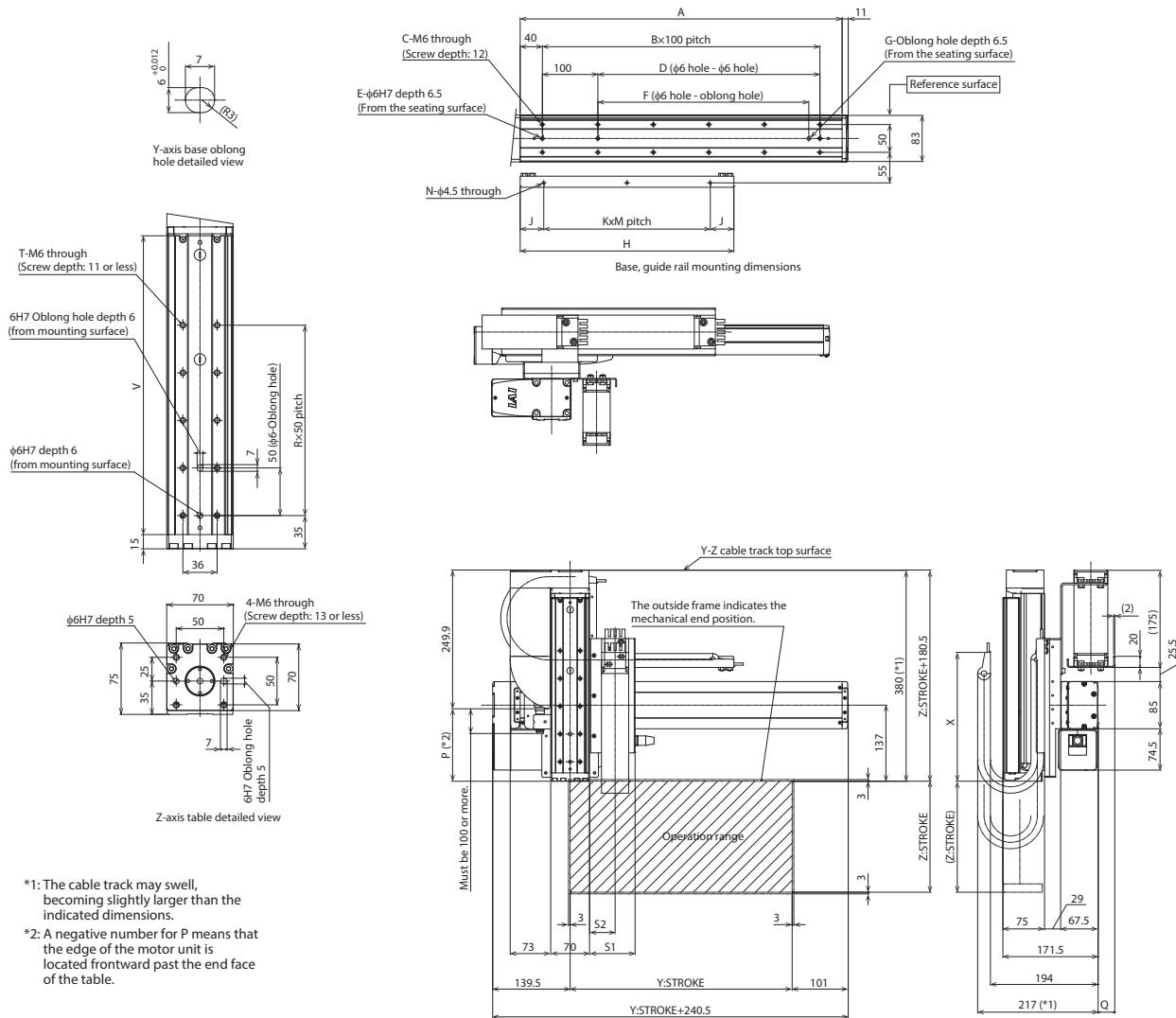
* Be sure to specify.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.
*2: A negative number for P means that the edge of the motor unit is located forward past the end face of the table.

(* Notes

The Y-axis cable track guide rail is to be fixed to the Y-axis mounting surface by the customer. Please note that there will be an overhang outside the Y-axis mounting surface. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis table by the customer.

■ Dimensions by Stroke

Y: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280
B	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1000	1000	1100
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980	1080
G	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	210	235	260	285	310	335	360	385	410	435	460	485	510	535	560	585	610	635	660	685	710	735
J	30	42.5	30	42.5	30	42.5	30	42.5	30	42.5	30	42.5	30	42.5	55	30	42.5	55	30	42.5	55	17.5
K	1	1	1	1	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4
M	150	150	200	200	125	125	150	150	175	175	200	200	150	150	150	175	175	175	200	200	200	175
N	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5

Z: Stroke	50	75	100	125	150	175	200	250	300
P (*2)	-19.4	5.6	30.6	55.6	80.6	105.6	130.6	180.6	230.6
R	1	2	2	3	3	4	4	5	6
T	4	6	6	8	8	10	10	12	14
V	164	189	214	239	264	289	314	364	414
X	188		232						

Cable track size	CT	CTM	CTL	CTLX
Q	18	30	45	63
S1	82	94	107	-
S2	46	52.5	59	-

* Dimensions Q, S1 and S2 change depending on the size of the cable track.

IK2-P6YBG2□□S

RCP6 2-axis configurations

Y-axis: SA8C (straight)

Z-axis: TA7R (side-mounted)

Model Specification Items

Series: **IK2** | Type: **P6YBG2□□S** | Encoder Type: **WA** | First Axis (Y-axis): **□□** | Second Axis (Z-axis): **□B□** | Controller: **□** | Cable: **□□□**

Configuration Direction
1 to 2
Refer to Robot Type Descriptions on page 3

Speed Type
HL: Y High Speed/Z Low Speed
HM: Y High Speed/Z Medium Speed
SH: Y Ultra High Speed/Z High Speed

Encoder Type
WA: Battery-less Absolute

Stroke
5: 50mm
5: 50mm*
(Every 50mm)

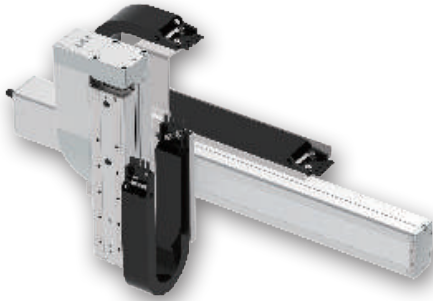
Options
Refer to Options table below.

Controller
PM1
PM2
Refer to Applicable Controllers table below.

Cable Length
1L : 1m
3L : 3m
5L : 5m
CL : □m

First Wiring
Second Wiring
Refer to Cable Track table below.

* In case stroke like 75mm is selected, indicate "7" without 0.5.



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

HL type: Y high speed/
Z low speed

Acceleration/ deceleration (G)	Z-axis stroke (mm)	50~200 (Every 25mm)	250	300
	0.1		8	
0.3		6		

HM type: Y high speed/
Z medium speed

Acceleration/ deceleration (G)	Z-axis stroke (mm)	50~200 (Every 25mm)	250	300
	0.1		4	
0.3		3		
0.5		3		

SH type: Y ultra high speed/
Z high speed

Acceleration/ deceleration (G)	Z-axis stroke (mm)	50~200 (Every 25mm)	250	300
	0.1		3	
0.3		2.5		

* When both Y and Z axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Z-axis stroke (mm)	50	75	100	125	150	175	200	250	300
50	○	○	○	○	○	○	○	○	○
100	○	○	○	○	○	○	○	○	○
150	○	○	○	○	○	○	○	○	○
200	○	○	○	○	○	○	○	○	○
250	○	○	○	○	○	○	○	○	○
300	○	○	○	○	○	○	○	○	○
350	○	○	○	○	○	○	○	○	○
400	○	○	○	○	○	○	○	○	○
450	○	○	○	○	○	○	○	○	○
500	○	○	○	○	○	○	○	○	○
550	○	○	○	○	○	○	○	○	○
600	○	○	○	○	○	○	○	○	○
650	○	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○	○
750	○	○	○	○	○	○	○	○	○
800	○	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○	○
900	○	○	○	○	○	○	○	○	○
950	○	○	○	○	○	○	○	○	○
1000	○	○	○	○	○	○	○	○	○
1050	○	○	○	○	○	○	○	○	○
1100	○	○	○	○	○	○	○	○	○

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	Y-axis : SA8C	PCON-CFB/CGFB	P-149
		MSEL-PCF/PGF	P-139
	Z-axis : TA7R	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
PM2	Y-axis : SA8C	MCON-C/CG	P-153
		MCON-LC/LCG	
	Z-axis : TA7R	MSEL	P-139
		RCON-PFC	P-159
RCON-PC			

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Specifications

Item	Y-axis	Z-axis
Axis configuration	RCP6-SA8C	RCP6-TA7R
Stroke	50 ~ 1100mm (Every 50mm)	50 ~ 200 (Every 25mm), 250, 300mm
Max speed *	HL	140mm/s
	HM	280mm/s
	SH	420mm/s
Motor size	650mm/s 56□ High thrust stepper motor	56□ Stepper motor
Ball screw lead	HL	4mm
	HM	8mm
	SH	16mm
Drive system	Ball screw Φ16mm rolled C10	Ball screw Φ12mm rolled C10
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low.
Maximum speed may change depending on the stroke.
For details, refer to the Maximum Speed by Stroke table on P.137.

Cable Track

Type	Model	Reference page	First wiring (Y-axis side)	Second wiring (Z-axis side)
Without cable track (cable only)	N	See P.136	-	-
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Options

Type	Option code	Reference page	Y-axis	Z-axis
Brake *	B	See P.134	○	Standard equipment *
Cable exit direction (Top)	CJT	See P.134	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.134	○	
Cable exit direction (Left)	CJL	See P.134	○	
Cable exit direction (Bottom)	CJB	See P.134	○	
Non-motor end specification	NM	See P.135	○	○
Slider section roller specification	SR	See P.135	○	Cannot be selected

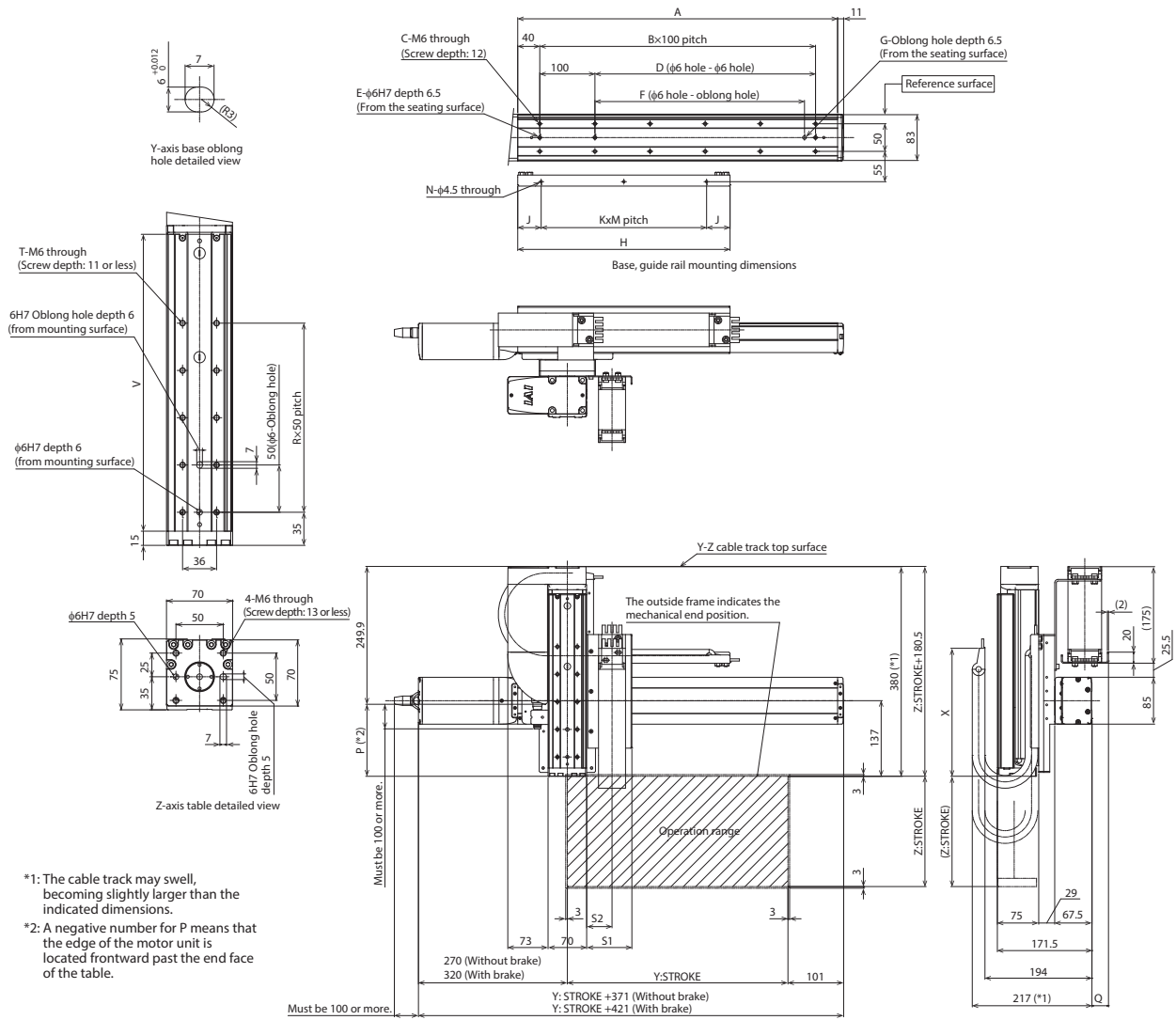
* Be sure to specify.
* Brake option for Y-axis increases the length of the motor unit. Please contact IAI for more information.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



- *1: The cable track may swell, becoming slightly larger than the indicated dimensions.
- *2: A negative number for P means that the edge of the motor unit is located forward past the end face of the table.

(* Notes

The Y-axis cable track guide rail is to be fixed to the Y-axis mounting surface by the customer. Please note that there will be an overhang outside the Y-axis mounting surface. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis table by the customer.

■ Dimensions by Stroke

Y: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280
B	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1000	1000	1100
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980	1080
G	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	210	235	260	285	310	335	360	385	410	435	460	485	510	535	560	585	610	635	660	685	710	735
J	30	42.5	30	42.5	30	42.5	30	42.5	30	42.5	30	42.5	30	42.5	55	30	42.5	55	30	42.5	55	17.5
K	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4
M	150	150	200	200	125	125	150	150	175	175	200	200	150	150	150	175	175	175	200	200	200	175
N	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5

Z: Stroke	50	75	100	125	150	175	200	250	300
P (*2)	-19.4	5.6	30.6	55.6	80.6	105.6	130.6	180.6	230.6
R	1	2	2	3	3	4	4	5	6
T	4	6	6	8	8	10	10	12	14
V	164	189	214	239	264	289	314	364	414
X	188		232						

Cable track size	CT	CTM	CTL	CTLX
Q	18	30	45	63
S1	82	94	107	-
S2	46	52.5	59	-

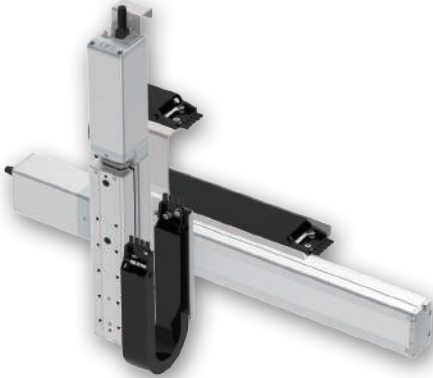
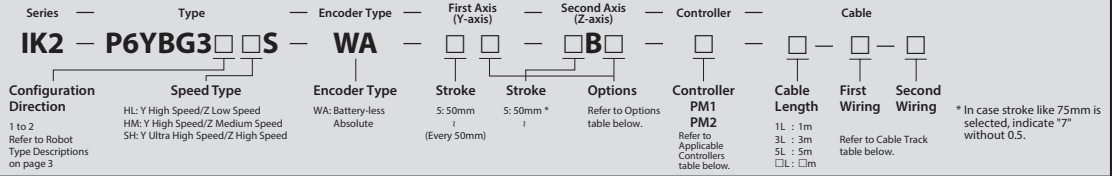
* Dimensions Q, S1 and S2 change depending on the size of the cable track.

IK2-P6YBG3□□S

RCP6 2-axis configurations

Y-axis: SA8C (straight)
Z-axis: TA7C (straight)

Model Specification Items



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

HL type: Y high speed/ Z low speed

Acceleration/ deceleration (G)	Z-axis stroke (mm)	50~200 (Every 25mm)	250	300
	0.1		8	
0.3		6		

HM type: Y high speed/ Z medium speed

Acceleration/ deceleration (G)	Z-axis stroke (mm)	50~200 (Every 25mm)	250	300
	0.1		4	
0.3		3		
0.5		3		

SH type: Y ultra high speed/ Z high speed

Acceleration/ deceleration (G)	Z-axis stroke (mm)	50~200 (Every 25mm)	250	300
	0.1		3	
0.3		2.5		

* When both Y and Z axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Stroke		50	75	100	125	150	175	200	250	300
Y-axis stroke (mm)	Z-axis stroke (mm)	50	75	100	125	150	175	200	250	300
	50	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○	○	○
	750	○	○	○	○	○	○	○	○	○
	800	○	○	○	○	○	○	○	○	○
	850	○	○	○	○	○	○	○	○	○
900	○	○	○	○	○	○	○	○	○	
950	○	○	○	○	○	○	○	○	○	
1000	○	○	○	○	○	○	○	○	○	
1050	○	○	○	○	○	○	○	○	○	
1100	○	○	○	○	○	○	○	○	○	

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	Y-axis : SA8C	PCON-CFB/CGFB	P-149
		MSEL-PCF/PGF	P-139
	Z-axis : TA7C	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
PM2	Y-axis : SA8C	MCON-C/CG	P-153
		MCON-LC/LCG	
	Z-axis : TA7C	MSEL	P-139
		RCON-PFC	P-159
RCON-PC			

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Specifications

Item	Y-axis	Z-axis
Axis configuration	RCP6-SA8C	RCP6-TA7C
Stroke	50 ~ 1100mm (Every 50mm)	50 ~ 200 (Every 25mm), 250, 300mm
Max speed *	HL	140mm/s
	HM	280mm/s
	SH	420mm/s
Motor size	56□ High thrust stepper motor	56□ Stepper motor
Ball screw lead	HL	4mm
	HM	8mm
	SH	16mm
Drive system	Ball screw Φ16mm rolled C10	Ball screw Φ12mm rolled C10
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Cable Track

Type	Model	Reference page	First wiring (Y-axis side)	Second wiring (Z-axis side)
Without cable track (cable only)	N	See P.136	-	-
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Options

Type	Option code	Reference page	Y-axis	Z-axis
Brake *	B	See P.134	○	Standard equipment *
Cable exit direction (Top)	CJT	See P.134	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.134	○	
Cable exit direction (Left)	CJL	See P.134	○	
Cable exit direction (Bottom)	CJB	See P.134	○	
Non-motor end specification	NM	See P.135	○	○
Slider section roller specification	SR	See P.135	○	Cannot be selected

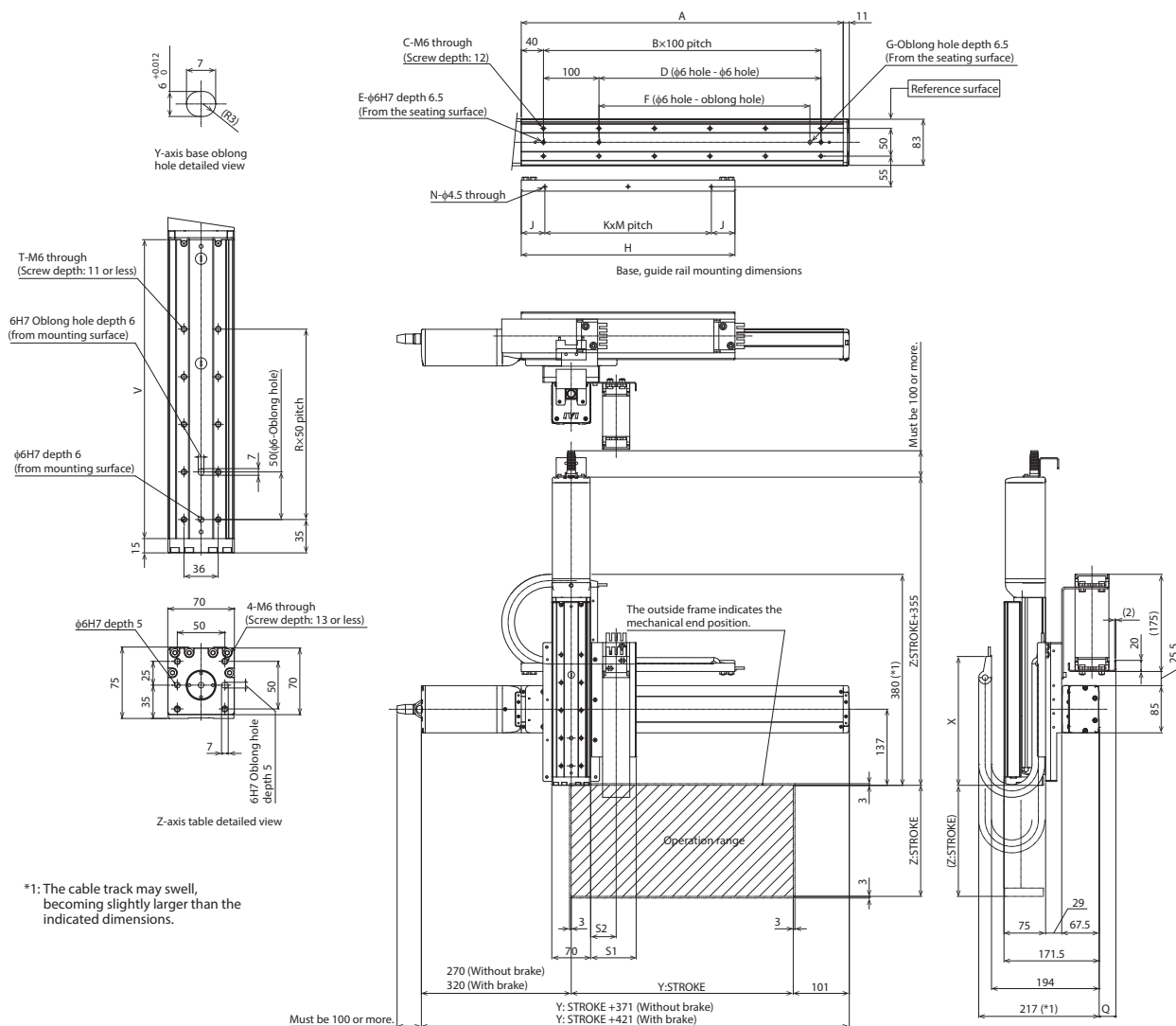
* Be sure to specify.
* Brake option for Y-axis increases the length of the motor unit. Please contact IAI for more information.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.

(*) Notes

The Y-axis cable track guide rail is to be fixed to the Y-axis mounting surface by the customer. Please note that there will be an overhang outside the Y-axis mounting surface. Also, the moving end of the Z-axis cable track is to be fixed to plate or the like mounted on the Z-axis table by the customer.

■ Dimensions by Stroke

Y: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280
B	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1000	1000	1100
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980
G	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	210	235	260	285	310	335	360	385	410	435	460	485	510	535	560	585	610	635	660	685	710	735
J	30	42.5	30	42.5	30	42.5	30	42.5	30	42.5	30	42.5	30	42.5	55	30	42.5	55	30	42.5	55	17.5
K	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	4
M	150	150	200	200	125	125	150	150	175	175	200	200	150	150	150	175	175	175	200	200	200	175
N	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	5

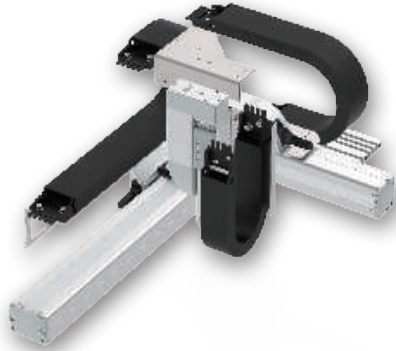
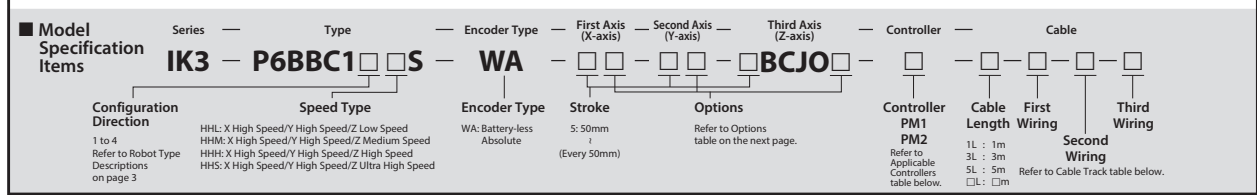
Cable track size	CT	CTM	CTL	CTLX
Q	18	30	45	63
S1	82	94	107	-
S2	46	52.5	59	-

* Dimensions Q, S1 and S2 change depending on the size of the cable track.

Z: Stroke	50	75	100	125	150	175	200	250	300
R	1	2	2	3	3	4	4	5	6
T	4	6	6	8	8	10	10	12	14
V	164	189	214	239	264	289	314	364	414
X		188				232			

IK3-P6BBC1□□S

RCP6 3-axis XYB + Z-axis base mount configurations
 X-axis: SA7R (side-mounted)
 Y-axis: SA6R (side-mounted) Z-axis: SA4R (side-mounted)



The photograph above shows the configuration direction "1" where all axes have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ HHL type: X high speed/Y high speed/Z low speed ■ HHM type: X high speed/Y high speed/Z medium speed (Unit: kg)

Y-axis (mm)	50~200 (Every 50mm)	250~400 (Every 50mm)
Acceleration/deceleration (G)		
0.1	3	—
0.3	3	—

Y-axis (mm)	50~200 (Every 50mm)	250~400 (Every 50mm)
Acceleration/deceleration (G)		
0.1	2	—
0.3	2	1

■ HHH type: X high speed/Y high speed/Z high speed

Y-axis (mm)	50~400 (Every 50mm)
Acceleration/deceleration (G)	
0.1	1
0.3	1
0.5	1

■ HHS type: X high speed/Y high speed/Z ultra high speed

Y-axis (mm)	50~400 (Every 50mm)
Acceleration/deceleration (G)	
0.1	0.5
0.3	0.5
0.5	0.5

* When X, Y and Z axes all have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

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

Y-axis stroke (mm)		250*			300*			350*			400*		
Z-axis stroke (mm)		50	100	150	50	100	150	50	100	150	50	100	150
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○	○	○	○	○	○
	750	○	○	○	○	○	○	○	○	○	○	○	○
	800	○	○	○	○	○	○	○	○	○	○	○	○

*When the speed type "HHL" is selected, the maximum Y-axis stroke will be 200mm. (250mm or more cannot be selected.)

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second and third axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)	Third wiring (Z-axis lateral)
Without cable track (cable only)	N	See P.136	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cable track S size (inner width: 38mm)	CT		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cable track M size (inner width: 50mm)	CTM		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cable track L size (inner width: 63mm)	CTL		<input type="radio"/>	<input type="radio"/>	Cannot be selected *1
Cable track XL size (inner width: 80mm)	CTXL		<input type="radio"/>	Cannot be selected *2	

*1 Only the first and second wiring can be selected *2 Only the first wiring can be selected

Applicable Controllers

Controllers are sold separately.
 Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : SA7R Y-axis : SA6R Z-axis : SA4R	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
		MSEL	P-139
PM2		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Specifications

Item	X-axis	Y-axis	Z-axis	
Axis configuration	RCP6-SA7R	RCP6-SA6R	RCP6-SA4R	
Stroke (Every 50mm)	50~800mm	50~400mm *1	50~150mm	
Max. speed *2	420mm/s	560mm/s	HHL	150mm/s
			HHM	305mm/s
			HHH	525mm/s
			HHS	560mm/s
Motor size	56□ Stepper motor	42□ Stepper motor	35□ Stepper motor	
Ball screw lead	16mm	12mm	HHL	2.5mm
			HHM	5mm
			HHH	10mm
			HHS	16mm
Drive system	Ball screw φ12mm rolled C10	Ball screw φ10mm rolled C10	Ball screw φ8mm rolled C10	
Positioning repeatability	±0.01mm			
Base material	Aluminum			
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)			

*1 When the speed type "HHL" is selected, the maximum Y-axis stroke will be 200 mm.
 *2 The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options

Type	Option code	Reference page	X-axis	Y-axis	Z-axis
Brake	B	See P.134	<input type="radio"/>	<input type="radio"/>	Standard equipment*
Cable exit direction (Outside)	CJO	See P.134	Cannot be selected		Standard equipment*
Non-motor end specification	NM	See P.135	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Slider section roller specification	SR	See P.135	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

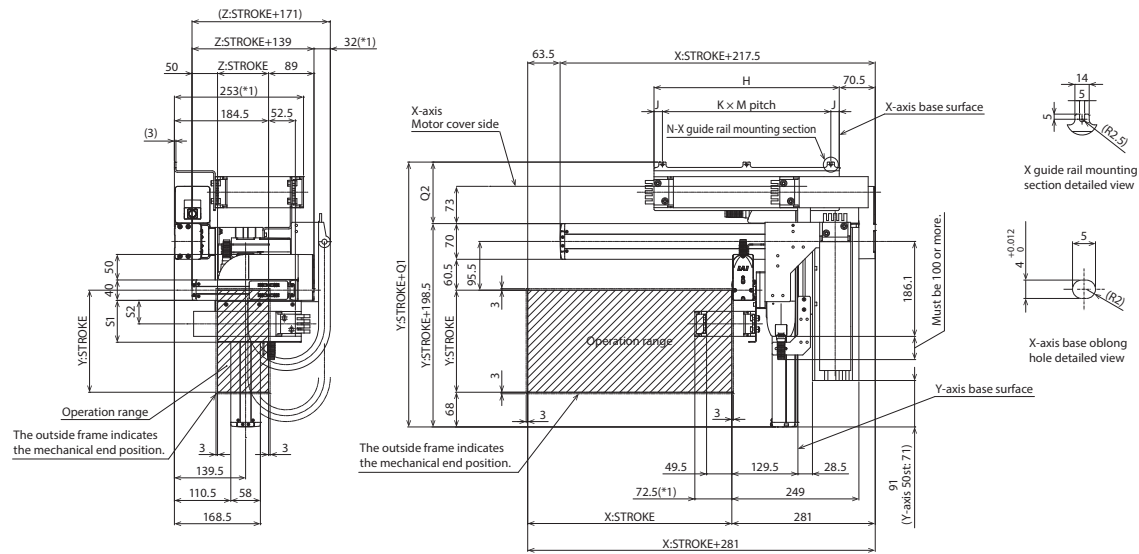
* Be sure to specify.

Dimensions

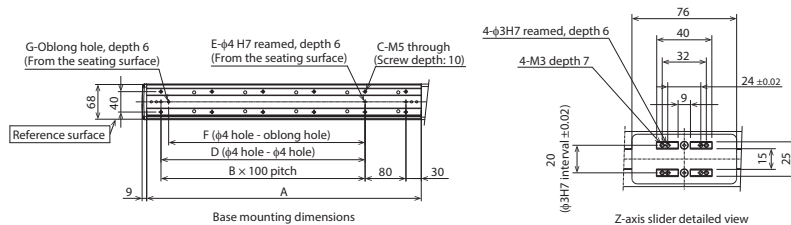
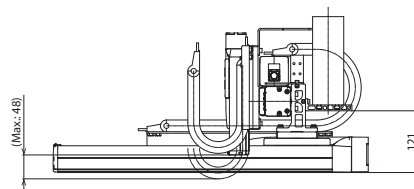
CAD drawings can be downloaded from our website.
www.intelligentactuator.com



- Note 1. The configuration position in the figure is home.
 Note 2. The diagram shows first, second and third wirings all with cable tracks.
 Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(* Notes

The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis slider by the customer.

■ Dimensions by Stroke

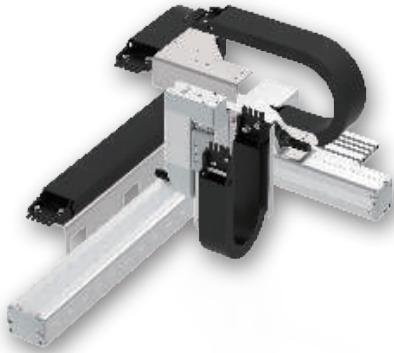
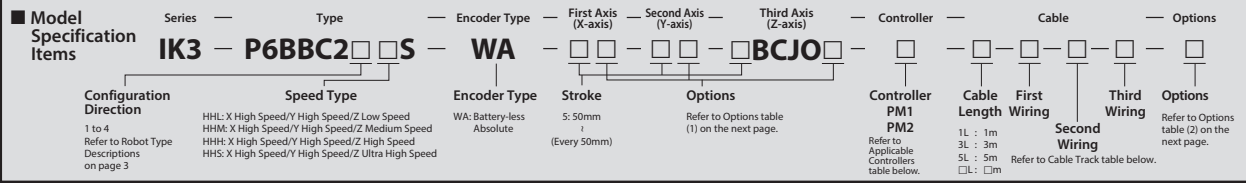
X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	0	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	188	213	238	263	288	313	338	363	388	413	438	463	488	513	538	563
J	16.5	16.5	14	16.5	16.5	16.5	14	16.5	14	16	15	66.5	44	56.5	69	16
K	1	1	1	2	2	2	2	2	2	3	3	3	2	2	2	3
M	155	180	210	115	127.5	140	155	165	180	127	136	110	200	200	200	177
N	2	2	2	3	3	3	3	3	3	4	4	4	3	3	3	4

Cable track size	CT	CTM	CTL	CTXL
Q1	306	319	332	349
Q2	107.5	120.5	133.5	150.5
S1	82	94	-	-
S2	46	52.5	-	-

* Dimensions Q1, Q2, S1 and S2 change depending on the size of the cable track.

IK3-P6BBC2□□S

RCP6 3-axis XYB + Z-axis base mount configurations
 X-axis: SA7C (straight)
 Y-axis: SA6R (side-mounted) Z-axis: SA4R (side-mounted)



The photograph above shows the configuration direction "1" where all axes have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

HHL type: X high speed/Y high speed/Z low speed			HHM type: X high speed/Y high speed/Z medium speed (Unit: kg)		
Y-axis (mm)	50~200 (Every 50mm)	250~400 (Every 50mm)	Y-axis (mm)	50~200 (Every 50mm)	250~400 (Every 50mm)
Acceleration/deceleration (G)			Acceleration/deceleration (G)		
0.1	3	-	0.1	2	
0.3	3	-	0.3	2	1

HHH type: X high speed/Y high speed/Z high speed		HHS type: X high speed/Y high speed/Z ultra high speed	
Y-axis (mm)	50~400 (Every 50mm)	Y-axis (mm)	50~400 (Every 50mm)
Acceleration/deceleration (G)		Acceleration/deceleration (G)	
0.1	1	0.1	0.5
0.3	1	0.3	0.5
0.5	1	0.5	0.5

* When X, Y and Z axes all have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

		50			100			150			200		
Z-axis stroke (mm)		50	100	150	50	100	150	50	100	150	50	100	150
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○	○	○	○	○	○
	750	○	○	○	○	○	○	○	○	○	○	○	○
	800	○	○	○	○	○	○	○	○	○	○	○	○

		250 *			300 *			350 *			400 *		
Z-axis stroke (mm)		50	100	150	50	100	150	50	100	150	50	100	150
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○	○	○	○	○	○
	750	○	○	○	○	○	○	○	○	○	○	○	○
	800	○	○	○	○	○	○	○	○	○	○	○	○

* When the speed type "HHL" is selected, the maximum Y-axis stroke will be 200mm. (250mm or more cannot be selected.)

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	<input type="checkbox"/> L	Specified length (15m max.)

Note 1. All-axis standard cable is used.

Note 2. The length of the second and third axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.

Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)	Third wiring (Z-axis lateral)
Without cable track (cable only)	N	See P.136	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cable track S size (inner width: 38mm)	CT		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cable track M size (inner width: 50mm)	CTM		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cable track L size (inner width: 63mm)	CTL		<input type="radio"/>	<input type="radio"/>	Cannot be selected *1
Cable track XL size (inner width: 80mm)	CTXL		<input type="radio"/>	Cannot be selected *2	

*1 Only the first and second wiring can be selected

*2 Only the first wiring can be selected

Applicable Controllers

Controllers are sold separately.
Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : SA7C Y-axis : SA6R Z-axis : SA4R	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
		MSEL	P-139
PM2		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Specifications

Item	X-axis	Y-axis	Z-axis	
Axis configuration	RCP6-SA7C	RCP6-SA6R	RCP6-SA4R	
Stroke (Every 50mm)	50~800mm	50~400mm *1	50~150mm	
Max. speed *2	420mm/s	560mm/s	HHL	150mm/s
			HHM	305mm/s
			HHH	525mm/s
			HHS	560mm/s
Motor size	56□ Stepper motor	42□ Stepper motor	35□ Stepper motor	
Ball screw lead	16mm	12mm	HHL	2.5mm
			HHM	5mm
			HHH	10mm
			HHS	16mm
Drive system	Ball screw φ12mm rolled C10	Ball screw φ10mm rolled C10	Ball screw φ8mm rolled C10	
Positioning repeatability	±0.01mm			
Base material	Aluminum			
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)			

*1 When the speed type "HHL" is selected, the maximum Y-axis stroke will be 200 mm.

*2 The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options (1)

Type	Option code	Reference page	X-axis	Y-axis	Z-axis
Brake *	B	See P.134	<input type="radio"/>	<input type="radio"/>	Standard equipment *
Cable exit direction (Top)	CJT	See P.134	<input type="radio"/>	Cannot be selected	
Cable exit direction (Right)	CJR	See P.134	<input type="radio"/>		
Cable exit direction (Left)	CJL	See P.134	<input type="radio"/>		
Cable exit direction (Bottom)	CJB	See P.134	<input type="radio"/>		
Cable exit direction (Outside)	CJO	See P.134	Cannot be selected		Standard equipment *
Non-motor end specification	NM	See P.135	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Slider section roller specification	SR	See P.135	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* Be sure to specify.

* Brake option for X-axis increases the length of the motor unit. Please contact IAI for more information.

Options (2)

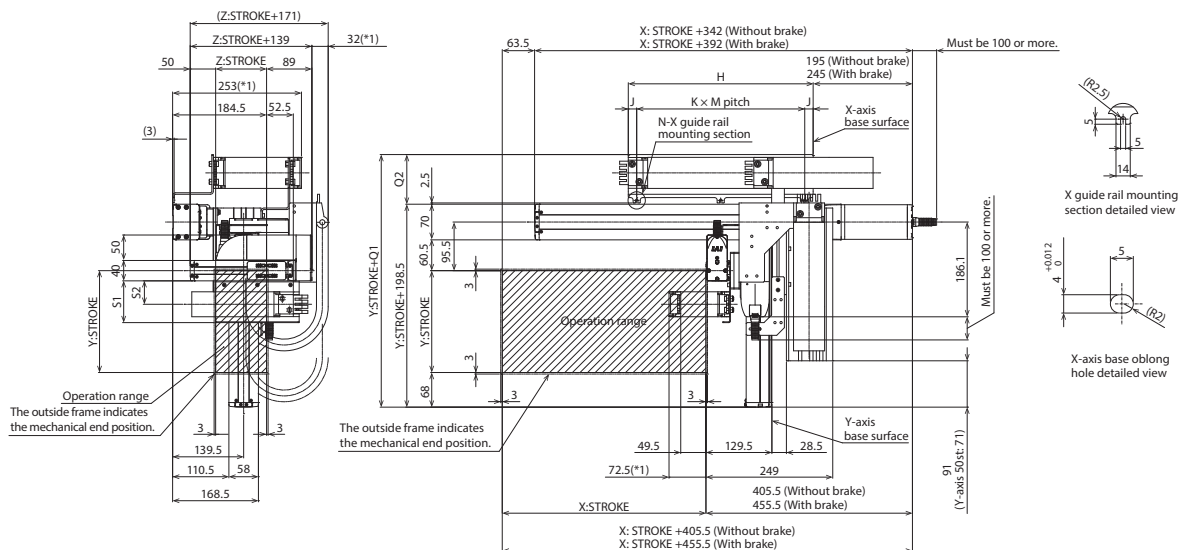
Type	Option code	Reference page
Foot plate	FTP	See P.134

Dimensions

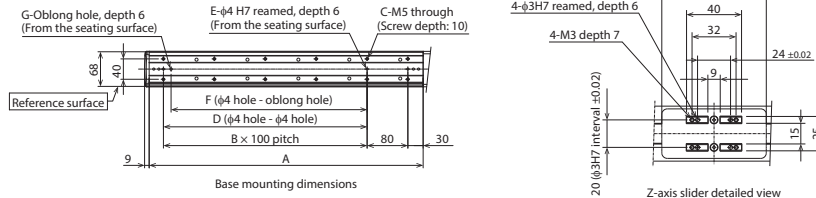
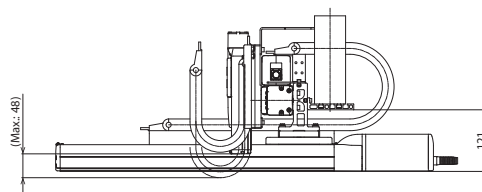
CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
Note 2. The diagram shows first, second and third wirings all with cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(*) Notes The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer. When the foot plate option is selected, the unit will be shipped fixed on the foot plate. (See P.134) Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis slider by the customer.

■ Dimensions by Stroke

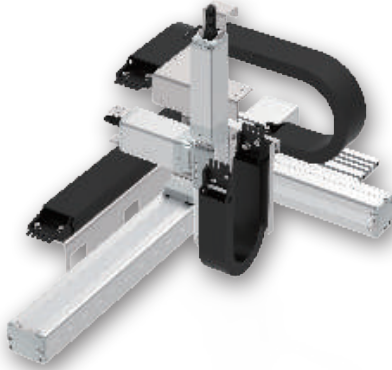
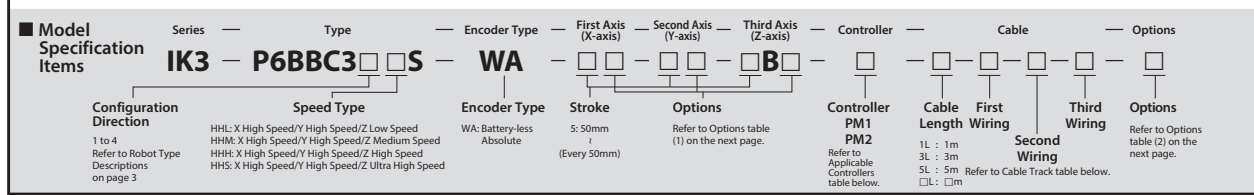
X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	0	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	188	213	238	263	288	313	338	363	388	413	438	463	488	513	538	563
J	16.5	16.5	14	16.5	16.5	14	16.5	14	16	15	66.5	44	56.5	69	16	16
K	1	1	1	2	2	2	2	2	2	3	3	3	2	2	2	3
M	155	180	210	115	127.5	140	155	165	180	127	136	110	200	200	200	177
N	2	2	2	3	3	3	3	3	3	4	4	4	3	3	3	4

Cable track size	CT	CTM	CTL	CTLX
Q1	283	296	309	326
Q2	84.5	97.5	110.5	127.5
S1	82	94	-	-
S2	46	52.5	-	-

* Dimensions Q1, Q2, S1 and S2 change depending on the size of the cable track.

IK3-P6BBC3□□S

RCP6 3-axis XYB + Z-axis base mount configurations
 X-axis: SA7C (straight)
 Y-axis: SA6C (straight) Z-axis: SA4C (straight)



The photograph above shows the configuration direction "1" where all axes have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ HHL type: X high speed/Y high speed/Z low speed ■ HHM type: X high speed/Y high speed/Z medium speed (Unit: kg)

Y-axis (mm)	50~200 (Every 50mm)	250~400 (Every 50mm)
Acceleration/deceleration (G)		
0.1	3	-
0.3	3	-

Y-axis (mm)	50~200 (Every 50mm)	250~400 (Every 50mm)
Acceleration/deceleration (G)		
0.1	2	
0.3	2	1

■ HHH type: X high speed/Y high speed/Z high speed

Y-axis (mm)	50~400 (Every 50mm)
Acceleration/deceleration (G)	
0.1	1
0.3	1
0.5	1

■ HHS type: X high speed/Y high speed/Z ultra high speed

Y-axis (mm)	50~400 (Every 50mm)
Acceleration/deceleration (G)	
0.1	0.5
0.3	0.5
0.5	0.5

* When X, Y and Z axes all have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

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

Y-axis stroke (mm)		250 *			300 *			350 *			400 *		
Z-axis stroke (mm)		50	100	150	50	100	150	50	100	150	50	100	150
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○	○	○	○	○	○
	750	○	○	○	○	○	○	○	○	○	○	○	○
	800	○	○	○	○	○	○	○	○	○	○	○	○

* When the speed type "HHL" is selected, the maximum Y-axis stroke will be 200mm. (250mm or more cannot be selected.)

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second and third axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track Price List

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)	Third wiring (Z-axis lateral)
Without cable track (cable only)	N	See P.136	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cable track S size (inner width: 38mm)	CT		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cable track M size (inner width: 50mm)	CTM		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cable track L size (inner width: 63mm)	CTL		<input type="radio"/>	<input type="radio"/>	Cannot be selected *1
Cable track XL size (inner width: 80mm)	CTXL		<input type="radio"/>	Cannot be selected *2	

*1 Only the first and second wiring can be selected *2 Only the first wiring can be selected

Applicable Controllers

Controllers are sold separately.
 Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : SA7C Y-axis : SA6C Z-axis : SA4C	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
		MSEL	P-139
PM2		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Specifications

Item	X-axis	Y-axis	Z-axis	
Axis configuration	RCP6-SA7C	RCP6-SA6C	RCP6-SA4C	
Stroke (Every 50mm)	50~800mm	50~400mm *1	50~150mm	
Max. speed *2	420mm/s	560mm/s	HHL	150mm/s
			HHM	305mm/s
			HHH	525mm/s
			HHS	560mm/s
Motor size	56□ Stepper motor	42□ Stepper motor	35□ Stepper motor	
Ball screw lead	16mm	12mm	HHL	2.5mm
			HHM	5mm
			HHH	10mm
			HHS	16mm
Drive system	Ball screw φ12mm rolled C10	Ball screw φ10mm rolled C10	Ball screw φ8mm rolled C10	
Positioning repeatability	±0.01mm			
Base material	Aluminum			
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)			

*1 When the speed type "HHL" is selected, the maximum Y-axis stroke will be 200 mm.

*2 The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options (1)

Type	Option code	Reference page	X-axis	Y-axis	Z-axis
Brake *	B	See P.134	<input type="radio"/>	<input type="radio"/>	Standard equipment*
Cable exit direction (Top)	CJT	See P.134	<input type="radio"/>	Cannot be selected	
Cable exit direction (Right)	CJR	See P.134	<input type="radio"/>		
Cable exit direction (Left)	CJL	See P.134	<input type="radio"/>		
Cable exit direction (Bottom)	CJB	See P.134	<input type="radio"/>		
Non-motor end specification	NM	See P.135	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Slider section roller specification	SR	See P.135	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* Outside as standard. Be sure to specify.

* Brake option for X- and/or Y-axes increases the length of the motor unit(s). Please contact IAI for more information.

Options (2)

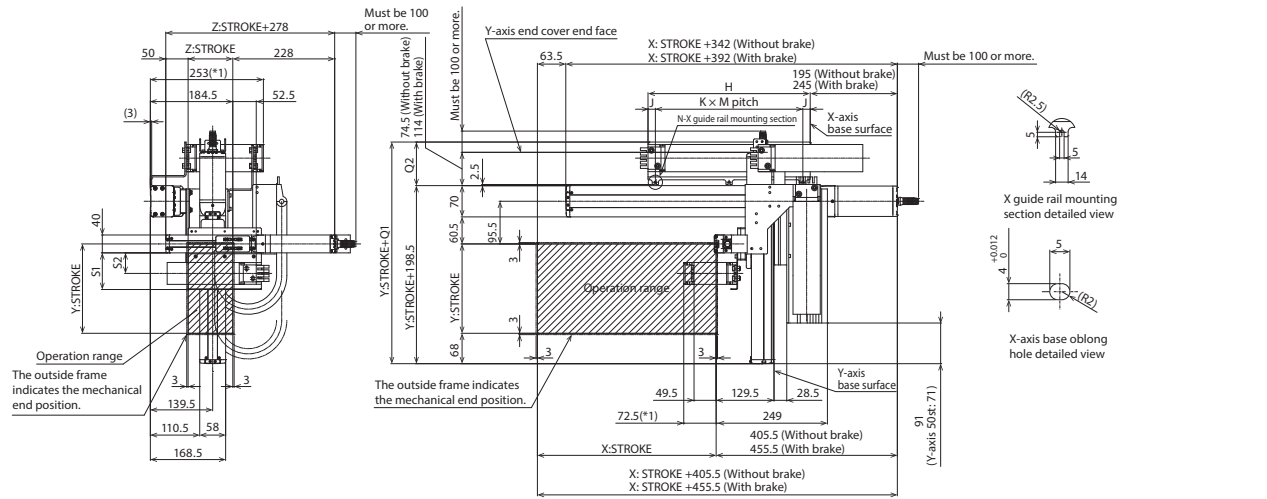
Type	Option code	Reference page
Foot plate	FTP	See P.134

Dimensions

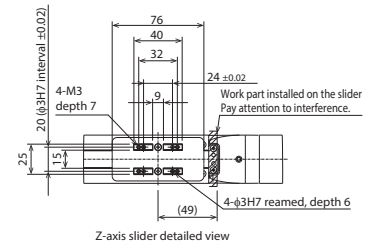
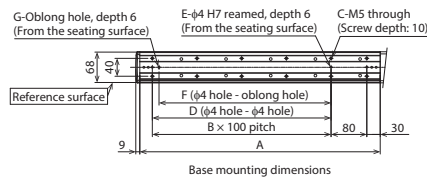
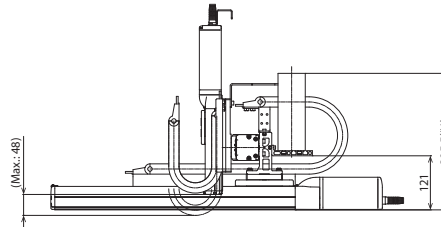
CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
 Note 2. The diagram shows first, second and third wirings all with cable tracks.
 Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(*) Notes The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer. When the foot plate option is selected, the unit will be shipped fixed on the foot plate. (See P.134) Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis slider by the customer.

■ Dimensions by Stroke

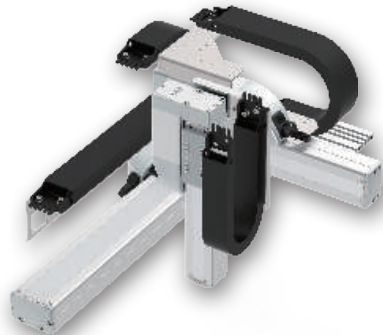
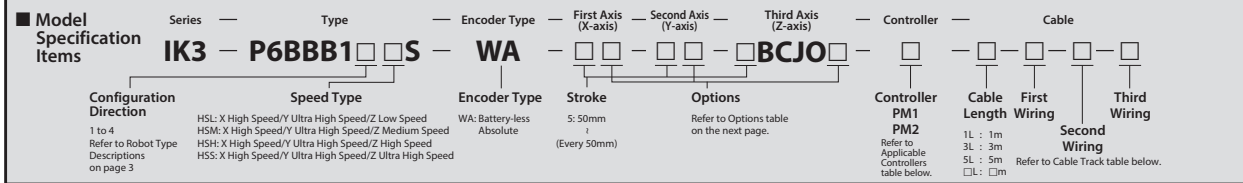
X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	0	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	188	213	238	263	288	313	338	363	388	413	438	463	488	513	538	563
J	16.5	16.5	14	16.5	16.5	14	16.5	14	16.5	15	66.5	44	56.5	69	16	16
K	1	1	1	2	2	2	2	2	2	3	3	3	2	2	2	3
M	155	180	210	115	127.5	140	155	165	180	127	136	110	200	200	200	177
N	2	2	2	3	3	3	3	3	3	4	4	4	3	3	3	4

Cable track size	CT	CTM	CTL	CTLX
Q1	283	296	309	326
Q2	84.5	97.5	110.5	127.5
S1	82	94	-	-
S2	46	52.5	-	-

* Dimensions Q1, Q2, S1 and S2 change depending on the size of the cable track.

IK3-P6BBB1□□S

RCP6 3-axis XYB + Z-axis base mount configurations
 X-axis: SA8R (side-mounted)
 Y-axis: SA7R (side-mounted) Z-axis: SA6R (side-mounted)



The photograph above shows the configuration direction "1" where all axes have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ HSL type: X high speed/Y ultra high speed/Z low speed				■ HSM type: X high speed/Y ultra high speed/Z medium speed (Unit: kg)			
Acceleration/ deceleration (G)	Y-axis (mm)		300~400 (Every 50mm)		Acceleration/ deceleration (G)	Y-axis (mm)	
	50~250 (Every 50mm)	300~400 (Every 50mm)	50~250 (Every 50mm)	300~400 (Every 50mm)			
0.1	4	—	—	—	0.1	2	
0.3	4	—	—	—	0.3	2	1
0.5	4	—	—	—	0.5	2	1

■ HSH type: X high speed/Y ultra high speed/Z high speed			■ HSS type: X high speed/Y ultra high speed/Z ultra high speed		
Acceleration/ deceleration (G)	Y-axis (mm)		Acceleration/ deceleration (G)	Y-axis (mm)	
	50~400 (Every 50mm)	50~400 (Every 50mm)		50~400 (Every 50mm)	50~400 (Every 50mm)
0.1	1		0.1	0.5	
0.3	1		0.3	0.5	
0.5	1		0.5	0.5	

* When X, Y and Z axes all have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm)		50				100				150			
Z-axis stroke (mm)		50	100	150	200	50	100	150	200	50	100	150	200
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○	○	○	○	○	○
	750	○	○	○	○	○	○	○	○	○	○	○	○
	800	○	○	○	○	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○	○	○	○	○	
900	○	○	○	○	○	○	○	○	○	○	○	○	
950	○	○	○	○	○	○	○	○	○	○	○	○	
1000	○	○	○	○	○	○	○	○	○	○	○	○	
1050	○	○	○	○	○	○	○	○	○	○	○	○	
1100	○	○	○	○	○	○	○	○	○	○	○	○	

Y-axis stroke (mm)		200				250				300*			
Z-axis stroke (mm)		50	100	150	200	50	100	150	200	50	100	150	200
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○	○	○	○	○	○
	750	○	○	○	○	○	○	○	○	○	○	○	○
	800	○	○	○	○	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○	○	○	○	○	
900	○	○	○	○	○	○	○	○	○	○	○	○	
950	○	○	○	○	○	○	○	○	○	○	○	○	
1000	○	○	○	○	○	○	○	○	○	○	○	○	
1050	○	○	○	○	○	○	○	○	○	○	○	○	
1100	○	○	○	○	○	○	○	○	○	○	○	○	

* When the speed type "HSL" is selected, the maximum Y-axis stroke will be 250mm. (300mm or more cannot be selected.)

Y-axis stroke (mm)		350 *				400 *			
Z-axis stroke (mm)		50	100	150	200	50	100	150	200
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○	○
	750	○	○	○	○	○	○	○	○
	800	○	○	○	○	○	○	○	○
	850	○	○	○	○	○	○	○	○
	900	○	○	○	○	○	○	○	○
950	○	○	○	○	○	○	○	○	
1000	○	○	○	○	○	○	○	○	
1050	○	○	○	○	○	○	○	○	
1100	○	○	○	○	○	○	○	○	

* When the speed type "HSL" is selected, the maximum Y-axis stroke will be 250mm. (300mm or more cannot be selected.)

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second and third axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)	Third wiring (Z-axis lateral)
Without cable track (cable only)	N	See P.136	○	○	○
Cable track S size (inner width: 38mm)	CT		○	○	○
Cable track M size (inner width: 50mm)	CTM		○	○	○
Cable track L size (inner width: 63mm)	CTL		○	○	Cannot be selected *1
Cable track XL size (inner width: 80mm)	CTXL		○	Cannot be selected *2	

*1 Only the first and second wiring can be selected *2 Only the first wiring can be selected

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : SA8R	PCON-CFB/CGFB	P-149
		MSEL-PCF/PGF	P-139
		PCON-CB/CGB	P-149
	Y-axis : SA7R Z-axis : SA6R	PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
PM2	X-axis : SA8R Y-axis : SA7R Z-axis : SA6R	MSEL	P-139
		RCON-PCF	P-159
	RCON-PC		

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Specifications

Item	X-axis	Y-axis	Z-axis
Axis configuration	RCP6-SA8R	RCP6-SA7R	RCP6-SA6R
Stroke (Every 50mm)	50~1100mm	50~400mm *1	50~200mm
Max. speed *2	300mm/s	640mm/s	170mm/s
			340mm/s
			680mm/s
			800mm/s
Motor size	56□ High thrust stepper motor	56□ Stepper motor	42□ Stepper motor
Ball screw lead	20mm	24mm	3mm
			6mm
			12mm
			20mm
Drive system	Ball screw φ16mm rolled C10	Ball screw φ12mm rolled C10	Ball screw φ10mm rolled C10
Positioning repeatability	±0.01mm		
Base material	Aluminum		
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)		

*1 When the speed type "HSL" is selected, the maximum Y-axis stroke will be 250mm.
 *2 The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options

Type	Option code	Reference page	X-axis	Y-axis	Z-axis
Brake	B	See P.134	○	○	Standard equipment *
Cable exit direction (Outside)	CJO	See P.134	Cannot be selected		Standard equipment *
Non-motor end specification	NM	See P.135	○	○	○
Slider section roller specification	SR	See P.135	○	○	○

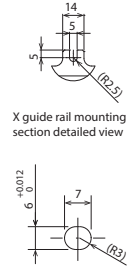
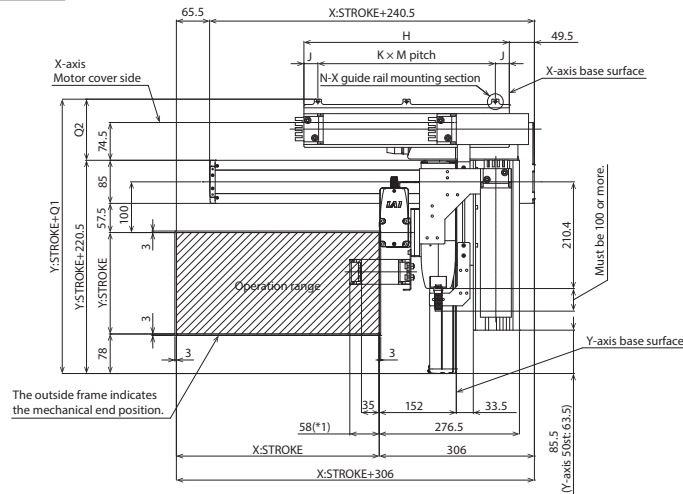
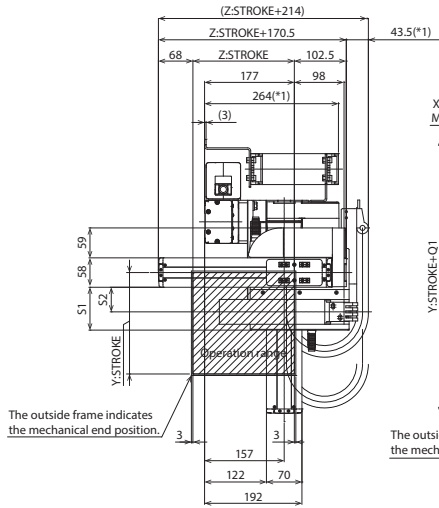
* Be sure to specify.

Dimensions

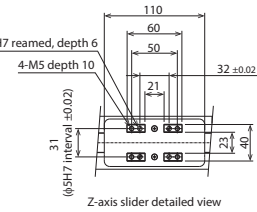
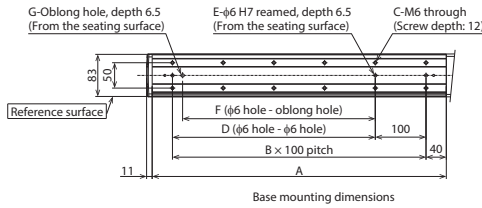
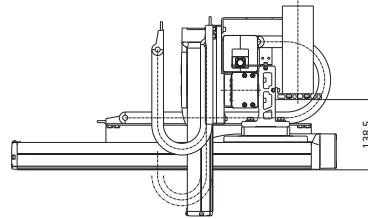
CAD drawings can be downloaded from our website.
www.intelligentactuator.com



- Note 1. The configuration position in the figure is home.
- Note 2. The diagram shows first, second and third wirings all with cable tracks.
- Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(*) Notes The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis slider by the customer.

■ Dimensions by Stroke

X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280
B	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1000	1000	1100
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980	1080
G	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	230	255	280	305	330	355	380	405	430	455	480	505	530	555	580	605	630	655	680	705	730	755
J	30	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	22.5	27.5	27.5	52.5	65	77.5	52.5	27.5	77.5	22.5	55	27.5
K	1	1	1	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4
M	170	200	225	125	137.5	150	162.5	175	187.5	200	145	150	125	150	150	175	200	175	165	155	175	175
N	2	2	2	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5	5	5

Cable track size	CT	CTM	CTL	CTLX
Q1	328	341	354	371
Q2	107.5	120.5	133.5	150.5
S1	84.5	96.5	-	-
S2	48.5	55	-	-

* Dimensions Q1, Q2, S1 and S2 change depending on the size of the cable track.

IK3-P6BBB2□□S

RCP6 3-axis XYB + Z-axis base mount configurations
 X-axis: SA8C (straight)
 Y-axis: SA7R (side-mounted) Z-axis: SA6R (side-mounted)

Model Specification Items

Series: **IK3** — Type: **P6BBB2□□S** — Encoder Type: **WA** — First Axis (X-axis): **□□** — Second Axis (Y-axis): **□□** — Third Axis (Z-axis): **BCJO** — Controller: **□** — Cable: **□□□□** — Options: **□**

Configuration Direction
 1 to 4
 Refer to Robot Type Descriptions on page 3

Speed Type
 HSL: X High Speed/Y Ultra High Speed/Z Low Speed
 HSM: X High Speed/Y Ultra High Speed/Z Medium Speed
 HSH: X High Speed/Y Ultra High Speed/Z High Speed
 HSS: X High Speed/Y Ultra High Speed/Z Ultra High Speed

Encoder Type
 WA: Battery-less Absolute

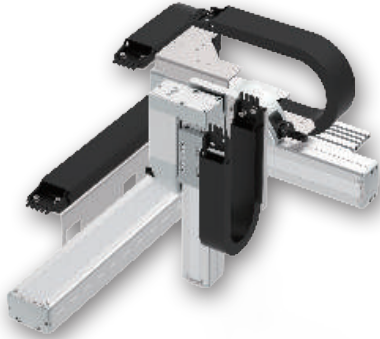
Stroke
 5: 50mm
 7: (Every 50mm)

Options
 Refer to Options table (1) on the next page.

Controller
 PM1
 PM2
 Refer to Applicable Controllers table below.

Cable
 Cable Length: 1L: 1m, 3L: 3m, 5L: 5m, □L: □m
 First Wiring, Second Wiring, Third Wiring
 Refer to Cable Track table below.

Options
 Refer to Options table (2) on the next page.



The photograph above shows the configuration direction "1" where all axes have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ HSL type: X high speed/Y ultra high speed/Z low speed				■ HSM type: X high speed/Y ultra high speed/Z medium speed (Unit: kg)			
Acceleration/deceleration (G)	Y-axis (mm)		300~400 (Every 50mm)	Acceleration/deceleration (G)	Y-axis (mm)		300~400 (Every 50mm)
	50~250 (Every 50mm)	300~400 (Every 50mm)			50~250 (Every 50mm)	300~400 (Every 50mm)	
0.1	4	—	—	0.1	2		—
0.3	4	—	—	0.3	2	1	—
0.5	4	—	—	0.5	2	1	—

■ HSH type: X high speed/Y ultra high speed/Z high speed			■ HSS type: X high speed/Y ultra high speed/Z ultra high speed		
Acceleration/deceleration (G)	Y-axis (mm)		Acceleration/deceleration (G)	Y-axis (mm)	
	50~400 (Every 50mm)	50~400 (Every 50mm)		50~400 (Every 50mm)	50~400 (Every 50mm)
0.1	1		0.1	0.5	
0.3	1		0.3	0.5	
0.5	1		0.5	0.5	

* When X, Y and Z axes all have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm)		50				100				150			
Z-axis stroke (mm)		50	100	150	200	50	100	150	200	50	100	150	200
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○	○	○	○	○	○
	750	○	○	○	○	○	○	○	○	○	○	○	○
	800	○	○	○	○	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○	○	○	○	○	
900	○	○	○	○	○	○	○	○	○	○	○	○	
950	○	○	○	○	○	○	○	○	○	○	○	○	
1000	○	○	○	○	○	○	○	○	○	○	○	○	
1050	○	○	○	○	○	○	○	○	○	○	○	○	
1100	○	○	○	○	○	○	○	○	○	○	○	○	

Y-axis stroke (mm)		200				250				300*			
Z-axis stroke (mm)		50	100	150	200	50	100	150	200	50	100	150	200
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○	○	○	○	○	○
	750	○	○	○	○	○	○	○	○	○	○	○	○
	800	○	○	○	○	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○	○	○	○	○	
900	○	○	○	○	○	○	○	○	○	○	○	○	
950	○	○	○	○	○	○	○	○	○	○	○	○	
1000	○	○	○	○	○	○	○	○	○	○	○	○	
1050	○	○	○	○	○	○	○	○	○	○	○	○	
1100	○	○	○	○	○	○	○	○	○	○	○	○	

* When the speed type "HSL" is selected, the maximum Y-axis stroke will be 250mm. (300mm or more cannot be selected.)

Y-axis stroke (mm)		350 *				400 *			
Z-axis stroke (mm)		50	100	150	200	50	100	150	200
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○	○
	750	○	○	○	○	○	○	○	○
	800	○	○	○	○	○	○	○	○
	850	○	○	○	○	○	○	○	○
	900	○	○	○	○	○	○	○	○
950	○	○	○	○	○	○	○	○	
1000	○	○	○	○	○	○	○	○	
1050	○	○	○	○	○	○	○	○	
1100	○	○	○	○	○	○	○	○	

* When the speed type "HSL" is selected, the maximum Y-axis stroke will be 250mm. (300mm or more cannot be selected.)

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second and third axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)	Third wiring (Z-axis lateral)
Without cable track (cable only)	N	See P.136	○	○	○
Cable track S size (inner width: 38mm)	CT		○	○	○
Cable track M size (inner width: 50mm)	CTM		○	○	○
Cable track L size (inner width: 63mm)	CTL		○	○	Cannot be selected *1
Cable track XL size (inner width: 80mm)	CTXL		○	Cannot be selected *2	

*1 Only the first and second wiring can be selected

*2 Only the first wiring can be selected

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : SA8C	PCON-CFB/CGFB	P-149
		MSEL-PCF/PGF	P-139
		PCON-CB/CGB	P-149
	Y-axis : SA7R Z-axis : SA6R	PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
PM2	X-axis : SA8C	RCON-PCF	P-159
	Y-axis : SA7R	RCON-PC	
	Z-axis : SA6R		

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Specifications

Item	X-axis	Y-axis	Z-axis
Axis configuration	RCP6-SA8C	RCP6-SA7R	RCP6-SA6R
Stroke (Every 50mm)	50~1100mm	50~400mm *1	50~200mm
Max. speed *2	300mm/s	640mm/s	HSL 170mm/s
			HSM 340mm/s
			HSH 680mm/s
			HSS 800mm/s
Motor size	56□ High thrust stepper motor	56□ Stepper motor	42□ Stepper motor
Ball screw lead	20mm	24mm	HSL 3mm
			HSM 6mm
			HSH 12mm
			HSS 20mm
Drive system	Ball screw φ16mm rolled C10	Ball screw φ12mm rolled C10	Ball screw φ10mm rolled C10
Positioning repeatability	±0.01mm		
Base material	Aluminum		
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)		

*1 When the speed type "HSL" is selected, the maximum Y-axis stroke will be 250mm.

*2 The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options (1)

Type	Option code	Reference page	X-axis	Y-axis	Z-axis
Brake *	B	See P.134	-	-	Standard equipment *
Cable exit direction (Top)	CJT	See P.134	-	-	Cannot be selected
Cable exit direction (Right)	CJR	See P.134	-	-	
Cable exit direction (Left)	CJL	See P.134	-	-	
Cable exit direction (Bottom)	CJB	See P.134	-	-	
Cable exit direction (Outside)	CJO	See P.134	Cannot be selected	-	Standard equipment *
Non-motor end specification	NM	See P.135	-	-	-
Slider section roller specification	SR	See P.135	-	-	-

* Be sure to specify.

* Brake option for X-axis increases the length of the motor unit. Please contact IAI for more information.

Options (2)

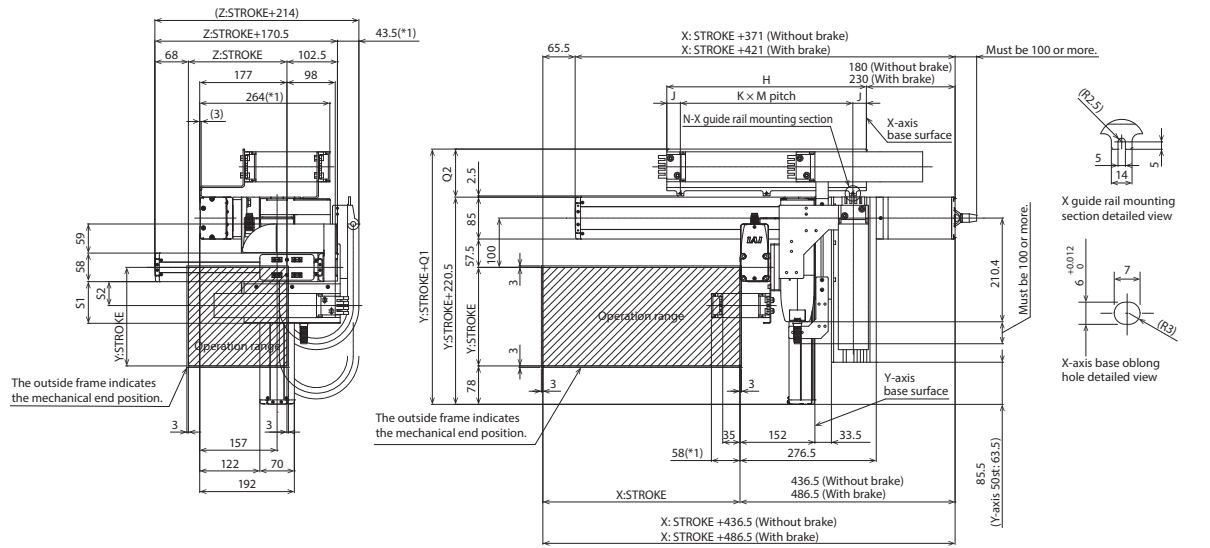
Type	Option code	Reference page
Foot plate	FTP	See P.134

Dimensions

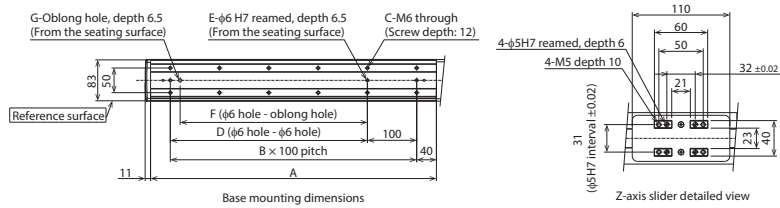
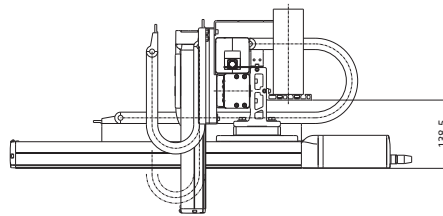
CAD drawings can be downloaded from our website.
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Note 1. The configuration position in the figure is home.
 Note 2. The diagram shows first, second and third wirings all with cable tracks.
 Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(*) Notes
 The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer.
 When the foot plate option is selected, the unit will be shipped fixed on the foot plate. (See P.134)
 Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis slider by the customer.

Dimensions by Stroke

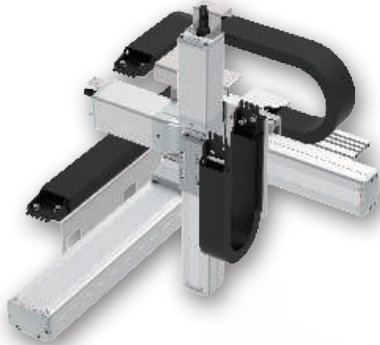
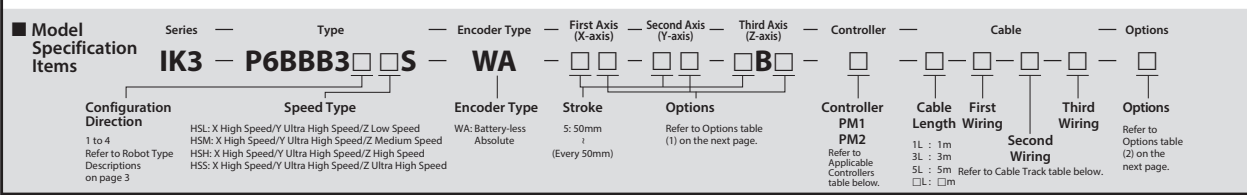
X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280
B	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1000	1000	1100
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980
G	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	230	255	280	305	330	355	380	405	430	455	480	505	530	555	580	605	630	655	680	705	730	755
J	30	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	22.5	27.5	27.5	22.5	27.5	27.5	27.5	27.5	22.5	22.5	22.5	27.5
K	1	1	1	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4
M	170	200	225	125	137.5	150	162.5	175	187.5	200	145	150	125	150	150	175	200	175	165	155	155	175
N	2	2	2	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5	5	5

Cable track size	CT	CTM	CTL	CTLX
Q1	305	318	331	348
Q2	84.5	97.5	110.5	127.5
S1	84.5	96.5	-	-
S2	48.5	55	-	-

* Dimensions Q1, Q2, S1 and S2 change depending on the size of the cable track.

IK3-P6BBB3□□S

RCP6 3-axis XYB + Z-axis base mount configurations
 X-axis: SA8C (straight)
 Y-axis: SA7C (straight) Z-axis: SA6C (straight)



The photograph above shows the configuration direction "1" where all axes have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ HSL type: X high speed/Y ultra high speed/Z low speed

Acceleration/ deceleration (G)	Y-axis (mm)	
	50~250 (Every 50mm)	300~400 (Every 50mm)
0.1	4	—
0.3	4	—
0.5	4	—

■ HSM type: X high speed/Y ultra high speed/Z medium speed (Unit: kg)

Acceleration/ deceleration (G)	Y-axis (mm)	
	50~250 (Every 50mm)	300~400 (Every 50mm)
0.1	2	
0.3	2	1
0.5	2	1

■ HSH type: X high speed/Y ultra high speed/Z high speed

Acceleration/ deceleration (G)	Y-axis (mm)
	50~400 (Every 50mm)
0.1	1
0.3	1
0.5	1

■ HSS type: X high speed/Y ultra high speed/Z ultra high speed

Acceleration/ deceleration (G)	Y-axis (mm)
	50~400 (Every 50mm)
0.1	0.5
0.3	0.5
0.5	0.5

* When X, Y and Z axes all have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm) Z-axis stroke (mm)	50				100				150			
	50	100	150	200	50	100	150	200	50	100	150	200
50	○	○	○	○	○	○	○	○	○	○	○	○
100	○	○	○	○	○	○	○	○	○	○	○	○
150	○	○	○	○	○	○	○	○	○	○	○	○
200	○	○	○	○	○	○	○	○	○	○	○	○
250	○	○	○	○	○	○	○	○	○	○	○	○
300	○	○	○	○	○	○	○	○	○	○	○	○
350	○	○	○	○	○	○	○	○	○	○	○	○
400	○	○	○	○	○	○	○	○	○	○	○	○
450	○	○	○	○	○	○	○	○	○	○	○	○
500	○	○	○	○	○	○	○	○	○	○	○	○
550	○	○	○	○	○	○	○	○	○	○	○	○
600	○	○	○	○	○	○	○	○	○	○	○	○
650	○	○	○	○	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○	○	○	○	○
750	○	○	○	○	○	○	○	○	○	○	○	○
800	○	○	○	○	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○	○	○	○	○
900	○	○	○	○	○	○	○	○	○	○	○	○
950	○	○	○	○	○	○	○	○	○	○	○	○
1000	○	○	○	○	○	○	○	○	○	○	○	○
1050	○	○	○	○	○	○	○	○	○	○	○	○
1100	○	○	○	○	○	○	○	○	○	○	○	○

Y-axis stroke (mm) Z-axis stroke (mm)	200				250				300*			
	50	100	150	200	50	100	150	200	50	100	150	200
50	○	○	○	○	○	○	○	○	○	○	○	○
100	○	○	○	○	○	○	○	○	○	○	○	○
150	○	○	○	○	○	○	○	○	○	○	○	○
200	○	○	○	○	○	○	○	○	○	○	○	○
250	○	○	○	○	○	○	○	○	○	○	○	○
300	○	○	○	○	○	○	○	○	○	○	○	○
350	○	○	○	○	○	○	○	○	○	○	○	○
400	○	○	○	○	○	○	○	○	○	○	○	○
450	○	○	○	○	○	○	○	○	○	○	○	○
500	○	○	○	○	○	○	○	○	○	○	○	○
550	○	○	○	○	○	○	○	○	○	○	○	○
600	○	○	○	○	○	○	○	○	○	○	○	○
650	○	○	○	○	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○	○	○	○	○
750	○	○	○	○	○	○	○	○	○	○	○	○
800	○	○	○	○	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○	○	○	○	○
900	○	○	○	○	○	○	○	○	○	○	○	○
950	○	○	○	○	○	○	○	○	○	○	○	○
1000	○	○	○	○	○	○	○	○	○	○	○	○
1050	○	○	○	○	○	○	○	○	○	○	○	○
1100	○	○	○	○	○	○	○	○	○	○	○	○

* When the speed type "HSL" is selected, the maximum Y-axis stroke will be 250mm. (300mm or more cannot be selected.)

Y-axis stroke (mm)		350 *				400 *			
Z-axis stroke (mm)		50	100	150	200	50	100	150	200
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○	○
	750	○	○	○	○	○	○	○	○
	800	○	○	○	○	○	○	○	○
	850	○	○	○	○	○	○	○	○
	900	○	○	○	○	○	○	○	○
950	○	○	○	○	○	○	○	○	
1000	○	○	○	○	○	○	○	○	
1050	○	○	○	○	○	○	○	○	
1100	○	○	○	○	○	○	○	○	

* When the speed type "HSL" is selected, the maximum Y-axis stroke will be 250mm. (300mm or more cannot be selected.)

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second and third axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)	Third wiring (Z-axis lateral)
Without cable track (cable only)	N	See P.136	○	○	○
Cable track S size (inner width: 38mm)	CT		○	○	○
Cable track M size (inner width: 50mm)	CTM		○	○	○
Cable track L size (inner width: 63mm)	CTL		○	○	Cannot be selected *1
Cable track XL size (inner width: 80mm)	CTXL		○	Cannot be selected *2	

*1 Only the first and second wiring can be selected *2 Only the first wiring can be selected

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : SA8C	PCON-CFB/CGFB	P-149
		MSEL-PCF/PGF	P-139
		PCON-CB/CGB	P-149
	Y-axis : SA7C Z-axis : SA6C	PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
PM2	X-axis : SA8C	RCON-PCF	P-159
	Y-axis : SA7C	RCON-PC	
	Z-axis : SA6C		

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Specifications

Item	X-axis	Y-axis	Z-axis
Axis configuration	RCP6-SA8C	RCP6-SA7C	RCP6-SA6C
Stroke (Every 50mm)	50~1100mm	50~400mm *1	50~200mm
Max. speed *2	300mm/s	640mm/s	HSL 170mm/s
			HSM 340mm/s
			HSH 680mm/s
			HSS 800mm/s
Motor size	56□ High thrust stepper motor	56□ Stepper motor	42□ Stepper motor
Ball screw lead	20mm	24mm	HSL 3mm
			HSM 6mm
			HSH 12mm
			HSS 20mm
Drive system	Ball screw φ16mm rolled C10	Ball screw φ12mm rolled C10	Ball screw φ10mm rolled C10
Positioning repeatability	±0.01mm		
Base material	Aluminum		
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)		

*1 When the speed type "HSL" is selected, the maximum Y-axis stroke will be 250mm.

*2 The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options (1)

Type	Option code	Reference page	X-axis	Y-axis	Z-axis
Brake *	B	See P.134	○	○	Standard equipment *
Cable exit direction (Top)	CJT	See P.134	○	Cannot be selected	
Cable exit direction (Right)	CJR	See P.134	○		
Cable exit direction (Left)	CJL	See P.134	○		
Cable exit direction (Bottom)	CJB	See P.134	○		
Non-motor end specification	NM	See P.135	○	○	○
Slider section roller specification	SR	See P.135	○	○	○

* Outside as standard. Be sure to specify.
 * Brake option for X- and/or Y-axes increases the length of the motor unit(s). Please contact IAI for more information.

Options (2)

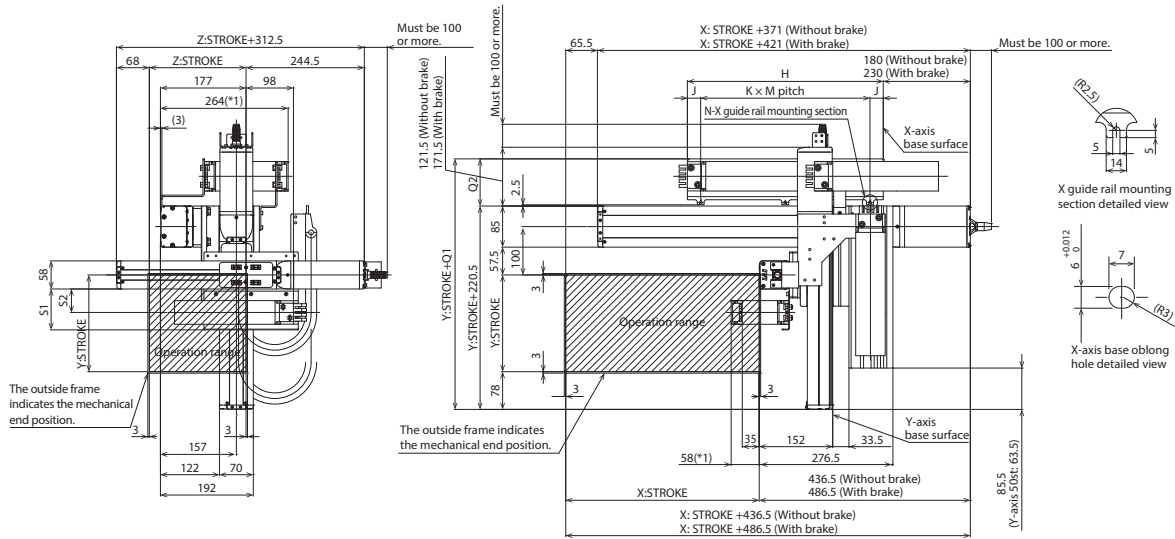
Type	Option code	Reference page
Foot plate	FTP	See P.134

Dimensions

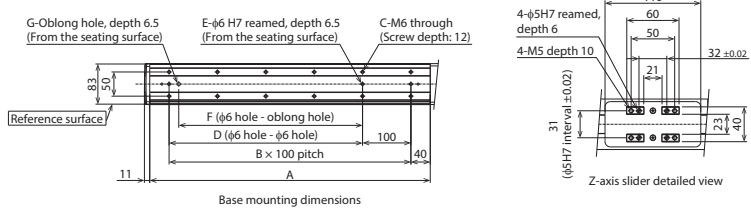
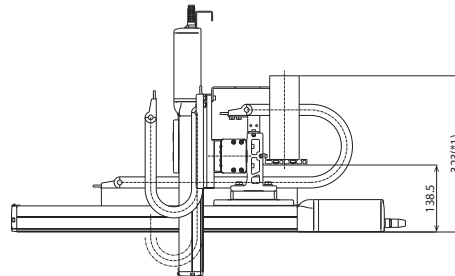
CAD drawings can be downloaded from our website.
www.intelligentactuator.com



- Note 1. The configuration position in the figure is home.
- Note 2. The diagram shows first, second and third wirings all with cable tracks.
- Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(*) Notes The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer. When the foot plate option is selected, the unit will be shipped fixed on the foot plate. (See P.134) Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis slider by the customer.

■ Dimensions by Stroke

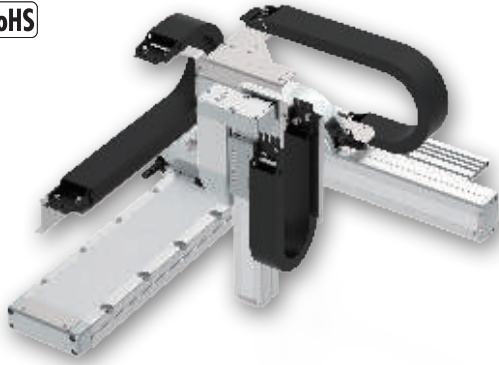
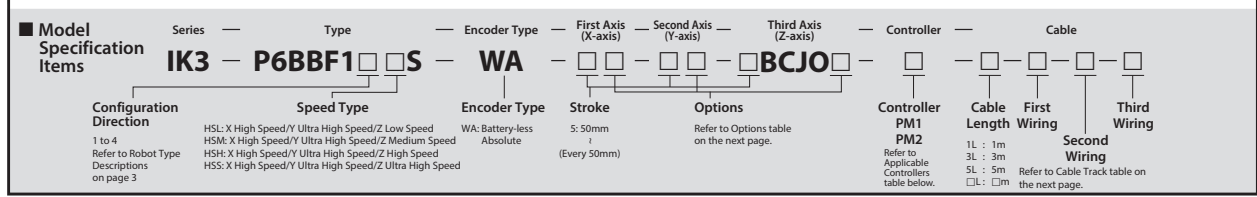
X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280
B	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1000	1000	1100
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980	1080
G	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	230	255	280	305	330	355	380	405	430	455	480	505	530	555	580	605	630	655	680	705	730	755
J	30	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5
K	1	1	1	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4
M	170	200	225	125	137.5	150	162.5	175	187.5	200	145	150	150	150	150	175	200	175	165	155	155	175
N	2	2	2	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5	5	5

Cable track size	CT	CTM	CTL	CTLX
Q1	305	318	331	348
Q2	84.5	97.5	110.5	127.5
S1	84.5	96.5	-	-
S2	48.5	55	-	-

* Dimensions Q1, Q2, S1 and S2 change depending on the size of the cable track.

IK3-P6BBF1□□S

RCP6 3-axis XYB + Z-axis base mount configurations
 X-axis: WSA14R (side-mounted)
 Y-axis: SA7R (side-mounted) Z-axis: SA6R (side-mounted)



The photograph above shows the configuration direction "1" where all axes have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ HSL type: X high speed/Y ultra high speed/Z low speed ■ HSM type: X high speed/Y ultra high speed/Z medium speed (Unit: kg)

Y-axis (mm)	50~400 (Every 50mm)
Acceleration/deceleration (G)	
0.1	4

Y-axis (mm)	50~400 (Every 50mm)
Acceleration/deceleration (G)	
0.1	2
0.3	2
0.5	2

■ HSH type: X high speed/Y ultra high speed/Z high speed

Y-axis (mm)	50~400 (Every 50mm)
Acceleration/deceleration (G)	
0.1	1
0.3	1
0.5	1

■ HSS type: X high speed/Y ultra high speed/Z ultra high speed

Y-axis (mm)	50~400 (Every 50mm)
Acceleration/deceleration (G)	
0.1	0.5
0.3	0.5
0.5	0.5

* When X, Y and Z axes all have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

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

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

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

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second and third axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)	Third wiring (Z-axis lateral)
Without cable track (cable only)	N	See P.136	○	○	○
Cable track S size (inner width: 38mm)	CT		○	○	○
Cable track M size (inner width: 50mm)	CTM		○	○	○
Cable track L size (inner width: 63mm)	CTL		○	○	Cannot be selected *1
Cable track XL size (inner width: 80mm)	CTXL		○	Cannot be selected *2	

*1 Only the first and second wiring can be selected *2 Only the first wiring can be selected

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : WSA14R Y-axis : SA7R Z-axis : SA6R	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
PM2		MSEL	P-139
		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Specifications

Item	X-axis	Y-axis	Z-axis
Axis configuration	RCP6-WSA14R	RCP6-SA7R	RCP6-SA6R
Stroke (Every 50mm)	50~800mm	50~400mm	50~200mm
Max. speed *	280mm/s	640mm/s	170mm/s
			340mm/s
			680mm/s
			800mm/s
Motor size	56□ Stepper motor	56□ Stepper motor	42□ Stepper motor
Ball screw lead	16mm	24mm	3mm
			6mm
			12mm
			20mm
Drive system	Ball screw φ12mm rolled C10	Ball screw φ12mm rolled C10	Ball screw φ10mm rolled C10
Positioning repeatability	±0.01mm		
Base material	Aluminum		
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)		

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options

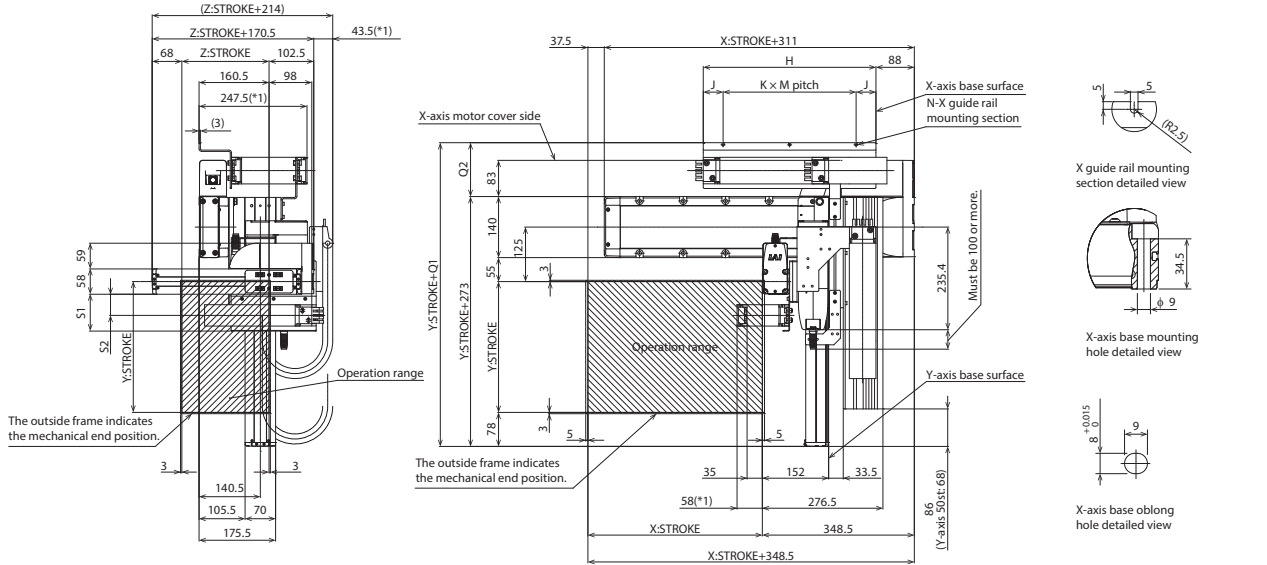
Type	Option code	Reference page	X-axis	Y-axis	Z-axis
Brake	B	See P.134	○	○	Standard equipment *
Cable exit direction (Outside)	CJO	See P.134	Cannot be selected		Standard equipment *
Non-motor end specification	NM	See P.135	○	○	○
Slider section roller specification	SR	See P.135	○	○	○

* Be sure to specify.

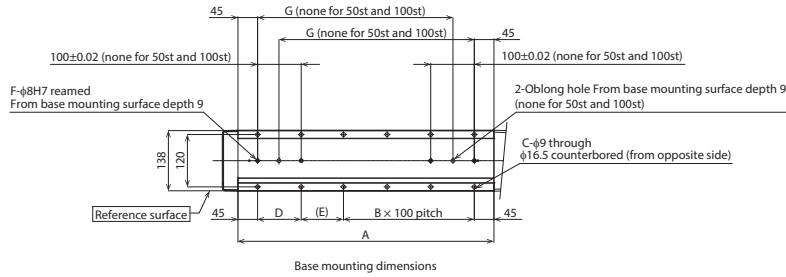
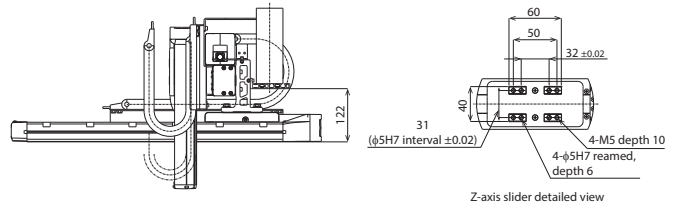
CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
 Note 2. The diagram shows first, second and third wirings all with cable tracks.
 Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(*) Notes

The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis slider by the customer.

■ Dimensions by Stroke

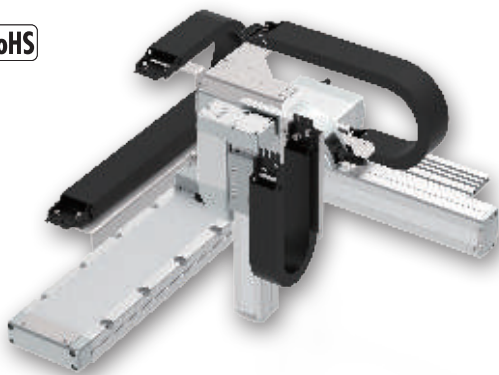
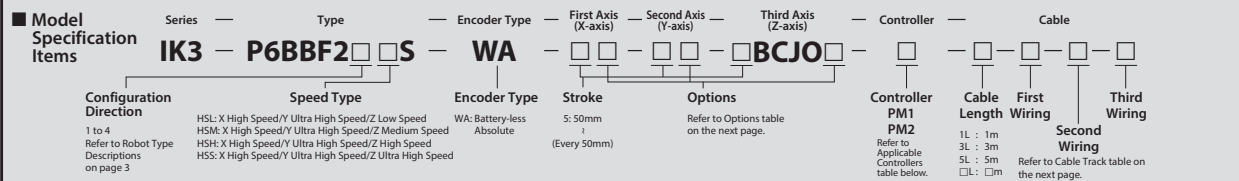
X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	237	287	337	387	437	487	537	587	637	687	737	787	837	887	937	987
B	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
C	4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20
D	-	-	100	100	100	100	100	100	100	100	100	100	100	100	100	100
E	147	197	47	97	47	97	47	97	47	97	47	97	47	97	47	97
F	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4
G	-	-	198	248	298	348	398	448	498	548	598	648	698	748	798	848
H	221	246	271	296	321	346	371	396	421	446	471	496	521	546	571	596
J	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	43	48	45.5	43	43	45.5	43
K	1	1	2	2	2	2	2	2	3	3	3	3	3	4	4	4
M	130	155	90	102.5	115	127.5	140	152.5	110	120	125	135	145	115	120	127.5
N	2	2	3	3	3	3	3	3	4	4	4	4	4	5	5	5

Cable track size	CT	CTM	CTL	CTLX
Q1	383.5	396.5	409.5	426.5
Q2	110.5	123.5	136.5	153.5
S1	84.5	96.5	-	-
S2	48.5	55	-	-

* Dimensions Q1, Q2, S1 and S2 change depending on the size of the cable track.

IK3-P6BBF2□□S

RCP6 3-axis XYB + Z-axis base mount configurations
 X-axis: WSA14C (straight)
 Y-axis: SA7R (side-mounted) Z-axis: SA6R (side-mounted)



The photograph above shows the configuration direction "1" where all axes have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ HSL type: X high speed/Y ultra high speed/Z low speed		■ HSM type: X high speed/Y ultra high speed/Z medium speed (Unit: kg)	
Y-axis (mm)	50~400 (Every 50mm)	Y-axis (mm)	50~400 (Every 50mm)
Acceleration/deceleration (G)		Acceleration/deceleration (G)	
0.1	4	0.1	2
0.3		0.3	2
0.5		0.5	2

■ HSH type: X high speed/Y ultra high speed/Z high speed		■ HSS type: X high speed/Y ultra high speed/Z ultra high speed	
Y-axis (mm)	50~400 (Every 50mm)	Y-axis (mm)	50~400 (Every 50mm)
Acceleration/deceleration (G)		Acceleration/deceleration (G)	
0.1	1	0.1	0.5
0.3	1	0.3	0.5
0.5	1	0.5	0.5

* When X, Y and Z axes all have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

		50				100				150			
Y-axis stroke (mm)		50	100	150	200	50	100	150	200	50	100	150	200
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○	○	○	○	○	
750	○	○	○	○	○	○	○	○	○	○	○	○	
800	○	○	○	○	○	○	○	○	○	○	○	○	

		200				250				300			
Y-axis stroke (mm)		50	100	150	200	50	100	150	200	50	100	150	200
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○	○	○	○	○	
750	○	○	○	○	○	○	○	○	○	○	○	○	
800	○	○	○	○	○	○	○	○	○	○	○	○	

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

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second and third axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)	Third wiring (Z-axis lateral)
Without cable track (cable only)	N	See P.136	○	○	○
Cable track S size (inner width: 38mm)	CT		○	○	○
Cable track M size (inner width: 50mm)	CTM		○	○	○
Cable track L size (inner width: 63mm)	CTL		○	○	Cannot be selected *1
Cable track XL size (inner width: 80mm)	CTXL		○	Cannot be selected *2	

*1 Only the first and second wiring can be selected *2 Only the first wiring can be selected

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : WSA14C Y-axis : SA7R Z-axis : SA6R	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
PM2		MSEL	P-139
		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Specifications

Item	X-axis	Y-axis	Z-axis
Axis configuration	RCP6-WSA14C	RCP6-SA7R	RCP6-SA6R
Stroke (Every 50mm)	50~800mm	50~400mm	50~200mm
Max. speed *	280mm/s	640mm/s	HSL 170mm/s
			HSM 340mm/s
			HSH 680mm/s
			HSS 800mm/s
Motor size	56□ Stepper motor	56□ Stepper motor	42□ Stepper motor
Ball screw lead	16mm	24mm	HSL 3mm
			HSM 6mm
			HSH 12mm
			HSS 20mm
Drive system	Ball screw φ12mm rolled C10	Ball screw φ12mm rolled C10	Ball screw φ10mm rolled C10
Positioning repeatability	±0.01mm		
Base material	Aluminum		
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)		

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options

Type	Option code	Reference page	X-axis	Y-axis	Z-axis
Brake *	B	See P.134	○	○	Standard equipment *
Cable exit direction (Top)	CJT	See P.134	○	Cannot be selected	
Cable exit direction (Right)	CJR	See P.134	○		
Cable exit direction (Left)	CJL	See P.134	○		
Cable exit direction (Bottom)	CJB	See P.134	○		
Cable exit direction (Outside)	CJO	See P.134		Cannot be selected	Standard equipment *
Non-motor end specification	NM	See P.135	○	○	○
Slider section roller specification	SR	See P.135	○	○	○

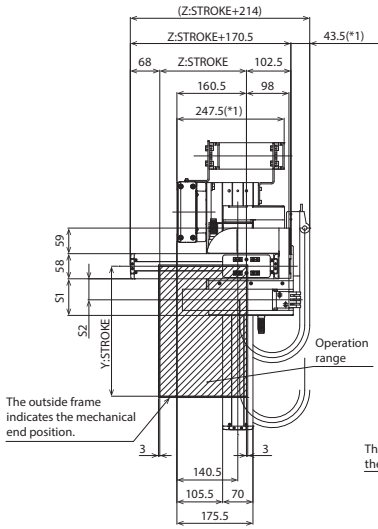
* Be sure to specify.
 * Brake option for X-axis increases the length of the motor unit. Please contact IAI for more information.

Dimensions

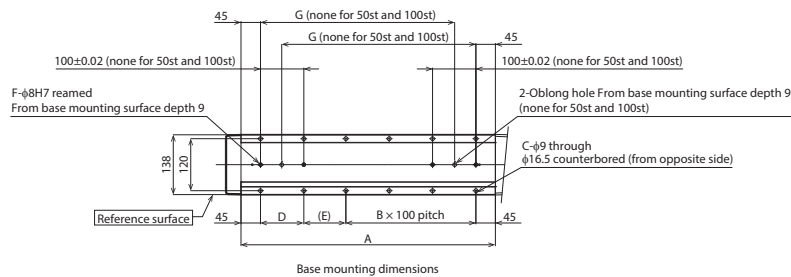
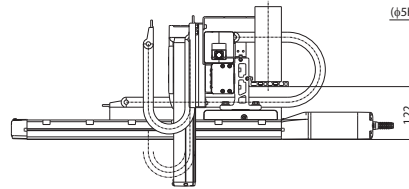
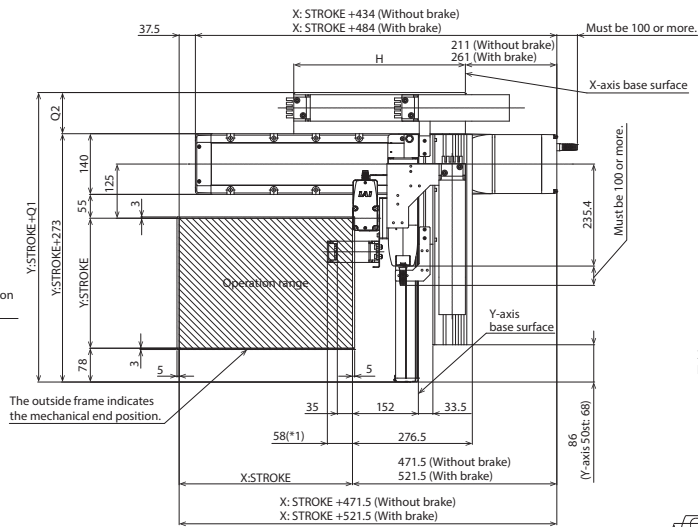
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Note 1. The configuration position in the figure is home.
Note 2. The diagram shows first, second and third wirings all with cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(* Notes

The moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis slider by the customer.

■ Dimensions by Stroke

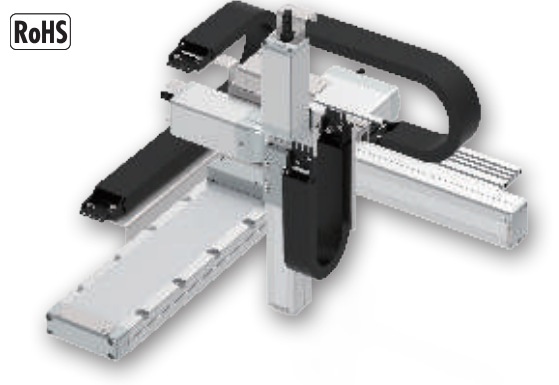
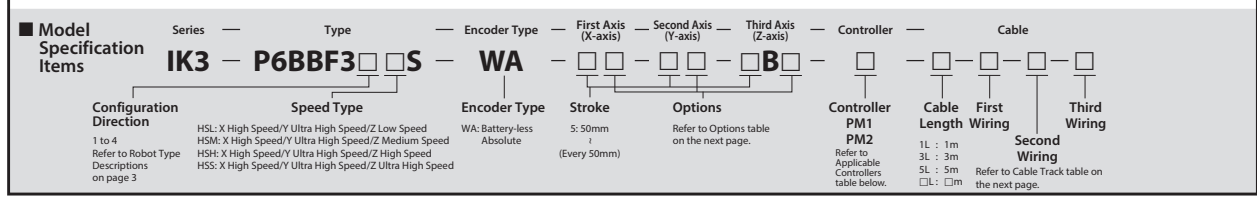
X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	237	287	337	387	437	487	537	587	637	687	737	787	837	887	937	987
B	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
C	4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20
D	-	-	100	100	100	100	100	100	100	100	100	100	100	100	100	100
E	147	197	47	97	47	97	47	97	47	97	47	97	47	97	47	97
F	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4
G	-	-	198	248	298	348	398	448	498	548	598	648	698	748	798	848
H	221	246	271	296	321	346	371	396	421	446	471	496	521	546	571	596

Cable track size	CT	CTM	CTL	CTXL
Q1	356	368	383	401
Q2	83	95	110	128
S1	84.5	96.5	-	-
S2	48.5	55	-	-

* Dimensions Q1, Q2, S1 and S2 change depending on the size of the cable track.

IK3-P6BBF3□□S

RCP6 3-axis XYB + Z-axis base mount configurations
 X-axis: WSA14C (straight)
 Y-axis: SA7C (straight) Z-axis: SA6C (straight)



The photograph above shows the configuration direction "1" where all axes have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ HSL type: X high speed/Y ultra high speed/Z low speed		■ HSM type: X high speed/Y ultra high speed/Z medium speed (Unit: kg)	
Y-axis (mm)	50~400 (Every 50mm)	Y-axis (mm)	50~400 (Every 50mm)
Acceleration/deceleration (G)		Acceleration/deceleration (G)	
0.1	4	0.1	2
		0.3	2
		0.5	2

■ HSH type: X high speed/Y ultra high speed/Z high speed		■ HSS type: X high speed/Y ultra high speed/Z ultra high speed	
Y-axis (mm)	50~400 (Every 50mm)	Y-axis (mm)	50~400 (Every 50mm)
Acceleration/deceleration (G)		Acceleration/deceleration (G)	
0.1	1	0.1	0.5
0.3	1	0.3	0.5
0.5	1	0.5	0.5

* When X, Y and Z axes all have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

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

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

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

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second and third axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)	Third wiring (Z-axis lateral)
Without cable track (cable only)	N	See P.136	○	○	○
Cable track S size (inner width: 38mm)	CT		○	○	○
Cable track M size (inner width: 50mm)	CTM		○	○	○
Cable track L size (inner width: 63mm)	CTL		○	○	Cannot be selected *1
Cable track XL size (inner width: 80mm)	CTXL		○	Cannot be selected *2	

*1 Only the first and second wiring can be selected *2 Only the first wiring can be selected

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : WSA14C Y-axis : SA7C Z-axis : SA6C	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
PM2		MSEL	P-139
		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Specifications

Item	X-axis	Y-axis	Z-axis
Axis configuration	RCP6-WSA14C	RCP6-SA7C	RCP6-SA6C
Stroke (Every 50mm)	50~800mm	50~400mm	50~200mm
Max. speed *	280mm/s	640mm/s	HSL 170mm/s
			HSM 340mm/s
			HSH 680mm/s
			HSS 800mm/s
Motor size	56□ Stepper motor	56□ Stepper motor	42□ Stepper motor
Ball screw lead	16mm	24mm	HSL 3mm
			HSM 6mm
			HSH 12mm
			HSS 20mm
Drive system	Ball screw φ12mm rolled C10	Ball screw φ12mm rolled C10	Ball screw φ10mm rolled C10
Positioning repeatability	±0.01mm		
Base material	Aluminum		
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)		

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options

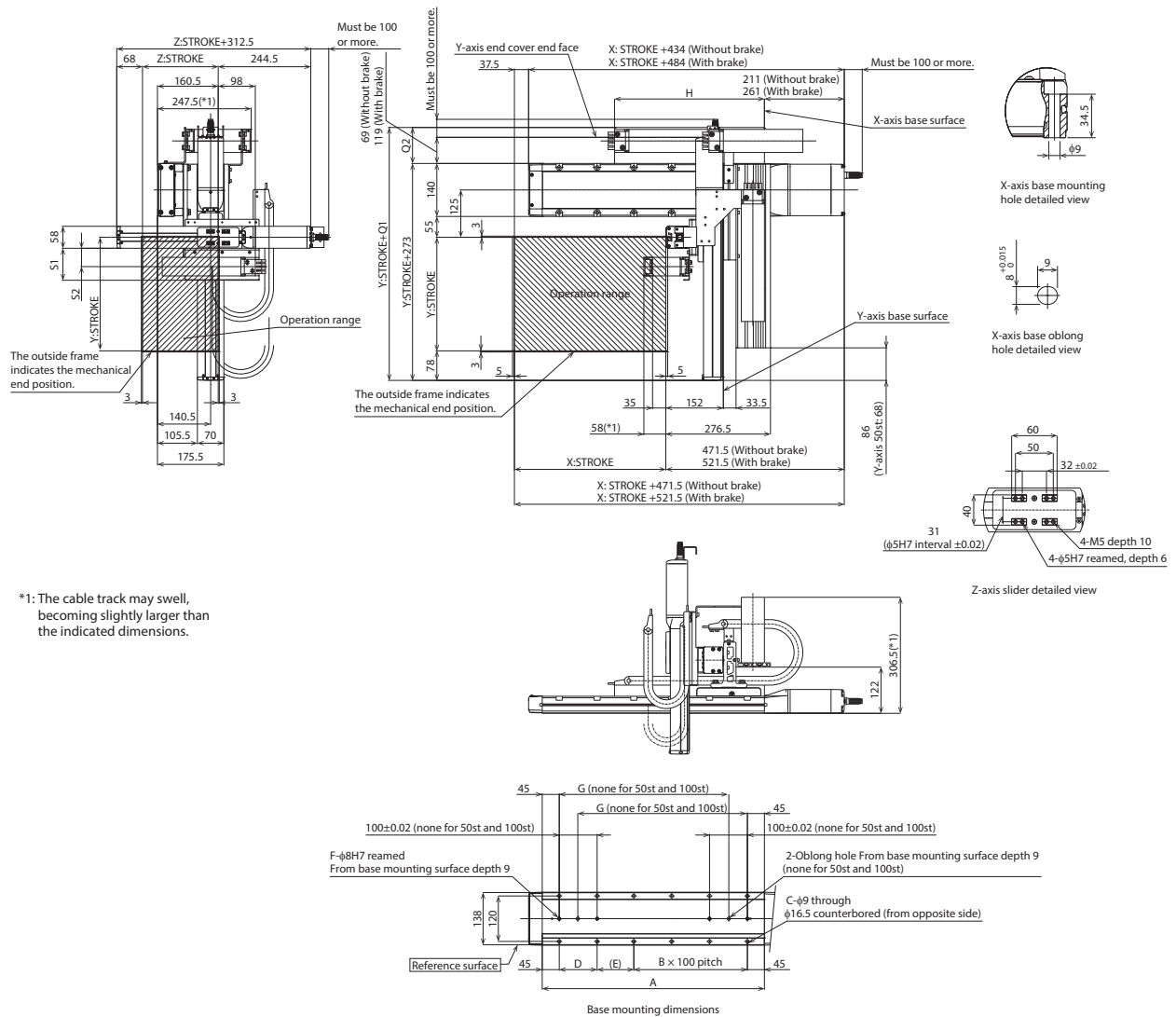
Type	Option code	Reference page	X-axis	Y-axis	Z-axis
Brake *	B	See P.134	○	○	Standard equipment *
Cable exit direction (Top)	CJT	See P.134	○	Cannot be selected	
Cable exit direction (Right)	CJR	See P.134	○		
Cable exit direction (Left)	CJL	See P.134	○		
Cable exit direction (Bottom)	CJB	See P.134	○		
Non-motor end specification	NM	See P.135	○	○	○
Slider section roller specification	SR	See P.135	○	○	○

* Outside as standard. Be sure to specify.
 * Brake option for X- and/or Y-axes increases the length of the motor unit(s). Please contact IAI for more information.

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Note 1. The configuration position in the figure is home.
 Note 2. The diagram shows first, second and third wirings all with cable tracks.
 Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



(*) Notes The moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis slider by the customer.

■ Dimensions by Stroke

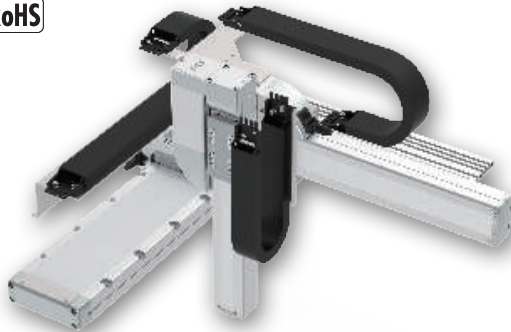
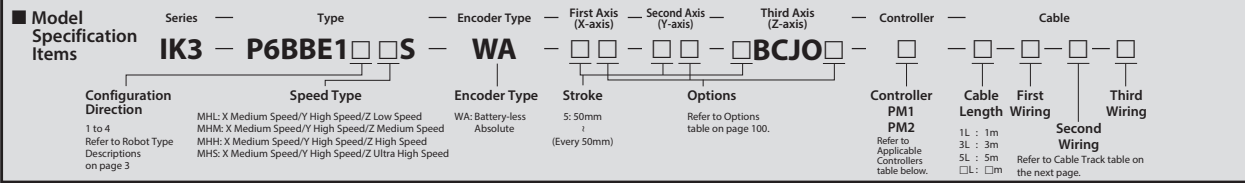
X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	237	287	337	387	437	487	537	587	637	687	737	787	837	887	937	987
B	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
C	4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20
D	-	-	100	100	100	100	100	100	100	100	100	100	100	100	100	100
E	147	197	47	97	47	97	47	97	47	97	47	97	47	97	47	97
F	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4
G	-	-	198	248	298	348	398	448	498	548	598	648	698	748	798	848
H	221	246	271	296	321	346	371	396	421	446	471	496	521	546	571	596

Cable track size	CT	CTM	CTL	CTXL
Q1	356	368	383	401
Q2	83	95	110	128
S1	84.5	96.5	-	-
S2	48.5	55	-	-

* Dimensions Q1, Q2, S1 and S2 change depending on the size of the cable track.

IK3-P6BBE1□□S

RCP6 3-axis XYB + Z-axis base mount configurations
 X-axis: WSA16R (side-mounted)
 Y-axis: SA8R (side-mounted) Z-axis: SA7R (side-mounted)



The photograph above shows the configuration direction "1" where all axes have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

MHL type: X medium speed/Y high speed/Z low speed		MHM type: X medium speed/Y high speed/Z medium speed (Unit: kg)		
Y-axis (mm)	50~500 (Every 50mm)	Y-axis (mm)	50~400 (Every 50mm)	450~500 (Every 50mm)
Acceleration/deceleration (G)		Acceleration/deceleration (G)		
0.1	6	0.1	4	
		0.3	4	-

MHH type: X medium speed/Y high speed/Z high speed		MHS type: X medium speed/Y high speed/Z ultra high speed	
Y-axis (mm)	50~500 (Every 50mm)	Y-axis (mm)	50~500 (Every 50mm)
Acceleration/deceleration (G)		Acceleration/deceleration (G)	
0.1	2	0.1	1
0.3	2	0.3	1

* When X, Y and Z axes all have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm)		50							100						
Z-axis stroke (mm)		50	100	150	200	250	300	50	100	150	200	250	300		
50	○	○	○	○	○	○	○	○	○	○	○	○	○		
100	○	○	○	○	○	○	○	○	○	○	○	○	○		
150	○	○	○	○	○	○	○	○	○	○	○	○	○		
200	○	○	○	○	○	○	○	○	○	○	○	○	○		
250	○	○	○	○	○	○	○	○	○	○	○	○	○		
300	○	○	○	○	○	○	○	○	○	○	○	○	○		
350	○	○	○	○	○	○	○	○	○	○	○	○	○		
400	○	○	○	○	○	○	○	○	○	○	○	○	○		
450	○	○	○	○	○	○	○	○	○	○	○	○	○		
500	○	○	○	○	○	○	○	○	○	○	○	○	○		
550	○	○	○	○	○	○	○	○	○	○	○	○	○		
600	○	○	○	○	○	○	○	○	○	○	○	○	○		
650	○	○	○	○	○	○	○	○	○	○	○	○	○		
700	○	○	○	○	○	○	○	○	○	○	○	○	○		
750	○	○	○	○	○	○	○	○	○	○	○	○	○		
800	○	○	○	○	○	○	○	○	○	○	○	○	○		
850	○	○	○	○	○	○	○	○	○	○	○	○	○		
900	○	○	○	○	○	○	○	○	○	○	○	○	○		
950	○	○	○	○	○	○	○	○	○	○	○	○	○		
1000	○	○	○	○	○	○	○	○	○	○	○	○	○		
1050	○	○	○	○	○	○	○	○	○	○	○	○	○		
1100	○	○	○	○	○	○	○	○	○	○	○	○	○		

Y-axis stroke (mm)		150							200						
Z-axis stroke (mm)		50	100	150	200	250	300	50	100	150	200	250	300		
50	○	○	○	○	○	○	○	○	○	○	○	○	○		
100	○	○	○	○	○	○	○	○	○	○	○	○	○		
150	○	○	○	○	○	○	○	○	○	○	○	○	○		
200	○	○	○	○	○	○	○	○	○	○	○	○	○		
250	○	○	○	○	○	○	○	○	○	○	○	○	○		
300	○	○	○	○	○	○	○	○	○	○	○	○	○		
350	○	○	○	○	○	○	○	○	○	○	○	○	○		
400	○	○	○	○	○	○	○	○	○	○	○	○	○		
450	○	○	○	○	○	○	○	○	○	○	○	○	○		
500	○	○	○	○	○	○	○	○	○	○	○	○	○		
550	○	○	○	○	○	○	○	○	○	○	○	○	○		
600	○	○	○	○	○	○	○	○	○	○	○	○	○		
650	○	○	○	○	○	○	○	○	○	○	○	○	○		
700	○	○	○	○	○	○	○	○	○	○	○	○	○		
750	○	○	○	○	○	○	○	○	○	○	○	○	○		
800	○	○	○	○	○	○	○	○	○	○	○	○	○		
850	○	○	○	○	○	○	○	○	○	○	○	○	○		
900	○	○	○	○	○	○	○	○	○	○	○	○	○		
950	○	○	○	○	○	○	○	○	○	○	○	○	○		
1000	○	○	○	○	○	○	○	○	○	○	○	○	○		
1050	○	○	○	○	○	○	○	○	○	○	○	○	○		
1100	○	○	○	○	○	○	○	○	○	○	○	○	○		

Stroke													
Y-axis stroke (mm)		250						300					
Z-axis stroke (mm)		50	100	150	200	250	300	50	100	150	200	250	300
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○	○	○	○	○	○
	750	○	○	○	○	○	○	○	○	○	○	○	○
	800	○	○	○	○	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○	○	○	○	○	
900	○	○	○	○	○	○	○	○	○	○	○	○	
950	○	○	○	○	○	○	○	○	○	○	○	○	
1000	○	○	○	○	○	○	○	○	○	○	○	○	
1050	○	○	○	○	○	○	○	○	○	○	○	○	
1100	○	○	○	○	○	○	○	○	○	○	○	○	

Y-axis stroke (mm)		350						400					
Z-axis stroke (mm)		50	100	150	200	250	300	50	100	150	200	250	300
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○	○	○	○	○	○
	750	○	○	○	○	○	○	○	○	○	○	○	○
	800	○	○	○	○	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○	○	○	○	○	
900	○	○	○	○	○	○	○	○	○	○	○	○	
950	○	○	○	○	○	○	○	○	○	○	○	○	
1000	○	○	○	○	○	○	○	○	○	○	○	○	
1050	○	○	○	○	○	○	○	○	○	○	○	○	
1100	○	○	○	○	○	○	○	○	○	○	○	○	

Y-axis stroke (mm)		450						500					
Z-axis stroke (mm)		50	100	150	200	250	300	50	100	150	200	250	300
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○	○	○	○	○	○
	750	○	○	○	○	○	○	○	○	○	○	○	○
	800	○	○	○	○	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○	○	○	○	○	
900	○	○	○	○	○	○	○	○	○	○	○	○	
950	○	○	○	○	○	○	○	○	○	○	○	○	
1000	○	○	○	○	○	○	○	○	○	○	○	○	
1050	○	○	○	○	○	○	○	○	○	○	○	○	
1100	○	○	○	○	○	○	○	○	○	○	○	○	

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second and third axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)	Third wiring (Z-axis lateral)
Without cable track (cable only)	N	See P.136	○	○	○
Cable track S size (inner width: 38mm)	CT		○	○	○
Cable track M size (inner width: 50mm)	CTM		○	○	○
Cable track L size (inner width: 63mm)	CTL		○	○	Cannot be selected *1
Cable track XL size (inner width: 80mm)	CTXL		○	Cannot be selected *2	

*1 Only the first and second wiring can be selected *2 Only the first wiring can be selected

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : WSA16R Y-axis : SA8R	PCON-CFB/CGFB	P-149
		MSEL-PCF/PGF	P-139
		PCON-CB/CGB	P-149
	Z-axis : SA7R	PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
		MSEL	P-139
PM2	X-axis : WSA16R Y-axis : SA8R	RCON-PCF	P-159
	Z-axis : SA7R	RCON-PC	

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Specifications			
Item	X-axis	Y-axis	Z-axis
Axis configuration	RCP6-WSA16R	RCP6-SA8R	RCP6-SA7R
Stroke (Every 50mm)	50~1100mm	50~500mm	50~300mm
Max. speed *	MHL	400mm/s	105mm/s
	MHM		210mm/s
	MHH		420mm/s
	MHS		640mm/s
Motor size	56□ High thrust stepper motor	56□ High thrust stepper motor	56□ Stepper motor
Ball screw lead	MHL	20mm	4mm
	MHM		8mm
	MHH		16mm
	MHS		24mm
Drive system	Ball screw φ16mm rolled C10	Ball screw φ16mm rolled C10	Ball screw φ12mm rolled C10
Positioning repeatability	±0.01mm		
Base material	Aluminum		
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)		

Options						
Type	Option code	Reference page	X-axis	Y-axis	Z-axis	
Brake	B	See P.134	—	—	Standard equipment*	
Cable exit direction (Outside)	CJO	See P.134	Cannot be selected		Standard equipment*	
Non-motor end specification	NM	See P.135	—	—	—	
Slider section roller specification	SR	See P.135	—	—	—	

* Be sure to specify.

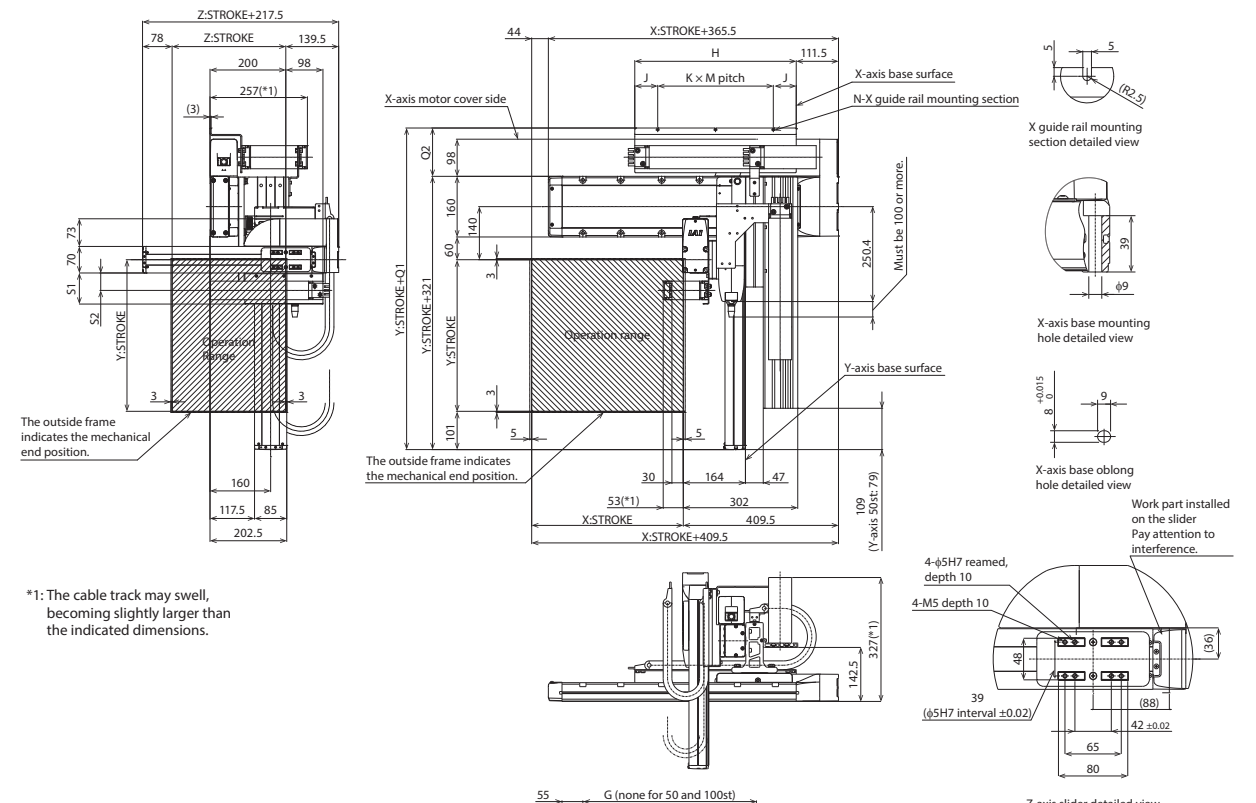
* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com

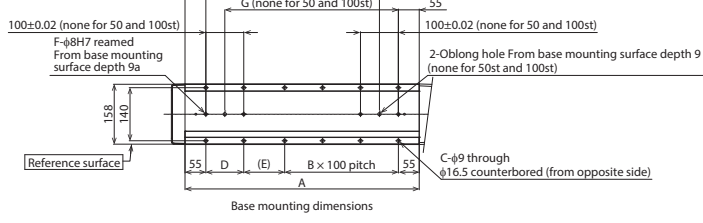


Note 1. The configuration position in the figure is home.
 Note 2. The diagram shows first, second and third wirings all with cable tracks.
 Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.

(*) Notes
 The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer.
 Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis slider by the customer.



Dimensions by Stroke

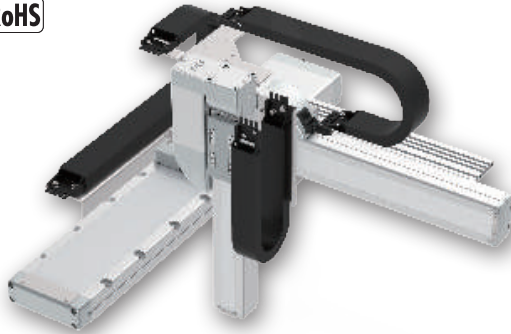
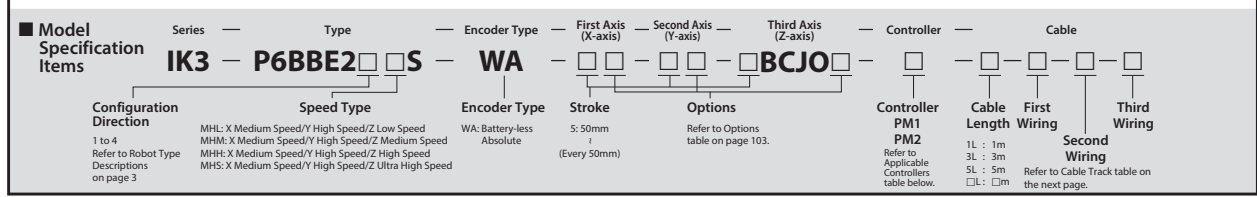
X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	
A	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	
B	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	
C	4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	
D	—	—	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
E	158	208	258	308	358	408	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158	1208	
F	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
G	—	—	208	258	308	358	408	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158	
H	251	276	301	326	351	376	401	426	451	476	501	526	551	576	601	626	651	676	701	726	751	776	
J	60.5	60.5	60.5	60.5	60.5	60.5	60.5	60.5	60.5	60.5	60.5	60.5	60.5	60.5	60.5	60.5	60.5	60.5	60.5	60.5	63	63	
K	1	1	2	2	2	2	2	2	3	3	3	3	3	3	4	4	4	4	4	4	5	5	
M	130	155	90	102.5	115	127.5	140	152.5	110	120	125	135	145	115	120	127.5	132.5	140	145	120	125	130	
N	2	2	3	3	3	3	3	3	4	4	4	4	4	5	5	5	5	5	5	6	6	6	

Cable track size	CT	CTM	CTL	CTLX
Q1	448.5	448.5	448.5	465.5
Q2	127.5	127.5	127.5	144.5
S1	82	94	—	—
S2	46	52.5	—	—

* Dimensions Q1, Q2, S1 and S2 change depending on the size of the cable track.

IK3-P6BBE2□□S

RCP6 3-axis XYB + Z-axis base mount configurations
 X-axis: WSA16C (straight)
 Y-axis: SA8R (side-mounted) Z-axis: SA7R (side-mounted)



The photograph above shows the configuration direction "1" where all axes have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ MHL type: X medium speed/Y high speed/Z low speed

Y-axis (mm)	50~500 (Every 50mm)
Acceleration/deceleration (G)	
0.1	6
0.3	

■ MHM type: X medium speed/Y high speed/Z medium speed (Unit: kg)

Y-axis (mm)	50~400 (Every 50mm)	450~500 (Every 50mm)
Acceleration/deceleration (G)		
0.1	4	
0.3	4	-

■ MHH type: X medium speed/Y high speed/Z high speed

Y-axis (mm)	50~500 (Every 50mm)
Acceleration/deceleration (G)	
0.1	2
0.3	2

■ MHS type: X medium speed/Y high speed/Z ultra high speed

Y-axis (mm)	50~500 (Every 50mm)
Acceleration/deceleration (G)	
0.1	1
0.3	1

* When X, Y and Z axes all have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm)		50							100						
Z-axis stroke (mm)		50	100	150	200	250	300	50	100	150	200	250	300		
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○	○	○		
	100	○	○	○	○	○	○	○	○	○	○	○	○		
	150	○	○	○	○	○	○	○	○	○	○	○	○		
	200	○	○	○	○	○	○	○	○	○	○	○	○		
	250	○	○	○	○	○	○	○	○	○	○	○	○		
	300	○	○	○	○	○	○	○	○	○	○	○	○		
	350	○	○	○	○	○	○	○	○	○	○	○	○		
	400	○	○	○	○	○	○	○	○	○	○	○	○		
	450	○	○	○	○	○	○	○	○	○	○	○	○		
	500	○	○	○	○	○	○	○	○	○	○	○	○		
	550	○	○	○	○	○	○	○	○	○	○	○	○		
	600	○	○	○	○	○	○	○	○	○	○	○	○		
	650	○	○	○	○	○	○	○	○	○	○	○	○		
	700	○	○	○	○	○	○	○	○	○	○	○	○		
	750	○	○	○	○	○	○	○	○	○	○	○	○		
	800	○	○	○	○	○	○	○	○	○	○	○	○		
	850	○	○	○	○	○	○	○	○	○	○	○	○		
900	○	○	○	○	○	○	○	○	○	○	○	○			
950	○	○	○	○	○	○	○	○	○	○	○	○			
1000	○	○	○	○	○	○	○	○	○	○	○	○			
1050	○	○	○	○	○	○	○	○	○	○	○	○			
1100	○	○	○	○	○	○	○	○	○	○	○	○			

Y-axis stroke (mm)		150							200						
Z-axis stroke (mm)		50	100	150	200	250	300	50	100	150	200	250	300		
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○	○	○		
	100	○	○	○	○	○	○	○	○	○	○	○	○		
	150	○	○	○	○	○	○	○	○	○	○	○	○		
	200	○	○	○	○	○	○	○	○	○	○	○	○		
	250	○	○	○	○	○	○	○	○	○	○	○	○		
	300	○	○	○	○	○	○	○	○	○	○	○	○		
	350	○	○	○	○	○	○	○	○	○	○	○	○		
	400	○	○	○	○	○	○	○	○	○	○	○	○		
	450	○	○	○	○	○	○	○	○	○	○	○	○		
	500	○	○	○	○	○	○	○	○	○	○	○	○		
	550	○	○	○	○	○	○	○	○	○	○	○	○		
	600	○	○	○	○	○	○	○	○	○	○	○	○		
	650	○	○	○	○	○	○	○	○	○	○	○	○		
	700	○	○	○	○	○	○	○	○	○	○	○	○		
	750	○	○	○	○	○	○	○	○	○	○	○	○		
	800	○	○	○	○	○	○	○	○	○	○	○	○		
	850	○	○	○	○	○	○	○	○	○	○	○	○		
900	○	○	○	○	○	○	○	○	○	○	○	○			
950	○	○	○	○	○	○	○	○	○	○	○	○			
1000	○	○	○	○	○	○	○	○	○	○	○	○			
1050	○	○	○	○	○	○	○	○	○	○	○	○			
1100	○	○	○	○	○	○	○	○	○	○	○	○			

Stroke												
Y-axis stroke (mm)		250						300				
Z-axis stroke (mm)	50	100	150	200	250	300	50	100	150	200	250	300
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○	○	○	○	○
	750	○	○	○	○	○	○	○	○	○	○	○
	800	○	○	○	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○	○	○	○	
900	○	○	○	○	○	○	○	○	○	○	○	
950	○	○	○	○	○	○	○	○	○	○	○	
1000	○	○	○	○	○	○	○	○	○	○	○	
1050	○	○	○	○	○	○	○	○	○	○	○	
1100	○	○	○	○	○	○	○	○	○	○	○	

Y-axis stroke (mm)		350						400				
Z-axis stroke (mm)	50	100	150	200	250	300	50	100	150	200	250	300
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○	○	○	○	○
	750	○	○	○	○	○	○	○	○	○	○	○
	800	○	○	○	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○	○	○	○	
900	○	○	○	○	○	○	○	○	○	○	○	
950	○	○	○	○	○	○	○	○	○	○	○	
1000	○	○	○	○	○	○	○	○	○	○	○	
1050	○	○	○	○	○	○	○	○	○	○	○	
1100	○	○	○	○	○	○	○	○	○	○	○	

Y-axis stroke (mm)		450						500				
Z-axis stroke (mm)	50	100	150	200	250	300	50	100	150	200	250	300
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○	○	○	○	○
	750	○	○	○	○	○	○	○	○	○	○	○
	800	○	○	○	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○	○	○	○	
900	○	○	○	○	○	○	○	○	○	○	○	
950	○	○	○	○	○	○	○	○	○	○	○	
1000	○	○	○	○	○	○	○	○	○	○	○	
1050	○	○	○	○	○	○	○	○	○	○	○	
1100	○	○	○	○	○	○	○	○	○	○	○	

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second and third axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)	Third wiring (Z-axis lateral)
Without cable track (cable only)	N	See P.136	-	-	-
Cable track S size (inner width: 38mm)	CT		-	-	-
Cable track M size (inner width: 50mm)	CTM		-	-	-
Cable track L size (inner width: 63mm)	CTL		-	-	Cannot be selected *1
Cable track XL size (inner width: 80mm)	CTXL		-	Cannot be selected *2	-

*1 Only the first and second wiring can be selected *2 Only the first wiring can be selected

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : WSA16C Y-axis : SA8R	PCON-CFB/CGFB	P-149
		MSEL-PCF/PGF	P-139
	Z-axis : SA7R	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
	MCON-LC/LCG		
	MSEL	P-139	
PM2	X-axis : WSA16C Y-axis : SA8R	RCON-PCF	P-159
		RCON-PC	
	Z-axis : SA7R		

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Specifications			
Item	X-axis	Y-axis	Z-axis
Axis configuration	RCP6-WSA16C	RCP6-SA8R	RCP6-SA7R
Stroke (Every 50mm)	50~1100mm	50~500mm	50~300mm
Max. speed *	MHL	400mm/s	105mm/s
	MHM		210mm/s
	MHH		420mm/s
	MHS		640mm/s
Motor size	56□ High thrust stepper motor	56□ High thrust stepper motor	56□ Stepper motor
Ball screw lead	MHL	20mm	4mm
	MHM		8mm
	MHH		16mm
	MHS		24mm
Drive system	Ball screw φ16mm rolled C10	Ball screw φ16mm rolled C10	Ball screw φ12mm rolled C10
Positioning repeatability	±0.01mm		
Base material	Aluminum		
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)		

Options						
Type	Option code	Reference page	X-axis	Y-axis	Z-axis	
Brake *	B	See P.134	○	○	○	Standard equipment*
Cable exit direction (Top)	CJT	See P.134	○	○	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.134	○	○	○	
Cable exit direction (Left)	CJL	See P.134	○	○	○	
Cable exit direction (Bottom)	CJB	See P.134	○	○	○	
Cable exit direction (Outside)	CJO	See P.134	Cannot be selected	○	○	Standard equipment*
Non-motor end specification	NM	See P.135	○	○	○	
Slider section roller specification	SR	See P.135	○	○	○	

* Be sure to specify.
 * Brake option for X-axis increases the length of the motor unit.
 Please contact IAI for more information.

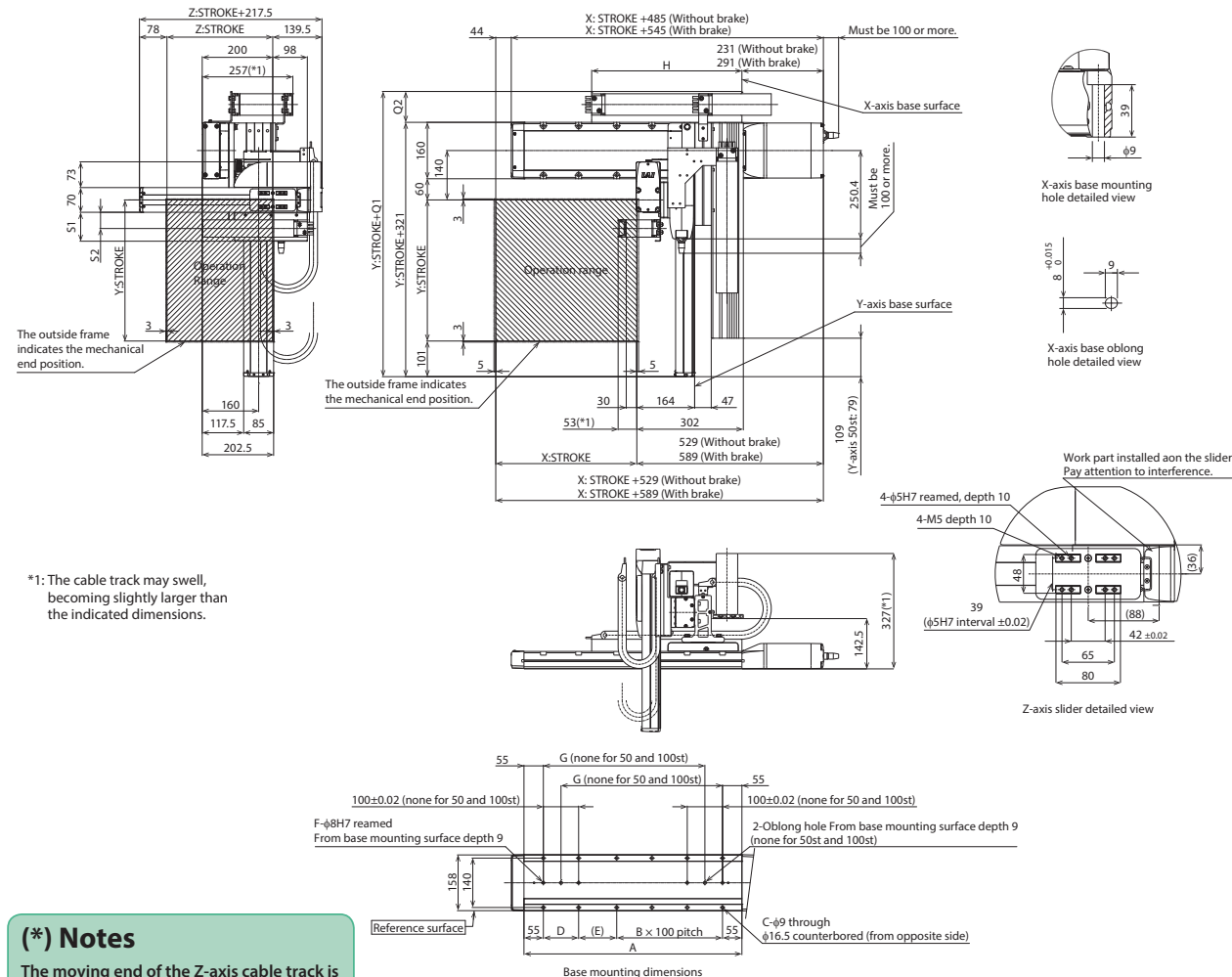
* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke.
 For details, refer to the Maximum Speed by Stroke table on P.137.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
 Note 2. The diagram shows first, second and third wirings all with cable tracks.
 Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.

(*) Notes
 The moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis slider by the customer.

■ Dimensions by Stroke

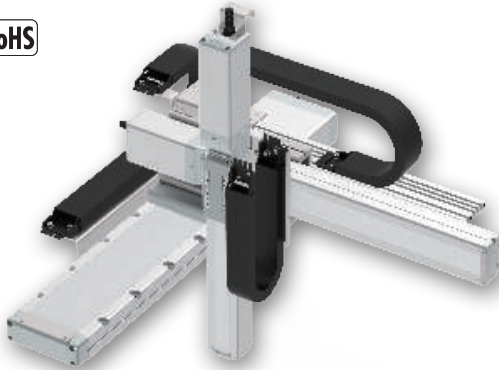
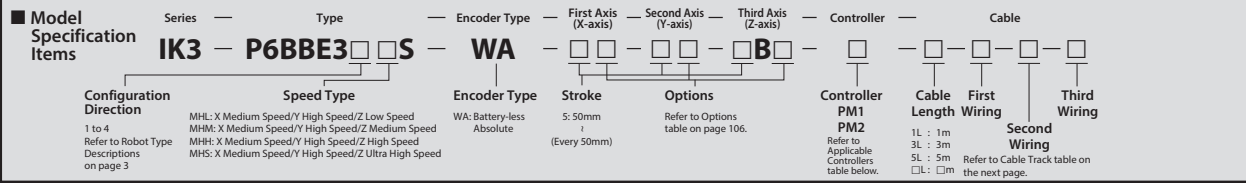
X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318
B	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
C	4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
D	-	-	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
E	158	208	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108
F	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
G	-	-	208	258	308	358	408	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158
H	251	276	301	326	351	376	401	426	451	476	501	526	551	576	601	626	651	676	701	726	751	776

Cable track size	CT	CTM	CTL	CTXL
Q1	396.5	408.5	423.5	441.5
Q2	75.5	87.5	102.5	120.5
S1	82	94	-	-
S2	46	52.5	-	-

* Dimensions Q1, Q2, S1 and S2 change depending on the size of the cable track.

IK3-P6BBE3□□S

RCP6 3-axis XYB + Z-axis base mount configurations
 X-axis: WSA16C (straight)
 Y-axis: SA8C (straight) Z-axis: SA7C (straight)



The photograph above shows the configuration direction "1" where all axes have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

MHL type: X medium speed/Y high speed/Z low speed		MHM type: X medium speed/Y high speed/Z medium speed (Unit: kg)		
Y-axis (mm)	50~500 (Every 50mm)	Y-axis (mm)	50~400 (Every 50mm)	450~500 (Every 50mm)
Acceleration/deceleration (G)		Acceleration/deceleration (G)		
0.1	6	0.1	4	-
0.3		0.3	4	-

MHH type: X medium speed/Y high speed/Z high speed		MHS type: X medium speed/Y high speed/Z ultra high speed	
Y-axis (mm)	50~500 (Every 50mm)	Y-axis (mm)	50~500 (Every 50mm)
Acceleration/deceleration (G)		Acceleration/deceleration (G)	
0.1	2	0.1	1
0.3	2	0.3	1

* When X, Y and Z axes all have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm)		50							100					
Z-axis stroke (mm)		50	100	150	200	250	300	50	100	150	200	250	300	
50		○	○	○	○	○	○	○	○	○	○	○	○	
100		○	○	○	○	○	○	○	○	○	○	○	○	
150		○	○	○	○	○	○	○	○	○	○	○	○	
200		○	○	○	○	○	○	○	○	○	○	○	○	
250		○	○	○	○	○	○	○	○	○	○	○	○	
300		○	○	○	○	○	○	○	○	○	○	○	○	
350		○	○	○	○	○	○	○	○	○	○	○	○	
400		○	○	○	○	○	○	○	○	○	○	○	○	
450		○	○	○	○	○	○	○	○	○	○	○	○	
500		○	○	○	○	○	○	○	○	○	○	○	○	
550		○	○	○	○	○	○	○	○	○	○	○	○	
600		○	○	○	○	○	○	○	○	○	○	○	○	
650		○	○	○	○	○	○	○	○	○	○	○	○	
700		○	○	○	○	○	○	○	○	○	○	○	○	
750		○	○	○	○	○	○	○	○	○	○	○	○	
800		○	○	○	○	○	○	○	○	○	○	○	○	
850		○	○	○	○	○	○	○	○	○	○	○	○	
900		○	○	○	○	○	○	○	○	○	○	○	○	
950		○	○	○	○	○	○	○	○	○	○	○	○	
1000		○	○	○	○	○	○	○	○	○	○	○	○	
1050		○	○	○	○	○	○	○	○	○	○	○	○	
1100		○	○	○	○	○	○	○	○	○	○	○	○	

Y-axis stroke (mm)		150						200					
Z-axis stroke (mm)		50	100	150	200	250	300	50	100	150	200	250	300
50		○	○	○	○	○	○	○	○	○	○	○	○
100		○	○	○	○	○	○	○	○	○	○	○	○
150		○	○	○	○	○	○	○	○	○	○	○	○
200		○	○	○	○	○	○	○	○	○	○	○	○
250		○	○	○	○	○	○	○	○	○	○	○	○
300		○	○	○	○	○	○	○	○	○	○	○	○
350		○	○	○	○	○	○	○	○	○	○	○	○
400		○	○	○	○	○	○	○	○	○	○	○	○
450		○	○	○	○	○	○	○	○	○	○	○	○
500		○	○	○	○	○	○	○	○	○	○	○	○
550		○	○	○	○	○	○	○	○	○	○	○	○
600		○	○	○	○	○	○	○	○	○	○	○	○
650		○	○	○	○	○	○	○	○	○	○	○	○
700		○	○	○	○	○	○	○	○	○	○	○	○
750		○	○	○	○	○	○	○	○	○	○	○	○
800		○	○	○	○	○	○	○	○	○	○	○	○
850		○	○	○	○	○	○	○	○	○	○	○	○
900		○	○	○	○	○	○	○	○	○	○	○	○
950		○	○	○	○	○	○	○	○	○	○	○	○
1000		○	○	○	○	○	○	○	○	○	○	○	○
1050		○	○	○	○	○	○	○	○	○	○	○	○
1100		○	○	○	○	○	○	○	○	○	○	○	○

Stroke													
Y-axis stroke (mm)		250						300					
Z-axis stroke (mm)		50	100	150	200	250	300	50	100	150	200	250	300
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○	○	○	○	○	○
	750	○	○	○	○	○	○	○	○	○	○	○	○
	800	○	○	○	○	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○	○	○	○	○	
900	○	○	○	○	○	○	○	○	○	○	○	○	
950	○	○	○	○	○	○	○	○	○	○	○	○	
1000	○	○	○	○	○	○	○	○	○	○	○	○	
1050	○	○	○	○	○	○	○	○	○	○	○	○	
1100	○	○	○	○	○	○	○	○	○	○	○	○	

Y-axis stroke (mm)		350						400					
Z-axis stroke (mm)		50	100	150	200	250	300	50	100	150	200	250	300
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○	○	○	○	○	○
	750	○	○	○	○	○	○	○	○	○	○	○	○
	800	○	○	○	○	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○	○	○	○	○	
900	○	○	○	○	○	○	○	○	○	○	○	○	
950	○	○	○	○	○	○	○	○	○	○	○	○	
1000	○	○	○	○	○	○	○	○	○	○	○	○	
1050	○	○	○	○	○	○	○	○	○	○	○	○	
1100	○	○	○	○	○	○	○	○	○	○	○	○	

Y-axis stroke (mm)		450						500					
Z-axis stroke (mm)		50	100	150	200	250	300	50	100	150	200	250	300
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○	○	○	○	○	○
	750	○	○	○	○	○	○	○	○	○	○	○	○
	800	○	○	○	○	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○	○	○	○	○	
900	○	○	○	○	○	○	○	○	○	○	○	○	
950	○	○	○	○	○	○	○	○	○	○	○	○	
1000	○	○	○	○	○	○	○	○	○	○	○	○	
1050	○	○	○	○	○	○	○	○	○	○	○	○	
1100	○	○	○	○	○	○	○	○	○	○	○	○	

Cable Length		
Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second and third axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track						
Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)	Third wiring (Z-axis lateral)	
Without cable track (cable only)	N	See P.136	○	○	○	
Cable track S size (inner width: 38mm)	CT		○	○	○	
Cable track M size (inner width: 50mm)	CTM		○	○	○	
Cable track L size (inner width: 63mm)	CTL		○	○	○	Cannot be selected *1
Cable track XL size (inner width: 80mm)	CTXL		○	○	○	Cannot be selected *2

*1 Only the first and second wiring can be selected *2 Only the first wiring can be selected

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : WSA16C Y-axis : SA8C	PCON-CFB/CGFB	P-149
		MSEL-PCF/PGF	P-139
	Z-axis : SA7C	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
	MCON-LC/LCG		
	MSEL	P-139	
PM2	X-axis : WSA16C Y-axis : SA8C	RCON-PCF	P-159
	Z-axis : SA7C	RCON-PC	

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Specifications			
Item	X-axis	Y-axis	Z-axis
Axis configuration	RCP6-WSA16C	RCP6-SA8C	RCP6-SA7C
Stroke (Every 50mm)	50~1100mm	50~500mm	50~300mm
Max. speed *	MHL	400mm/s	105mm/s
	MHM		210mm/s
	MHH		420mm/s
	MHS		640mm/s
Motor size	56□ High thrust stepper motor	56□ High thrust stepper motor	56□ Stepper motor
Ball screw lead	MHL	20mm	4mm
	MHM		8mm
	MHH		16mm
	MHS		24mm
Drive system	Ball screw φ16mm rolled C10	Ball screw φ16mm rolled C10	Ball screw φ12mm rolled C10
Positioning repeatability	±0.01mm		
Base material	Aluminum		
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)		

Options						
Type	Option code	Reference page	X-axis	Y-axis	Z-axis	
Brake *	B	See P.134	○	○	○	Standard equipment †
Cable exit direction (Top)	CJT	See P.134	○	○	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.134	○	○	○	
Cable exit direction (Left)	CJL	See P.134	○	○	○	
Cable exit direction (Bottom)	CJB	See P.134	○	○	○	
Non-motor end specification	NM	See P.135	○	○	○	
Slider section roller specification	SR	See P.135	○	○	○	

* Outside as standard. Be sure to specify.
 † Brake option for X- and/or Y-axes increases the length of the motor unit(s). Please contact IAI for more information.

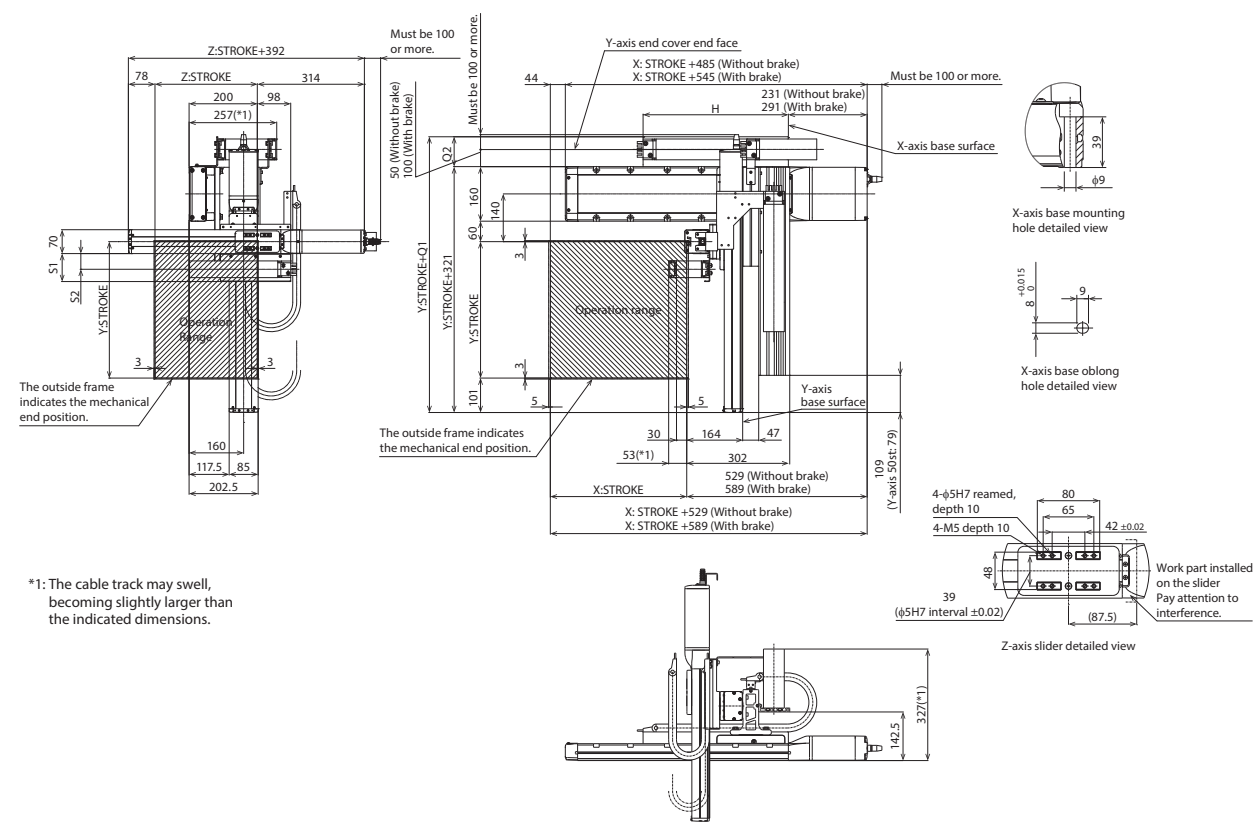
* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com

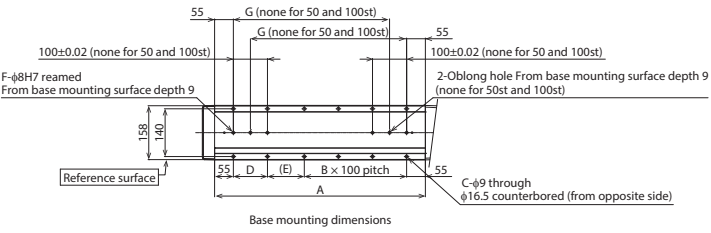


Note 1. The configuration position in the figure is home.
 Note 2. The diagram shows first, second and third wirings all with cable tracks.
 Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.

(*) Notes
 The moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis slider by the customer.



■ Dimensions by Stroke

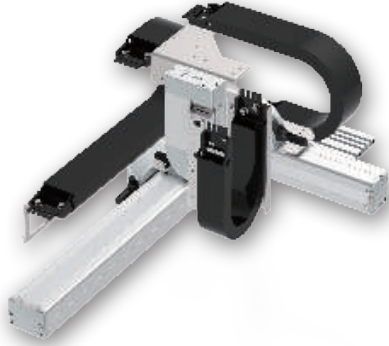
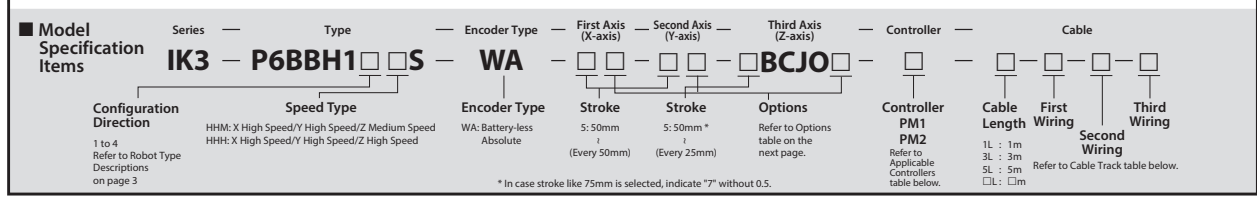
X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318
B	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
C	4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
D	-	-	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
E	158	208	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108
F	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
G	-	-	208	258	308	358	408	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158
H	251	276	301	326	351	376	401	426	451	476	501	526	551	576	601	626	651	676	701	726	751	776

Cable track size	CT	CTM	CTL	CTXL
Q1	396.5	408.5	423.5	441.5
Q2	75.5	87.5	102.5	120.5
S1	82	94	-	-
S2	46	52.5	-	-

* Dimensions Q1, Q2, S1 and S2 change depending on the size of the cable track.

IK3-P6BBH1□□S

RCP6 3-axis XYB + Z-axis base mount configurations
 X-axis: SA7R (side-mounted)
 Y-axis: SA6R (side-mounted) Z-axis: TA4R (side-mounted)



The photograph above shows the configuration direction "1" where all axes have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ HHM type: X high speed/
Y high speed/Z medium speed

Y-axis (mm)	50~200 (Every 50mm)
Acceleration/deceleration (G)	
0.1	2
0.3	2
0.5	1.5

■ HHH type: X high speed/
Y high speed/Z high speed (Unit: kg)

Y-axis (mm)	50~200 (Every 50mm)
Acceleration/deceleration (G)	
0.1	1
0.3	1
0.5	1

* When X, Y and Z axes all have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm)		50			100			150			200		
Z-axis stroke (mm)		50	75	100	50	75	100	50	75	100	50	75	100
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○	○	○	○	○	
750	○	○	○	○	○	○	○	○	○	○	○	○	
800	○	○	○	○	○	○	○	○	○	○	○	○	

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second and third axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis side)	Second wiring (Y-axis side)	Third wiring (Z-axis side)
Without cable track (cable only)	N	See P.136	—	—	—
Cable track S size (inner width: 38mm)	CT		○	○	○
Cable track M size (inner width: 50mm)	CTM		○	○	○
Cable track L size (inner width: 63mm)	CTL		○	○	Cannot be selected *1
Cable track XL size (inner width: 80mm)	CTXL		○	Cannot be selected *2	

*1 Only the first and second wiring can be selected *2 Only the first wiring can be selected

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : SA7R Y-axis : SA6R Z-axis : TA4R	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
PM2		MSEL	P-139
		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Specifications			
Item	X-axis	Y-axis	Z-axis
Axis configuration	RCP6-SA7R	RCP6-SA6R	RCP6-TA4R
Stroke	50 ~ 800mm (Every 50mm)	50 ~ 200mm (Every 50mm)	50 ~ 100mm (Every 25mm)
Max speed *	HHM HHH 420mm/s	560mm/s	260mm/s 350mm/s
Motor size	56□ Stepper motor	42□ Stepper motor	35□ Stepper motor
Ball screw lead	HHM HHH 16mm	12mm	5mm 10mm
Drive system	Ball screw φ12mm rolled C10	Ball screw φ10mm rolled C10	Ball screw φ8mm rolled C10
Positioning repeatability	±0.01mm		
Base material	Aluminum		
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)		

Options					
Type	Option code	Reference page	X-axis	Y-axis	Z-axis
Brake	B	See P.134	<input type="radio"/>	<input type="radio"/>	Standard equipment *
Cable exit direction (Outside)	CJO	See P.134	Cannot be selected		Standard equipment *
Non-motor end specification	NM	See P.135	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Slider section roller specification	SR	See P.135	<input type="radio"/>	<input type="radio"/>	Cannot be selected

* Be sure to specify.

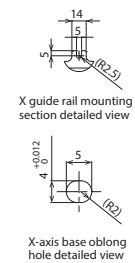
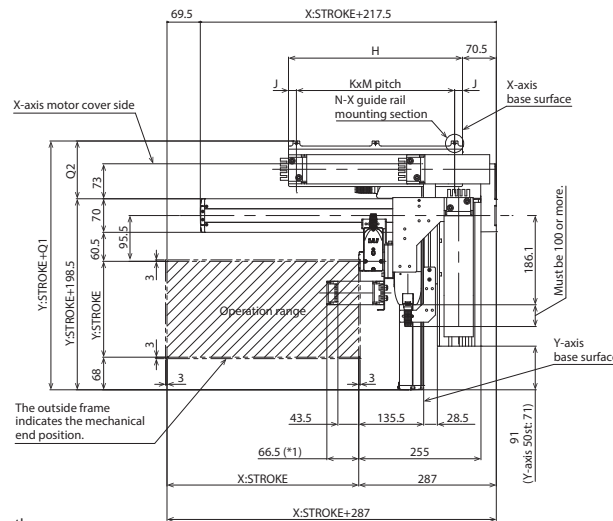
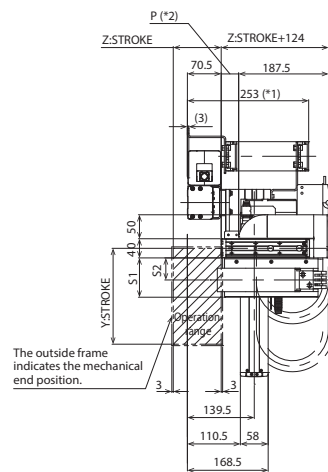
* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Dimensions

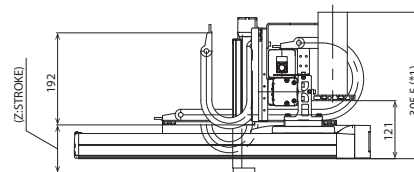
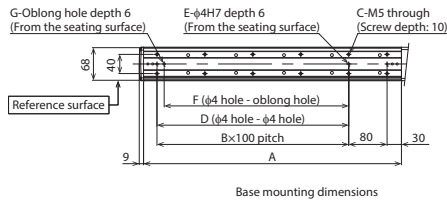
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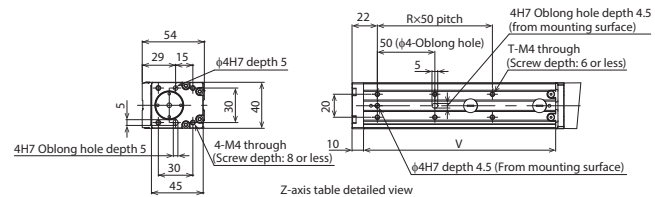
Note 1. The configuration position in the figure is home.
Note 2. The diagram shows first, second and third wirings all with cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.
*2: A negative number for P means that the edge of the motor unit is located forward past the end face of the table.



(*) Notes
The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis table by the customer.



■ Dimensions by Stroke

X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	0	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	188	213	238	263	288	313	338	363	388	413	438	463	488	513	538	563
J	16.5	16.5	14	16.5	16.5	14	16.5	14	16	15	66.5	44	56.5	69	16	
K	1	1	1	2	2	2	2	2	3	3	3	2	2	2	3	
M	155	180	210	115	127.5	140	155	165	180	127	136	110	200	200	200	177
N	2	2	2	3	3	3	3	3	3	4	4	4	3	3	3	4

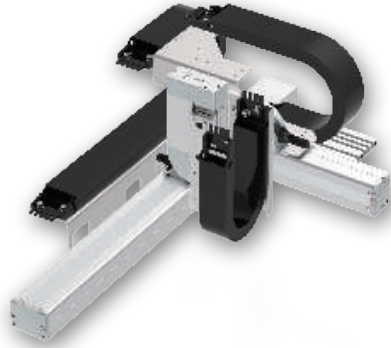
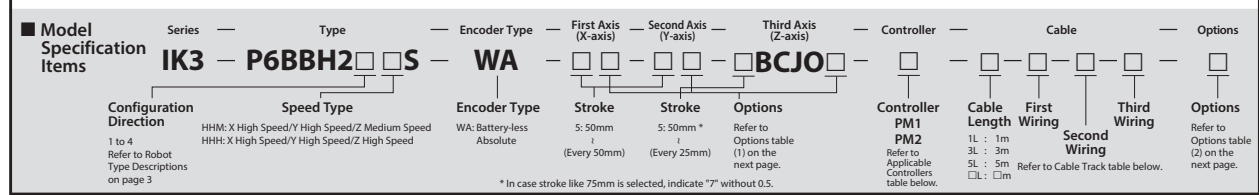
Cable track size	CT	CTM	CTL	CTLX
Q1	306	319	332	349
Q2	107.5	120.5	133.5	150.5
S1	82	94	-	-
S2	46	52.5	-	-

* Dimensions Q1, Q2, S1 and S2 change depending on the size of the cable track.

Z: Stroke	50	75	100
P (*2)	-13.5	11.5	36.5
R	1	2	2
T	4	6	6
V	117	142	167

IK3-P6BBH2□□S

RCP6 3-axis XYB + Z-axis base mount configurations
 X-axis: SA7C (Straight)
 Y-axis: SA6R (side-mounted) Z-axis: TA4R (side-mounted)



The photograph above shows the configuration direction "1" where all axes have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

HHM type: X high speed/ Y high speed/Z medium speed		HHH type: X high speed/ Y high speed/Z high speed (Unit: kg)	
Acceleration/ deceleration (G)	Y-axis (mm) 50~200 (Every 50mm)	Acceleration/ deceleration (G)	Y-axis (mm) 50~200 (Every 50mm)
0.1	2	0.1	1
0.3	2	0.3	1
0.5	1.5	0.5	1

* When X, Y and Z axes all have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

		50			100			150			200		
Z-axis stroke (mm)		50	75	100	50	75	100	50	75	100	50	75	100
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○	○	○	○	○	
750	○	○	○	○	○	○	○	○	○	○	○	○	
800	○	○	○	○	○	○	○	○	○	○	○	○	

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second and third axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis side)	Second wiring (Y-axis side)	Third wiring (Z-axis side)
Without cable track (cable only)	N	See P.136	○	○	○
Cable track S size (inner width: 38mm)	CT		○	○	○
Cable track M size (inner width: 50mm)	CTM		○	○	○
Cable track L size (inner width: 63mm)	CTL		○	○	Cannot be selected *1
Cable track XL size (inner width: 80mm)	CTXL		○	Cannot be selected *2	

*1 Only the first and second wiring can be selected *2 Only the first wiring can be selected

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : SA7C Y-axis : SA6R Z-axis : TA4R	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
PM2		MSEL	P-139
		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Specifications			
Item	X-axis	Y-axis	Z-axis
Axis configuration	RCP6-SA7C	RCP6-SA6R	RCP6-TA4R
Stroke	50 ~ 800mm (Every 50mm)	50 ~ 200mm (Every 50mm)	50 ~ 100mm (Every 25mm)
Max speed *	HHM HHH 420mm/s	560mm/s	260mm/s 350mm/s
Motor size	56□ Stepper motor	42□ Stepper motor	35□ Stepper motor
Ball screw lead	HHM HHH 16mm	12mm	5mm 10mm
Drive system	Ball screw φ12mm rolled C10	Ball screw φ10mm rolled C10	Ball screw φ8mm rolled C10
Positioning repeatability	±0.01mm		
Base material	Aluminum		
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)		

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.110.

Options (1)						
Type	Option code	Reference page	X-axis	Y-axis	Z-axis	
Brake*	B	See P.134	<input type="radio"/>	<input type="radio"/>		Standard equipment †
Cable exit direction (Top)	CJT	See P.134	<input type="radio"/>			Cannot be selected
Cable exit direction (Right)	CJR	See P.134	<input type="radio"/>			
Cable exit direction (Left)	CJL	See P.134	<input type="radio"/>			
Cable exit direction (Bottom)	CJB	See P.134	<input type="radio"/>			
Cable exit direction (Outside)	CJO	See P.134	Cannot be selected			Standard equipment †
Non-motor end specification	NM	See P.135	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>
Slider section roller specification	SR	See P.135	<input type="radio"/>	<input type="radio"/>		Cannot be selected

* Be sure to specify.
 † Brake option for X-axis increases the length of the motor unit. Please contact IAI for more information.

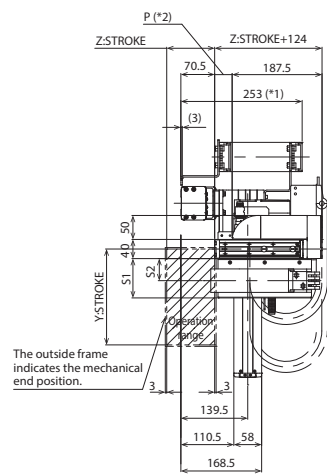
Options (2)		
Type	Option code	Reference page
Foot plate	FTP	See P.134

Dimensions

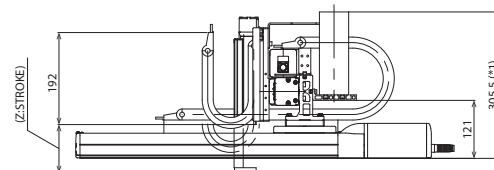
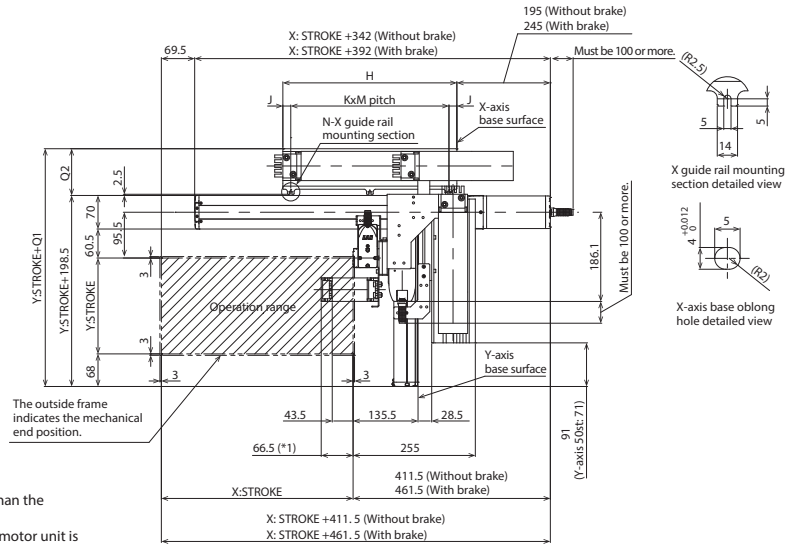
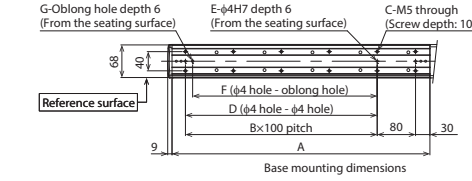
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www.intelligentactuator.com



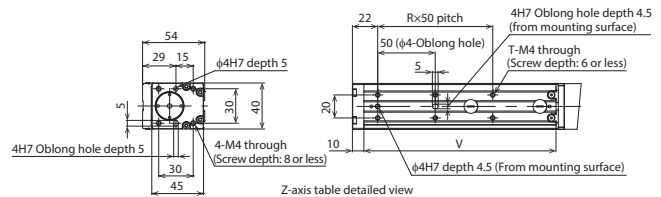
Note 1. The configuration position in the figure is home.
 Note 2. The diagram shows first, second and third wirings all with cable tracks.
 Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.
 *2: A negative number for P means that the edge of the motor unit is located frontward past the end face of the table.



(*) Notes
 The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer.
 When the foot plate option is selected, the unit will be shipped fixed on the foot plate. (See P. 134)
 Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis table by the customer.



■ Dimensions by Stroke

X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	0	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	188	213	238	263	288	313	338	363	388	413	438	463	488	513	538	563
J	16.5	16.5	14	16.5	16.5	14	16.5	14	16	15	66.5	44	56.5	69	16	16
K	1	1	1	2	2	2	2	2	2	3	3	3	2	2	2	3
M	155	180	210	115	127.5	140	155	165	180	127	136	110	200	200	200	177
N	2	2	2	3	3	3	3	3	3	4	4	4	3	3	3	4

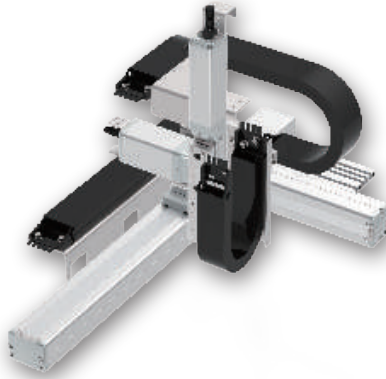
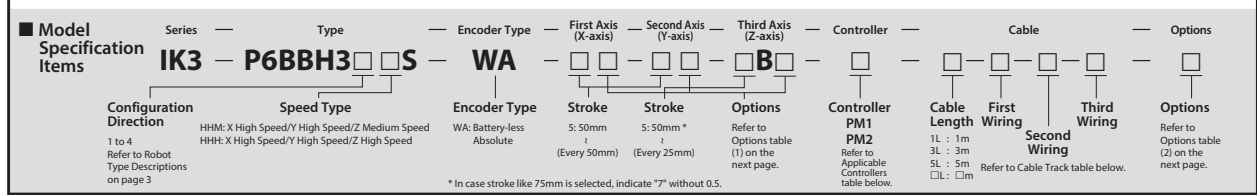
Z: Stroke	50	75	100
P (*2)	-13.5	11.5	36.5
R	1	2	2
T	4	6	6
V	117	142	167

Cable track size	CT	CTM	CTL	CTXL
Q1	283	296	309	326
Q2	84.5	97.5	110.5	127.5
S1	82	94	-	-
S2	46	52.5	-	-

* Dimensions Q1, Q2, S1 and S2 change depending on the size of the cable track.

IK3-P6BBH3□□S

RCP6 3-axis XYB + Z-axis base mount configurations
 X-axis: SA7C (Straight)
 Y-axis: SA6C (straight), Z-axis: TA4C (straight)



The photograph above shows the configuration direction "1" where all axes have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ HHM type: X high speed/
 Y high speed/Z medium speed

Acceleration/ deceleration (G)	Y-axis (mm)	
	50~200 (Every 50mm)	
0.1	2	
0.3	2	
0.5	1.5	

■ HHH type: X high speed/
 Y high speed/Z high speed (Unit: kg)

Acceleration/ deceleration (G)	Y-axis (mm)	
	50~200 (Every 50mm)	
0.1	1	
0.3	1	
0.5	1	

* When X, Y and Z axes all have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm)		50			100			150			200		
Z-axis stroke (mm)		50	75	100	50	75	100	50	75	100	50	75	100
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○	○	○	○	○	○
	750	○	○	○	○	○	○	○	○	○	○	○	○
	800	○	○	○	○	○	○	○	○	○	○	○	○

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second and third axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis side)	Second wiring (Y-axis side)	Third wiring (Z-axis side)
Without cable track (cable only)	N	See P.136	—	—	—
Cable track S size (inner width: 38mm)	CT		○	○	○
Cable track M size (inner width: 50mm)	CTM		○	○	○
Cable track L size (inner width: 63mm)	CTL		○	○	Cannot be selected *1
Cable track XL size (inner width: 80mm)	CTXL		○	Cannot be selected *2	

*1 Only the first and second wiring can be selected

*2 Only the first wiring can be selected

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : SA7C Y-axis : SA6C Z-axis : TA4C	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
PM2		MSEL	P-139
		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Specifications			
Item	X-axis	Y-axis	Z-axis
Axis configuration	RCP6-SA7C	RCP6-SA6C	RCP6-TA4C
Stroke	50 ~ 800mm (Every 50mm)	50 ~ 200mm (Every 50mm)	50 ~ 100mm (Every 25mm)
Max speed *	HHM HHH 420mm/s	560mm/s	260mm/s 350mm/s
Motor size	56□ Stepper motor	42□ Stepper motor	35□ Stepper motor
Ball screw lead	HHM HHH 16mm	12mm	5mm 10mm
Drive system	Ball screw φ12mm rolled C10	Ball screw φ10mm rolled C10	Ball screw φ8mm rolled C10
Positioning repeatability	±0.01mm		
Base material	Aluminum		
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)		

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options (1)						
Type	Option code	Reference page	X-axis	Y-axis	Z-axis	
Brake*	B	See P.134	<input type="radio"/>	<input type="radio"/>		Standard equipment *
Cable exit direction (Top)	CJT	See P.134	<input type="radio"/>			Cannot be selected
Cable exit direction (Right)	CJR	See P.134	<input type="radio"/>			
Cable exit direction (Left)	CJL	See P.134	<input type="radio"/>			
Cable exit direction (Bottom)	CJB	See P.134	<input type="radio"/>			
Non-motor end specification	NM	See P.135	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Slider section roller specification	SR	See P.135	<input type="radio"/>	<input type="radio"/>		Cannot be selected

* Outside as standard. Be sure to specify.
* Brake option for X- and/or Y-axis increases the length of the motor unit(s). Please contact IAI for more information.

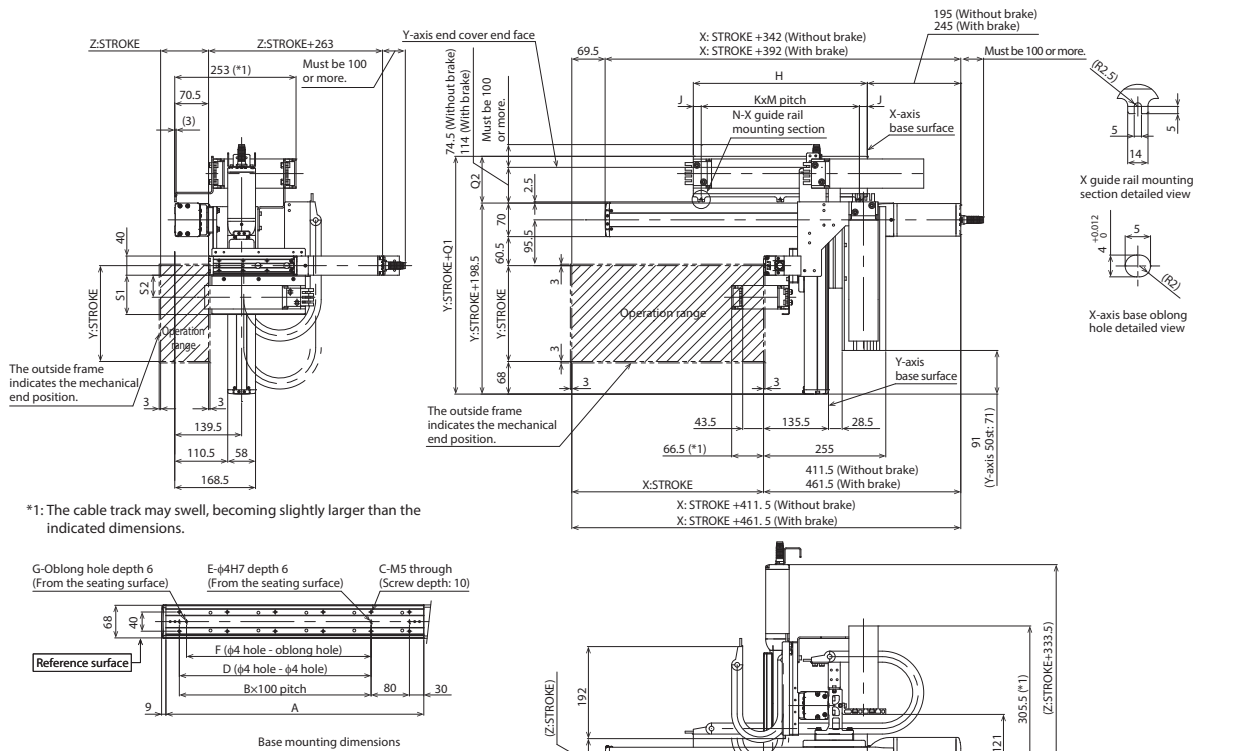
Options (2)		
Type	Option code	Reference page
Foot plate	FTP	See P.134

Dimensions

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Note 1. The configuration position in the figure is home.
Note 2. The diagram shows first, second and third wirings all with cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



(*) Notes
The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer.
When the foot plate option is selected, the unit will be shipped fixed on the foot plate. (See P. 134)
Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis table by the customer.

■ Dimensions by Stroke

X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	0	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	188	213	238	263	288	313	338	363	388	413	438	463	488	513	538	563
J	16.5	16.5	14	16.5	16.5	14	16.5	14	16	15	66.5	44	56.5	69	16	
K	1	1	1	2	2	2	2	2	3	3	3	2	2	2	3	
M	155	180	210	115	127.5	140	155	165	180	127	136	110	200	200	200	177
N	2	2	2	3	3	3	3	3	3	4	4	4	3	3	3	4

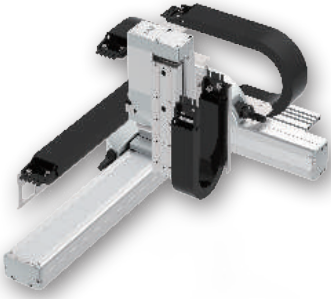
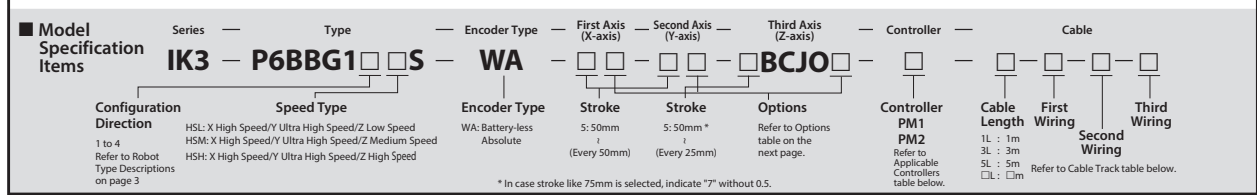
Z: Stroke	50	75	100
R	1	2	2
T	4	6	6
V	117	142	167

Cable track size	CT	CTM	CTL	CTLX
Q1	283	296	309	326
Q2	84.5	97.5	110.5	127.5
S1	82	94	-	-
S2	46	52.5	-	-

* Dimensions Q1, Q2, S1 and S2 change depending on the size of the cable track.

IK3-P6BBG1□□S

RCP6 3-axis XYB + Z-axis base mount configurations
 X-axis: SA8R (side-mounted)
 Y-axis: SA7R (side-mounted) Z-axis: TA6R (side-mounted)



The photograph above shows the configuration direction "1" where all axes have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ HSL type: X high speed/
 Y ultra high speed/Z low speed

Acceleration/ deceleration (G)	Y-axis (mm)	
	50~200 (Every 50mm)	250
0.1	4	3
0.3	4	3
0.5	4	3

■ HSM type: X high speed/
 Y ultra high speed/Z medium speed (Unit: kg)

Acceleration/ deceleration (G)	Y-axis (mm)	
	50~200 (Every 50mm)	250
0.1	2.5	2
0.3	2.5	2
0.5	2.5	2

■ HSH type: X high speed/
 Y ultra high speed/Z high speed

Acceleration/ deceleration (G)	Y-axis (mm)	
	50~200 (Every 50mm)	250
0.1	1.5	1
0.3	1.5	1
0.5	1.5	1

* When X, Y and Z axes all have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm)		50					100					150					200				
Z-axis stroke (mm)		50	75	100	125	150	50	75	100	125	150	50	75	100	125	150	50	75	100	125	150
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	750	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	800	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	850	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
900	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
950	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
1000	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
1050	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
1100	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	

Y-axis stroke (mm)		250				
Z-axis stroke (mm)		50	75	100	125	150
X-axis stroke (mm)	50	○	○	○	○	○
	100	○	○	○	○	○
	150	○	○	○	○	○
	200	○	○	○	○	○
	250	○	○	○	○	○
	300	○	○	○	○	○
	350	○	○	○	○	○
	400	○	○	○	○	○
	450	○	○	○	○	○
	500	○	○	○	○	○
	550	○	○	○	○	○
	600	○	○	○	○	○
	650	○	○	○	○	○
	700	○	○	○	○	○
	750	○	○	○	○	○
	800	○	○	○	○	○
	850	○	○	○	○	○
900	○	○	○	○	○	
950	○	○	○	○	○	
1000	○	○	○	○	○	
1050	○	○	○	○	○	
1100	○	○	○	○	○	

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : SA8R	PCON-CFB/CGFB	P-149
		MSEL-PCF/PGF	P-139
		PCON-CB/CGB	P-149
	Y-axis : SA7R Z-axis : TA6R	PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG MCON-LC/LCG	P-153
PM2	X-axis : SA8R	RCON-PCF	P-159
	Y-axis : SA7R	RCON-PC	
	Z-axis : TA6R		

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second and third axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis side)	Second wiring (Y-axis side)	Third wiring (Z-axis side)
Without cable track (cable only)	N	See P.136	—	—	—
Cable track S size (inner width: 38mm)	CT		○	○	○
Cable track M size (inner width: 50mm)	CTM		○	○	○
Cable track L size (inner width: 63mm)	CTL		○	○	Cannot be selected *1
Cable track XL size (inner width: 80mm)	CTXL		○	Cannot be selected *2	—

*1 Only the first and second wiring can be selected

*2 Only the first wiring can be selected

Specifications			
Item	X-axis	Y-axis	Z-axis
Axis configuration	RCP6-SA8R	RCP6-SA7R	RCP6-TA6R
Stroke	50 ~ 1100mm (Every 50mm)	50 ~ 250mm (Every 50mm)	50 ~ 150mm (Every 25mm)
Max speed *	HSL	640mm/s	140mm/s
	HSM		280mm/s
	HSH		440mm/s
Motor size	56□ High thrust stepper motor	56□ Stepper motor	42□ Stepper motor
Ball screw lead	HSL	24mm	3mm
	HSM		6mm
	HSH		12mm
Drive system	Ball screw φ16mm rolled C10	Ball screw φ12mm rolled C10	Ball screw φ10mm rolled C10
Positioning repeatability	±0.01mm		
Base material	Aluminum		
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)		

Options						
Type	Option code	Reference page	X-axis	Y-axis	Z-axis	
Brake	B	See P.134	<input type="radio"/>	<input type="radio"/>		Standard equipment *
Cable exit direction (Outside)	CJO	See P.134	Cannot be selected			Standard equipment *
Non-motor end specification	NM	See P.135	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Slider section roller specification	SR	See P.135	<input type="radio"/>	<input type="radio"/>		Cannot be selected

* Be sure to specify.

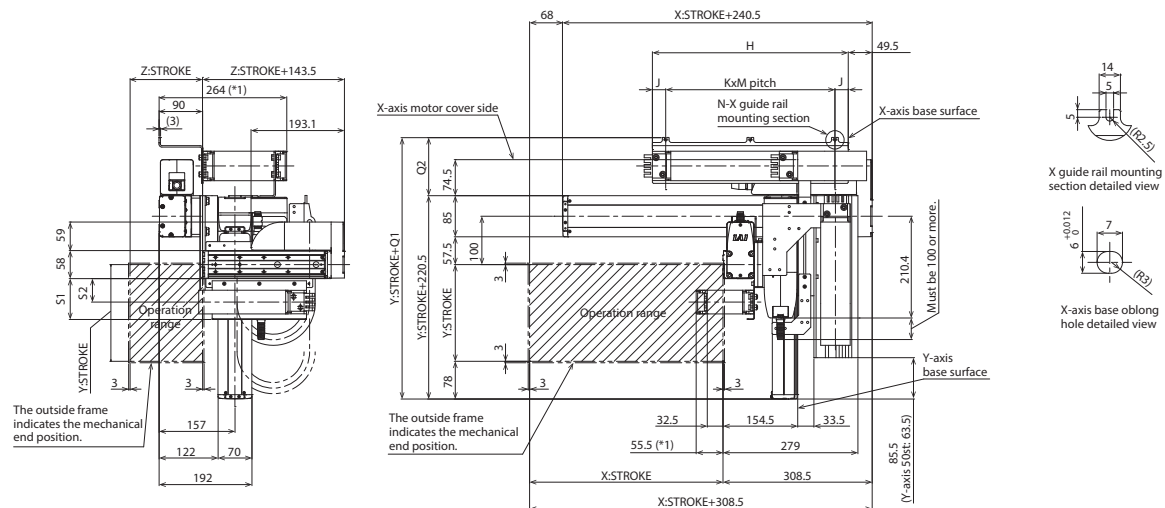
* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Dimensions

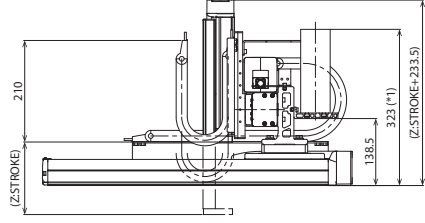
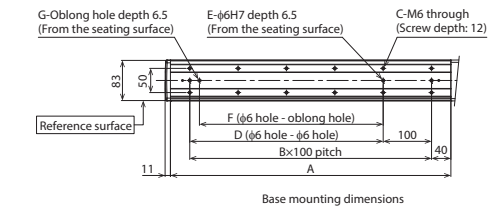
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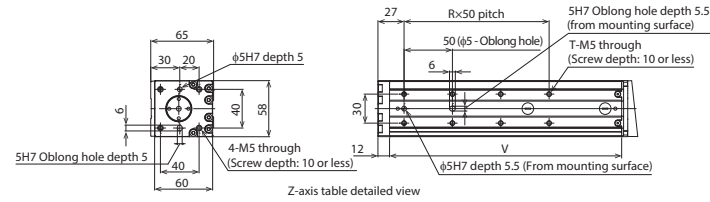
Note 1. The configuration position in the figure is home.
 Note 2. The diagram shows first, second and third wirings all with cable tracks.
 Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(* Notes)
 The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis table by the customer.



■ Dimensions by Stroke

X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280
B	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1000	1000	1100
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980	1080
G	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	230	255	280	305	330	355	380	405	430	455	480	505	530	555	580	605	630	655	680	705	730	755
J	30	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	22.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	22.5	27.5	27.5
K	1	1	1	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4
M	170	200	225	125	137.5	150	162.5	175	187.5	200	145	150	150	150	150	150	150	150	175	165	155	175
N	2	2	2	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5	5	5

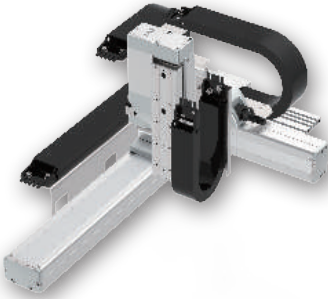
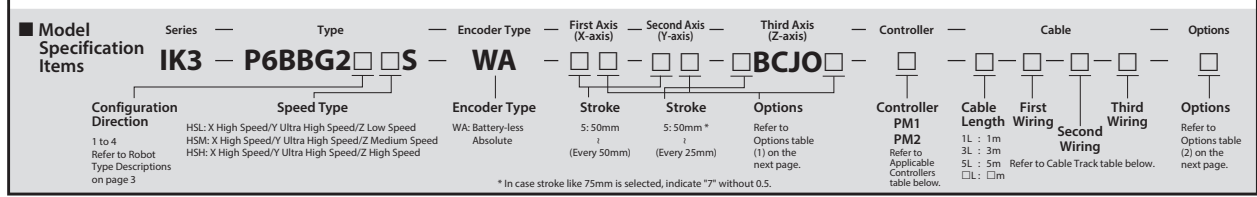
Z: Stroke	50	75	100	125	150
R	1	2	2	3	3
T	4	6	6	8	8
V	140	165	190	215	240

Cable track size	CT	CTM	CTL	CTLX
Q1	328	341	354	371
Q2	107.5	120.5	133.5	150.5
S1	84.5	96.5	-	-
S2	48.5	55	-	-

* Dimensions Q1, Q2, S1 and S2 change depending on the size of the cable track.

IK3-P6BBG2□□S

RCP6 3-axis XYB + Z-axis base mount configurations
 X-axis: SA8C (straight)
 Y-axis: SA7R (side-mounted) Z-axis: TA6R (side-mounted)



The photograph above shows the configuration direction "1" where all axes have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ HSL type: X high speed/
Y ultra high speed/Z low speed

Acceleration/ deceleration (G)	Y-axis (mm)	
	50~200 (Every 50mm)	250
0.1	4	3
0.3	4	3
0.5	4	3

■ HSM type: X high speed/
Y ultra high speed/Z medium speed (Unit: kg)

Acceleration/ deceleration (G)	Y-axis (mm)	
	50~200 (Every 50mm)	250
0.1	2.5	2
0.3	2.5	2
0.5	2.5	2

■ HSH type: X high speed/
Y ultra high speed/Z high speed

Acceleration/ deceleration (G)	Y-axis (mm)	
	50~200 (Every 50mm)	250
0.1	1.5	1
0.3	1.5	1
0.5	1.5	1

* When X, Y and Z axes all have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm)	50					100					150					200				
	50	75	100	125	150	50	75	100	125	150	50	75	100	125	150	50	75	100	125	150
50	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
100	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
150	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
200	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
250	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
300	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
350	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
400	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
450	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
500	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
550	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
600	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
650	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
750	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
800	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
900	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
950	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
1000	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
1050	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
1100	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

Y-axis stroke (mm)	250				
	50	75	100	125	150
50	○	○	○	○	○
100	○	○	○	○	○
150	○	○	○	○	○
200	○	○	○	○	○
250	○	○	○	○	○
300	○	○	○	○	○
350	○	○	○	○	○
400	○	○	○	○	○
450	○	○	○	○	○
500	○	○	○	○	○
550	○	○	○	○	○
600	○	○	○	○	○
650	○	○	○	○	○
700	○	○	○	○	○
750	○	○	○	○	○
800	○	○	○	○	○
850	○	○	○	○	○
900	○	○	○	○	○
950	○	○	○	○	○
1000	○	○	○	○	○
1050	○	○	○	○	○
1100	○	○	○	○	○

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : SA8C	PCON-CFB/CGFB	P-149
		MSEL-PCF/PGF	P-139
		PCON-CB/CGB	P-149
	Y-axis : SA7R Z-axis : TA6R	PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG MCON-LC/LCG	P-153
PM2	X-axis : SA8C	RCON-PCF	P-159
	Y-axis : SA7R	RCON-PC	
	Z-axis : TA6R		

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second and third axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis side)	Second wiring (Y-axis side)	Third wiring (Z-axis side)
Without cable track (cable only)	N	See P.136	-	-	-
Cable track S size (inner width: 38mm)	CT		○	○	○
Cable track M size (inner width: 50mm)	CTM		○	○	○
Cable track L size (inner width: 63mm)	CTL		○	○	Cannot be selected *1
Cable track XL size (inner width: 80mm)	CTXL		○	Cannot be selected *2	

*1 Only the first and second wiring can be selected

*2 Only the first wiring can be selected

Specifications			
Item	X-axis	Y-axis	Z-axis
Axis configuration	RCP6-SA8C	RCP6-SA7R	RCP6-TA6R
Stroke	50 ~ 1100mm (Every 50mm)	50 ~ 250mm (Every 50mm)	50 ~ 150mm (Every 25mm)
Max speed *	HSL	300mm/s	640mm/s
	HSM		
	HSH		
Motor size	56□ High thrust stepper motor	56□ Stepper motor	42□ Stepper motor
Ball screw lead	HSL	20mm	24mm
	HSM		
	HSH		
Drive system	Ball screw φ16mm rolled C10	Ball screw φ12mm rolled C10	Ball screw φ10mm rolled C10
Positioning repeatability	±0.01mm		
Base material	Aluminum		
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)		

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.

Options (1)						
Type	Option code	Reference page	X-axis	Y-axis	Z-axis	
Brake *	B	See P.134	○	○		Standard equipment *
Cable exit direction (Top)	CJT	See P.134	○			Cannot be selected
Cable exit direction (Right)	CJR	See P.134	○			
Cable exit direction (Left)	CJL	See P.134	○			
Cable exit direction (Bottom)	CJB	See P.134	○			
Cable exit direction (Outside)	CJO	See P.134	Cannot be selected			Standard equipment *
Non-motor end specification	NM	See P.135	○	○		○
Slider section roller specification	SR	See P.135	○	○		Cannot be selected

* Be sure to specify.
* Brake option for X-axis increases the length of the motor unit. Please contact IAI for more information.

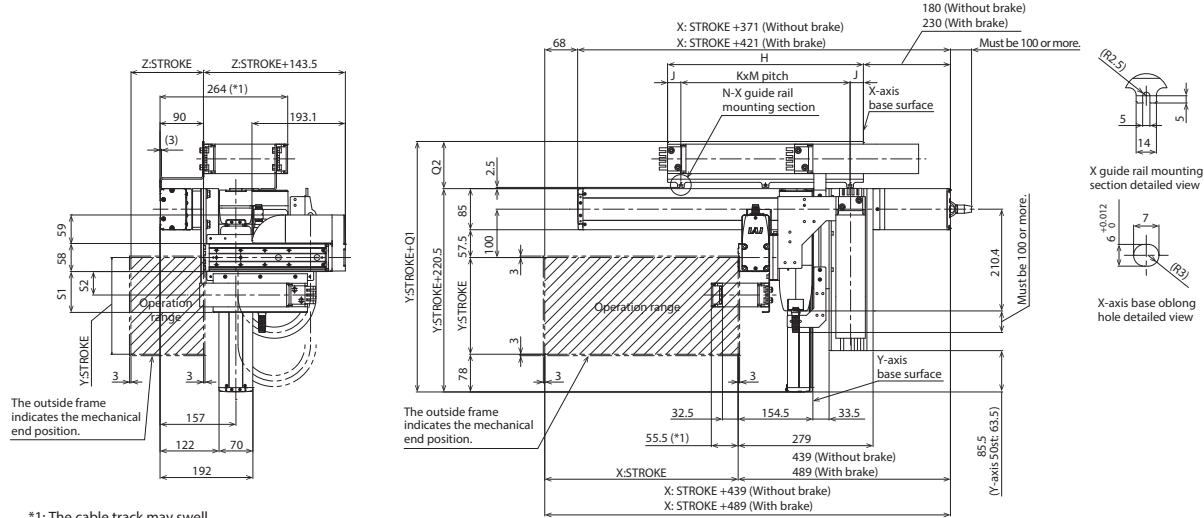
Options (2)		
Type	Option code	Reference page
Foot plate	FTP	See P.134

Dimensions

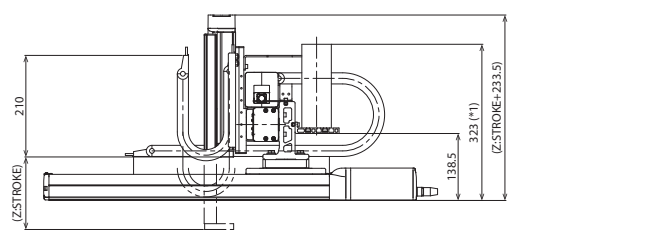
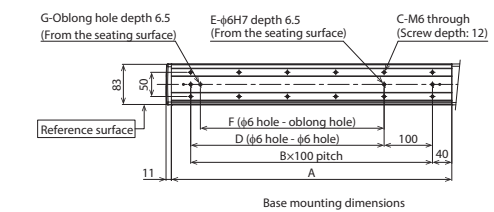
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Note 1. The configuration position in the figure is home.
Note 2. The diagram shows first, second and third wirings all with cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(* Notes)
The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis table by the customer.

Dimensions by Stroke

X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280
B	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
C	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1000	1000	1100
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980	1080
G	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	230	255	280	305	330	355	380	405	430	455	480	505	530	555	580	605	630	655	680	705	730	755
J	30	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	22.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5
K	1	1	1	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4
M	170	200	225	125	137.5	150	162.5	175	187.5	200	145	150	155	160	165	170	175	180	185	190	195	200
N	2	2	2	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	5	5

Z: Stroke	50	75	100	125	150
R	1	2	2	3	3
T	4	6	6	8	8
V	140	165	190	215	240

Cable track size	CT	CTM	CTL	CTLX
Q1	305	318	331	348
Q2	84.5	97.5	110.5	127.5
S1	84.5	96.5	-	-
S2	48.5	55	-	-

* Dimensions Q1, Q2, S1 and S2 change depending on the size of the cable track.

IK3-P6BBG3□□S

RCP6 3-axis XYB + Z-axis base mount configurations
 X-axis: SA8C (straight)
 Y-axis: SA7C (straight), Z-axis: TA6C (straight)

Model Specification Items

Series: **IK3** — Type: **P6BBG3□□S** — Encoder Type: **WA** — First Axis (X-axis): **□** — Second Axis (Y-axis): **□** — Third Axis (Z-axis): **B** — Controller: **□** — Cable: **□** — Options: **□**

Configuration Direction
 1 to 4 Refer to Robot Type Descriptions on page 3

Speed Type
 HSL: X High Speed/Y Ultra High Speed/Z Low Speed
 HSM: X High Speed/Y Ultra High Speed/Z Medium Speed
 HSH: X High Speed/Y Ultra High Speed/Z High Speed

Encoder Type
 WA: Battery-less Absolute

Stroke
 5: 50mm (Every 50mm) 5: 50mm* (Every 25mm)

Options
 Refer to Options table (1) on the next page.

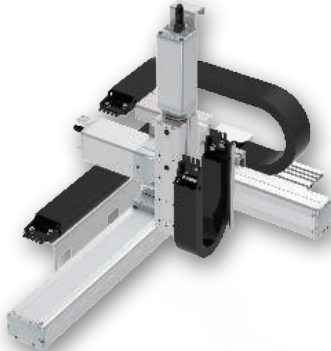
Controller
 PM1 Refer to Applicable Controllers table below.
 PM2 Refer to Applicable Controllers table below.

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

First Wiring **Second Wiring** **Third Wiring**
 Refer to Cable Track table below.

Options
 Refer to Options table (2) on the next page.

* In case stroke like 75mm is selected, indicate "7" without 0.5.



The photograph above shows the configuration direction "1" where all axes have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ HSL type: X high speed/ Y ultra high speed/Z low speed ■ HSM type: X high speed/ Y ultra high speed/Z medium speed (Unit: kg)

Acceleration/deceleration (G)	Y-axis (mm)		Acceleration/deceleration (G)	Y-axis (mm)	
	50~200 (Every 50mm)	250		50~200 (Every 50mm)	250
0.1	4	3	0.1	2.5	2
0.3	4	3	0.3	2.5	2
0.5	4	3	0.5	2.5	2

■ HSH type: X high speed/ Y ultra high speed/Z high speed

Acceleration/deceleration (G)	Y-axis (mm)	
	50~200 (Every 50mm)	250
0.1	1.5	1
0.3	1.5	1
0.5	1.5	1

* When X, Y and Z axes all have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm)	50					100					150					200				
	50	75	100	125	150	50	75	100	125	150	50	75	100	125	150	50	75	100	125	150
50	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
100	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
150	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
200	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
250	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
300	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
350	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
400	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
450	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
500	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
550	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
600	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
650	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
750	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
800	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
900	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
950	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
1000	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
1050	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
1100	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

Y-axis stroke (mm)	250				
	50	75	100	125	150
50	○	○	○	○	○
100	○	○	○	○	○
150	○	○	○	○	○
200	○	○	○	○	○
250	○	○	○	○	○
300	○	○	○	○	○
350	○	○	○	○	○
400	○	○	○	○	○
450	○	○	○	○	○
500	○	○	○	○	○
550	○	○	○	○	○
600	○	○	○	○	○
650	○	○	○	○	○
700	○	○	○	○	○
750	○	○	○	○	○
800	○	○	○	○	○
850	○	○	○	○	○
900	○	○	○	○	○
950	○	○	○	○	○
1000	○	○	○	○	○
1050	○	○	○	○	○
1100	○	○	○	○	○

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : SA8C	PCON-CFB/CGFB	P-149
		MSEL-PCF/PGF	P-139
	Y-axis : SA7C Z-axis : TA6C	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
PM2	X-axis : SA8C	MCON-C/CG	P-153
		MCON-LC/LCG	P-139
	Y-axis : SA7C Z-axis : TA6C	RCON-PCF	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second and third axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis side)	Second wiring (Y-axis side)	Third wiring (Z-axis side)
Without cable track (cable only)	N	See P.136	—	—	—
Cable track S size (inner width: 38mm)	CT		○	○	○
Cable track M size (inner width: 50mm)	CTM		○	○	○
Cable track L size (inner width: 63mm)	CTL		○	○	Cannot be selected *1
Cable track XL size (inner width: 80mm)	CTXL		○	Cannot be selected *2	—

*1 Only the first and second wiring can be selected *2 Only the first wiring can be selected

Specifications			
Item	X-axis		Z-axis
Axis configuration	RCP6-SA8C		RCP6-TA6C
Stroke	50 ~ 1100mm (Every 50mm)		50 ~ 150mm (Every 25mm)
Max speed *	HSL	300mm/s	640mm/s
	HSM		
	HSH		
Motor size	56□ High thrust stepper motor	56□ Stepper motor	42□ Stepper motor
Ball screw lead	HSL	20mm	24mm
	HSM		
	HSH		
Drive system	Ball screw φ16mm rolled C10	Ball screw φ12mm rolled C10	Ball screw φ10mm rolled C10
Positioning repeatability	±0.01mm		
Base material	Aluminum		
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)		

Options (1)						
Type	Option code	Reference page	X-axis	Y-axis	Z-axis	
Brake *	B	See P.134	○	○	○	Standard equipment *
Cable exit direction (Top)	CJT	See P.134	○	Cannot be selected	○	
Cable exit direction (Right)	CJR	See P.134	○			
Cable exit direction (Left)	CJL	See P.134	○			
Cable exit direction (Bottom)	CJB	See P.134	○			
Non-motor end specification	NM	See P.135	○	○	○	
Slider section roller specification	SR	See P.135	○	○	○	Cannot be selected

* Outside as standard. Be sure to specify.
 * Brake option for X- and/or Y-axes increases the length of the motor unit(s).
 Please contact IAI for more information.

Options (2)		
Type	Option code	Reference page
Foot plate	FTP	See P.134

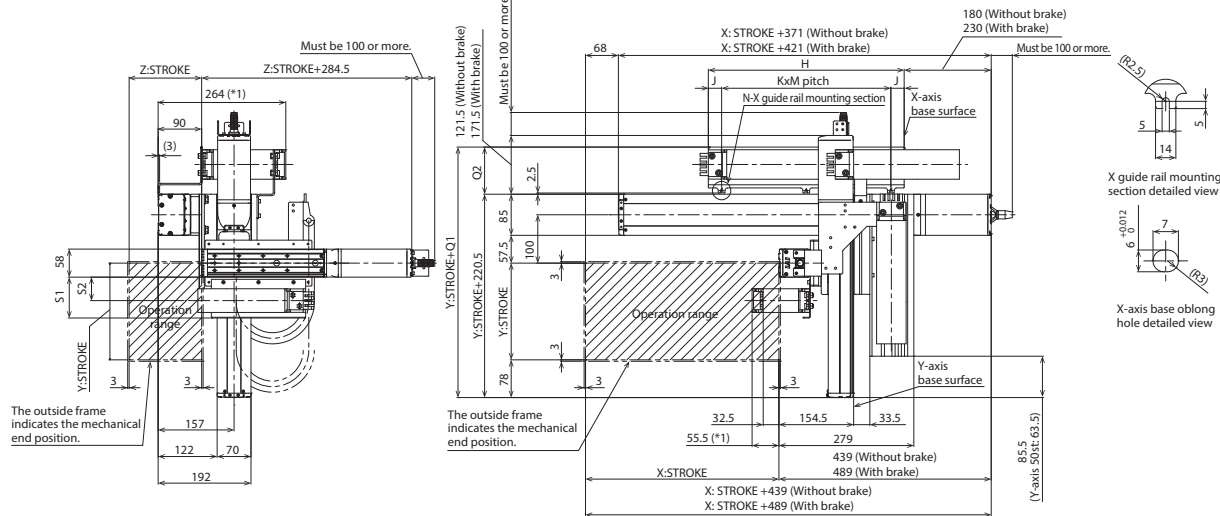
* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke.
 For details, refer to the Maximum Speed by Stroke table on P.137.

Dimensions

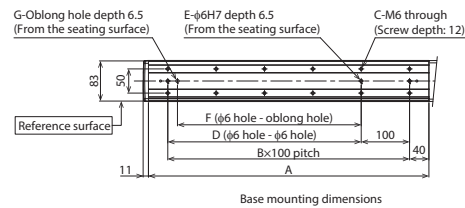
CAD drawings can be downloaded from our website.
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Note 1. The configuration position in the figure is home.
 Note 2. The diagram shows first, second and third wirings all with cable tracks.
 Note 3. For details on the cable track and cable track moving end bracket, refer to P.136.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.

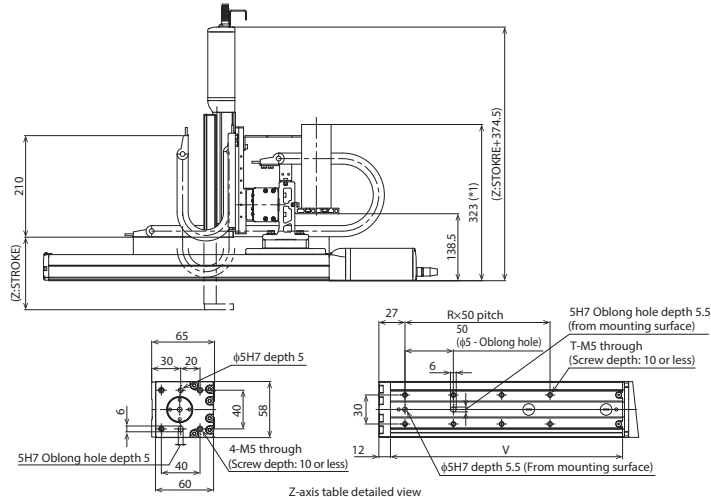


(*) Notes
 The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis table by the customer.

Dimensions by Stroke

X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280
B	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1000	1000	1100
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980	1080
G	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	230	255	280	305	330	355	380	405	430	455	480	505	530	555	580	605	630	655	680	705	730	755
J	30	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	22.5	27.5	27.5	27.5	22.5	27.5	27.5	27.5	27.5	22.5	27.5	27.5
K	1	1	1	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4
M	170	200	225	125	137.5	150	162.5	175	187.5	200	145	150	150	150	150	150	175	200	175	165	155	175
N	2	2	2	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5	5	5

Z: Stroke	50	75	100	125	150
R	1	2	2	3	3
T	4	6	6	8	8
V	140	165	190	215	240

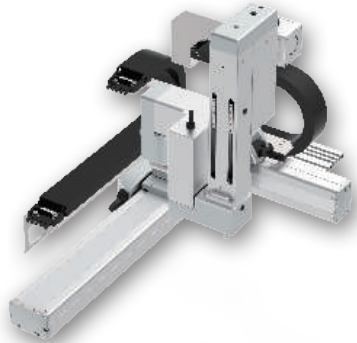
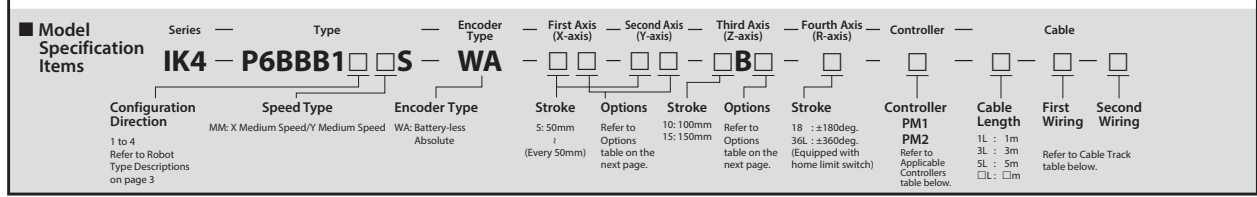


Cable track size	CT	CTM	CTL	CTLX
Q1	305	318	331	348
Q2	84.5	97.5	110.5	127.5
S1	84.5	96.5	-	-
S2	48.5	55	-	-

* Dimensions Q1, Q2, S1 and S2 change depending on the size of the cable track.

IK4-P6BBB1□□S RCP6 2-axis XYB + ZR unit configurations

X-axis: SA8R (side-mounted)
Y-axis: SA7R (side-mounted)



The photograph above shows the configuration direction "1" where all axes have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

MM type: X medium speed/Y medium speed

(Unit: kg)

Acceleration/ deceleration (G)	Y-axis stroke (mm)	
	50~200 (Every 50mm)	250~300 (Every 50mm)
0.1	3.5	
0.3	2	1

* When X, Y, Z and R axes all have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm)	50				100				150			
	100		360		100		360		100		360	
Z-axis stroke (mm)	±180	±360	±180	±360	±180	±360	±180	±360	±180	±360	±180	±360
R-axis operation range (deg.)												
50	○	○	○	○	○	○	○	○	○	○	○	○
100	○	○	○	○	○	○	○	○	○	○	○	○
150	○	○	○	○	○	○	○	○	○	○	○	○
200	○	○	○	○	○	○	○	○	○	○	○	○
250	○	○	○	○	○	○	○	○	○	○	○	○
300	○	○	○	○	○	○	○	○	○	○	○	○
350	○	○	○	○	○	○	○	○	○	○	○	○
400	○	○	○	○	○	○	○	○	○	○	○	○
450	○	○	○	○	○	○	○	○	○	○	○	○
500	○	○	○	○	○	○	○	○	○	○	○	○
550	○	○	○	○	○	○	○	○	○	○	○	○
600	○	○	○	○	○	○	○	○	○	○	○	○
650	○	○	○	○	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○	○	○	○	○
750	○	○	○	○	○	○	○	○	○	○	○	○
800	○	○	○	○	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○	○	○	○	○
900	○	○	○	○	○	○	○	○	○	○	○	○
950	○	○	○	○	○	○	○	○	○	○	○	○
1000	○	○	○	○	○	○	○	○	○	○	○	○
1050	○	○	○	○	○	○	○	○	○	○	○	○
1100	○	○	○	○	○	○	○	○	○	○	○	○

Y-axis stroke (mm)	200				250				300			
	100		360		100		360		100		360	
Z-axis stroke (mm)	±180	±360	±180	±360	±180	±360	±180	±360	±180	±360	±180	±360
R-axis operation range (deg.)												
50	○	○	○	○	○	○	○	○	○	○	○	○
100	○	○	○	○	○	○	○	○	○	○	○	○
150	○	○	○	○	○	○	○	○	○	○	○	○
200	○	○	○	○	○	○	○	○	○	○	○	○
250	○	○	○	○	○	○	○	○	○	○	○	○
300	○	○	○	○	○	○	○	○	○	○	○	○
350	○	○	○	○	○	○	○	○	○	○	○	○
400	○	○	○	○	○	○	○	○	○	○	○	○
450	○	○	○	○	○	○	○	○	○	○	○	○
500	○	○	○	○	○	○	○	○	○	○	○	○
550	○	○	○	○	○	○	○	○	○	○	○	○
600	○	○	○	○	○	○	○	○	○	○	○	○
650	○	○	○	○	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○	○	○	○	○
750	○	○	○	○	○	○	○	○	○	○	○	○
800	○	○	○	○	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○	○	○	○	○
900	○	○	○	○	○	○	○	○	○	○	○	○
950	○	○	○	○	○	○	○	○	○	○	○	○
1000	○	○	○	○	○	○	○	○	○	○	○	○
1050	○	○	○	○	○	○	○	○	○	○	○	○
1100	○	○	○	○	○	○	○	○	○	○	○	○

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (Max. 15m)

Note 1. All-axis standard cable is used.
Note 2. The length of the second, third, and fourth axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.

Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	N	P.136	—	—
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm)	CTXL		○	Cannot be selected *1

*1 Only the first wiring can be selected

Specifications				
Item	X-axis	Y-axis	Z-axis	R-axis
Axis configuration	RCP6-SA8R	RCP6-SA7R	TPIK-AZR	
Stroke	50 ~ 1100mm (Every 50mm)	50 ~ 300mm (Every 50mm)	100, 150mm	180deg., 360deg.
Max. speed *1	300mm/s	280mm/s	400mm/s	1,000deg/s *2
Allowable moment of inertia *2	-			0.01kg·m ²
Motor size	56□ High thrust stepper motor	56□ Stepper motor	42□ Stepper motor	42□ Stepper motor
Ball screw lead	10mm	8mm	12mm	-
Drive system	Ball screw φ16mm rolled C10	Ball screw φ12mm rolled C10	Ball screw φ10mm rolled C10	-
Positioning repeatability	±0.01mm			±0.01 deg.
Base material	Aluminum			
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)			

Options					
Type	Option code	Reference page	X-axis	Y-axis	Z-axis
Brake	B	See P.134	○	○	Standard equipment *
Slider cover	CO	See P.134	Cannot be selected		
Non-motor end specification	NM	See P.135	○	○	○
Slider section roller specification	SR	See P.135	○	○	Cannot be selected

* Be sure to specify.

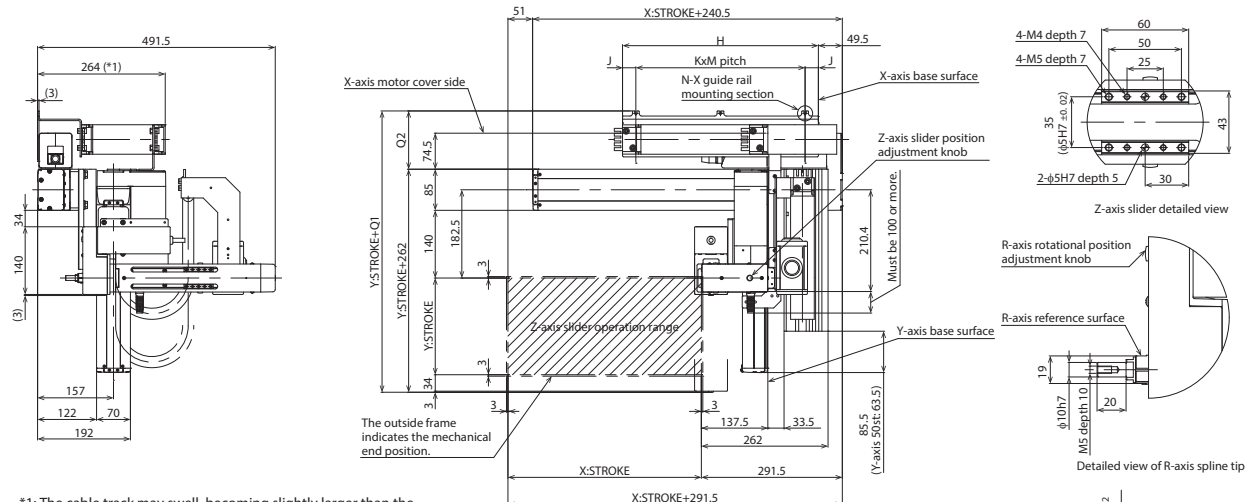
*1 The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.
 *2 Angular velocity and acceleration/deceleration differ depending on allowable moment of inertia. Please refer to P.138 for more information.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
 Note 2. The diagram shows first and second wirings with cable tracks.
 Note 3. Refer to P.136 for the details of the cable tracks.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.
 158.5(Z-STROKE=100)
 108.5(Z-STROKE=150)

(*) Notes
 The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer.

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

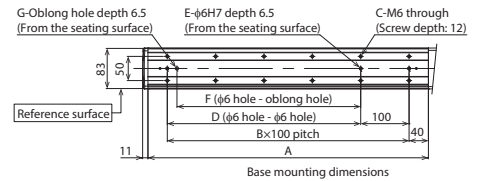
Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : SA8R	PCON-CFB/CGFB	P-149
		MSEL-PCF/PGF	P-139
	Y-axis : SA7R Z-axis R-axis	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
PM2	X-axis : SA8R	MCON-LC/LCG	P-139
		MSEL	P-139
	Y-axis : SA7R Z-axis, R-axis	RCON-PCF RCON-PC	P-159

Dimensions by Stroke

X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280
B	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1000	1000	1100
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980	1080
G	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	230	255	280	305	330	355	380	405	430	455	480	505	530	555	580	605	630	655	680	705	730	755
J	30	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	22.5	27.5	27.5	22.5	27.5	27.5	22.5	27.5	27.5	22.5	27.5	27.5
K	1	1	1	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4
M	170	200	225	125	137.5	150	162.5	175	187.5	200	145	150	125	150	150	175	200	175	165	155	175	175
N	2	2	2	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	5	5	5	5

Cable track size	CT	CTM	CTL	CTLX
Q1	369.5	382.5	395.5	412.5
Q2	107.5	120.5	133.5	150.5

* Dimensions Q1 and Q2 change depending on the size of the cable track.



IK4-P6BBB2□□S

RCP6 2-axis XYB + ZR unit configurations
 X-axis: SA8C (straight)
 Y-axis: SA7R (side-mounted)

Model Specification Items

Series: **IK4** | Type: **P6BBB2□□S** | Encoder Type: **WA** | First Axis (X-axis): **□□** | Second Axis (Y-axis): **□□** | Third Axis (Z-axis): **B□** | Fourth Axis (R-axis): **□** | Controller: **□** | Cable: **□□□** | Options: **□**

Configuration Direction: 1 to 4. Refer to Robot Type Descriptions on page 3.

Speed Type: MM: X Medium Speed/Y Medium Speed

Encoder Type: WA: Battery-less Absolute

Stroke: 5: 50mm (Every 50mm) | 10: 100mm | 15: 150mm. Refer to Options table (1) on the next page.

Stroke: 18: ±180deg. | 36L: ±360deg. (Equipped with home limit switch). Refer to Options table (1) on the next page.

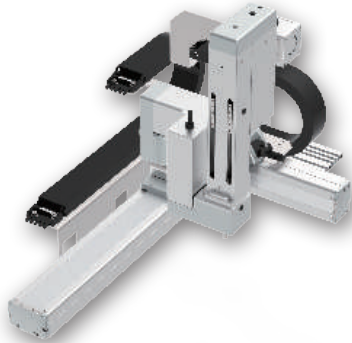
Controller: **PM1** | **PM2**. Refer to Applicable Controllers table below.

Cable Length: 1L: 1m | 3L: 3m | 5L: 5m | □L: □m.

First Wiring: Refer to Cable Track table below.

Second Wiring: Refer to Cable Track table below.

Options: Refer to Options table (2) on the next page.



The photograph above shows the configuration direction "1" where all axes have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

MM type: X medium speed/Y medium speed

(Unit: kg)

Acceleration/ deceleration (G)	Y-axis stroke (mm)	250~300 (Every 50mm)
	50~200 (Every 50mm)	250~300 (Every 50mm)
0.1	3.5	1
0.3	2	1

* When X, Y, Z and R axes all have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm)	50				100				150			
	100		150		100		150		100		150	
Z-axis stroke (mm)	±180	±360	±180	±360	±180	±360	±180	±360	±180	±360	±180	±360
R-axis operation range (deg.)	±180	±360	±180	±360	±180	±360	±180	±360	±180	±360	±180	±360
50	○	○	○	○	○	○	○	○	○	○	○	○
100	○	○	○	○	○	○	○	○	○	○	○	○
150	○	○	○	○	○	○	○	○	○	○	○	○
200	○	○	○	○	○	○	○	○	○	○	○	○
250	○	○	○	○	○	○	○	○	○	○	○	○
300	○	○	○	○	○	○	○	○	○	○	○	○
350	○	○	○	○	○	○	○	○	○	○	○	○
400	○	○	○	○	○	○	○	○	○	○	○	○
450	○	○	○	○	○	○	○	○	○	○	○	○
500	○	○	○	○	○	○	○	○	○	○	○	○
550	○	○	○	○	○	○	○	○	○	○	○	○
600	○	○	○	○	○	○	○	○	○	○	○	○
650	○	○	○	○	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○	○	○	○	○
750	○	○	○	○	○	○	○	○	○	○	○	○
800	○	○	○	○	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○	○	○	○	○
900	○	○	○	○	○	○	○	○	○	○	○	○
950	○	○	○	○	○	○	○	○	○	○	○	○
1000	○	○	○	○	○	○	○	○	○	○	○	○
1050	○	○	○	○	○	○	○	○	○	○	○	○
1100	○	○	○	○	○	○	○	○	○	○	○	○

Y-axis stroke (mm)	200				250				300			
	100		150		100		150		100		150	
Z-axis stroke (mm)	±180	±360	±180	±360	±180	±360	±180	±360	±180	±360	±180	±360
R-axis operation range (deg.)	±180	±360	±180	±360	±180	±360	±180	±360	±180	±360	±180	±360
50	○	○	○	○	○	○	○	○	○	○	○	○
100	○	○	○	○	○	○	○	○	○	○	○	○
150	○	○	○	○	○	○	○	○	○	○	○	○
200	○	○	○	○	○	○	○	○	○	○	○	○
250	○	○	○	○	○	○	○	○	○	○	○	○
300	○	○	○	○	○	○	○	○	○	○	○	○
350	○	○	○	○	○	○	○	○	○	○	○	○
400	○	○	○	○	○	○	○	○	○	○	○	○
450	○	○	○	○	○	○	○	○	○	○	○	○
500	○	○	○	○	○	○	○	○	○	○	○	○
550	○	○	○	○	○	○	○	○	○	○	○	○
600	○	○	○	○	○	○	○	○	○	○	○	○
650	○	○	○	○	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○	○	○	○	○
750	○	○	○	○	○	○	○	○	○	○	○	○
800	○	○	○	○	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○	○	○	○	○
900	○	○	○	○	○	○	○	○	○	○	○	○
950	○	○	○	○	○	○	○	○	○	○	○	○
1000	○	○	○	○	○	○	○	○	○	○	○	○
1050	○	○	○	○	○	○	○	○	○	○	○	○
1100	○	○	○	○	○	○	○	○	○	○	○	○

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (Max. 15m)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second, third, and fourth axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	N	See P.136	-	-
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm)	CTXL		○	Cannot be selected *1

*1 Only the first wiring can be selected

Specifications				
Item	X-axis	Y-axis	Z-axis	R-axis
Axis configuration	RCP6-SA8C	RCP6-SA7R	TTPIK-AZR	
Stroke	50 ~ 1100mm (Every 50mm)	50 ~ 300mm (Every 50mm)	100, 150mm	180deg., 360deg.
Max. speed *1	300mm/s	280mm/s	400mm/s	1,000deg/s *2
Allowable moment of inertia *2	-			0.01kg·m ²
Motor size	56□ High thrust stepper motor	56□ Stepper motor	42□ Stepper motor	Stepper motor
Ball screw lead	10mm	8mm	12mm	-
Drive system	Ball screw φ16mm rolled C10	Ball screw φ12mm rolled C10	Ball screw φ10mm rolled C10	-
Positioning repeatability	±0.01mm			±0.01 deg.
Base material	Aluminum			
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)			

*1 The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.
 *2 Angular velocity and acceleration/deceleration differ depending on allowable moment of inertia. Please refer to P.138 for more information.

Options (1)					
Type	Option code	Reference page	X-axis	Y-axis	Z-axis
Brake *	B	See P.134	○	○	Standard equipment *
Cable exit direction (Top)	CJT	See P.134	○	Cannot be selected	
Cable exit direction (Right)	CJR	See P.134	○	Cannot be selected	
Cable exit direction (Left)	CJL	See P.134	○	Cannot be selected	
Cable exit direction (Bottom)	CJB	See P.134	○	Cannot be selected	
Slider cover	CO	See P.134	Cannot be selected		○
Non-motor end specification	NM	See P.135	○	○	○
Slider section roller specification	SR	See P.135	○	○	Cannot be selected

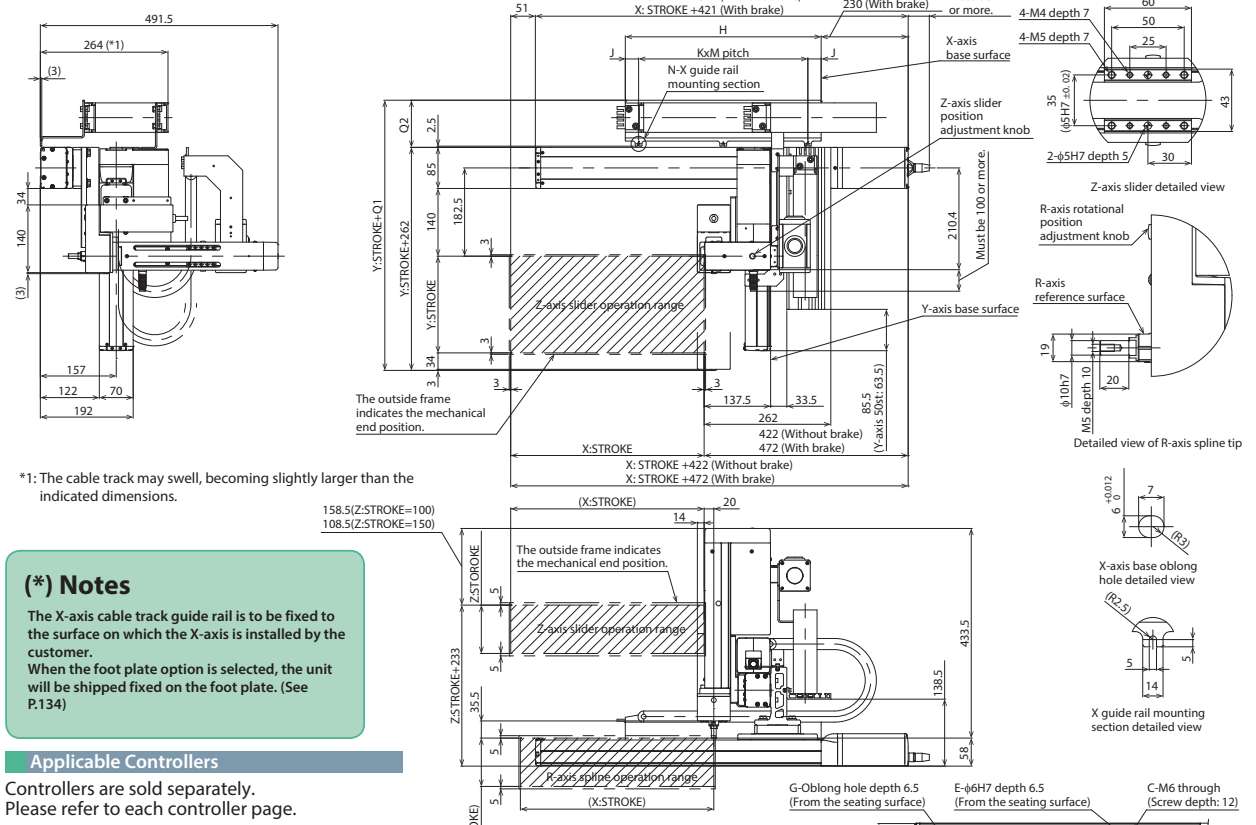
* Be sure to specify.
 * Brake option for X-axis increases the length of the motor unit. Please contact IAI for more information.

Options (2)		
Type	Option code	Reference page
Foot plate	FTP	See P.134

Dimensions
 CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
 Note 2. The diagram shows first and second wirings with cable tracks.
 Note 3. Refer to P.136 for the details of the cable tracks.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.

(*) Notes
 The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer. When the foot plate option is selected, the unit will be shipped fixed on the foot plate. (See P.134)

Applicable Controllers
 Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : SA8C	PCON-CFB/CGFB	P-149
		MSEL-PCF/PGF	P-139
	Y-axis : SA7R Z-axis R-axis	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
PM2	X-axis : SA8C	MCON-LC/LCG	P-139
		MSEL	P-139
	Y-axis : SA7R Z-axis, R-axis	RCON-PCF	P-159

Dimensions by Stroke

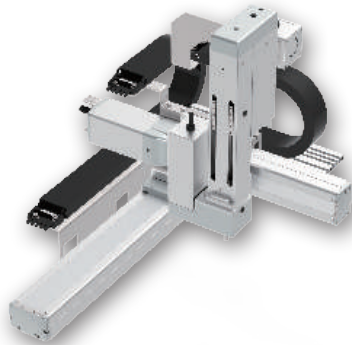
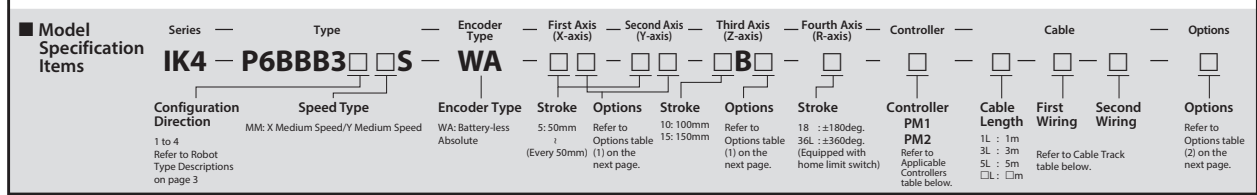
X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280
B	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1000	1000	1100
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980	1080
G	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	230	255	280	305	330	355	380	405	430	455	480	505	530	555	580	605	630	655	680	705	730	755
J	30	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	22.5	27.5	27.5	27.5	65	77.5	52.5	27.5	77.5	22.5	55	27.5
K	1	1	1	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4
M	170	200	225	125	137.5	150	162.5	175	187.5	200	145	150	125	150	150	150	175	200	175	165	155	175
N	2	2	2	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5	5	5

Cable track size	CT	CTM	CTL	CTLX
Q1	346.5	359.5	372.5	389.5
Q2	84.5	97.5	110.5	127.5

* Dimensions Q1 and Q2 change depending on the size of the cable track.

IK4-P6BBB3□□S RCP6 2-axis XYB + ZR unit configurations

X-axis: SA8C (straight)
Y-axis: SA7C (straight)



The photograph above shows the configuration direction "1" where all axes have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ MM type: X medium speed/Y medium speed (Unit: kg)

Acceleration/ deceleration (G)	Y-axis stroke (mm)	250~300 (Every 50mm)
	50~200 (Every 50mm)	250~300 (Every 50mm)
0.1	3.5	
0.3	2	1

* When X, Y, Z and R axes all have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm)	50				100				150			
	100		150		100		150		100		150	
Z-axis stroke (mm)	±180	±360	±180	±360	±180	±360	±180	±360	±180	±360	±180	±360
R-axis operation range (deg.)												
50	○	○	○	○	○	○	○	○	○	○	○	○
100	○	○	○	○	○	○	○	○	○	○	○	○
150	○	○	○	○	○	○	○	○	○	○	○	○
200	○	○	○	○	○	○	○	○	○	○	○	○
250	○	○	○	○	○	○	○	○	○	○	○	○
300	○	○	○	○	○	○	○	○	○	○	○	○
350	○	○	○	○	○	○	○	○	○	○	○	○
400	○	○	○	○	○	○	○	○	○	○	○	○
450	○	○	○	○	○	○	○	○	○	○	○	○
500	○	○	○	○	○	○	○	○	○	○	○	○
550	○	○	○	○	○	○	○	○	○	○	○	○
600	○	○	○	○	○	○	○	○	○	○	○	○
650	○	○	○	○	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○	○	○	○	○
750	○	○	○	○	○	○	○	○	○	○	○	○
800	○	○	○	○	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○	○	○	○	○
900	○	○	○	○	○	○	○	○	○	○	○	○
950	○	○	○	○	○	○	○	○	○	○	○	○
1000	○	○	○	○	○	○	○	○	○	○	○	○
1050	○	○	○	○	○	○	○	○	○	○	○	○
1100	○	○	○	○	○	○	○	○	○	○	○	○

Y-axis stroke (mm)	200				250				300			
	100		150		100		150		100		150	
Z-axis stroke (mm)	±180	±360	±180	±360	±180	±360	±180	±360	±180	±360	±180	±360
R-axis operation range (deg.)												
50	○	○	○	○	○	○	○	○	○	○	○	○
100	○	○	○	○	○	○	○	○	○	○	○	○
150	○	○	○	○	○	○	○	○	○	○	○	○
200	○	○	○	○	○	○	○	○	○	○	○	○
250	○	○	○	○	○	○	○	○	○	○	○	○
300	○	○	○	○	○	○	○	○	○	○	○	○
350	○	○	○	○	○	○	○	○	○	○	○	○
400	○	○	○	○	○	○	○	○	○	○	○	○
450	○	○	○	○	○	○	○	○	○	○	○	○
500	○	○	○	○	○	○	○	○	○	○	○	○
550	○	○	○	○	○	○	○	○	○	○	○	○
600	○	○	○	○	○	○	○	○	○	○	○	○
650	○	○	○	○	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○	○	○	○	○
750	○	○	○	○	○	○	○	○	○	○	○	○
800	○	○	○	○	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○	○	○	○	○
900	○	○	○	○	○	○	○	○	○	○	○	○
950	○	○	○	○	○	○	○	○	○	○	○	○
1000	○	○	○	○	○	○	○	○	○	○	○	○
1050	○	○	○	○	○	○	○	○	○	○	○	○
1100	○	○	○	○	○	○	○	○	○	○	○	○

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (Max. 15m)

Note 1. All-axis standard cable is used.
Note 2. The length of the second, third, and fourth axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.

Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	N	P.136	—	—
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm)	CTXL		○	Cannot be selected *1

*1 Only the first wiring can be selected

Specifications				
Item	X-axis	Y-axis	Z-axis	R-axis
Axis configuration	RCP6-SA8C	RCP6-SA7C	TTPIK-AZR	
Stroke	50 ~ 1100mm (Every 50mm)	50 ~ 300mm (Every 50mm)	100, 150mm	180deg., 360deg.
Max. speed *1	300mm/s	280mm/s	400mm/s	1,000deg/s *2
Allowable moment of inertia *2	-		0.01kg·m ²	
Motor size	56□ High thrust stepper motor	56□ Stepper motor	42□ Stepper motor	42□ Stepper motor
Ball screw lead	10mm	8mm	12mm	-
Drive system	Ball screw φ16mm rolled C10	Ball screw φ12mm rolled C10	Ball screw φ10mm rolled C10	-
Positioning repeatability	±0.01mm			±0.01 deg.
Base material	Aluminum			
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)			

*1 The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.
 *2 Angular velocity and acceleration/deceleration differ depending on allowable moment of inertia. Please refer to P.138 for more information.

Options (1)					
Type	Option code	Reference page	X-axis	Y-axis	Z-axis
Brake *	B	See P.134	○	○	Standard equipment *
Cable exit direction (Top)	CJT	See P.134	○	Cannot be selected	
Cable exit direction (Right)	CJR	See P.134	○	Cannot be selected	
Cable exit direction (Left)	CJL	See P.134	○	Cannot be selected	
Cable exit direction (Bottom)	CJB	See P.134	○	Cannot be selected	
Slider cover	CO	See P.134	Cannot be selected		○
Non-motor end specification	NM	See P.135	○	○	○
Slider section roller specification	SR	See P.135	○	○	Cannot be selected

* Outside as standard. Be sure to specify.
 * Brake option for X- and/or Y-axes increases the length of the motor unit(s). Please contact IAI for more information.

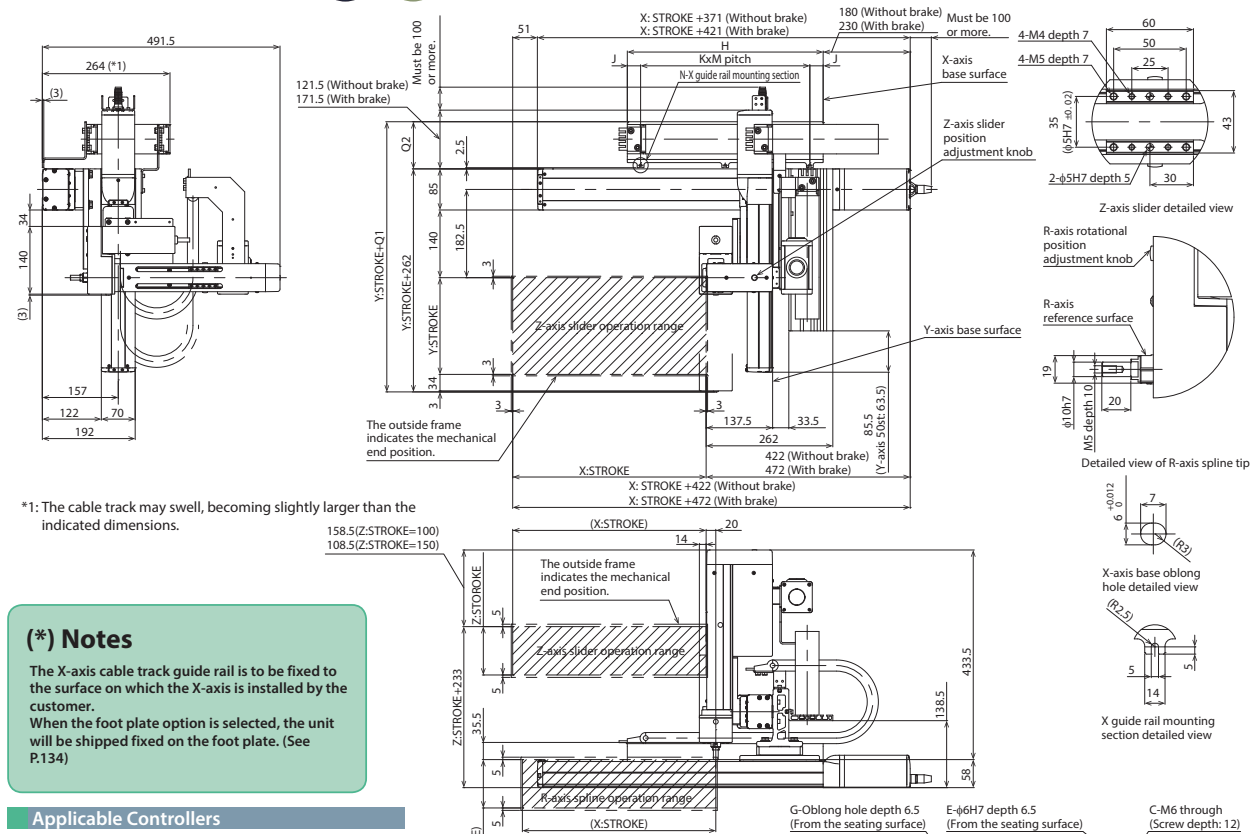
Options (2)		
Type	Option code	Reference page
Foot plate	FTP	See P.134

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
 Note 2. The diagram shows first and second wirings with cable tracks.
 Note 3. Refer to P.136 for the details of the cable tracks.



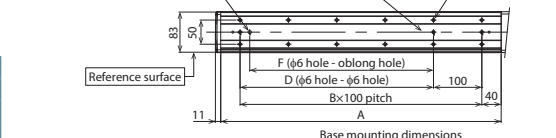
*1: The cable track may swell, becoming slightly larger than the indicated dimensions.

(*) Notes
 The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer.
 When the foot plate option is selected, the unit will be shipped fixed on the foot plate. (See P.134)

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : SA8C	PCON-CFB/CGFB	P-149
		MSEL-PCF/PGF	P-139
	Y-axis : SA7C Z-axis R-axis	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG MCON-LC/LCG	P-153
PM2	X-axis : SA8C Y-axis : SA7C, Z-axis, R-axis	MSEL	P-139
		RCON-PCF RCON-PC	P-159



* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Dimensions by Stroke

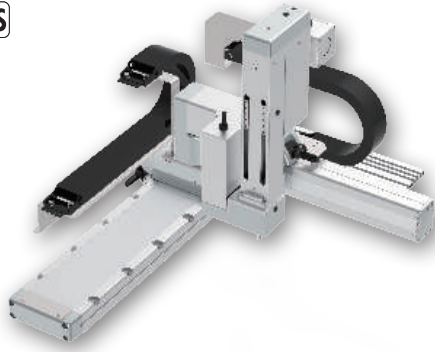
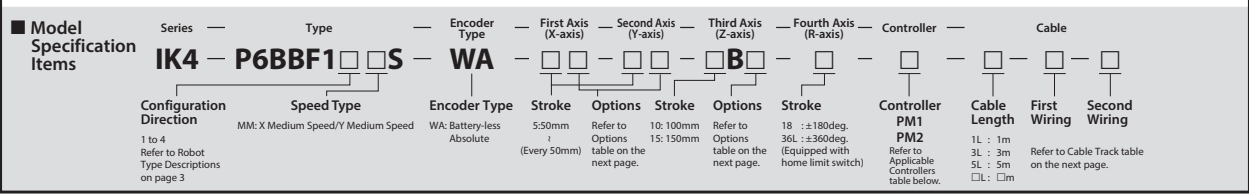
X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280
B	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1000	1000	1100
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980	1080
G	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	230	255	280	305	330	355	380	405	430	455	480	505	530	555	580	605	630	655	680	705	730	755
J	30	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	22.5	27.5	27.5	22.5	27.5	27.5	27.5	27.5	27.5	22.5	27.5	27.5
K	1	1	1	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4
M	170	200	225	125	137.5	150	162.5	175	187.5	200	145	150	125	150	150	175	200	175	165	155	175	175
N	2	2	2	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5	5	5

Cable track size	CT	CTM	CTL	CTXL
Q1	346.5	359.5	372.5	389.5
Q2	84.5	97.5	110.5	127.5

* Dimensions Q1 and Q2 change depending on the size of the cable track.

IK4-P6BBF1□□S

RCP6 2-axis XYB + ZR unit configurations
 X-axis: WSA14R (side-mounted)
 Y-axis: SA7R (side-mounted)



The photograph above shows the configuration direction "1" where all axes have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

MM type: X medium speed/Y medium speed

(Unit: kg)

Acceleration/ deceleration (G)	Y-axis stroke (mm)	350	400
	50~300 (Every 50mm)		
0.1	5	3	2
0.3	3	-	-

* When X, Y, Z and R axes all have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm)	50				100				150			
	100		150		100		150		100		150	
Z-axis stroke (mm)	±180	±360	±180	±360	±180	±360	±180	±360	±180	±360	±180	±360
R-axis operation range (deg.)	±180	±360	±180	±360	±180	±360	±180	±360	±180	±360	±180	±360
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○	○	○	○	
750	○	○	○	○	○	○	○	○	○	○	○	
800	○	○	○	○	○	○	○	○	○	○	○	

Y-axis stroke (mm)	200				250				300			
	100		150		100		150		100		150	
Z-axis stroke (mm)	±180	±360	±180	±360	±180	±360	±180	±360	±180	±360	±180	±360
R-axis operation range (deg.)	±180	±360	±180	±360	±180	±360	±180	±360	±180	±360	±180	±360
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○	○	○	○	
750	○	○	○	○	○	○	○	○	○	○	○	
800	○	○	○	○	○	○	○	○	○	○	○	

Y-axis stroke (mm)	350				400			
Z-axis stroke (mm)	100		150		100		150	
R-axis operation range (deg.)	±180	±360	±180	±360	±180	±360	±180	±360
X-axis stroke (mm)	50	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○
	750	○	○	○	○	○	○	○
800	○	○	○	○	○	○	○	

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second, third, and fourth axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis side)	Second wiring (Y-axis side)
Without cable track (cable only)	N	See P.136	—	—
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm)	CTXL		○	Cannot be selected *1

*1 Only the first wiring can be selected

Applicable Controllers

Controllers are sold separately. Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : WSA14R Y-axis : SA7R	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
	Z-axis R-axis	MCON-C/CG	P-153
		MCON-LC/LCG	
PM2	R-axis	MSEL	P-139
		RCON-PC	P-159

* Operation is possible with the high output setting specification.
 When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected.
 Please contact IAI regarding use with the high-output setting disabled.

Specifications

Item	X-axis	Y-axis	Z-axis	R-axis
Axis configuration	RCP6-WSA14R	RCP6-SA7R	TTPIK-AZR	
Stroke	50 ~ 800mm (Every 50mm)	50 ~ 400mm (Every 50mm)	100, 150mm	180deg., 360deg.
Max. speed *1	210mm/s	280mm/s	400mm/s	1,000deg/s *2
Allowable moment of inertia *2	—			0.01kg·m ²
Motor size	56□ Stepper motor	56□ Stepper motor	42□ Stepper motor	42□ Stepper motor
Ball screw lead	8mm	8mm	12mm	—
Drive system	Ball screw φ12mm rolled C10	Ball screw φ12mm rolled C10	Ball screw φ10mm rolled C10	—
Positioning repeatability	±0.01mm			±0.01 deg.
Base material	Aluminum			
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)			

*1 The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.
 *2 Angular velocity and acceleration/deceleration differ depending on allowable moment of inertia. Please refer to P.138 for more information.

Options

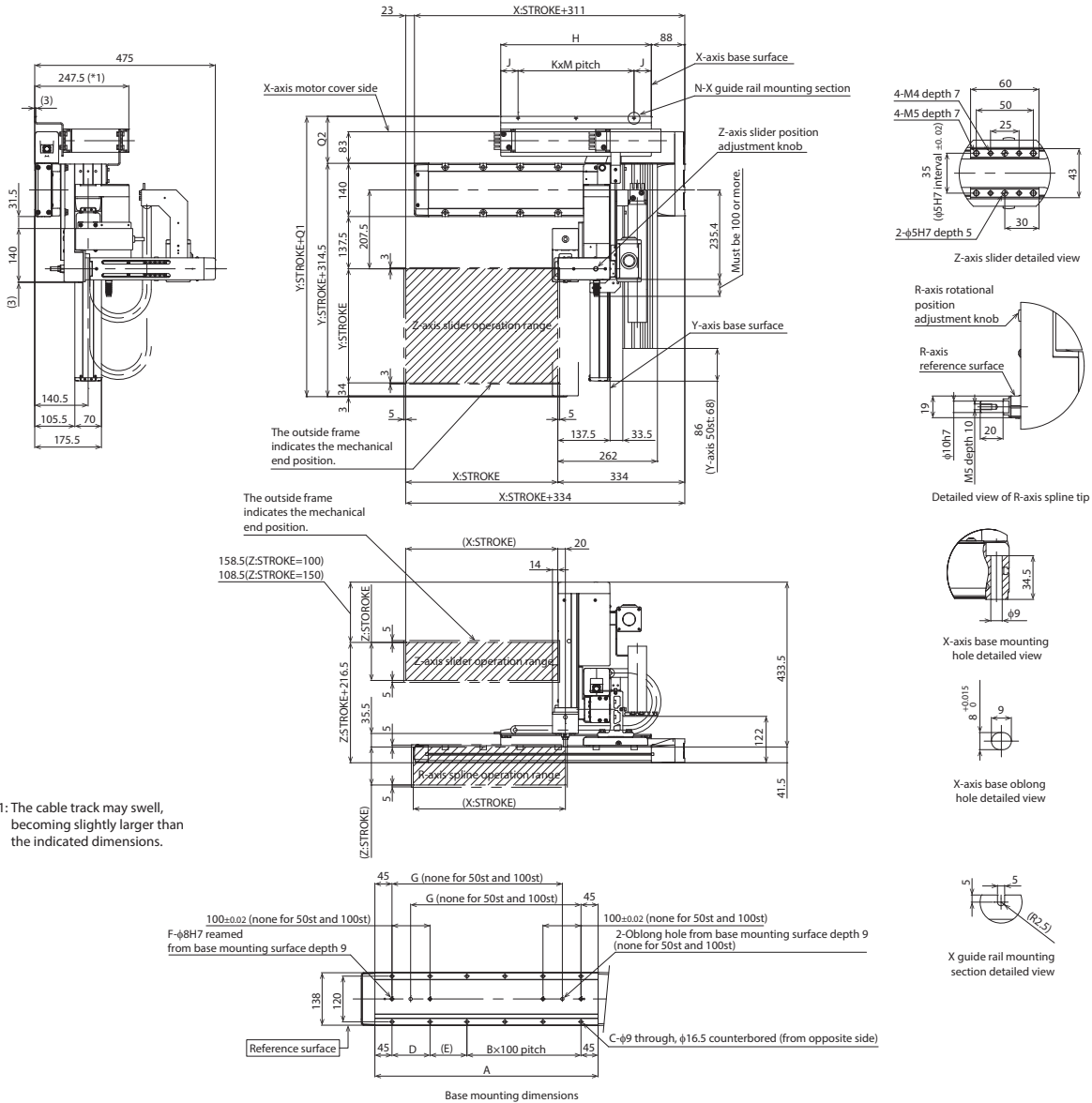
Type	Option code	Reference page	X-axis	Y-axis	Z-axis
Brake	B	See P.134	○	○	Standard equipment*
Slider cover	CO	See P.134	Cannot be selected		○
Non-motor end specification	NM	See P.135	○	○	○
Slider section roller specification	SR	See P.135	○	○	Cannot be selected

* Be sure to specify.

CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
Note 2. The diagram shows first and second wirings with cable tracks.
Note 3. Refer to P.136 for the details of the cable tracks.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.

(*) Notes

The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer.

■ Dimensions by Stroke

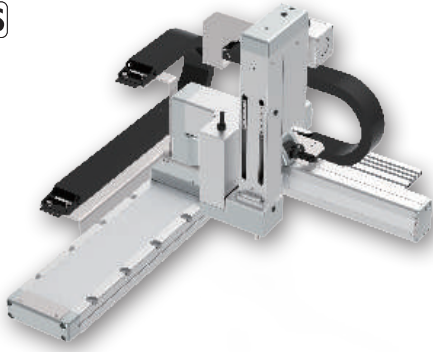
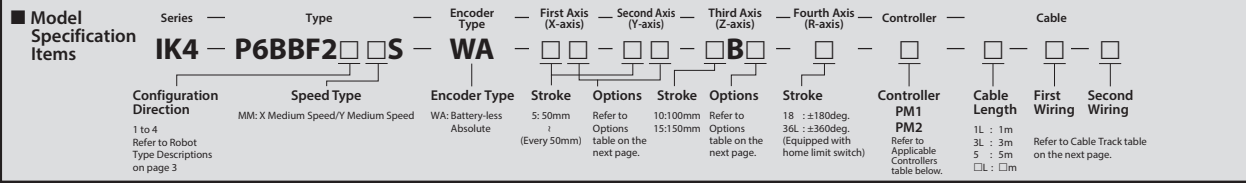
X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	237	287	337	387	437	487	537	587	637	687	737	787	837	887	937	987
B	0	0	1	2	2	2	3	3	4	4	5	5	6	6	7	7
C	4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20
D	-	-	100	100	100	100	100	100	100	100	100	100	100	100	100	100
E	147	197	47	97	47	97	47	97	47	97	47	97	47	97	47	97
F	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4
G	-	-	198	248	298	348	398	448	498	548	598	648	698	748	798	848
H	221	246	271	296	321	346	371	396	421	446	471	496	521	546	571	596
J	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	43	48	45.5	43	43	45.5	43
K	1	1	2	2	2	2	2	2	3	3	3	3	3	4	4	4
M	130	155	90	102.5	115	127.5	140	152.5	110	120	125	135	145	115	120	127.5
N	2	2	3	3	3	3	3	3	4	4	4	4	5	5	5	5

Cable track size	CT	CTM	CTL	CTLX
Q1	425	438	451	468
Q2	110.5	123.5	136.5	153.5

* Dimensions Q1 and Q2 change depending on the size of the cable track.

IK4-P6BBF2□□S

RCP6 2-axis XYB + ZR unit configurations
 X-axis: WSA14C (straight)
 Y-axis: SA7R (side-mounted)



The photograph above shows the configuration direction "1" where all axes have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

MM type: X medium speed/Y medium speed

(Unit: kg)

Acceleration/ deceleration (G)	Y-axis stroke (mm)	350	400
	50~300 (Every 50mm)		
0.1	5	3	2
0.3	3	-	-

* When X, Y, Z and R axes all have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm)		50				100				150			
Z-axis stroke (mm)		100		150		100		150		100		150	
R-axis operation range (deg)		±180	±360	±180	±360	±180	±360	±180	±360	±180	±360	±180	±360
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○	○	○	○	○	
750	○	○	○	○	○	○	○	○	○	○	○	○	
800	○	○	○	○	○	○	○	○	○	○	○	○	

Y-axis stroke (mm)		200				250				300			
Z-axis stroke (mm)		100		150		100		150		100		150	
R-axis operation range (deg)		±180	±360	±180	±360	±180	±360	±180	±360	±180	±360	±180	±360
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○	○	○	○	○	
750	○	○	○	○	○	○	○	○	○	○	○	○	
800	○	○	○	○	○	○	○	○	○	○	○	○	

Y-axis stroke (mm)	350				400			
Z-axis stroke (mm)	100		150		100		150	
R-axis operation range (deg.)	±180	±360	±180	±360	±180	±360	±180	±360
X-axis stroke (mm)	50	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○
	750	○	○	○	○	○	○	○
800	○	○	○	○	○	○	○	

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second, third, and fourth axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis side)	Second wiring (Y-axis side)
Without cable track (cable only)	N	See P.136	—	—
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm)	CTXL		○	Cannot be selected *1

*1 Only the first wiring can be selected

Applicable Controllers

Controllers are sold separately.
 Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page
PM1	X-axis : WSA14C Y-axis : SA7R Z-axis R-axis	PCON-CB/CGB	P-149
		PCON-CYB/PLB/POB	Please contact IAI
		MCON-C/CG	P-153
		MCON-LC/LCG	
		MSEL	P-139
PM2		RCON-PC	P-159

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected.
 Please contact IAI regarding use with the high-output setting disabled.

Specifications

Item	X-axis	Y-axis	Z-axis	R-axis
Axis configuration	RCP6-WSA14C	RCP6-SA7R	TTPIK-AZR	
Stroke	50 ~ 800mm (Every 50mm)	50 ~ 400mm (Every 50mm)	100, 150mm	180deg., 360deg.
Max. speed *1	210mm/s	280mm/s	400mm/s	1,000deg/s *2
Allowable moment of inertia *2	— 0.01kg·m ²			
Motor size	56□ Stepper motor	56□ Stepper motor	42□ Stepper motor	42□ Stepper motor
Ball screw lead	8mm	8mm	12mm	—
Drive system	Ball screw φ12mm rolled C10	Ball screw φ12mm rolled C10	Ball screw φ10mm rolled C10	—
Positioning repeatability	±0.01mm ±0.01 deg.			
Base material	Aluminum			
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)			

*1 The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke.
 For details, refer to the Maximum Speed by Stroke table on P.137.
 *2 Angular velocity and acceleration/deceleration differ depending on allowable moment of inertia. Please refer to P.138 for more information.

Options

Type	Option code	Reference page	X-axis	Y-axis	Z-axis
Brake *	B	See P.134	○	○	Standard equipment *
Cable exit direction (Top)	CJT	See P.134	○	Cannot be selected	
Cable exit direction (Right)	CJR	See P.134	○		
Cable exit direction (Left)	CJL	See P.134	○		
Cable exit direction (Bottom)	CJB	See P.134	○		
Slider cover	CO	See P.134	Cannot be selected		○
Non-motor end specification	NM	See P.135	○	○	○
Slider section roller specification	SR	See P.135	○	○	Cannot be selected

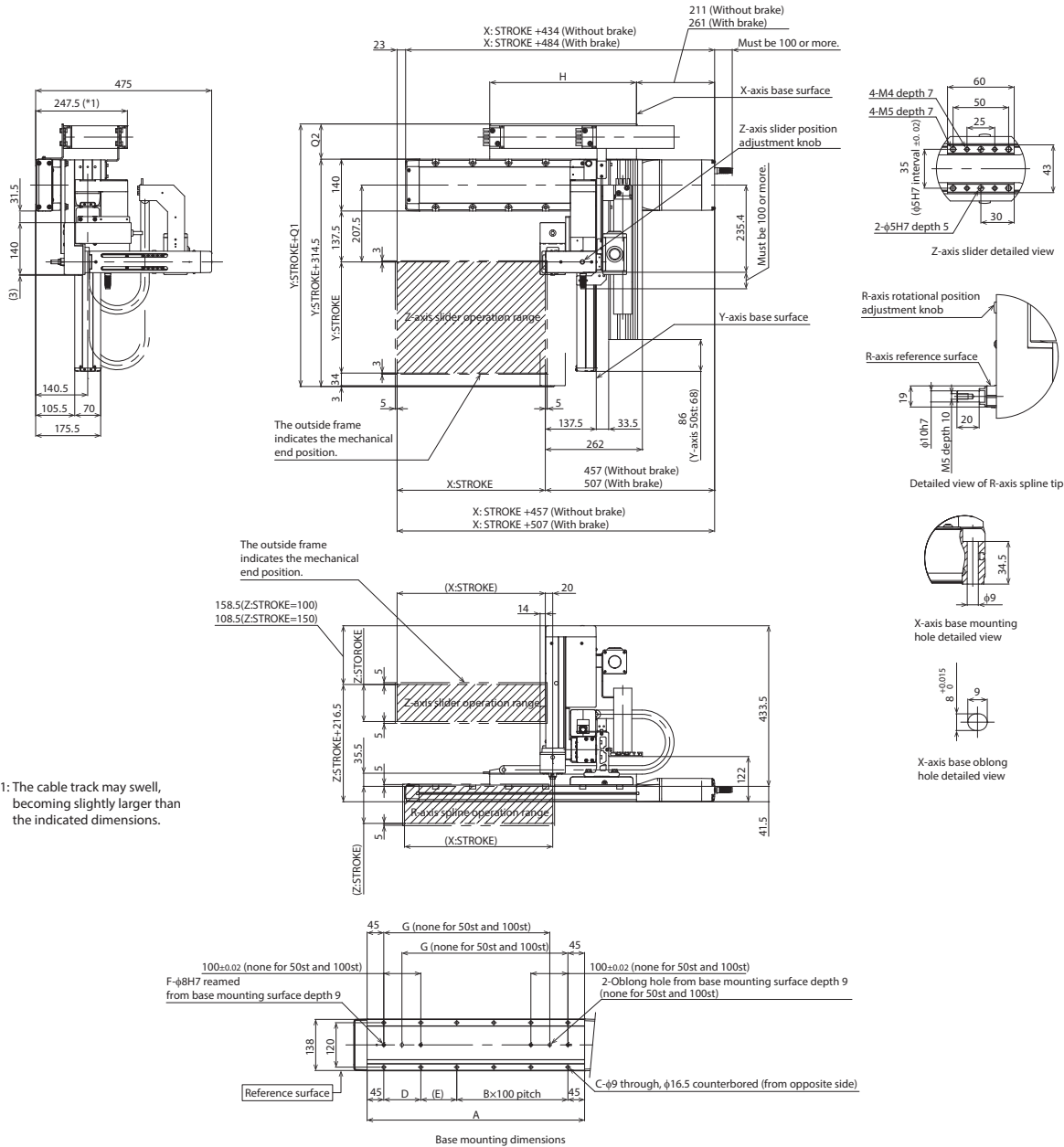
* Be sure to specify.
 * Brake option for X-axis increases the length of the motor unit. Please contact IAI for more information.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
Note 2. The diagram shows first and second wirings with cable tracks.
Note 3. Refer to P.136 for the details of the cable tracks.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.

■ Dimensions by Stroke

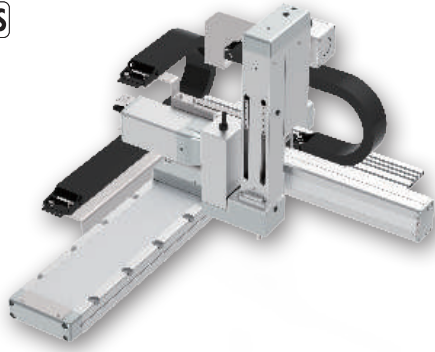
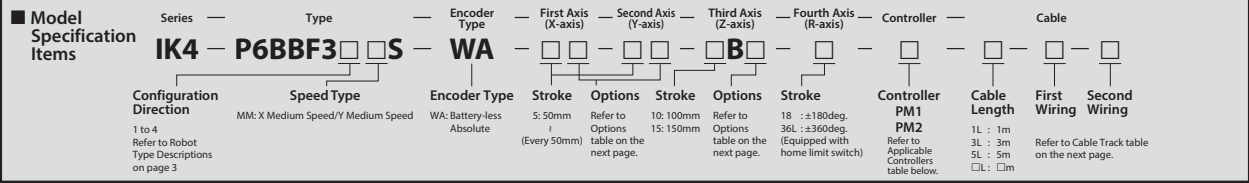
X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	237	287	337	387	437	487	537	587	637	687	737	787	837	887	937	987
B	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
C	4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20
D	-	-	100	100	100	100	100	100	100	100	100	100	100	100	100	100
E	147	197	47	97	47	97	47	97	47	97	47	97	47	97	47	97
F	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4
G	-	-	198	248	298	348	398	448	498	548	598	648	698	748	798	848
H	221	246	271	296	321	346	371	396	421	446	471	496	521	546	571	596

Cable track size	CT	CTM	CTL	CTXL
Q1	397.5	409.5	424.5	442.5
Q2	83	95	110	128

* Dimensions Q1 and Q2 change depending on the size of the cable track.

IK4-P6BBF3□□S

RCP6 2-axis XYB + ZR unit configurations
 X-axis: WSA14C (straight)
 Y-axis: SA7C (straight)



The photograph above shows the configuration direction "1" where all axes have cable tracks. Please refer to P.3 for other configuration directions.

Payload by Acceleration

MM type: X medium speed/Y medium speed

(Unit: kg)

Acceleration/ deceleration (G)	Y-axis stroke (mm)	350	400
	50~300 (Every 50mm)		
0.1	5	3	2
0.3	3	-	-

* When X, Y, Z and R axes all have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm)	50				100				150			
	100		150		100		150		100		150	
Z-axis stroke (mm)	±180	±360	±180	±360	±180	±360	±180	±360	±180	±360	±180	±360
R-axis operation range (deg.)	○	○	○	○	○	○	○	○	○	○	○	○
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○	○	○	○	
750	○	○	○	○	○	○	○	○	○	○	○	
800	○	○	○	○	○	○	○	○	○	○	○	

Y-axis stroke (mm)	200				250				300			
	100		150		100		150		100		150	
Z-axis stroke (mm)	±180	±360	±180	±360	±180	±360	±180	±360	±180	±360	±180	±360
R-axis operation range (deg.)	○	○	○	○	○	○	○	○	○	○	○	○
X-axis stroke (mm)	50	○	○	○	○	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○	○	○	○	
750	○	○	○	○	○	○	○	○	○	○	○	
800	○	○	○	○	○	○	○	○	○	○	○	

Y-axis stroke (mm)	350				400			
Z-axis stroke (mm)	100		150		100		150	
R-axis operation range (deg.)	±180	±360	±180	±360	±180	±360	±180	±360
X-axis stroke (mm)	50	○	○	○	○	○	○	○
	100	○	○	○	○	○	○	○
	150	○	○	○	○	○	○	○
	200	○	○	○	○	○	○	○
	250	○	○	○	○	○	○	○
	300	○	○	○	○	○	○	○
	350	○	○	○	○	○	○	○
	400	○	○	○	○	○	○	○
	450	○	○	○	○	○	○	○
	500	○	○	○	○	○	○	○
	550	○	○	○	○	○	○	○
	600	○	○	○	○	○	○	○
	650	○	○	○	○	○	○	○
	700	○	○	○	○	○	○	○
750	○	○	○	○	○	○	○	
800	○	○	○	○	○	○	○	

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
 Note 2. The length of the second, third, and fourth axis cable is from the exit of the cable track. A separate robot cable is included for wiring inside the cable track.
 Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis side)	Second wiring (Y-axis side)
Without cable track (cable only)	N	See P.136	—	—
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm)	CTXL		○	Cannot be selected *1

*1 Only the first wiring can be selected

Applicable Controllers

Controllers are sold separately.
 Please refer to each controller page.

Type	Axis configuration	Applicable controllers	Reference page	
PM1	X-axis : WSA14C	PCON-CB/CGB	P-149	
		PCON-CYB/PLB/POB	Please contact IAI	
	Y-axis : SA7C	MCON-C/CG	P-153	
		Z-axis		MCON-LC/LCG
		R-axis		MSEL
PM2		RCON-PC	P-159	

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "HIGH OUTPUT SETTING SPECIFICATION" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Specifications

Item	X-axis	Y-axis	Z-axis	R-axis
Axis configuration	RCP6-WSA14C	RCP6-SA7C	TPIK-AZR	
Stroke	50 ~ 800mm (Every 50mm)	50 ~ 400mm (Every 50mm)	100, 150mm	180deg., 360deg.
Max. speed *1	210mm/s	280mm/s	400mm/s	1,000deg/s *2
Allowable moment of inertia *2	—			
Motor size	56□ Stepper motor	56□ Stepper motor	42□ Stepper motor	42□ Stepper motor
Ball screw lead	8mm	8mm	12mm	—
Drive system	Ball screw φ12mm rolled C10	Ball screw φ12mm rolled C10	Ball screw φ10mm rolled C10	—
Positioning repeatability	±0.01mm			
Base material	Aluminum			
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)			

*1 The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.137.
 *2 Angular velocity and acceleration/deceleration differ depending on allowable moment of inertia. Please refer to P.138 for more information.

Options

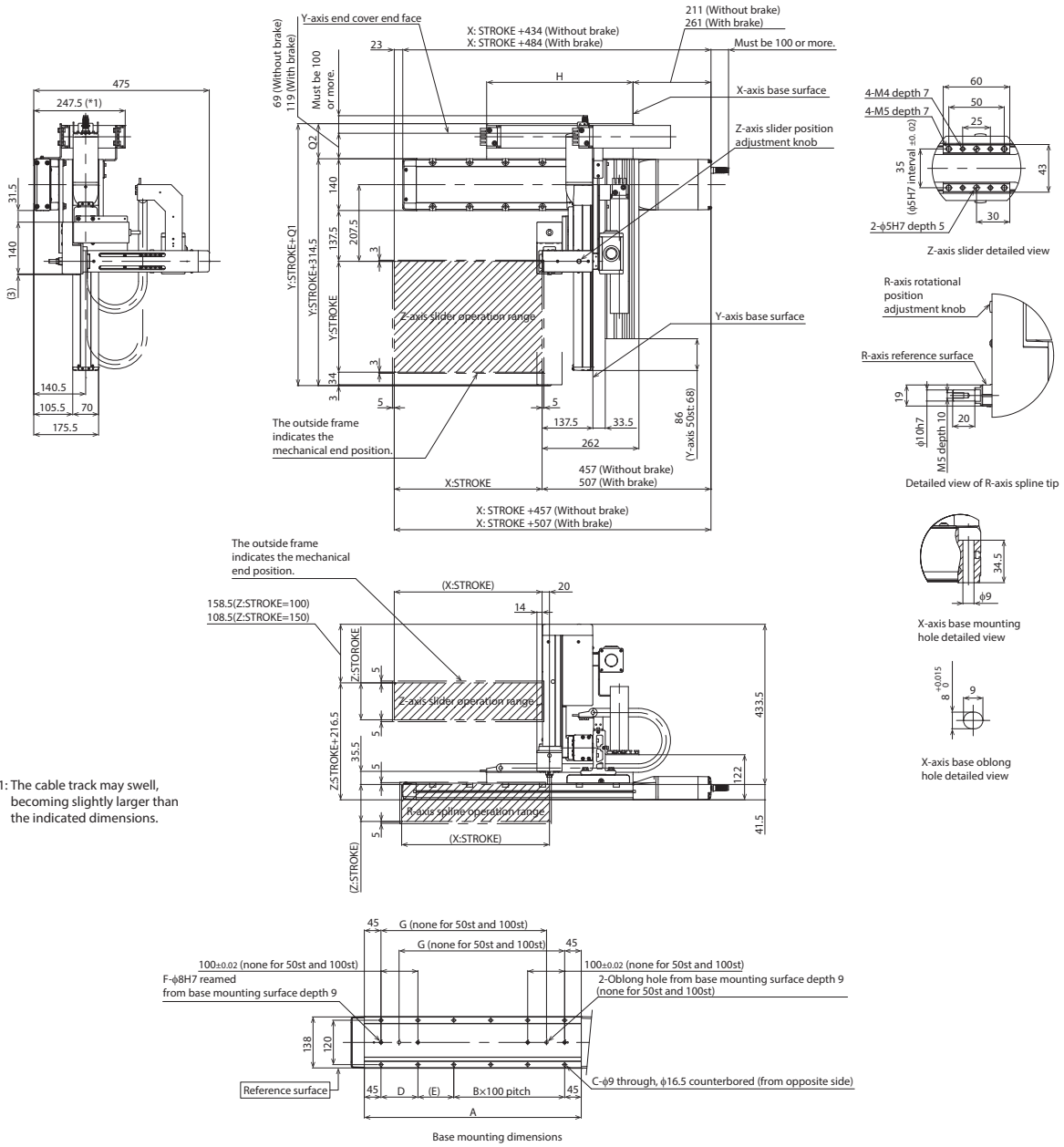
Type	Option code	Reference page	X-axis	Y-axis	Z-axis
Brake*	B	See P.134	○	○	Standard equipment *
Cable exit direction (Top)	CJT	See P.134	○	Cannot be selected	
Cable exit direction (Right)	CJR	See P.134	○		
Cable exit direction (Left)	CJL	See P.134	○		
Cable exit direction (Bottom)	CJB	See P.134	○		
Slider cover	CO	See P.134	Cannot be selected		○
Non-motor end specification	NM	See P.135	○	○	○
Slider section roller specification	SR	See P.135	○	○	Cannot be selected

* Outside as standard. Be sure to specify.
 * Brake option for X- and/or Y-axis increases the length of the motor unit(s). Please contact IAI for more information.

CAD drawings can be downloaded from our website.
www.intelligentactuator.com



Note 1. The configuration position in the figure is home.
Note 2. The diagram shows first and second wirings with cable tracks.
Note 3. Refer to P.136 for the details of the cable tracks.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.

■ Dimensions by Stroke

X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	237	287	337	387	437	487	537	587	637	687	737	787	837	887	937	987
B	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
C	4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20
D	-	-	100	100	100	100	100	100	100	100	100	100	100	100	100	100
E	147	197	47	97	47	97	47	97	47	97	47	97	47	97	47	97
F	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4
G	-	-	198	248	298	348	398	448	498	548	598	648	698	748	798	848
H	221	246	271	296	321	346	371	396	421	446	471	496	521	546	571	596

Cable track size	CT	CTM	CTL	CTXL
Q1	397.5	409.5	424.5	442.5
Q2	83	95	110	128

* Dimensions Q1 and Q2 change depending on the size of the cable track.

Cartesian Robot Options

Brake

Option Code B

Description This is a holding mechanism that prevents the slider from falling and damaging any attached fittings when the power or servo is turned off. As the Z-axis is designed to be used vertically, a brake will be equipped as a standard feature. For axes other than the Z-axis, please use the brake option as required.

Slider Cover (IK4 dedicated)

Option Code CO

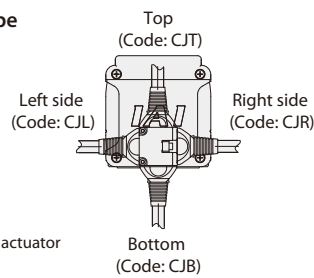
Description Equips the IK4 (rotational axis specification) with a slider cover for when the Z-axis slider is not in use.

Cable Exit Direction

Option Code CJT / CJR / CJL / CJB / CJO

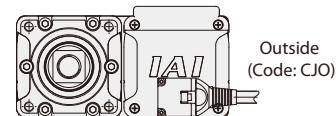
Description This option allows you to change the exit direction of the motor-encoder cable to top, bottom, left, or right.

Straight motor type



* When viewed from the actuator rear side (motor side).

Side-mounted motor type



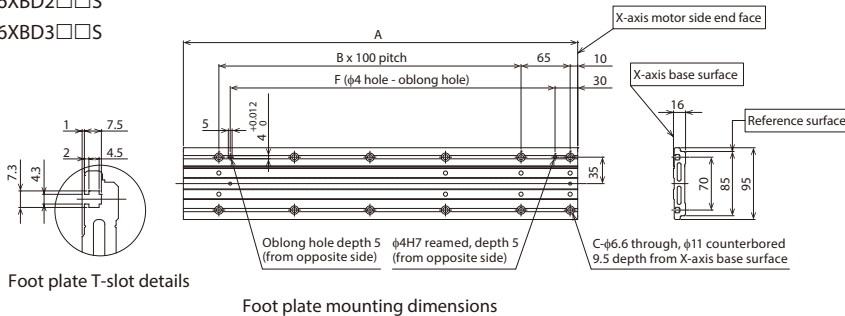
* When viewed from the actuator front side.

Foot Plate

Option Code FTP

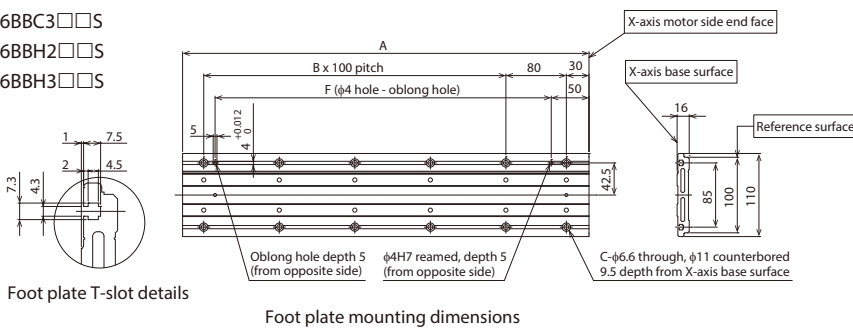
Description X-axis can be installed from the top with this Foot Plate.

IK2-P6XBD2□□S
IK2-P6XBD3□□S



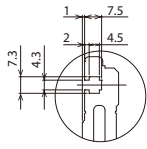
X-axis stroke	A	B	C	F
50	172	0	4	30
100	222	1	6	130
150	272	1	6	130
200	322	2	8	230
250	372	2	8	230
300	422	3	10	330
350	472	3	10	330
400	522	4	12	430
450	572	4	12	430
500	622	5	14	530
550	672	5	14	530
600	722	6	16	630
650	772	6	16	630
700	822	7	18	730
750	872	7	18	730
800	922	8	20	830

IK2-P6XBC2□□S
IK2-P6XBC3□□S
IK3-P6BBC2□□S
IK3-P6BBC3□□S
IK3-P6BBH2□□S
IK3-P6BBH3□□S

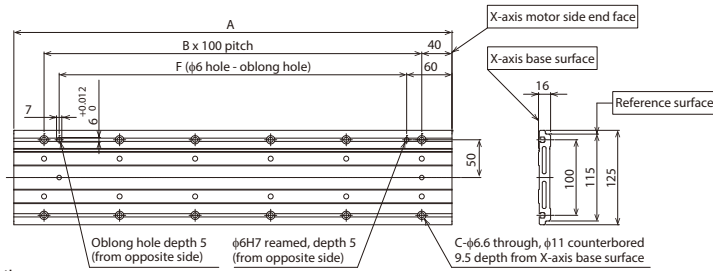


X-axis stroke	A	B	C	F
50	188	0	4	45
100	238	1	6	145
150	288	1	6	145
200	338	2	8	245
250	388	2	8	245
300	438	3	10	345
350	488	3	10	345
400	538	4	12	445
450	588	4	12	445
500	638	5	14	545
550	688	5	14	545
600	738	6	16	645
650	788	6	16	645
700	838	7	18	745
750	888	7	18	745
800	938	8	20	845

- IK2-P6XBB2□□S
- IK2-P6XBB3□□S
- IK3-P6BBB2□□S
- IK3-P6BBB3□□S
- IK3-P6BBG2□□S
- IK3-P6BBG3□□S
- IK4-P6BBB2□□S
- IK4-P6BBB3□□S



Foot plate T-slot details

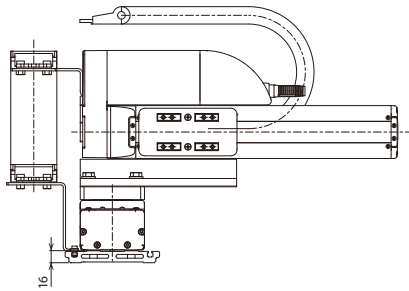


Foot plate mounting dimensions

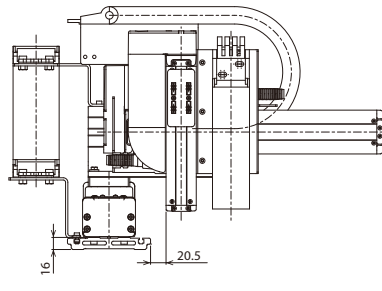
X-axis stroke	A	B	C	F
50	230	1	4	60
100	280	2	6	160
150	330	2	6	160
200	380	3	8	260
250	430	3	8	260
300	480	4	10	360
350	530	4	10	360
400	580	5	12	460
450	630	5	12	460
500	680	6	14	560
550	730	6	14	560
600	780	7	16	660
650	830	7	16	660
700	880	8	18	760
750	930	8	18	760
800	980	9	20	860
850	1030	9	20	860
900	1080	10	22	960
950	1130	10	22	960
1000	1180	11	24	1060
1050	1230	11	24	1060
1100	1280	12	26	1160

* Please refer to the dimensions below when mounting.

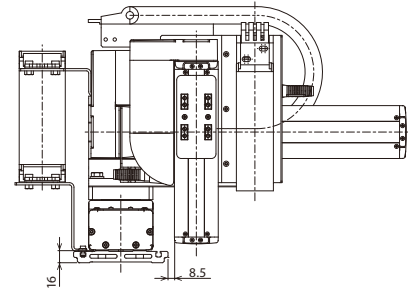
- IK2-P6XBD2□□S
- IK2-P6XBD3□□S
- IK2-P6XBC2□□S
- IK2-P6XBC3□□S
- IK2-P6XBB2□□S
- IK2-P6XBB3□□S



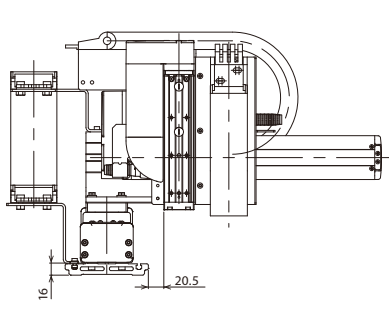
- IK3-P6BBC2□□S
- IK3-P6BBC3□□S



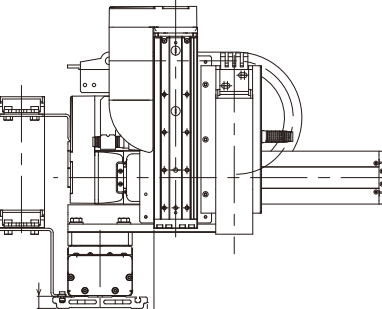
- IK3-P6BBB2□□S
- IK3-P6BBB3□□S



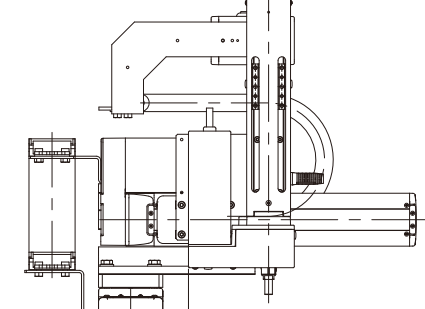
- IK3-P6BBH2□□S
- IK3-P6BBH3□□S



- IK3-P6BBG2□□S
- IK3-P6BBG3□□S



- IK4-P6BBB2□□S
- IK4-P6BBB3□□S



Non-motor End Specification

Option Code **NM**

Description The normal home position is set by the slider and rod on the motor side, however there is the option for the home position to be on the other side to accommodate variations in equipment layout, etc. (Please note that changing the home position after the actuators are shipped may require the products to be sent back to IAI for re-setting.)

Slider Roller Specification

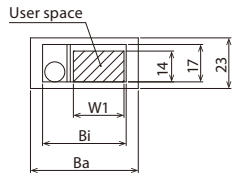
Option Code **SR**

Description The slider of the standard slider type specification is changed to the same roller structure as the cleanroom type. When using the slider roller spec., the appearance and dimensions of the slider cover will be the same as the cleanroom type. Changing to roller specification will make the external view and dimensions of the slider cover the same as the cleanroom type.

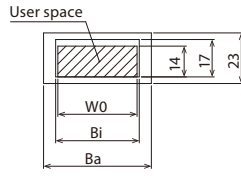
Appendix

Cable Track

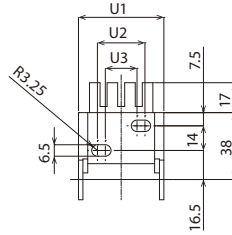
2-axis configurations | Cable storage | Detailed view



X-Y, Y-Z cable track sectional view

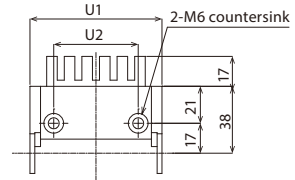


Y-Y, Z-Z cable track sectional view



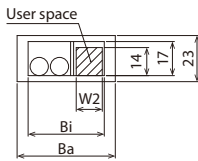
Y-Y, Z-Z cable track moving end detailed view (CT, CTM)

Cable track size	CT	CTM	CTL	CTXL
U1	48.5	60.5	75	-
U2	27	39.5	48	-
U3	18	30.5	-	-
Ba	49	61	76	94
Bi	38	50	63	80
W0	36	48	61	78
W1	23	35	48	65

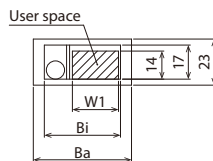


Y-Y, Z-Z cable track moving end detailed view (CTL)

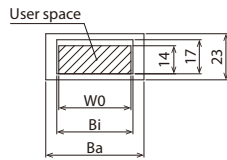
3-axis configurations | Cable storage | Detailed view



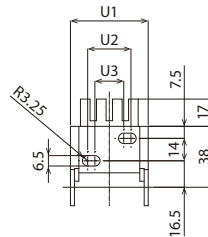
X-Y cable track sectional view



Y-Z cable track sectional view



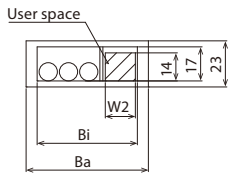
Z-Z cable track sectional view



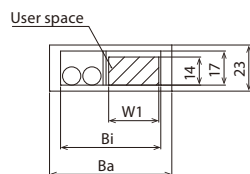
Z-Z cable track moving end detailed view

Cable track size	CT	CTM	CTL	CTXL
U1	48.5	60.5	-	-
U2	27	39.5	-	-
U3	18	30.5	-	-
Ba	49	61	76	94
Bi	38	50	63	80
W0	36	48	61	78
W1	23	35	48	65
W2	13	25	38	55

4-axis configurations | Cable storage | Detailed view



X-Y cable track sectional view



Y-ZR cable track sectional view

Cable track size	CT	CTM	CTL	CTXL
Ba	49	61	76	94
Bi	38	50	63	80
W1	13	25	38	-
W2	-	15	28	45

Bigger user space is available by ordering as a special specification, if it is insufficient. Please refer to each controller page.

Cable Length

Cable code	Length	RCP6 2-axis IK2-P6	RCP6 3-axis IK3-P6	RCP6 4-axis IK4-P6
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	○	○	○

Table of Maximum Speed by Stroke

Only models and axes whose maximum speed varies depending on the stroke are listed.

For models and axes not listed below, there is no change in the maximum speed depending on the stroke. Please refer to the product pages. However, the maximum speed may not be reached if the stroke is short or the acceleration is low.

■ IK2-P6XBD1□□S X-axis: SA6R

■ IK2-P6XBD2□□S X-axis: SA6C

■ IK2-P6XBD3□□S X-axis: SA6C

(Unit: mm/s)

Speed type	Stroke	50~750 (Every 50mm)	800 (mm)
	SS		640

■ IK2-P6XBC1□□S X-axis: SA7R

■ IK2-P6XBC2□□S X-axis: SA7C

■ IK2-P6XBC3□□S X-axis: SA7C

(Unit: mm/s)

Speed type	Stroke	50~700 (Every 50mm)	750 (mm)	800 (mm)
	MM		280	275
HH		560		500
SS		640		

■ IK2-P6XBB1□□S X-axis: SA8R

■ IK2-P6XBB2□□S X-axis: SA8C

■ IK2-P6XBB3□□S X-axis: SA8C

(Unit: mm/s)

Speed type	Stroke	50~900 (Every 50mm)	950 (mm)	1000 (mm)	1050 (mm)	1100 (mm)
	MM		300	285	260	235
HH		400				
SS		650				

■ IK2-P6XBE1□□S X-axis: WSA16R

■ IK2-P6XBE2□□S X-axis: WSA16C

■ IK2-P6XBE3□□S X-axis: WSA16C

(Unit: mm/s)

Speed type	Stroke	50~1050 (Every 50mm)	1100 (mm)
	MH		210
HH		365	

■ IK2-P6YBD1□□S Y-axis: SA6R

■ IK2-P6YBD2□□S Y-axis: SA6C

■ IK2-P6YBD3□□S Y-axis: SA6C

(Unit: mm/s)

Speed type	Stroke	50~650 (Every 50mm)	700 (mm)	750 (mm)	800 (mm)
	SM		800	735	650
SH					

■ IK2-P6YBI1□□S Y-axis: SA6R

■ IK2-P6YBI2□□S Y-axis: SA6C

■ IK2-P6YBI3□□S Y-axis: SA6C

(Unit: mm/s)

Speed type	Stroke	50~650 (Every 50mm)	700 (mm)	750 (mm)	800 (mm)
	SH		800	735	650

■ IK3-P6BBE1□□S X-axis: WSA16R

■ IK3-P6BBE2□□S X-axis: WSA16C

■ IK3-P6BBE3□□S X-axis: WSA16C (Unit: mm/s)

Speed Type	Stroke	50 ~ 1050 (Every 50mm)	1100 (mm)
	MHL		210
MHM			
MHH			
MHS			

■ IK4-P6BBB1□□S X-axis: SA8R

■ IK4-P6BBB2□□S X-axis: SA8C

■ IK4-P6BBB3□□S X-axis: SA8C (Unit: mm/s)

Speed Type	Stroke	50 ~ 900 (Every 50mm)	950 (mm)	1000 (mm)	1050 (mm)	1100 (mm)
	MM		300	285	260	235

R-Axis Allowable Moment of Inertia, and Angular Velocity and Angular Acceleration/Deceleration

R-axis allowable moment of inertia	Set angular velocity	Set acceleration/deceleration
0.010kg·m ²	300 deg/s	0.10 G (1,000 deg/s ²)
0.008kg·m ²	400 deg/s	0.18 G (1,778 deg/s ²)
0.006kg·m ²	500 deg/s	0.28 G (2,778 deg/s ²)
0.005kg·m ²	600 deg/s	0.30 G (2,940 deg/s ²)
0.004kg·m ²	800 deg/s	
0.003kg·m ² or less	1,000deg/s	

MSEL



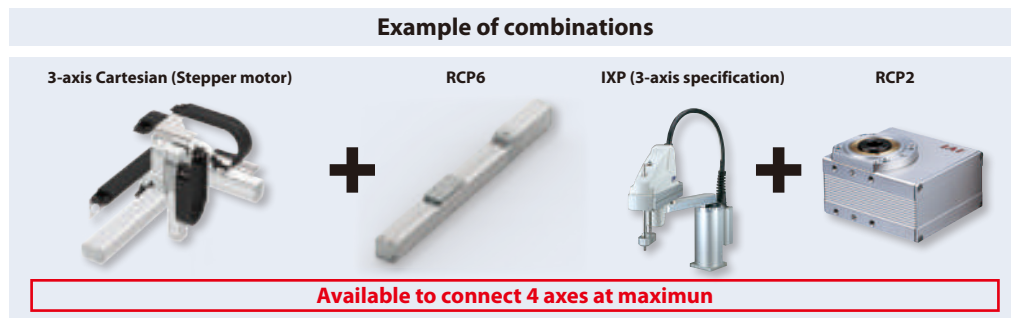
RCP6/RCP5/RCP4/RCP3/RCP2
Program Controller

Features

1 Control maximum of 4 axes available with stepper motor mounted ROBO Cylinder

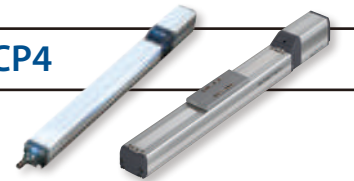
It is also available for interpolation operation, widening the range of possible applications

Example of combinations



2 Available to connect ROBO Cylinders RCP6/RCP5/RCP4

By applying PowerCON, it is now possible to perform interpolation operation with ROBO Cylinders RCP6/RCP5/RCP4, which are applicable for high-output driver, but were not feasible with the program controller PSEL in the past.

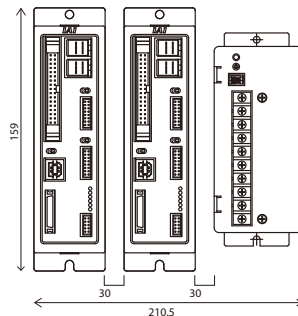


3 Reduced wiring/space saving

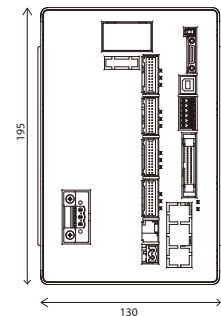
Until now, with 4 axes controlled for the actuator, 2 controllers (PSEL) for 2-axis control and a 24 V power supply were required. Using MSEL with a built-in power supply, 4-axis control is possible with 1 controller. As a result, wiring is reduced and space is saved.

In 4-axis controlling of actuator

Conventional Product PSEL 2 units + PS241 (24 V power supply)



New product MSEL 1 unit



Cable Reduction


Applicable for 100 ~230VAC
with built-in power source

4 Equipped with expansion I/O slot

In addition to standard IO (IN 16 points / OUT 16 points), one slot is available as the expansion I/O slot. The expansion I/O is available to select from either a PIO (IN 16 points / OUT 16 points) or one of the various available communication boards.

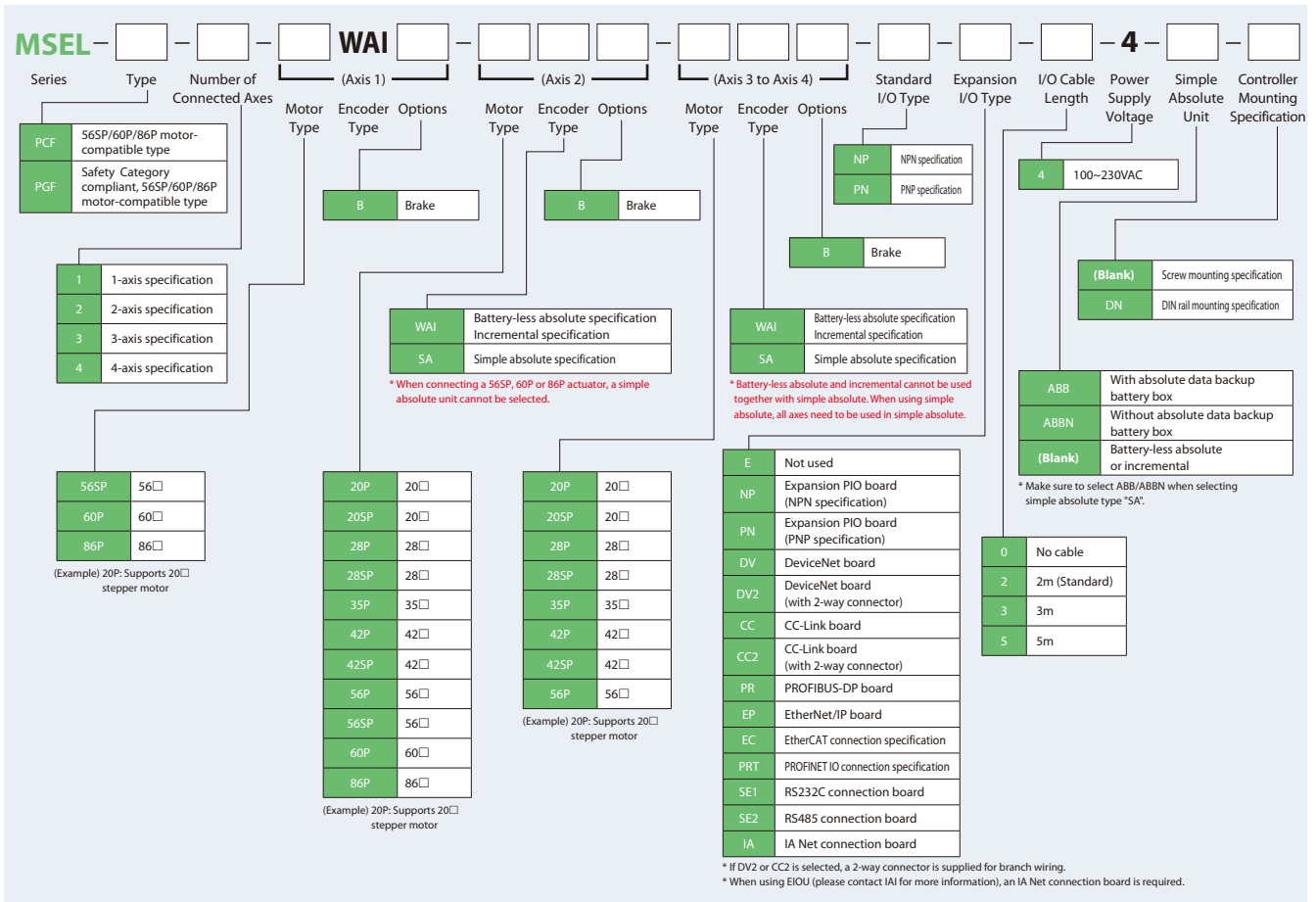
When connecting an actuator with the motor type 56SP, 60P, or 86P.

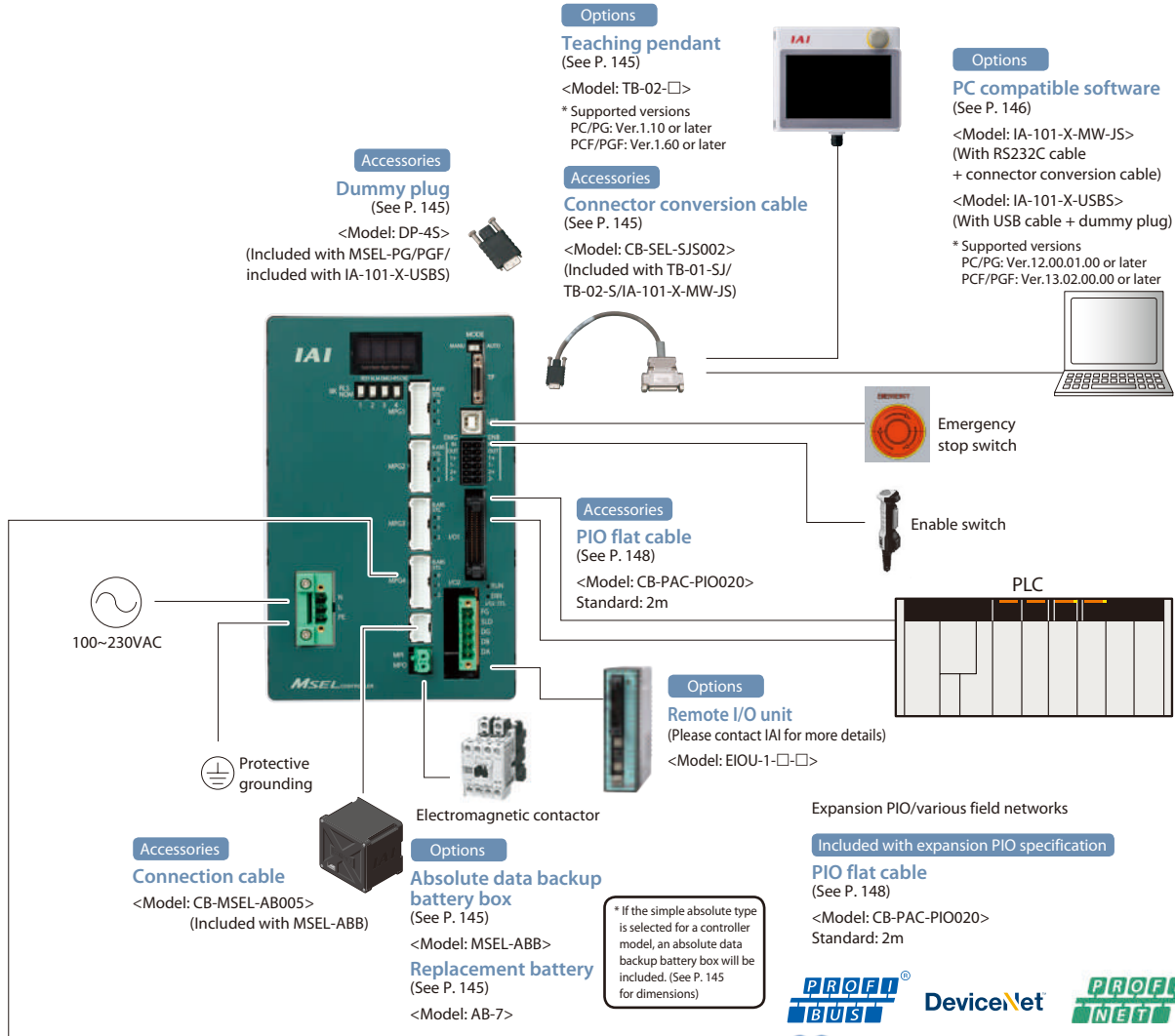
List of Models

Type name	PCF	PGF																																						
Type	56SP/60P/86P motor-compatible type	Safety Category compliant, 56SP/60P/86P motor-compatible type																																						
External view																																								
Max. number of controlled axes	4																																							
No. of positions	30,000 points																																							
Power supply	Single-phase 100~230VAC																																							
Safety Category	B	3 ^{*1}																																						
Standard price	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">1</th> <th colspan="2">2</th> <th colspan="2">3</th> <th rowspan="2">Price</th> </tr> <tr> <th colspan="2">Base price</th> <th colspan="2">56SP, 60P, 86P actuator quantity</th> <th colspan="2">Quantity of simple absolute encoders</th> </tr> <tr> <th>Number of axes</th> <th>Price</th> <th>Number of axes</th> <th>Price</th> <th>Number of axes</th> <th>Price</th> <th rowspan="4">Standard price by specification</th> </tr> </thead> <tbody> <tr> <td>1-axis specification</td> <td style="text-align: center;">○</td> <td>1-axis</td> <td style="text-align: center;">○</td> <td>1-axis</td> <td style="text-align: center;">○</td> </tr> <tr> <td>2-axis specification</td> <td style="text-align: center;">○</td> <td>2-axis</td> <td style="text-align: center;">○</td> <td>2-axis</td> <td style="text-align: center;">○</td> </tr> <tr> <td>3-axis specification</td> <td style="text-align: center;">○</td> <td></td> <td></td> <td>3-axis</td> <td style="text-align: center;">○</td> </tr> </tbody> </table>		1		2		3		Price	Base price		56SP, 60P, 86P actuator quantity		Quantity of simple absolute encoders		Number of axes	Price	Number of axes	Price	Number of axes	Price	Standard price by specification	1-axis specification	○	1-axis	○	1-axis	○	2-axis specification	○	2-axis	○	2-axis	○	3-axis specification	○			3-axis	○
1		2		3		Price																																		
Base price		56SP, 60P, 86P actuator quantity		Quantity of simple absolute encoders																																				
Number of axes	Price	Number of axes	Price	Number of axes	Price	Standard price by specification																																		
1-axis specification	○	1-axis	○	1-axis	○																																			
2-axis specification	○	2-axis	○	2-axis	○																																			
3-axis specification	○			3-axis	○																																			

*1: To comply with the safety category, the customer will need to install a safety circuit external to the controller.

Model Specification Items

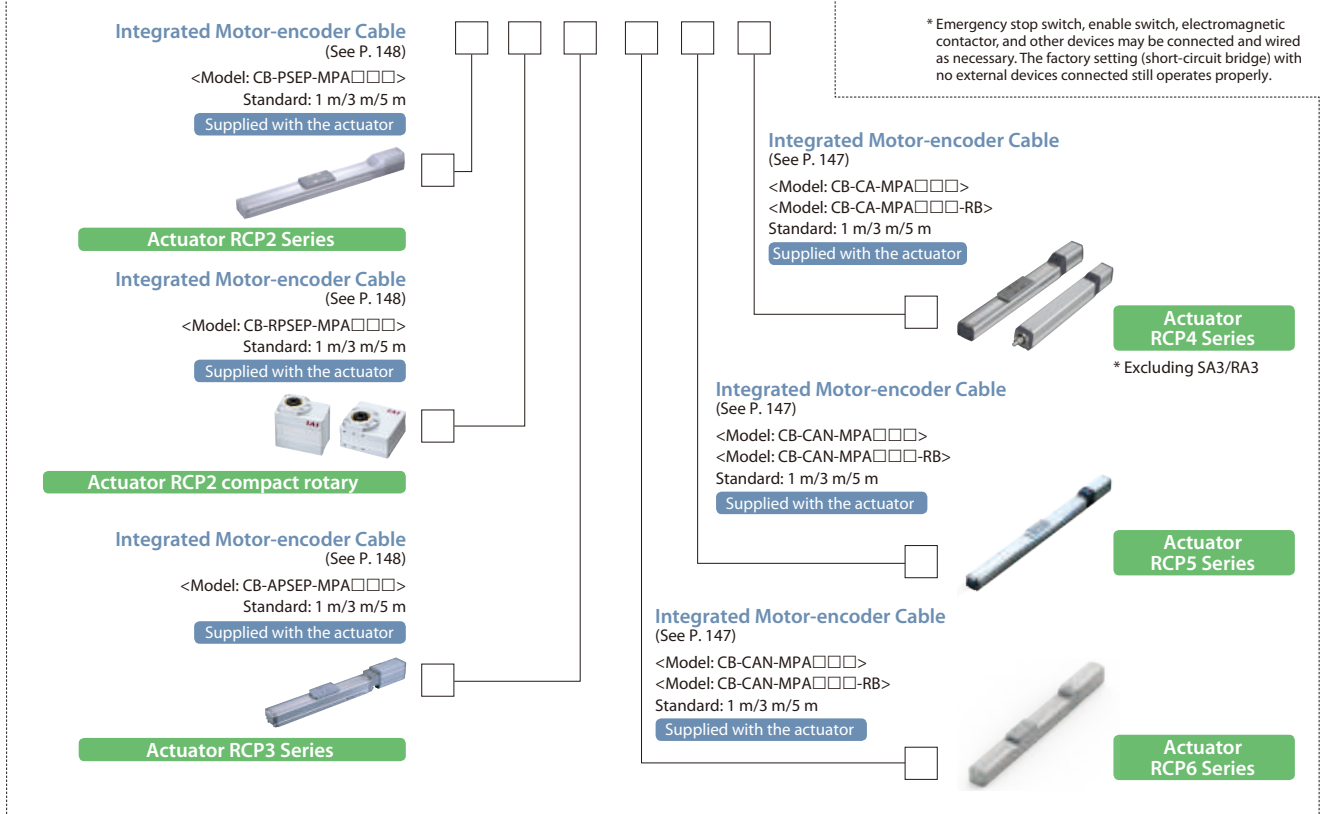




* If the simple absolute type is selected for a controller model, an absolute data backup battery box will be included. (See P. 145 for dimensions)



<Connectable actuators>



Basic Controller Specifications

Specification item		Description	
Power supply input voltage		Single-phase 100~230 VAC ±10%	
Power supply current		2.9A typ. (100 VAC), 1.4A typ. (200 VAC), 1.2A typ. (230 VAC)	
Power frequency range		50/60Hz ±5%	
Motor type		Stepper motor (servo control)	
Supported encoders		Incremental Encoder/Battery-Less Absolute Encoder	
Data storage device		FlashROM/FRAM	
Number of program steps		9,999	
Number of positions		30,000	
Number of programs		255	
Number of multi-tasks		16	
Operation mode	Serial communication	○	
	Program	○	
SIO interface	Communication method	RS232 (asynchronous communication)	
	Baud rate	9.6, 19.2, 38.4, 57.6, 76.8, 115.2kbps	
	Live wire connection	TP port	×
		USB	○
Standard PIO interface	Input specification	Number of input points	16 points
		Input voltage	24VDC ± 10%
		Input current	7mA/circuit
		ON voltage	Min.16VDC
		OFF voltage	Max.5VDC
		Leak current	Allowable leak current: 1mA max.
	Output specification	Isolation method	Photocoupler insulation
		Number of output	16 points
		Load voltage	24VDC ± 10%
		Max. current	100mA/1 point, 400mA/8 points (Note 1)
		Saturated voltage	Max.3V
		Leak current	Max.0.1mA
Isolation method	Photocoupler insulation		
Applicable expansion I/O interface		Expansion PIO NPN specification (16IN/16OUT)	
		Expansion PIO PNP specification (16IN/16OUT)	
Calendar/clock function		Retention time	Approx. 10 days
		Charging time	Approx. 100 hours (full charge) data retention is possible even if the batteries are not fully charge
Protection function		Overcurrent, abnormal temperature, fan speed degradation monitoring, encoder disconnection, etc.	
Operating temperature range		0 to 40°C	
Operating humidity range		85% RH max. (no condensation or freezing)	
Installation	Mounting direction	Vertical mounting (exhaust-side top)	
	Mounting method	Screw mounted or DIN rail mounted	
Rush current		15A typ. (100 VAC), 30A typ. (200 VAC): 5ms max. (Ambient temperature 25°C/No cycling of the power)	
Air cooling method		Forced air cooling	
External dimensions		Width 130mm x Height 195mm x Depth 125mm	
Mass		Approx. 1400g	

Note 1: The total load current is 400mA for every eight points from standard I/O No. 316. (The maximum current per point is 100mA.)

PIO Signal Chart

Pin Layouts for Standard PIO Connector/Expansion PIO Connector

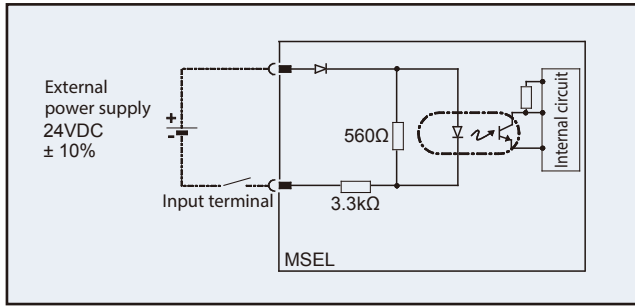
Pin No.	Category	Assignment	Pin No.	Category	Assignment
1A	24V	P24	1B	Output	OUT0
2A	24V	P24	2B		OUT1
3A	-	-	3B		OUT2
4A	-	-	4B		OUT3
5A	Input	IN0	5B		OUT4
6A		IN1	6B		OUT5
7A		IN2	7B		OUT6
8A		IN3	8B		OUT7
9A		IN4	9B		OUT8
10A		IN5	10B		OUT9
11A		IN6	11B		OUT10
12A		IN7	12B		OUT11
13A		IN8	13B		OUT12
14A		IN9	14B		OUT13
15A		IN10	15B		OUT14
16A		IN11	16B	OUT15	
17A		IN12	17B	-	
18A		IN13	18B	-	
19A		IN14	19B	0V	N
20A	IN15	20B	0V	N	

Standard I/O (NPN Specification) Internal Circuit

[Input] External input specification (NPN specification)

Item	Specification
Input voltage	24VDC $\pm 10\%$
Input current	7mA, 1 circuit
ON/OFF voltage	ON voltage: min. 16.0VDC; OFF voltage: max. 5.0VDC
Insulation method	Photocoupler insulation

* The port numbers in the circuit diagram below are the default port numbers set at time of shipping.
 * The allowable leakage current when input is off is 1mA or less.

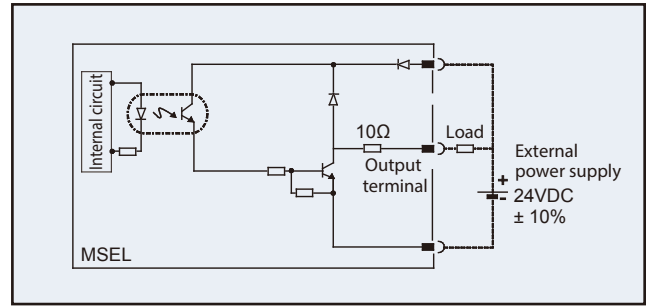


* Please refer to the instruction manual for standard I/O (PNP specification).

[Output] External output specification (NPN specification)

Item	Specification	TD62084 (equivalent) used
Load voltage	24VDC $\pm 10\%$	
Maximum load current	100mA/1 point, 400mA/8 points (Note)	
Leakage current	0.1mA max./point	
Insulation method	Photocoupler insulation	

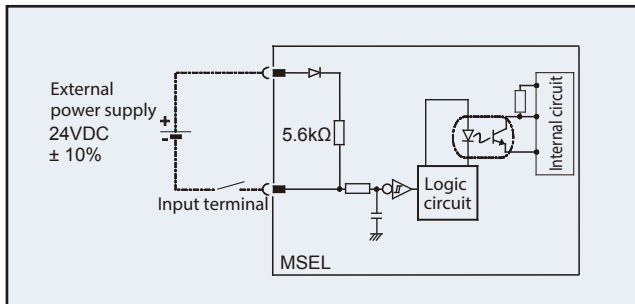
* The port numbers in the circuit diagram below are the default port numbers set at time of shipping.
 Note: The total load current is 400mA for every eight points from standard I/O No. 316.
 (The maximum current per point is 100mA.)



Expansion I/O (NPN Specification) Internal Circuit

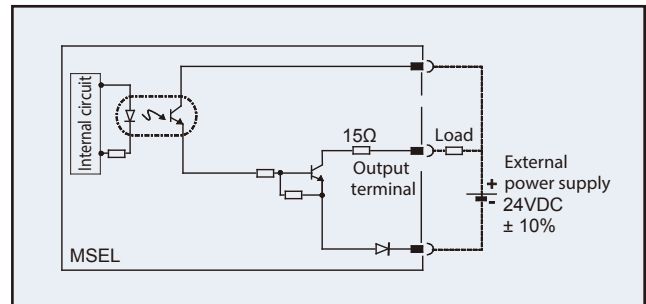
[Input] External input specification

Item	Specification
Number of input	16 points
Input voltage	24VDC $\pm 10\%$
Input current	4mA, 1 circuit
ON/OFF voltage	ON voltage: 18VDC min. (3.5mA) OFF voltage: 6VDC max. (1mA)
Insulation method	Photocoupler insulation

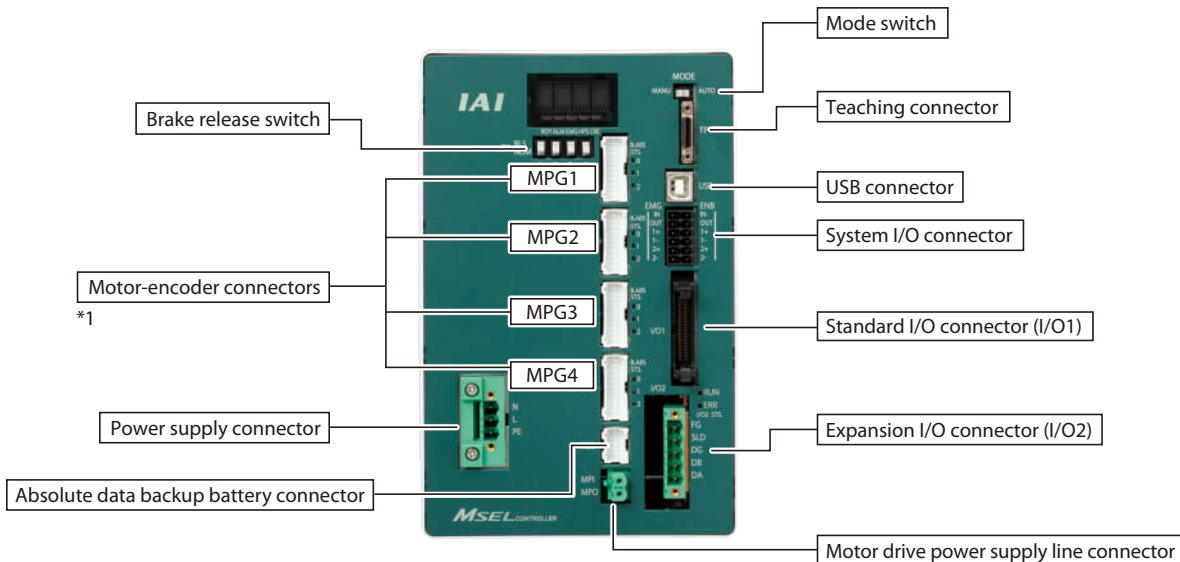


[Output] External output specification

Item	Specification
Number of output	16 points
Rated load current	24VDC $\pm 10\%$
Max. current	50mA, 1 circuit
Insulation method	Photocoupler insulation

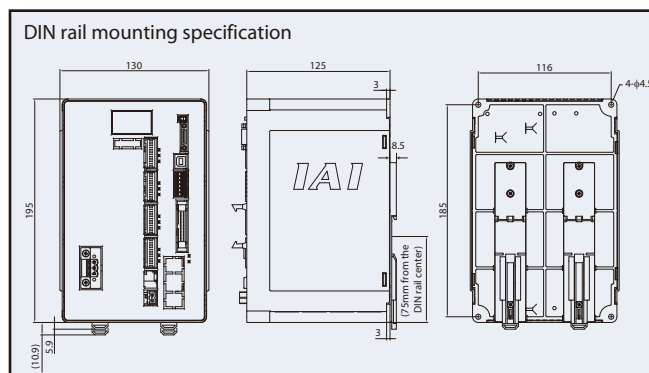
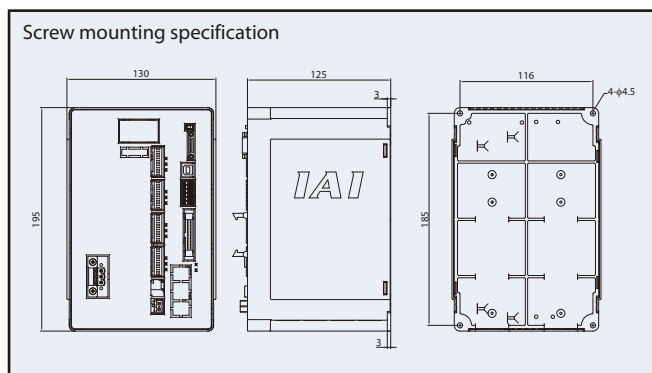


Name of Each Component

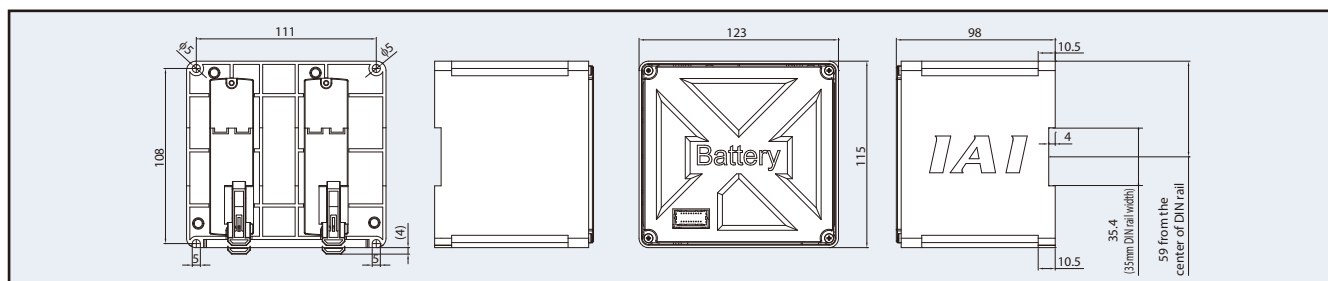


*1: Do not connect a motor to the wrong MPG1, MPG2, MPG3, or MPG4 connector. This may lead to malfunction or failure.

Controller



Absolute data backup battery box



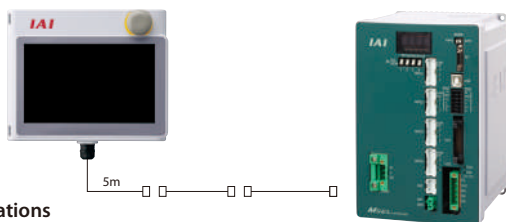
Options

Teaching pendant

Features A teaching device equipped with functions such as program and position input, trial operation, monitoring, etc.

Model **TB-02-**

Configuration



Specifications

Rated voltage	24V DC
Power consumption	3.6W or less (150mA or less)
Ambient operating temperature	0 to 40°C
Ambient operating humidity	20~85% RH (no condensation)
Environmental resistance	IP20
Mass	470g (TB-02 unit only)

Dummy plug

Features Required when operating safety category specification (MSEL-PG/PGF) units or when operated using a USB cable. (MSEL-PG/PGF type, PC software IA-101-X-USBS accessory)

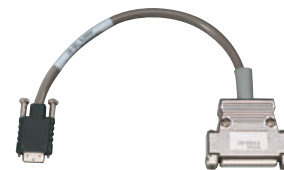
Model **DP-4S**



Connector conversion cable

Features Converts a teaching pendant or RS232C cable D-sub 25-pin connector to an MSEL teaching connector. (TB-01-SJ, TB-02-S, IA-101-X-MW-JS accessory)

Model **CB-SEL-SJS002**

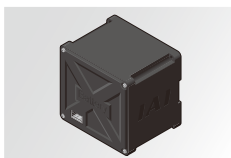


Absolute data backup battery box

Overview If the simple absolute type is selected with the code ABB, the absolute data backup battery box is included with the controller. However, if the battery box is ordered as a separate unit, batteries will not be included, only the box itself. If the battery is needed, please purchase it separately (Model: AB-7).

Model **MSEL-ABB** (battery sold separately)

External Dimensions See P. 145



* Cable that connects the absolute data backup battery box and MSEL (Model: CB-MSEL-AB005) is included with the box.

Replacement battery

Overview Replacement battery for the absolute data backup battery box.

Model **AB-7**



* The number of required absolute batteries is the same as the number of axes.

PC compatible software (Windows only)

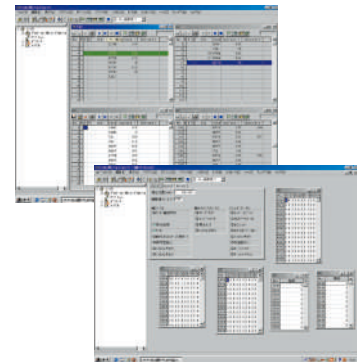
Features This is start-up support software which comes equipped with functions such as program/position input, trial operation, monitoring, etc. The functions required for debugging have been significantly improved to shorten the start-up time.

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

Configuration

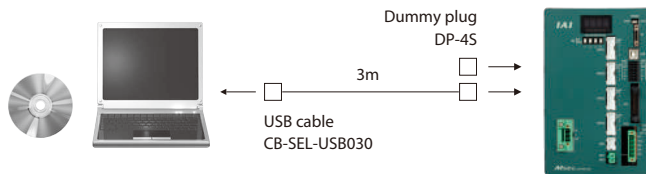


Compatible with Windows
XP SP2 or later/Vista/7/8



Model **IA-101-X-USBS** (With USB cable + dummy plug)

Configuration



MSEL-PC/PG is supported by
Ver.12.00.01.00 or later.

CB-ST-E1MW050-EB cannot be used "when building an enable system using the system I/O connector and an external power supply." or "when building a redundant safety circuit". (The use of CB-ST-A2MW050-EB is required.)

Maintenance Parts

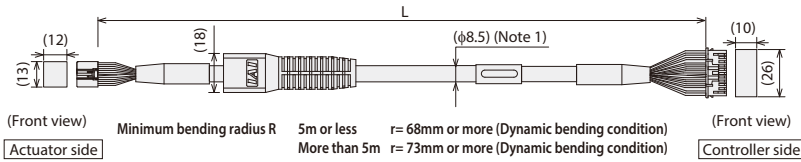
When placing an order for a replacement cable, please use the model name shown below. (* For connectable actuators, please contact IAI for more information.)

Table of compatible cables

Model name		Integrated Motor-encoder Cable	Integrated Motor-encoder Robot Cable
①	RCP6/RCP6CR/RCP5/RCP5CR/RCP5W (Models other than (3))	CB-CAN-MPA□□□	CB-CAN-MPA□□□-RB
②	RCP4 SA3/RA3/GR		
③	RCP6/RCP6CR RCP5 RA7 (High thrust specification)/RA8/RA10 RCP5W WSA16/WRA16	CB-CFA3-MPA□□□	CB-CFA3-MPA□□□-RB
④	RCP4/RCP4CR/RCP4W (Models other than (2), (5), (6))	CB-CA-MPA□□□	CB-CA-MPA□□□-RB
⑤	RCP4 RA6C (High thrust specification)	CB-CFA2-MPA□□□	CB-CFA2-MPA□□□-RB
⑥	RCP4W RA7C (High thrust specification)		
⑦	RCP3		
⑧	RCP2 GRSS/GRLS/GRST/GRHM/GRHB/SRA4R/ SRGS4R/SRGD4R	-	CB-APSEP-MPA□□□
⑨	RTBS/RTBSL RTCS/RTCSL	-	CB-RPSEP-MPA□□□
⑩	RCP2CR GRS/GRM RCP2W GR3SS/GR3SM	CB-CAN-MPA□□□	CB-CAN-MPA□□□-RB
⑪	RTBS/RTBSL RTCS/RTCSL/RTB/RTBL/RTC/RTCL/RTBB/ RTBBL/RTCB/RTCBL		
⑫	RCP2 RA10/HS8 RCP2CR RA8 RCP2W	CB-CFA-MPA□□□	CB-CFA-MPA□□□-RB
⑬	RCP2W SA16C		
⑭	RCP2 (Models other than (8)~(13))	-	CB-PSEP-MPA□□□
Model name		PIO flat cable	
⑮	PCON-CB-CGB/CFB-CGFB	CB-PAC-PIO□□□	

Model: **CB-CAN-MPA**□□□/ **CB-CAN-MPA**□□□-**RB**

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



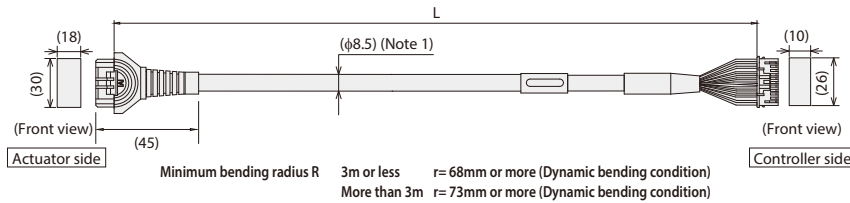
* The robot cable is designed for flex-resistance:
Please use the robot cable if the cable needs to be installed through the cable track.

(Note 1) If the cable length is 5m or more, $\phi 9.1$ cable diameter applies for both non-robot cables and robot cables.

Pin No.	Signal name	Pin No.	Signal name
3	$\phi A/U$	1	ϕA
5	VMM/V	2	VMM
10	$\phi A/W$	3	ϕB
9	$\phi B/-$	4	VMM
4	VMM/-	5	ϕA
15	$\phi B/-$	6	ϕB
8	LS+/BK+	7	LS+
14	LS-/BK-	8	LS-
12	-/A+	11	SA(mABS)
17	-/A-	12	SB(mABS)
1	A+/B+	13	A+
6	A-/B-	14	A-
11	B+/Z+	15	B+
16	B-/Z-	16	B-
20	BK+/LS+	9	BK+
2	BK-/LS-	10	BK-
21	LS GND	17	VCC
7	VPS	19	GND
15	VCC	18	VPS
13	GND	20	LS GND
19	—	22	—
22	BAT+	21	-(CFvcc)
23	—	23	—
24	FG	24	FG

Model: **CB-CFA3-MPA**□□□/ **CB-CFA3-MPA**□□□-**RB**

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



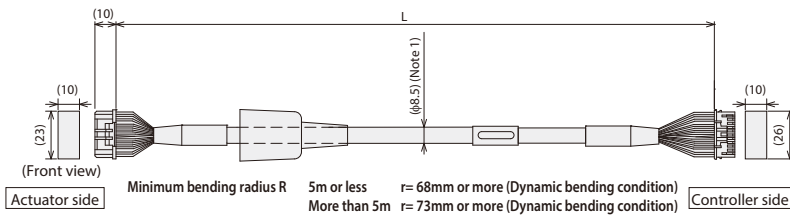
* The robot cable is designed for flex-resistance:
Please use the robot cable if the cable needs to be installed through the cable track.

(Note 1) If the cable length is over 3m, $\phi 9.1$ cable diameter applies for a non-robot cable and $\phi 10$ for a robot cable.

Pin No.	Signal name	Pin No.	Signal name
A1	ϕA	1	ϕA
B1	VMM	2	VMM
A2	ϕA	5	ϕA
B2	ϕB	3	ϕB
A3	VMM	4	VMM
B3	ϕB	6	ϕB
B4	LS+	7	LS+
B4	LS-	8	LS-
A6	SA (mABS)	11	SA (mABS)
B6	SB (mABS)	12	SB (mABS)
A7	A+	13	A+
B7	A-	14	A-
A8	B+	15	B+
B8	B-	16	B-
A5	BK+	9	BK+
B5	BK-	10	BK-
A9	LS GND	20	LS GND
B9	VPS	18	VPS
A10	VCC	21	VCC
B10	GND	19	GND
A11	—	17	—
B11	FG	22	—
		23	—
		24	FG

Model: **CB-CA-MPA**□□□/ **CB-CA-MPA**□□□-**RB**

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



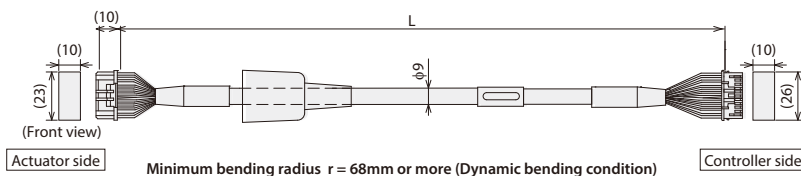
* The robot cable is designed for flex-resistance:
Please use the robot cable if the cable needs to be installed through the cable track.

(Note 1) If the cable length is 5m or more, $\phi 9.1$ cable diameter applies for a non-robot cable and $\phi 10$ for a robot cable.

Pin No.	Signal name	Pin No.	Signal name
A1	ϕA	1	ϕA
B1	VMM	2	VMM
A2	ϕA	5	ϕA
B2	ϕB	3	ϕB
A3	VMM	4	VMM
B3	ϕB	6	ϕB
A4	LS+	7	LS+
B4	LS-	8	LS-
A6	—	11	—
B6	—	12	—
A7	A+	13	A+
B7	A-	14	A-
A8	B+	15	B+
B8	B-	16	B-
A5	BK+	9	BK+
B5	BK-	10	BK-
A9	LS GND	20	LS GND
B9	VPS	18	VPS
A10	VCC	21	VCC
B10	GND	19	GND
A11	—	17	—
B11	FG	22	—
		23	—
		24	FG

Model: **CB-CFA2-MPA**□□□/ **CB-CFA2-MPA**□□□-**RB**

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

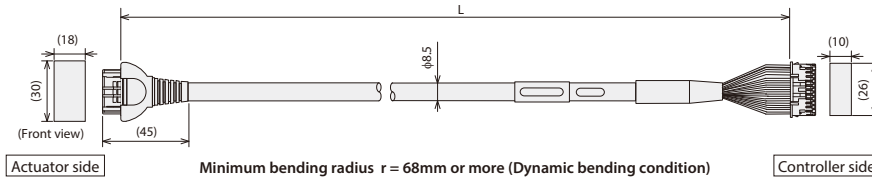


* The robot cable is designed for flex-resistance:
Please use the robot cable if the cable needs to be installed through the cable track.

Pin No.	Signal name	Pin No.	Signal name
A1	ϕA	1	ϕA
B1	VMM	2	VMM
A2	ϕA	5	ϕA
B2	ϕB	3	ϕB
A3	VMM	4	VMM
B3	ϕB	6	ϕB
A4	LS+	7	LS+
B4	LS-	8	LS-
A6	—	11	—
B6	—	12	—
A7	A+	13	A+
B7	A-	14	A-
A8	B+	15	B+
B8	B-	16	B-
A5	BK+	9	BK+
B5	BK-	10	BK-
A9	LS GND	20	LS GND
B9	VPS	18	VPS
A10	VCC	21	VCC
B10	GND	19	GND
A11	—	17	—
B11	FG	22	—
		23	—
		24	FG

Model: **CB-APSEP-MPA** □ □ □

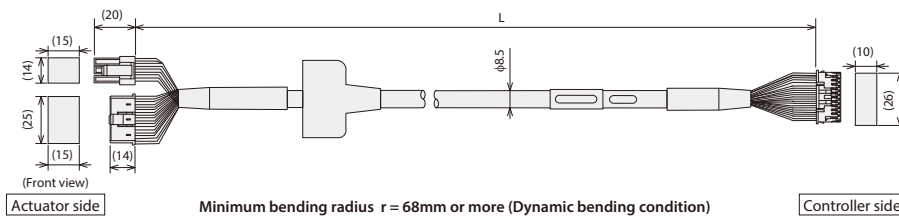
* Please indicate the cable length (L) in □ □ □, e.g.) 080 = 8m, maximum 20m



Actuator side Terminal number	(PCON)(ACON)	Controller side Terminal number
A1	{φA} (U)	1
B1	{VMM}(V)	2
A2	{φA} (W)	5
B2	{φB} (+)	3
A3	{VMM}(-)	4
B3	{φB} (+)	6
A4	{LS+}{BK+}	7
B4	{LS-}{BK-}	8
A6	{-}{A+}	11
B6	{-}{A-}	12
A7	{A+}{B+}	13
B7	{A-}{B-}	14
A8	{B+}{Z+}	15
B8	{B-}{Z-}	16
A5	{BK+}{LS+}	9
B5	{BK-}{LS-}	10
A9	{GNDL}{GNDLS}	20
B9	{VPS}{VPS}	18
A10	{VCC}{VCC}	17
B10	{GND}{GND}	19
A11	NC	21
	Shield (FG) (FG)	24
	NC	22
	NC	23

Model: **CB-PSEP-MPA** □ □ □ * Only the robot cable is available for this model.

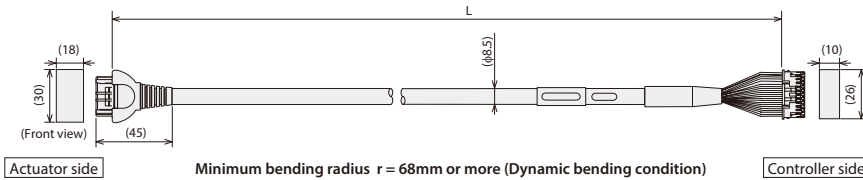
* Please indicate the cable length (L) in □ □ □, e.g.) 080 = 8m, maximum 20m



Actuator side Terminal number		Controller side Terminal number
1	{φA}	1
2	{VMM}	2
4	{φB}	3
5	{VMM}	4
3	{φA}	5
6	{φB}	6
16	{BK+}	9
17	{BK-}	10
5	NC	11
6	NC	12
13	{LS+}	7
14	{LS-}	8
1	{A+}	13
2	{A-}	14
3	{B+}	15
4	{B-}	16
10	{VCC}	17
11	{VPS}	18
9	{GND}	19
12	{Spare}	20
15	NC	21
7	NC	22
8	NC	23
18	Shield (FG)	24

Model: **CB-RPSEP-MPA** □ □ □ * Only the robot cable is available for this model.

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

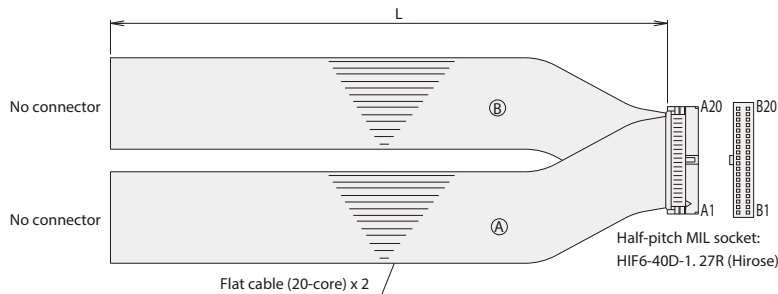


Actuator side Terminal number		Controller side Terminal number
A1	{φA}	1
B1	{VMM}	2
A2	{φA}	5
B2	{φB}	3
A3	{VMM}	4
B3	{φB}	6
A6	{LS+}	7
B6	{LS-}	8
A7	{A+}	13
B7	{A-}	14
A8	{B+}	15
B8	{B-}	16
A4	NC	-
B4	NC	-
A5	{BK+}	9
B5	{BK-}	10
A9	{GNDL}	20
B9	{VPS}	18
A10	{VCC}	17
B10	{GND}	19
A11	NC	21
B11	Shield (FG) (FG)	24
	NC	22
	NC	23

MSEL/PCON-CA/MSEP-LC PIO flat cable

Model: **CB-PAC-PIO** □ □ □

* Please indicate the cable length (L) in □ □ □, e.g.) 080 = 8m, maximum 10m



HIF6-40D-1.27R

No.	Signal name	Cable color	Wiring	No.	Signal name	Cable color	Wiring
A1	24V	Brown-1	Flat cable ④ (pressure-welded) AWG28	B1	OUT0	Brown-3	Flat cable ④ (pressure-welded) AWG28
A2	24V	Red-1		B2	OUT1	Red-3	
A3	-	Orange-1		B3	OUT2	Orange-3	
A4	-	Yellow-1		B4	OUT3	Yellow-3	
A5	IN0	Green-1		B5	OUT4	Green-3	
A6	IN1	Blue-1		B6	OUT5	Blue-3	
A7	IN2	Purple-1		B7	OUT6	Purple-3	
A8	IN3	Gray-1		B8	OUT7	Gray-3	
A9	IN4	White-1		B9	OUT8	White-3	
A10	IN5	Black-1		B10	OUT9	Black-3	
A11	IN6	Brown-2		B11	OUT10	Brown-4	
A12	IN7	Red-2		B12	OUT11	Red-4	
A13	IN8	Orange-2		B13	OUT12	Orange-4	
A14	IN9	Yellow-2		B14	OUT13	Yellow-4	
A15	IN10	Green-2		B15	OUT14	Green-4	
A16	IN11	Blue-2		B16	OUT15	Blue-4	
A17	IN12	Purple-2		B17	-	Purple-4	
A18	IN13	Gray-2		B18	-	Gray-4	
A19	IN14	White-2		B19	0V	White-4	
A20	IN15	Black-2		B20	0V	Black-4	

PCON-CB/CFB



Position Controller for RCP6/RCP5/
RCP4 (PowerCON Applicable) /RCP3/RCP2

Features

1 High-resolution battery-less absolute encoder compatible

The RCP6 equipped with a high-resolution battery-less absolute encoder is supported. Since no battery is needed to retain position data, less space is required in the control panel, which in turn leads to lower cost of your equipment. The resolution is increased from 800 pulses /rev to 8,192 pulses/rev.



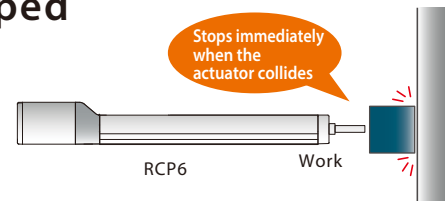
2 PowerCON Equipped

PowerCON (high-output driver) which can enable the stepper motor to perform at its maximum capacity is now installed. By using PowerCON, the output of the stepper motor is increased by 50%. It contributes to cycle time reduction and productivity improvement.

3 Collision Detection Function Equipped

This function stops the operation immediately when the actuator comes into contact with an object.

The actuator stops without crashing, so that damage to the actuator can be minimized.



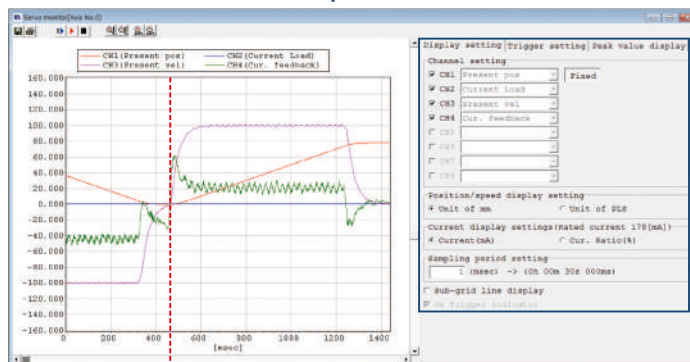
4 Enhanced Monitor Functions

The PC compatible software can display information about the actuator and controller in operation as waveforms.

*Information that can be displayed: Command current value, current speed/position, and PIO signals (start, positioning completion, alarm, etc.)

Using the trigger function, the end user can specify a particular moment, either a change in PIO signals or a designated moment during the actuator's operation time, to begin displaying the waveforms.

Monitor function screen (example)



Signal: CSTR (start) turned ON

The 'Display settings' panel includes options for 'Class setting', 'Position/speed display setting', 'Current display settings', and 'Sampling period setting'. The 'Trigger settings' panel includes options for 'Trigger setting', 'Trigger type', 'Trigger type', and 'Action formula'. A note indicates that data acquiring starts from the time of change of selected items.

* Items to be monitored can be selected.

Model number		PCON-CB/CGB, CFB/CGFB										
External view												
I/O type		Positioner type	Pulse-train type	Field network type								
				DeviceNet CC-Link PROFIBUS- DP CompoNet MECHATROLINK I/II* MECHATROLINK III* EtherCAT EtherNet/IP PROFINET IO								
I/O type model number		NP/PN	PLN/PLP	DV	CC	PR	CN	ML	ML3	EC	EP	PRT
PCON-CB/CGB	Battery-less absolute specification Incremental specification	○	○	○	○	○	○	○	○	○	○	○
	Simple absolute spec.	With absolute battery	○	○	○	○	○	○	○	○	○	○
		With absolute battery unit	○	—	○	○	○	○	○	○	○	○
Without absolute battery	○	—	○	○	○	○	○	○	○	○		
PCON-CFB/CGFB	Battery-less absolute specification Incremental specification	○	—	○	○	○	○	○	○	○	○	○

*1 MECHATROLINK I/II is treated as an Intelligent I/O and supports only asynchronous commands. MECHATROLINK III is compatible with standard servo profiles.

Model Specification Items

<Controller>

PCON — — — — — — — **0** — —

Series Type Motor Type Encoder Type I/O Type I/O Cable Length Power Supply Voltage Simple Absolute Specification Controller Mounting Specification

CB	Standard					0	24VDC		
CGB	Safety category compliant type								
CFB	56SP/60P/86P motor-compatible type	WAI	Battery-less absolute specification Incremental specification						
		SA	Simple absolute specification						
CGFB	Safety category compliant, 56SP/60P/86P motor-compatible type								

20P	20□	42SP	42□
20SP	20□	56P	56□
28P	28□	56SP	56□
28SP	28□	60P	60□
35P	35□	86P	86□
42P	42□		

(E.g.) 20P: 20□ stepper motor supported

Note

While the motor type specified in the actuator model number and the controller model number usually matches, there are some models where the actuator and controller motor types do not match. Be sure to check the corresponding models listed below during selection.
<28SP target actuator>

- Controller motor type "28SP" RCP2-RA3C

NP	PIO (NPN)
PLN	Pulse train (NPN)
PN	PIO (PNP)
PLP	Pulse train (PNP)
DV	DeviceNet
CC	CC-Link
PR	PROFIBUS-DP
CN	CompoNet
ML	MECHATROLINK-I/II (Note 1)
ML3	MECHATROLINK III (Note 1)
EC	EtherCAT
EP	EtherNet/IP
PRT	PROFINET IO

(Note 1) There are some restrictions of the functionality. Please contact IAI for more details.

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

* When a field network specification is selected, the I/O cable length is "0".

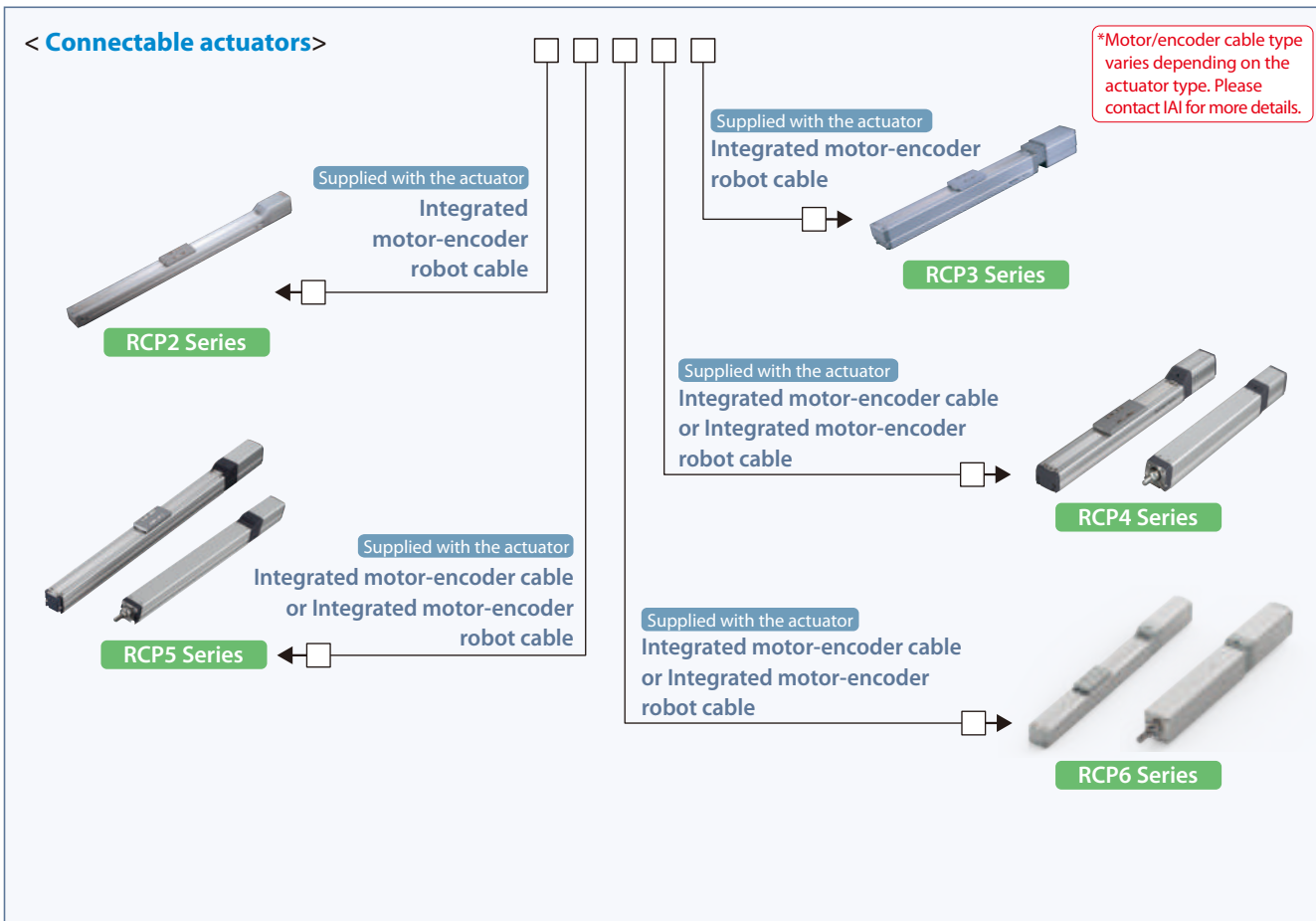
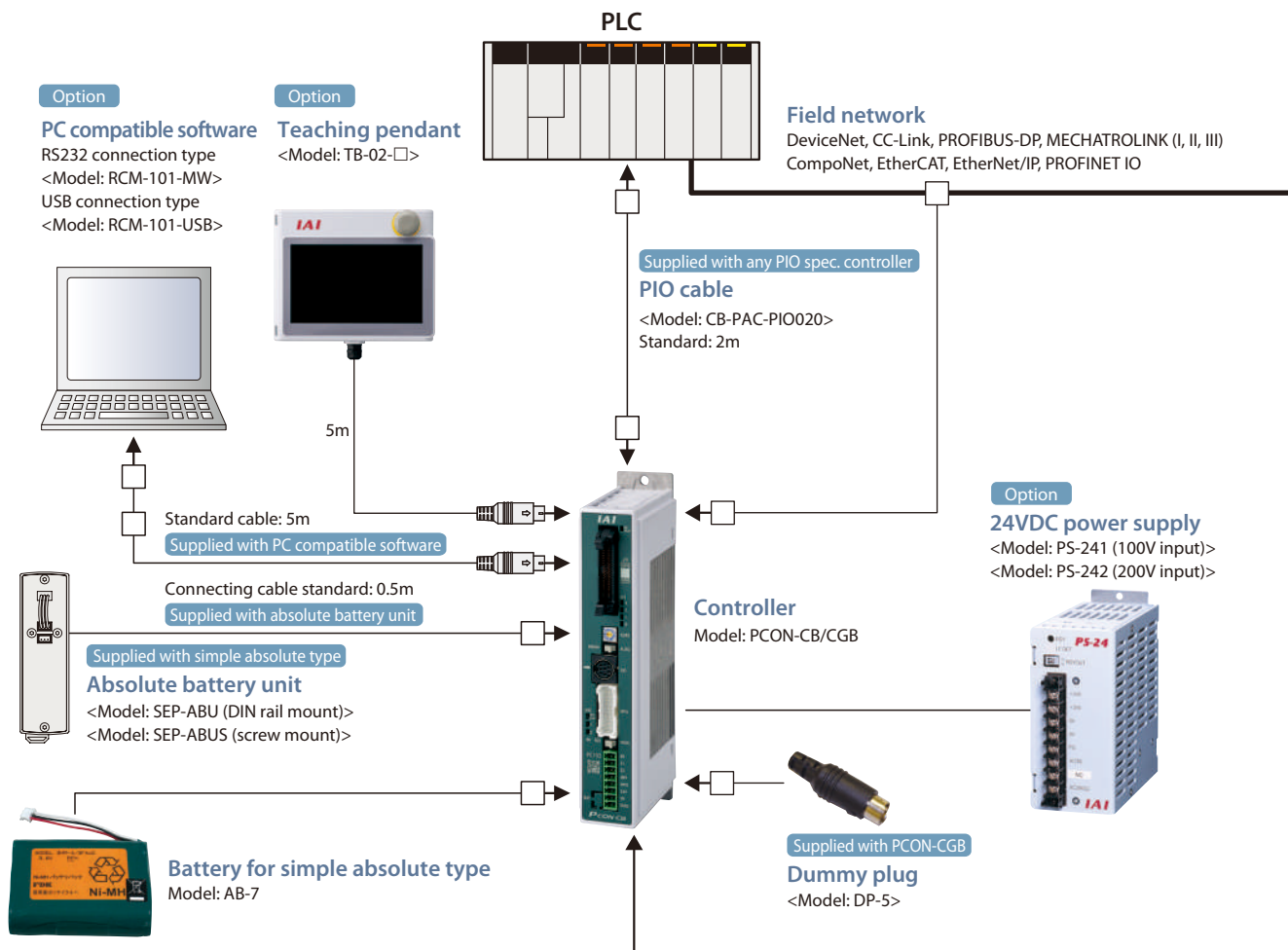
(Blank)	Battery-less absolute specification Incremental specification
AB	Simple absolute specification (With absolute battery. No battery unit included)
ABU	Simple absolute specification (With absolute battery and battery unit)
ABUN	Simple absolute specification (Without absolute battery and battery unit)

* PCON-CFB/CGFB does not support a simple absolute specification.

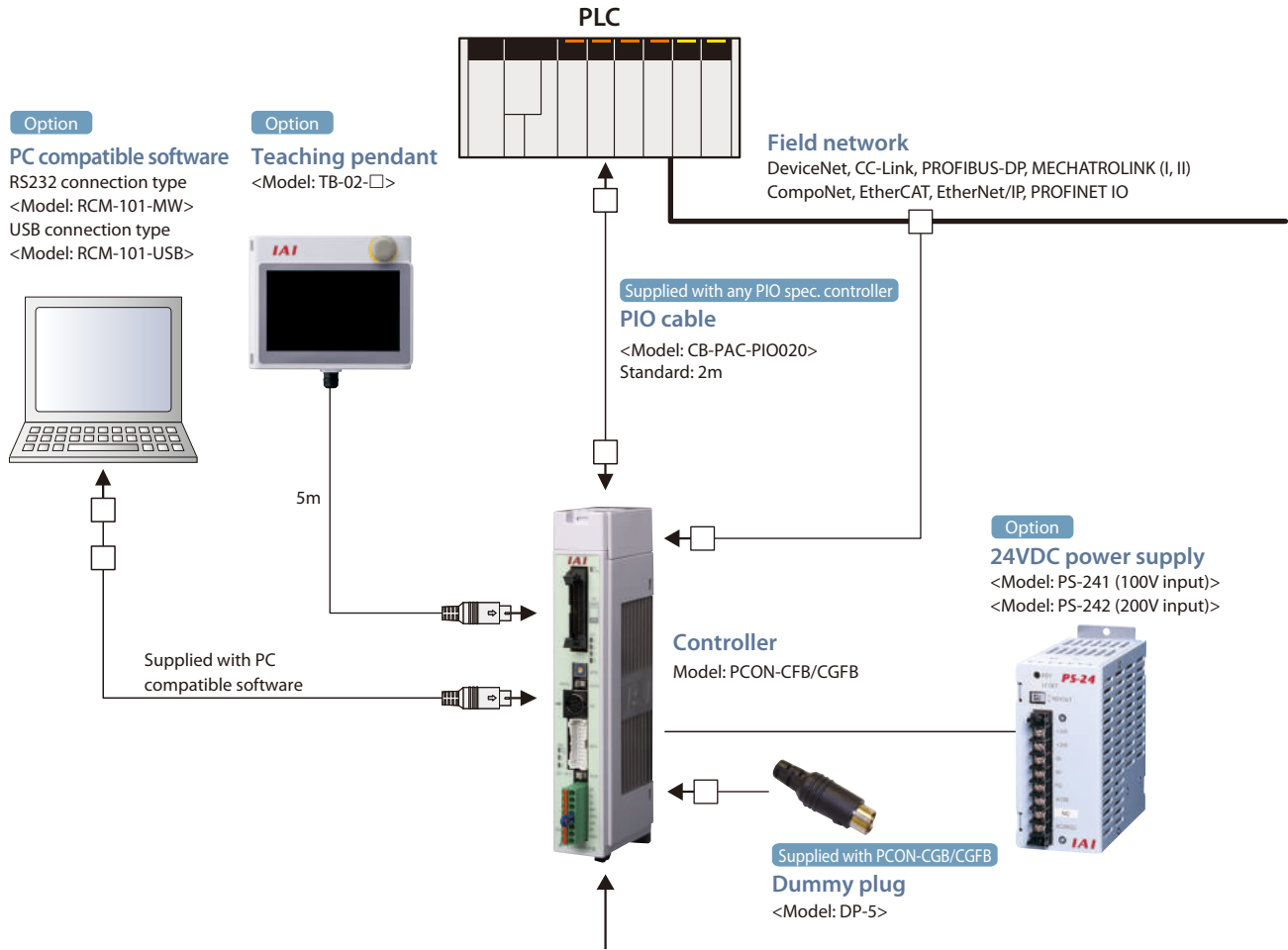
(Blank)	Screw mounting specification
DN	DIN rail mounting specification

* The mounting type (screw or DIN rail) of the absolute battery unit and the controller must be the same.

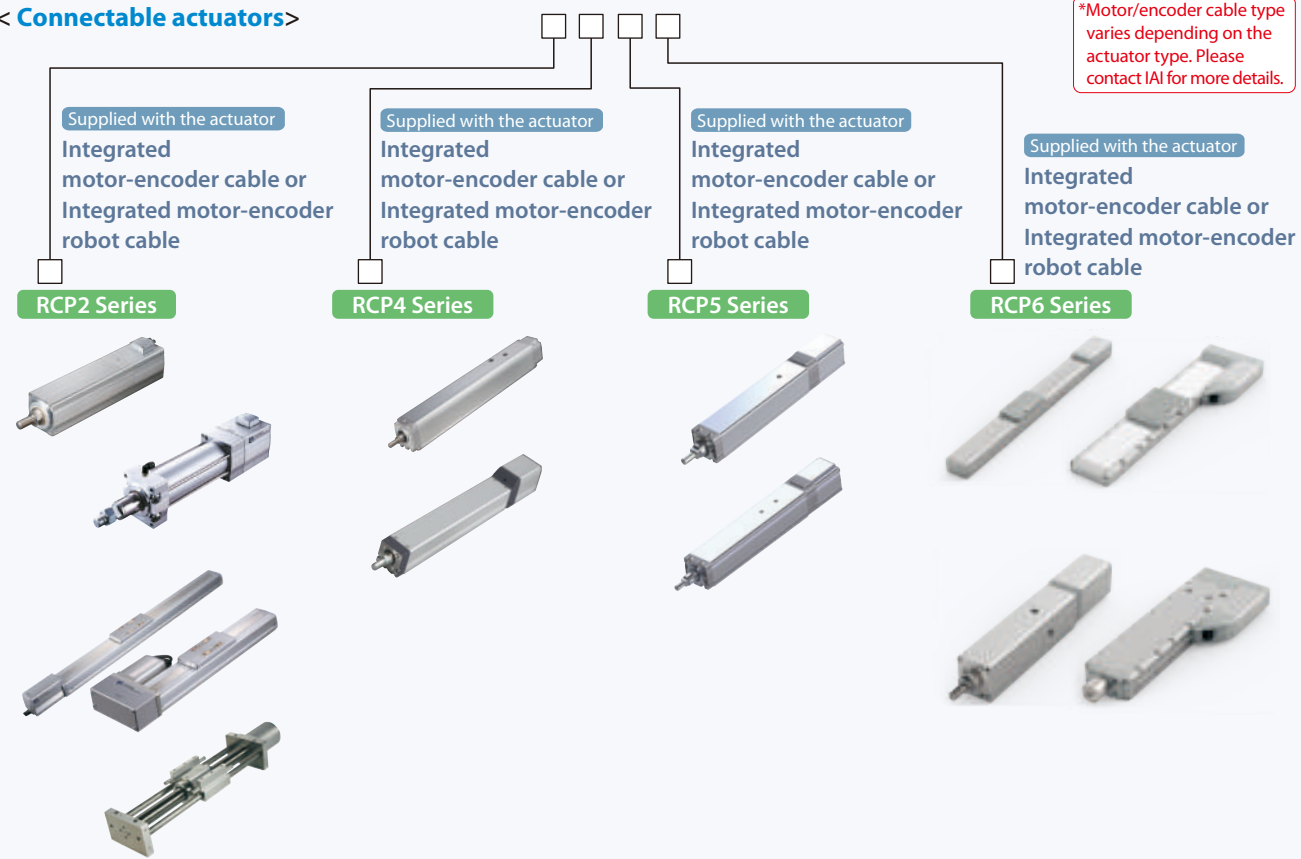
■ PowerCON150 <PCON-CB/CGB>



■ 56SP/60P/86P Motor Compatible <PCON-CFB/CGFB>



< Connectable actuators >



MCON-C/CG

CON Series
Position Controller
8-axis type



MCON-LC/LCG

CON Series
Position Controller
PLC function equipped type



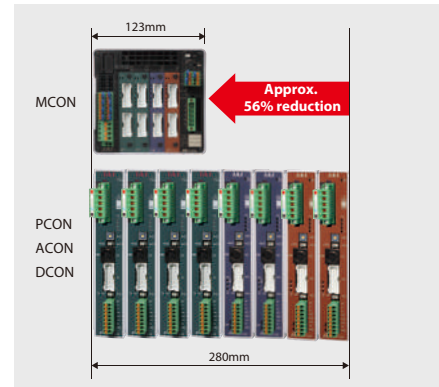
Features

MCON-C/CG, MCON-LC/LCG Common

1 Saves space and reduces cost

It saves space in the control panel and significantly reduces the total cost by combining 8 controllers into one.

* For MCON-C/CG



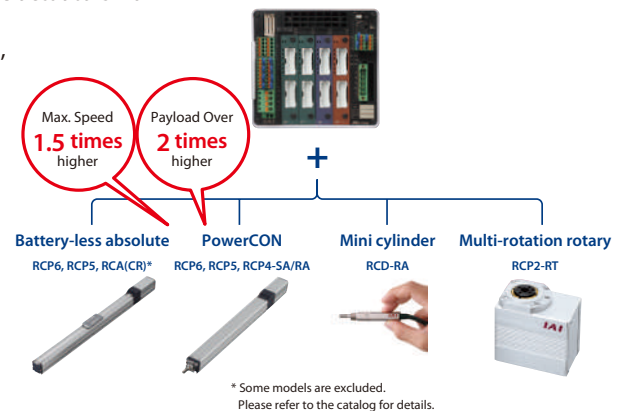
2 Accommodates a wide range of actuators

It corresponds to actuators with battery-less absolute encoders, ultra-compact mini-cylinders, multi-rotation rotaries and more, expanding the operable actuators from small to large.

In addition, it is equipped with the PowerCON (high-output driver), and achieves maximum speeds 1.5 times higher and maximum load capacities over 2 times higher than conventional models when used in combination with the RCP6/RCP5/RCP4 actuators.

Allows the installation of 7 types of driver boards

- (1) Battery-less absolute/incremental driver boards for stepper motor
- (2) Simple absolute driver board for stepper motor
- (3) Battery-less absolute/incremental driver boards for PowerCON
- (4) Simple absolute driver board for PowerCON
- (5) Battery-less absolute/incremental driver boards for AC servo motor
- (6) Simple absolute driver boards for AC servo motor
- (7) Incremental driver boards for brush-less DC motor



3 Many useful functions

Servo monitoring in AUTO mode function

- AUTO mode servo monitoring can now be performed using multi-axis controllers.
- In addition, the monitoring can start from the moment that the condition of a selected signal changes. (Trigger function)

Calendar function

- With the addition of the clock function, the alarm history is displayed with the time of occurrence, making it easier for the alarm to be analyzed.

Smart tuning function

- The optimum acceleration and deceleration are set according to the payload to be carried.

Off-board tuning function (For AC servo motor)

- The optimum gain is set according to the payload.

Vibration control function (For AC servo motor)

- It reduces the shaking (vibration) of the workpiece attached to the slider.

Acceleration/deceleration mode specification

- The acceleration and deceleration patterns can be specified from the trapezoid pattern, first-order delay filter and S-shaped motion.

Axis name display function

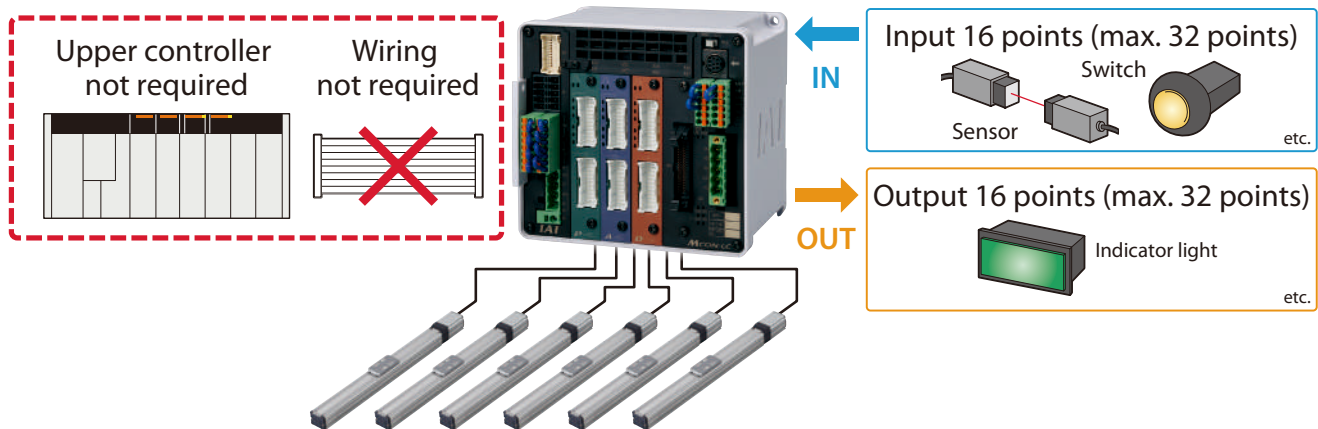
- The axis name can be displayed in the PC compatible software and touch panel teaching box.

* Some functions cannot be used, depending on the network. Please refer to the instruction manual.

4 PLC function added

Capable of operating actuators by ladder programs and ON/OFF control of I/O (input and output) signals. Small-scale systems can be controlled by MCON-LC/LCG only. Load on the main PLC can be reduced by performing distributed control using MCON-LC/LCG for each procedure. In addition, it enables easier program simplification and troubleshooting.

* Please refer to the table below for more information about ladder programs.



LC-LADDER

● Features of ladder software

As MCON-LC/LCG can be controlled by ladder programs, those who are familiar with PLC can easily use it. In addition, "Dedicated Commands" for moving the actuator are available within the ladder program, making it even easier to control.

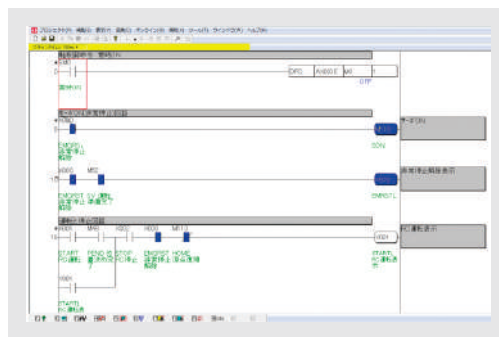
The editing software "LC-LADDER" can be used to easily write, monitor and debug ladder programs.

1 Program writing

Programs can be written using 27 types of basic command (contact command, output commands, etc.) and 53 types of application command (data comparison, arithmetic, logical, etc.).

3 Debug function

Run the program under the specified conditions to check the operation of the program.



2 Monitoring

The state when the program is run can be checked by respective functions.

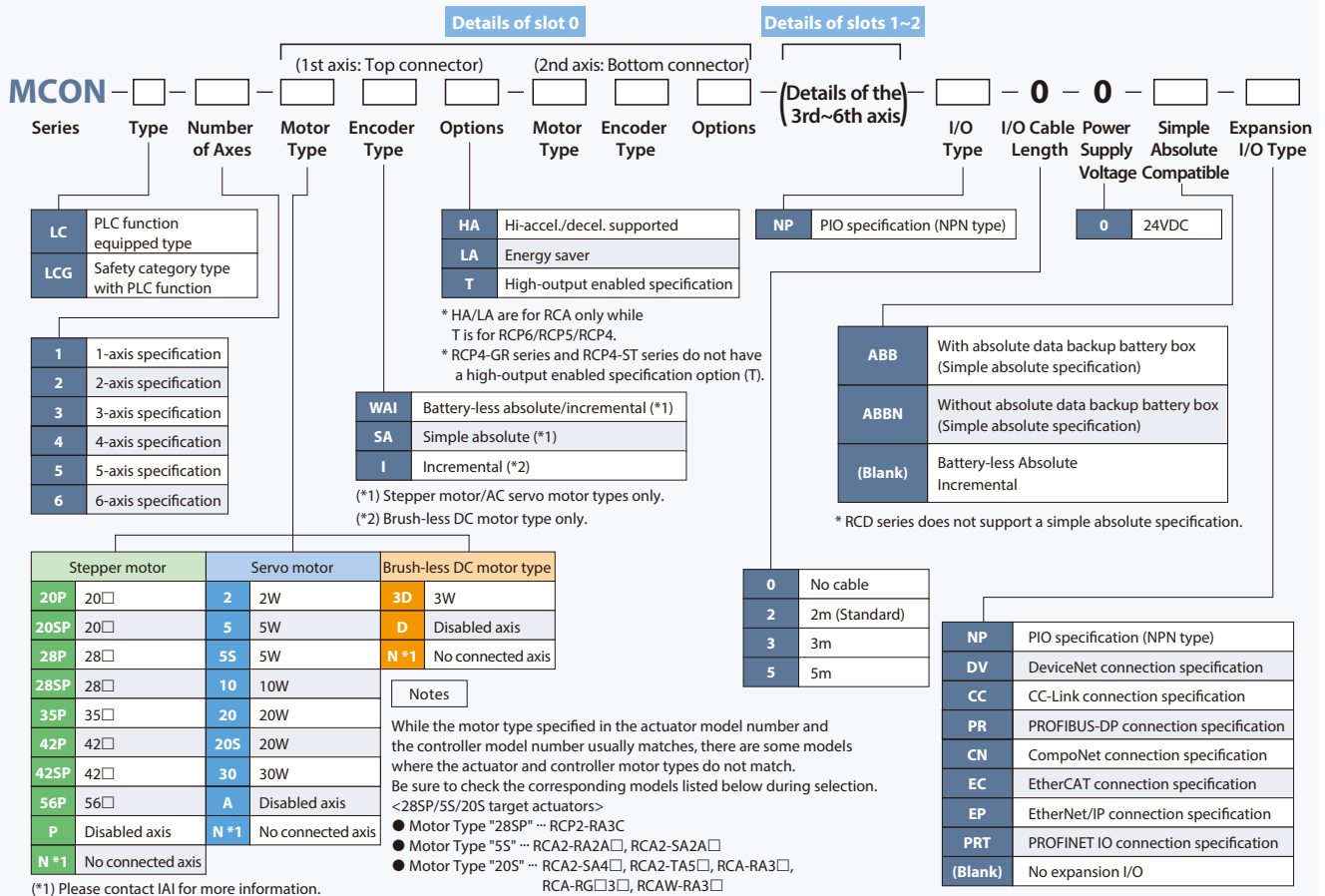
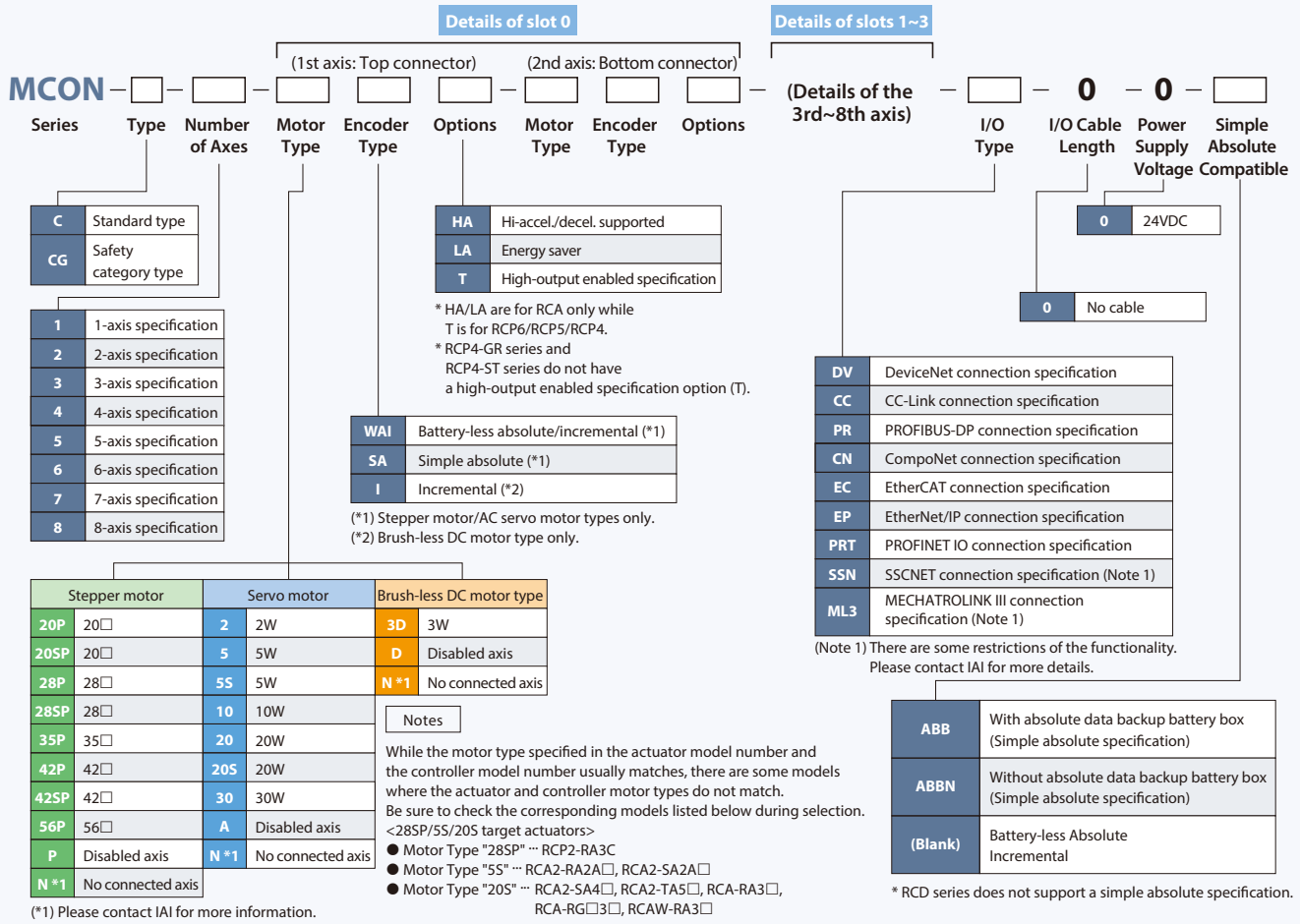
4 Simulation

You can check the program on a PC (test run) without operating it on the controller.

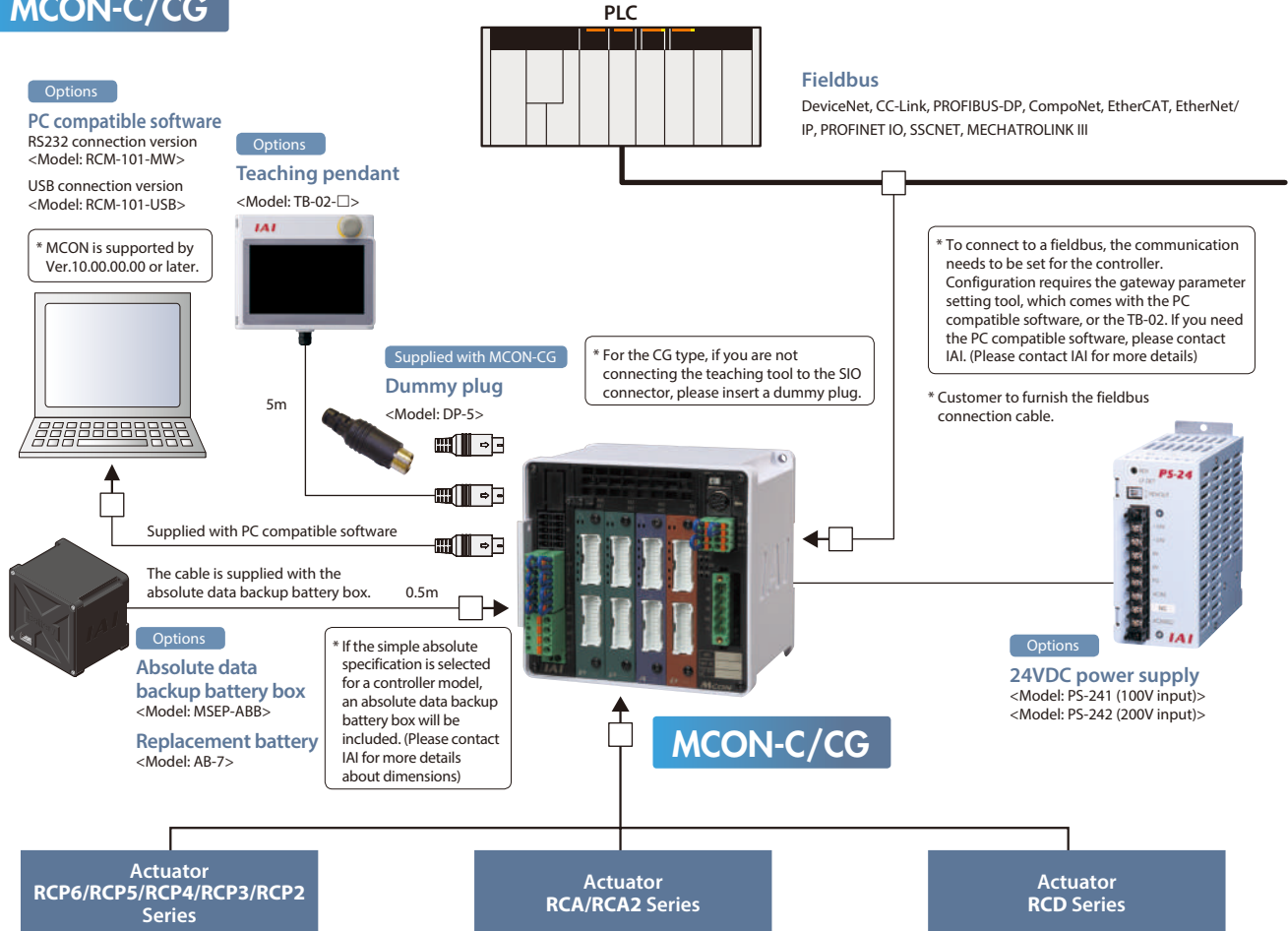
Free
of
charge

* LC ladder can be downloaded for free here:

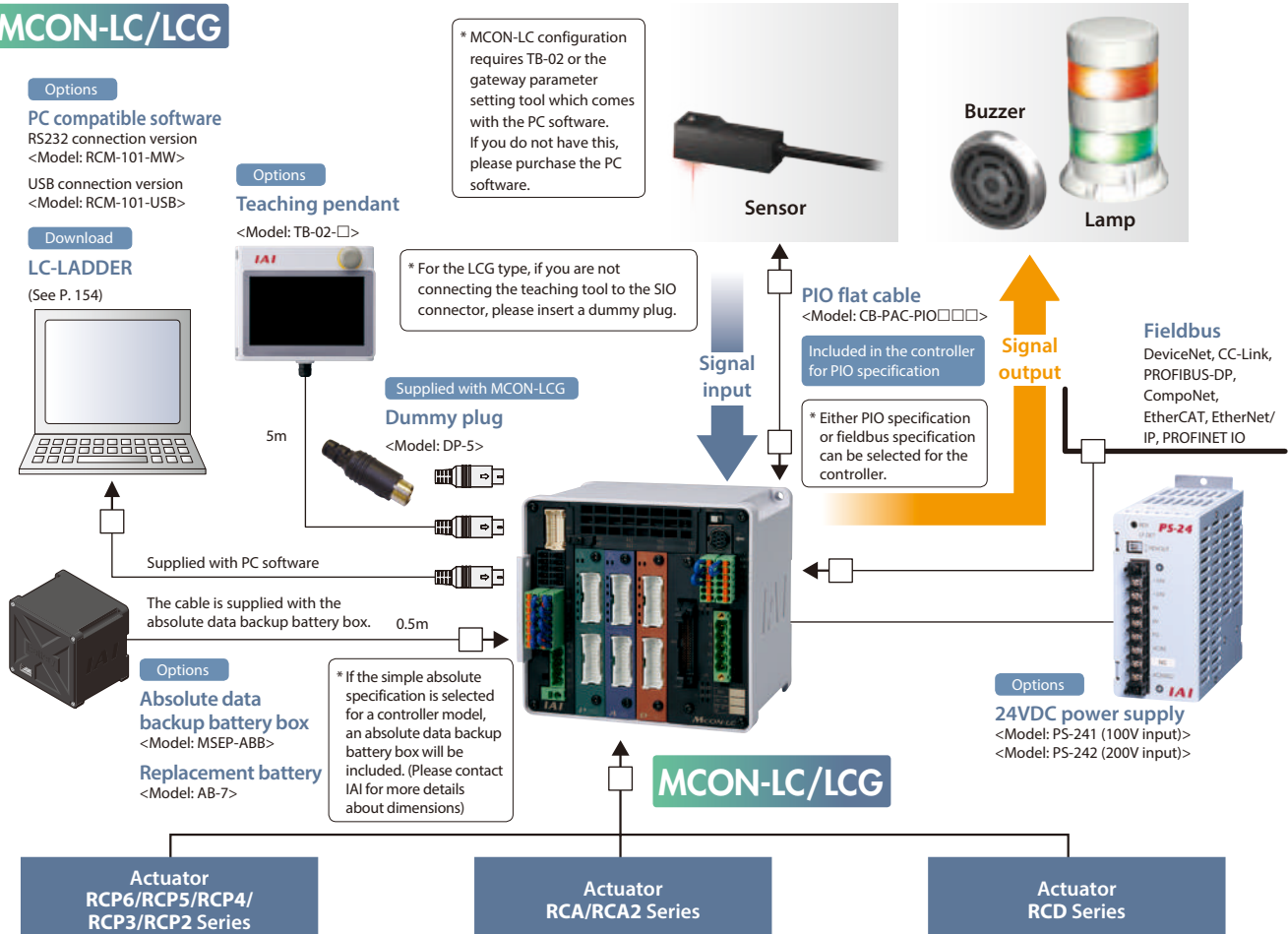
www.intelligentactuator.com/welcome-to-our-members-area/



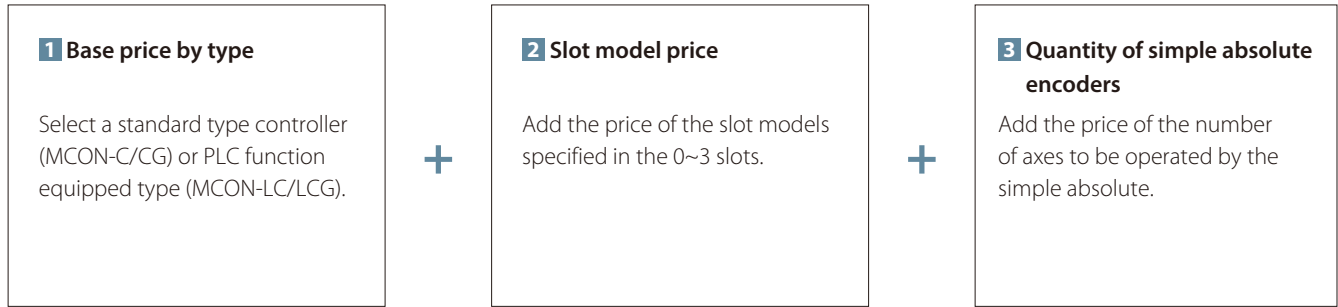
MCON-C/CG



MCON-LC/LCG

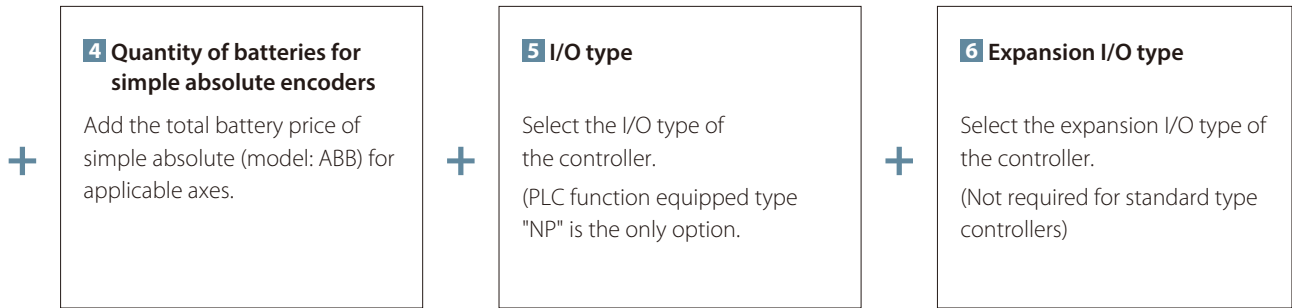


Calculate the standard price of the MCON controller based on **1** base price by type and add **2** slot model price, **3** quantity of simple absolute, **4** quantity of batteries for simple absolute, **5** I/O type, and **6** expansion I/O type.



1			2					3	
Base price by type			Slot model price (Add the total amount of slots to be used)					Quantity of simple absolute encoders	
Description	Model Specification Items	Price	Details of slot		Model Specification Items	Price	Number of axes	Price	
Standard type	MCON-C	○	Stepper motor	1-axis	Battery-less Absolute/ Incremental (For PowerCON)	<input type="checkbox"/> PWAIT-N	○	1-axis	○
Safety Category type	MCON-CG	○			Simple absolute (For PowerCON)	<input type="checkbox"/> PSAT-N	○	2-axis	○
PLC function equipped type	MCON-LC	○			Battery-less Absolute/ Incremental (For standard)	<input type="checkbox"/> PWAI-N	○	3-axis	○
Safety Category type with PLC function	MCON-LCG	○			Simple absolute (For standard)	<input type="checkbox"/> PSA-N	○	4-axis	○
			AC servo motor	2-axis	Simple absolute (For standard) + Simple absolute (For standard)	<input type="checkbox"/> PSA- <input type="checkbox"/> PSA	○	5-axis	○
					Battery-less absolute/ Incremental (For standard) + Battery-less abs./ Incremental (For standard)	<input type="checkbox"/> PWAI- <input type="checkbox"/> PWAI	○	6-axis	○
				1-axis	Battery-less Absolute/ Incremental (For standard)	<input type="checkbox"/> WAI-N	○	7-axis	○
					Simple absolute (For standard)	<input type="checkbox"/> SA-N	○	8-axis	○
			Brush-less DC motor	2-axis	Battery-less absolute/ Incremental (For standard) + Battery-less abs./ Incremental (For standard)	<input type="checkbox"/> WAI- <input type="checkbox"/> WAI	○		
					Simple absolute (For standard) + Simple absolute (For standard)	<input type="checkbox"/> SA- <input type="checkbox"/> SA	○		
			1-axis	Incremental (For standard)	3DI-N	○			
				Incremental (For standard) + Incremental (For standard)	3DI-3DI	○			

* indicates the motor size.



	4		5		6																																																																																										
+	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">Quantity of batteries for simple absolute encoders</th> </tr> <tr> <th>Number of axes</th> <th>Price</th> </tr> </thead> <tbody> <tr><td>1-axis</td><td style="text-align: center;">○</td></tr> <tr><td>2-axis</td><td style="text-align: center;">○</td></tr> <tr><td>3-axis</td><td style="text-align: center;">○</td></tr> <tr><td>4-axis</td><td style="text-align: center;">○</td></tr> <tr><td>5-axis</td><td style="text-align: center;">○</td></tr> <tr><td>6-axis</td><td style="text-align: center;">○</td></tr> <tr><td>7-axis</td><td style="text-align: center;">○</td></tr> <tr><td>8-axis</td><td style="text-align: center;">○</td></tr> </tbody> </table>	Quantity of batteries for simple absolute encoders		Number of axes	Price	1-axis	○	2-axis	○	3-axis	○	4-axis	○	5-axis	○	6-axis	○	7-axis	○	8-axis	○	+	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">I/O type (NP is only available for the PLC function equipped types.)</th> </tr> <tr> <th>Type</th> <th>Model Specification Items</th> <th>Price</th> </tr> </thead> <tbody> <tr><td>PIO specification (NPN specification)</td><td>NP</td><td style="text-align: center;">○</td></tr> <tr><td>DeviceNet connection specification</td><td>DV</td><td style="text-align: center;">○</td></tr> <tr><td>CC-Link connection specification</td><td>CC</td><td style="text-align: center;">○</td></tr> <tr><td>PROFIBUS-DP connection specification</td><td>PR</td><td style="text-align: center;">○</td></tr> <tr><td>CompoNet connection specification</td><td>CN</td><td style="text-align: center;">○</td></tr> <tr><td>EtherCAT connection specification</td><td>EC</td><td style="text-align: center;">○</td></tr> <tr><td>EtherNet/IP connection specification</td><td>EP</td><td style="text-align: center;">○</td></tr> <tr><td>PROFINET IO connection specification</td><td>PRT</td><td style="text-align: center;">○</td></tr> <tr><td>SSCNET connection specification</td><td>SSN</td><td style="text-align: center;">○</td></tr> <tr><td>MECHATROLINK III connection specification</td><td>ML3</td><td style="text-align: center;">○</td></tr> </tbody> </table>	I/O type (NP is only available for the PLC function equipped types.)			Type	Model Specification Items	Price	PIO specification (NPN specification)	NP	○	DeviceNet connection specification	DV	○	CC-Link connection specification	CC	○	PROFIBUS-DP connection specification	PR	○	CompoNet connection specification	CN	○	EtherCAT connection specification	EC	○	EtherNet/IP connection specification	EP	○	PROFINET IO connection specification	PRT	○	SSCNET connection specification	SSN	○	MECHATROLINK III connection specification	ML3	○	+	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">Expansion I/O type (PLC function equipped type only)</th> </tr> <tr> <th>Type</th> <th>Model Specification Items</th> <th>Price</th> </tr> </thead> <tbody> <tr><td>PIO specification (NPN specification)</td><td>NP</td><td style="text-align: center;">○</td></tr> <tr><td>DeviceNet connection specification</td><td>DV</td><td style="text-align: center;">○</td></tr> <tr><td>CC-Link connection specification</td><td>CC</td><td style="text-align: center;">○</td></tr> <tr><td>PROFIBUS-DP connection specification</td><td>PR</td><td style="text-align: center;">○</td></tr> <tr><td>CompoNet connection specification</td><td>CN</td><td style="text-align: center;">○</td></tr> <tr><td>EtherCAT connection specification</td><td>EC</td><td style="text-align: center;">○</td></tr> <tr><td>EtherNet/IP connection specification</td><td>EP</td><td style="text-align: center;">○</td></tr> <tr><td>PROFINET IO connection specification</td><td>PRT</td><td style="text-align: center;">○</td></tr> </tbody> </table>	Expansion I/O type (PLC function equipped type only)			Type	Model Specification Items	Price	PIO specification (NPN specification)	NP	○	DeviceNet connection specification	DV	○	CC-Link connection specification	CC	○	PROFIBUS-DP connection specification	PR	○	CompoNet connection specification	CN	○	EtherCAT connection specification	EC	○	EtherNet/IP connection specification	EP	○	PROFINET IO connection specification	PRT	○	=	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Price</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Standard price by specification</td> </tr> </tbody> </table>	Price	Standard price by specification
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* No need to add **3** and **4** for the battery-less absolute type.

RCON

RCON

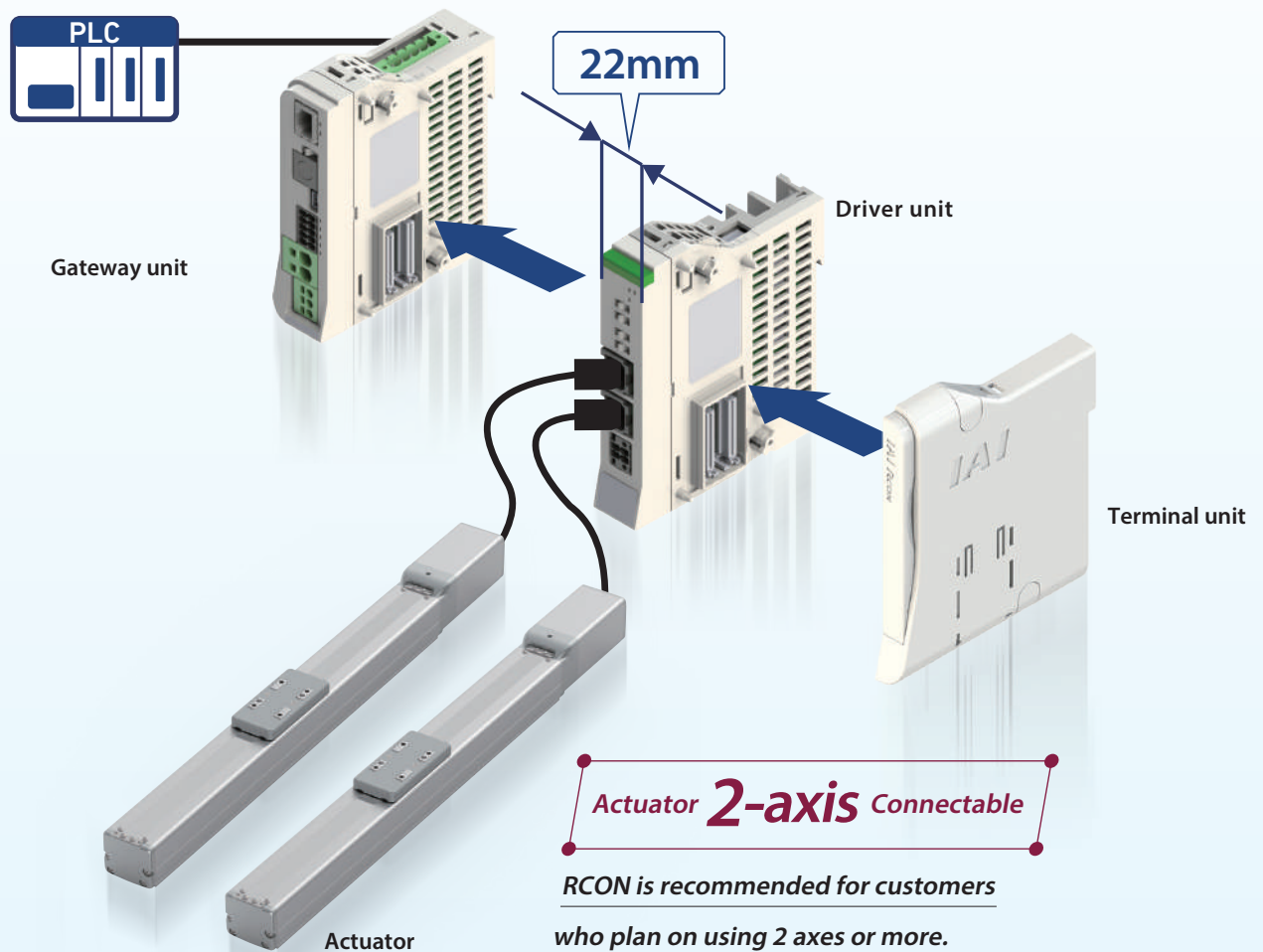


Saves space inside the control panel



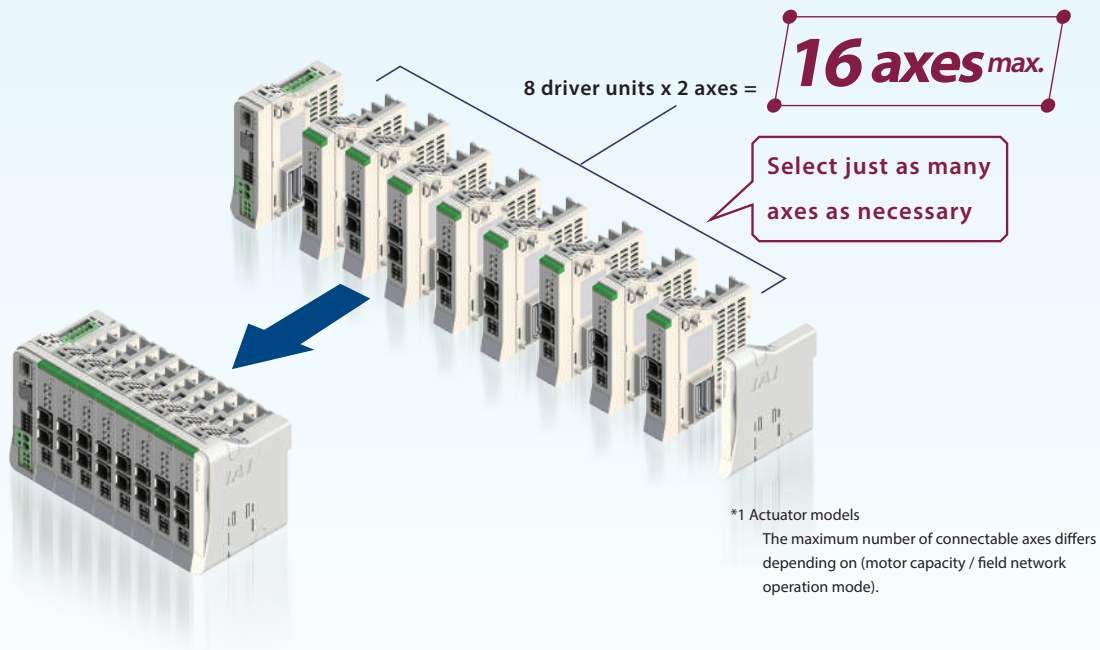
RCON is recommended for actuators with two axes or more.

Up to 2 axes of actuators can be connected to one RCON driver unit with 22mm width, making it ideal for saving space in the control panel.



Up to 16 axes*1 of actuators can be connected.

There will be no wasted space as driver units can be added in just the amount necessary.

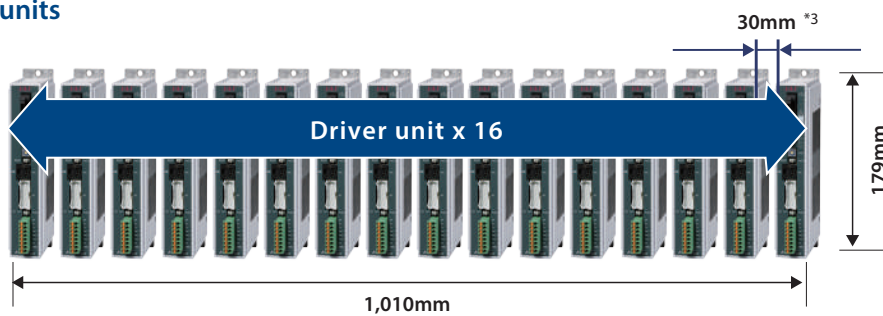


Saves up to 85%*2 of control panel space.

*2 IAI product comparison

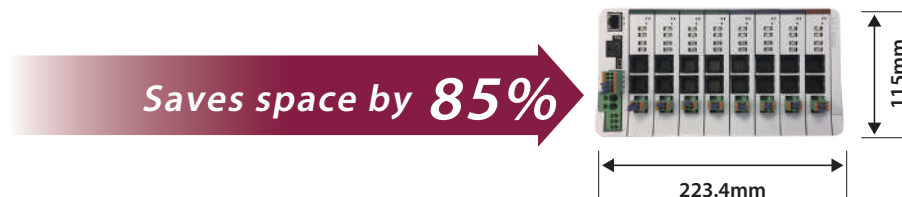
Up to about 85% of control panel space can be saved, compared with models that connect a 1-axis actuator to a single driver unit.

PCON-CB x 16 units



*3 Minimum distance required for natural heat dissipation of the controller

RCON x 16-axis connection specification



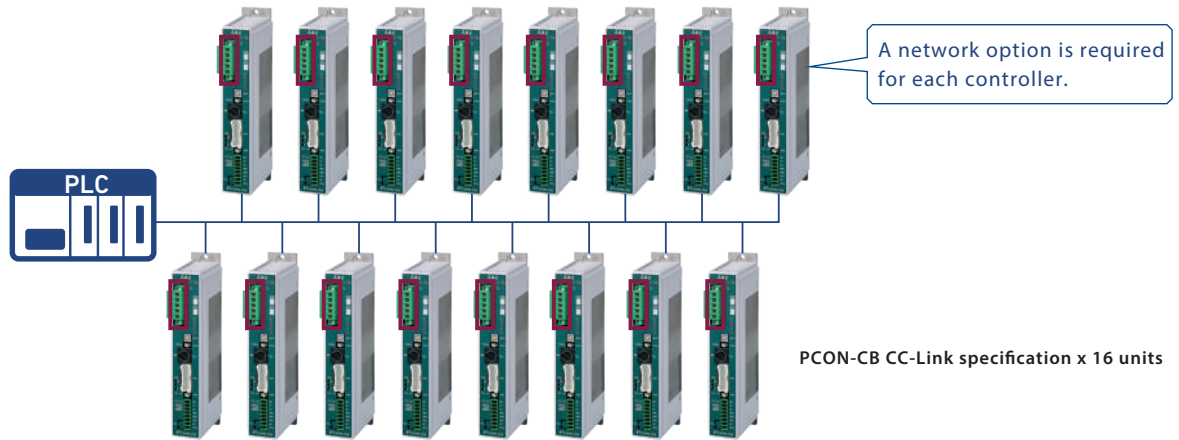
Reduces costs by as much as 60%^{*4}

*4 IAI product comparison

The conventional type ([Comparison example] below) requires network options installed to match the number of controllers.

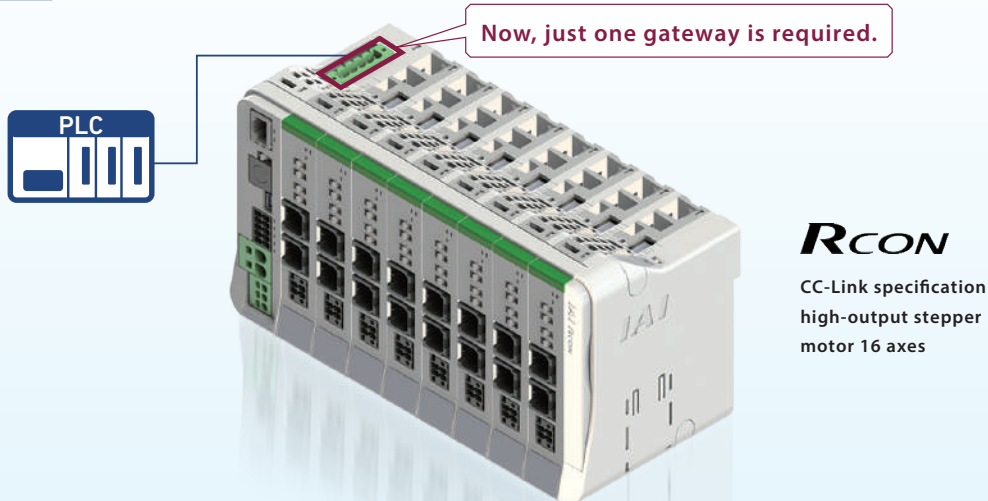
RCON can control driver units for up to 16 axes of actuators with a single gateway, allowing cost reductions up to 60% or so. It is especially recommended when using multiple axes.

Comparison example



60% cost reduction

For RCON



Seven high-performance functions that only IAI is capable of delivering

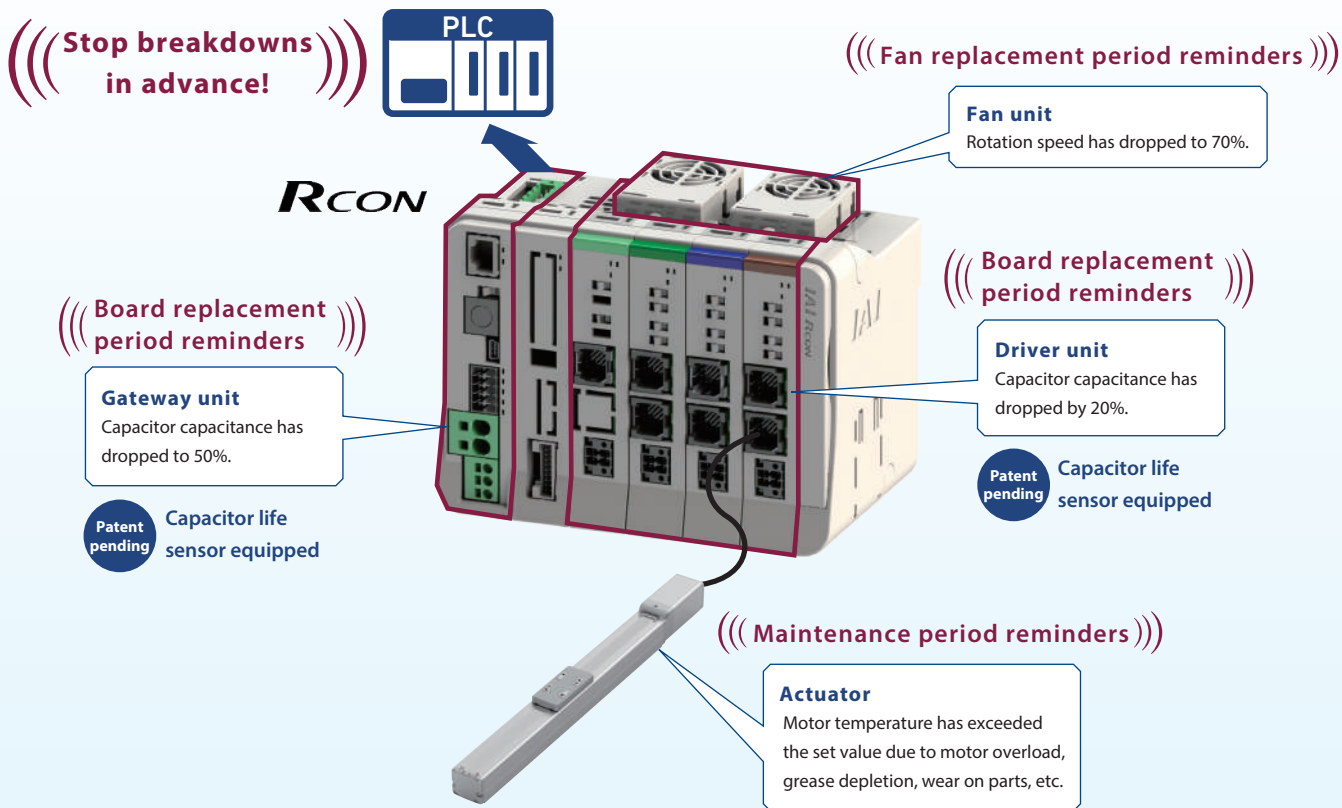
High function 1 Compatibility: No.1 in the industry with seven field network types supported

Can be connected to various field networks.



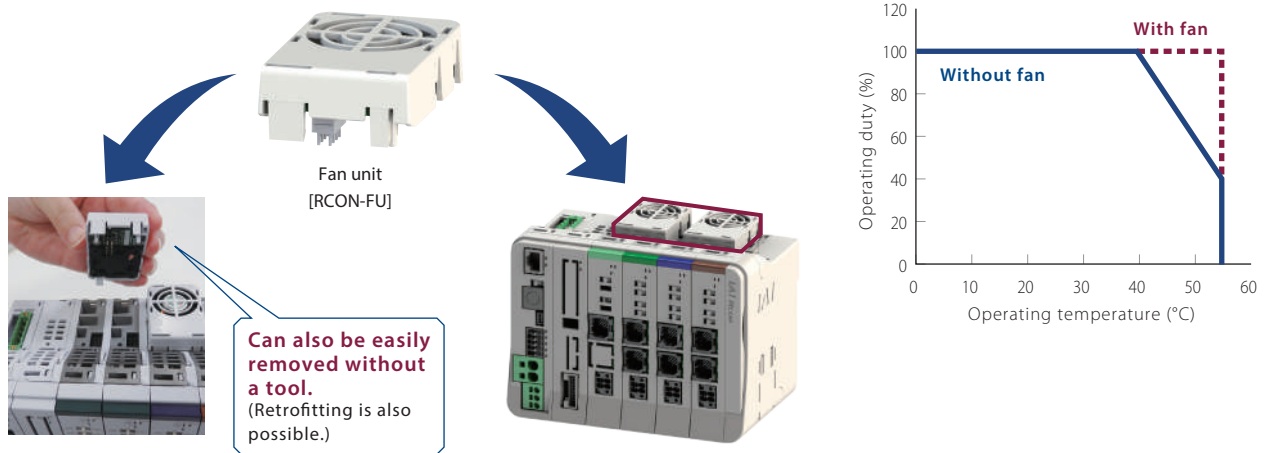
High function 2 Predictive maintenance/preventative maintenance function

The RCON has a preventative maintenance function for the capacitor and a predictive maintenance function for the fan unit and actuator.



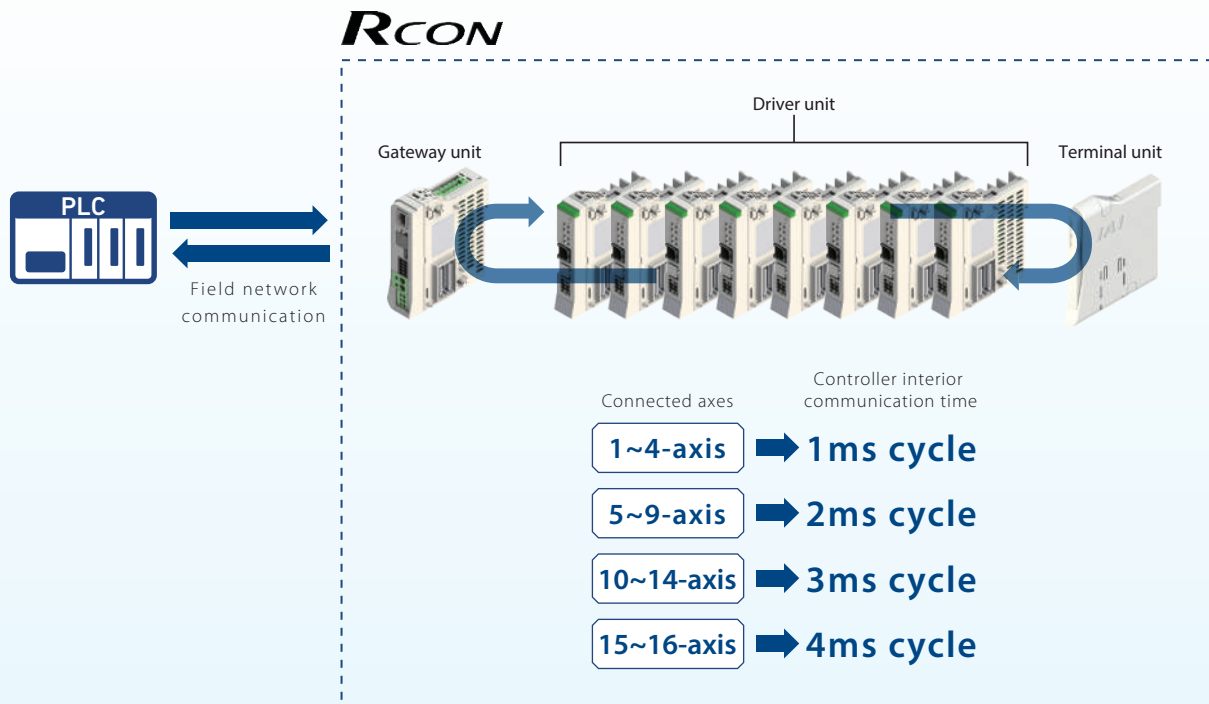
High function 3 Supports controller installation environment temperatures of 0 to 55°C

Install the optional fan unit to enable use in environments of 0 to 55°C without lowering actuator operating duty. (one fan unit can be mounted across a driver unit and a terminal unit)



High function 4 Controller interior communication time is 4ms cycle

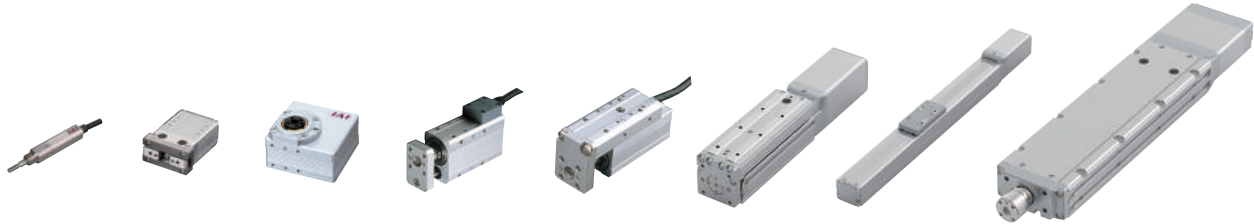
Controller interior communication time is 4ms even when 16 actuators are connected.



High function 5 No. 1 in the industry for number of supported actuators
(332 IAI actuator models*).

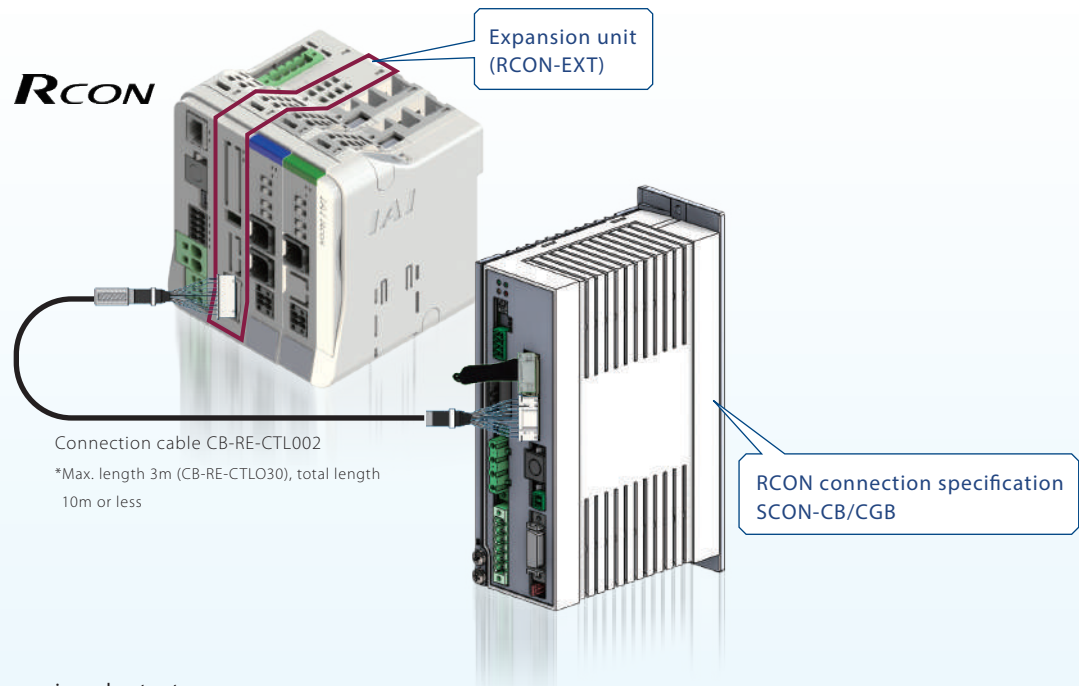
Compatible with RCP2/3/4/5/6, RCA/2, RCD, RCL Series

Supports actuators equipped with a Battery-less absolute encoder as well as those with simple absolute and incremental encoders.

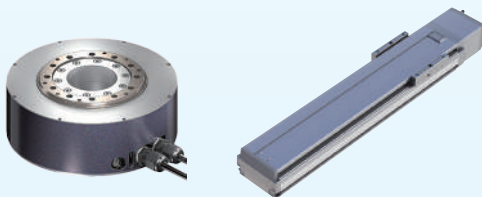


Compatible with RCS2/3/4, IS(D)B, SSPA, LSA, NS, DDA Series

When the SCON's RCON connection specification option (-RC) is selected, it can be connected to the RCON expansion unit (RCON-EXT) to operate an actuator equipped with a large-capacity motor.
One RCON-EXT can connect to multiple SCON-CB controllers.



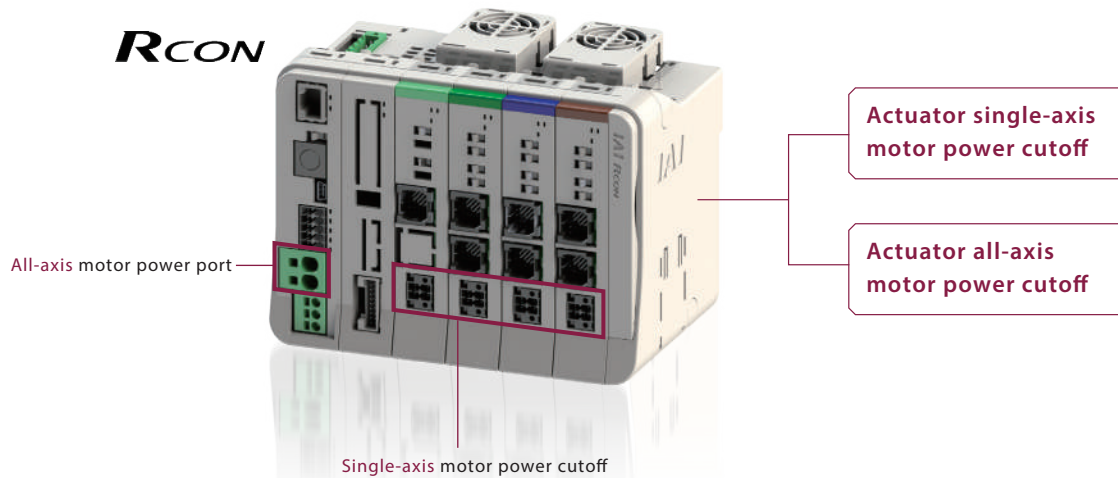
■ Large-capacity motor equipped actuator



* IAI General Catalog product series / type model
Note that servo press actuator models, LSA-W21H, EC Series, SCARA robots, TTA, ZR units and Wrist Units are not supported.
* As of December 2018

High function 6 Motor power cutoff method can be selected.

In accordance with customer safety function applications, the motor power (drive source) cutoff method at emergency stop can be selected through the RCON wiring method.

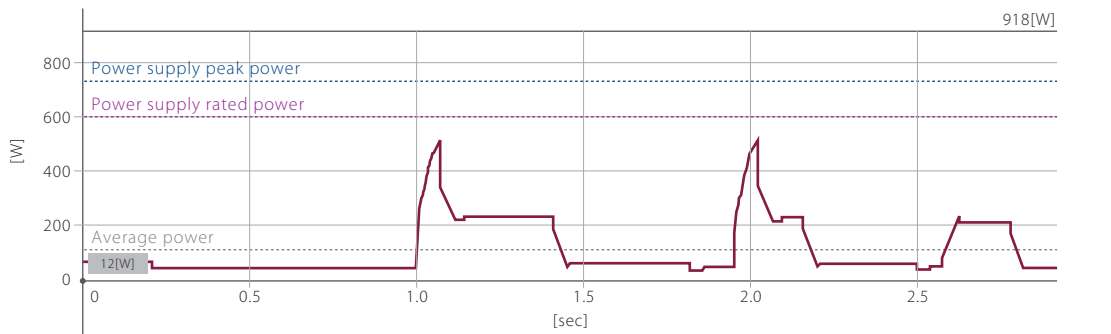


High function 7 Helps visualize equipment with 24V power monitor

Visualize power consumption

The following IAI 24V power supply (PSA-24) monitoring can be output to a PLC via RCON.

- Output voltage ● Output current ● Power load factor ● Total energizing time
- Internal temperature ● Low fan speed warning



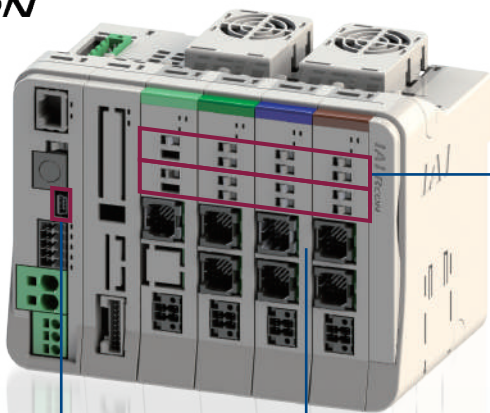
*The graph is a reference image.



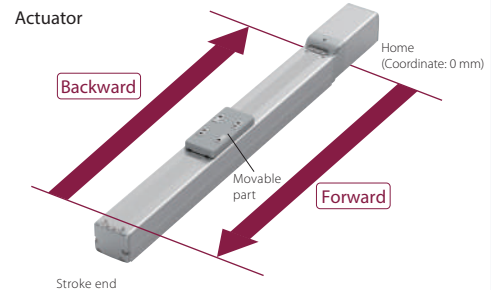
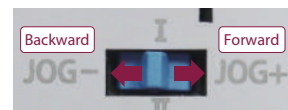
Enables easy start-up and maintenance.

Even without a teaching pendant or PC teaching software, each axis can be moved **forward/backward**.

RCON



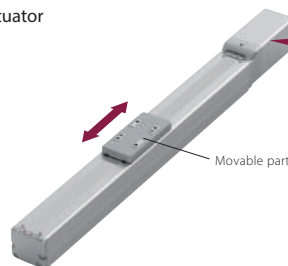
Each axis JOG (+/-) switch



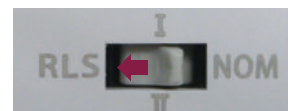
JOG switch enabled in manual mode, with PC software/teaching pendant manual operation windows closed.

Each axis brake release switch

Actuator



Forced brake release



Equipped with a brake release switch for each axis, the movable parts can be moved by hand during maintenance.

USB port



Connection to a PC is possible using a **commercial USB cable**.
Dedicated cables are not required.

*Compatible with miniUSB (mini-B).

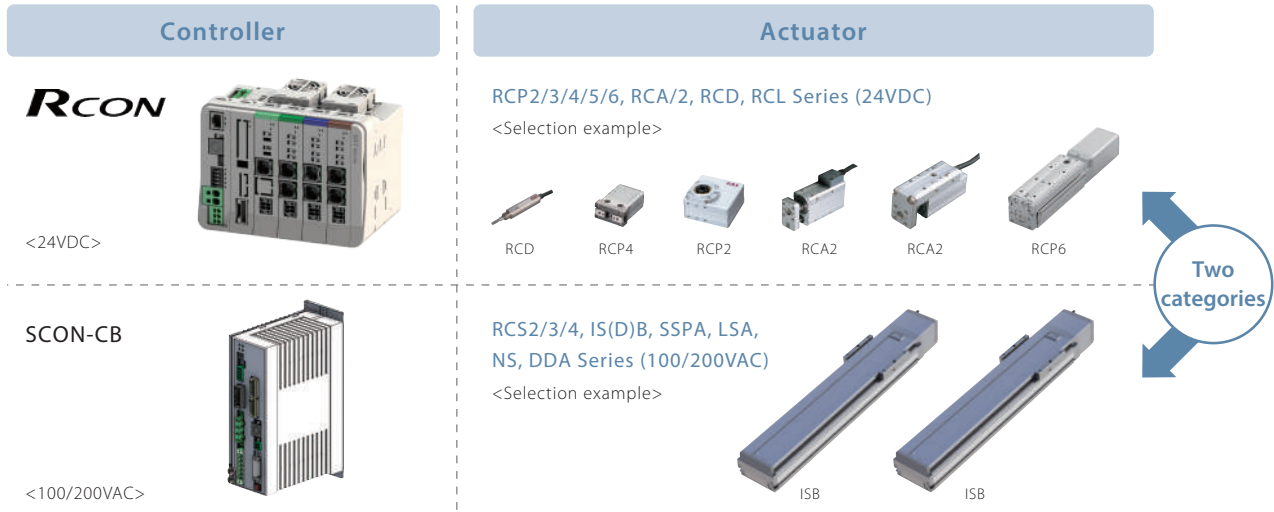
Selection Method

Step 1 Actuator selection

<Selection example>



The actuator series are classified into two categories according to the table below.



*Note that servo press actuator models, LSA-W21H, EC Series, SCARA robots, TTA, ZR units and Wrist Units cannot be connected.

Step 2 Gateway unit selection

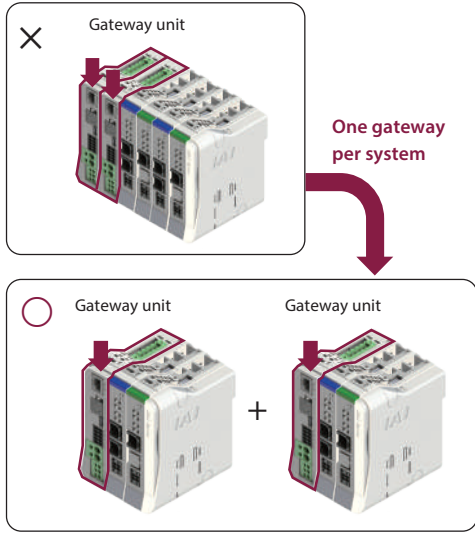
Select the gateway unit model from the network type.

Network type	Gateway unit model
DeviceNet™	RCON-GW/GWG-DV
CC-Link	RCON-GW/GWG-CC
CC-Link IE Field	RCON-GW/GWG-CIE
PROFI BUS	RCON-GW/GWG-PR
EtherCAT™	RCON-GW/GWG-EC
EtherNet/IP™	RCON-GW/GWG-EP
PROFI NET	RCON-GW/GWG-PRT

<Selection example>
 ← Select 1

Caution

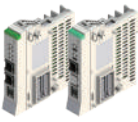








Only one gateway unit can be connected per system. When using two units or more, divide it into two.



16 axes of actuators can be connected to one gateway unit.

Step 3 Driver unit selection

Select the driver unit model number and required number of units according to the series name and motor type of the actuator(s) to be connected to the RCON.

Actuator		RCON Driver unit			<Selection example>		
Series	Motor type	External view	Number of axes connected to actuator	Model	Classification	Required units	
RCP2 RCP3 RCP4 RCP5 RCP6	20P, 28P 35P, 42P 56P		2-axis specification	RCON-PC-2	 	1	← Select 2
			1-axis specification	RCON-PC-1		1	← Select 2
	High thrust motor 56SP, 60P 86P		1-axis specification	RCON-PCF-1			-
RCA RCA2 RCL	2 5 10 20, 20S 30		2-axis specification	RCON-AC-2	 	1	← Select 2
			1-axis specification	RCON-AC-1			-
RCD	3D		2-axis specification	RCON-DC-2			
			1-axis specification	RCON-DC-1		1	← Select 2

Step 4 Simple absolute unit selection

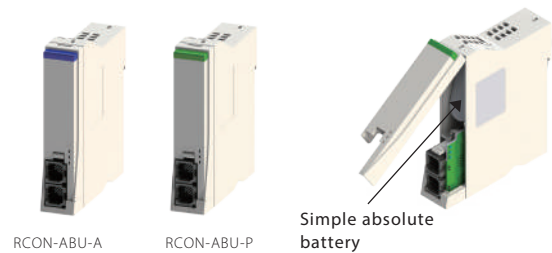
For actuators with simple absolute specification, select simple absolute units (RCON-ABU-A/P) for the required number of axes.

*Connect to the RCON controller using a cable (CB-ADPC-MPA005).

The cable is supplied with the simple absolute unit.

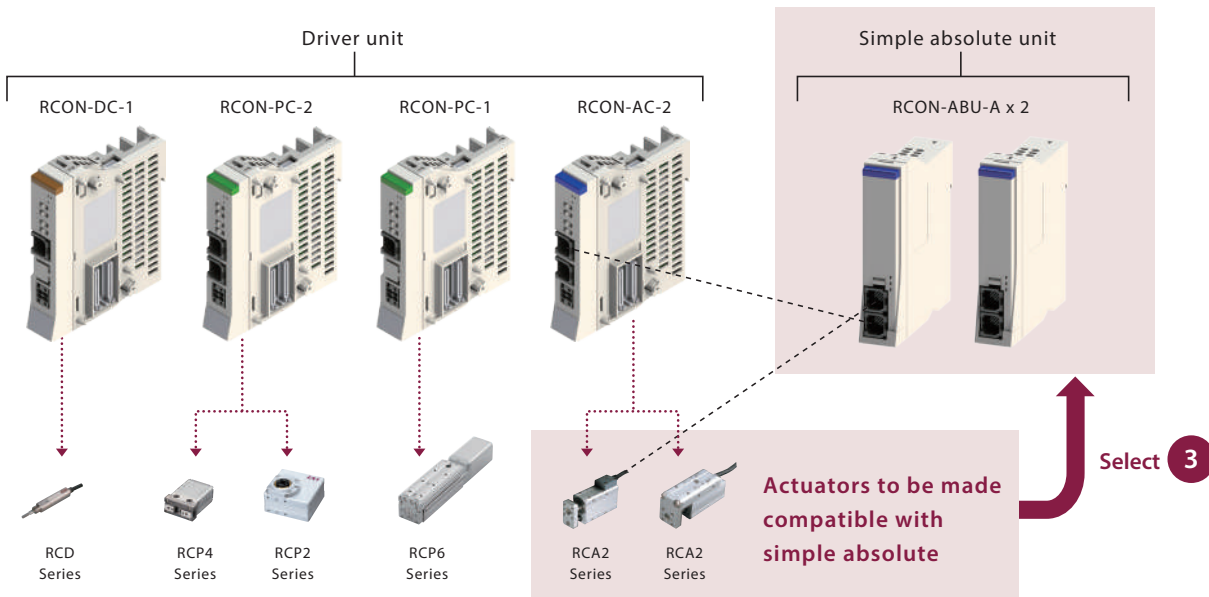
Note: The ambient operating temperature of the simple absolute unit is within the range of 0~40°C.

* One simple absolute unit required per axis.



<Selection example>

This is an example in which a 2-axis RCA2 Series actuator is selected for simple absolute specification.



Step 5 Expansion unit selection

For actuators to be connected to SCON-CB, select (1) to (3) below.

(1) Expansion unit (Model: RCON-EXT)

When connecting SCON-CB and RCON, one expansion unit is required. One unit can connect to multiple SCON-CB RC controllers.

<Selection example>



x 1 unit

← Select 4

(2) RCON connection specification SCON-CB

Required for the number of actuator axes to be connected to SCON*.

<Selection example>

I/O type
Model: SCON- * - * * * - RC - *



RCON connection specification selected

x 2 units

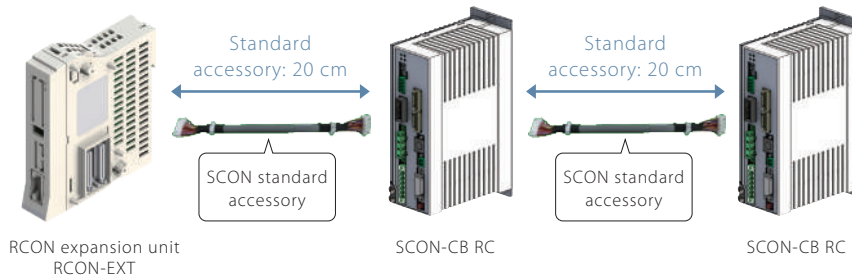
← Select 5

* 16 axes max.

* 100/200 VAC power supply for each SCON-CB RC

(3) RCON expansion unit to SCON-CB connection cable

One cable (CB-ER-CTL002) is supplied as standard with SCON-CB for RCON connection.



Must be separately purchased only when 20 cm is too short.

Model: CB-RE-CTL□□□ max length 3m (030)

See P. 37



x Required number of units

Total cable length may not exceed 10m

Step 6 Calculating various unit control power capacities (CP)

Gateway unit

Make sure that the total control power capacity of the various units selected so far is within 9.0A.

How to check

Add up while checking the "Control Power Capacity List" below.

Control power (CP)
9.0A or less



Control Power Capacity List

Item	Specifications		
Power supply voltage	24VDC±10%		
Control power capacity (CP) (Per driver unit)	Gateway unit (includes terminal unit)		
	0.8A		
	Driver unit (common for all types)	Brake: No	0.2A
		Brake: Yes (1-axis specification)	0.4A
		Brake: Yes (2-axis specification)	0.6A
Expansion unit		0.1A	
Simple absolute unit (common to all types)		0.2A	

<Selection example>

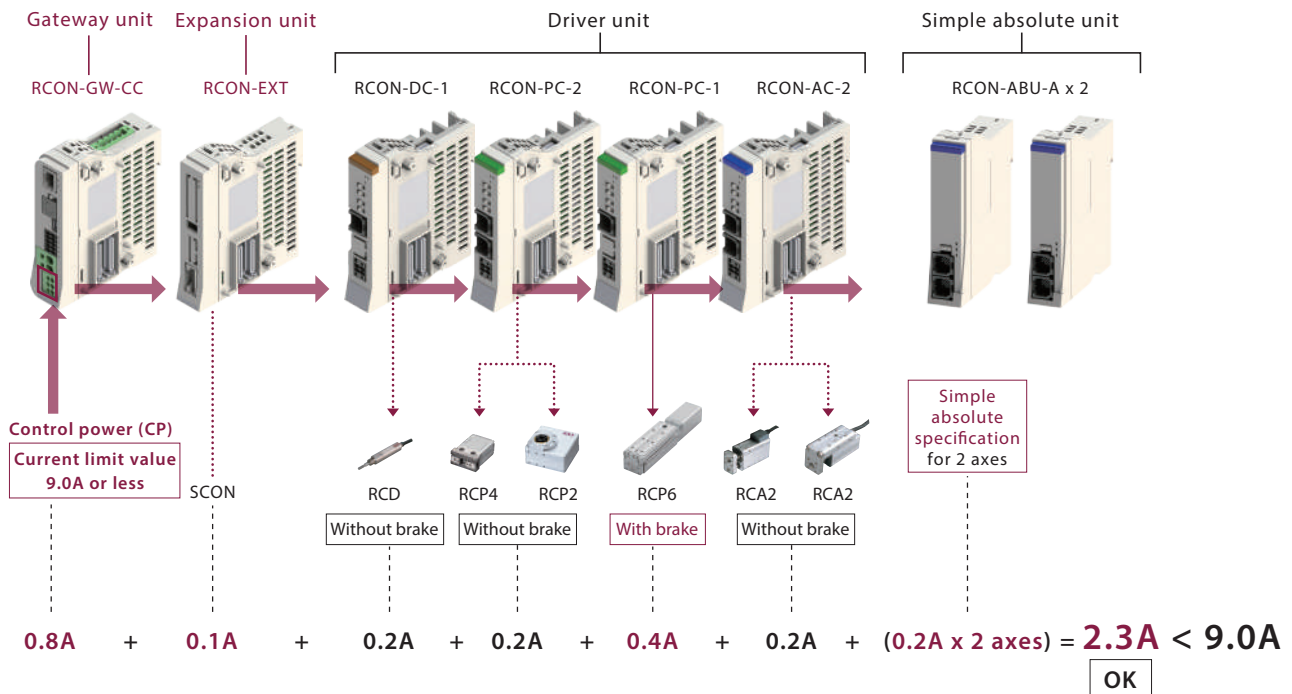
x 1 unit

x 1 unit

x 1 unit

x 2 axes

<Selection example>



(Confirmed to be less than 9.0A. If larger than 9.0A, another gateway unit is required.)

Step 7 Calculating various unit motor power capacities (MP)

Gateway unit

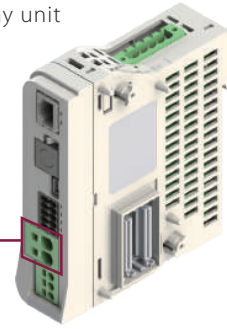
Make sure that the total motor power capacity of the driver units selected so far is within 37.5A.

How to check

Add up while checking the "Motor Power Capacity List" below. If the maximum current is listed, add the maximum current. If not, add the rated current.

* Do not include the 100/200 VAC power supply to SCON-CB RC.

Motor power (MP)
37.5 A or less

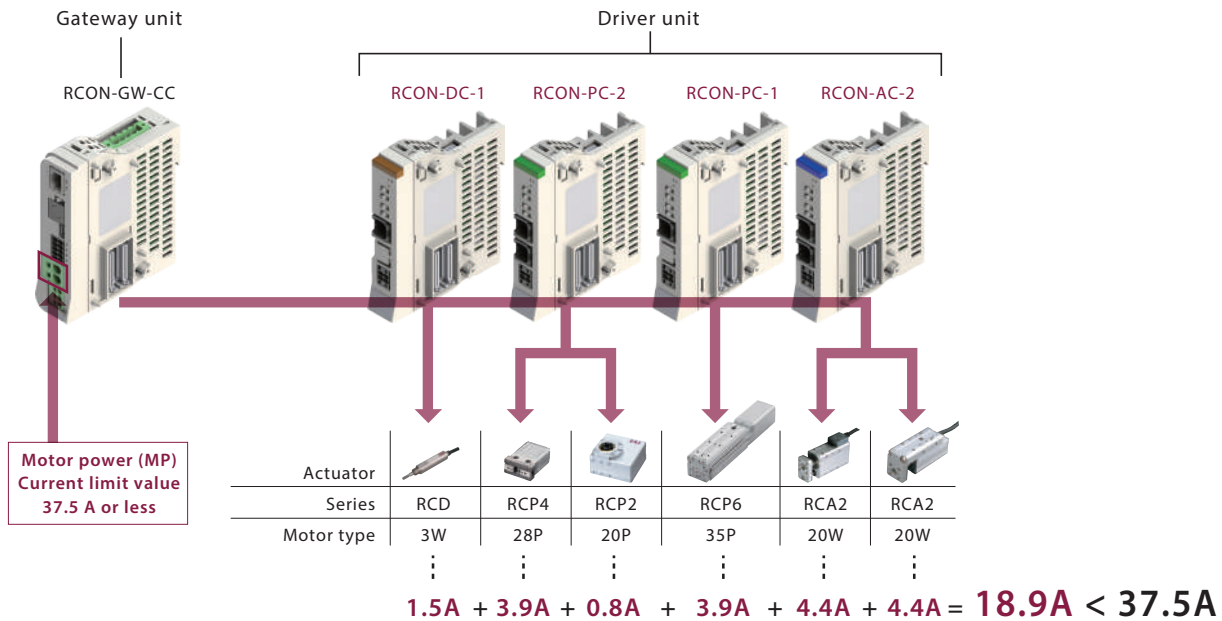


Motor Power Capacity List

Item	Actuator/driver unit			Rated current	Max. current		
	Series	Motor type			When energy-saving is set		
Stepper motor RCON-PC	RCP2	20P/20SP/28P	Without PowerCON	0.8A	-	-	x 2 axes
	RCP3	28P*		1.9A	-	-	
	RCP4	28P/35P/42P/ 42SP/56P	Without PowerCON	1.9A	-	-	x 1 axis
	RCP5			2.3A	-	3.9A	
	RCP6		With PowerCON	2.3A	-	3.9A	
	Stepper motor RCON-PCF	RCP2 RCP4 RCP5 RCP6	56SP/60P/ 86P	Without PowerCON	5.7A	-	-
AC servo motor RCON-AC (Per 1-axis actuator)	RCA RCA2	5W	Standard / Hi-accel./decel.	1.0A	-	3.3A	x 2 axes
		10W		1.3A	2.5A	4.4A	
		20W	Standard / High accel./decel / Energy saving	1.3A	2.5A	4.4A	
		20W(20S)		1.7A	3.4A	5.1A	
	RCL	30W	Standard / Hi-accel./decel.	1.3A	2.2A	4.0A	
		2W		0.8A	-	4.6A	
		5W		1.0A	-	6.4A	
		10W		1.3A	-	6.4A	
DC brush-less motor RCON-DC	RCD	3W	Standard	0.7A	-	1.5A	x 1 axis

* Applicable models: RCP2-RA3, RCP2-RGD3

<Selection example>



OK

(Confirmed to be less than 37.5A. If larger than 37.5A, another gateway unit is required.)

Step 8 Fan unit selection

If the controller installation environment may exceed 40°C, a fan unit will be required. (Up to 55°C)

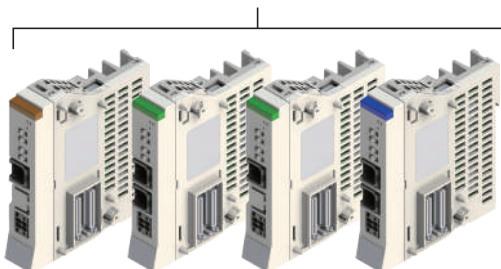
The number of fan units is the total number of driver units divided by 2.

If the total number of driver units is an odd number, add 1 to the total number and divide it by 2 (The last fan will connect to the last driver card and the terminal unit).

When ordering, be sure to specify the gateway unit model.

<Selection example>

$$4 \text{ driver units} \div 2 = 2 \text{ units}$$



Fan unit [RCON-FU]



Note: The ambient operating temperature of the simple absolute unit is within the range of 0~40°C even when a fan unit is installed.

Step 9 Unit models to be ordered

Order using the model name for each unit.

<Selection example>

RCON

Gateway unit (2 fan units included)

[RCON-GW-CC-FU2] 1 6

Expansion unit [RCON-EXT] 4

Driver unit [RCON-DC-1] 2

Driver unit [RCON-PC-2] 2

Driver unit [RCON-PC-1] 2

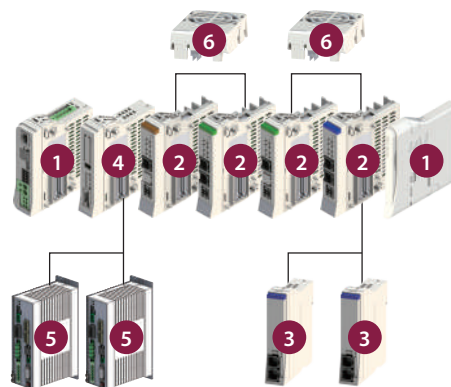
Driver unit [RCON-AC-2] 2

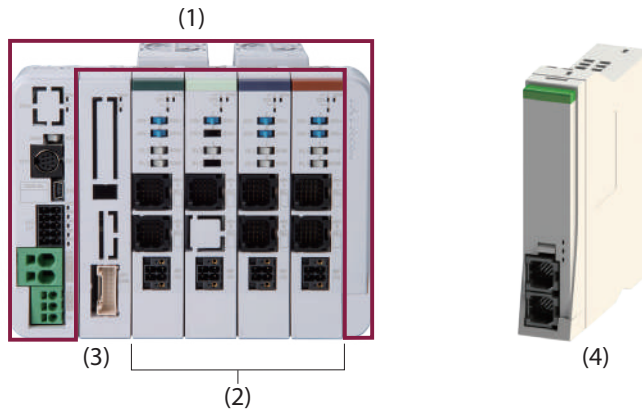
Simple absolute unit [RCON-ABU-A] x 2 3

RCON connection specification SCON

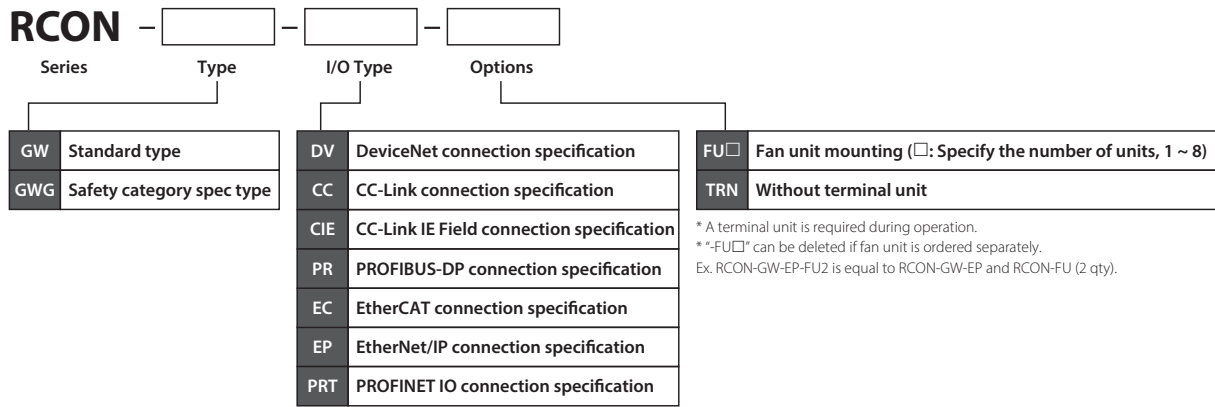
[SCON-*-***-RC] x 2 5

See pages 33 to 34 for applicable cables for each actuator.

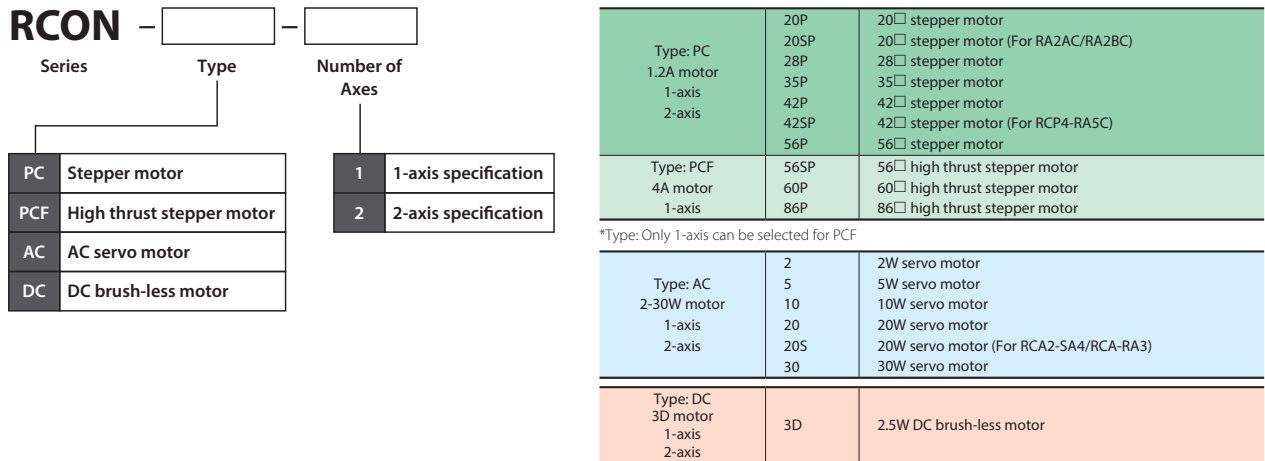




(1) Gateway unit



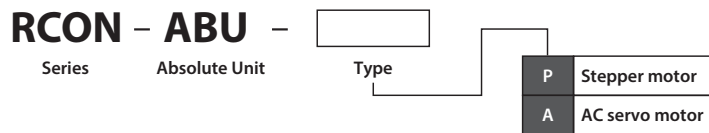
(2) Driver unit



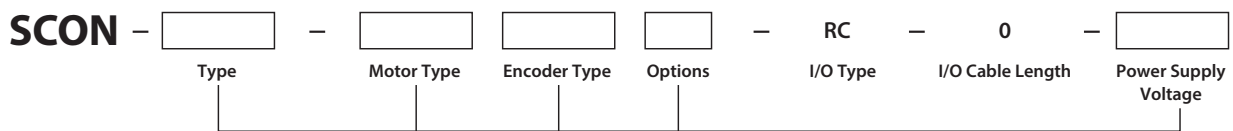
(3) Expansion unit



(4) Simple absolute unit

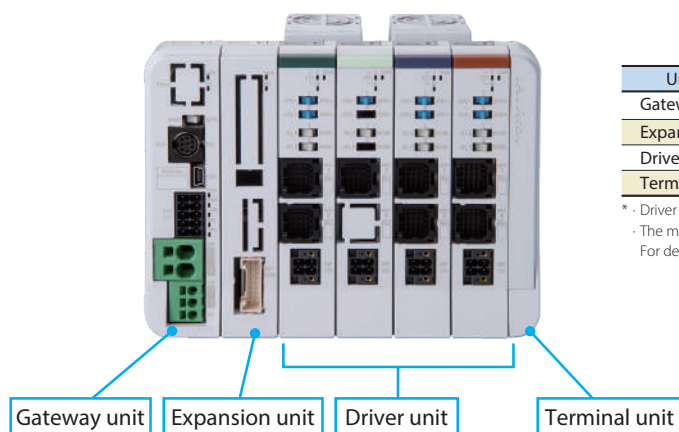


(5) SCON controller (RCON connection specification)



Contact IAI for model selection items
 Only SCON-C RC option can be connected to RCON-EXT.

The RCON has a modular configuration. Connect each unit under the following conditions.



Unit name	Number of connected units	Location
Gateway unit	1	Placed at far left
Expansion unit	1	Placed to right of gateway unit
Driver unit	16 axes max.*	Placed to left of terminal unit
Terminal unit	1	Placed at far right

* - Driver units can be rearranged.
 · The maximum number of connectable axes varies depending on the operation mode.
 For details, refer to "Maximum number of connectable axes (page 26)".

Unit name and single product model number list

	Product name	Model	Reference page
Gateway unit (GWG: Safety category type)	DeviceNet connection specification	RCON-GW/GWG-DV	P. 20
	CC-Link connection specification	RCON-GW/GWG-CC	P. 20
	CC-Link IE Field connection specification	RCON-GW/GWG-CIE	P. 21
	PROFIBUS-DP connection specification	RCON-GW/GWG-PR	P. 21
	EtherCAT connection specification	RCON-GW/GWG-EC	P. 22
	EtherNet/IP connection specification	RCON-GW/GWG-EP	P. 22
	PROFINET IO connection specification	RCON-GW/GWG-PRT	P. 23
Expansion unit	For SCON-CB connection	RCON-EXT	P. 25
	Terminal connector (for SCON-CB)	RCON-EXT-TR	P. 32
Driver unit	Stepper motor 1-axis specification	RCON-PC-1	P. 24
	Stepper motor 2-axis specification	RCON-PC-2	
	High thrust stepper motor 1-axis specification	RCON-PCF-1	
	AC servo motor 1-axis specification	RCON-AC-1	
	AC servo motor 2-axis specification	RCON-AC-2	
	DC brush-less motor 1-axis specification	RCON-DC-1	
DC brush-less motor 2-axis specification	RCON-DC-2		
Terminal unit	Included with gateway unit	RCON-GW-TR	P. 25
Simple absolute unit (1-axis specification)	For RCON-PC	RCON-ABU-P	P. 25
	For RCON-AC	RCON-ABU-A	
Fan unit	One for every two driver units	RCON-FU	P. 32

General Specifications

Item	Specifications			Details page	
Power supply voltage	24VDC \pm 10%			-	
Power supply current	Differs with system configuration			P. 19	
Number of axes controlled	1 to 16 axes *For maximum axes, refer to "Maximum number of connectable axes"			P. 26	
Encoder resolution [pulse/r]	Stepper motor	Incremental	800	-	
		Battery-less Absolute	RCP4/RCP5		800
			RCP6		8192
	AC servo motor	Incremental	RCA		800
		Battery-less Absolute			16384
		Incremental	RCA2-***N/NA		1048
			Excluding RCA2-***N/NAN		800
	DC brush-less motor	Incremental	RCD-RA1R/GRSN		400
RCD-RA1DA/GRSNA			480		
Supported field networks	DeviceNet, CC-Link, CC-Link IE Field, PROFIBUS-DP, EtherCAT, EtherNet/IP, PROFINET IO				
Configuration units	Gateway unit, driver unit, expansion unit, simple absolute unit			P. 20	
SIO interface	Teaching port	Communication method	RS485	-	
		Communication speed	9.6/19.2/38.4/57.6/115.2/230.4kbps		
	USB port	Communication method	USB		
		Communication speed	12Mbps		
Emergency stop/Enable operation	Collective system support with gateway unit STOP signal input, equipped with connectors capable of shutting off the drive power supply to individual axes of each driver unit			-	
Data recording device	Position data and parameters are saved in non-volatile memory (Unlimited rewrites)			-	
Calendar function	Retention function: About 10 days Charging time: About 100 hours			-	
Safety category compliance	B (The safety category specification supports up to category 4 external circuits)			-	
Protection functionality	Overcurrent, abnormal temperature, encoder disconnection, overload			-	
Preventative/predictive maintenance function	Low electrolytic capacitor capacity and low fan rotation speed			-	
Ambient operating temperature	0~55°C *0~40°C for simple absolute units			-	
Ambient operating humidity	85% RH or less, non-condensing			-	
Operating atmosphere	Avoid corrosive gas and excessive dust			-	
Vibration resistance	Frequency: 10~57Hz / Amplitude: 0.075mm, Frequency: 57~150Hz / Acceleration: 9.8m/s2 XYZ directions Sweep time: 10 minutes Number of sweeps: 10 times			-	
Shock resistance	Drop height: 800mm 1 corner, 3 edges, 6 faces			-	
Electric shock protection mechanism	Class III			-	
Degree of protection	IP20			-	
Insulation withstanding voltage	500VDC 10M Ω			-	
Generated heat (per unit)	RCON-PC	PowerCON: No	5.0W	-	
		PowerCON: Yes	8.0W		
	RCON-PCF	PowerCON: No	19.2W		
	RCON-AC	Standard / High accel/decel / Energy saving	4.5W		
	RCON-DC	Standard	3.0W		
Cooling method	Natural cooling and forced cooling by fan unit (option)			-	
Connections between each unit	Unit connection method			-	
Installation/mounting method	DIN rail (35mm) mounting			-	
Regulations/standards	CE Marking, UL Certification (planned), RoHS			-	

Based on the connection configuration, make sure for each unit that the calculated results for control power and motor power do not exceed the current limit value for selection calculation.

Item	Current limit value
Control power	9.0A or less
Motor power	37.5A or less

* Do not include the power supply to SCON-CB RC.

Power supply capacity by unit

Item	Specifications							
Power supply voltage	24VDC±10%							
Control power capacity (per unit)	Gateway unit (includes terminal unit)				0.8A			
	Driver unit (common for all types)		Brake: No		0.2A			
			Brake: Yes (1-axis specification)		0.4A			
			Brake: Yes (2-axis specification)		0.6A			
	Expansion unit				0.1A			
Simple absolute unit (common to all types)				0.2A				
Motor power capacity (per 1-axis actuator)	Actuator/driver unit				Rated current	Max. current		
		Series	Motor type			When energy-saving is set		
	Stepper motor/ RCON-PC	RCP2 RCP3	20P/20SP/28P		Without PowerCON	0.8A	-	-
			28P*			1.9A	-	-
		RCP4 RCP5 RCP6	28P/35P/42P/ 42SP/56P		Without PowerCON	1.9A	-	-
					With PowerCON	2.3A	-	3.9A
	Stepper motor/ RCON-PCF	RCP2 RCP4 RCP5 RCP6	56SP/60P/86P		Without PowerCON	5.7A	-	-
	AC servo motor/ RCON-AC	RCA RCA2	5W		Standard / Hi-accel./decel.	1.0A	-	3.3A
			10W		Standard / High accel./decel / Energy saving	1.3A	2.5A	4.4A
			20W			1.3A	2.5A	4.4A
			20W(20S)			1.7A	3.4A	5.1A
			30W		1.3A	2.2A	4.0A	
		RCL	2W		Standard / Hi-accel./decel.	0.8A	-	4.6A
			5W			1.0A	-	6.4A
	10W		1.3A	-		6.4A		
DC brush-less motor/ RCON-DC	RCD	3W		Standard	0.7A	-	1.5A	

* Applicable models: RCP2-RA3, RCP2-RGD3



Caution

· For operation patterns where acceleration/deceleration operation is performed simultaneously on all axes, and where operating duty is 100%: Motor power must be calculated at the maximum current value.
(If the maximum current is not listed, calculate with the rated current.)

Gateway Unit

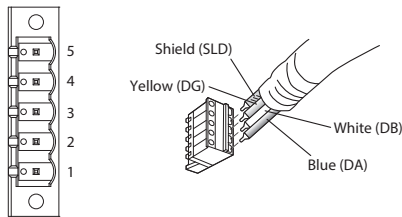
- Features** It is used to connect a 24V power supply and a teaching tool to the RCON.
 (The GWG specification is for the safety category spec type.)

Gateway unit DeviceNet connection specification

Model: RCON-GW/GWG-DV



Connector for network



Controller side connector top view

Specifications

Power	24VDC ±10%
Control power	0.8A
Ambient operating temperature & humidity	0~55°C, 85% RH or less, non-condensing
Operating atmosphere	Avoid corrosive gas and excessive dust
Degree of protection	IP20
Mass	155g
External dimensions	W30mm × H115mm × D95mm

Connector	Cable connector model (manufacturer)	Remarks
System I/O	Cable side: DFMC1.5/5-ST-3.5	Standard accessories
Network	Cable side: MSTB2.5/5-STF-5.08 AUM (Phoenix Contact)	Standard accessories
	Controller side: MSTBA2.5/5-GF-5.08 AU (Phoenix Contact)	

Network connection cable

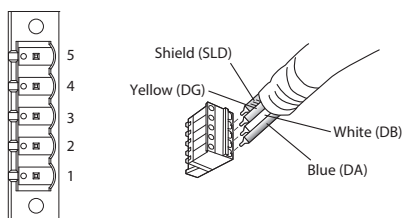
Pin No.	Signal name (color scheme)	Description	Compatible wire diameter
1	V- (black)	Power supply cable - side	DeviceNet dedicated cable
2	CAN L (blue)	Signal data Low side	
3	-	Drain (shield)	
4	CAN H (white)	Signal data High side	
5	V+ (red)	Power supply cable + side	

Gateway unit CC-Link connection specification

Model: RCON-GW/GWG-CC



Connector for network



Controller side connector top view

Specifications

Power	24VDC ±10%
Control power	0.8A
Ambient operating temperature & humidity	0~55°C, 85% RH or less, non-condensing
Operating atmosphere	Avoid corrosive gas and excessive dust
Degree of protection	IP20
Mass	154g
External dimensions	W30mm × H115mm × D95mm

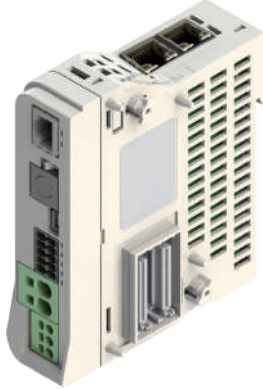
Connector	Cable connector model (manufacturer)	Remarks
System I/O	Cable side: DFMC1.5/5-ST-3.5	Standard accessories
Network	Cable side: MSTB2.5/5-STF-5.08 AU (Phoenix Contact) With 110Ω/130Ω terminal resistor	Standard accessories
	Controller side: MSTBA2.5/5-GF-5.08 AU (Phoenix Contact)	

Network connection cable

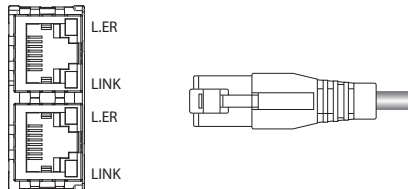
Pin No.	Signal name (color scheme)	Description	Compatible wire diameter
1	DA (blue)	Signal line A	CC-Link dedicated cable
2	DB (white)	Signal line B	
3	DG (yellow)	Digital ground	
4	SLD	Connects the shield of shielded cables (5-pin FG and control power connector 1-pin FG connected internally)	
5	FG	Frame ground (4-pin SLD and control power connector 1-pin FG connected internally)	

Gateway unit CC-Link IE Field connection specification

Model: RCON-GW/GWG-CIE



Connector for network



Controller side connector top view

Specifications

Power	24VDC ±10%
Control power	0.8A
Ambient operating temperature & humidity	0~55°C, 85% RH or less, non-condensing
Operating atmosphere	Avoid corrosive gas and excessive dust
Degree of protection	IP20
Mass	165g
External dimensions	W30mm × H115mm × D95mm

Connector	Cable connector model (manufacturer)	Remarks
System I/O	Cable side DFMC1.5/5-ST-3.5	Standard accessories
Network	Cable side Ethernet ANSI/TIA/EIA-568-B Category 5e or higher shielded 8P8C modular plug (RJ45)	To be prepared by the customer
	Controller side Ethernet ANSI/TIA/EIA-568-B Category 5e or higher shielded 8P8C modular plug (RJ45)	

Network connection cable

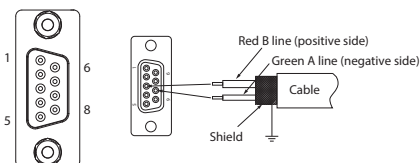
Pin No.	Signal name	Description	Compatible wire diameter
1	TP0+	Data 0+	For the Ethernet cable, use a straight STP cable of Category 5e or higher.
2	TP0-	Data 0-	
3	TP1+	Data 1+	
4	TP2+	Data 2+	
5	TP2-	Data 2-	
6	TP1-	Data 1-	
7	TP3+	Data 3+	
8	TP3-	Data 3-	

Gateway unit PROFIBUS-DP connection specification

Model: RCON-GW/GWG-PR



Connector for network



Controller side connector top view

Specifications

Power	24VDC ±10%
Control power	0.8A
Ambient operating temperature & humidity	0~55°C, 85% RH or less, non-condensing
Operating atmosphere	Avoid corrosive gas and excessive dust
Degree of protection	IP20
Mass	158g
External dimensions	W30mm × H115mm × D95mm

Connector	Cable connector model (manufacturer)	Remarks
System I/O	Cable side DFMC1.5/5-ST-3.5	Standard accessories
Network	Cable side 9-pin D sub connector (male)	To be prepared by the customer
	Controller side 9-pin D sub connector (female)	

Network connection cable

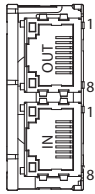
Pin No.	Signal name	Description	Compatible wire diameter
1	NC	Not connected	PROFIBUS-DP dedicated cable (Type A: EN5017)
2	NC	Not connected	
3	B-Line	Signal line B (RS-485)	
4	RTS	Transmission request	
5	GND	Signal GND (insulation)	
6	+5V	+5 V output (isolated)	
7	NC	Not connected	
8	A-Line	Signal line A (RS-485)	
9	NC	Not connected	

Gateway unit EtherCAT connection specification

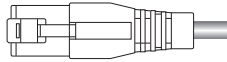
Model: RCON-GW/GWG-EC



Connector for network



Controller side connector top view



Specifications

Power	24VDC ±10%
Control power	0.8A
Ambient operating temperature & humidity	0~55°C, 85% RH or less, non-condensing
Operating atmosphere	Avoid corrosive gas and excessive dust
Degree of protection	IP20
Mass	152g
External dimensions	W30mm × H115mm × D95mm

Connector	Cable connector model (manufacturer)	Remarks
System I/O	Cable side DFMC1.5/5-ST-3.5	Standard accessories
Network	Cable side Ethernet ANSI/TIA/EIA-568-B Category 5 or higher Shielded 8P8C modular plug (RJ45)	To be prepared by the customer
	Controller side Ethernet ANSI/TIA/EIA-568-B Category 5 or higher Shielded 8P8C modular jack (RJ45)	

Network connection cable

Pin No.	Signal name	Description	Compatible wire diameter
1	TD +	Transmit data +	For the Ethernet cable, use a straight STP cable of Category 5 or higher.
2	TD -	Transmit data -	
3	RD +	Receive data +	
4	-	Not used	
5	-	Not used	
6	RD -	Receive data -	
7	-	Not used	
8	-	Not used	

Gateway unit EtherNet/IP connection specification

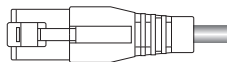
Model: RCON-GW/GWG-EP



Connector for network



Controller side connector top view



Specifications

Power	24VDC ±10%
Control power	0.8A
Ambient operating temperature & humidity	0~55°C, 85% RH or less, non-condensing
Operating atmosphere	Avoid corrosive gas and excessive dust
Degree of protection	IP20
Mass	156g
External dimensions	W30mm × H115mm × D95mm

Connector	Cable connector model (manufacturer)	Remarks
System I/O	Cable side DFMC1.5/5-ST-3.5	Standard accessories
Network	Cable side Ethernet ANSI/TIA/EIA-568-B Category 5 or higher Shielded 8P8C modular plug (RJ45)	To be prepared by the customer
	Controller side Ethernet ANSI/TIA/EIA-568-B Category 5 or higher Shielded 8P8C modular jack (RJ45)	

Network connection cable

Pin No.	Signal name	Description	Compatible wire diameter
1	TD +	Transmit data +	For the Ethernet cable, use a straight STP cable of Category 5 or higher.
2	TD -	Transmit data -	
3	RD +	Receive data +	
4	-	Not used	
5	-	Not used	
6	RD -	Receive data -	
7	-	Not used	
8	-	Not used	

Gateway unit PROFINET IO connection specification

■ Model: RCON-GW/GWG-PRT



Specifications

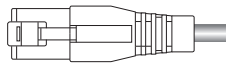
Power	24VDC ±10%
Control power	0.8A
Ambient operating temperature & humidity	0~55°C, 85% RH or less, non-condensing
Operating atmosphere	Avoid corrosive gas and excessive dust
Degree of protection	IP20
Mass	158g
External dimensions	W30mm × H115mm × D95mm

Connector	Cable connector model (manufacturer)	Remarks
System I/O	Cable side DFMC1.5/5-ST-3.5	Standard accessories
Network	Cable side Ethernet ANSI/TIA/EIA-568-B Category 5 or higher Shielded 8P8C modular plug (RJ45)	To be prepared by the customer
	Controller side Ethernet ANSI/TIA/EIA-568-B Category 5 or higher Shielded 8P8C modular jack (RJ45)	

Connector for network



Controller side connector top view



Network connection cable

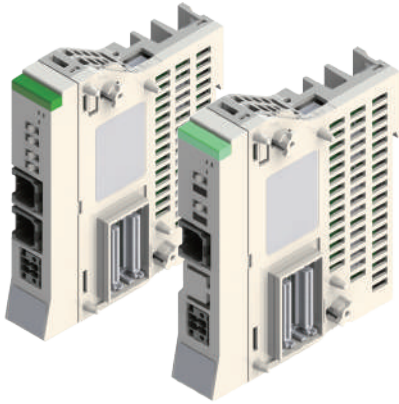
Pin No.	Signal name	Description	Compatible wire diameter
1	TD +	Transmit data +	For the Ethernet cable, use a straight STP cable of Category 5 or higher.
2	TD -	Transmit data -	
3	RD +	Receive data +	
4	-	Not used	
5	-	Not used	
6	RD -	Receive data -	
7	-	Not used	
8	-	Not used	

Driver Unit

- **Features** A controller unit for actuator control.
Up to two axes can be connected to a single unit.

Driver unit for RCP series connection

A driver unit for stepper motor connection.
Can be connected to all RCP series actuators.



Model	Type	Compatible motor capacity
RCON-PC-1	1-axis connection	1.2A (□20/28/35/42/56)
RCON-PC-2	2-axis connection	
RCON-PCF-1	1-axis connection *For high thrust	4A (□56/60/86)

Specifications

Power	24VDC ±10%
Control power	(Without brake) 0.2A (With brake, 1-axis specification) 0.4A (With brake, 2-axis specification) 0.6A
Ambient operating temperature & humidity	(Without fan) 0~40°C (With fan) 0~55°C, 85% RH or less, non-condensing
Operating atmosphere	Avoid corrosive gas and excessive dust
Degree of protection	IP20
Mass	(1-axis specification) 175g (2-axis specification) 180g
External dimensions	W22.6mm × H115mm × D95mm
Accessories	Drive source shutoff connector (DFMC1.5/2-STF-3.5)

Driver unit for RCA series connection

A driver unit for AC servo motor connection.
Can be connected to all RCA series actuators.



Model	Type	Compatible motor capacity
RCON-AC-1	1-axis connection	2W - 30W
RCON-AC-2	2-axis connection	

Specifications

Power	24VDC ±10%
Control power	(Without brake) 0.2A (With brake, 1-axis specification) 0.4A (With brake, 2-axis specification) 0.6A
Ambient operating temperature & humidity	(Without fan) 0~40°C (With fan) 0~55°C, 85% RH or less, non-condensing
Operating atmosphere	Avoid corrosive gas and excessive dust
Degree of protection	IP20
Mass	(1-axis specification) 175g (2-axis specification) 180g
External dimensions	W22.6mm × H115mm × D95mm
Accessories	Drive source shutoff connector (DFMC1.5/2-STF-3.5)

Driver unit for RCD series connection

A driver unit for DC brush-less motor connection.
Can be connected to all RCD series actuators.



Model	Type	Compatible motor capacity
RCON-DC-1	1-axis connection	3W
RCON-DC-2	2-axis connection	

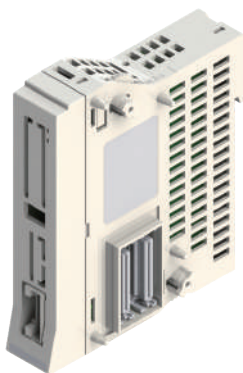
Specifications

Power	24VDC ±10%
Control power	(Without brake) 0.2A (With brake, 1-axis specification) 0.4A (With brake, 2-axis specification) 0.6A
Ambient operating temperature & humidity	(Without fan) 0~40°C (With fan) 0~55°C, 85% RH or less, non-condensing
Operating atmosphere	Avoid corrosive gas and excessive dust
Degree of protection	IP20
Mass	(1-axis specification) 175g (2-axis specification) 180g
External dimensions	W22.6mm × H115mm × D95mm
Accessories	Drive source shutoff connector (DFMC1.5/2-STF-3.5)

Other Units

Expansion unit

SCON-CB/CGB can be connected to operate an actuator with 200V motor.



Model
RCON-EXT

Specifications

Power	24VDC ±10%
Control power	0.1A
Ambient operating temperature & humidity	0~55°C, 85% RH or less, non-condensing
Operating atmosphere	Avoid corrosive gas and excessive dust
Degree of protection	IP20
Mass	96g
External dimensions	W22.6mm × H115mm × D95mm
Accessories	Terminal connector

Actuators that cannot be connected

Servo press type, LSA-W21, SCARA robots, TTA, ZR units, Wrist Units

Terminal unit

A terminal resistor for returning RCON serial communication and input/output signals. (Supplied as an accessory with the gateway unit.)



Model
RCON-GW-TR

Specifications

Power	24VDC ±10%
Control power	0.8A
Ambient operating temperature & humidity	0~55°C, 85% RH or less, non-condensing
Operating atmosphere	Avoid corrosive gas and excessive dust
Degree of protection	IP20
Mass	48g
External dimensions	W12.6mm × H115mm × D95mm

Simple absolute unit

This unit is to be connected when using an actuator with incremental specification as absolute specification.



* One unit per axis with simple absolute.

Model	Type	Compatible motor
RCON-ABU-P	For RCP series connection	Stepper motor
RCON-ABU-A	For RCA series connection	AC servo motor

Specifications

Power	24VDC ±10%
Control power	0.2A
Absolute battery model	AB-7
Battery voltage	3.6V
Charging time	Approx. 72 hours
Ambient operating temperature & humidity	0~40°C, 85% RH or less, non-condensing
Operating atmosphere	Avoid corrosive gas and excessive dust
Degree of protection	IP20
Mass	271g (including 173g for absolute battery)
External dimensions	W22.6mm×H115mm×D95mm
Accessories	Cable (CB-ADPC-MPA005)

The field network control operation mode can be selected from the following control modes.

Data required for operation (target position, speed, acceleration, push current value, etc.) are written by a connected PLC or other host controller into the specified addresses.

Operation mode	Description	Overview
Direct numerical control mode	This mode allows designating the target position, speed, acceleration/deceleration, and current limit value for pushing numerically. Also, it is capable of monitoring the present position, present speed, and the command current value with 0.01mm increments.	
Simple direct mode	Can modify any of the stored target positions by numerical value. Also allows monitoring of the present position numerically with 0.01mm increments.	
Positioner 1 mode	Registers up to 128 points of position data, and can stop at the registered position. Also allows monitoring of the present position numerically with 0.01mm increments.	
Positioner 2 mode	Registers up to 128 points of position data, and can stop at the registered position. This mode does not allow monitoring of the present position. This mode has less in/out data transfer volume than the Positioner 1 mode.	
Positioner 3 mode	Registers up to 128 points of position data, and can stop at the registered position. This mode does not allow monitoring of the present position. This mode has less in/out data transfer volume than the Positioner 2 mode, and controls travel with the minimum of signals.	
Positioner 5 mode	Registers up to 16 points of position data, and can stop at the registered position. This mode has less in/out data transfer volume and fewer positioning tables than the Positioner 2 mode, and allows monitoring of the present position numerically with 0.1mm increments.	

* No remote I/O mode available.

Maximum number of connectable axes

Operation mode / Field network	Direct numerical control mode	Simple direct mode	Positioner 1 mode	Positioner 2 mode	Positioner 3 mode	Positioner 5 mode
DeviceNet	8-axis	16-axis	16-axis	16-axis	16-axis	16-axis
CC-Link	16-axis	16-axis	16-axis	16-axis	16-axis	16-axis
CC-Link IE Field	16-axis	16-axis	16-axis	16-axis	16-axis	16-axis
PROFIBUS-DP	8-axis	16-axis	16-axis	16-axis	16-axis	16-axis
EtherCAT	8-axis	16-axis	16-axis	16-axis	16-axis	16-axis
EtherNet/IP	8-axis	16-axis	16-axis	16-axis	16-axis	16-axis
PROFINET IO	8-axis	16-axis	16-axis	16-axis	16-axis	16-axis

List of Functions by Operation Mode

	Direct numerical control mode	Simple direct mode	Positioner 1 mode	Positioner 2 mode	Positioner 3 mode	Positioner 5 mode
Number of positioning points	Unlimited	128 points	128 points	128 points	128 points	16 points
Home return motion	○	○	○	○	○	○
Positioning operation	○	○	△	△	△	△
Speed, acceleration/ deceleration settings	○	△	△	△	△	△
Different acceleration and deceleration settings	×	△	△	△	△	△
Pitch feed (Incremental)	○	△	△	△	×	△
JOG operation	△	△	△	△	×	△
Position data writing	×	×	○	○	×	×
Push-motion operation	○	△	△	△	△	△
Speed changes while traveling	○	△	△	△	△	△
Pausing	○	○	○	○	○	○
Zone signal output	△ (2 points)	△ (2 points)	△ (2 points)	△ (2 points)	△ (1 point)	△ (2 points)
Position zone signal output	×	△	△	△	×	×
Overload warning output	○	○	○	○	×	○
Vibration control (Note 1)	×	△	△	△	△	△
Present position reading (Note 2) (Resolution)	○ (0.01mm)	○ (0.01mm)	○ (0.01mm)	×	×	○ (Note 3) (0.1mm)

* ○: Direct setting is possible, △: Position data or parameter input is required, ×: The operation is not supported.

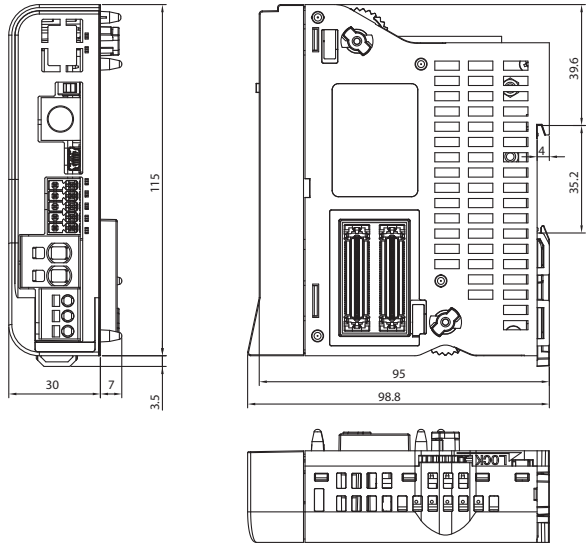
Note 1: This function is limited to the AC servo motor specification.

Note 2: The resolution when connecting a SCON controller to control a SCON motor is 0.001 degree (0.01 degree for positioner 5 mode only).

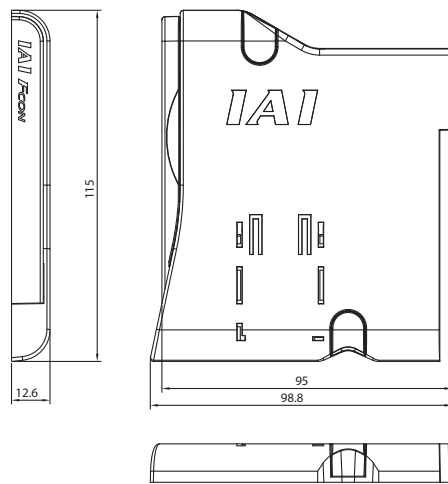
Note 3: The maximum output value in positioner 5 mode is 3,276.7mm (327.67 degrees for DDA motor).

To control the actuator in an operation range exceeding the maximum value, select a different operation mode.

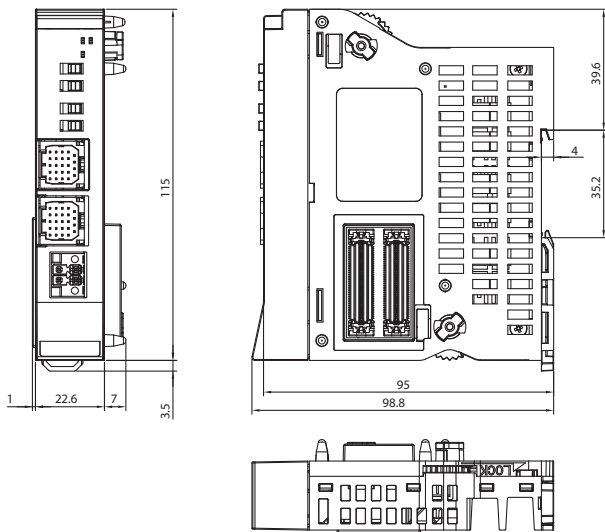
Gateway unit



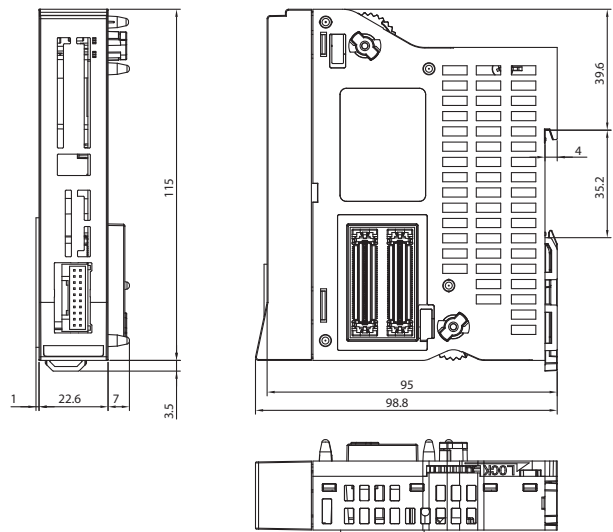
Terminal unit



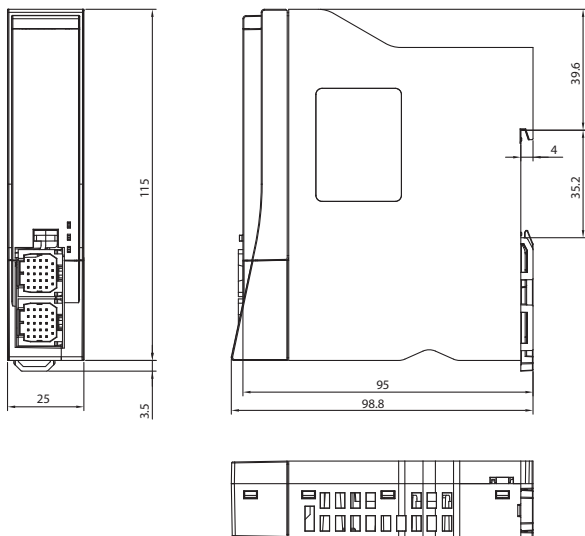
Driver unit



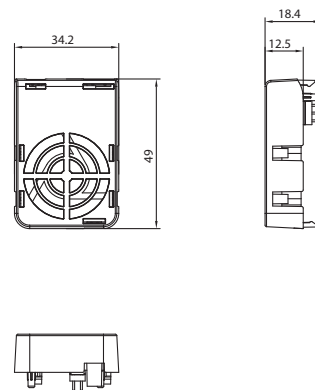
Expansion unit



Simple absolute unit

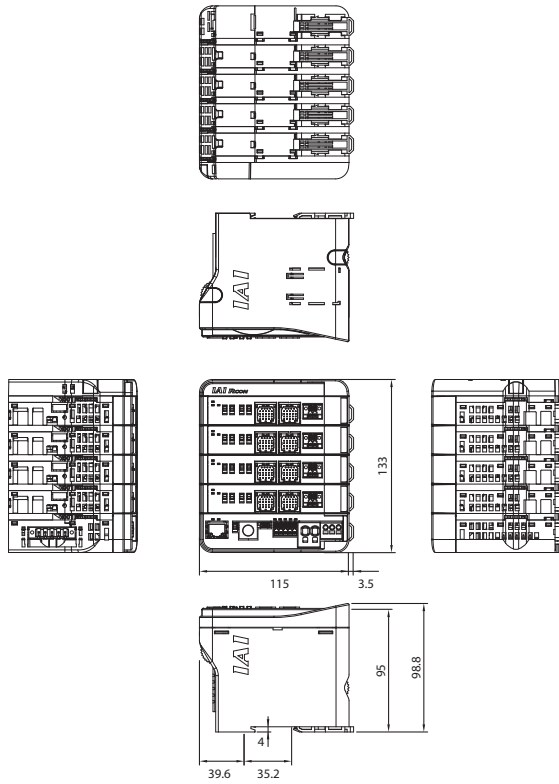


Fan unit

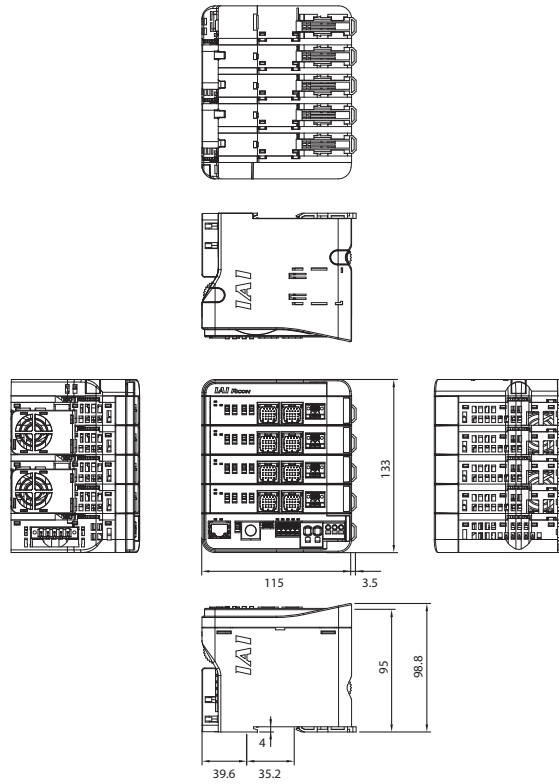


Unit combination examples

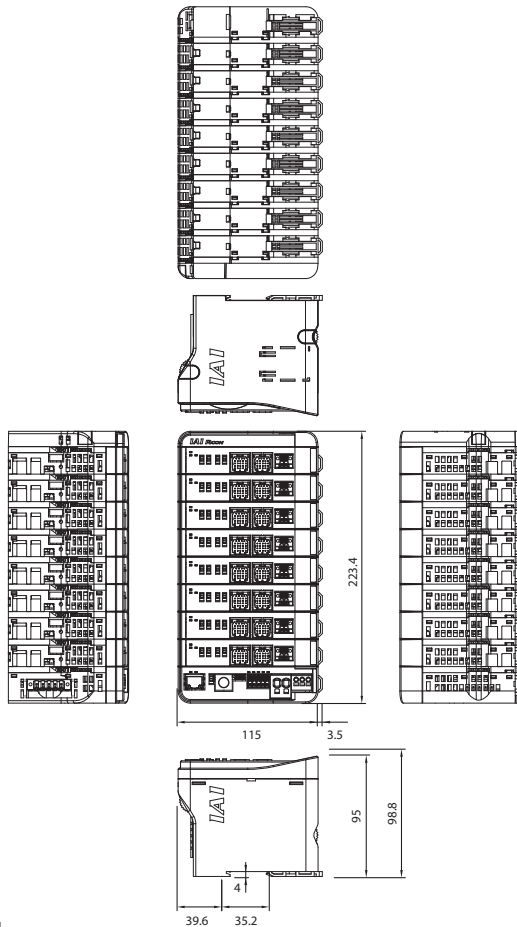
Driver units x 4, without fan



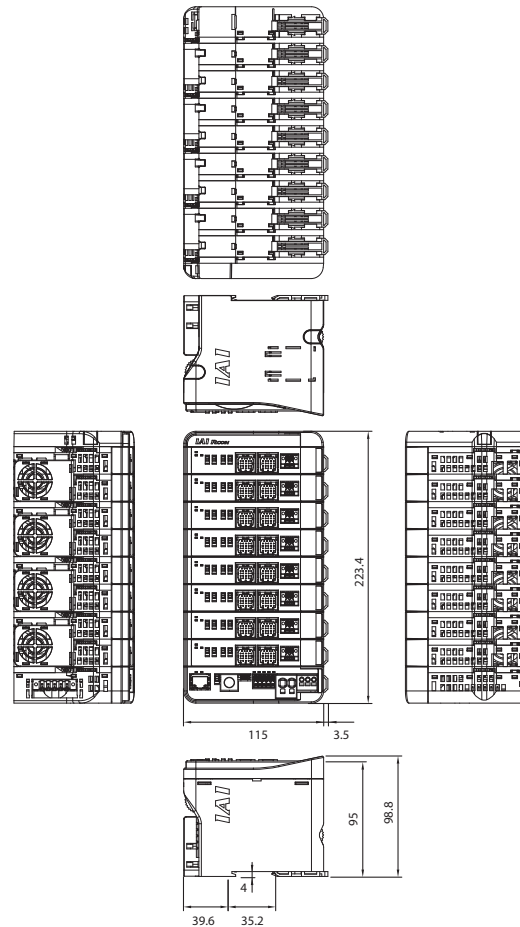
Driver units x 4, with fan



Driver units x 8, without fan



Driver units x 8, with fan

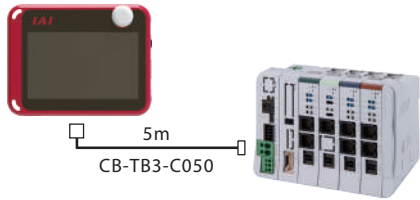


Touch Panel Teaching Pendant

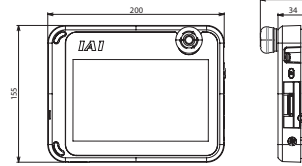
- Features A teaching device equipped with functions such as position teaching, trial operation, and monitoring.

- Model **TB-03-** Please contact IAI for the current supported versions.

■ Configuration



■ External Dimensions

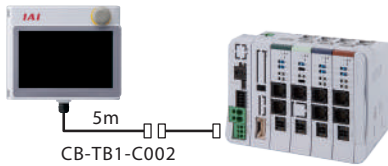


■ Specifications

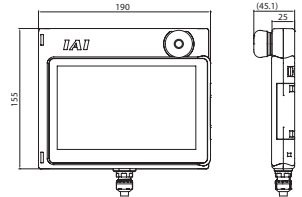
Rated voltage	24VDC
Power consumption	3.6W or less (150mA or less)
Ambient operating temperature	0 to 40°C
Ambient operating humidity	20~85% RH (Non-condensing)
Environmental resistance	IPX0
Mass	670g (TB-03 unit only)
Charging method	Wired connection with dedicated AC adapter/controller
Wireless connection	Bluetooth4.2 class2

- Model **TB-02(D)-** Please contact IAI for the current supported versions.

■ Configuration



■ External Dimensions



■ Specifications

Rated voltage	24VDC
Power consumption	3.6W or less (150mA or less)
Ambient operating temperature	0 to 40°C
Ambient operating humidity	20~85% RH (Non-condensing)
Environmental resistance	IP20
Mass	470g (TB-02 unit only)

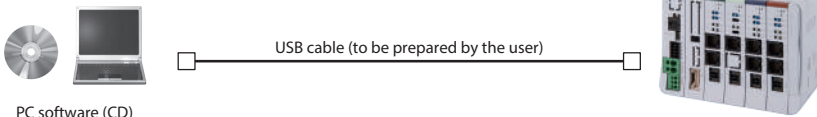
PC Teaching Software (Windows only)

- Features Start-up support software which comes equipped with functions such as position teaching, trial operation, and monitoring. A complete range of functions needed for making adjustments contributes to shortened start-up time.

- Model **IA-OS**

Please contact IAI for the current supported versions.

■ Configuration



PC software (CD)

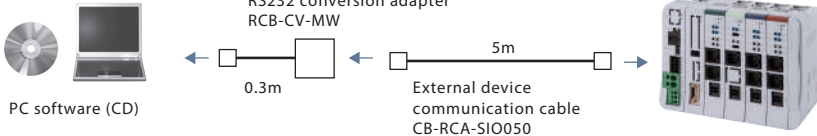
Supported Windows versions: 7/8/8.1/10



- Model **RCM-101-MW** (with external device communication cable + RS232 conversion unit)

Please contact IAI for the current supported versions.

■ Configuration



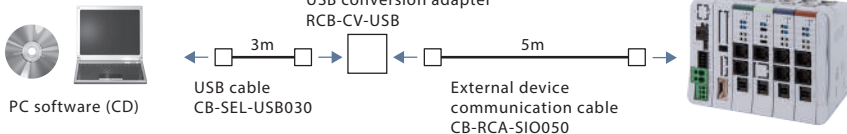
PC software (CD)



- Model **RCM-101-USB**
(with external device communication cable + USB conversion adapter + USB cable)

Please contact IAI for the current supported versions.

■ Configuration



PC software (CD)



24 V Power Supply

■ Overview A power supply the same height as RCON which can be easily installed on control panels. It can be connected to RCON to monitor power status.

■ Model **PSA-24
(Without fan)**

■ Model **PSA-24L
(With fan)**

* Non-IAI power supply can be used for RCON.



Specifications Table

Item	Specifications	
	100VAC input	200VAC input
Power input voltage range	100VAC~230VAC ±10%	
Input power supply current	3.9A or less	1.9A or less
Power capacity	Without fan: 250VA With fan: 390VA	Without fan: 280VA With fan: 380VA
Inrush current *1	Without fan: 17A (typ) With fan: 27.4A (typ)	Without fan: 34A (typ) With fan: 54.8A (typ)
Generated heat	28.6W	20.4W
Output voltage range *2	24VDC ±10%	
Continuous rated output	Without fan: 8.5A (204W), with fan: 13.8A (330W)	
Peak output	17A(408W)	
	86% or more	90% or more
Parallel connection *3	Max.: 5 units	

*1 The pulse width of flowing inrush current is less than 5 ms.

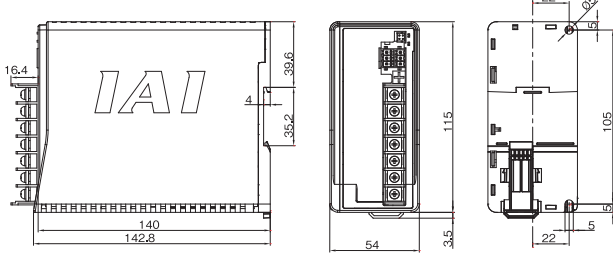
*2 In order to enable parallel operation, this power supply can vary the output voltage according to the load. Therefore, the power supply unit is dedicated for IAI controllers.

*3 Parallel connection cannot be used under the following conditions.

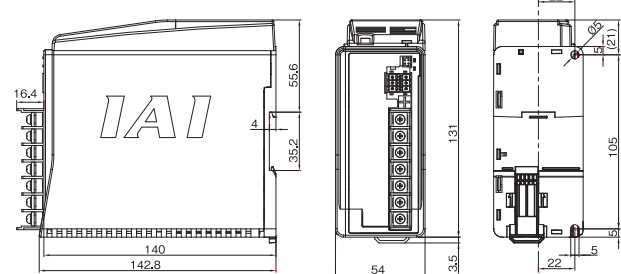
- Parallel connection of PSA-24 (specification without fan) and PSA-24L (specification with fan)
- Parallel connection with a power supply unit other than this power supply
- Parallel connection with PS-24

External Dimensions

PSA-24



PSA-24L



Fan unit

- Overview An option for forced cooling of the driver unit. 1 fan unit to be mounted per 2 driver units.
- Model **RCON-FU**



Dummy plug

- Overview Required for the safety category specification (GWG).
- Model **DP-5**



* This plug is included with RCON-GWG.

System I/O connector

- Overview A connector for emergency stop input, operation mode switching input from exterior, etc.
- Model **DFMC1.5/5-ST-3.5**



Drive source shutoff connector

- Overview A drive source shutoff input connector.
- Model **DFMC1.5/2-STF-3.5**



Terminal connector

- Overview Required as a terminal resistor when connecting SCON.
- Model **RCON-EXT-TR**



Replacement battery

- Overview A replacement battery for the simple absolute unit.
- Model **AB-7**



* This connector is included with RCON-EXT.

* For RCON-ABU-P & RCON-ABU-A.

When placing an order for a replacement cable, please use the model number shown below.

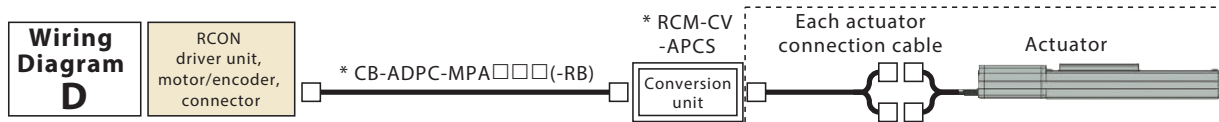
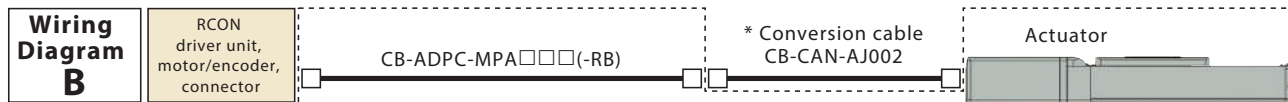
Table of compatible cables

No.	Actuator		Applicable controller symbol	RCON connection cable ^(Note 2) (-RB: Robot cable) Each actuator connection cable	RCM-CV-APCS	Wiring diagram
	Series	Target type				
(1)	RCP6 RCP6CR RCP6W	Other than high thrust type ^(Note 1)	P5	CB-ADPC-MPA□□□(-RB)	-	A
(2)	RCP5 RCP5CR RCP5W	High thrust type ^(Note 1)	P6	CB-ADPC-MPA□□□(-RB) CB-CAN-AJ002 (conversion cable)	-	B
(3)		Gripper (GR*), ST4525E, SA3/RA3	P5	CB-ADPC-MPA□□□(-RB)	-	A
(4)	RCP4 RCP4CR RCP4W	High thrust type ^(Note 1)	P6	CB-ADPC-MPA□□□(-RB) CB-CAN-AJ002 (conversion cable)	-	B
(5)		Other than (3), (4)	P5	CB-ADPC-MPA□□□(-RB) CB-CAN-AJ002 (conversion cable)	-	B
(6)	RCP3		P5	CB-RCAPC-MPA□□□(-RB)	-	C
(7)		RCP2 rotary compact type (standard type) RCP2-RTBS/RTBSL/RTCS/RTCSL	P5	CB-ADPC-MPA□□□(-RB) [CB-RPSEP-MPA□□□]	Required	D
(8)		RCP2CR (clean room type), RCP2W (dust-proof/splash-proof type) Rotary (RT*) of above types GRS/GRM/GR35S/GR35M of above types	P5	CB-ADPC-MPA□□□(-RB)	-	A
(9)	RCP2 RCP2CR RCP2W	GRSS/GRLS/GRST/GRHM/GRHB of all types (standard / clean room / dust-proof/splash-proof) Short type (RCP2 only) RCP2-SRA4R/SRGS4R/SRGD4R	P5	CB-RCAPC-MPA□□□(-RB)	-	C
(10)		High thrust type ^(Note 1)	P6	CB-ADPC-MPA□□□(-RB) [CB-CFA-MPA□□□-RB]	Required	D
(11)		Other than (7) to (10)	P5	CB-ADPC-MPA□□□(-RB) [CB-PSEP-MPA□□□]	Required	D
(12)	RCA2/RCA2CR/RCA2W, RCL		A6	CB-RCAPC-MPA□□□(-RB)	-	C
(13)	RCA RCACR	Short type (RCA only) RCA-SRA4R/SRGS4R/SRGD4R	A6	CB-RCAPC-MPA□□□(-RB)	-	C
(14)	RCAW	Other than (13)	A6	CB-ADPC-MPA□□□(-RB) [CB-ASEP2-MPA□□□]	Required	D
(15)	RCD	RCD-RA1DA, RCD-GRSNA	D6	CB-ADPC-MPA□□□(-RB)	-	A

Note 1: An actuator that uses a high thrust stepper motor (56SP, 60P, 86P)

Note 2: Up to 20m from each driver unit to the actuator, with or without the conversion unit.

Note that the maximum length from the D driver unit to the RCD actuator will be 10 m.



Items with * do not come with actuator.
Those items need to be purchased separately.

Cables in dash lines (-----) come with actuators if the applicable controller designation for RCON (P5/P6/A6/D6) are selected in the actuator model #.

- Non High-Thrust Stepper : [P5]
- High-Thrust Stepper : [P6]
- 24V Servo : [A6]
- Brush-less DC Servo : [D6]

Ex.

RCP6-SA4C-WA-35P-5-50-P5-5S: → CB-ADPC-MPA030 ("S"=3m) cable comes with actuator **[Wiring Diagram A]**

RCP6-SA8C-WA-56SP-5-50-P6-S: → CB-ADPC-MPA030 ("S"=3m) cable comes with actuator but (High-Thrust Type) → CB-CAN-AJ002 cable needs to be purchased separately **[Wiring Diagram B]**

P3 is not for RCON type cable

RCP6-SA4C-WA-35P-5-50-P3-S: → CB-ADPC-MPA030 ("S"=3m) cable required for RCON connection

RCA-SA6C-WA-20-5-50-A6-S: → "S" 3m cable between RCM-CV-APCS and actuator comes with actuator.

Add two more items:

- RCM-CV-APCS
- CB-ADPC-MPA□□□(-RB)

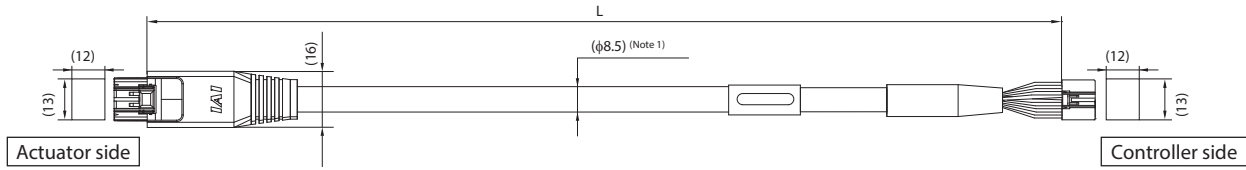
[Wiring Diagram D]

Shortest non-flex cable is CB-ADPC-MPA002 (200mm)

Contact IAI for details.

Model **CB-ADPC-MPA**□□□/□□□/□□□-**RB**

* Please indicate the cable length (L) in □□□, e.g.) 030 = 3m, maximum 20m



Minimum bending radius R 5m or less $r=68\text{mm}$ or more (Dynamic bending condition) More than 5m $r=73\text{mm}$ or more (Dynamic bending condition)

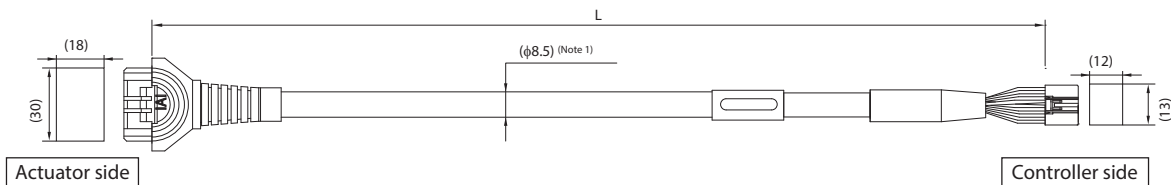
* The robot cable is designed for flex-resistance: Please use the robot cable if the cable needs to be installed through the cable track.

(Note 1) If the cable length is over 5m, $\phi 9.1$ cable diameter applies.

DF62DL-245-2.2C (HIROSE ELECTRIC CO., LTD.)					DF62DL-245-2.2C (HIROSE ELECTRIC CO., LTD.)				
Color	Signal name			Pin No.	Pin No.	Signal name			Color
	DC	AC	PC			PC	AC	DC	
Blue (AWG22/19)	U	U	ϕA	3	3	ϕA	U	U	Blue (AWG22/19)
Orange (AWG22/19)	V	V	VMM	5	5	VMM	V	V	Orange (AWG22/19)
Brown (AWG22/19)	-	-	ϕB	10	10	ϕB	-	-	Brown (AWG22/19)
Gray (AWG22/19)	-	-	VMM	9	9	VMM	-	-	Gray (AWG22/19)
Green (AWG22/19)	W	W	ϕ_A	4	4	ϕ_A	W	W	Green (AWG22/19)
Red (AWG22/19)	-	-	ϕ_B	15	15	ϕ_B	-	-	Red (AWG22/19)
Light blue (AWG26)	A+	A+	SA[mABS]	12	12	SA[mABS]	A+	A+	Light blue (AWG26)
Orange (AWG26)	A-	A-	SB[mABS]	17	17	SB[mABS]	A-	A-	Orange (AWG26)
Green (AWG26)	B+	B+	A+	1	1	A+	B+	B+	Green (AWG26)
Brown (AWG26)	B-	B-	A-	6	6	A-	B-	B-	Brown (AWG26)
Gray (AWG26)	HS1_IN	Z+/SA[mABS]	B+	11	11	B+	Z+/SA[mABS]	HS1_IN	Gray (AWG26)
Red (AWG26)	HS2_IN	Z-/SB[mABS]	B-	16	16	B-	Z-/SB[mABS]	HS2_IN	Red (AWG26)
Black (AWG26)	-	VPS/BAT-	VPS	18	18	VPS	VPS/BAT-	-	Black (AWG26)
Yellow (AWG26)	-	BK+	LS+	8	8	LS+	BK+	-	Yellow (AWG26)
Light blue (AWG26)	-	LS+	BK+	20	20	BK+	LS+	-	Light blue (AWG26)
Orange (AWG26)	-	LS-	BK-	2	2	BK-	LS-	-	Orange (AWG26)
Gray (AWG26)	VCC	VCC	VCC	21	21	VCC	VCC	VCC	Gray (AWG26)
Red (AWG26)	GND	GND	GND	7	7	GND	GND	GND	Red (AWG26)
Brown (AWG26)	-	BK-	LS-	14	14	LS-	BK-	-	Brown (AWG26)
Green (AWG26)	HS3_IN	LS_GND	LS_GND	13	13	LS_GND	LS_GND	HS3_IN	Green (AWG26)
-	-	-	-	19	19	-	-	-	-
Pink (AWG26)	-	BAT+	CF_VCC	22	22	CF_VCC	BAT+	-	Pink (AWG26)
-	-	-	-	23	23	-	-	-	-
Black (AWG26)	FG	FG	FG	24	24	FG	FG	FG	Black (AWG26)

Model **CB-RCAPC-MPA**□□□/□□□/□□□-**RB**

* Please indicate the cable length (L) in □□□, e.g.) 030 = 3m, maximum 20m



Minimum bending radius R 3m or less $r=68\text{mm}$ or more (Dynamic bending condition) More than 3m $r=73\text{mm}$ or more (Dynamic bending condition)

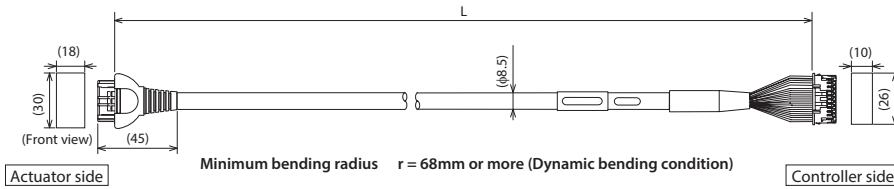
* The robot cable is designed for flex-resistance: Please use the robot cable if the cable needs to be installed through the cable track.

(Note 1) If the cable length is over 3m, $\phi 9.1$ cable diameter applies.

1-1827863-1 (AMP)					DF62DL-245-2.2C (HIROSE ELECTRIC CO., LTD.)				
Color	Signal name			Pin No.	Pin No.	Signal name			Color
	DC	AC	PC			PC	AC	DC	
Blue (AWG22/19)	U	U	ϕA	A1	3	ϕA	U	U	Blue (AWG22/19)
Orange (AWG22/19)	V	V	VMM	B1	5	VMM	V	V	Orange (AWG22/19)
Brown (AWG22/19)	-	-	ϕB	B2	10	ϕB	-	-	Brown (AWG22/19)
Gray (AWG22/19)	-	-	VMM	A3	9	VMM	-	-	Gray (AWG22/19)
Green (AWG22/19)	W	W	ϕ_A	A2	4	ϕ_A	W	W	Green (AWG22/19)
Red (AWG22/19)	-	-	ϕ_B	B3	15	ϕ_B	-	-	Red (AWG22/19)
Light blue (AWG26)	A+	A+	SA[mABS]	A6	12	SA[mABS]	A+	A+	Light blue (AWG26)
Orange (AWG26)	A-	A-	SB[mABS]	B6	17	SB[mABS]	A-	A-	Orange (AWG26)
Green (AWG26)	B+	B+	A+	A7	1	A+	B+	B+	Green (AWG26)
Brown (AWG26)	B-	B-	A-	B7	6	A-	B-	B-	Brown (AWG26)
Gray (AWG26)	HS1_IN	Z+/SA[mABS]	B+	A8	11	B+	Z+/SA[mABS]	HS1_IN	Gray (AWG26)
Red (AWG26)	HS2_IN	Z-/SB[mABS]	B-	B8	16	B-	Z-/SB[mABS]	HS2_IN	Red (AWG26)
Black (AWG26)	-	VPS/BAT-	VPS	B9	18	VPS	VPS/BAT-	-	Black (AWG26)
Yellow (AWG26)	-	BK+	LS+	A4	8	LS+	BK+	-	Yellow (AWG26)
Light blue (AWG26)	-	LS+	BK+	A5	20	BK+	LS+	-	Light blue (AWG26)
Orange (AWG26)	-	LS-	BK-	B5	2	BK-	LS-	-	Orange (AWG26)
Gray (AWG26)	VCC	VCC	VCC	A10	21	VCC	VCC	VCC	Gray (AWG26)
Red (AWG26)	GND	GND	GND	B10	7	GND	GND	GND	Red (AWG26)
Brown (AWG26)	-	BK-	LS-	B4	14	LS-	BK-	-	Brown (AWG26)
Green (AWG26)	HS3_IN	LS_GND	LS_GND	A9	13	LS_GND	LS_GND	HS3_IN	Green (AWG26)
-	-	-	-	A11	19	-	-	-	-
-	-	-	-	-	22	CF_VCC	BAT+	-	Gray (AWG26)
-	-	-	-	-	23	-	-	-	-
Black (AWG26)	FG	FG	FG	B11	24	FG	FG	FG	Black (AWG26)

■ Model **CB-RPSEP-MPA** □ □ □ * Only the robot cable is available for this model.

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

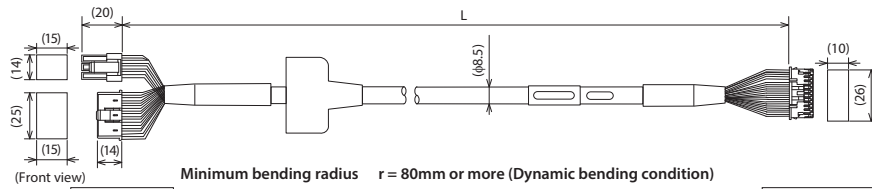


Actuator side D-1100D 1-1827863-1 (AMP)		Controller side PADP-24V-1-S (J.S.T.MFG.CO.,LTD.)
Terminal number		Terminal number
A1	Black (φA)	1
B1	White (VMM)	2
A2	Brown (φA)	5
B2	Green (φB)	3
A3	Yellow (VMM)	4
B3	Red (φB)	6
A6	Orange (LS+)	7
B6	Gray (LS-)	8
A7	Red (A+)	13
B7	Green (A-)	14
A8	Black (B+)	15
B8	Brown (B-)	16
A4	NC	-
B4	NC	-
A5	Black (identification tape) [BK+]	9
B5	Brown (identification tape) [BK-]	10
A9	Green (identification tape) [GNDLS]	20
B9	Red (identification tape) [VPS]	18
A10	White (identification tape) [VCC]	17
B10	Yellow (identification tape) [GND]	19
A11	NC	21
B11	Shield [FG] (FG)	24
	NC	22
	NC	23

■ Model **CB-CFA-MPA** □ □ □ / **CB-CFA-MPA** □ □ □ -RB

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

(Note 1) If the cable length is over 3m, φ9.1 cable diameter applies for a non-robot cable and φ10 for a robot cable.

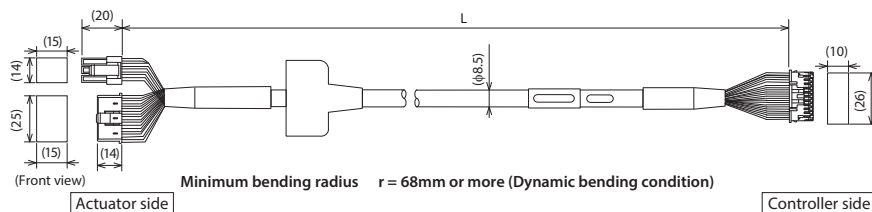


* The robot cable is designed for flex-resistance: Please use the robot cable if the cable needs to be installed through the cable track.

Actuator side SLP-06V (J.S.T. Mfg. Co., Ltd.) XMP-18V (J.S.T. Mfg. Co., Ltd.)		Controller side PADP-24V-1-S (J.S.T.MFG.CO.,LTD.)	
Pin No.	Signal name	Pin No.	Signal name
1	φA	1	φA
2	VMM	2	VMM
4	φB	3	φB
5	VMM	4	VMM
3	φ/A	5	φ/A
6	φ/B	6	φ/B
5	NC	11	NC
6	NC	12	NC
13	LS+	7	LS+
14	LS-	8	LS-
1	A+	13	A+
2	A-	14	A-
3	B+	15	B+
4	B-	16	B-
16	BK+	9	BK+
17	BK-	10	BK-
12	VCC	21	VCC
9	GND	19	GND
11	VPS	18	VPS
10	NC	20	NC
18	FG	24	FG
15	NC	17	NC
7	NC	22	NC
8	NC	23	NC

■ Model **CB-PSEP-MPA** □ □ □ * Only the robot cable is available for this model.

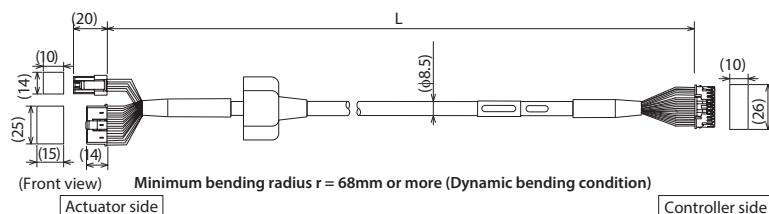
* Please indicate the cable length (L) in □ □ □, e.g.) 080 = 8m, maximum 20m



Actuator side SLP-06V (J.S.T. Mfg. Co., Ltd.) XMP-18V (J.S.T. Mfg. Co., Ltd.)		Controller side PADP-24V-1-S (J.S.T.MFG.CO.,LTD.)
Terminal number		Terminal number
1	Black (φA)	1
2	White (VMM)	2
4	Red (φB)	3
5	Green (VMM)	4
3	Brown (φ/A)	5
6	Yellow (φ/B)	6
16	Orange [BK+]	9
17	Gray [BK-]	10
5	NC	11
6	NC	12
13	Black [LS+]	7
14	Brown [LS-]	8
1	White [A+]	13
2	Yellow [A-]	14
3	Red [B+]	15
4	Green [B-]	16
10	White (identification tape) [VCC]	17
11	Yellow (identification tape) [VPS]	18
9	Red (identification tape) [GND]	19
12	Green (identification tape) [(reserve)]	20
7	NC	21
15	NC	22
8	NC	23
18	Shield [FG]	24

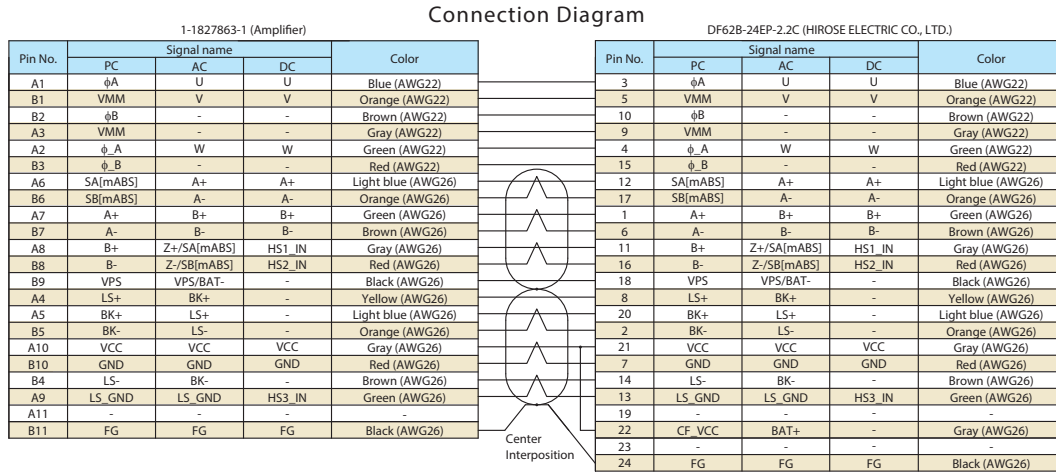
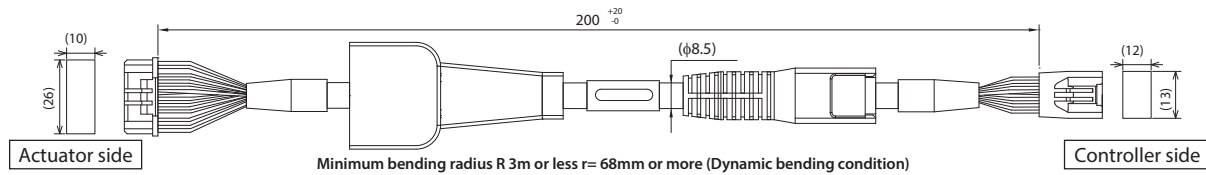
■ Model **CB-ASEP2-MPA** □ □ □ * Only the robot cable is available for this model.

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

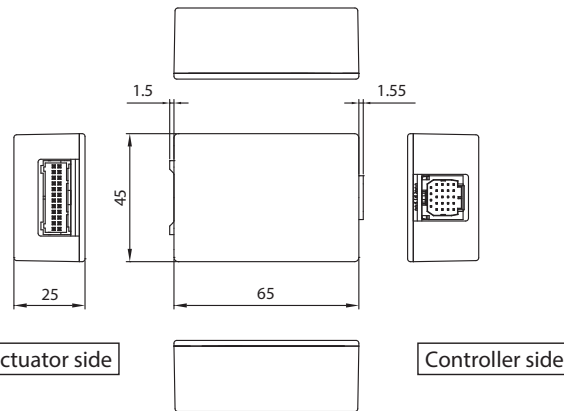


Actuator side SLP-06V (J.S.T. Mfg. Co., Ltd.) XMP-18V (J.S.T. Mfg. Co., Ltd.)		Controller side PADP-24V-1-S (J.S.T.MFG.CO.,LTD.)
Terminal number		Terminal number
1	Red [U]	1
2	Yellow [V]	2
	NC	3
3	NC	4
	Black [W]	5
	NC	6
18	Orange [BK+]	7
17	Gray [BK-]	8
7	Black [LS+]	9
16	Brown [LS-]	10
1	White [A+]	11
2	Yellow [A-]	12
3	Red [B+]	13
4	Green [B-]	14
10	Black (identification tape) [Z+]	15
11	Brown (identification tape) [Z-]	16
14	White (identification tape) [VCC]	17
15	Yellow (identification tape) [GND]	19
13	Red (identification tape) [VPS/BAT-]	18
6	Green (identification tape) [(reserve)]	20
12	White [BAT+]	21
5	NC	22
8	NC	23
9	Shield [FG]	24

Model **CB-CAN-AJ002**

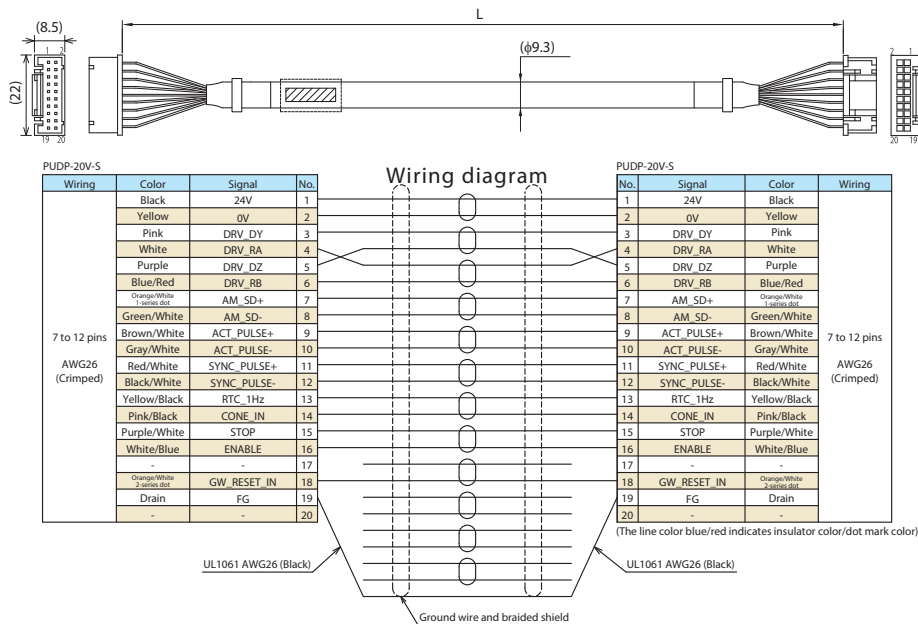


Model **RCM-CV-APCS**



Model **CB-RE-CTL** □ □ □

* Please indicate the cable length (L) in □□□, e.g.) 080 = 8m, maximum 10m



RCON CHECKLIST

IAI America will select all RCON required items if the following information is provided by the customer.

Q1. Fieldbus type

Q2. Global type/non-global type

Q3. Full actuator mode number of all axes (1st axis to max. 16th axis)

Q4. Duty cycle in %

Q5. Max. temperature of RCON installation location

Q6. Does the quantity of IAI power supplies PSA-24(L) need to be calculated?

Q7. Is any actuator purchased for non-RCON controllers? If so, which axes?

Q8. Does any actuator require a simple absolute unit? If so, which axes?

Q9. For global type gateway unit (RCON-GWG), what safety category level is required?
Is safety category required during both AUTO and MANUAL modes, or only during
AUTO mode?

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Southeast Branch Office (Atlanta): 1220 Kennestone Circle, Suite 108, Marietta, GA 30066 (888) 354-9470

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The information contained in this product brochure may change without prior notice due to product improvements.

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