IAI
Quality and Innovation

ROBO Cylinder® with Battery-less Absolute Encoder as Standard

Standard RCS4
Cleanroom Speciÿcation RCS4CR

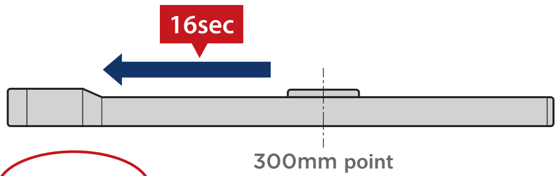
www.intelligentactuator.com

Next-Generation ROBO Cylinder

RCS4 BENEFITS

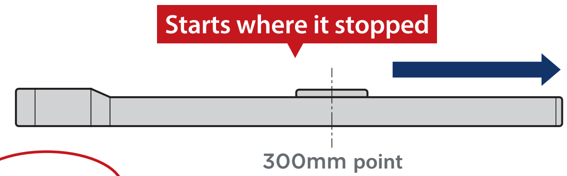
The advantages of using an absolute encoder — Home return not required

[For incremental encoder]



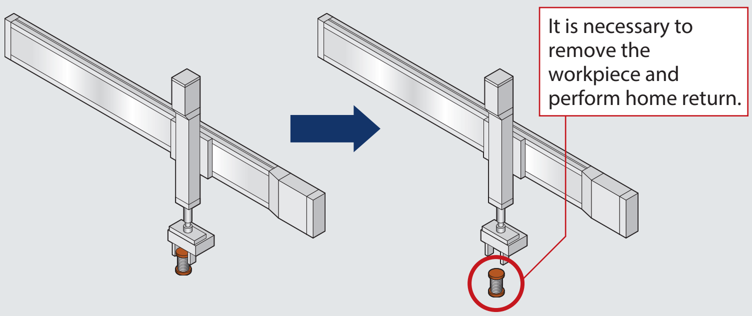
It takes 16 seconds from the 300mm point until home return is completed.

[For absolute encoder]



Since the position information is held by the battery, it is unnecessary to perform home return each time.

Normally, in emergency stops...



With absolute encoder

Since home return is unnecessary, there is no need to remove the workpiece and perform home return.

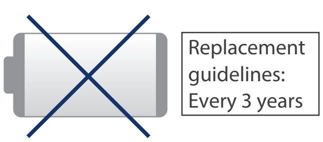
MERIT 1 The recovery time after device shutdown can be shortened.

MERIT 2 This reduces the production costs.

\+

The advantages of battery-less — Battery replacement not required

MERIT 1 The battery replacement processes and purchase costs can be reduced.



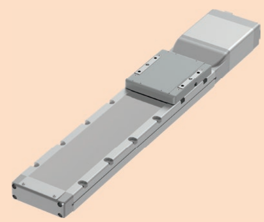
MERIT 2 Battery-related trouble such as “voltage drop” will not occur.

The advantages of using an absolute encoder.	+	The advantages of battery-less	=	**Battery-less Absolute Encoder**

An abundant lineup of 54 models

Slider Type SA

The slider on the top of the body actuates. Since it uses a base integrated ball circulating type with a built-in linear guide, it will be able to deal with moments in the pitching, yawing, and rolling directions.



Wide Slider Type WSA

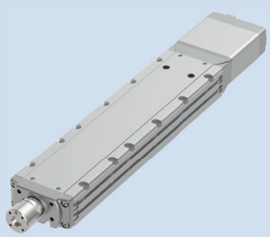
The slider on the top of the body actuates. The ball circulating linear guide is built into the wide body. External guides are not required, even for applications with large overhangs.

Rod Type RA

The rod actuates in the same manner as the rod type air cylinder. This actuator type has no built-in linear guide and costs the least among the RCS4 rod types.

Radial Cylinder RRA

The rod actuates in the same manner as the rod type air cylinder. Since ball circulating type linear guides are built in, it can take moment loads. External guides are not required.



Wide Radial Cylinder WRA

The rod actuates in the same manner as the rod type air cylinder. Due to a wide body and high rigidity rod, it can deal with up to four times the allowable torque on rod tip compared to a radial cylinder.

Table Type TA

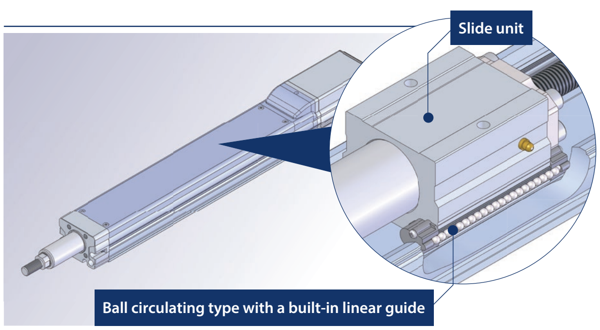
The table actuates on top of the main body. A ball circulating type linear guide is built into the table. Double block can be selected as an option, so that the two guide blocks increase the allowable dynamic moment.

Now hear this!

Radial Cylinder RRA

You may not believe it, but...

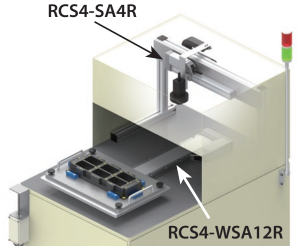
A guide is not required!



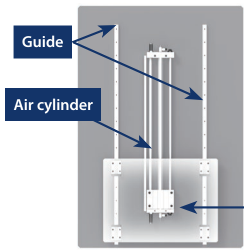
Since ball circulating type linear guides are built into the rod type body, it can take radial loads and moment loads. The equipment will be compact since an external guide is unnecessary.

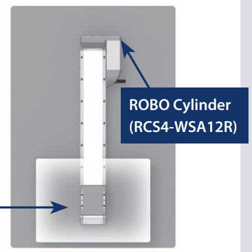
Wide Slider Type WSA

Since it uses a built-in ball circulating type with a built-in linear guide inside its wide body, it will be able to deal with high load moments in the pitching, yawing, and rolling directions. Since it is flat, it is ideal when the space in the height direction is limited.

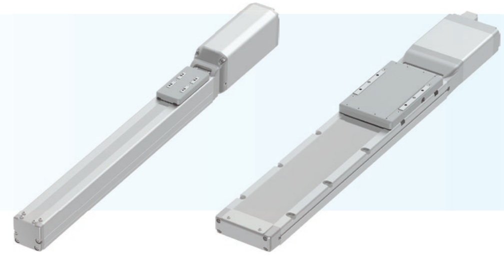


Device using an air cylinder	Device using ROBO Cylinder





Product Lineup



Slider Type: SA

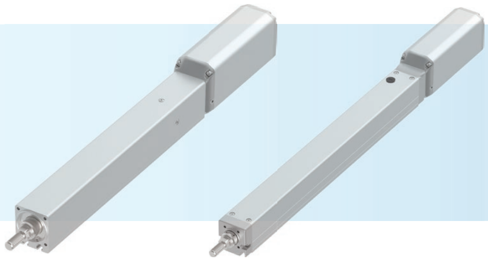
Motor	Type	External view	Body width (mm)	Motor wattage (W)	Lead (mm)	Positioning repeatability (mm)	Stroke (mm)	Max speed (mm/s)	Rated thrust (N)	Max. payload (kg) Horizontal	Max. payload (kg) Vertical	Reference page
Coupled Motor	SA4C		40mm	60	16	±0.01 [±0.005]	50~500 (50st increments)	960	53	10	3	P11
					10			600	85	14	5	
					5			300	170	17	8	
					2.5			150	340	20	12	
	SA6C		60mm	100	30	±0.01	50~800 (50st increments)	1600	57	11	3.5	P13
					20	±0.01 [±0.005]		1200	85	18	6	
					12			720	142	30	11	
					6			360	283	45	15	
					3			180	566	45	15	
	SA7C		70mm	200	36	±0.01	50~800 (50st increments)	1800	95	7	4	P15
					24			1500	142	30	7	
					16	±0.01 [±0.005]		1000	214	40	12	
					8			500	427	45	20	
					4			240	855	50	25	
	SA8C		90mm	400	48	±0.01	50~1100 (50st increments)	2200	141	8	-	P17
					30			1800	226	30	12	
					20	±0.01 [±0.005]		1200	339	60	20	
					10			600	678	80	35	
					5			300	1357	90	45	
Side-mounted Motor	SA4R		40mm	60	16	±0.01	50~500 (50st increments)	960	53	10	2.5	P19
					10			600	85	14	4.5	
					5			300	170	17	8	
					2.5			150	340	20	12	
	SA6R		60mm	100	30	±0.01	50~800 (50st increments)	1600	57	11	3	P21
					20			1200	85	18	5	
					12			720	142	30	9	
					6			360	283	45	15	
					3			180	566	45	15	
	SA7R		70mm	200	36	±0.01	50~800 (50st increments)	1800	95	7	4	P23
					24			1500	142	30	6	
					16			1000	214	38	12	
					8			500	427	45	18	
					4			240	855	50	25	
	SA8R		90mm	400	48	±0.01	50~1100 (50st increments)	2100	141	8	-	P25
					30			1800	226	30	12	
					20			1200	339	60	20	
					10			600	678	80	35	
					5			300	1357	90	45	

Values in [ ] are for high-precision specification

Wide Slider Type: WSA

Motor	Type	External view	Body width (mm)	Motor wattage (W)	Lead (mm)	Positioning repeatability (mm)	Stroke (mm)	Max speed (mm/s)	Rated thrust (N)	Max. payload (kg) Horizontal	Max. payload (kg) Vertical	Reference page
Coupled Motor	WSA10C		100mm	60	16	±0.01 [±0.005]	50~500 (50st increments)	960	53	7	-	P27
					10			600	85	16	3	
					5			300	170	27	5	
					2.5			150	340	40	10	
	WSA12C		120mm	100	30	±0.01	50~800 (50st increments)	1600	57	5	-	P29
					20	±0.01 [±0.005]		1200	85	15	3	
					12			720	142	25	8	
					6			360	283	45	15	
					3			180	566	55	15	
	WSA14C		140mm	200	36	±0.01	50~800 (50st increments)	1800	95	7	-	P31
					24			1440	142	20	2.5	
					16	±0.01 [±0.005]		960	214	45	8	
					8			480	427	65	10	
					4			240	855	80	25	
	WSA16C		160mm	400	30	±0.01	50~1100 (50st increments)	1800	226	30	12	P33
					20	±0.01 [±0.005]		1200	339	60	20	
					10			600	678	80	35	
					5			300	1357	100	50	
Side-mounted Motor	WSA10R		100mm	60	16	±0.01	50~500 (50st increments)	960	53	7	-	P35
					10			600	85	16	3	
					5			300	170	27	5	
					2.5			150	340	40	10	
	WSA12R		120mm	100	30	±0.01	50~800 (50st increments)	1600	57	5	-	P37
					20			1200	85	13	3	
					12			720	142	23	8	
					6			360	283	43	15	
					3			180	566	55	15	
	WSA14R		140mm	200	36	±0.01	50~800 (50st increments)	1710	95	7	-	P39
					24			1440	142	20	2.5	
					16			960	214	45	8	
					8			480	427	65	10	
					4			240	855	75	25	
	WSA16R		160mm	400	30	±0.01	50~1100 (50st increments)	1800	226	30	12	P41
					20			1200	339	60	18	
					10			600	678	80	35	
					5			300	1357	100	50	

Values in [ ] are for high-precision specification



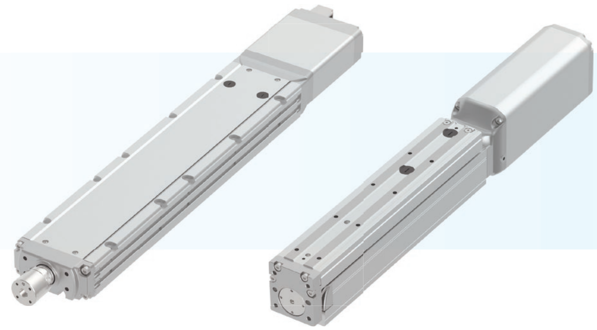
Rod Type: RA

Motor	Type	External view	Body width (mm)	Motor wattage (W)	Lead (mm)	Positioning repeatability (mm)	Stroke (mm)	Max speed (mm/s)	Rated thrust (N)	Max. payload (kg) Horizontal	Max. payload (kg) Vertical	Reference page
Coupled Motor	RA4C		40mm	60	16	±0.01	50~200 (50st increments)	800	53	8	2	P43
					10			500	85	18	4	
					5			250	170	30	6	
					2.5			125	340	40	10	
	RA6C		60mm	100	20	±0.01	50~300 (50st increments)	1000	85	15	4	P45
					12			600	142	25	10	
					6			300	283	50	20	
					3			150	566	60	20	
	RA7C		70mm	200	24	±0.01	50~300 (50st increments)	1200	142	20	6	P47
					16			800	214	45	12	
					8			400	427	60	25	
					4			200	855	80	35	
	RA8C		90mm	400	20	±0.01	50~300 (50st increments)	1000	399	60	20	P49
					10			500	678	80	40	
					5			250	1357	100	72	
Side-mounted Motor	RA4R		40mm	60	16	±0.01	50~200 (50st increments)	800	53	8	2	P51
					10			500	85	18	4	
					5			250	170	30	6	
					2.5			125	340	40	10	
	RA6R		60mm	100	20	±0.01	50~300 (50st increments)	1000	85	15	4	P53
					12			600	142	25	9	
					6			300	283	50	19	
					3			150	566	60	20	
	RA7R		70mm	200	24	±0.01	50~300 (50st increments)	1200	142	20	6	P55
					16			800	214	45	12	
					8			400	427	60	25	
					4			200	855	80	35	
	RA8R		90mm	400	20	±0.01	50~300 (50st increments)	1000	339	60	20	P57
					10			500	678	80	40	
					5			250	1357	100	72	

Radial Cylinder: RRA

Motor	Type	External view	Body width (mm)	Motor wattage (W)	Lead (mm)	Positioning repeatability (mm)	Stroke (mm)	Max speed (mm/s)	Rated thrust (N)	Max. payload (kg) Horizontal	Max. payload (kg) Vertical	Reference page
Coupled Motor	RRA4C		40mm	60	16	±0.01	60~410 (50st increments)	960	53	8	2	P59
					10			600	85	18	4	
					5			300	170	30	6	
					2.5			150	340	40	10	
	RRA6C		60mm	100	20	±0.01	65~415 (50st increments)	1200	85	15	4	P61
					12			720	142	25	10	
					6			360	283	50	20	
					3			180	566	60	20	
	RRA7C		70mm	200	24	±0.01	70~520 (50st increments)	1440	142	20	6	P63
					16			960	214	45	12	
					8			480	427	60	25	
					4			240	855	80	35	
	RRA8C		90mm	400	30	±0.01	50~700 (50st increments)	1500	226	30	8	P65
					20			1100	339	60	20	
					10			550	678	80	40	
					5			275	1357	100	72	
Side-mounted Motor	RRA4R		40mm	60	16	±0.01	60~410 (50st increments)	960	53	8	2	P67
					10			600	85	18	4	
					5			300	170	30	6	
					2.5			150	340	40	10	
	RRA6R		60mm	100	20	±0.01	65~415 (50st increments)	1200	85	15	4	P69
					12			720	142	25	9	
					6			360	283	50	19	
					3			180	566	60	20	
	RRA7R		70mm	200	24	±0.01	70~520 (50st increments)	1440	142	20	6	P71
					16			960	214	45	12	
					8			480	427	60	25	
					4			240	855	80	35	
	RRA8R		90mm	400	30	±0.01	50~700 (50st increments)	1300	226	30	8	P73
					20			1000	339	60	17	
					10			550	678	80	34	
					5			275	1357	100	72	

Product Lineup



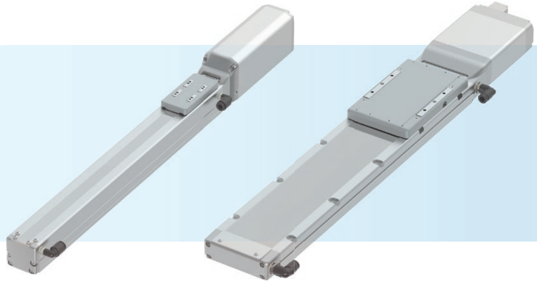
Wide Radial Cylinder: WRA

Motor	Type	External view	Body width (mm)	Motor wattage (W)	Lead (mm)	Positioning repeatability (mm)	Stroke (mm)	Max speed (mm/s)	Rated thrust (N)	Max. payload (kg) Horizontal	Vertical	Reference page
Coupled Motor	WRA10C		100mm	60	16	±0.01	50~500 (50st increments)	800	53	5	–	P75
					10			600	85	16	3	
					5			300	170	25	5	
					2.5			150	340	40	10	
	WRA12C		120mm	100	20	±0.01	50~500 (50st increments)	1000	85	12	2	P77
					12			720	142	25	6	
					6			360	283	40	15	
					3			180	566	60	20	
	WRA14C		140mm	200	24	±0.01	50~600 (50st increments)	1200	142	25	3	P79
					16			800	214	50	8	
					8			480	427	65	20	
					4			240	855	85	30	
	WRA16C		160mm	400	30	±0.01	50~800 (50st increments)	1300	226	30	6	P81
					20			1000	339	60	12	
					10			500	678	80	35	
					5			250	1357	100	50	
Side-mounted Motor	WRA10R		100mm	60	16	±0.01	50~500 (50st increments)	800	53	5	–	P83
					10			600	85	13	2.5	
					5			300	170	25	5	
					2.5			150	340	40	10	
	WRA12R		120mm	100	20	±0.01	50~500 (50st increments)	1000	85	12	2	P85
					12			720	142	25	6	
					6			360	283	40	15	
					3			180	566	60	20	
	WRA14R		140mm	200	24	±0.01	50~600 (50st increments)	1200	142	25	3	P87
					16			800	214	50	8	
					8			480	427	65	20	
					4			240	855	85	30	
	WRA16R		160mm	400	30	±0.01	50~800 (50st increments)	1300	226	30	6	P89
					20			1000	339	60	12	
					10			500	678	80	35	
					5			250	1357	100	50	

Table Type: TA

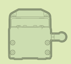
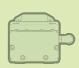
Motor	Type	External view	Body width (mm)	Motor wattage (W)	Lead (mm)	Positioning repeatability (mm)	Stroke (mm)	Max speed (mm/s)	Rated thrust (N)	Max. payload (kg) Horizontal	Vertical	Reference page
Coupled Motor	TA4C		40mm	60	16*	±0.01	Single Block 25~150 (25st increments) Double Block 40~90 (25st increments) 140,190,240	900[–]	53[–]	4[–]	1.5[–]	P91 P93
					10			600	85	5[8]	3	
					5			300	170	5[10]	6	
					2.5			150	340	5[10]	9	
	TA6C		60mm	100	20*	±0.01	Single Block 25~200 (25st increments) Double Block 45~120 (25st increments) 170~320 (50st increments)	1100[–]	85[–]	8[–]	4[–]	P95 P97
					12			720	142	8[14]	6	
					6			360	283	8[20]	10	
					3			180	566	10[20]	12	
	TA7C		70mm	200	24*	±0.01	Single Block 25~200 (25mm increments) 250,300 Double Block 40~90 (25mm increments) 140~390 (50mm increments)	1300[–]	142[–]	12[–]	5[–]	P99 P101
					16			960	214	15[25]	10[8]	
					8			480	427	15[30]	18	
					4			240	855	15[30]	20[24]	
Side-mounted Motor	TA4R		40mm	60	16*	±0.01	Single Block 25~150 (25st increments) Double Block 40~90 (25st increments) 140,190,240	800[–]	53[–]	4[–]	1.5[–]	P103 P105
					10			600	85	5[8]	3	
					5			300	170	5[10]	6	
					2.5			150	340	5[10]	9	
	TA6R		60mm	100	20*	±0.01	Single Block 25~200 (25st increments) Double Block 45~120 (25st increments) 170~320 (50st increments)	1000[–]	85[–]	8[–]	4[–]	P107 P109
					12			720	142	8[14]	6	
					6			360	283	8[20]	10	
					3			180	566	10[20]	10[12]	
	TA7R		70mm	200	24*	±0.01	Single Block 25~200 (25mm increments) 250,300 Double Block 40~90 (25mm increments) 140~390 (50mm increments)	1200[–]	142[–]	12[–]	5[–]	P111 P113
					16			960	214	15[25]	10[8]	
					8			480	427	15[30]	18	
					4			240	855	15[30]	20[24]	

* Single Block (SB) specification only. Values in [ ] are for double block specification



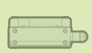
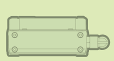
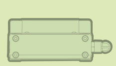
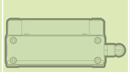
Foreword
Slider Type
Wide Slider Type
Rod Type
Radial Cylinder®
Wide Radial Cylinder
Table Type
Cleanroom Slider
Cleanroom Wide Slider
Options
Reference Data
Controller

Slider Type SA <Cleanroom Specification>

Motor	Type	External view	Body width (mm)	Motor wattage (W)	Lead (mm)	Positioning repeatability (mm)	Stroke (mm)	Max Speed (mm/s)	Rated thrust (N)	Max. payload (kg) Horizontal	Max. payload (kg) Vertical	Cleanliness	Reference page
Coupled Motor	SA4C		 40mm	60	16	±0.01 [±0.005]	50~500 (50st increments)	960	53	10	3	Class 10 (Fed.Std.209D Standard) Class 2.5 or equivalent (ISO 14644-1 Standard)	P115
					10			600	85	14	5		
					5			300	170	17	8		
					2.5			150	340	20	12		
	SA6C		 60mm	100	20	±0.01 [±0.005]	50~800 (50st increments)	1200	85	18	6		P117
					12			720	142	30	11		
					6			360	283	45	15		
					3			180	566	45	15		
	SA7C		 70mm	200	24	±0.01	50~800 (50st increments)	1500	142	30	7		P119
					16	±0.01 [±0.005]		1000	214	40	12		
					8			500	427	45	20		
					4			240	855	50	25		
	SA8C		 90mm	400	20	±0.01 [±0.005]	50~1100 (50st increments)	1200	339	60	20		P121
					10			600	678	80	35		
					5			300	1357	90	45		

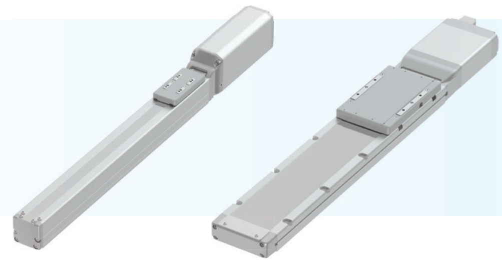
Values in [ ] are for high-precision specification

Wide Slider Type WSA <Cleanroom Specification>

Motor	Type	External view	Body width (mm)	Motor wattage (W)	Lead (mm)	Positioning repeatability (mm)	Stroke (mm)	Max Speed (mm/s)	Rated thrust (N)	Max. payload (kg) Horizontal	Max. payload (kg) Vertical	Cleanliness	Reference page
Coupled Motor	WSA10C		 100mm	60	16	±0.01 [±0.005]	50~500 (50st increments)	960	53	7	–	Class 10 (Fed.Std.209D Standard) Class 2.5 or equivalent (ISO 14644-1 Standard)	P123
					10			600	85	16	3		
					5			300	170	27	5		
					2.5			150	340	40	10		
	WSA12C		 120mm	100	20	±0.01 [±0.005]	50~800 (50st increments)	1200	85	15	3		P125
					12			720	142	25	8		
					6			360	283	45	15		
					3			180	566	55	15		
	WSA14C		 140mm	200	24	±0.01	50~800 (50st increments)	1440	142	20	2.5		P127
					16	±0.01 [±0.005]		960	214	45	8		
					8			480	427	65	10		
					4			240	855	80	25		
	WSA16C		 160mm	400	20	±0.01 [±0.005]	50~1100 (50st increments)	1200	339	60	20		P129
					10			600	678	80	35		
					5			300	1357	100	50		

Values in [ ] are for high-precision specification

Model Specification Number



Slider Type: SA

RCS4 — [Type] — **WA** — [Motor Type] — [Ball Screw Lead] — [Stroke] — [Applicable Controllers] — [Cable Length] — [Options]

Series / Type / Encoder Type / Motor Type / Ball Screw Lead / Stroke / Applicable Controllers / Cable Length / Options

Type

SA4C	Body width 40mm Coupled motor type
SA6C	Body width 60mm Coupled motor type
SA7C	Body width 70mm Coupled motor type
SA8C	Body width 90mm Coupled motor type
SA4R	Body width 40mm Side-mounted motor type
SA6R	Body width 60mm Side-mounted motor type
SA7R	Body width 70mm Side-mounted motor type
SA8R	Body width 90mm Side-mounted motor type

Encoder Type

WA	Battery-less Absolute

Motor Type

60	60W
100	100W
200	200W
400	400W

Ball Screw Lead

2.5	2.5mm
3	3mm
4	4mm
5	5mm
6	6mm
8	8mm
10	10mm
12	12mm
16	16mm
20	20mm
24	24mm
30	30mm
36	36mm
48	48mm

Stroke

50	50mm
~	~
1100	1100mm

(50mm increments)

Applicable Controllers

T2	SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA

Cable Length

N	None
P	1m
S	3m
M	5m
X□□	Specified length (Standard cable)
R□□	Robot cable

Options

B	Brake
CJT	Cable exit direction (Top)
CJR	Cable exit direction (Right)
CJL	Cable exit direction (Left)
CJO	Cable exit direction (Outside)
CJB	Cable exit direction (Bottom)
HPR	High-precision Specification
ML	Motor side-mounted to left (standard)
MR	Motor side-mounted to right
NM	Non-motor End Specification
RP	Back mounting plate
SS	Slider spacer
SR	Slider Roller Specification
W	Double Slider Specification

*The type of motor, ball screw lead, stroke, and selection options vary depending on the actuator type. Please refer to the pages of each type for details.

Wide Slider Type: WSA

RCS4 — [Type] — **WA** — [Motor Type] — [Ball Screw Lead] — [Stroke] — [Applicable Controllers] — [Cable Length] — [Options]

Series / Type / Encoder Type / Motor Type / Ball Screw Lead / Stroke / Applicable Controllers / Cable Length / Options

Type

WSA10C	Body width 100mm Coupled motor type
WSA12C	Body width 120mm Coupled motor type
WSA14C	Body width 140mm Coupled motor type
WSA16C	Body width 160mm Coupled motor type
WSA10R	Body width 100mm Side-mounted motor type
WSA12R	Body width 120mm Side-mounted motor type
WSA14R	Body width 140mm Side-mounted motor type
WSA16R	Body width 160mm Side-mounted motor type

Encoder Type

WA	Battery-less Absolute

Motor Type

60	60W
100	100W
200	200W
400	400W

Ball Screw Lead

2.5	2.5mm
3	3mm
4	4mm
5	5mm
6	6mm
8	8mm
10	10mm
12	12mm
16	16mm
20	20mm
24	24mm
30	30mm
36	36mm

Stroke

50	50mm
~	~
1100	1100mm

(50mm increments)

Applicable Controllers

T2	SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA

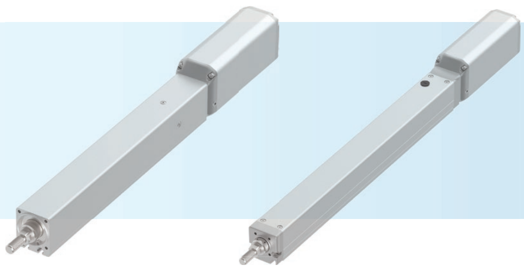
Cable Length

N	None
P	1m
S	3m
M	5m
X□□	Specified length (Standard cable)
R□□	Robot cable

Options

B	Brake
CJT	Cable exit direction (Top)
CJR	Cable exit direction (Right)
CJL	Cable exit direction (Left)
CJO	Cable exit direction (Outside)
CJB	Cable exit direction (Bottom)
HPR	High-precision Specification
ML	Motor side-mounted to left (standard)
MR	Motor side-mounted to right
NM	Non-motor End Specification
SS	Slider spacer
SR	Slider Roller Specification

*The type of motor, ball screw lead, stroke, and selection options vary depending on the actuator type. Please refer to the pages of each type for details.



Rod Type: RA

RCS4	—	□	—	WA	—	□	—	□	—	□	—	□	—	□	—	□
Series		Type		Encoder Type		Motor Type		Ball Screw Lead		Stroke		Applicable Controllers		Cable Length		Options

Type

RA4C	Body width 40mm Coupled motor type
RA6C	Body width 60mm Coupled motor type
RA7C	Body width 70mm Coupled motor type
RA8C	Body width 90mm Coupled motor type
RA4R	Body width 40mm Side-mounted motor type
RA6R	Body width 60mm Side-mounted motor type
RA7R	Body width 70mm Side-mounted motor type
RA8R	Body width 90mm Side-mounted motor type

Encoder Type

WA	Battery-less Absolute

Motor Type

60	60W
100	100W
200	200W
400	400W

Ball Screw Lead

2.5	2.5mm
3	3mm
4	4mm
5	5mm
6	6mm
8	8mm
10	10mm
12	12mm
16	16mm
20	20mm
24	24mm

Stroke

50	50mm
≀	≀
300	300mm

(50mm increments)

Applicable Controllers

T2	SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA

Cable Length

N	None
P	1m
S	3m
M	5m
X□□	Specified length (Standard cable)
R□□	Robot cable

Options

B	Brake
CJT	Cable exit direction (Top)
CJR	Cable exit direction (Right)
CJL	Cable exit direction (Left)
CJO	Cable exit direction (Outside)
CJB	Cable exit direction (Bottom)
FL	Flange
FT	Foot bracket
ML	Motor side-mounted to left (standard)
MR	Motor side-mounted to right
NFA	Tip adapter (Internal thread)
NM	Non-motor End Specification
NTB	T-slot nut bar
RP	Back mounting plate

*The type of motor, ball screw lead, stroke, and selection options vary depending on the actuator type. Please refer to the pages of each type for details.

Radial Cylinder: RRA

RCS4	—	□	—	WA	—	□	—	□	—	□	—	□	—	□	—	□
Series		Type		Encoder Type		Motor Type		Ball Screw Lead		Stroke		Applicable Controllers		Cable Length		Options

Type

RRA4C	Body width 40mm Coupled motor type
RRA6C	Body width 60mm Coupled motor type
RRA7C	Body width 70mm Coupled motor type
RRA8C	Body width 90mm Coupled motor type
RRA4R	Body width 40mm Side-mounted motor type
RRA6R	Body width 60mm Side-mounted motor type
RRA7R	Body width 70mm Side-mounted motor type
RRA8R	Body width 90mm Side-mounted motor type

Encoder Type

WA	Battery-less Absolute

Motor Type

60	60W
100	100W
200	200W
400	400W

Ball Screw Lead

2.5	2.5mm
3	3mm
4	4mm
5	5mm
6	6mm
8	8mm
10	10mm
12	12mm
16	16mm
20	20mm
24	24mm
30	30mm

Stroke

60	60mm
≀	≀
700	700mm

(50mm increments)

Applicable Controllers

T2	SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA

Cable Length

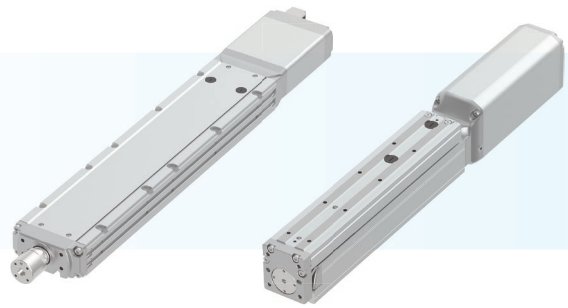
N	None
P	1m
S	3m
M	5m
X□□	Specified length (Standard cable)
R□□	Robot cable

Options

B	Brake
CJT	Cable exit direction (Top)
CJR	Cable exit direction (Right)
CJL	Cable exit direction (Left)
CJO	Cable exit direction (Outside)
CJB	Cable exit direction (Bottom)
FL	Flange
FFA	Tip adapter (Flange)
NFA	Tip adapter (Internal thread)
KFA	Tip adapter (Keyway)
ML	Motor side-mounted to left (standard)
MR	Motor side-mounted to right
NM	Non-motor End Specification
RP	Back mounting plate

*The type of motor, ball screw lead, stroke, and selection options vary depending on the actuator type.
Please refer to the pages of each type for details.

Model Number



Wide Radial Cylinder: WRA

RCS4 — [Type] — WA — [Motor Type] — [Ball Screw Lead] — [Stroke] — [Applicable Controllers] — [Cable Length] — [Options]

Series / Type / Encoder Type / Motor Type / Ball Screw Lead / Stroke / Applicable Controllers / Cable Length / Options

Type

WRA10C	Body width 100mm Coupled motor type
WRA12C	Body width 120mm Coupled motor type
WRA14C	Body width 140mm Coupled motor type
WRA16C	Body width 160mm Coupled motor type
WRA10R	Body width 100mm Side-mounted motor type
WRA12R	Body width 120mm Side-mounted motor type
WRA14R	Body width 140mm Side-mounted motor type
WRA16R	Body width 160mm Side-mounted motor type

Encoder Type

WA	Battery-less Absolute

Motor Type

60	60W
100	100W
200	200W
400	400W

Ball Screw Lead

2.5	2.5mm
3	3mm
4	4mm
5	5mm
6	6mm
8	8mm
10	10mm
12	12mm
16	16mm
20	20mm
24	24mm
30	30mm

Stroke

50	50mm
≀	≀
800	800mm

(50mm increments)

Applicable Controllers

T2	SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA

Cable Length

N	None
P	1m
S	3m
M	5m
X□□	Specified length (Standard cable)
R□□	Robot cable

Options

B	Brake
CJT	Cable exit direction (Top)
CJR	Cable exit direction (Right)
CJL	Cable exit direction (Left)
CJO	Cable exit direction (Outside)
CJB	Cable exit direction (Bottom)
FL	Flange
ML	Motor side-mounted to left (standard)
MR	Motor side-mounted to right
NM	Non-motor End Specification
NTBL	T-slot nut bar (Left)
NTBR	T-slot nut bar (Right)

*The type of motor, ball screw lead, stroke, and selection options vary depending on the actuator type. Please refer to the pages of each type for details.

Table Type: TA

RCS4 — [Type] — WA — [Motor Type] — [Ball Screw Lead] — [Stroke] — [Applicable Controllers] — [Cable Length] — [Options]

Series / Type / Encoder Type / Motor Type / Ball Screw Lead / Stroke / Applicable Controllers / Cable Length / Options

Type

TA4C	Body width 40mm Coupled motor type
TA6C	Body width 60mm Coupled motor type
TA7C	Body width 70mm Coupled motor type
TA4R	Body width 40mm Side-mounted motor type
TA6R	Body width 60mm Side-mounted motor type
TA7R	Body width 70mm Side-mounted motor type

Encoder Type

WA	Battery-less Absolute

Motor Type

60	60W
100	100W
200	200W
400	400W

Ball Screw Lead

2.5	2.5mm
3	3mm
4	4mm
5	5mm
6	6mm
8	8mm
10	10mm
12	12mm
16	16mm
20	20mm
24	24mm

Stroke

25	25mm
≀	≀
390	390mm

Applicable Controllers

T2	SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA

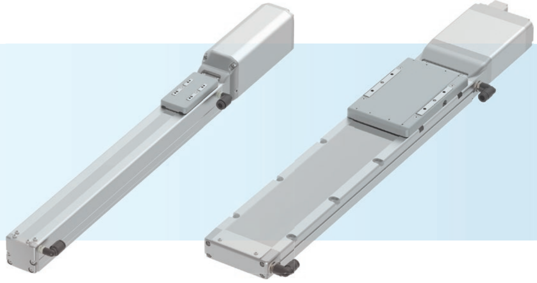
Cable Length

N	None
P	1m
S	3m
M	5m
X□□	Specified length (Standard cable)
R□□	Robot cable

Options

B	Brake
CJT	Cable exit direction (Top)
CJR	Cable exit direction (Right)
CJL	Cable exit direction (Left)
CJO	Cable exit direction (Outside)
CJB	Cable exit direction (Bottom)
DB	High Rigidity Specification (Double-block guide)
ML	Motor side-mounted to left (standard)
MR	Motor side-mounted to right
NM	Non-motor End Specification
RP	Back mounting plate

*The type of motor, ball screw lead, stroke, and selection options vary depending on the actuator type. Please refer to the pages of each type for details.



Slider Type SA <Cleanroom Specification>

RCS4CR — [Type] — **WA** — [Motor Type] — [Ball Screw Lead] — [Stroke] — [Applicable Controllers] — [Cable Length] — [Options]

Series / Type / Encoder Type / Motor Type / Ball Screw Lead / Stroke / Applicable Controllers / Cable Length / Options

Type

SA4C	Body width 40mm Coupled motor type
SA6C	Body width 60mm Coupled motor type
SA7C	Body width 70mm Coupled motor type
SA8C	Body width 90mm Coupled motor type

Encoder Type

WA	Battery-less Absolute

Motor Type

60	60W
100	100W
200	200W
400	400W

Ball Screw Lead

2.5	2.5mm
3	3mm
4	4mm
5	5mm
6	6mm
8	8mm
10	10mm
12	12mm
16	16mm
20	20mm
24	24mm

Stroke

50	50mm
~	~
1100	1100mm

(50mm increments)

Applicable Controllers

T2	SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA

Cable Length

N	None
P	1m
S	3m
M	5m
X□□	Specified length (Standard cable)
R□□	Robot cable

Options

B	Brake
CJT	Cable exit direction (Top)
CJR	Cable exit direction (Right)
CJL	Cable exit direction (Left)
CJB	Cable exit direction (Bottom)
HPR	High-precision Specification
NM	Non-motor End Specification
VR	Air suction joint in opposite position
W	Double Slider Specification

*The type of motor, ball screw lead, stroke, and selection options vary depending on the actuator type. Please refer to the pages of each type for details.

Wide Slider Type WSA <Cleanroom Specification>

RCS4CR — [Type] — **WA** — [Motor Type] — [Ball Screw Lead] — [Stroke] — [Applicable Controllers] — [Cable Length] — [Options]

Series / Type / Encoder Type / Motor Type / Ball Screw Lead / Stroke / Applicable Controllers / Cable Length / Options

Type

WSA10C	Body width 100mm Coupled motor type
WSA12C	Body width 120mm Coupled motor type
WSA14C	Body width 140mm Coupled motor type
WSA16C	Body width 160mm Coupled motor type

Encoder Type

WA	Battery-less Absolute

Motor Type

60	60W
100	100W
200	200W
400	400W

Ball Screw Lead

2.5	2.5mm
3	3mm
4	4mm
5	5mm
6	6mm
8	8mm
10	10mm
12	12mm
16	16mm
20	20mm
24	24mm

Stroke

50	50mm
~	~
1100	1100mm

(50mm increments)

Applicable Controllers

T2	SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA

Cable Length

N	None
P	1m
S	3m
M	5m
X□□	Specified length (Standard cable)
R□□	Robot cable

Options

B	Brake
CJT	Cable exit direction (Top)
CJR	Cable exit direction (Right)
CJL	Cable exit direction (Left)
CJB	Cable exit direction (Bottom)
HPR	High-precision Specification
NM	Non-motor End Specification
VR	Air suction joint in opposite position

*The type of motor, ball screw lead, stroke, and selection options vary depending on the actuator type. Please refer to the pages of each type for details.

RCS4-SA4C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 40 mm | 200v AC Servo Motor

■ Model Specification Items

RCS4	—	SA4C	—	WA	—	60	—		—		—	T2	—		—	
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		60: Servo motor 60W		16: 16mm 10: 10mm 5: 5mm 2.5:2.5mm		50:50mm ~ 500:500mm (50mm increments)		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable		Refer to Options table below.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.

POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.
(2) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(3) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS4-SA4C-WA-60-16-①-T2-②-③	60	16	10	3	53	50~500 (50mm increments)
RCS4-SA4C-WA-60-10-①-T2-②-③		10	14	5	85	
RCS4-SA4C-WA-60-5-①-T2-②-③		5	17	8	170	
RCS4-SA4C-WA-60-2.5-①-T2-②-③		2.5	20	12	340	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed (Unit: mm/s)

Lead \ Stroke	50~450 (50mm increments)	500 (mm)
16	960	875
10	600	555
5	300	275
2.5	150	135

① Stroke

① Stroke (mm)	RCS4-SA4C	① Stroke (mm)	RCS4-SA4C
50	○	**300**	○
100	○	**350**	○
150	○	**400**	○
200	○	**450**	○
250	○	**500**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options * Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
High-Precision specification (*1)	**HPR**	See P.134
Non-motor end specification	**NM**	See P.136
Slider roller specification	**SR**	See P.137
Double slider specification (*2)	**W**	See P.137

(*1) Double slider specification cannot be selected.
(*2) Some leads cannot be selected. (Please see P. 150)

Actuator Specifications

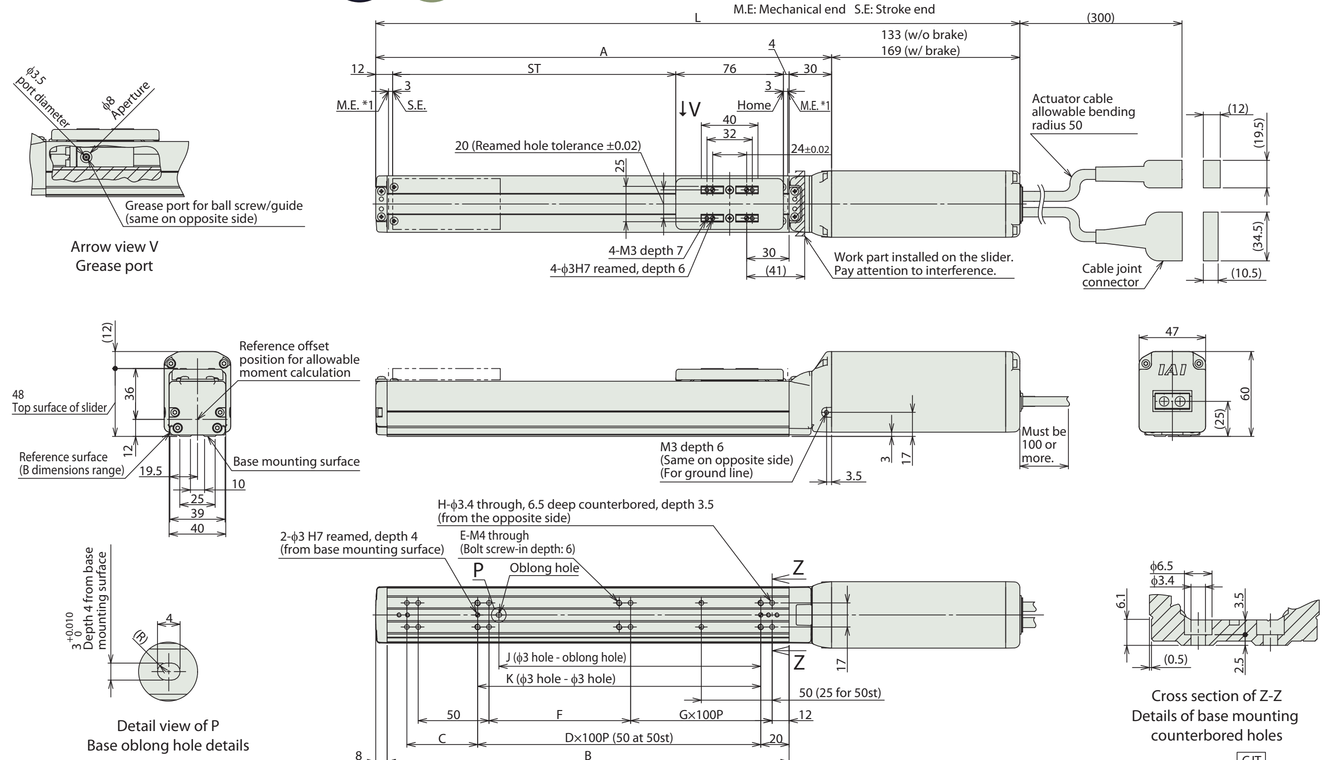
Item	Description
Drive system	Ball screw ϕ8mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction: 13.0N·m, Mb direction: 18.6N·m, Mc direction: 25.3N·m
Allowable dynamic moment (*2)	Ma direction: 5.0N·m, Mb direction: 7.1N·m, Mc direction: 9.7N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

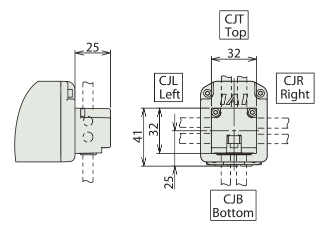
* Reference for overhang load length: Ma direction: 150mm or less, Mb, Mc direction: 150mm or less
(*1) Values in [ ] are for high precision specification.
(*2) Assumes a standard rated life of 5,000km. The service life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life. See page 146 for moment load directions.
If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end





Cable exit direction (Option)

OFF BOARD TUNING CHART:
Please see page 166

■ Dimensions and Mass by Stroke

	Stroke	50	100	150	200	250	300	350	400	450	500
L	W/o brake	305	355	405	455	505	555	605	655	705	755
	W/ brake	341	391	441	491	541	591	641	691	741	791
	A	172	222	272	322	372	422	472	522	572	622
	B	134	184	234	284	334	384	434	484	534	584
	C	50	50	100	50	100	50	100	50	100	50
	D	–	1	1	2	2	3	3	4	4	5
	E	6	6	6	8	8	10	10	12	12	14
	F	50	100	50	100	50	100	50	100	50	100
	G	0	0	1	1	2	2	3	3	4	4
	H	8	8	10	10	12	12	14	14	16	16
	J	35	85	85	185	185	285	285	385	385	485
	K	50	100	100	200	200	300	300	400	400	500
Mass (kg)	W/o brake	1.2	1.3	1.4	1.5	1.5	1.6	1.7	1.8	1.9	2.0
	W/ brake	1.4	1.5	1.6	1.7	1.7	1.8	1.9	2.0	2.1	2.2

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET. Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-SA6C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 60 mm | 200v AC Servo Motor

■ Model Specification Items

RCS4	—	SA6C	—	WA	—	100	—	☐	—	☐	—	T2	—	☐	—	☐
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		100: Servo motor 100W		30:30mm 20:20mm 12:12mm 6: 6mm 3: 3mm		50:50mm ~ 800:800mm (50mm increments)		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X☐☐ : Specified Length R☐☐ : Robot Cable		Refer to Options table below.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.

POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.
(2) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(3) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-SA6C-WA-100-30-①-T2-②-③	100	30	11	3.5	57	50~800 (50mm increments)
RCS4-SA6C-WA-100-20-①-T2-②-③	100	20	18	6	85	50~800 (50mm increments)
RCS4-SA6C-WA-100-12-①-T2-②-③	100	12	30	11	142	50~800 (50mm increments)
RCS4-SA6C-WA-100-6-①-T2-②-③	100	6	45	15	283	50~800 (50mm increments)
RCS4-SA6C-WA-100-3-①-T2-②-③	100	3	45	15	566	50~800 (50mm increments)

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed

(Unit: mm/s)

Lead \ Stroke	50~500 (50mm increments)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
30	1600	1450	1260	1100	970	860	
20	1200	1130	970	840	735	650	575
12	720	620	535	460	405	355	315
6	360	305	265	230	200	175	155
3	180	150	130	115	100	85	75

① Stroke

① Stroke (mm)	RCS4-SA6C	① Stroke (mm)	RCS4-SA6C
50	○	**450**	○
100	○	**500**	○
150	○	**550**	○
200	○	**600**	○
250	○	**650**	○
300	○	**700**	○
350	○	**750**	○
400	○	**800**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options

* Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
High-Precision specification (*1)	**HPR**	See P.134
Non-motor end specification	**NM**	See P.136
Slider roller specification	**SR**	See P.137
Double slider specification (*2)	**W**	See P.137

(*1) When the lead is 30, it cannot be selected.
Double slider specification cannot be selected.
(*2) Some leads cannot be selected. (Please see P. 150)

Actuator Specifications

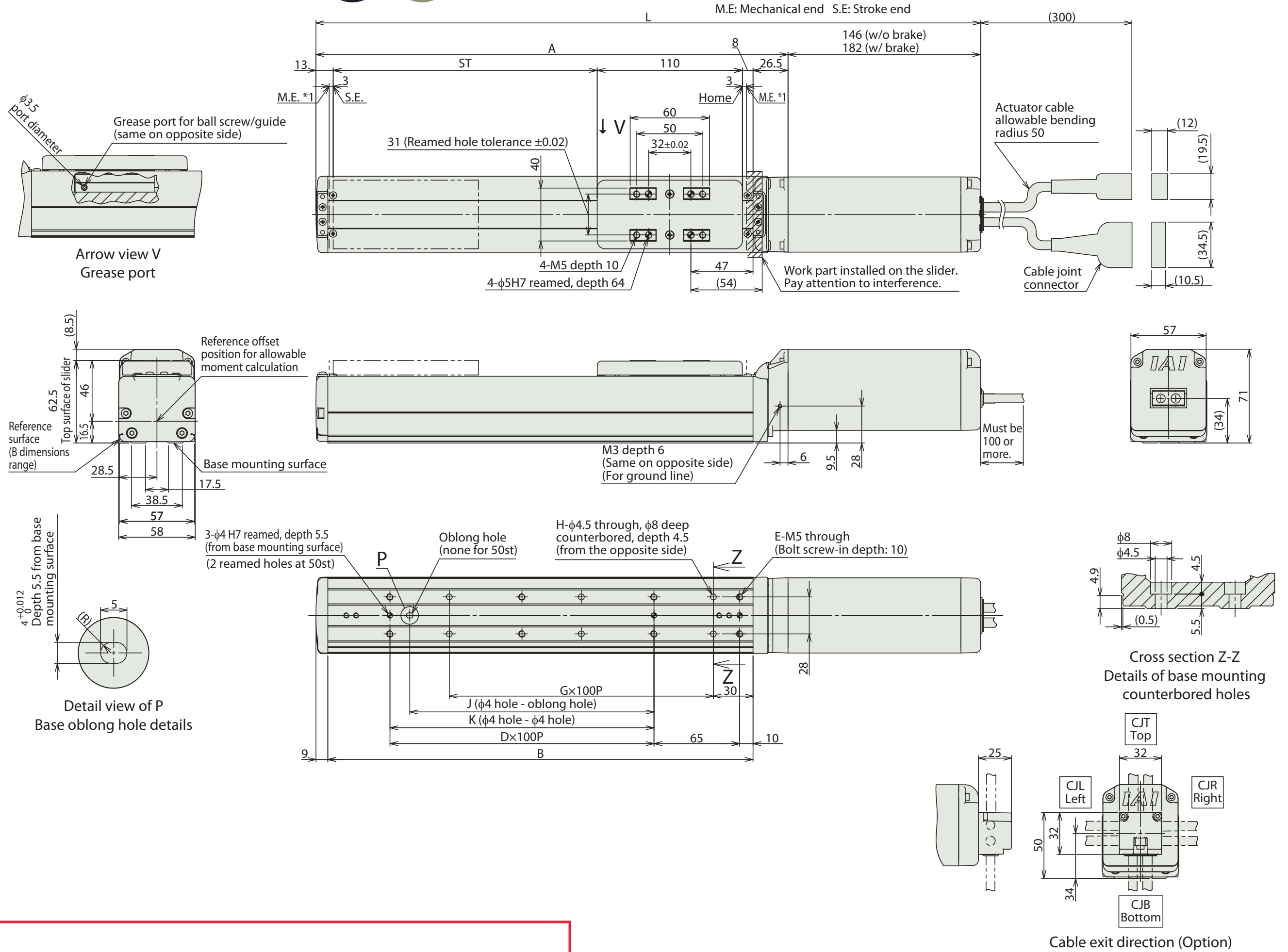
Item	Description
Drive system	Ball screw ϕ10mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction: 48.5N·m, Mb direction: 69.3N·m, Mc direction: 103N·m
Allowable dynamic moment (*2)	Ma direction: 11.6N·m, Mb direction: 16.6N·m, Mc direction: 24.6N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

* Reference for overhang load length: Ma direction: 220mm or less, Mb, Mc direction: 220mm or less
(*1) Values in [ ] are for high precision (for lead 3/6/12/20) specification.
(*2) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.
See page 146 for moment load directions.
If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



OFF BOARD TUNING CHART: Please see page 166

■ Dimensions and Mass by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	W/o brake	353.5	403.5	453.5	503.5	553.5	603.5	653.5	703.5	753.5	803.5	853.5	903.5	953.5	1003.5	1053.5	1103.5
	W/ brake	389.5	439.5	489.5	539.5	589.5	639.5	689.5	739.5	789.5	839.5	889.5	939.5	989.5	1039.5	1089.5	1139.5
A		207.5	257.5	307.5	357.5	407.5	457.5	507.5	557.5	607.5	657.5	707.5	757.5	807.5	857.5	907.5	957.5
B		172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922
D		0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
E		4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
G		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
H		4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18
J		0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
K		0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
Mass (kg)	W/o brake	2.0	2.2	2.4	2.6	2.7	2.9	3.1	3.3	3.4	3.6	3.8	4.0	4.2	4.3	4.5	4.7
	W/ brake	2.3	2.5	2.7	2.9	3.0	3.2	3.4	3.6	3.7	3.9	4.1	4.3	4.5	4.6	4.8	5.0

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET. Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-SA7C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 70 mm | 200v AC Servo Motor

■ Model Specification Items

RCS4	—	SA7C	—	WA	—	200	—	□	—	□	—	T2	—	□	—	□
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		200: Servo motor 200W		36:36mm 24:24mm 16:16mm 8: 8mm 4: 4mm		50:50mm ~ 800:800mm (50mm increments)		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable		Refer to Options table below.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.

POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.
(2) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(3) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-SA7C-WA-200-36-①-T2-②-③	200	36	7	4	95	50~800 (50mm increments)
RCS4-SA7C-WA-200-24-①-T2-②-③		24	30	7	142	
RCS4-SA7C-WA-200-16-①-T2-②-③		16	40	12	214	
RCS4-SA7C-WA-200-8-①-T2-②-③		8	45	20	427	
RCS4-SA7C-WA-200-4-①-T2-②-③		4	50	25	855	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed

(Unit: mm/s)

Lead \ Stroke	50~500 (50mm increments)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
36	1800			1620	1420	1260	1120
24	1500	1440	1240	1095	965	850	760
16	1000	965	830	720	635	560	500
8	500	475	410	355	315	275	245
4	240	235	205	175	155	135	120

① Stroke

① Stroke (mm)	RCS4-SA7C	① Stroke (mm)	RCS4-SA7C
50	○	450	○
100	○	500	○
150	○	550	○
200	○	600	○
250	○	650	○
300	○	700	○
350	○	750	○
400	○	800	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options

* Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
High-Precision specification (*1)	**HPR**	See P.134
Non-motor end specification	**NM**	See P.136
Slider roller specification	**SR**	See P.137
Double slider specification (*2)	**W**	See P.137

(*1) When the lead is 24/36, it cannot be selected.
Double slider specification cannot be selected.
(*2) Some leads cannot be selected. (Please see P. 150)

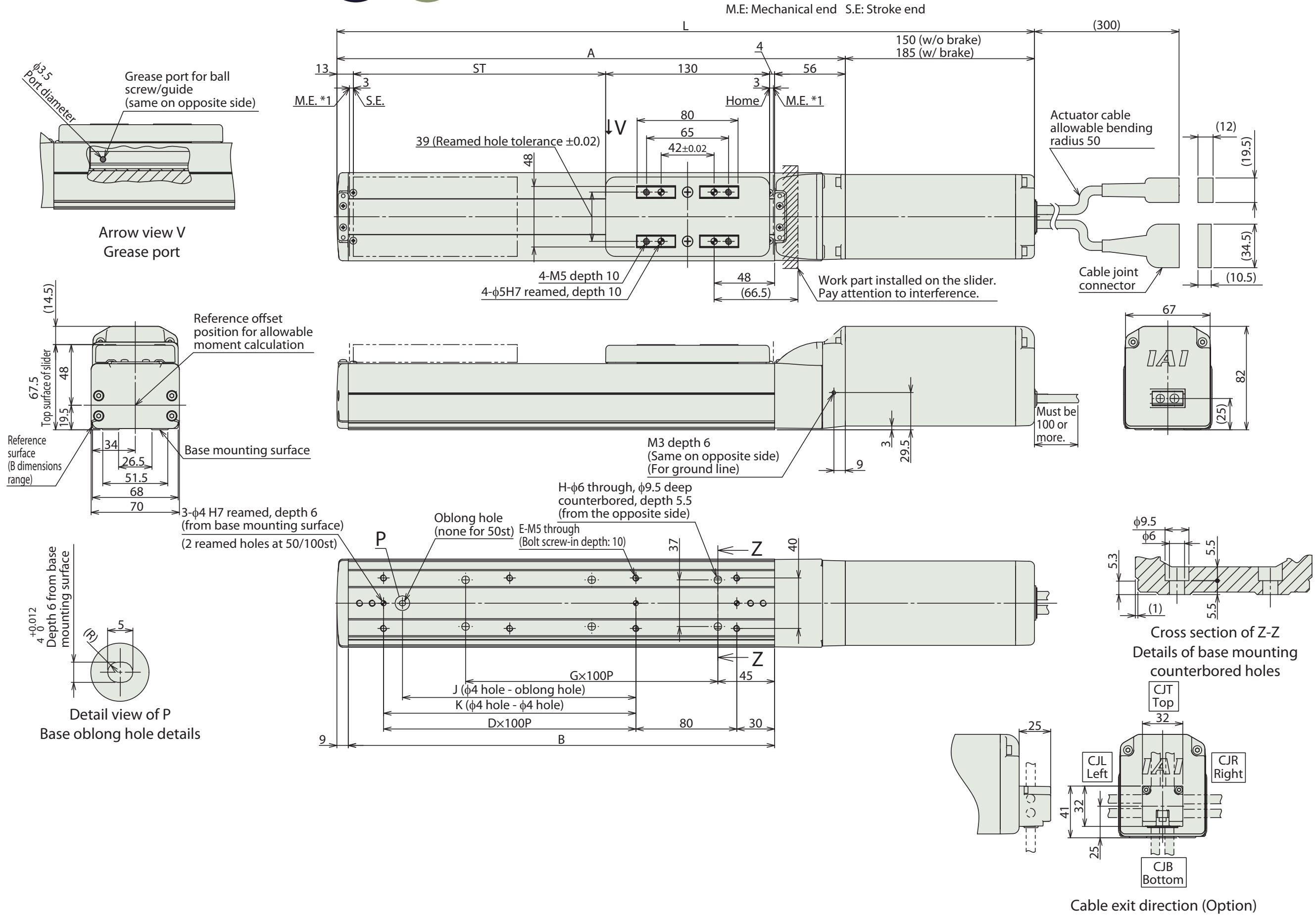
Actuator Specifications

Item	Description
Drive system	Ball screw ϕ12mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 115N·m, Mb direction 115N·m, Mc direction 229N·m
Allowable dynamic moment (*2)	Ma direction 44.7N·m, Mb direction 44.7N·m, Mc direction 89.1N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

* Reference for overhang load length: Ma direction: 300mm or less, Mb, Mc direction: 300mm or less
(*1) Values in [ ] are for high precision (for lead 4/8/16) specification.
(*2) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.
See page 146 for moment load directions.
If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



OFF BOARD TUNING CHART:
Please see page 166

■ Dimensions and Mass by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	W/o brake	403	453	503	553	603	653	703	753	803	853	903	953	1003	1053	1103	1153
	W/ brake	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188
A		253	303	353	403	453	503	553	603	653	703	753	803	853	903	953	1003
B		188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938
D		0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
E		4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
G		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
H		4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18
J		0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
K		0	0	100	200	200	300	300	400	400	500	500	600	600	700	700	800
Mass (kg)	W/o brake	3.5	3.8	4.0	4.3	4.5	4.7	5.0	5.2	5.4	5.7	5.9	6.1	6.4	6.6	6.8	7.1
	W/ brake	4.0	4.3	4.5	4.8	5.0	5.2	5.5	5.7	5.9	6.2	6.4	6.6	6.9	7.1	7.3	7.6

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet CC-Link PROFIBUS CompoNet MECHATROLINK EtherCAT EtherNet/IP PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-SA8C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 90 mm | 200v AC Servo Motor

■ Model Specification Items

RCS4	—	SA8C	—	WA	—	400	—	☐	—	☐	—	T2	—	☐	—	☐
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		400: Servo motor 400W		48:48mm 30:30mm 20:20mm 10:10mm 5: 5mm		50:50mm ~ 1100:1100mm (50mm increments)		T2:SCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X☐☐ : Specified Length R☐☐ : Robot Cable		Refer to Options table below.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.

POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.

(2) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.

(3) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.

(4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-SA8C-WA-400-48-①-T2-②-③	400	48	8	-	141	50~1100 (50mm increments)
RCS4-SA8C-WA-400-30-①-T2-②-③		30	30	12	226	
RCS4-SA8C-WA-400-20-①-T2-②-③		20	60	20	339	
RCS4-SA8C-WA-400-10-①-T2-②-③		10	80	35	678	
RCS4-SA8C-WA-400-5-①-T2-②-③		5	90	45	1357	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed

(Unit: mm/s)

Lead \ Stroke	50~600 (50mm increments)	650 (mm)	700 (mm)	750 (mm)	800 (mm)	850 (mm)	900 (mm)	950 (mm)	1000 (mm)	1050 (mm)	1100 (mm)
48	2200			2180	1950	1760	1590	1450	1320	1210	1110
30	1800	1640	1440	1280	1155	1040	940	855	780	715	660
20	1200	1090	960	860	770	695	630	570	520	480	440
10	600	540	480	430	385	345	310	285	260	235	220
5	300	270	240	215	190	175	155	140	130	120	110

① Stroke

① Stroke (mm)	RCS4-SA8C	① Stroke (mm)	RCS4-SA8C
50	○	**600**	○
100	○	**650**	○
150	○	**700**	○
200	○	**750**	○
250	○	**800**	○
300	○	**850**	○
350	○	**900**	○
400	○	**950**	○
450	○	**1000**	○
500	○	**1050**	○
550	○	**1100**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options

* Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
High-Precision specification (*1)	**HPR**	See P.134
Non-motor end specification	**NM**	See P.136
Slider roller specification	**SR**	See P.137
Double slider specification (*2)	**W**	See P.137

(*1) When the lead is 30/48, it cannot be selected. Double slider specification cannot be selected.
(*2) Some leads cannot be selected. (Please see P. 150)

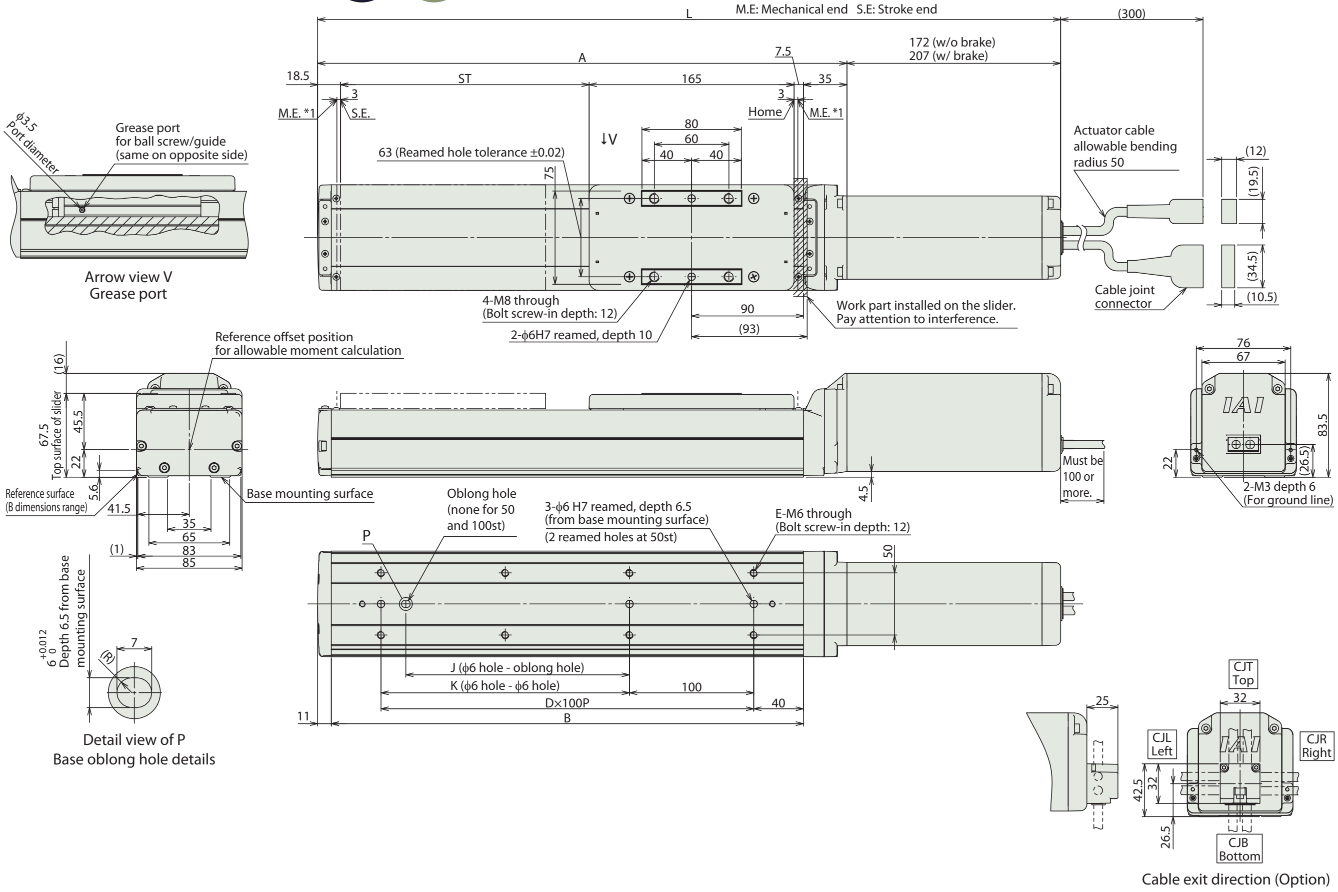
Actuator Specifications

Item	Description
Drive system	Ball screw ϕ16mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 219N·m, Mb direction 219N·m, Mc direction 414N·m
Allowable dynamic moment (*2)	Ma direction 77.0N·m, Mb direction 77.0N·m, Mc direction 146N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

* Reference for overhang load length: Ma direction: 400mm or less, Mb, Mc direction: 400mm or less
(*1) Values in [ ] are for high precision (for lead 5/10/20) specification.
(*2) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.
See page 146 for moment load directions.
If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD
3D CAD

*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



OFF BOARD TUNING CHART:
Please see page 166

■ Dimensions and Mass by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
L	W/o brake	448	498	548	598	648	698	748	798	848	898	948	998	1048	1098	1148	1198	1248	1298	1348	1398	1448	1498
	W/ brake	483	533	583	633	683	733	783	833	883	933	983	1033	1083	1133	1183	1233	1283	1333	1383	1433	1483	1533
A		276	326	376	426	476	526	576	626	676	726	776	826	876	926	976	1026	1076	1126	1176	1226	1276	1326
B		230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280
D		1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
E		4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
J		0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980	1080
K		0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1000	1000	1100
Mass (kg)	W/o brake	4.7	5.0	5.3	5.6	5.9	6.2	6.5	6.8	7.1	7.4	7.6	7.9	8.2	8.5	8.8	9.1	9.4	9.7	10.0	10.3	10.6	10.8
	W/ brake	5.2	5.5	5.8	6.1	6.4	6.7	7.0	7.3	7.6	7.9	8.1	8.4	8.7	9.0	9.3	9.6	9.9	10.2	10.5	10.8	11.1	11.3

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
SCON-CB/CGB		1	Single phase 200VAC	●	●	–	DeviceNet CC-Link PROFIBUS CompoNet MECHATROLINK EtherCAT EtherNet/IP PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SSEL-CS		2	Single phase 100V/200VAC	●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-SA4R

±10μm Standard | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 40* mm | 200v AC Servo Motor

■ Model Specification Items

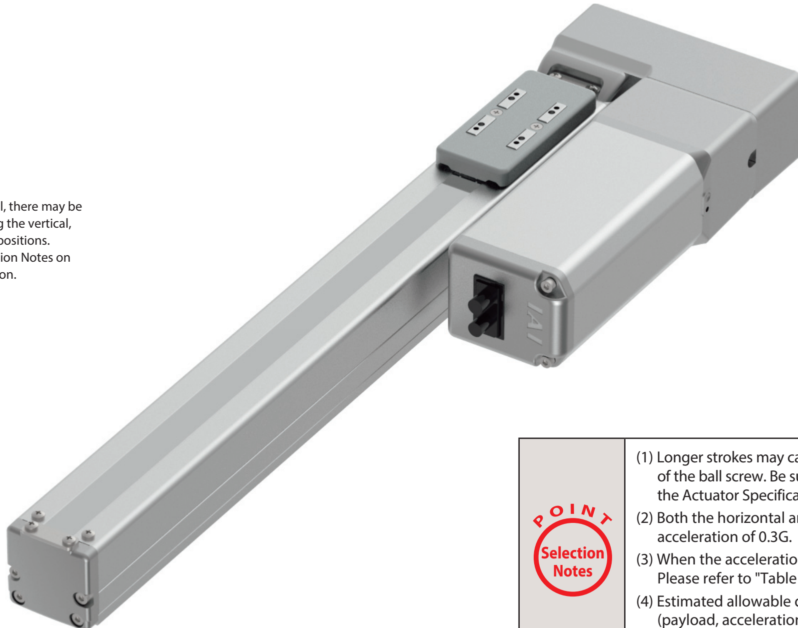
RCS4	—	SA4R	—	WA	—	60	—	☐	—	☐	—	T2	—	☐	—	☐
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		60: **Servo motor** 60W		16:16mm 10:10mm 5: 5mm 2.5:2.5mm		50:50mm ≀ 500:500mm (50mm increments)		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M : 5m X☐☐ : Specified Length R☐☐ : Robot Cable		Refer to Options table below.

* Body width does not include the width of the side-mounted motor.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.

(2) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.

(3) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.

(4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS4-SA4R-WA-60-16-①-T2-②-③	60	16	10	2.5	53	50~500 (50mm increments)
RCS4-SA4R-WA-60-10-①-T2-②-③		10	14	4.5	85	
RCS4-SA4R-WA-60-5-①-T2-②-③		5	17	8	170	
RCS4-SA4R-WA-60-2.5-①-T2-②-③		2.5	20	12	340	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed (Unit: mm/s)

Lead \ Stroke	50~450 (50mm increments)	500 (mm)
16	960	875
10	600	555
5	300	275
2.5	150	135

① Stroke

① Stroke (mm)	RCS4-SA4R	① Stroke (mm)	RCS4-SA4R
50	○	**300**	○
100	○	**350**	○
150	○	**400**	○
200	○	**450**	○
250	○	**500**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options

* Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Cable exit direction (Outside)	**CJO**	See P.131
Motor side-mounted to left (standard)	**ML**	See P.135
Motor side-mounted to right	**MR**	See P.135
Non-motor end specification	**NM**	See P.136
Back mounting plate	**RP**	See P.137
Slider roller specification	**SR**	See P.137
Slider spacer	**SS**	See P.137
Double slider specification (*1)	**W**	See P.137

(*1) Some leads cannot be selected. (Please see P. 150)

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 13.0N·m, Mb direction 18.6N·m, Mc direction 25.3N·m
Allowable dynamic moment (*1)	Ma direction 5.0N·m, Mb direction 7.1N·m, Mc direction 9.7N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

* Reference for overhang load length: Ma direction: 150mm or less, Mb, Mc direction: 150mm or less

(*1) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.

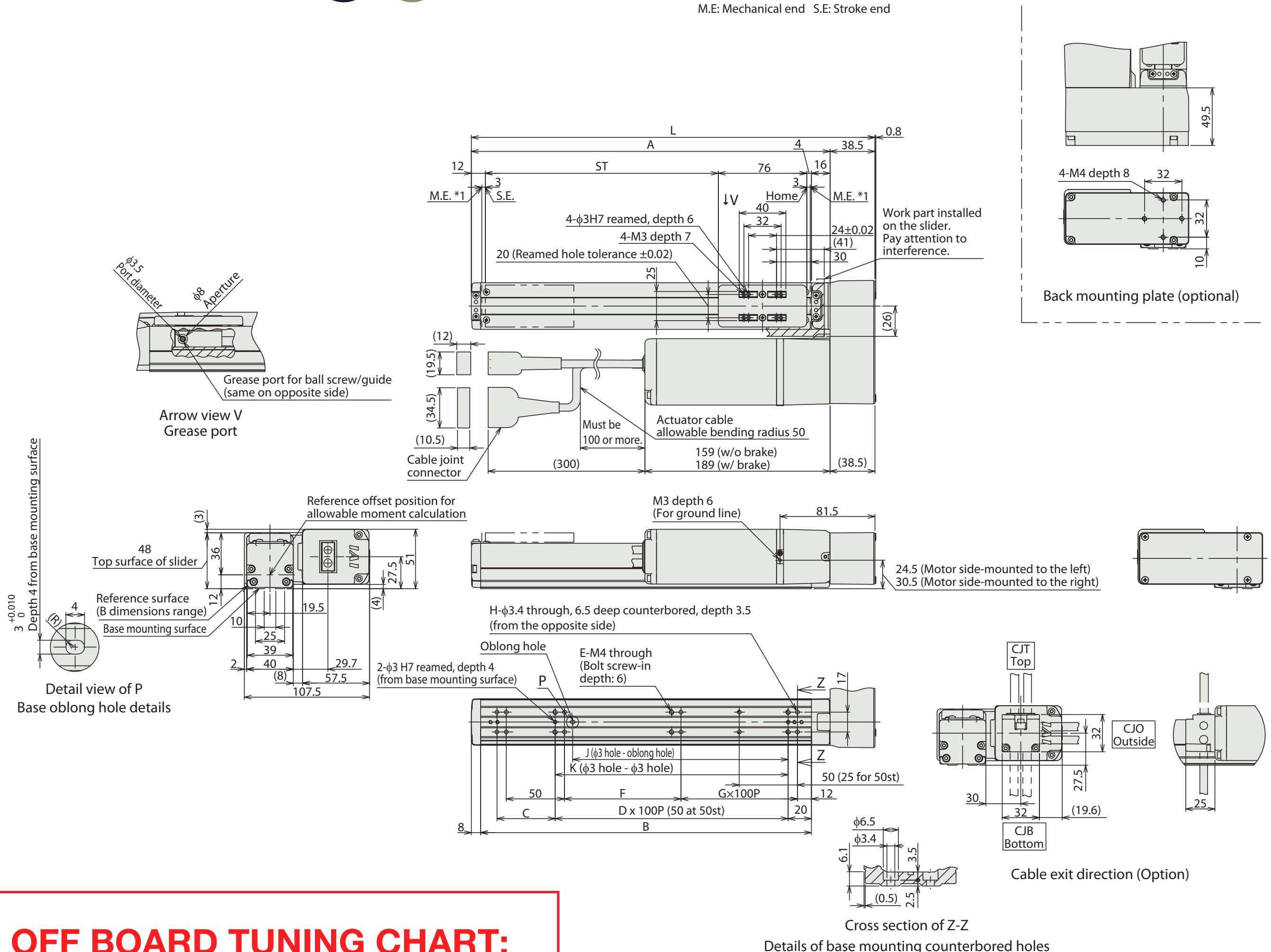
See page 146 for moment load directions.

If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.

Dimensions

CAD drawings can be downloaded from our website. www.intelligentactuator.com 2D CAD 3D CAD

*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



OFF BOARD TUNING CHART:
Please see page 167

■ Dimensions and Mass by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500
L		196.5	246.5	296.5	346.5	396.5	446.5	496.5	546.5	596.5	646.5
A		158	208	258	308	358	408	458	508	558	608
B		134	184	234	284	334	384	434	484	534	584
C		50	50	100	50	100	50	100	50	100	50
D		–	1	1	2	2	3	3	4	4	5
E		6	6	6	8	8	10	10	12	12	14
F		50	100	50	100	50	100	50	100	50	100
G		0	0	1	1	2	2	3	3	4	4
H		8	8	10	10	12	12	14	14	16	16
J		35	85	85	185	185	285	285	385	385	485
K		50	100	100	200	200	300	300	400	400	500
Mass (kg)	W/o brake	1.5	1.6	1.7	1.7	1.8	1.9	2.0	2.1	2.2	2.3
	W/ brake	1.7	1.8	1.9	1.9	2.0	2.1	2.2	2.3	2.4	2.5

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET. Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-SA6R

±10μm Standard | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 60* mm | 200v AC Servo Motor

■ Model Specification Items

RCS4	— SA6R	— WA	— 100	— ☐	— ☐	— T2	— ☐	— ☐
Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
		WA: Battery-less Absolute	100: Servo motor 100W	30:30mm 20:20mm 12:12mm 6: 6mm 3: 3mm	50:50mm ~ 800:800mm (50mm increments)	T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA	N : None P : 1m S : 3m M: 5m X☐☐ : Specified Length R☐☐ : Robot Cable	Refer to Options table below.

* Body width does not include the width of the side-mounted motor.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.

POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.

(2) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.

(3) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.

(4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-SA6R-WA-100-30-①-T2-②-③	100	30	11	3	57	50~800 (50mm increments)
RCS4-SA6R-WA-100-20-①-T2-②-③		20	18	5	85	
RCS4-SA6R-WA-100-12-①-T2-②-③		12	30	9	142	
RCS4-SA6R-WA-100-6-①-T2-②-③		6	45	15	283	
RCS4-SA6R-WA-100-3-①-T2-②-③		3	45	15	566	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed

(Unit: mm/s)

Lead \ Stroke	50~500 (50mm increments)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
30	1600	1450	1260	1100	970	860	
20	1200	1130	970	840	735	650	575
12	720	620	535	460	405	355	315
6	360	305	265	230	200	175	155
3	180	150	130	115	100	85	75

① Stroke

① Stroke (mm)	RCS4-SA6R	① Stroke (mm)	RCS4-SA6R
50	○	450	○
100	○	500	○
150	○	550	○
200	○	600	○
250	○	650	○
300	○	700	○
350	○	750	○
400	○	800	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options

* Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Cable exit direction (Outside)	**CJO**	See P.131
Motor side-mounted to left (standard)	**ML**	See P.135
Motor side-mounted to right	**MR**	See P.135
Non-motor end specification	**NM**	See P.136
Slider roller specification	**SR**	See P.137
Double slider specification (*1)	**W**	See P.137

(*1) Some leads cannot be selected. (Please see P. 150)

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction: 48.5N·m, Mb direction: 69.3N·m, Mc direction: 103N·m
Allowable dynamic moment (*1)	Ma direction: 11.6N·m, Mb direction: 16.6N·m, Mc direction: 24.6N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

* Reference for overhang load length: Ma direction: 220mm or less, Mb, Mc direction: 220mm or less

(*1) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.

See page 146 for moment load directions. If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.

CAD drawings can be downloaded from our website.
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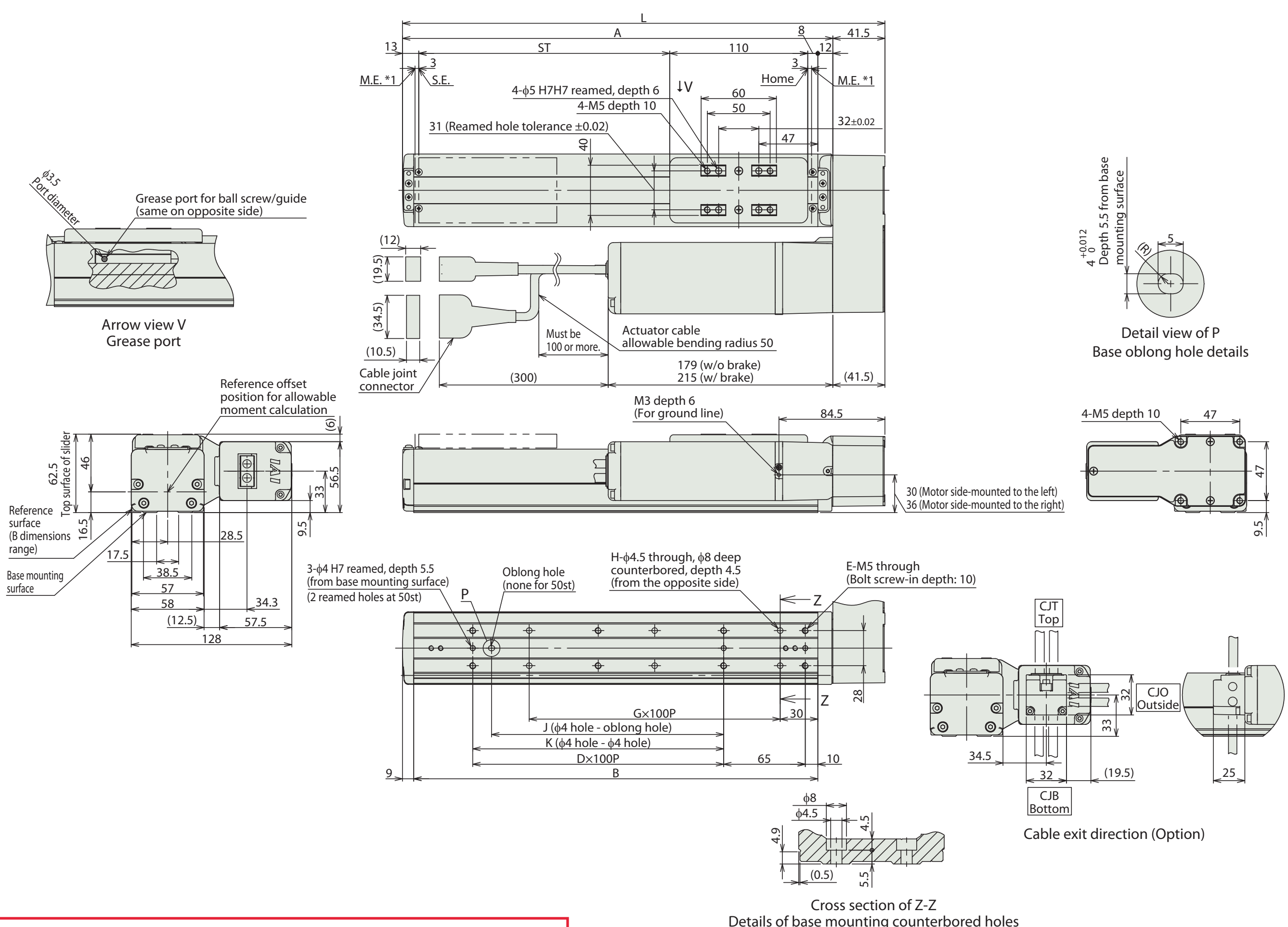
2D CAD 3D CAD

*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



OFF BOARD TUNING CHART:
Please see page 167

■ Dimensions and Mass by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L		234.5	284.5	334.5	384.5	434.5	484.5	534.5	584.5	634.5	684.5	734.5	784.5	834.5	884.5	934.5	984.5
A		193	243	293	343	393	443	493	543	593	643	693	743	793	843	893	943
B		172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922
D		0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
E		4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
G		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
H		4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18
J		0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
K		0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
Mass (kg)	W/o brake	2.4	2.5	2.7	2.9	3.1	3.2	3.4	3.6	3.8	4.0	4.1	4.3	4.5	4.7	4.9	5.0
	W/ brake	2.7	2.8	3.0	3.2	3.4	3.5	3.7	3.9	4.1	4.3	4.4	4.6	4.8	5.0	5.2	5.3

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Pulse train	Program	Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

Foreword
Slider Type
Wide Slider Type
Rod Type
Radial Cylinder®
Wide Radial Cylinder
Table Type
Cleanroom Slider
Cleanroom Wide Slider
Options
Reference Data
Controller

RCS4-SA7R

±10μm Standard | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 70* mm | 200V AC Servo Motor

■ Model Specification Items

RCS4	—	SA7R	—	WA	—	200	—	☐	—	☐	—	T2	—	☐	—	☐
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		200: Servo motor 200W		36:36mm 24:24mm 16:16mm 8: 8mm 4: 4mm		50:50mm ~ 800:800mm (50mm increments)		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X☐☐ : Specified Length R☐☐ : Robot Cable		Refer to Options table below.

* Body width does not include the width of the side-mounted motor.

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.

POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.
(2) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(3) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-SA7R-WA-200-36-①-T2-②-③	200	36	7	4	95	50~800 (50mm increments)
RCS4-SA7R-WA-200-24-①-T2-②-③		24	30	6	142	
RCS4-SA7R-WA-200-16-①-T2-②-③		16	38	12	214	
RCS4-SA7R-WA-200-8-①-T2-②-③		8	45	18	427	
RCS4-SA7R-WA-200-4-①-T2-②-③		4	50	25	855	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed

(Unit: mm/s)

Lead \ Stroke	50~500 (50mm increments)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
36	1800			1620	1420	1260	1120
24	1500	1440	1240	1095	965	850	760
16	1000	965	830	720	635	560	500
8	500	475	410	355	315	275	245
4	240	235	205	175	155	135	120

① Stroke

① Stroke (mm)	RCS4-SA7R	① Stroke (mm)	RCS4-SA7R
50	○	450	○
100	○	500	○
150	○	550	○
200	○	600	○
250	○	650	○
300	○	700	○
350	○	750	○
400	○	800	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options

* Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	B	See P.131
Cable exit direction (Top)	CJT	See P.131
Cable exit direction (Bottom)	CJB	See P.131
Cable exit direction (Outside)	CJO	See P.131
Motor side-mounted to left (standard)	ML	See P.135
Motor side-mounted to right	MR	See P.135
Non-motor end specification	NM	See P.136
Slider roller specification	SR	See P.137
Slider spacer	SS	See P.137
Double slider specification (*1)	W	See P.137

(*1) Some leads cannot be selected. (Please see P. 150)

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 115N·m, Mb direction 115N·m, Mc direction 229N·m
Allowable dynamic moment (*1)	Ma direction 44.7N·m, Mb direction 44.7N·m, Mc direction 89.1N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

* Reference for overhang load length: Ma direction: 300mm or less, Mb, Mc direction: 300mm or less

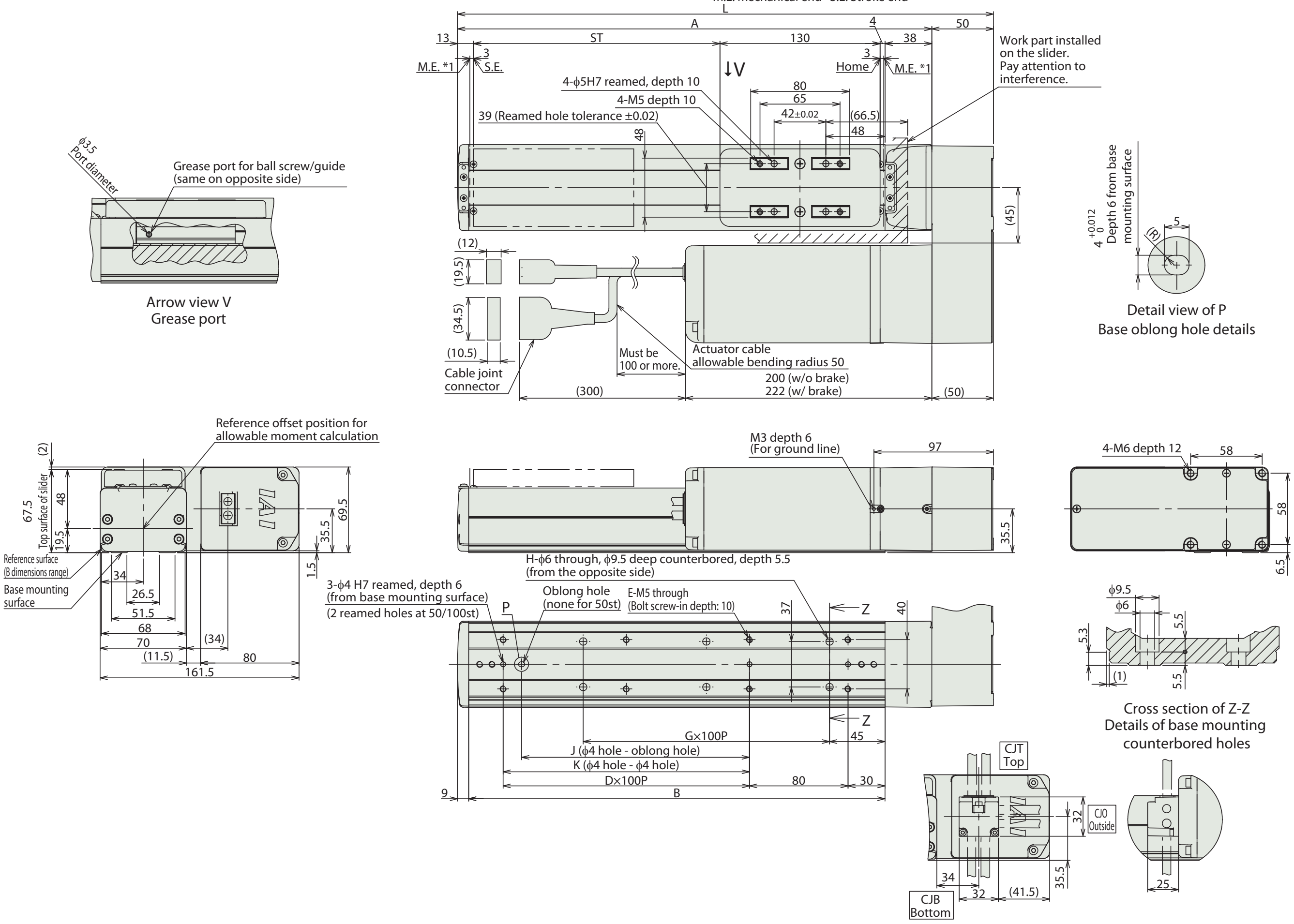
(*1) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.

See page 146 for moment load directions. If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



OFF BOARD TUNING CHART:
Please see page 167

■ Dimensions and Mass by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L		285	335	385	435	485	535	585	635	685	735	785	835	885	935	985	1035
A		235	285	335	385	435	485	535	585	635	685	735	785	835	885	935	985
B		188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938
D		0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
E		4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
G		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
H		4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18
J		0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
K		0	0	100	200	200	300	300	400	400	500	500	600	600	700	700	800
Mass (kg)	W/o brake	4.3	4.6	4.8	5.0	5.3	5.5	5.8	6.0	6.2	6.5	6.7	6.9	7.2	7.4	7.6	7.9
	W/ brake	4.8	5.1	5.3	5.5	5.8	6.0	6.3	6.5	6.7	7.0	7.2	7.4	7.7	7.9	8.1	8.4

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-SA8R

±10μm Standard | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 90* mm | 200V AC Servo Motor

■ Model Specification Items

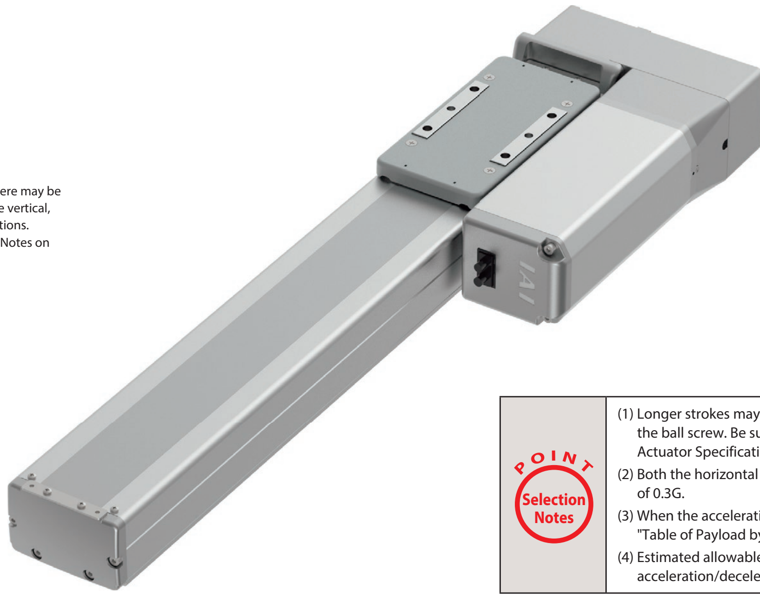
RCS4	—	SA8R	—	WA	—	400	—	☐	—	☐	—	T2	—	☐	—	☐
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		400: Servo motor 400W		48:48mm 30:30mm 20:20mm 10:10mm 5: 5mm		50:50mm ≀ 1100:1100mm (50mm increments)		T2:SCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X☐☐ : Specified Length R☐☐ : Robot Cable		Refer to Options table below.

* Body width does not include the width of the side-mounted motor.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.
(2) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(3) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS4-SA8R-WA-400-48-①-T2-②-③	400	48	8	-	141	50~1100 (50mm increments)
RCS4-SA8R-WA-400-30-①-T2-②-③		30	30	12	226	
RCS4-SA8R-WA-400-20-①-T2-②-③		20	60	20	339	
RCS4-SA8R-WA-400-10-①-T2-②-③		10	80	35	678	
RCS4-SA8R-WA-400-5-①-T2-②-③		5	90	45	1357	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed

(Unit: mm/s)

Lead \ Stroke	50~600 (50mm increments)	650 (mm)	700 (mm)	750 (mm)	800 (mm)	850 (mm)	900 (mm)	950 (mm)	1000 (mm)	1050 (mm)	1100 (mm)
48	2100				1950	1760	1590	1450	1320	1210	1110
30	1800	1640	1440	1280	1155	1040	940	855	780	715	660
20	1200	1090	960	860	770	695	630	570	520	480	440
10	600	540	480	430	385	345	310	285	260	235	220
5	300	270	240	215	190	175	155	140	130	120	110

① Stroke

① Stroke (mm)	RCS4-SA8R	① Stroke (mm)	RCS4-SA8R
50	○	**600**	○
100	○	**650**	○
150	○	**700**	○
200	○	**750**	○
250	○	**800**	○
300	○	**850**	○
350	○	**900**	○
400	○	**950**	○
450	○	**1000**	○
500	○	**1050**	○
550	○	**1100**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options

* Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Cable exit direction (Outside)	**CJO**	See P.131
Motor side-mounted to left (standard)	**ML**	See P.135
Motor side-mounted to right	**MR**	See P.135
Non-motor end specification	**NM**	See P.136
Slider roller specification	**SR**	See P.137
Slider spacer	**SS**	See P.137
Double slider specification (*1)	**W**	See P.137

(*1) Some leads cannot be selected. (Please see P. 150)

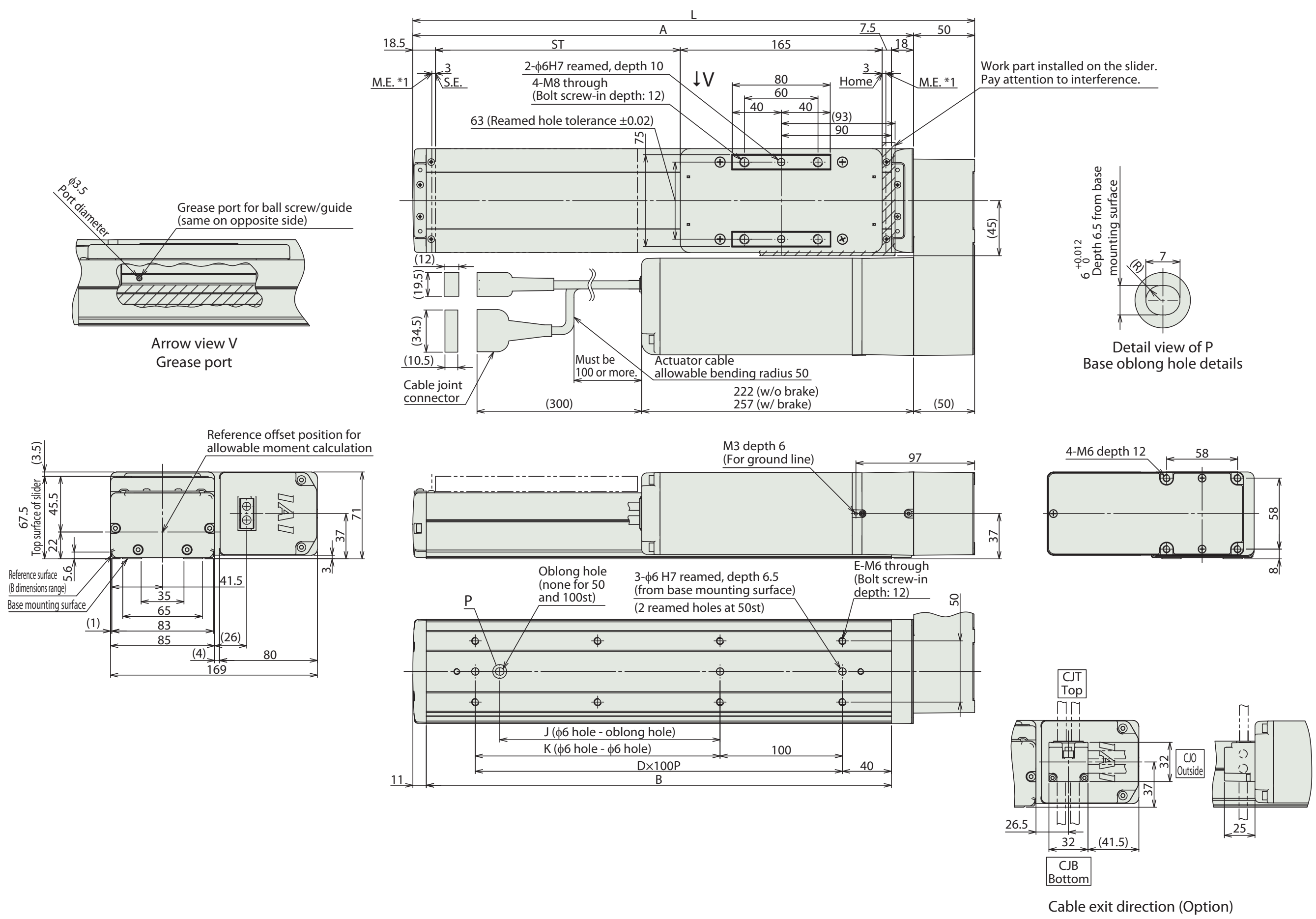
Actuator Specifications

Item	Description
Drive system	Ball screw ϕ16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 219N·m, Mb direction 219N·m, Mc direction 414N·m
Allowable dynamic moment (*1)	Ma direction 77.0N·m, Mb direction 77.0N·m, Mc direction 146N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

* Reference for overhang load length: Ma direction: 400mm or less, Mb, Mc direction: 400mm or less
(*1) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.
See page 146 for moment load directions. If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



OFF BOARD TUNING CHART:
Please see page 167

■ Dimensions and Mass by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
L		309	359	409	459	509	559	609	659	709	759	809	859	909	959	1009	1059	1109	1159	1209	1259	1309	1359
A		259	309	359	409	459	509	559	609	659	709	759	809	859	909	959	1009	1059	1109	1159	1209	1259	1309
B		230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280
D		1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
E		4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
J		0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980	1080
K		0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1000	1000	1100
Mass (kg)	W/o brake	5.6	5.9	6.2	6.4	6.7	7.0	7.3	7.6	7.9	8.2	8.5	8.8	9.1	9.4	9.6	9.9	10.2	10.5	10.8	11.1	11.4	11.7
	W/ brake	6.1	6.4	6.7	6.9	7.2	7.5	7.8	8.1	8.4	8.7	9.0	9.3	9.6	9.9	10.1	10.4	10.7	11.0	11.3	11.6	11.9	12.2

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
SCON-CB/CGB		1	Single phase 200VAC	●	●	–	DeviceNet CC-Link PROFIBUS CompoNet MECHATROLINK EtherCAT EtherNet/IP PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SSEL-CS		2	Single phase 100V/200VAC	●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

Foreword
Slider Type
Wide Slider Type
Rod Type
Radial Cylinder®
Wide Radial Cylinder
Table Type
Cleanroom Slider
Cleanroom Wide Slider
Options
Reference Data
Controller

RCS4-WSA10C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 100 mm | 200v AC Servo Motor

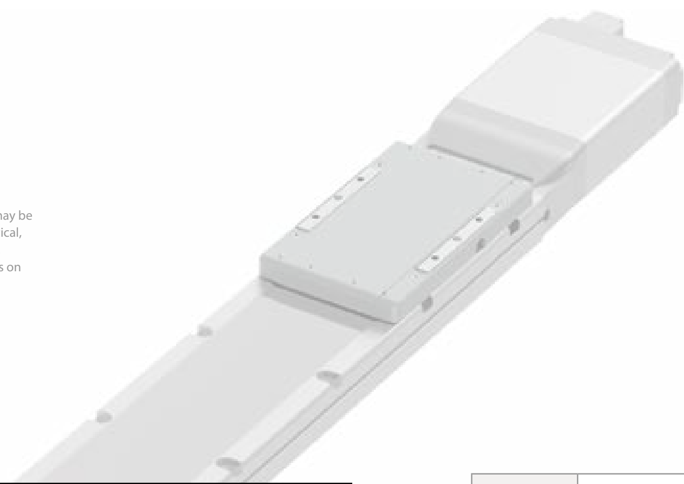
■ Model Specification Items

RCS4	—	WSA10C	—	WA	—	60	—	☐	—	☐	—	T2	—	☐	—	☐
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		60: Servo motor 60W		16: 16mm 10: 10mm 5: 5mm 2.5:2.5mm		50:50mm ~ 500:500mm (50mm increments)		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X☐☐ : Specified Length R☐☐ : Robot Cable		Refer to Options table below. * Be sure to select an option for the cable exit direction.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



For updated version, refer to page 168

Previous Version

POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due [illegible] of the ball screw. Be sure to check the maximum speed of the desi[illegible]troke [illegible] the Actuator Specifications table, which c[illegible]e found [illegible]
(2) Both the horizontal and vertical payloads assume [illegible]eratio[illegible] an a[illegible]eratio[illegible] of 0.3G.
(3) When the acceleration is incr[illegible]he pa[illegible]d wi[illegible]redu[illegible]. Please refer to "Table of Payload by Accele[illegible]on" on P.139 [illegible] more [illegible]
(4) Estimated allow[illegible]uty va[illegible]ng o[illegible]erating conditions (payload, accelera[illegible]tion/dec[illegible]tion, etc.). Please [illegible]er to P. 149 for more information.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. [illegible]load: Horiz[illegible] (kg)	Max. [illegible]load: [illegible]	Rated thrust (N)	Stroke (mm)
RCS4-WSA10C-WA-60-16-①-T2-②-[illegible]	60	[illegible]6	7	[illegible]	53	50~500 (50mm increments)
RCS4-WSA10C-WA-60-10-①-T2-[illegible]-③		[illegible]	[illegible]	3	85	
RCS4-WSA10C-WA[illegible]①-[illegible]		5	27	5	170	
[illegible]WS[illegible]C-WA[illegible]-2.5-[illegible]-T2-②-③		2.5	40	10	340	

[illegible] Strok[illegible] [illegible] Cable Length ③ Option

■ Stroke and Max Speed

(Unit: mm/s)

Lead \ Stroke	50~350 (50mm increments)	400 (mm)	450 (mm)	500 (mm)
16	960	930	775	660
10	600	590	490	415
5	300	290	245	205
2.5	150	145	120	100

[illegible]troke

① Stroke (mm)	RCS4-WSA10C	① Stroke (mm)	RCS4-WSA10C
50	○	300	○
100	○	350	○
150	○	400	○
200	○	450	○
250	○	500	○

② Cable Length

Type	Cable Code
Standard	P(1m) S(3m) M(5m)
Specified length (Standard cable)	X06(6m) ~X10(10m) X11(11m)~X15(15m) X16(16m)~X20(20m)
Robot cable	R01(1m) ~R03(3m) R04(4m) ~R05(5m) R06(6m) ~R10(10m) R11(11m)~R15(15m) R16(16m)~R20(20m)

③ Options

Name	Option Code	Reference Page
Brake	B	See P.131
Cable exit direction (Top)	CJT	See P.131
Cable exit direction (Right)	CJR	See P.131
Cable exit direction (Left)	CJL	See P.131
Cable exit direction (Bottom)	CJB	See P.131
High-precision specification	HPR	See P.134
Non-motor end specification	NM	See P.136
Slider roller specification	SR	See P.137

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ8mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 271N·m, Mb direction 271N·m, Mc direction 553N·m
Allowable dynamic moment (*2)	Ma direction 65.4N·m, Mb direction 65.4N·m, Mc direction 134N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

* Reference for overhang load length: Ma direction: 500mm or less, Mb, Mc direction: 500mm or less

(*1) Values in [ ] are for high precision specification.

(*2) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.

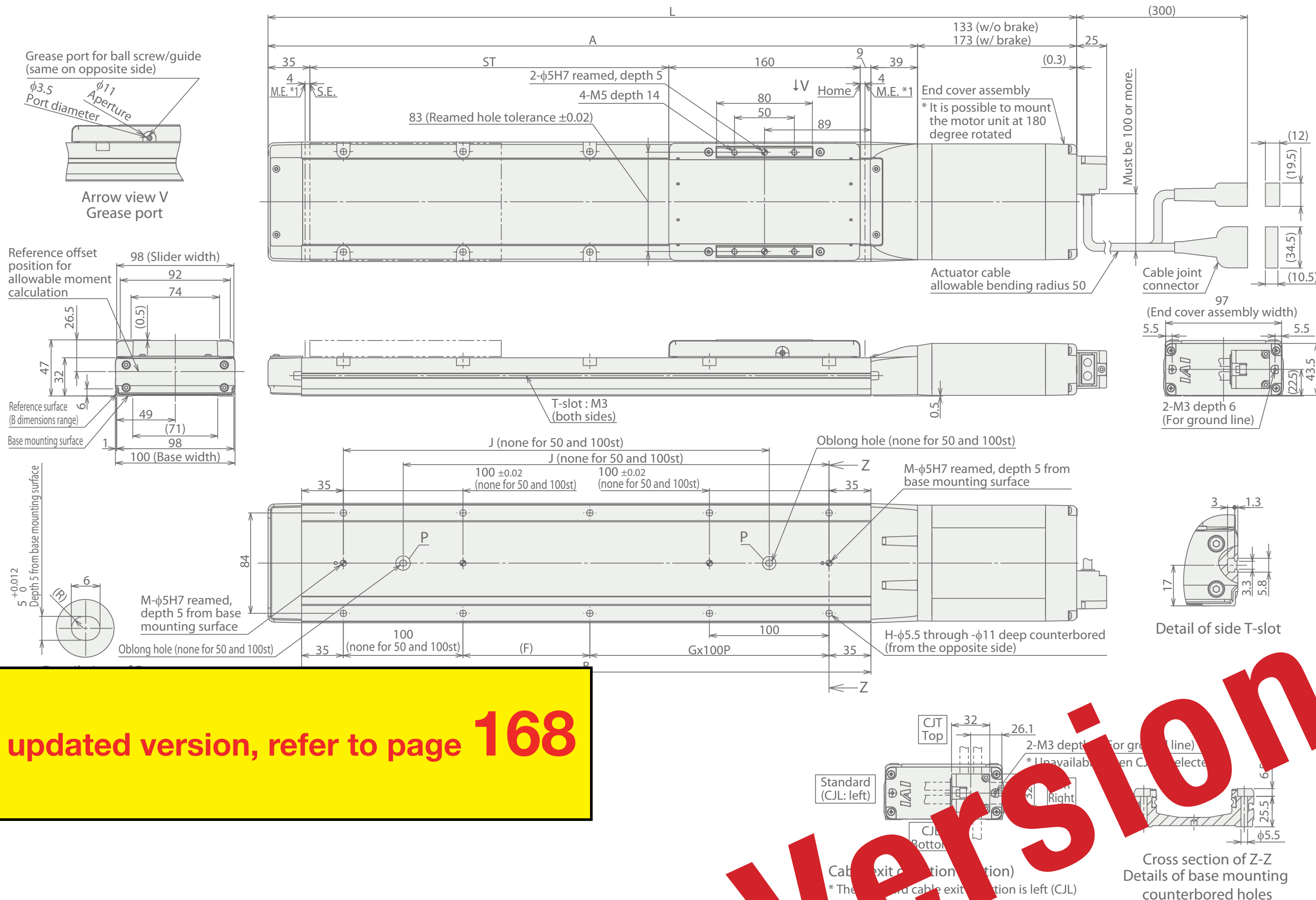
See page 146 for moment load directions.

If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



For updated version, refer to page 168

■ Dimensions and Mass by Stroke

Stroke		50	[illegible]	150	[illegible]	[illegible]	300	350	400	450	500
L	W/o brake	426	[illegible]	526	[illegible]	626	676	726	776	826	876
	W/ brake	[illegible]	[illegible]	566	[illegible]	666	716	766	816	866	916
A		[illegible]	[illegible]	[illegible]	443	493	543	593	643	693	743
B		[illegible]	[illegible]	[illegible]	376	426	476	526	576	626	676
F		[illegible]	206	56	106	56	106	56	106	56	106
[illegible]		[illegible]	0	1	1	2	2	3	3	4	4
[illegible]		4	4	8	8	10	10	12	12	14	14
[illegible]		–	–	206	256	306	356	406	456	506	556
M		1	1	2	2	2	2	2	2	2	2
Mass (kg)	W/o brake	2.8	3.0	3.3	3.5	3.8	4.0	4.3	4.5	4.8	5.0
	W/ brake	3.1	3.3	3.6	3.8	4.1	4.3	4.6	4.8	5.1	5.3

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-WSA12C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 120 mm | 200v AC Servo Motor

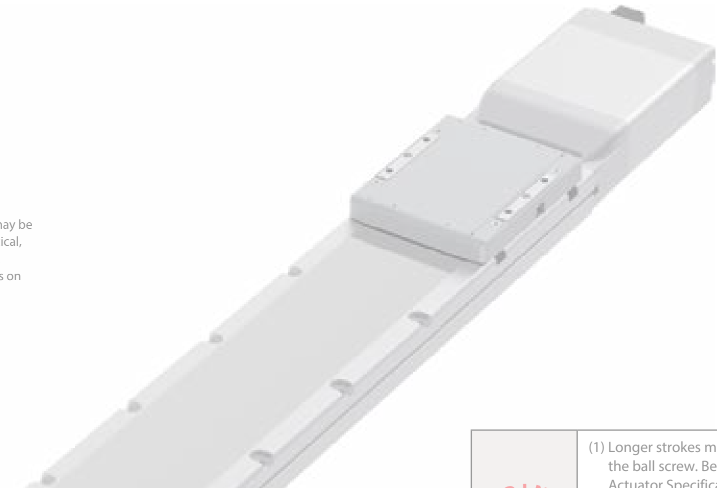
■ Model Specification Items

RCS4	—	WSA12C	—	WA	—	100	—		—		—	T2	—		—	
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		100: Servo motor 100W		30:30mm 20:20mm 12:12mm 6: 6mm 3: 3mm		50:50mm ~ 800:800mm (50mm increments)		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable		Refer to Options table below. * Be sure to select an option for the cable exit direction.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



For updated version, refer to page 172

POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.
(2) Both the horizontal and vertical payloads assume operation at [illegible] of 0.3G.
(3) When the acceleration is increased, th[illegible]yload w[illegible] be r[illegible]ed. P[illegible]e refe[illegible] "Table of Payload by Acceleration" on P.1[illegible] for m[illegible] detai[illegible]
(4) Estimated allowable duty varies dependi[illegible] operating co[illegible]tions [illegible]yload, acceleration/deceleration, e[illegible] refe[illegible] P. 14[illegible] m[illegible]nformation.

Previous Version

Actuator Specifications

Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-WSA12C-WA-100-30-①-T2-②-③	100	30	[illegible]	[illegible]	57	50~800 (50mm increments)
RCS4-WSA12C-WA-100-20-①-T2-②-③		20	15	[illegible]	85	
RCS4-WSA12C-WA-100-12-①-T2-②-③		12	25	8	142	
RCS4-WSA12C-WA-100-6-①-T2-②-③		6	45	15	283	
RCS4-WSA12C-WA-100-3-①-T2-②-③		3	55	15	566	

Legend: ① Stroke ② Cable Length ③ Option

Stroke and Max Speed

(Unit: mm/s)

Lead \ Stroke	50~500 (50mm increments)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
30	1600	1450	1260	1100	970	860	770
20	1200	970	840	740	650	580	520
12	720	535	465	405	355	315	285
6	360	265	230	200	175	155	140
3	180	130	115	100	85	75	70

① Stroke

① Stroke (mm)	RCS4-WSA12C	① Stroke (mm)	RCS4-WSA12C
50	○	450	○
100	○	500	○
150	○	550	○
200	○	600	○
250	○	650	○
300	○	700	○
350	○	750	○
400	○	800	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options

Name	Option Code	Reference Page
Brake	B	See P.131
Cable exit direction (Top)	CJT	See P.131
Cable exit direction (Right)	CJR	See P.131
Cable exit direction (Left)	CJL	See P.131
Cable exit direction (Bottom)	CJB	See P.131
High-precision specification *	HPR	See P.134
Non-motor end specification	NM	See P.136
Slider roller specification	SR	See P.137

* When the lead is 30, it cannot be selected.

Actuator Specifications

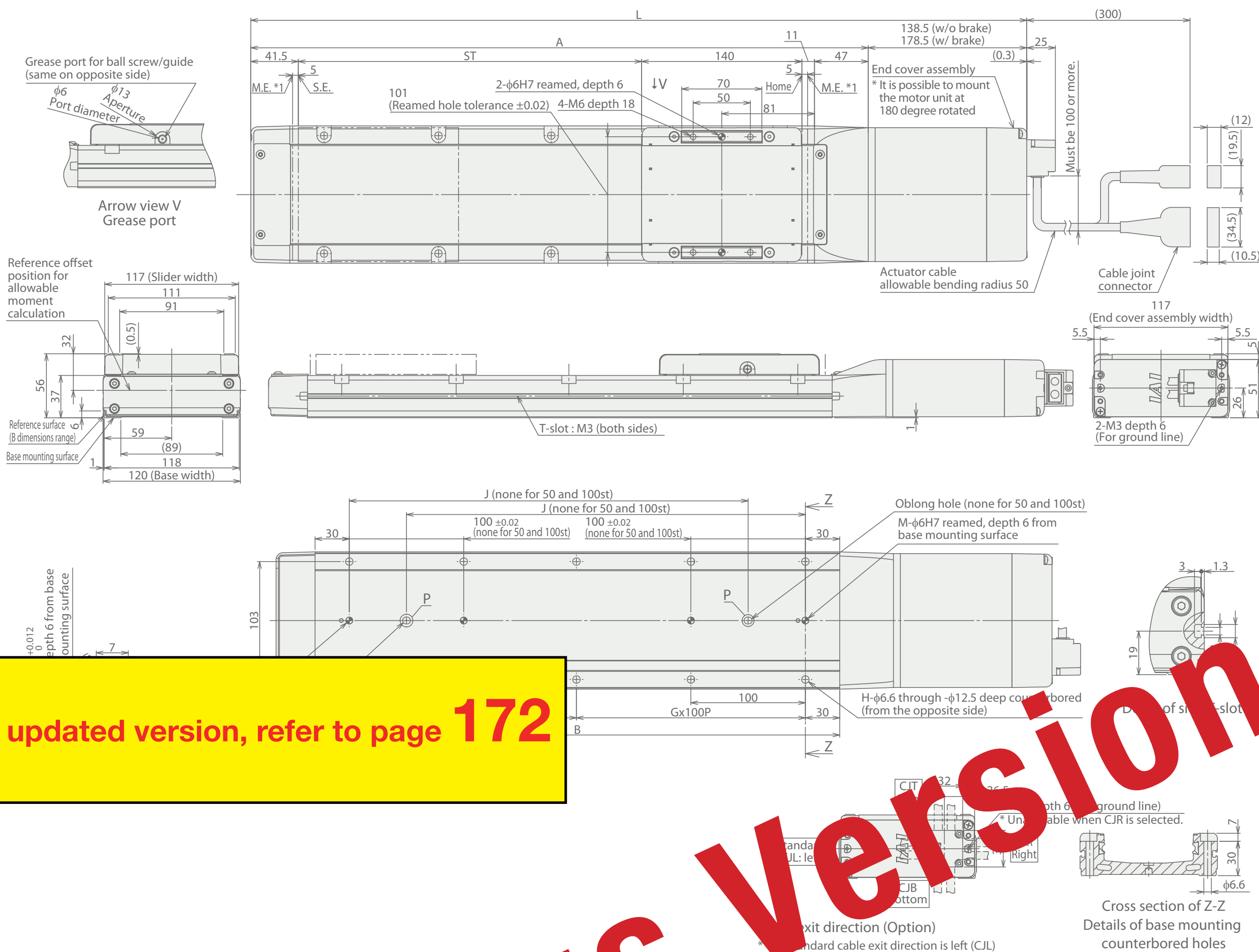
Item	Description
Drive system	Ball screw ϕ10mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 311N·m, Mb direction 311N·m, Mc direction 827N·m
Allowable dynamic moment (*2)	Ma direction 87.5N·m, Mb direction 87.5N·m, Mc direction 233N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

* Reference for overhang load length: Ma direction: 450mm or less, Mb, Mc direction: 450mm or less
(*1) Values in [ ] are for high precision (for lead 3/6/12/20) specification.
(*2) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.
See page 146 for moment load directions.
If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



For updated version, refer to page 172

■ Dimensions and Mass by Stroke

Stroke		50	[illegible]	150	[illegible]	[illegible]	300	350	400	450	500	550	600	650	700	750	800
L	W/o brake	428	[illegible]	528	[illegible]	628	678	728	778	828	878	928	978	1028	1078	1128	1178
	W/ brake	[illegible]	[illegible]	568	[illegible]	668	718	768	818	868	918	968	1018	1068	1118	1168	1218
A		[illegible]	[illegible]	[illegible]	439.5	489.5	539.5	589.5	639.5	689.5	739.5	789.5	839.5	889.5	939.5	989.5	1039.5
B		[illegible]	[illegible]	[illegible]	358.5	408.5	458.5	508.5	558.5	608.5	658.5	708.5	758.5	808.5	858.5	908.5	958.5
F		[illegible]	198.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5
[illegible]		[illegible]	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
[illegible]		4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20
[illegible]		–	–	198.5	248.5	298.5	348.5	398.5	448.5	498.5	548.5	598.5	648.5	698.5	748.5	798.5	848.5
M		1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mass (kg)	W/o brake	3.8	4.2	4.5	4.8	5.2	5.5	5.8	6.2	6.5	6.9	7.2	7.5	7.9	8.2	8.5	8.9
	W/ brake	4.2	4.6	4.9	5.2	5.6	5.9	6.2	6.6	6.9	7.3	7.6	7.9	8.3	8.6	8.9	9.3

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Pulse train	Program	Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET. Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-WSA14C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 140 mm | 200v AC Servo Motor

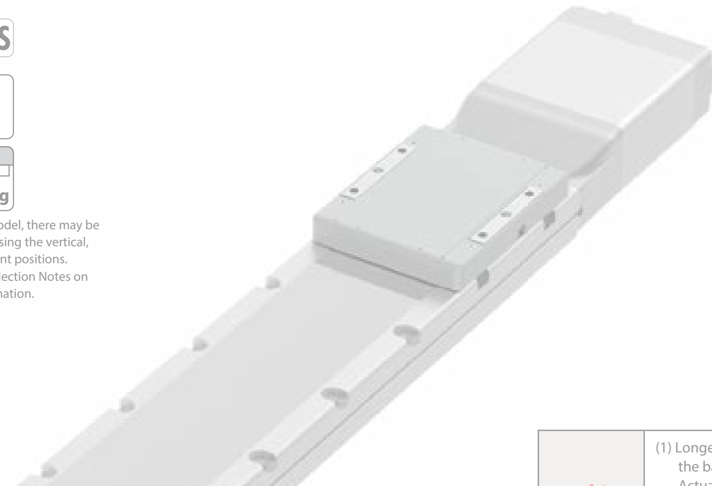
■ Model Specification Items

RCS4	—	WSA14C	—	WA	—	200	—		—		—	T2	—		—	
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		200: Servo motor 200W		36:36mm 24:24mm 16:16mm 8: 8mm 4: 4mm		50:50mm ≀ 800:800mm (50mm increments)		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable		Refer to Options table below. * Be sure to select an option for the cable exit direction.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



For updated version, refer to page 176

POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.
(2) Both the horizontal and vertical payloads assume operation at [illegible] of 0.3G.
(3) When the acceleration is increased, th[illegible]ayload w[illegible] be r[illegible]ed. [illegible]e refe[illegible] "Table of Payload by Acceleration" on P.1[illegible] for m[illegible] deta[illegible]
(4) Estimated allowable duty varies dependi[illegible] ope[illegible]ng co[illegible]ions [illegible]ayload, acceleration/deceleration, [illegible]e refe[illegible] P. 14[illegible] m[illegible] information.

Previous Version

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	[illegible] (mm)
RCS4-WSA14C-WA-200-36-①-T2-②-③	[illegible]	3[illegible]	[illegible]	[illegible]	95	50~800 (50mm increments)
RCS4-WSA14C-WA-200-24-①-T2-②-③		24	20	[illegible]	142	
RCS4-WSA14C-WA-200-16-①-T[illegible]	2[illegible]	[illegible]	45	8	214	
RCS4-WSA14C-WA[illegible]-①-[illegible]-③		8	65	10	427	
[illegible]WS[illegible]C-WA[illegible]0-4-[illegible]-T2-②-③		4	80	25	855	

[illegible] Strok[illegible] [illegible] Cable Length ③ Option

■ St[illegible]ke [illegible]d Max Speed

(Unit: mm/s)

Lead \ Stroke	50~550 (50mm increments)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
36	1800	1590	1400	1240	1110	990
24	1440	1060	930	830	740	665
16	960	690	610	550	490	440
8	480	350	305	270	240	215
4	240	170	150	135	120	105

[illegible]troke

① Stroke (mm)	RCS4-WSA14C	① Stroke (mm)	RCS4-WSA14C
50	○	450	○
100	○	500	○
150	○	550	○
200	○	600	○
250	○	650	○
300	○	700	○
350	○	750	○
400	○	800	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options

Name	Option Code	Reference Page
Brake	B	See P.131
Cable exit direction (Top)	CJT	See P.131
Cable exit direction (Right)	CJR	See P.131
Cable exit direction (Left)	CJL	See P.131
Cable exit direction (Bottom)	CJB	See P.131
High-precision specification *	HPR	See P.134
Non-motor end specification	NM	See P.136
Slider roller specification	SR	See P.137

* When the lead is 24/36, it cannot be selected.

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ12mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 462N·m, Mb direction 462N·m, Mc direction 1170N·m
Allowable dynamic moment (*2)	Ma direction 122N·m, Mb direction 122N·m, Mc direction 308N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

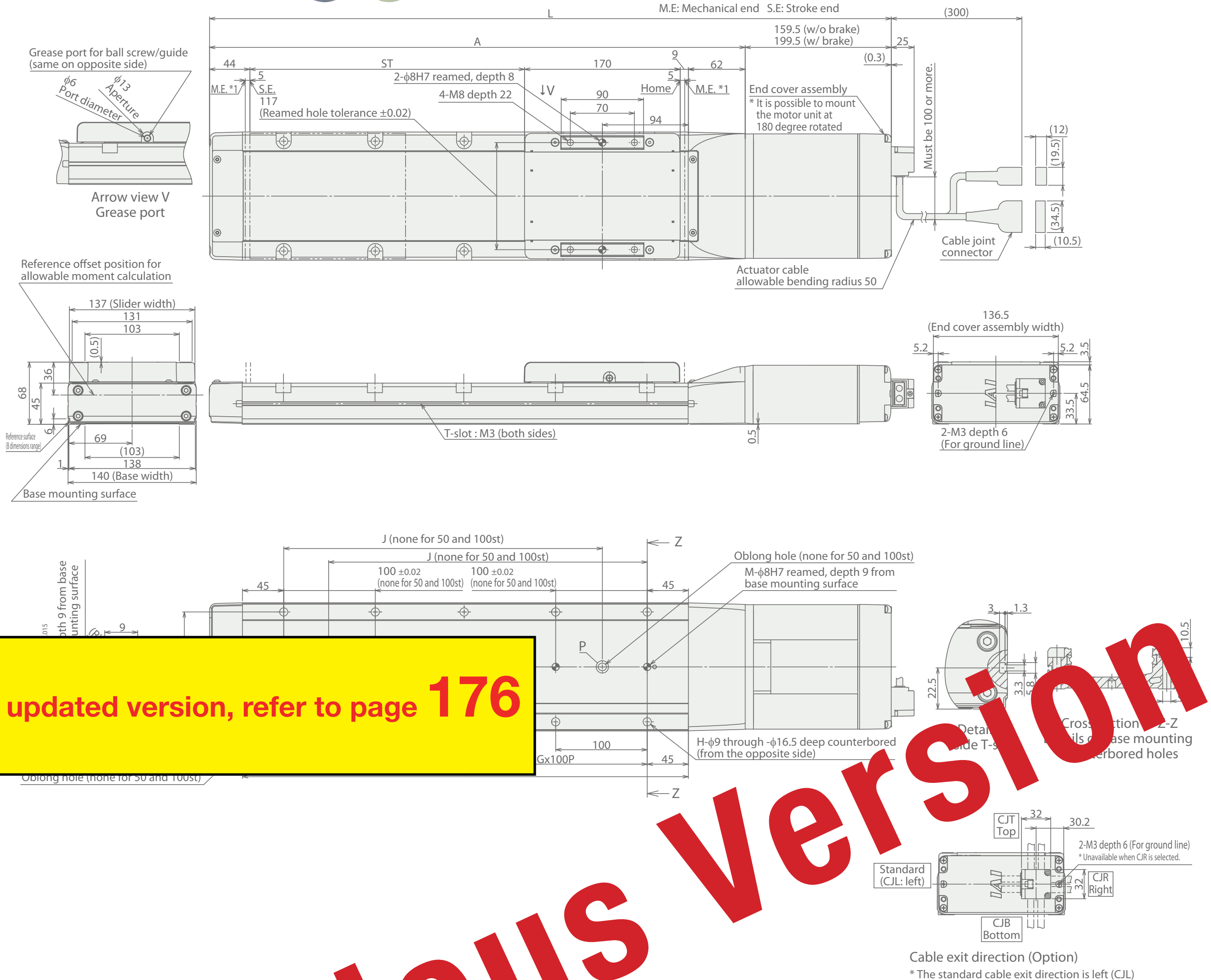
* Reference for overhang load length: Ma direction: 550mm or less, Mb, Mc direction: 550mm or less

(*1) Values in [ ] are for high precision (for lead 4/8/16) specification.
(*2) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.
See page 146 for moment load directions.
If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



Cable exit direction (Option)
* The standard cable exit direction is left (CJL)

Dimensions and Mass by Strok[illegible]

Stroke		50	[illegible]	150	[illegible]	[illegible]	300	350	400	450	500	550	600	650	700	750	800
L	W/o brake	494.5	[illegible]	[illegible]	[illegible]	694.5	744.5	794.5	844.5	894.5	944.5	994.5	1044.5	1094.5	1144.5	1194.5	1244.5
	W/ brake	[illegible]	[illegible]	634.5	[illegible]	734.5	784.5	834.5	884.5	934.5	984.5	1034.5	1084.5	1134.5	1184.5	1234.5	1284.5
A		[illegible]	[illegible]	[illegible]	485	535	585	635	685	735	785	835	885	935	985	1035	1085
B		[illegible]	[illegible]	[illegible]	387	437	487	537	587	637	687	737	787	837	887	937	987
[illegible]		[illegible]	197	47	97	47	97	47	97	47	97	47	97	47	97	47	97
[illegible]		[illegible]	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
[illegible]		4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20
[illegible]		–	–	198	248	298	348	398	448	498	548	598	648	698	748	798	848
M		1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mass (kg)	W/o brake	6.5	6.9	7.4	7.9	8.4	8.9	9.4	9.9	10.3	10.8	11.3	11.8	12.3	12.8	13.3	13.8
	W/ brake	7.1	7.5	8.0	8.5	9.0	9.5	10.0	10.5	10.9	11.4	11.9	12.4	12.9	13.4	13.9	14.4

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-WSA16C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 160 mm | 200v AC Servo Motor

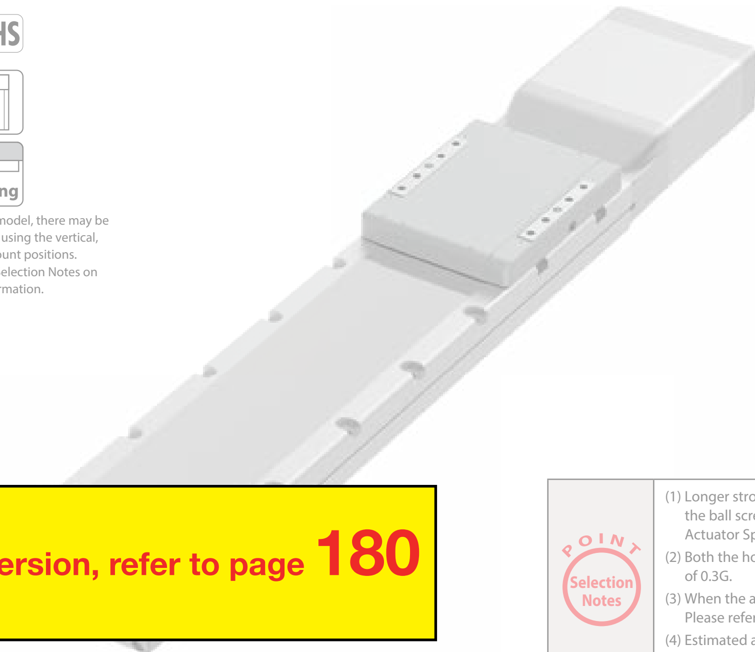
■ Model Specification Items

RCS4	—	WSA16C	—	WA	—	400	—		—		—	T2	—		—	
Series		Type		Encoder Type		Motor Type		Lead		Stroke		Applicable Controllers		Cable Length		Options
				WA: Battery-less Absolute		400: Servo motor 400W		30:30mm 20:20mm 10:10mm 5: 5mm		50:50mm ≀ 1100:1100mm (50mm increments)		T2:SCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable		Refer to Options table below. * Be sure to select an option for the cable exit direction.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



For updated version, refer to page 180

POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due [illegible] of the ball screw. Be sure to check the maximum speed of the desi[illegible] stroke [illegible] the Actuator Specifications table, which c[illegible] e found [illegible]
(2) Both the horizontal and vertical payloads assume [illegible] an [illegible] of 0.3G.
(3) When the acceleration is inc[illegible] e pa[illegible] d wi[illegible] redu[illegible] Please refer to "Table [illegible] f Pa[illegible] d by Acceler[illegible]" on [illegible] more details.
(4) Estimated allow[illegible] ty va[illegible] ng o[illegible] erating conditions (payload, acceleration/dec[illegible] tion, etc.). Please [illegible] er to [illegible]. 149 for more information.

Previous Version

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-WSA16C-WA-400-30-①-T2-②-③	[illegible]	[illegible]	30	12	226	50~1100 (50mm increments)
RCS4-WSA16C-WA-400-20-①-T2-②-③	[illegible]	[illegible]	[illegible]	20	339	
RCS4-WSA16C-WA-4[illegible]-①-T[illegible]-③		10	80	35	678	
[illegible]WSA[illegible]WA-4[illegible]-①-[illegible]2-②-③		5	100	50	1357	

[illegible] ① Strok[illegible] ② Cable Length ③ Option

■ [illegible]e and Max Speed

(Unit: mm/s)

Lead \ Stroke	50~550 (50mm increments)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)	850 (mm)	900 (mm)	950 (mm)	1000 (mm)	1050 (mm)	1100 (mm)
30	1800	1680	1480	1320	1180	1060	960	870	790	730	670	620
20	1200	1120	990	880	780	715	645	590	535	490	450	415
10	600	560	490	440	395	355	320	290	265	240	225	205
5	300	280	240	220	195	175	160	145	130	120	110	100

① Stroke

① Stroke (mm)	RCS4-WSA16C	① Stroke (mm)	RCS4-WSA16C
50	○	600	○
100	○	650	○
150	○	700	○
200	○	750	○
250	○	800	○
300	○	850	○
350	○	900	○
400	○	950	○
450	○	1000	○
500	○	1050	○
550	○	1100	○

② Cable Length

Type	Cable Code
Standard	**P**(1m) **S**(3m) **M**(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m) **X11**(11m)~**X15**(15m) **X16**(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m) **R04**(4m) ~**R05**(5m) **R06**(6m) ~**R10**(10m) **R11**(11m)~**R15**(15m) **R16**(16m)~**R20**(20m)

③ Options

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
High-precision specification *	**HPR**	See P.134
Non-motor end specification	**NM**	See P.136
Slider roller specification	**SR**	See P.137

* When the lead is 30, it cannot be selected.

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ16mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 642N·m, Mb direction 642N·m, Mc direction 1610N·m
Allowable dynamic moment (*2)	Ma direction 161N·m, Mb direction 161N·m, Mc direction 404N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

* Reference for overhang load length: Ma direction: 650mm or less, Mb, Mc direction: 650mm or less

(*1) Values in [ ] are for high precision (for lead 5/10/20) specification.

(*2) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.

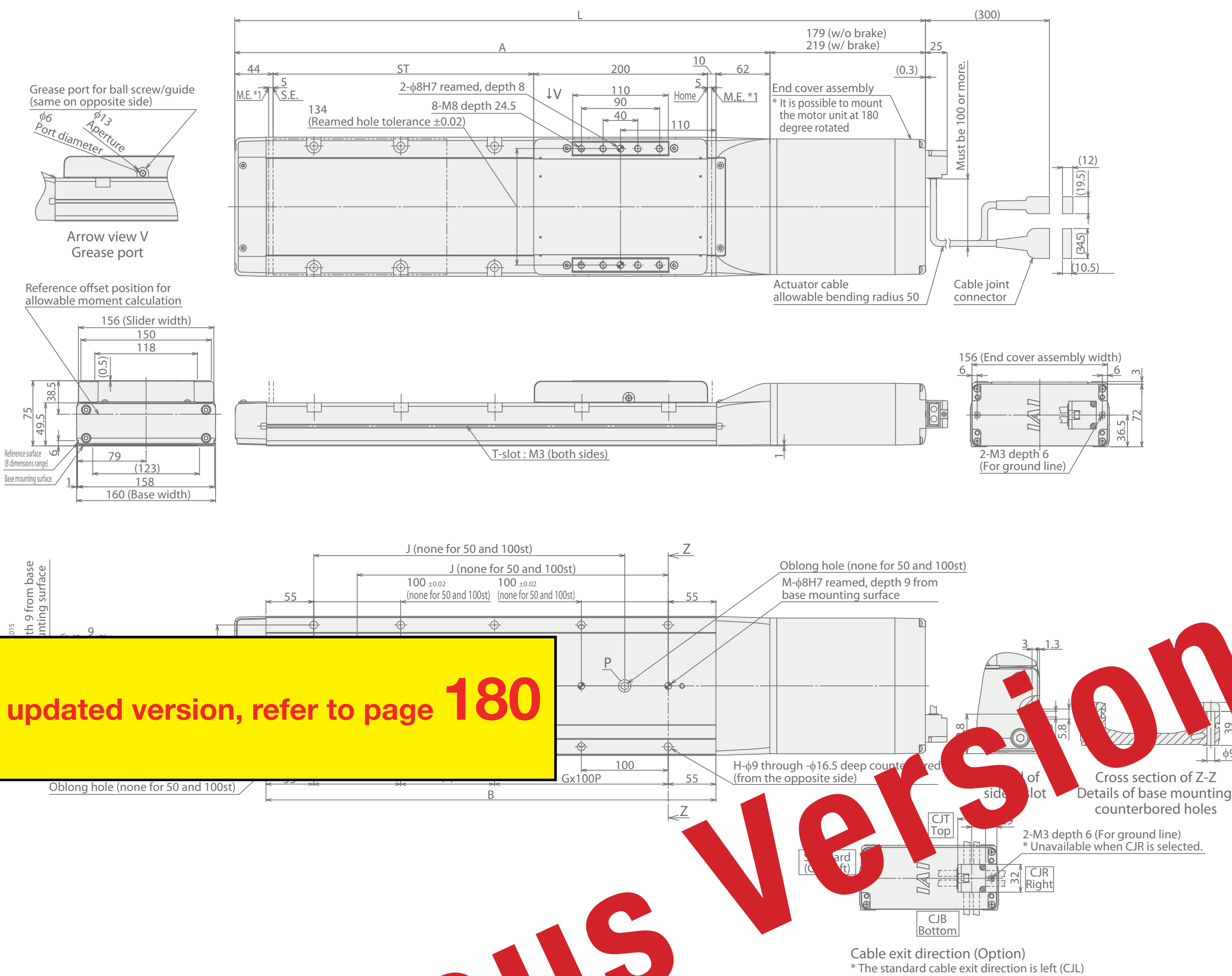
See page 146 for moment load directions.

If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



For updated version, refer to page 180

■ Dimensions and Mass by Stroke

Stroke		50	[illegible]	[illegible]	[illegible]	250	[illegible]	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
L	W/o brake	545	[illegible]	[illegible]	[illegible]	745	795	845	895	945	995	1045	1095	1145	1195	1245	1295	1345	1395	1445	1495	1545	1595
	W/ brake	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	835	885	935	985	1035	1085	1135	1185	1235	1285	1335	1385	1435	1485	1535	1585	1635
A		[illegible]	[illegible]	[illegible]	516	566	616	666	716	766	816	866	916	966	1016	1066	1116	1166	1216	1266	1316	1366	1416
B		[illegible]	[illegible]	[illegible]	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318
[illegible]		[illegible]	208	[illegible]	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108
[illegible]		[illegible]	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
[illegible]		4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
[illegible]		–	–	208	258	308	358	408	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158
M		1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mass (kg)	W/o brake	9.1	9.8	10.4	11.0	11.6	12.2	12.8	13.4	14.0	14.7	15.3	15.9	16.5	17.1	17.7	18.3	18.9	19.6	20.2	20.8	21.4	22.0
	W/ brake	9.7	10.4	11.0	11.6	12.2	12.8	13.4	14.0	14.6	15.3	15.9	16.5	17.1	17.7	18.3	18.9	19.5	20.2	20.8	21.4	22.0	22.6

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SSEL-CS		2	Single phase 100V/200VAC	●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-WSA10R

±10μm Standard | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 100* mm | 200v AC Servo Motor

■ Model Specification Items

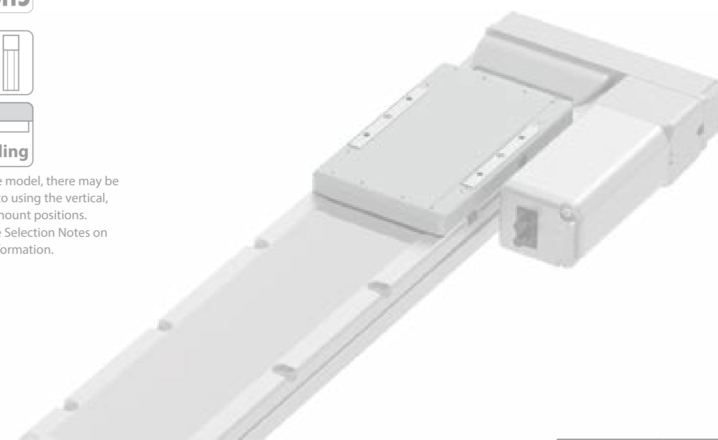
RCS4	—	WSA10R	—	WA	—	60	—		—		—	T2	—		—	
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		60: Servo motor 60W		16: 16mm 10: 10mm 5: 5mm 2.5:2.5mm		50:50mm ≀ 500:500mm (50mm increments)		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable		Refer to Options table below.

* Body width does not include the width of the side-mounted motor.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



For updated version, refer to page 184

Previous Version

POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due [illegible]e of the ball screw. Be sure to check the maximum speed of the desi[illegible]troke [illegible]he Actuator Specifications table, which ca[illegible]e found [illegible]
(2) Both the horizontal and vertical payloads assume [illegible]eratio[illegible] an a[illegible]eratio[illegible] of 0.3G.
(3) When the acceleration is incr[illegible]he pa[illegible]d wi[illegible]redu[illegible]. Please refer to "Table of Payload by Accele[illegible]on" on P.139 [illegible]more
(4) Estimated allow[illegible]uty va[illegible]ng o[illegible]erating conditions (payload, accelera[illegible]tion, etc.). Please [illegible]er to P. 149 for more information.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. [illegible]load Horiz[illegible] (kg)	[illegible]	Rated thrust (N)	Stroke (mm)
RCS4-WSA10R-WA-60-16-①-T2-②-[illegible]	60	16	7	[illegible]	53	50~500 (50mm increments)
RCS4-WSA10R-WA-60-10-①-T2-[illegible]-③		[illegible]	16	3	85	
RCS4-WSA10R-WA[illegible]①-T[illegible]②[illegible]		5	27	5	170	
[illegible]WS[illegible]R-WA[illegible]-2.5[illegible]-T2-[illegible]-③		2.5	40	10	340	

[illegible] Strok[illegible] [illegible] Cable Length ③ Option

■ Stroke and Max Speed

(Unit: mm/s)

Lead \ Stroke	50~350 (50mm increments)	400 (mm)	450 (mm)	500 (mm)
16	960	930	775	660
10	600	590	490	415
5	300	290	245	205
2.5	150	145	120	100

[illegible]troke

① Stroke (mm)	RCS4-WSA10R	① Stroke (mm)	RCS4-WSA10R
50	○	300	○
100	○	350	○
150	○	400	○
200	○	450	○
250	○	500	○

② Cable Length

Type	Cable Code
Standard	**P**(1m) **S**(3m) **M**(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m) **X11**(11m)~**X15**(15m) **X16**(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m) **R04**(4m) ~**R05**(5m) **R06**(6m) ~**R10**(10m) **R11**(11m)~**R15**(15m) **R16**(16m)~**R20**(20m)

③ Options

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Cable exit direction (Outside)	**CJO**	See P.131
Motor side-mounted to left (standard)	**ML**	See P.135
Motor side-mounted to right	**MR**	See P.135
Non-motor end specification	**NM**	See P.136
Slider roller specification	**SR**	See P.137
Slider spacer	**SS**	See P.137

Actuator Specifications

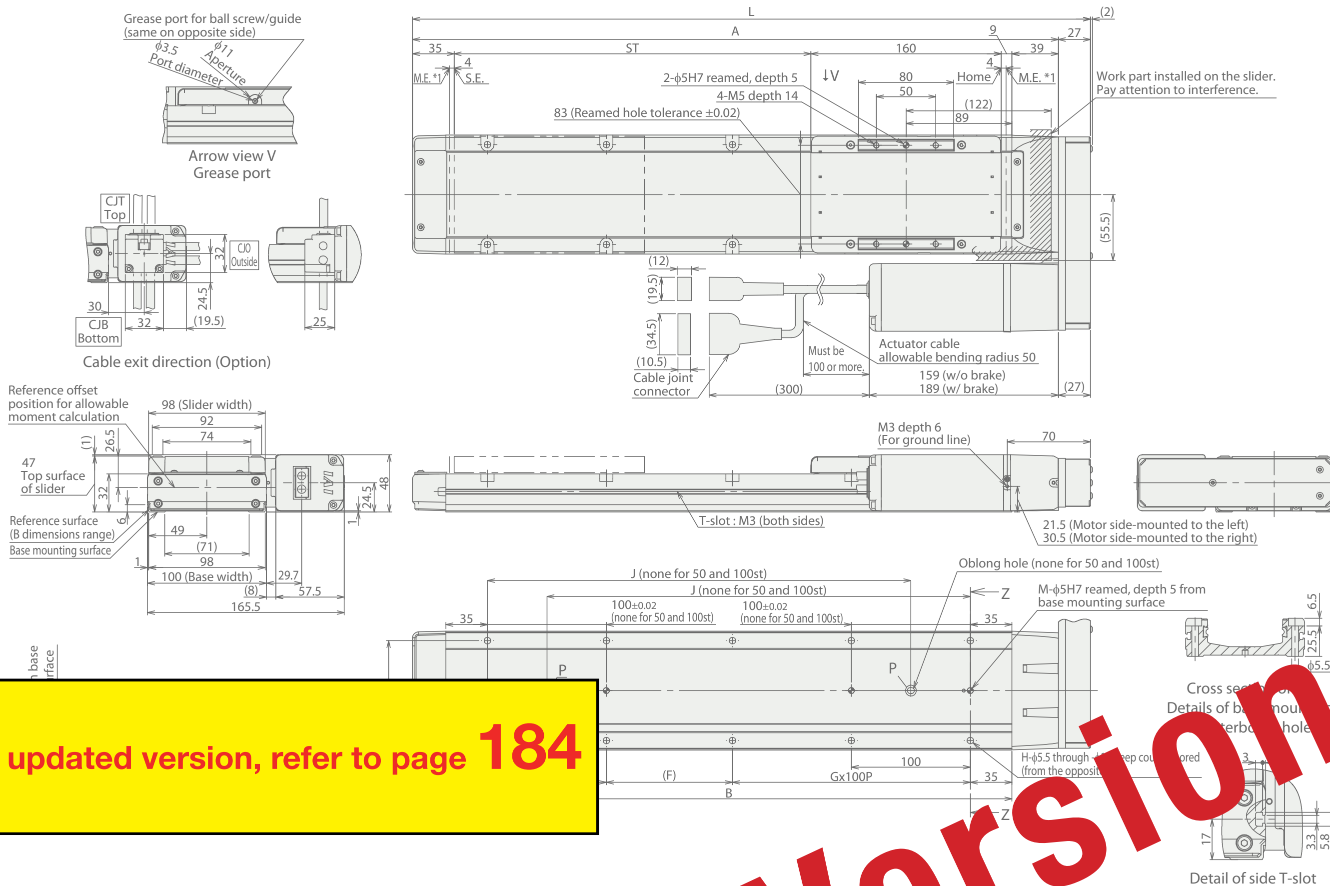
Item	Description
Drive system	Ball screw ϕ8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 271N·m, Mb direction 271N·m, Mc direction 553N·m
Allowable dynamic moment (*1)	Ma direction 65.4N·m, Mb direction 65.4N·m, Mc direction 134N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

* Reference for overhang load length: Ma direction: 500mm or less, Mb, Mc direction: 500mm or less
(*1) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.
See page 146 for moment load directions.
If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



For updated version, refer to page 184

Dimensions and Mass by Stroke

Stroke		50	[illegible]	150	[illegible]	250	300	350	400	450	500
L		[illegible]	[illegible]	420	[illegible]	520	570	620	670	720	770
A		[illegible]	[illegible]	[illegible]	443	493	543	593	643	693	743
B		[illegible]	[illegible]	[illegible]	376	426	476	526	576	626	676
F		[illegible]	206	56	106	56	106	56	106	56	106
[illegible]		[illegible]	0	1	1	2	2	3	3	4	4
[illegible]		4	4	8	8	10	10	12	12	14	14
[illegible]		–	–	206	256	306	356	406	456	506	556
M		1	1	2	2	2	2	2	2	2	2
Mass (kg)	W/o brake	3.2	3.5	3.7	4.0	4.2	4.5	4.7	4.9	5.2	5.4
	W/ brake	3.5	3.8	4.0	4.3	4.5	4.8	5.0	5.2	5.5	5.7

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-WSA12R

±10μm Standard | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 120* mm | 200v AC Servo Motor

■ Model Specification Items

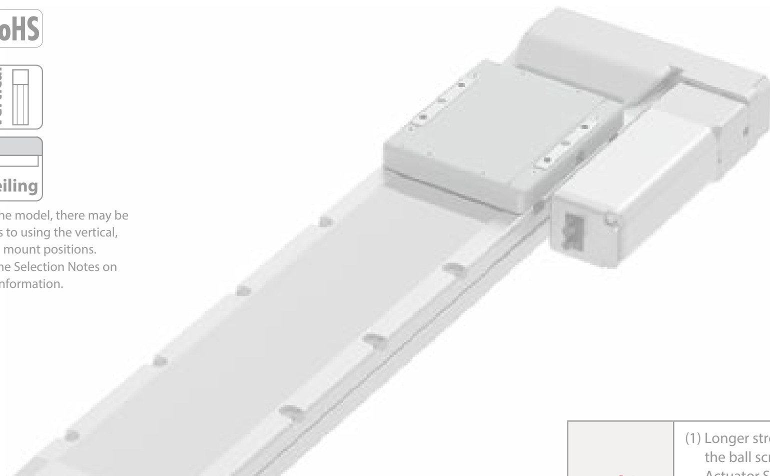
RCS4	—	WSA12R	—	WA	—	100	—		—		—	T2	—		—	
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		100: Servo motor 100W		30:30mm 20:20mm 12:12mm 6: 6mm 3: 3mm		50:50mm ~ 800:800mm (50mm increments)		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable		Refer to Options table below.

* Body width does not include the width of the side-mounted motor.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



For updated version, refer to page 188

Previous Version

POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.
(2) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(3) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.13[illegible] for more details.
(4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 14[illegible] for more information.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-WSA12R-WA-100-30-①-T2-②-③	100	30	[illegible]	[illegible]	57	50~800 (50mm increments)
RCS4-WSA12R-WA-100-20-①-T2-②-③		20	13	[illegible]	85	
RCS4-WSA12R-WA-100-12-①-T2-②-③		12	23	8	142	
RCS4-WSA12R-WA-100-6-①-T2-②-③		6	43	15	283	
RCS4-WSA12R-WA-100-3-①-T2-②-③		3	55	15	566	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed (Unit: mm/s)

Lead \ Stroke	50~500 (50mm increments)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
30	1600	1450	1260	1100	970	860	770
20	1200	970	840	740	650	580	520
12	720	535	465	405	355	315	285
6	360	265	230	200	175	155	140
3	180	130	115	100	85	75	70

① Stroke

① Stroke (mm)	RCS4-WSA12R	① Stroke (mm)	RCS4-WSA12R
50	○	**450**	○
100	○	**500**	○
150	○	**550**	○
200	○	**600**	○
250	○	**650**	○
300	○	**700**	○
350	○	**750**	○
400	○	**800**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m) **S**(3m) **M**(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m) **X11**(11m)~**X15**(15m) **X16**(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m) **R04**(4m) ~**R05**(5m) **R06**(6m) ~**R10**(10m) **R11**(11m)~**R15**(15m) **R16**(16m)~**R20**(20m)

③ Options

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Cable exit direction (Outside)	**CJO**	See P.131
Motor side-mounted to left (standard)	**ML**	See P.135
Motor side-mounted to right	**MR**	See P.135
Non-motor end specification	**NM**	See P.136
Slider roller specification	**SR**	See P.137

Actuator Specifications

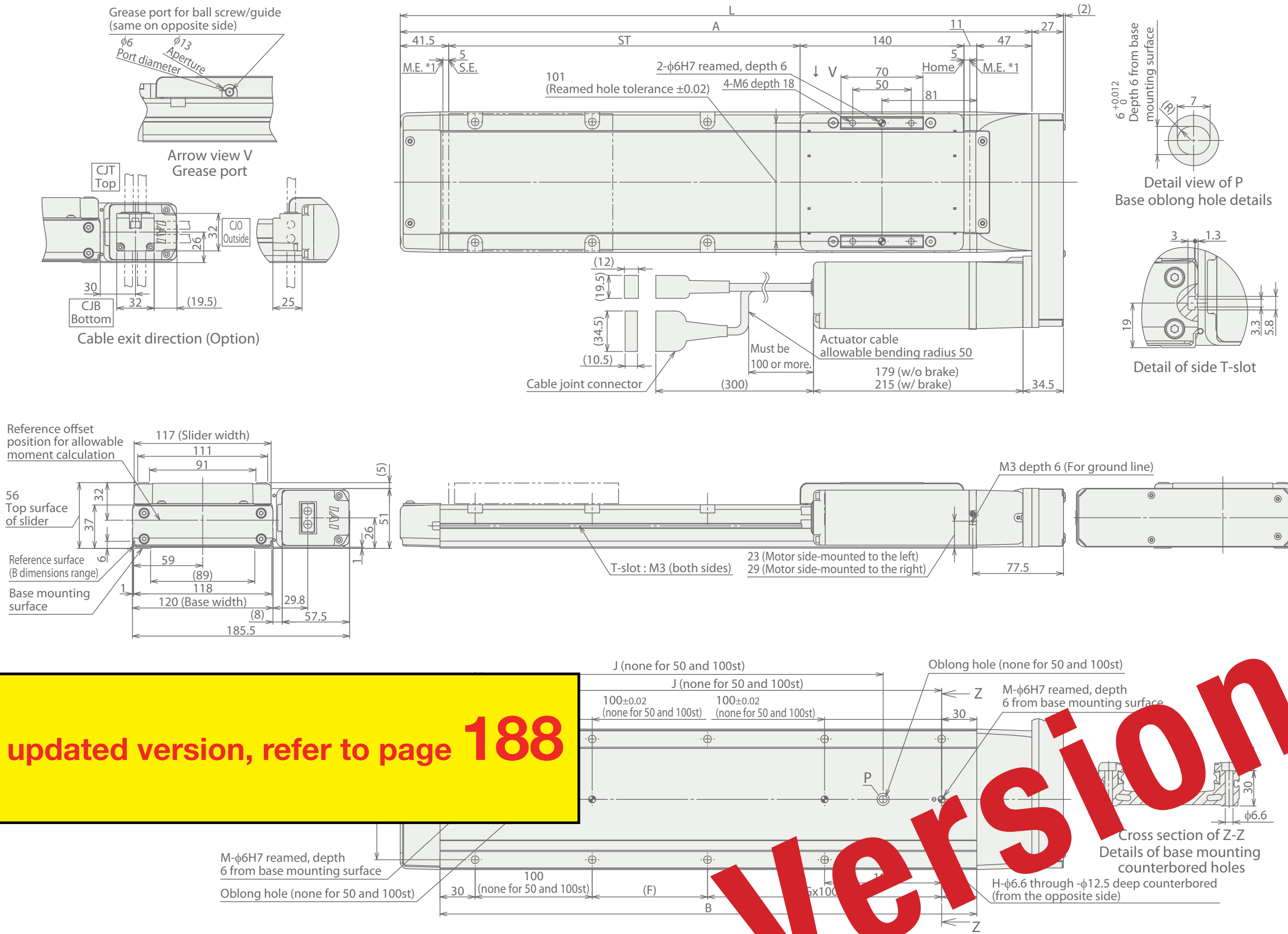
Item	Description
Drive system	Ball screw ϕ10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 311N·m, Mb direction 311N·m, Mc direction 827N·m
Allowable dynamic moment (*1)	Ma direction 87.5N·m, Mb direction 87.5N·m, Mc direction 233N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

* Reference for overhang load length: Ma direction: 450mm or less, Mb, Mc direction: 450mm or less
(*1) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.
See page 146 for moment load directions.
If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



For updated version, refer to page 188

Dimensions and Mass by Stroke

Stroke		50	100	150	[illegible]	250	300	350	400	450	500	550	600	650	700	750	800
L		[illegible]	[illegible]	416.5	[illegible]	516.5	566.5	616.5	666.5	716.5	766.5	816.5	866.5	916.5	966.5	1016.5	1066.5
A		[illegible]	[illegible]	[illegible]	439.5	489.5	539.5	589.5	639.5	689.5	739.5	789.5	839.5	889.5	939.5	989.5	1039.5
B		[illegible]	[illegible]	[illegible]	358.5	408.5	458.5	508.5	558.5	608.5	658.5	708.5	758.5	808.5	858.5	908.5	958.5
F		[illegible]	198.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5
[illegible]		[illegible]	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
[illegible]		4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20
[illegible]		–	–	198.5	248.5	298.5	348.5	398.5	448.5	498.5	548.5	598.5	648.5	698.5	748.5	798.5	848.5
M		1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mass (kg)	W/o brake	4.2	4.5	4.9	5.2	5.6	5.9	6.2	6.6	6.9	7.2	7.6	7.9	8.3	8.6	8.9	9.3
	W/ brake	4.5	4.8	5.2	5.5	5.9	6.2	6.5	6.9	7.2	7.5	7.9	8.2	8.6	8.9	9.2	9.6

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-WSA14R

±10μm Standard | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 140* mm | 200v AC Servo Motor

■ Model Specification Items

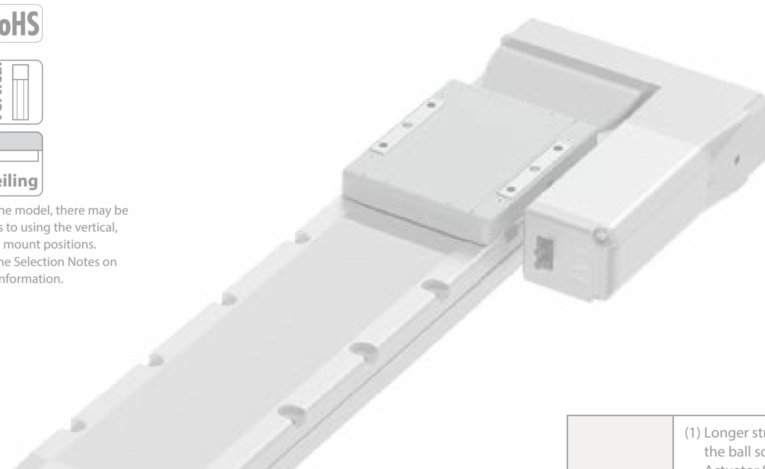
RCS4	—	WSA14R	—	WA	—	200	—	☐	—	☐	—	T2	—	☐	—	☐
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		200: Servo motor 200W		36:36mm 24:24mm 16:16mm 8: 8mm 4: 4mm		50:50mm ~ 800:800mm (50mm increments)		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X☐☐ : Specified Length R☐☐ : Robot Cable		Refer to Options table below.

* Body width does not include the width of the side-mounted motor.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



For updated version, refer to page 192

Previous Version

POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.
(2) Both the horizontal and vertical payloads assume operation at [illegible] of 0.3G.
(3) When the acceleration is increased, th[illegible]ayload w[illegible]ed. P[illegible]e refe[illegible] "Table of Payload by Acceleration" on P.1[illegible] for m[illegible] detai[illegible]
(4) Estimated allowable duty varies dependi[illegible]n ope[illegible]ng co[illegible]ions (payload, acceleration/deceleration, e[illegible]. P[illegible]e refe[illegible] P. 14[illegible] mo[illegible]nformation.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-WSA14R-WA-200-36-①-T2-②-③	200	36	[illegible]	[illegible]	95	50~800 (50mm increments)
RCS4-WSA14R-WA-200-24-①-T2-②-③		24	20	[illegible]	142	
RCS4-WSA14R-WA-200-16-①-T2-②-③		16	45	8	214	
RCS4-WSA14R-WA-[illegible]-①-[illegible]-②-③		8	65	10	427	
[illegible]WS[illegible]R-WA[illegible]0-4-[illegible]-T2-②-③		4	75	25	855	

[illegible] ① Strok[illegible] ② Cable Length ③ Option

■ Stroke and Max Speed

(Unit: mm/s)

Lead \ Stroke	50~550 (50mm increments)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
36	1710	1590	1400	1240	1110	990
24	1440	1060	930	830	740	665
16	960	690	610	550	490	440
8	480	350	305	270	240	215
4	240	170	150	135	120	105

① Stroke

① Stroke (mm)	RCS4-WSA14R	① Stroke (mm)	RCS4-WSA14R
50	○	450	○
100	○	500	○
150	○	550	○
200	○	600	○
250	○	650	○
300	○	700	○
350	○	750	○
400	○	800	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options

Name	Option Code	Reference Page
Brake	B	See P.131
Cable exit direction (Top)	CJT	See P.131
Cable exit direction (Bottom)	CJB	See P.131
Cable exit direction (Outside)	CJO	See P.131
Motor side-mounted to left (standard)	ML	See P.135
Motor side-mounted to right	MR	See P.135
Non-motor end specification	NM	See P.136
Slider roller specification	SR	See P.137
Slider spacer	SS	See P.137

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 462N·m, Mb direction 462N·m, Mc direction 1170N·m
Allowable dynamic moment (*1)	Ma direction 122N·m, Mb direction 122N·m, Mc direction 308N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

* Reference for overhang load length: Ma direction: 550mm or less, Mb, Mc direction: 550mm or less
(*1) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.
See page 146 for moment load directions.
If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.

CAD drawings can be downloaded from our website.
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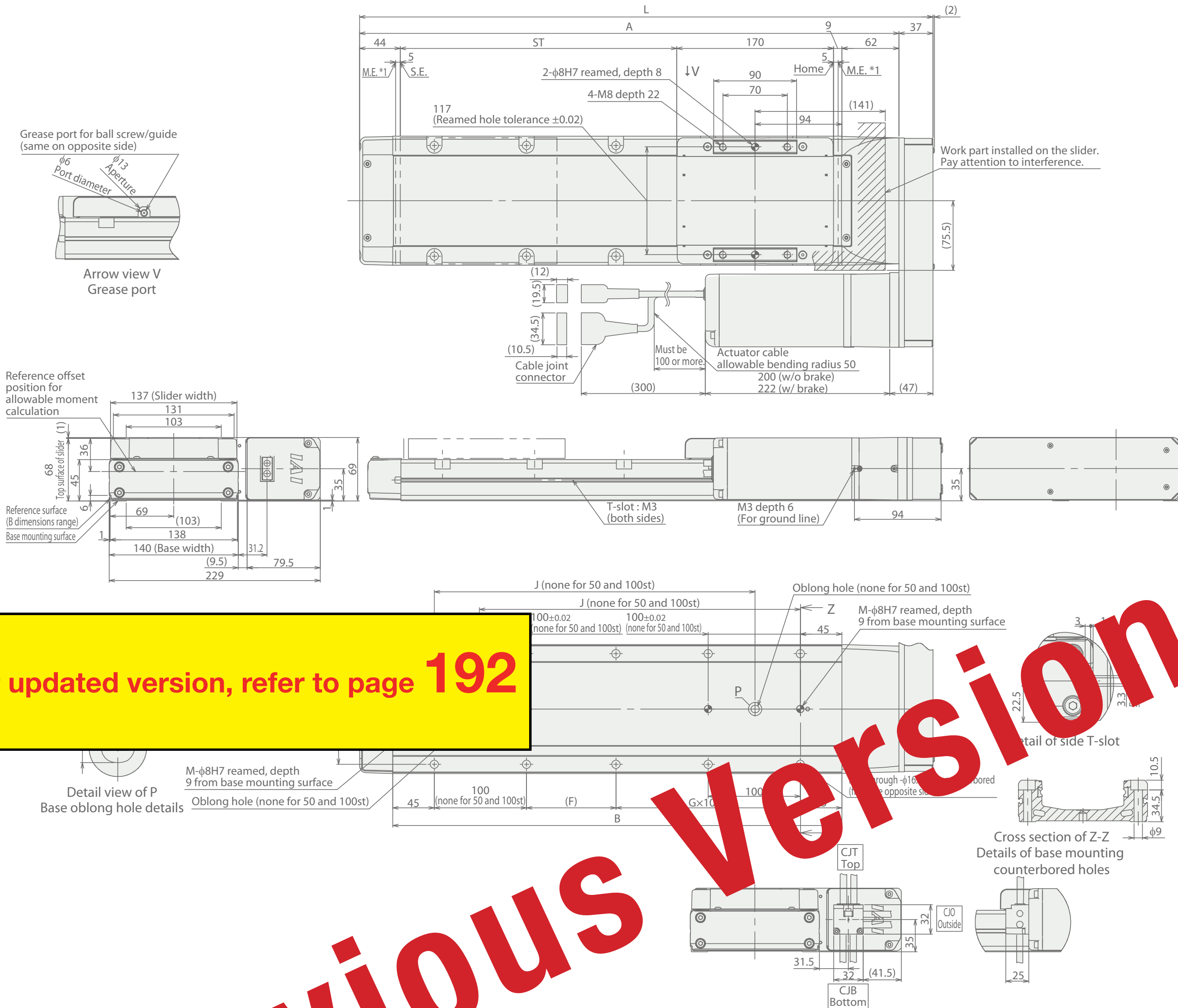
2D CAD 3D CAD

*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



For updated version, refer to page 192

Dimensions and Mass by Stroke

Stroke		50	[illegible]	[illegible]	[illegible]	250	300	350	400	450	500	550	600	650	700	750	800
L		[illegible]	[illegible]	[illegible]	[illegible]	572	622	672	722	772	822	872	922	972	1022	1072	1122
[illegible]		[illegible]	[illegible]	[illegible]	485	535	585	635	685	735	785	835	885	935	985	1035	1085
[illegible]		[illegible]	287	[illegible]	387	437	487	537	587	637	687	737	787	837	887	937	987
[illegible]		[illegible]	197	[illegible]	97	47	97	47	97	47	97	47	97	47	97	47	97
[illegible]		0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
[illegible]		4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20
J		–	–	198	248	298	348	398	448	498	548	598	648	698	748	798	848
M		1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mass (kg)	W/o brake	7.4	7.9	8.4	8.9	9.4	9.9	10.3	10.8	11.3	11.8	12.3	12.8	13.3	13.8	14.2	14.7
	W/ brake	8.0	8.5	9.0	9.5	10.0	10.5	10.9	11.4	11.9	12.4	12.9	13.4	13.9	14.4	14.8	15.3

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●	Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-WSA16R

±10μm Standard | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 160* mm | 200v AC Servo Motor

■ Model Specification Items

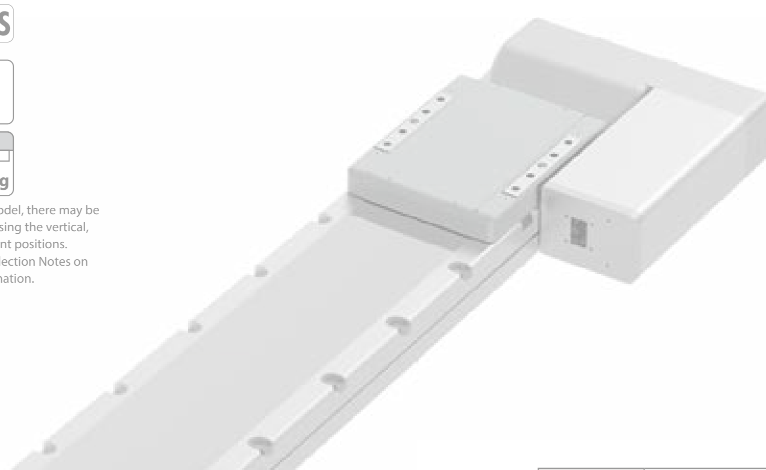
RCS4	—	WSA16R	—	WA	—	400	—	☐	—	☐	—	T2	—	☐	—	☐
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		400: Servo motor 400W		30:30mm 20:20mm 10:10mm 5: 5mm		50:50mm ≀ 1100:1100mm (50mm increments)		T2:SCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X☐☐ : Specified Length R☐☐ : Robot Cable		Refer to Options table below.

* Body width does not include the width of the side-mounted motor.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



For updated version, refer to page 196

Previous Version

POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due t[illegible]e of the ball screw. Be sure to check the maximum speed of the desi[illegible]troke [illegible]he Actuator Specifications table, which c[illegible]e found [illegible]
(2) Both the horizontal and vertical payloads assume [illegible]eratio[illegible] an a[illegible]eratio[illegible] of 0.3G.
(3) When the acceleration is inc[illegible]he pa[illegible]d wi[illegible]redu[illegible]. Please refer to "Table of Payload by Accele[illegible]on" on P.139 [illegible]more [illegible]
(4) Estimated allow[illegible]ty va[illegible]ng o[illegible]erating conditions (payload, acceleration/dec[illegible]tion, etc.). Please [illegible]er to P. 149 for more information.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-WSA16R-WA-400-30-①-T2-②-③		[illegible]	30	12	226	50~1100 (50mm increments)
RCS4-WSA16R-WA-400-20-①-T2-②-③		[illegible]	[illegible]	[illegible]	339	
RCS4-WSA16R-WA-4[illegible]-①-T[illegible]		10	80	35	678	
[illegible]WSA[illegible]WA-4[illegible]-①-[illegible]2-②-③		5	100	50	1357	

[illegible] ① Strok[illegible] ② Cable Length ③ Option

■ [illegible]e and Max Speed

(Unit: mm/s)

Lead \ Stroke	50~550 (50mm increments)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)	850 (mm)	900 (mm)	950 (mm)	1000 (mm)	1050 (mm)	1100 (mm)
30	1800	1680	1480	1320	1180	1060	960	870	790	730	670	620
20	1200	1120	990	880	780	715	645	590	535	490	450	415
10	600	560	490	440	395	355	320	290	265	240	225	205
5	300	280	240	220	195	175	160	145	130	120	110	100

① Stroke

① Stroke (mm)	RCS4-WSA16R	① Stroke (mm)	RCS4-WSA16R
50	○	600	○
100	○	650	○
150	○	700	○
200	○	750	○
250	○	800	○
300	○	850	○
350	○	900	○
400	○	950	○
450	○	1000	○
500	○	1050	○
550	○	1100	○

② Cable Length

Type	Cable Code
Standard	**P**(1m) **S**(3m) **M**(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m) **X11**(11m)~**X15**(15m) **X16**(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m) **R04**(4m) ~**R05**(5m) **R06**(6m) ~**R10**(10m) **R11**(11m)~**R15**(15m) **R16**(16m)~**R20**(20m)

③ Options

Name	Option Code	Reference Page
Brake	B	See P.131
Cable exit direction (Top)	CJT	See P.131
Cable exit direction (Bottom)	CJB	See P.131
Cable exit direction (Outside)	CJO	See P.131
Motor side-mounted to left (standard)	ML	See P.135
Motor side-mounted to right	MR	See P.135
Non-motor end specification	NM	See P.136
Slider roller specification	SR	See P.137

Actuator Specifications

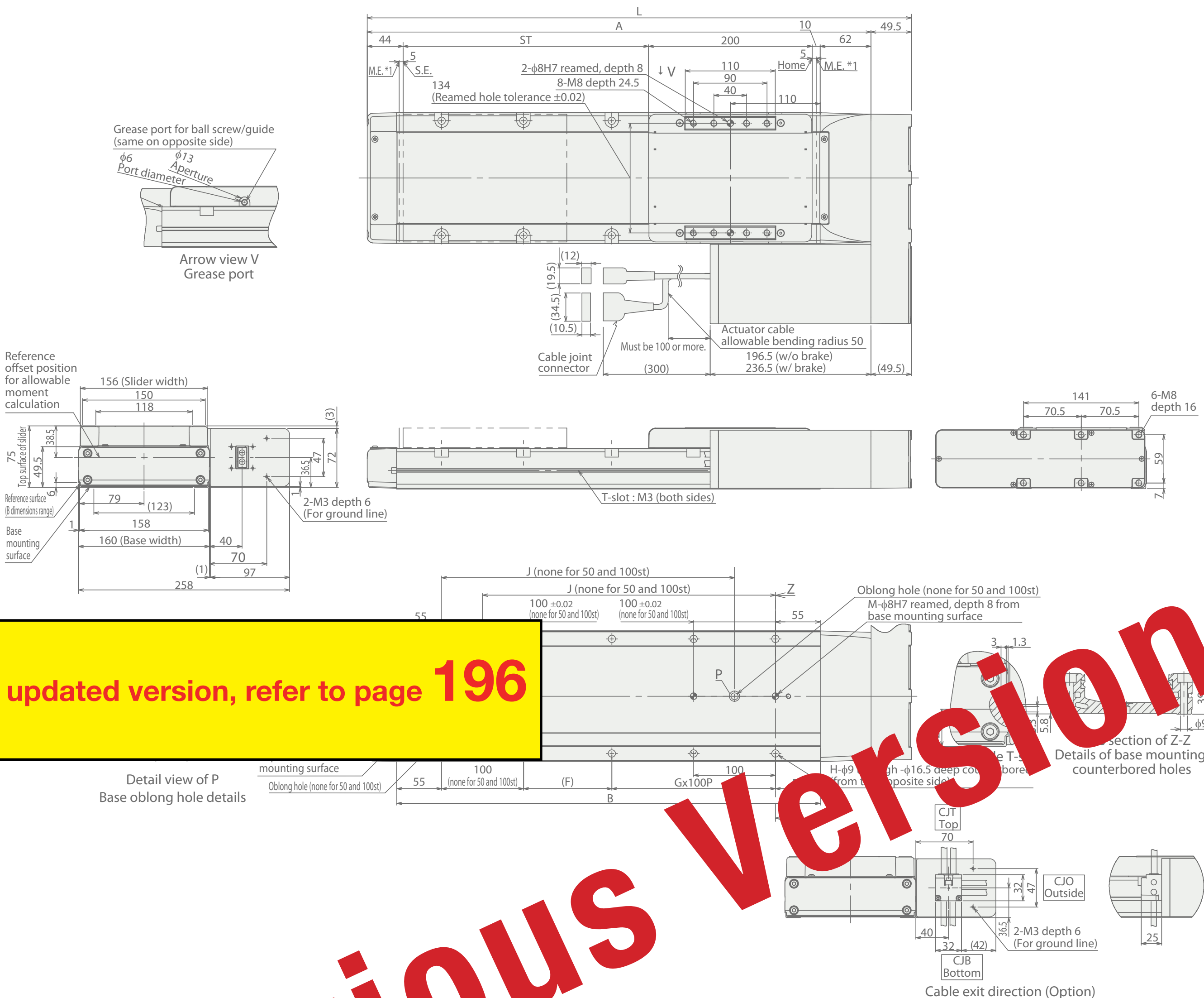
Item	Description
Drive system	Ball screw ϕ16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 642N·m, Mb direction 642N·m, Mc direction 1610N·m
Allowable dynamic moment (*1)	Ma direction 161N·m, Mb direction 161N·m, Mc direction 404N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

* Reference for overhang load length: Ma direction: 650mm or less, Mb, Mc direction: 650mm or less
(*1) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.
See page 146 for moment load directions.
If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



For updated version, refer to page 196

Dimensions and Mass by Stroke

Stroke		50	[illegible]	[illegible]	[illegible]	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
L		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	665.5	715.5	765.5	815.5	865.5	915.5	965.5	1015.5	1065.5	1115.5	1165.5	1215.5	1265.5	1315.5	1365.5	1415.5	1465.5
A		[illegible]	[illegible]	[illegible]	516	566	616	666	716	766	816	866	916	966	1016	1066	1116	1166	1216	1266	1316	1366	1416
B		[illegible]	[illegible]	[illegible]	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318
F		[illegible]	208	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108
[illegible]		[illegible]	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
[illegible]		4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
[illegible]		–	–	208	258	308	358	408	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158
M		1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mass (kg)	W/o brake	10.6	11.2	11.8	12.4	13.0	13.6	14.2	14.9	15.5	16.1	16.7	17.3	17.9	18.5	19.1	19.8	20.4	21.0	21.6	22.2	22.8	23.4
	W/ brake	11.2	11.8	12.4	13.0	13.6	14.2	14.8	15.5	16.1	16.7	17.3	17.9	18.5	19.1	19.7	20.4	21.0	21.6	22.2	22.8	23.4	24.0

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
SCON-CB/CGB		1	Single phase 200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SSEL-CS		2	Single phase 100V/200VAC	●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-RA4C

Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 40 mm | 200v AC Servo Motor

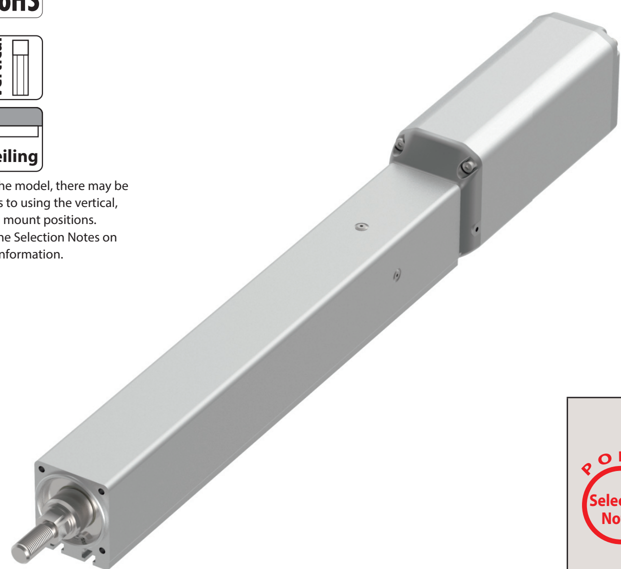
■ Model Specification Items

RCS4	—	RA4C	—	WA	—	60	—	☐	—	☐	—	T2	—	☐	—	☐
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		60: Servo motor 60W		16: 16mm 10: 10mm 5: 5mm 2.5:2.5mm		50:50mm ~ 200:200mm (50mm increments)		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/S		N : None P : 1m S : 3m M: 5m X☐☐ : Specified Length R☐☐ : Robot Cable		Refer to Options table below.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



POINT Selection Notes

(1) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(2) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(4) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-RA4C-WA-60-16-①-T2-②-③	60	16	8	2	53	50~200 (50mm increments)
RCS4-RA4C-WA-60-10-①-T2-②-③		10	18	4	85	
RCS4-RA4C-WA-60-5-①-T2-②-③		5	30	6	170	
RCS4-RA4C-WA-60-2.5-①-T2-②-③		2.5	40	10	340	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed (Unit: mm/s)

Lead \ Stroke	50~200 (50mm increments)
16	800
10	500
5	250
2.5	125

① Stroke

① Stroke (mm)	RCS4-RA4C	① Stroke (mm)	RCS4-RA4C
50	○	**150**	○
100	○	**200**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options

* Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Flange	**FL**	See P.132
Foot bracket	**FT**	See P.133
Tip adapter (Internal thread)	**NFA**	See P.135
Non-motor end specification	**NM**	See P.136
T-slot nut bar	**NTB**	See P.136

Actuator Specifications

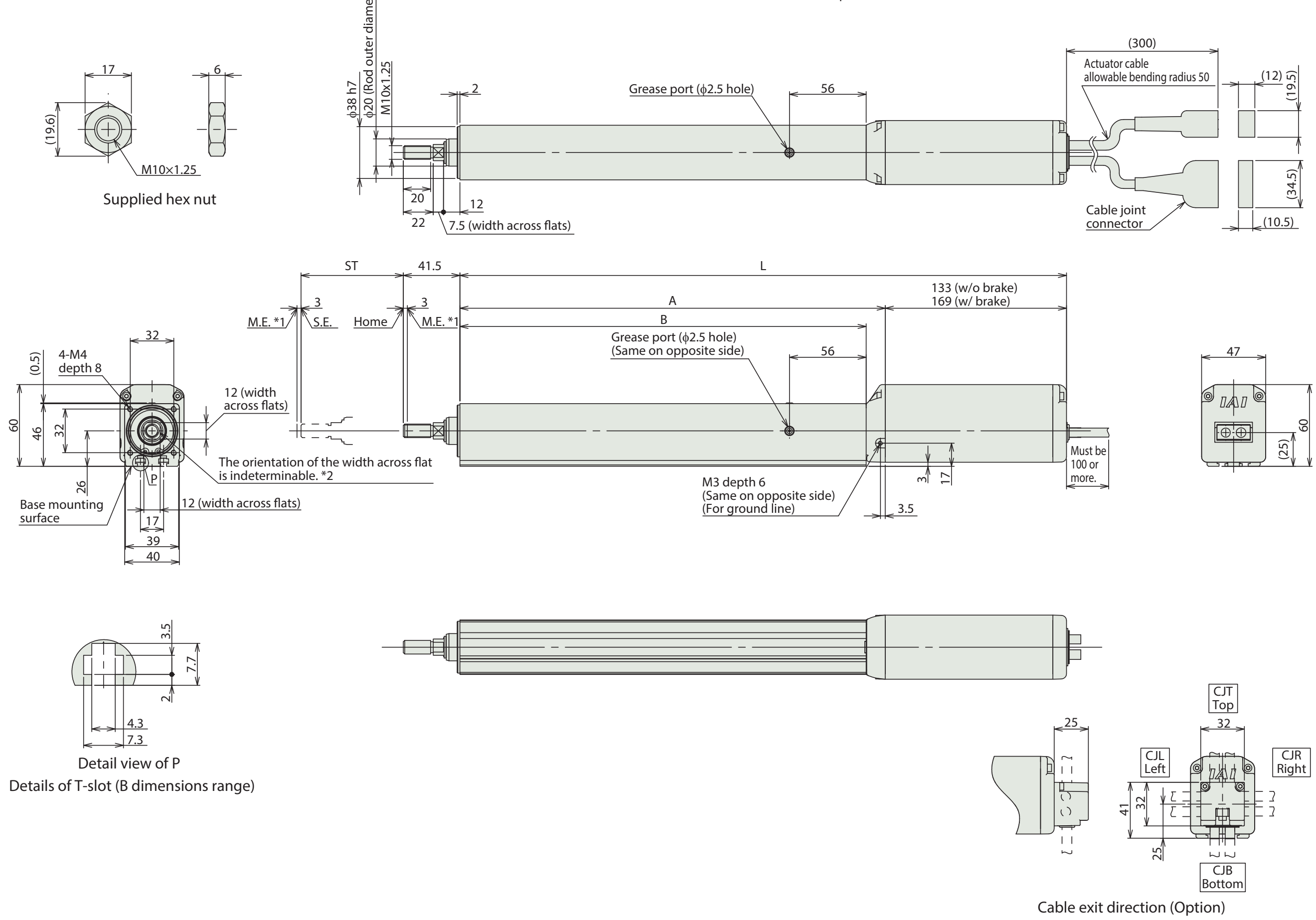
Item	Description
Drive system	Ball screw ϕ8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ20mm Material: Aluminum with hard alumite treatment
Allowable static torque on rod tip	1.0N·m
Max. angular displacement on rod tip (*1)	±1.0 deg.
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*1) This is the displacement angle of the rod tip (initial reference value) when the rod tip is fully retracted and the allowable static torque is applied at the rod tip.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flat varies depending on the product. Those flats cannot be used for vertical or horizontal reference plane.



Dimensions and Mass by Stroke

Stroke		50	100	150	200
L	W/o brake	295	345	395	445
	W/ brake	331	381	431	481
A		162	212	262	312
B		148	198	248	298
Mass (kg)	W/o brake	1.5	1.7	1.9	2.0
	W/ brake	1.7	1.9	2.1	2.2

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-RA6C

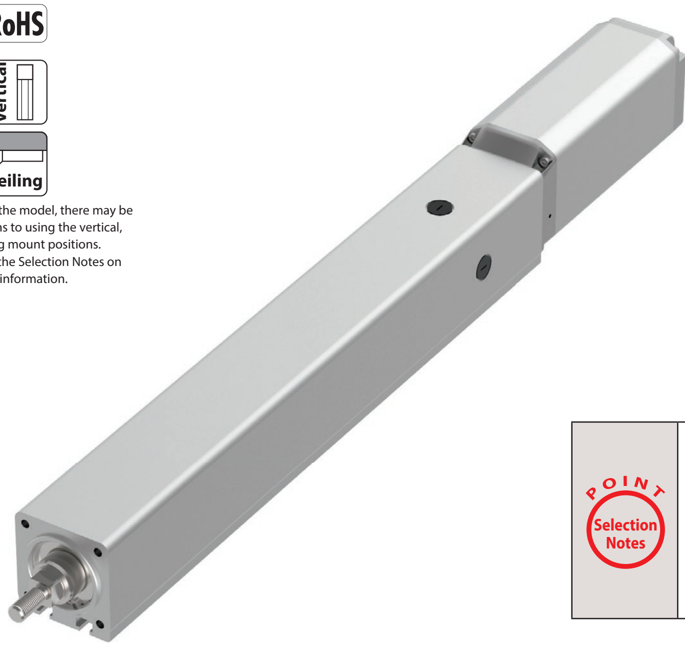
Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 60 mm | 200v AC Servo Motor

■ Model Specification Items

RCS4	RA6C	WA	100			T2		
Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
		WA: Battery-less Absolute	100: Servo motor 100W	20:20mm 12:12mm 6: 6mm 3: 3mm	50:50mm ~ 300:300mm (50mm increments)	T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Refer to Options table below.

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



POINT Selection Notes

(1) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(2) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(4) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-RA6C-WA-100-20-①-T2-②-③	100	20	15	4	85	50~300 (50mm increments)
RCS4-RA6C-WA-100-12-①-T2-②-③		12	25	10	142	
RCS4-RA6C-WA-100-6-①-T2-②-③		6	50	20	283	
RCS4-RA6C-WA-100-3-①-T2-②-③		3	60	20	566	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed (Unit: mm/s)

Lead \ Stroke	50~300 (50mm increments)
20	1000
12	600
6	300
3	150

① Stroke

① Stroke (mm)	RCS4-RA6C	① Stroke (mm)	RCS4-RA6C
50	○	200	○
100	○	250	○
150	○	300	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options

* Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Flange	**FL**	See P.132
Foot bracket	**FT**	See P.133
Tip adapter (Internal thread)	**NFA**	See P.135
Non-motor end specification	**NM**	See P.136
T-slot nut bar	**NTB**	See P.136

Actuator Specifications

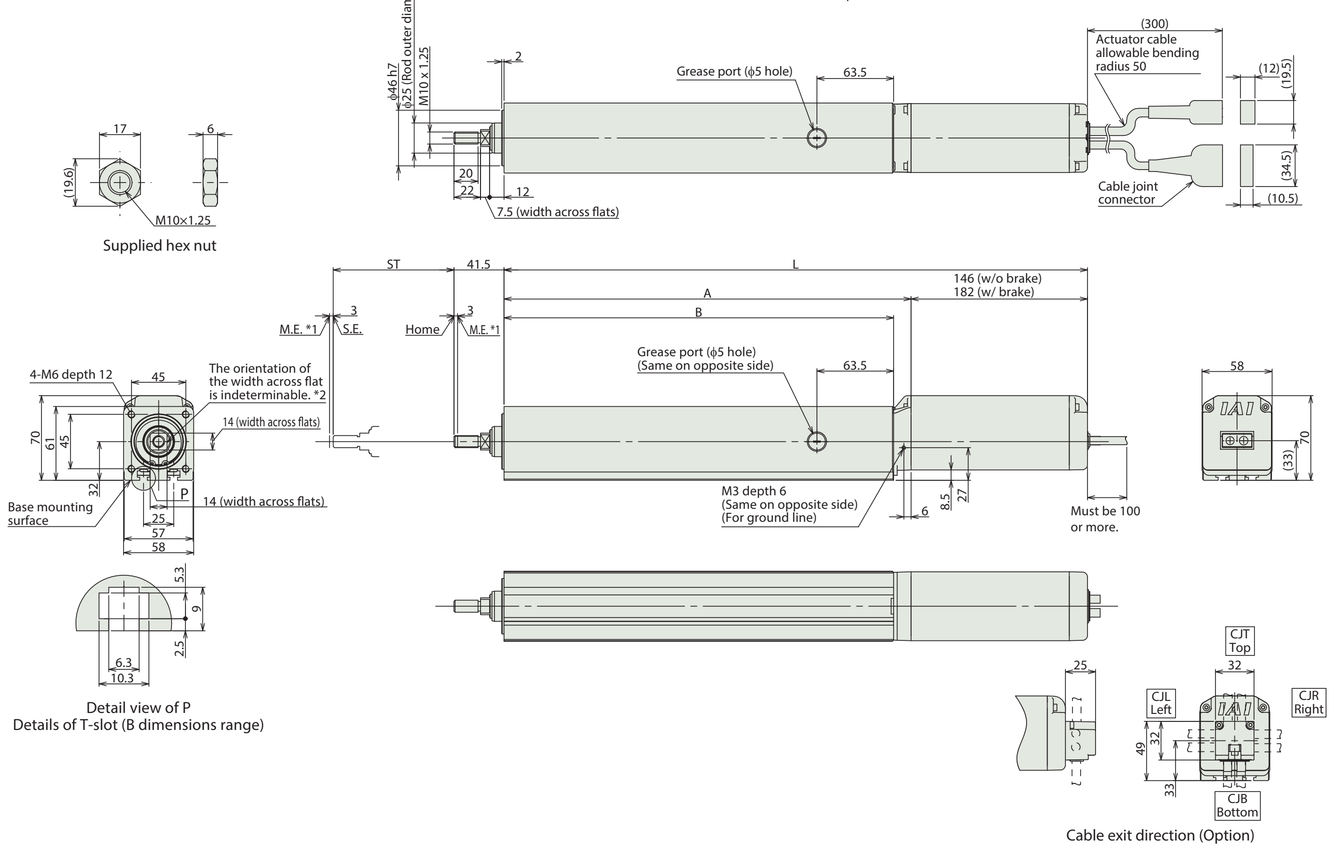
Item	Description
Drive system	Ball screw ϕ10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ25mm Material: Aluminum with hard alumite treatment
Allowable static torque on rod tip	1.5N·m
Max. angular displacement on rod tip (*1)	±1.0 deg.
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*1) This is the displacement angle of the rod tip (initial reference value) when the rod tip is fully retracted and the allowable static torque is applied at the rod tip.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flat varies depending on the product. Those flats cannot be used for vertical or horizontal reference plane.



■ Dimensions and Mass by Stroke

Stroke		50	100	150	200	250	300
L	W/o brake	333	383	433	483	533	583
	W/ brake	369	419	469	519	569	619
A		187	237	287	337	387	437
B		172.5	222.5	272.5	322.5	372.5	422.5
Mass (kg)	W/o brake	2.6	3.0	3.4	3.8	4.1	4.5
	W/ brake	2.9	3.3	3.7	4.1	4.4	4.8

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-RA7C

Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 70 mm | 200v AC Servo Motor

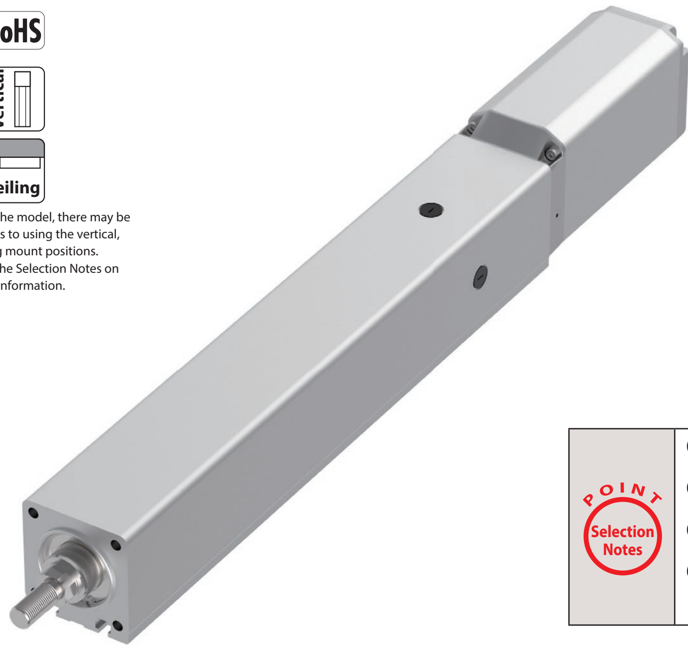
■ Model Specification Items

RCS4	—	RA7C	—	WA	—	200	—	☐	—	☐	—	T2	—	☐	—	☐
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		200: Servo motor 200W		24:24mm 16:16mm 8: 8mm 4: 4mm		50:50mm ≀ 300:300mm (50mm increments)		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X☐☐ : Specified Length R☐☐ : Robot Cable		Refer to Options table below.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



POINT Selection Notes

(1) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(2) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(4) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS4-RA7C-WA-200-24-①-T2-②-③	200	24	20	6	142	50~300 (50mm increments)
RCS4-RA7C-WA-200-16-①-T2-②-③		16	45	12	214	
RCS4-RA7C-WA-200-8-①-T2-②-③		8	60	25	427	
RCS4-RA7C-WA-200-4-①-T2-②-③		4	80	35	855	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed (Unit: mm/s)

Lead \ Stroke	50~300 (50mm increments)
24	1200
16	800
8	400
4	200

① Stroke

① Stroke (mm)	RCS4-RA7C	① Stroke (mm)	RCS4-RA7C
50	○	**200**	○
100	○	**250**	○
150	○	**300**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options

* Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Flange	**FL**	See P.132
Foot bracket	**FT**	See P.133
Tip adapter (Internal thread)	**NFA**	See P.135
Non-motor end specification	**NM**	See P.136
T-slot nut bar	**NTB**	See P.136

Actuator Specifications

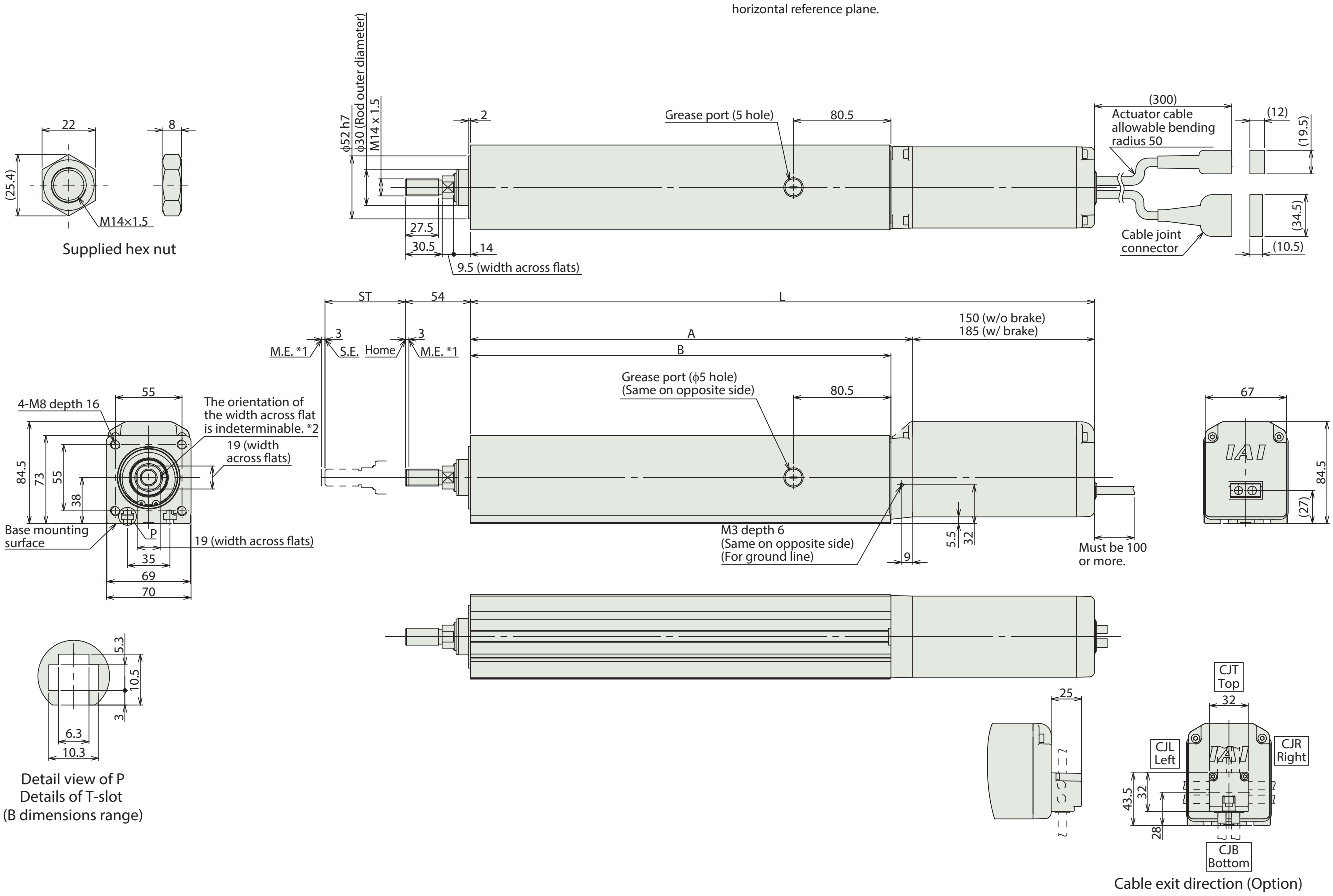
Item	Description
Drive system	Ball screw ϕ12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ30mm Material: Aluminum with hard alumite treatment
Allowable static torque on rod tip	2.5N·m
Max. angular displacement on rod tip (*1)	±0.8 deg.
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*1) This is the displacement angle of the rod tip (initial reference value) when the rod tip is fully retracted and the allowable static torque is applied at the rod tip.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD
3D CAD

*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flat varies depending on the product. Those flats cannot be used for vertical or horizontal reference plane.



■ Dimensions and Mass by Stroke

Stroke		50	100	150	200	250	300
L	W/o brake	365.5	415.5	465.5	515.5	565.5	615.5
	W/ brake	400.5	450.5	500.5	550.5	600.5	650.5
A		215.5	265.5	315.5	365.5	415.5	465.5
B		197.5	247.5	297.5	347.5	397.5	447.5
Mass (kg)	W/o brake	4.6	5.2	5.7	6.3	6.9	7.5
	W/ brake	5.1	5.7	6.2	6.8	7.4	8.0

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET. Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-RA8C

Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 90 mm | 200v AC Servo Motor

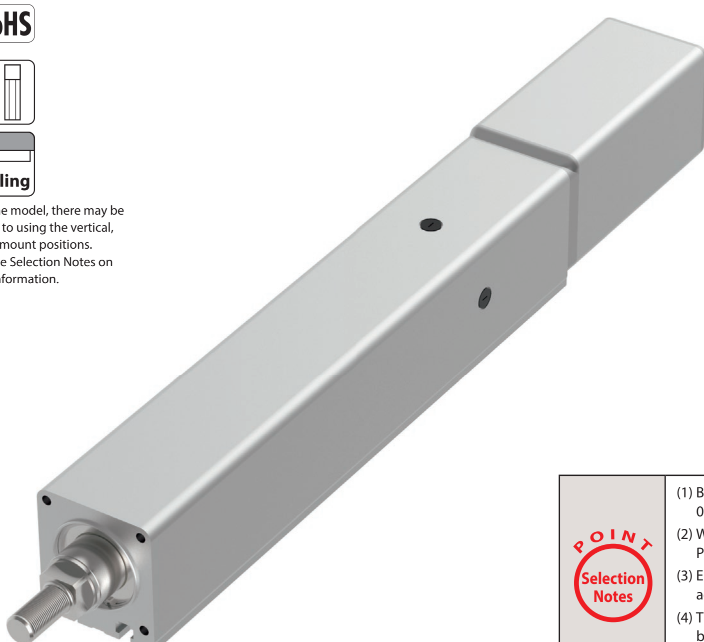
■ Model Specification Items

RCS4	—	RA8C	—	WA	—	400	—	☐	—	☐	—	T2	—	☐	—	☐
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		400: Servo motor 400W		20:20mm 10:10mm 5: 5mm		50:50mm ~ 300:300mm (50mm increments)		T2:SCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X☐☐ : Specified Length R☐☐ : Robot Cable		Refer to Options table below.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



POINT Selection Notes

(1) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G. (0.2G for vertical lead 5).
(2) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(4) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-RA8C-WA-400-20-①-T2-②-③	400	20	60	20	339	50~300 (50mm increments)
RCS4-RA8C-WA-400-10-①-T2-②-③		10	80	40	678	
RCS4-RA8C-WA-400-5-①-T2-②-③		5	100	72	1357	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed (Unit: mm/s)

Lead \ Stroke	50~300 (50mm increments)
20	1000
10	500
5	250

① Stroke

① Stroke (mm)	RCS4-RA8C	① Stroke (mm)	RCS4-RA8C
50	○	200	○
100	○	250	○
150	○	300	○

② Cable Length

Type	Cable Code
Standard	**P**(1m) **S**(3m) **M**(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m) **X11**(11m)~**X15**(15m) **X16**(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m) **R04**(4m) ~**R05**(5m) **R06**(6m) ~**R10**(10m) **R11**(11m)~**R15**(15m) **R16**(16m)~**R20**(20m)

③ Options

* Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Flange	**FL**	See P.132
Foot bracket	**FT**	See P.133
Tip adapter (Internal thread)	**NFA**	See P.135
Non-motor end specification	**NM**	See P.136
T-slot nut bar	**NTB**	See P.136

Actuator Specifications

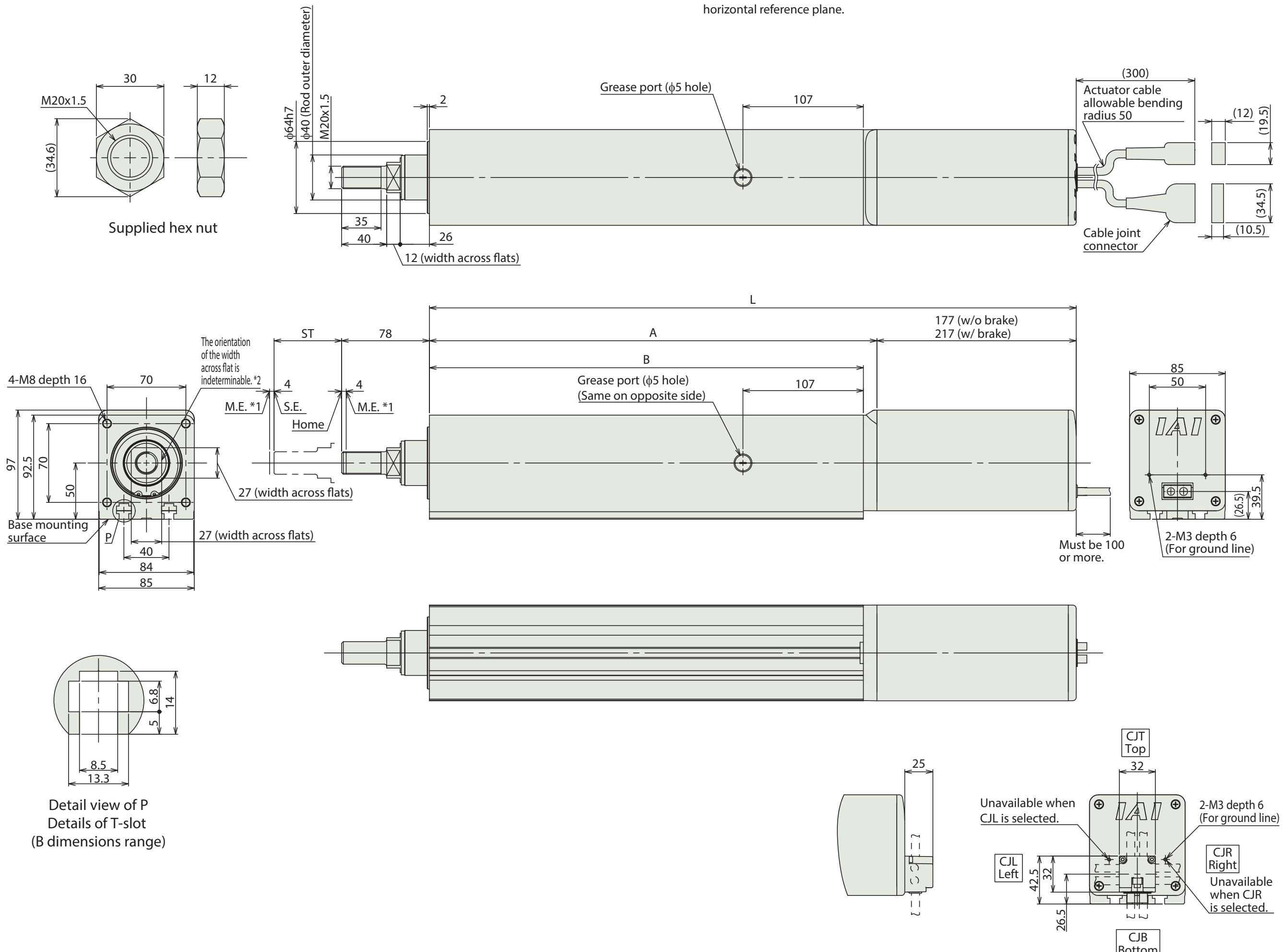
Item	Description
Drive system	Ball screw ϕ16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ40mm Material: Aluminum with hard alumite treatment
Allowable static torque on rod tip	5.0N·m
Max. angular displacement on rod tip (*1)	±0.8 deg.
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*1) This is the displacement angle of the rod tip (initial reference value) when the rod tip is fully retracted and the allowable static torque is applied at the rod tip.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD
3D CAD

*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flat varies depending on the product. Those flats cannot be used for vertical or horizontal reference plane.



■ Dimensions and Mass by Stroke

Stroke		50	100	150	200	250	300
L	W/o brake	424.5	474.5	524.5	574.5	624.5	674.5
	W/ brake	464.5	514.5	564.5	614.5	664.5	714.5
A		247.5	297.5	347.5	397.5	447.5	497.5
B		235.5	285.5	335.5	385.5	435.5	485.5
Mass (kg)	W/o brake	8.3	9.2	10.0	10.8	11.7	12.5
	W/ brake	8.9	9.8	10.6	11.4	12.3	13.1

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET. Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SSEL-CS		2	Single phase 100V/200VAC	●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-RA4R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 40* mm | 200v AC Servo Motor

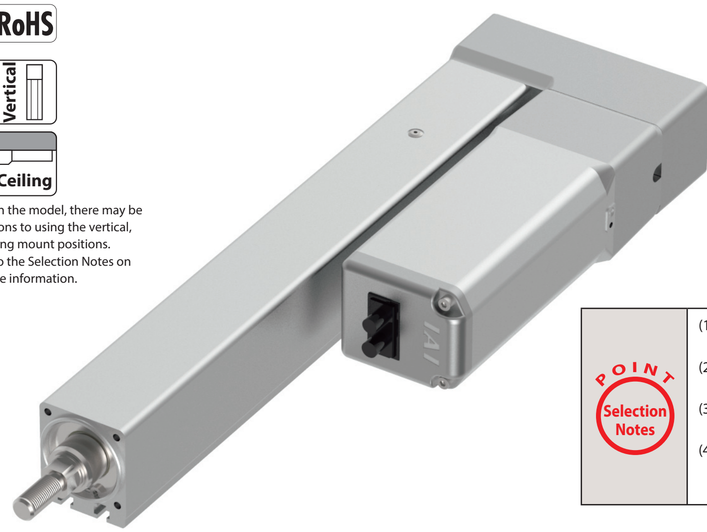
■ Model Specification Items

RCS4	– RA4R	– WA	– 60	– □	– □	– T2	– □	– □
Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
		WA: Battery-less Absolute	60: Servo motor 60W	16: 16mm 10: 10mm 5: 5mm 2.5:2.5mm	50:50mm ≀ 200:200mm (50mm increments)	T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Refer to Options table below.

* Body width does not include the width of the side-mounted motor.

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



POINT Selection Notes

(1) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(2) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(4) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-RA4R-WA-60-16-①-T2-②-③	60	16	8	2	53	50~200 (50mm increments)
RCS4-RA4R-WA-60-10-①-T2-②-③		10	18	4	85	
RCS4-RA4R-WA-60-5-①-T2-②-③		5	30	6	170	
RCS4-RA4R-WA60-2.5-①-T2-②-③		2.5	40	10	340	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed (Unit: mm/s)

Lead \ Stroke	50~200 (50mm increments)
16	800
10	500
5	250
2.5	125

① Stroke

① Stroke (mm)	RCS4-RA4R	① Stroke (mm)	RCS4-RA4R
50	○	**150**	○
100	○	**200**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options

* Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Cable exit direction (Outside)	**CJO**	See P.131
Flange	**FL**	See P.132
Foot bracket	**FT**	See P.133
Motor side-mounted to left (standard)	**ML**	See P.135
Motor side-mounted to right	**MR**	See P.135
Tip adapter (Internal thread)	**NFA**	See P.135
Non-motor end specification	**NM**	See P.136
T-slot nut bar specification	**NTB**	See P.136
Back mounting plate	**RP**	See P.137

* Be sure to confirm with the "Selection Notes (P.138)" when selecting options.

Actuator Specifications

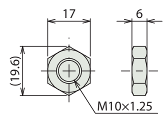
Item	Description
Drive system	Ball screw ϕ8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ20mm Material: Aluminum with hard alumite treatment
Allowable static torque on rod tip	1.0N·m
Max. angular displacement on rod tip (*1)	±1.0 deg.
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*1) This is the displacement angle of the rod tip (initial reference value) when the rod tip is fully retracted and the allowable static torque is applied at the rod tip.

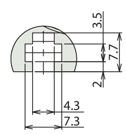
Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD
3D CAD

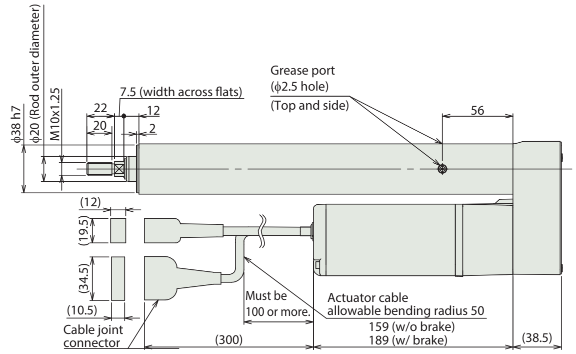
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flat varies depending on the product. Those flats cannot be used for vertical or horizontal reference plane.

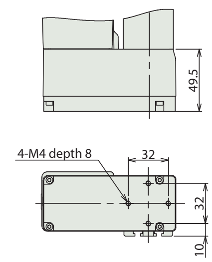


Supplied hex nut

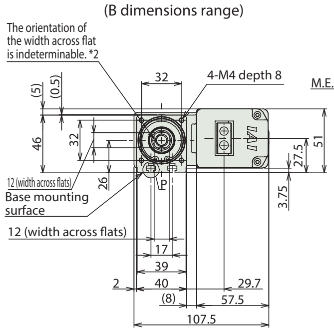


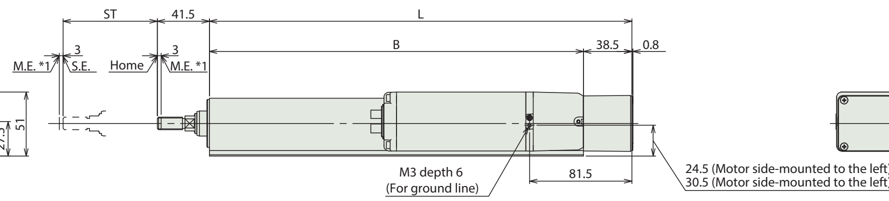
Detail view of P
Details of T-slot
(B dimensions range)

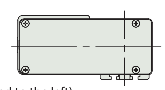


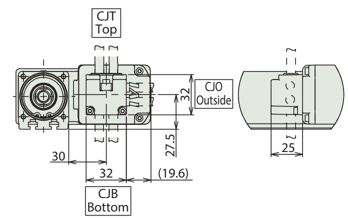


Back mounting plate (optional)









Cable exit direction (Option)

■ Dimensions and Mass by Stroke

Stroke		50	100	150	200
L		186.5	236.5	286.5	336.5
B		148	198	248	298
Mass (kg)	W/o brake	1.8	2.0	2.1	2.3
	W/ brake	2.0	2.2	2.3	2.5

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-RA6R

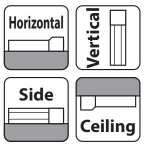
Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 60* mm | 200V AC Servo Motor

■ Model Specification Items

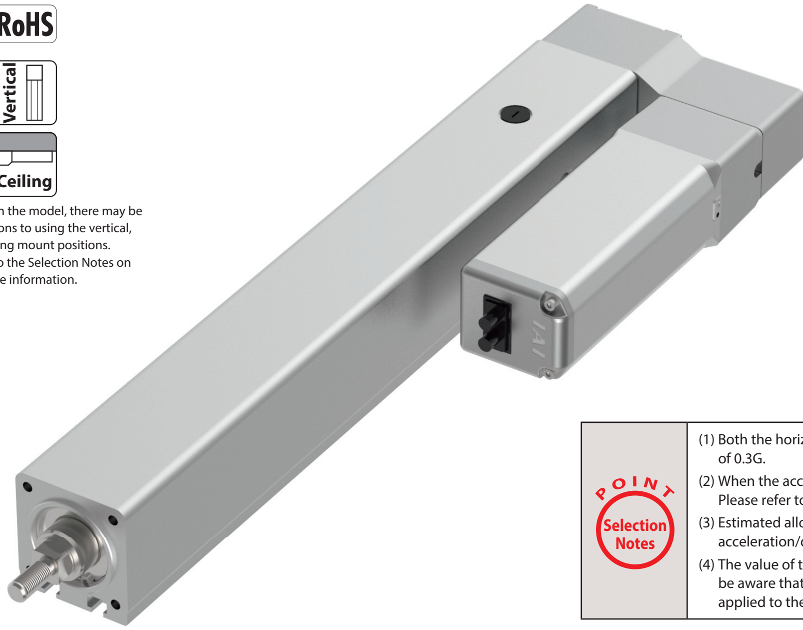
RCS4	—	RA6R	—	WA	—	100	—	☐	—	☐	—	T2	—	☐	—	☐
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		100: Servo motor 100W		20:20mm 12:12mm 6: 6mm 3: 3mm		50:50mm ~ 300:300mm (50mm increments)		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X☐☐ : Specified Length R☐☐ : Robot Cable		Refer to Options table below.

* Body width does not include the width of the side-mounted motor.

CE RoHS



* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



POINT Selection Notes

(1) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(2) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(4) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-RA6R-WA-100-20-①-T2-②-③	100	20	15	4	85	50~300 (50mm increments)
RCS4-RA6R-WA-100-12-①-T2-②-③		12	25	9	142	
RCS4-RA6R-WA-100-6-①-T2-②-③		6	50	19	283	
RCS4-RA6R-WA-100-3-①-T2-②-③		3	60	20	566	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed (Unit: mm/s)

Lead \ Stroke	50~300 (50mm increments)
20	1000
12	600
6	300
3	150

① Stroke

① Stroke (mm)	RCS4-RA6R	① Stroke (mm)	RCS4-RA6R
50	○	**200**	○
100	○	**250**	○
150	○	**300**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options * Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Cable exit direction (Outside)	**CJO**	See P.131
Flange	**FL**	See P.132
Foot bracket	**FT**	See P.133
Motor side-mounted to left (standard)	**ML**	See P.135
Motor side-mounted to right	**MR**	See P.135
Tip adapter (Internal thread)	**NFA**	See P.135
Non-motor end specification	**NM**	See P.136
T-slot nut bar specification	**NTB**	See P.136

* Be sure to confirm with the "Selection Notes (P.138)" when selecting options.

Actuator Specifications

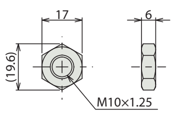
Item	Description
Drive system	Ball screw ϕ10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ25mm Material: Aluminum with hard alumite treatment
Allowable static torque on rod tip	1.5N·m
Max. angular displacement on rod tip (*1)	±1.0 deg.
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*1) This is the displacement angle of the rod tip (initial reference value) when the rod tip is fully retracted and the allowable static torque is applied at the rod tip.

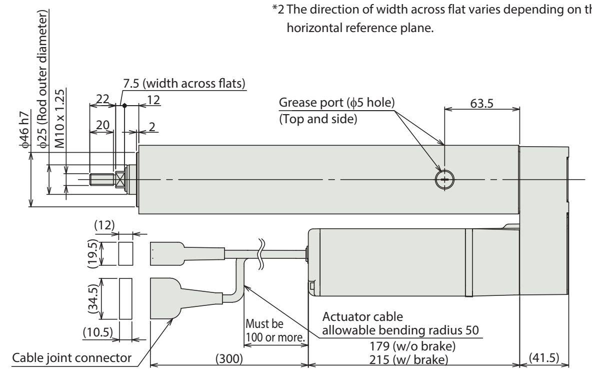
Dimensions

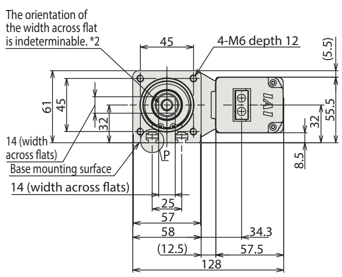
CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

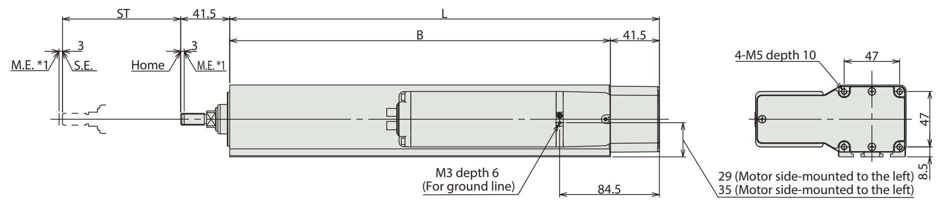
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flat varies depending on the product. Those flats cannot be used for vertical or horizontal reference plane.

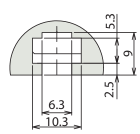


Supplied hex nut

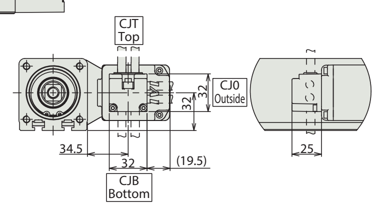








Detail view of P
Details of T-slot (B dimensions range)



Cable exit direction (Option)

■ Dimensions and Mass by Stroke

Stroke		50	100	150	200	250	300
L		214	264	314	364	414	464
B		172.5	222.5	272.5	322.5	372.5	422.5
Mass (kg)	W/o brake	2.9	3.3	3.7	4.1	4.5	4.9
	W/ brake	3.2	3.6	4.0	4.4	4.8	5.2

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Pulse train	Program	Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET. Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-RA7R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 70* mm | 200v AC Servo Motor

■ Model Specification Items

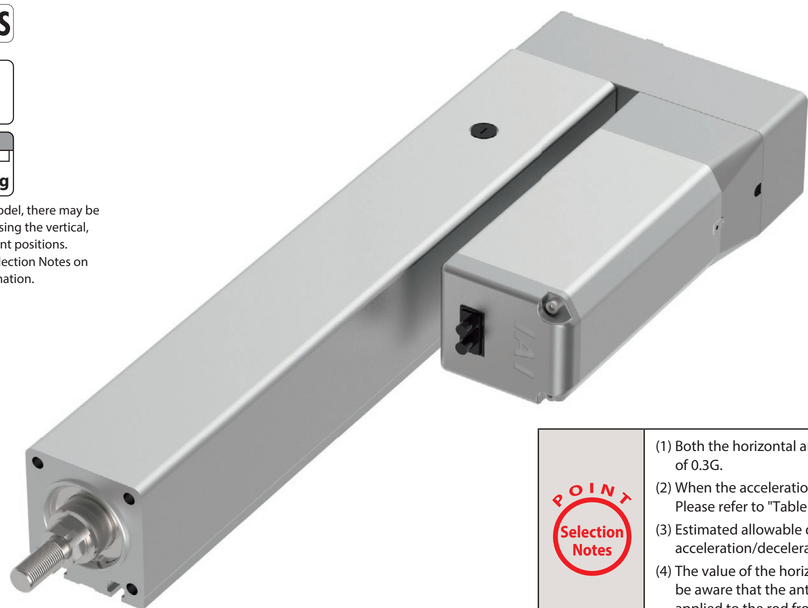
RCS4	RA7R	WA	200	☐	☐	T2	☐	☐
Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
		WA: Battery-less Absolute	200: Servo motor 200W	24:24mm 16:16mm 8: 8mm 4: 4mm	50:50mm ≀ 300:300mm (50mm increments)	T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA	N : None P : 1m S : 3m M: 5m X☐☐ : Specified Length R☐☐ : Robot Cable	Refer to Options table below.

* Body width does not include the width of the side-mounted motor.

C€ RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



POINT Selection Notes

(1) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(2) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(4) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-RA7R-WA-200-24-①-T2-②-③	200	24	20	6	142	50~300 (50mm increments)
RCS4-RA7R-WA-200-16-①-T2-②-③		16	45	12	214	
RCS4-RA7R-WA-200-8-①-T2-②-③		8	60	25	427	
RCS4-RA7R-WA-200-4-①-T2-②-③		4	80	35	855	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed (Unit: mm/s)

Lead \ Stroke	50~300 (50mm increments)
24	1200
16	800
8	400
4	200

① Stroke

① Stroke (mm)	RCS4-RA7R	① Stroke (mm)	RCS4-RA7R
50	○	**200**	○
100	○	**250**	○
150	○	**300**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options * Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Cable exit direction (Outside)	**CJO**	See P.131
Flange	**FL**	See P.132
Foot bracket	**FT**	See P.133
Motor side-mounted to left (standard)	**ML**	See P.135
Motor side-mounted to right	**MR**	See P.135
Tip adapter (Internal thread)	**NFA**	See P.135
Non-motor end specification	**NM**	See P.136
T-slot nut bar specification	**NTB**	See P.136

* Be sure to confirm with the "Selection Notes (P.138)" when selecting options.

Actuator Specifications

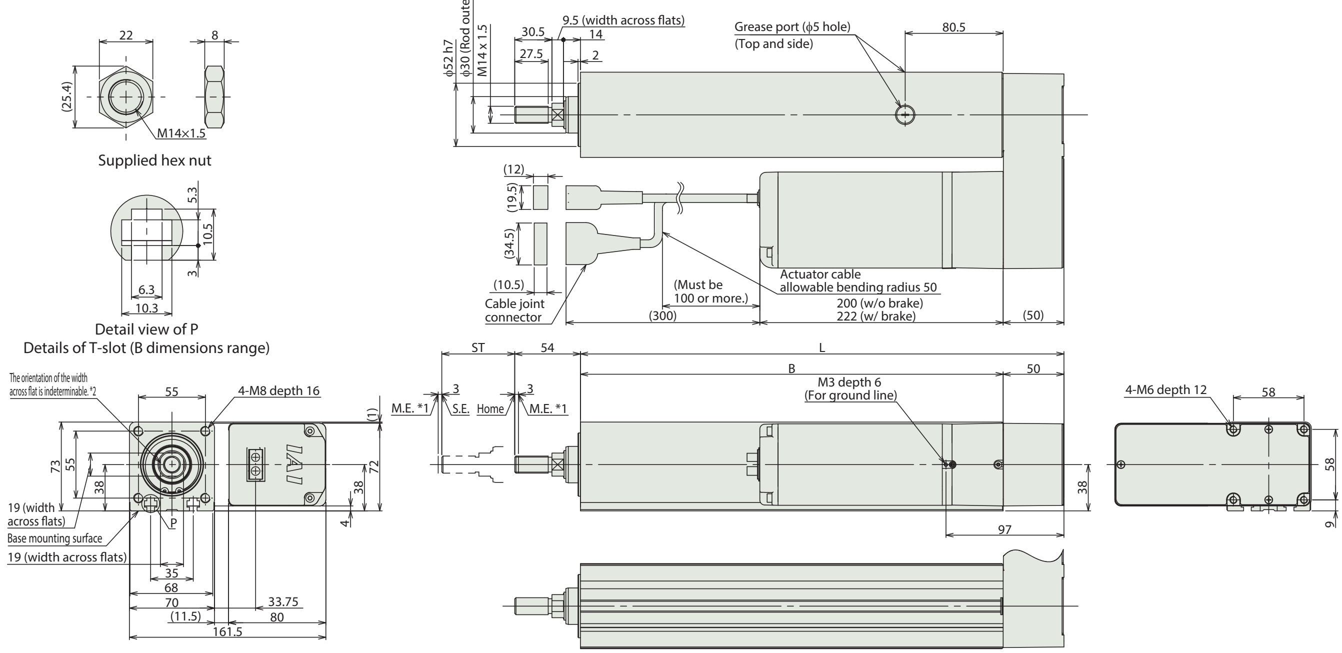
Item	Description
Drive system	Ball screw ϕ12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ30mm Material: Aluminum with hard alumite treatment
Allowable static torque on rod tip	2.5N·m
Max. angular displacement on rod tip (*1)	±0.8 deg.
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

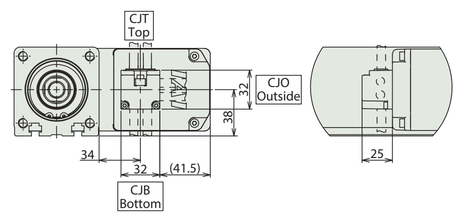
(*1) This is the displacement angle of the rod tip (initial reference value) when the rod tip is fully retracted and the allowable static torque is applied at the rod tip.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flat varies depending on the product. Those flats cannot be used for vertical or horizontal reference plane.





Cable exit direction (Option)

■ Dimensions and Mass by Stroke

Stroke		50	100	150	200	250	300
L		247.5	297.5	347.5	397.5	447.5	497.5
B		197.5	247.5	297.5	347.5	397.5	447.5
Mass (kg)	W/o brake	5.4	6.0	6.5	7.1	7.7	8.3
	W/ brake	5.9	6.5	7.0	7.6	8.2	8.8

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet CC-Link PROFIBUS CompoNet MECHATROLINK EtherCAT EtherNet/IP PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-RA8R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 90* mm | 200v AC Servo Motor

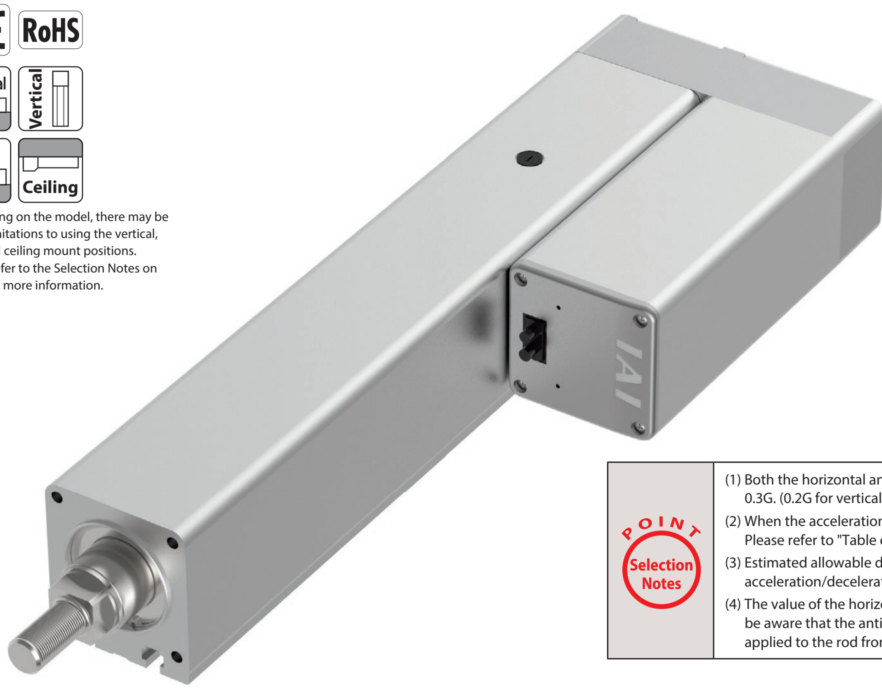
■ Model Specification Items

RCS4	RA8R	WA	400			T2		
Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
		WA: Battery-less Absolute	400: Servo motor 400W	20:20mm 10:10mm 5: 5mm	50:50mm ~ 300:300mm (50mm increments)	T2:SCON SSEL XSEL-P/Q XSEL-RA/SA	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Refer to Options table below.

* Body width does not include the width of the side-mounted motor.

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



POINT Selection Notes

(1) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G. (0.2G for vertical lead 5).
(2) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(4) The value of the horizontal payload assumes that there is an external guide. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-RA8R-WA-400-20-①-T2-②-③	400	20	60	20	339	50~300 (50mm increments)
RCS4-RA8R-WA-400-10-①-T2-②-③		10	80	40	678	
RCS4-RA8R-WA-400-5-①-T2-②-③		5	100	72	1357	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed (Unit: mm/s)

Lead \ Stroke	50~300 (50mm increments)
20	1000
10	500
5	250

① Stroke

① Stroke (mm)	RCS4-RA8R	① Stroke (mm)	RCS4-RA8R
50	○	**200**	○
100	○	**250**	○
150	○	**300**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options * Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Cable exit direction (Outside)	**CJO**	See P.131
Flange	**FL**	See P.132
Foot bracket	**FT**	See P.133
Motor side-mounted to left (standard)	**ML**	See P.135
Motor side-mounted to right	**MR**	See P.135
Tip adapter (Internal thread)	**NFA**	See P.135
Non-motor end specification	**NM**	See P.136
T-slot nut bar specification	**NTB**	See P.136

* Be sure to confirm with the "Selection Notes (P.138)" when selecting options.

Actuator Specifications

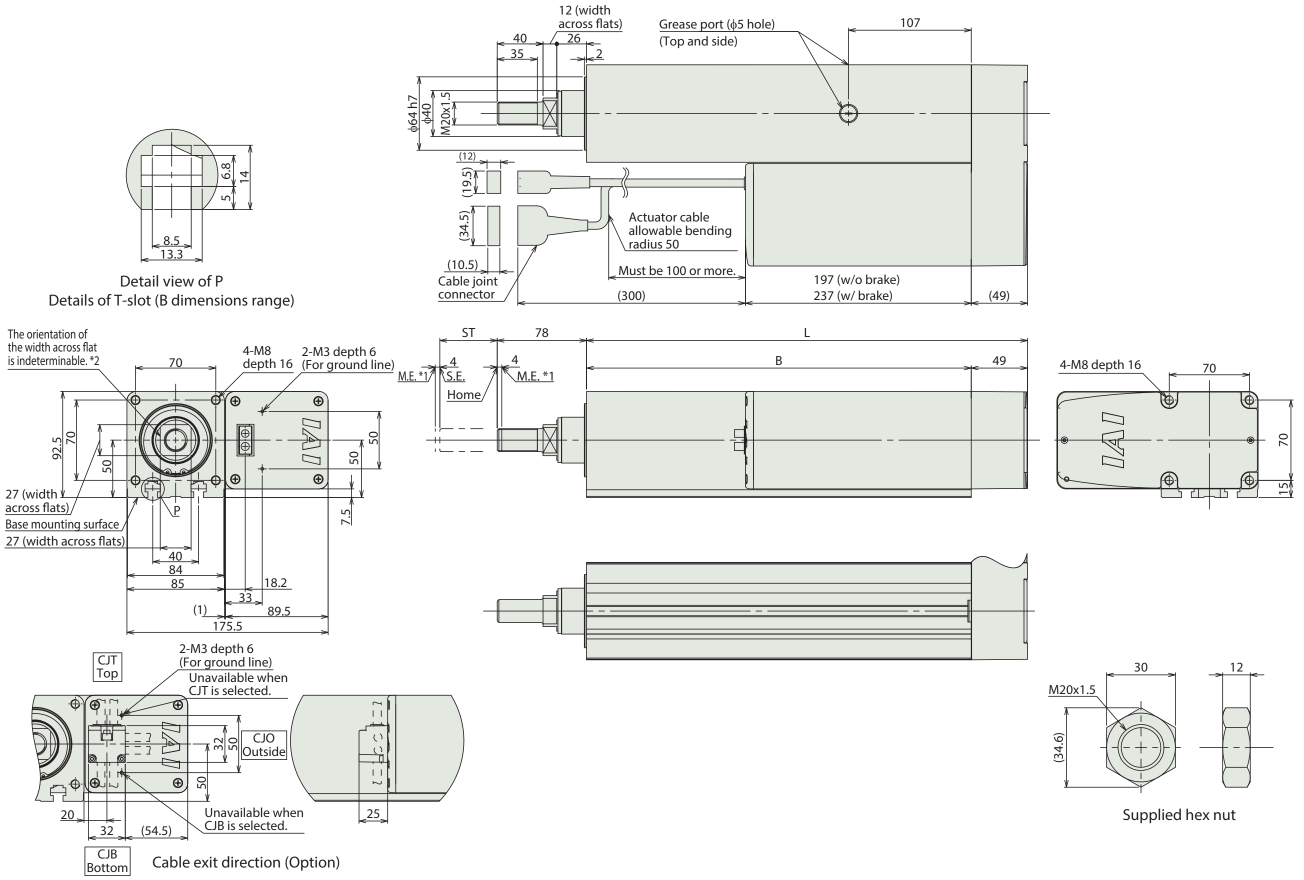
Item	Description
Drive system	Ball screw ϕ16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ40mm Material: Aluminum with hard alumite treatment
Allowable static torque on rod tip	5.0N·m
Max. angular displacement on rod tip (*1)	±0.8 deg.
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*1) This is the displacement angle of the rod tip (initial reference value) when the rod tip is fully retracted and the allowable static torque is applied at the rod tip.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flat varies depending on the product. Those flats cannot be used for vertical or horizontal reference plane.



■ Dimensions and Mass by Stroke

Stroke		50	100	150	200	250	300
L		284.5	334.5	384.5	434.5	484.5	534.5
B		235.5	285.5	335.5	385.5	435.5	485.5
Mass (kg)	W/o brake	9.6	10.4	11.2	12.1	12.9	13.8
	W/ brake	10.2	11.0	11.8	12.7	13.5	14.4

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1	Single phase 200VAC	–	–	●		512 (768 for network spec.)	
SSEL-CS		2	Single phase 100V/200VAC	●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-RRA4C

Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 40 mm | 200v AC Servo Motor

■ Model Specification Items

RCS4	—	RRA4C	—	WA	—	60	—		—		—	T2	—		—	
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		60: Servo motor 60W		16: 16mm 10: 10mm 5: 5mm 2.5:2.5mm		60:60mm ≀ 410:410mm (50mm increments)		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable		Refer to Options table below.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.

POINT Selection Notes

(1) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(2) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(4) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.145 and after for the allowable load mass.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-RRA4C-WA-60-16-①-T2-②-③	60	16	8	2	53	60~410 (50mm increments)
RCS4-RRA4C-WA-60-10-①-T2-②-③		10	18	4	85	
RCS4-RRA4C-WA-60-5-①-T2-②-③		5	30	6	170	
RCS4-RRA4C-WA-60-2.5-①-T2-②-③		2.5	40	10	340	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed (Unit: mm/s)

Lead \ Stroke	60~410 (50mm increments)
16	960
10	600
5	300
2.5	150

① Stroke

① Stroke (mm)	RCS4-RRA4C	① Stroke (mm)	RCS4-RRA4C
60	○	**260**	○
110	○	**310**	○
160	○	**360**	○
210	○	**410**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options

* Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Flange	**FL**	See P.132
Tip adapter (Flange)	**FFA**	See P.131
Tip adapter (Keyway)	**KFA**	See P.134
Tip adapter (Internal thread)	**NFA**	See P.135
Non-motor end specification	**NM**	See P.136

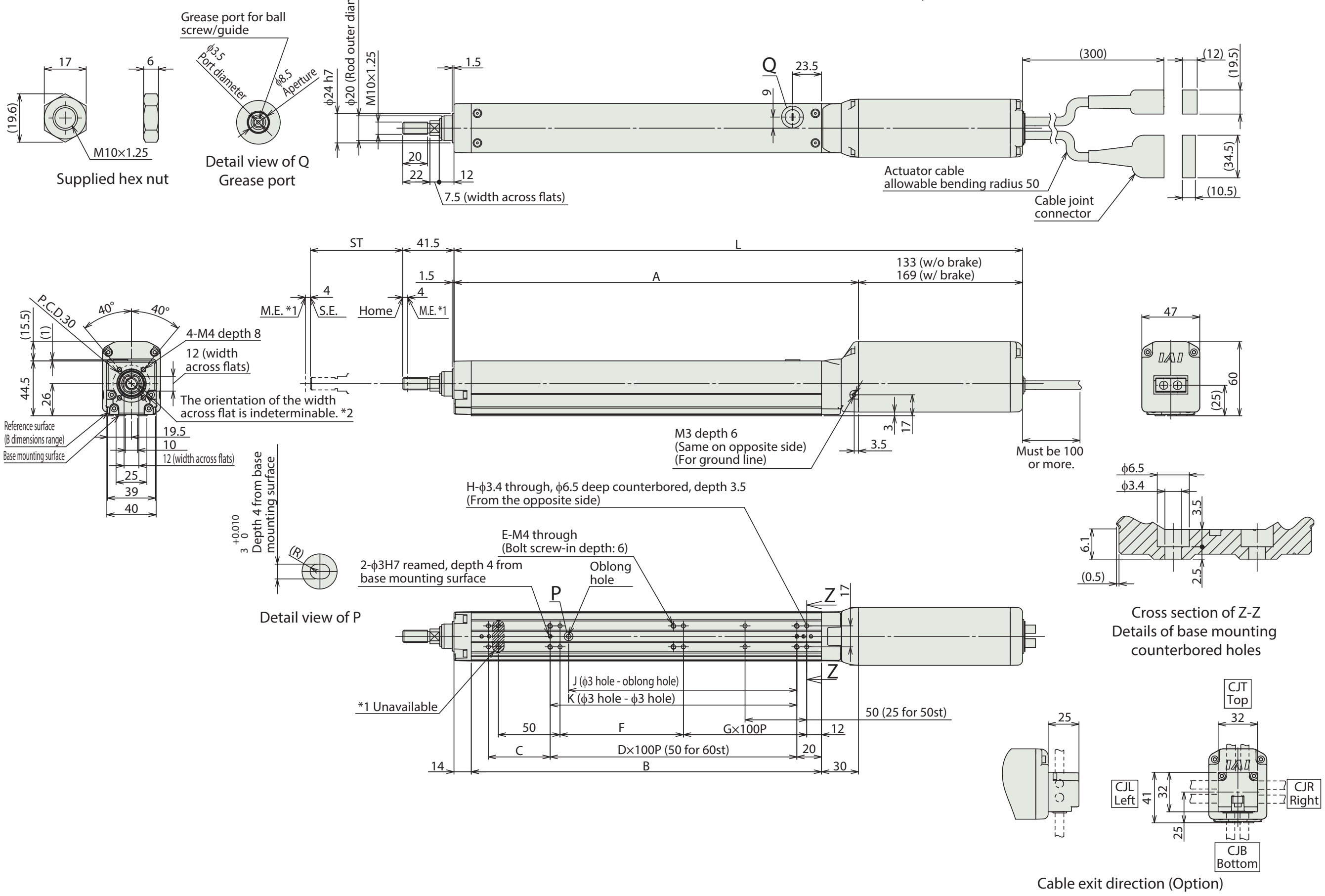
Actuator Specifications

Item	Description
Drive system	Ball screw ϕ8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ20mm Material: Aluminum with hard alumite treatment
Rod non-rotation precision	0 degrees
Allowable load and torque on rod tip	Please see P. 60
Rod tip overhang distance	100mm
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 The two mounting holes (H) on the rod side of the top surface cannot be used.
(Note) When the rod is returning to its home position, please be mindful of possible interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flat varies depending on the product. Those flats cannot be used for vertical or horizontal reference plane.

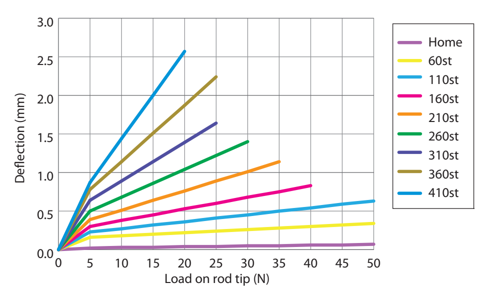


Dimensions and Mass by Stroke

Stroke		60	110	160	210	260	310	360	410
L	W/o brake	311	361	411	461	511	561	611	661
	W/ brake	347	397	447	497	547	597	647	697
A		178	228	278	328	378	428	478	528
B		134	184	234	284	334	384	434	484
C		50	50	100	50	100	50	100	50
D		0	1	1	2	2	3	3	4
E		6	6	6	8	8	10	10	12
F		50	100	50	100	50	100	50	100
G		0	0	1	1	2	2	3	3
H *2		6	6	8	8	10	10	12	12
J		35	85	85	185	185	285	285	385
K		50	100	100	200	200	300	300	400
Allowable static load on rod tip (N)		63.4	50.7	42.1	36.0	31.3	27.6	24.6	22.2
Allowable dynamic load on rod tip (5000km life) (N)	Load offset 0mm	28.9	22.2	17.9	14.8	12.6	10.8	9.4	8.2
	Load offset 100mm	17.9	15.5	13.4	11.6	10.2	9.0	8.0	7.1
Allowable static torque on rod tip (N·m)		6.4	5.1	4.3	3.7	3.2	2.9	2.6	2.3
Allowable dynamic torque on rod tip (N·m)		1.7	1.5	1.3	1.1	1.0	0.9	0.7	0.7
Mass (kg)	W/o brake	1.3	1.3	1.4	1.5	1.6	1.7	1.8	1.9
	W/ brake	1.6	1.6	1.7	1.8	1.9	2.0	2.1	2.2

*2 Does not include holes that are not available.

Rod Deflection of RCS4-RRA4C (Reference Values)



Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Pulse train	Program	Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-RRA6C

Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 60 mm | 200v AC Servo Motor

■ Model Specification Items

RCS4	RRA6C	WA	100			T2		
Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
		WA: Battery-less Absolute	100: Servo motor 100W	20:20mm 12:12mm 6: 6mm 3: 3mm	65:65mm ~ 415:415mm (50mm increments)	T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Refer to Options table below.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.

POINT Selection Notes

(1) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(2) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(4) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.145 and after for the allowable load mass.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-RRA6C-WA-100-20-①-T2-②-③	100	20	15	4	85	65~415 (50mm increments)
RCS4-RRA6C-WA-100-12-①-T2-②-③		12	25	10	142	
RCS4-RRA6C-WA-100-6-①-T2-②-③		6	50	20	283	
RCS4-RRA6C-WA-100-3-①-T2-②-③		3	60	20	566	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed (Unit: mm/s)

Lead \ Stroke	65~415 (50mm increments)
20	1200
12	720
6	360
3	180

① Stroke

① Stroke (mm)	RCS4-RRA6C	① Stroke (mm)	RCS4-RRA6C
65	○	**265**	○
115	○	**315**	○
165	○	**365**	○
215	○	**415**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m) **S**(3m) **M**(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m) **X11**(11m)~**X15**(15m) **X16**(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m) **R04**(4m) ~**R05**(5m) **R06**(6m) ~**R10**(10m) **R11**(11m)~**R15**(15m) **R16**(16m)~**R20**(20m)

③ Options

* Please check the Options reference pages to confirm each option.

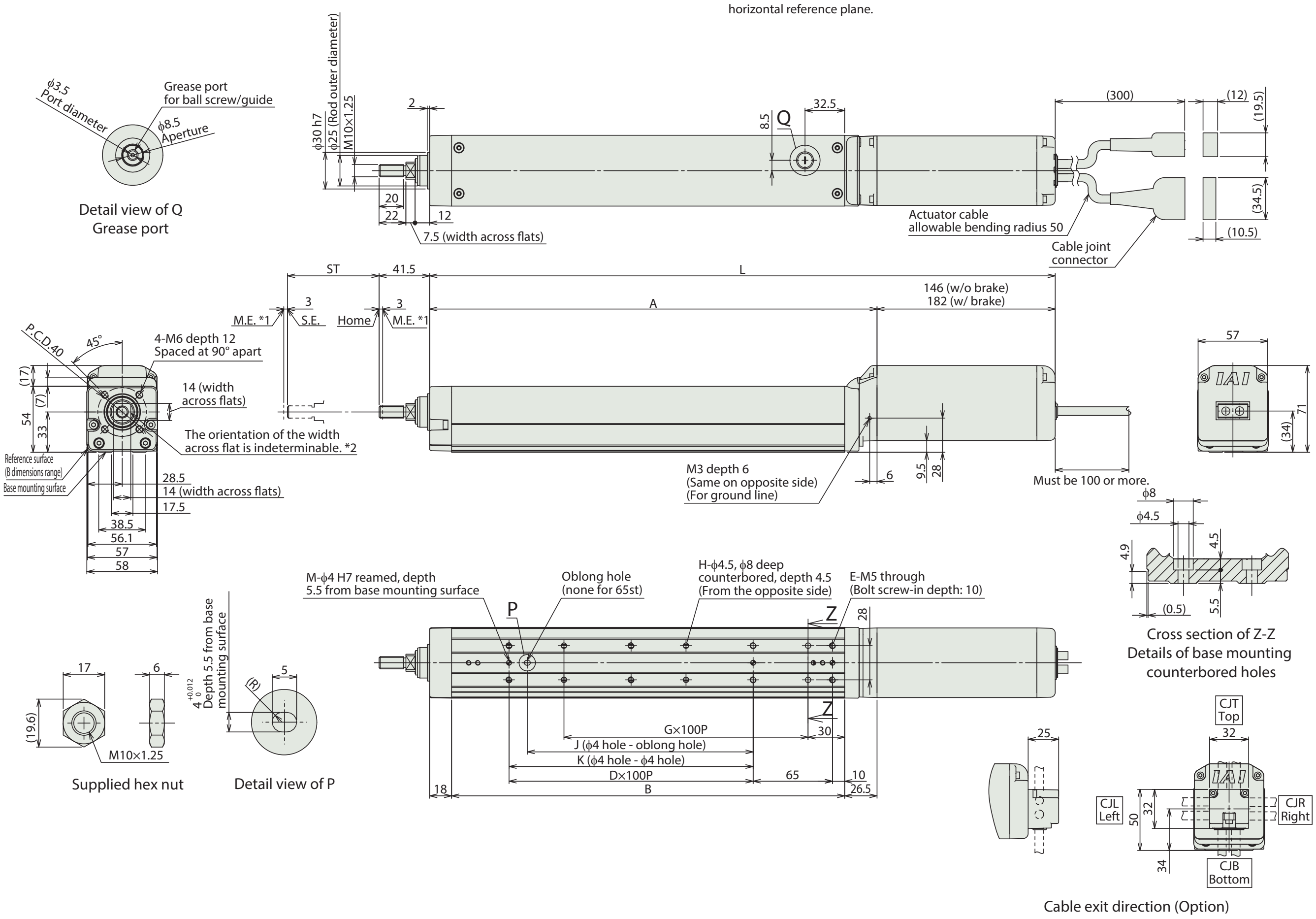
Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Flange	**FL**	See P.132
Tip adapter (Flange)	**FFA**	See P.131
Tip adapter (Keyway)	**KFA**	See P.134
Tip adapter (Internal thread)	**NFA**	See P.135
Non-motor end specification	**NM**	See P.136

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ25mm Material: Aluminum with hard alumite treatment
Rod non-rotation precision	0 degrees
Allowable load and torque on rod tip	Please see P. 62
Rod tip overhang distance	100mm
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

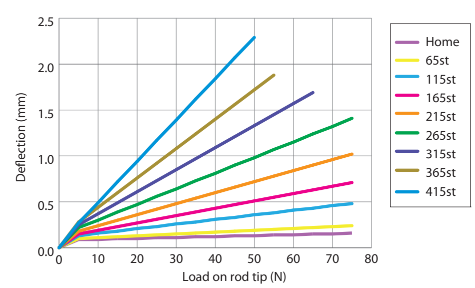
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flat varies depending on the product. Those flats cannot be used for vertical or horizontal reference plane.



■ Dimensions and Mass by Stroke

Stroke		65	115	165	215	265	315	365	415
L	W/o brake	362.5	412.5	462.5	512.5	562.5	612.5	662.5	712.5
	W/ brake	398.5	448.5	498.5	548.5	598.5	648.5	698.5	748.5
A		216.5	266.5	316.5	366.5	416.5	466.5	516.5	566.5
B		172	222	272	322	372	422	472	522
D		0	1	1	2	2	3	3	4
E		4	6	6	8	8	10	10	12
G		1	1	2	2	3	3	4	4
H		4	4	6	6	8	8	10	10
J		0	85	85	185	185	285	285	385
K		0	100	100	200	200	300	300	400
M		2	3	3	3	3	3	3	3
Allowable static load on rod tip (N)		144	117	99	85.4	75	66.7	59.9	54.3
Allowable dynamic load on rod tip (5000km life) (N)	Load offset 0mm	58.1	46.4	38.3	32.4	27.9	24.4	21.5	19.2
	Load offset 100mm	38.8	34.0	29.7	26.2	23.2	20.8	18.7	16.8
Allowable static torque on rod tip (N·m)		14.5	11.8	10.0	8.7	7.6	6.8	6.2	5.6
Allowable dynamic torque on rod tip (N·m)		3.8	3.3	2.9	2.6	2.3	2.0	1.8	1.6
Mass (kg)	W/o brake	2.1	2.4	2.6	2.8	3.1	3.3	3.5	3.7
	W/ brake	2.4	2.7	2.9	3.1	3.4	3.6	3.8	4.0

■ Rod Deflection of RCS4-RRA6C (Reference Values)



Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET. Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

IAI
Foreword
Slider Type
Wide Slider Type
Rod Type
Radial Cylinder®
Wide Radial Cylinder
Table Type
Cleanroom Slider
Cleanroom Wide Slider
Options
Reference Data
Controller

RCS4-RRA7C

Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 70 mm | 200v AC Servo Motor

■ Model Specification Items

RCS4	—	RRA7C	—	WA	—	200	—	☐	—	☐	—	T2	—	☐	—	☐
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		200: Servo motor 200W		24:24mm 16:16mm 8: 8mm 4: 4mm		70:70mm ~ 520:520mm (50mm increments)		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable		Refer to Options table below.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.

POINT Selection Notes

(1) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(2) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(4) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.145 and after for the allowable load mass.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-RRA7C-WA-200-24-①-T2-②-③	200	24	20	6	142	70~520 (50mm increments)
RCS4-RRA7C-WA-200-16-①-T2-②-③		16	45	12	214	
RCS4-RRA7C-WA-200-8-①-T2-②-③		8	60	25	427	
RCS4-RRA7C-WA-200-4-①-T2-②-③		4	80	35	855	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed (Unit: mm/s)

Lead \ Stroke	70~520 (50mm increments)
24	1440
16	960
8	480
4	240

① Stroke

① Stroke (mm)	RCS4-RRA7C	① Stroke (mm)	RCS4-RRA7C
70	○	**320**	○
120	○	**370**	○
170	○	**420**	○
220	○	**470**	○
270	○	**520**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options

* Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Flange	**FL**	See P.132
Tip adapter (Flange)	**FFA**	See P.131
Tip adapter (Keyway)	**KFA**	See P.134
Tip adapter (Internal thread)	**NFA**	See P.135
Non-motor end specification	**NM**	See P.136

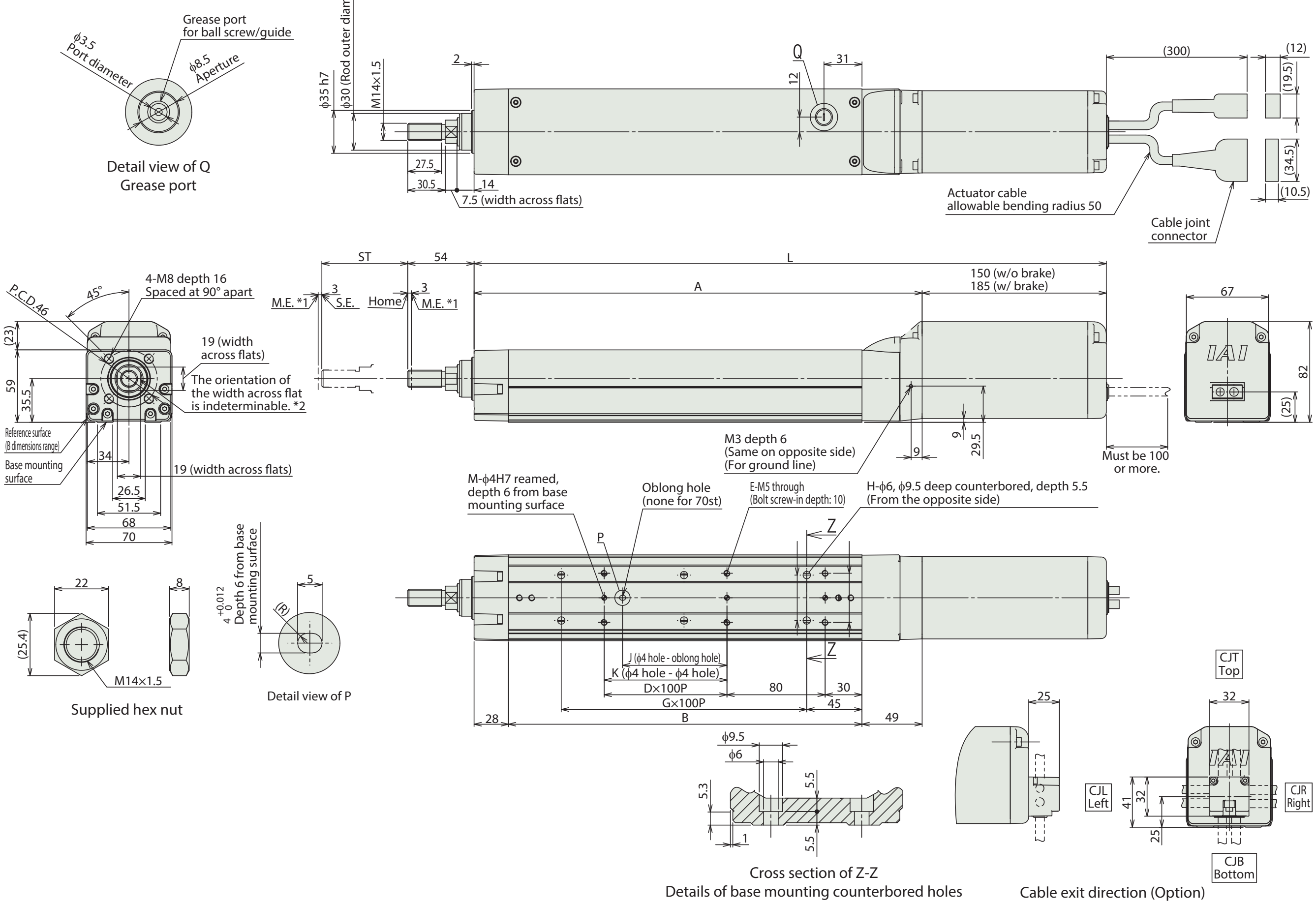
Actuator Specifications

Item	Description
Drive system	Ball screw ϕ12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ30mm Material: Aluminum with hard alumite treatment
Rod non-rotation precision	0 degrees
Allowable load and torque on rod tip	Please see P. 64
Rod tip overhang distance	150mm
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

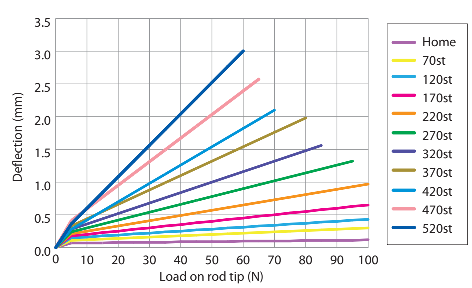
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flat varies depending on the product. Those flats cannot be used for vertical or horizontal reference plane.



■ Dimensions and Mass by Stroke

Stroke		70	120	170	220	270	320	370	420	470	520
L	W/o brake	415	465	515	565	615	665	715	765	815	865
	W/ brake	450	500	550	600	650	700	750	800	850	900
A		265	315	365	415	465	515	565	615	665	715
B		188	238	288	338	388	438	488	538	588	638
D		0	1	1	2	2	3	3	4	4	5
E		4	6	6	8	8	10	10	12	12	14
G		1	1	2	2	3	3	4	4	5	5
H		4	4	6	6	8	8	10	10	12	12
J		0	85	85	185	185	285	285	385	385	485
K		0	0	100	200	200	300	300	400	400	500
M		2	2	3	3	3	3	3	3	3	3
Allowable static load on rod tip (N)		175	147	126	111	98.6	88.7	80.6	73.8	68	63
Allowable dynamic load on rod tip (5000km life) (N)	Load offset 0mm	75.7	62.6	53.1	46.0	40.5	36.1	32.5	29.4	26.9	24.7
	Load offset 100mm	49.8	45.1	40.5	36.5	33.1	30.2	27.7	25.5	23.6	21.9
Allowable static torque on rod tip (N·m)		17.6	14.7	12.7	11.2	9.9	9.0	8.2	7.5	6.94	6.45
Allowable dynamic torque on rod tip (N·m)		5.0	4.5	4.0	3.6	3.3	3.0	2.8	2.5	2.32	2.16
Mass (kg)	W/o brake	3.7	4.0	4.2	4.5	4.8	5.0	5.3	5.6	5.8	6.1
	W/ brake	4.2	4.5	4.7	5.0	5.3	5.5	5.8	6.1	6.3	6.6

■ Rod Deflection of RCS4-RRA7C (Reference Values)



Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET. Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-RRA8C

Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 90 mm | 200v AC Servo Motor

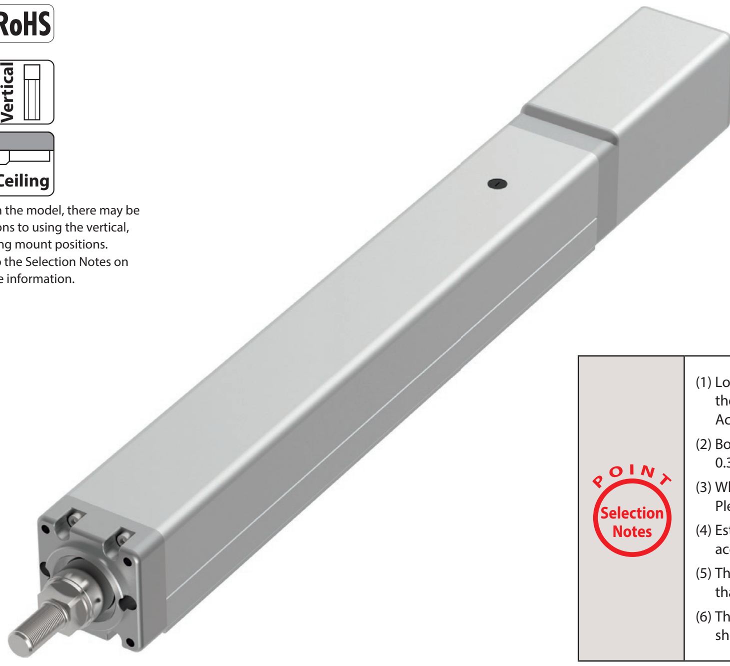
■ Model Specification Items

Series		Type		Encoder Type		Motor Type		Lead		Stroke		Applicable Controllers		Cable Length		Options
RCS4	—	RRA8C	—	WA	—	400	—	□	—	□	—	T2	—	□	—	□
				WA: Battery-less Absolute		400: Servo motor 400W		30:30mm 20:20mm 10:10mm 5: 5mm		50:50mm ~ 700:700mm (50mm increments)		T2:SCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable		Refer to Options table below.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.
(2) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G. (0.2G for lead 5).
(3) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(5) The value of the maximum payload assumes that there is an external guide and that the rod is not subjected to external force other than in the moving direction.
(6) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.145 and after for the allowable load mass.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-RRA8C-WA-400-30-①-T2-②-③	400	30	30	8	226	50~700 (50mm increments)
RCS4-RRA8C-WA-400-20-①-T2-②-③	400	20	60	20	339	50~700 (50mm increments)
RCS4-RRA8C-WA-400-10-①-T2-②-③	400	10	80	40	678	50~700 (50mm increments)
RCS4-RRA8C-WA-400-5-①-T2-②-③	400	5	100	72	1357	50~700 (50mm increments)

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed

(Unit: mm/s)

Lead \ Stroke	50~250 (50mm increments)	300 (mm)	350 (mm)	400 (mm)	450 (mm)	500 (mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)
30	1500	1500	1230	970	790	650	540	460	400	350
20	1100	1070	820	650	520	430	360	310	260	230
10	550	520	400	310	250	210	180	150	130	110
5	275	250	190	150	120	100	80	70	60	55

① Stroke

① Stroke (mm)	RCS4-RRA8C	① Stroke (mm)	RCS4-RRA8C
50	○	**400**	○
100	○	**450**	○
150	○	**500**	○
200	○	**550**	○
250	○	**600**	○
300	○	**650**	○
350	○	**700**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options

* Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Flange	**FL**	See P.132
Tip adapter (Internal thread)	**NFA**	See P.135
Non-motor end specification	**NM**	See P.136

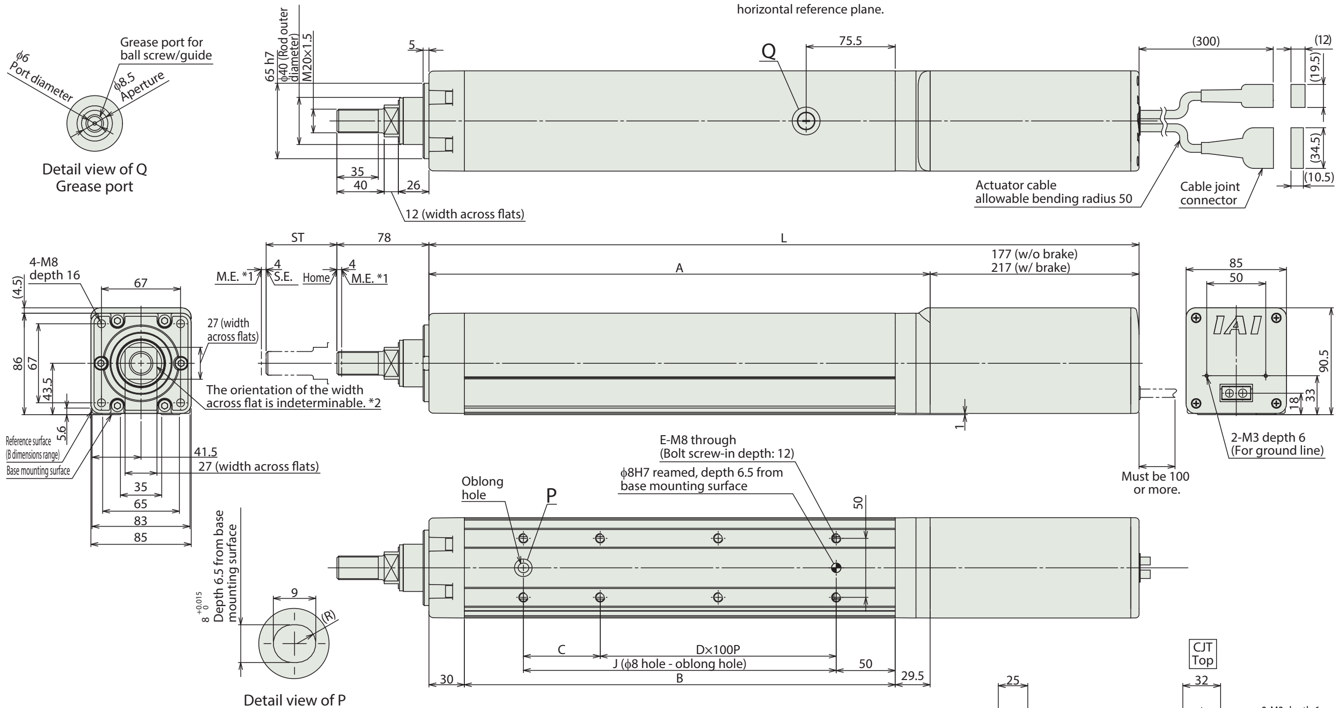
Actuator Specifications

Item	Description
Drive system	Ball screw ϕ16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ40mm Material: Aluminum with hard alumite treatment
Rod non-rotation precision	0 degrees
Allowable load and torque on rod tip	Please see P. 66
Rod tip overhang distance	150mm
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

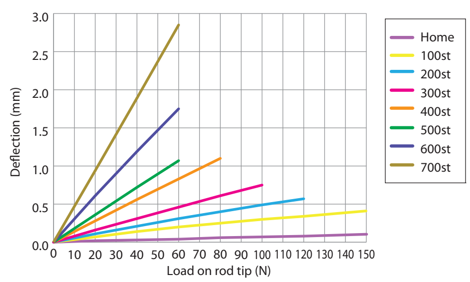
Dimensions

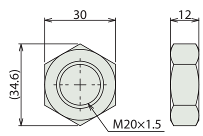
CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flat varies depending on the product. Those flats cannot be used for vertical or horizontal reference plane.

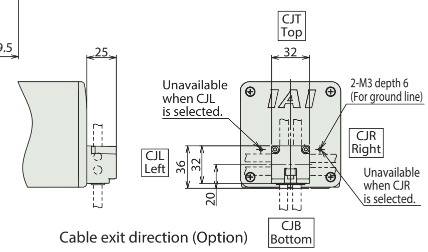


■ Rod Deflection of RCS4-RRA8C (Reference Values)





Supplied hex nut



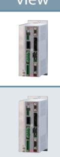
Cable exit direction (Option)

■ Dimensions and Mass by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700
L	W/o brake	451.5	501.5	551.5	601.5	651.5	701.5	751.5	801.5	851.5	901.5	951.5	1001.5	1051.5	1101.5
	W/ brake	491.5	541.5	591.5	641.5	691.5	741.5	791.5	841.5	891.5	941.5	991.5	1041.5	1091.5	1141.5
A		274.5	324.5	374.5	424.5	474.5	524.5	574.5	624.5	674.5	724.5	774.5	824.5	874.5	924.5
B		215	265	315	365	415	465	515	565	615	665	715	765	815	865
C		115	65	115	65	115	65	115	65	115	65	115	65	115	65
D		0	1	1	2	2	3	3	4	4	5	5	6	6	7
E		4	6	6	8	8	10	10	12	12	14	14	16	16	18
J		115	165	215	265	315	365	415	465	515	565	615	665	715	765
Allowable static load on rod tip (N)		222	186	159	139	124	111	101	92	84.7	78.4	72.8	68	63.7	59.8
Allowable dynamic load on rod tip (5000km life) (N)	Load offset 0mm	93	76.3	64.7	56	49.2	43.8	39.3	35.6	32.4	29.7	27.3	25.2	23.3	21.7
	Load offset 100mm	72	61.6	53.9	48	43	38.9	35.4	32.3	29.7	27.4	25.3	23.5	21.9	20.4
Allowable static torque on rod tip (N·m)		22.3	18.7	16.1	14.1	12.6	11.3	10.3	9.4	8.7	8.1	7.6	7.1	6.7	6.3
Allowable dynamic torque on rod tip (N·m)		7.2	6.2	5.4	4.8	4.3	3.9	3.5	3.2	3	2.7	2.5	2.4	2.2	2
Mass (kg)	W/o brake	6.6	7.1	7.6	8.1	8.6	9.1	9.5	10.0	10.5	11.0	11.5	12.0	12.4	12.9
	W/ brake	7.2	7.7	8.2	8.7	9.2	9.7	10.1	10.6	11.1	11.6	12.1	12.6	13.0	13.5

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Pulse train	Program	Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET. Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SSEL-CS		2	Single phase 100V/200VAC	●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-RRA4R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 40* mm | 200v AC Servo Motor

■ Model Specification Items

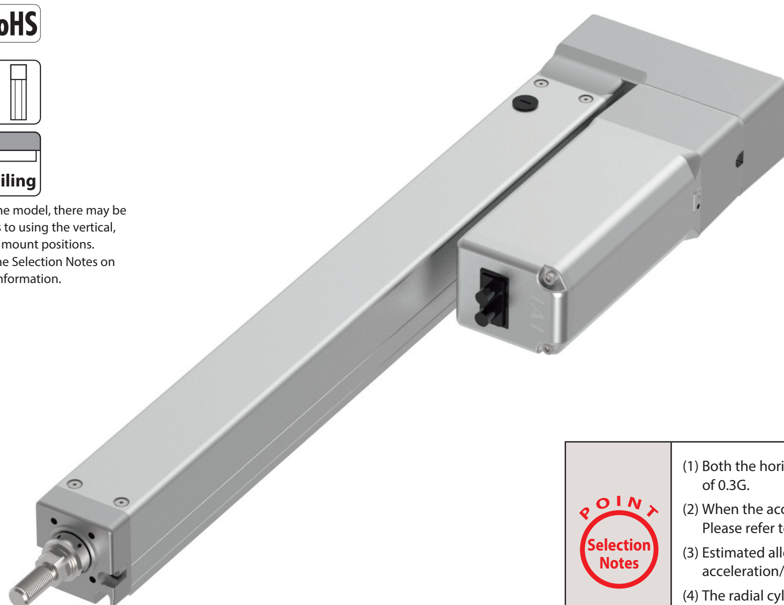
Series		Type		Encoder Type		Motor Type		Lead		Stroke		Applicable Controllers		Cable Length		Options
RCS4	—	RRA4R	—	WA	—	60	—	☐	—	☐	—	T2	—	☐	—	☐
				WA: Battery-less Absolute		60: Servo motor 60W		16: 16mm 10: 10mm 5: 5mm 2.5:2.5mm		60:60mm ~ 410:410mm (50mm increments)		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable		Refer to Options table below.

* Body width does not include the width of the side-mounted motor.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



POINT Selection Notes

(1) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(2) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(4) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.145 and after for the allowable load mass.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-RRA4R-WA-60-16-①-T2-②-③	60	16	8	2	53	60~410 (50mm increments)
RCS4-RRA4R-WA-60-10-①-T2-②-③		10	18	4	85	
RCS4-RRA4R-WA-60-5-①-T2-②-③		5	30	6	170	
RCS4-RRA4R-WA-60-2.5-①-T2-②-③		2.5	40	10	340	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed (Unit: mm/s)

Lead \ Stroke	60~410 (50mm increments)
16	960
10	600
5	300
2.5	150

① Stroke

① Stroke (mm)	RCS4-RRA4R	① Stroke (mm)	RCS4-RRA4R
60	○	**260**	○
110	○	**310**	○
160	○	**360**	○
210	○	**410**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options * Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Cable exit direction (Outside)	**CJO**	See P.131
Flange	**FL**	See P.132
Tip adapter (Flange)	**FFA**	See P.131
Tip adapter (Keyway)	**KFA**	See P.134
Tip adapter (Internal thread)	**NFA**	See P.135
Motor side-mounted to left (standard)	**ML**	See P.135
Motor side-mounted to right	**MR**	See P.135
Non-motor end specification	**NM**	See P.136
Back mounting plate	**RP**	See P.137

* Be sure to confirm with the "Selection Notes (P.138)" when selecting options.

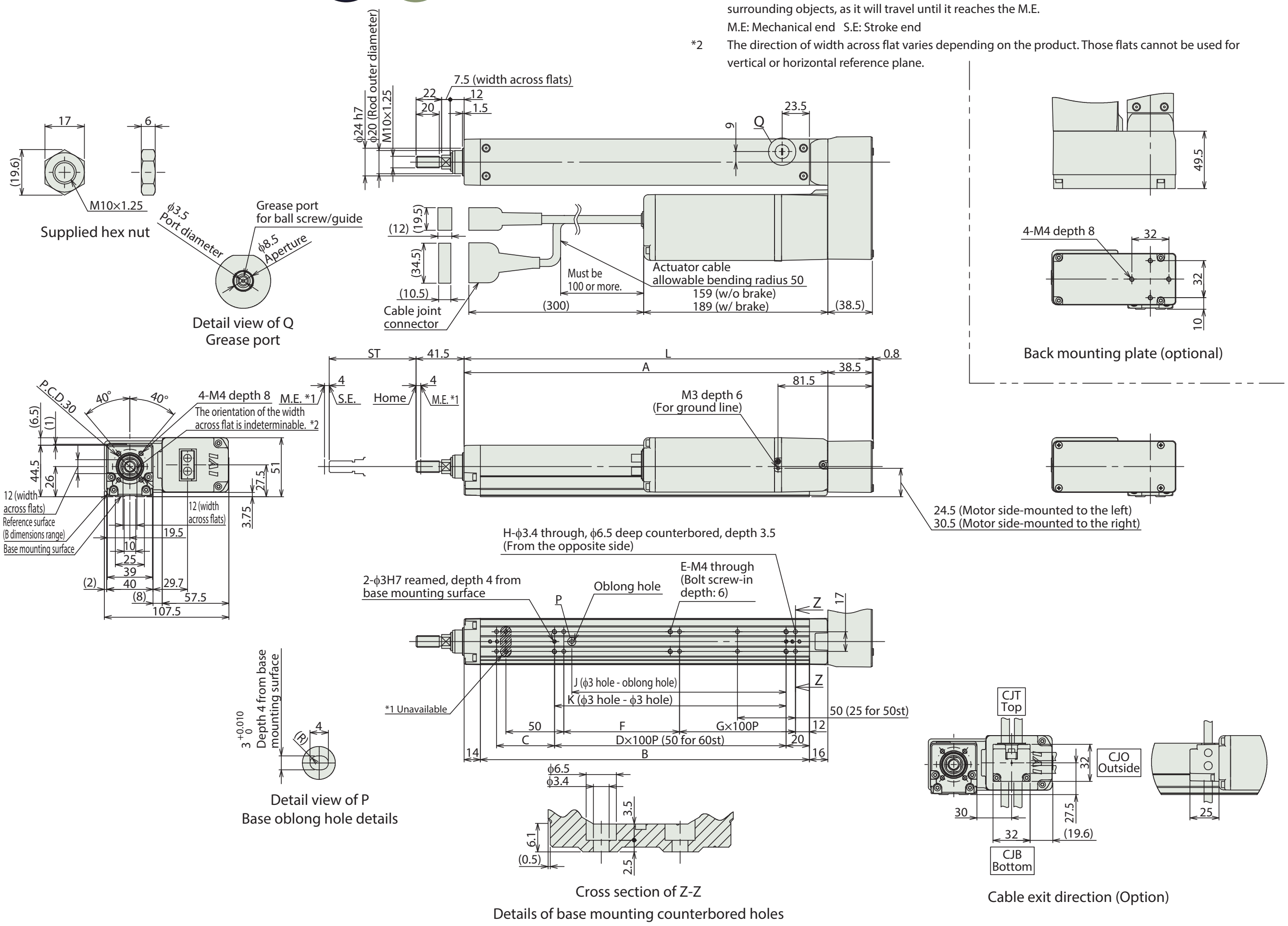
Actuator Specifications

Item	Description
Drive system	Ball screw ϕ8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ20mm Material: Aluminum with hard alumite treatment
Rod non-rotation precision	0 degrees
Allowable load and torque on rod tip	Please see P. 68
Rod tip overhang distance	100mm
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 The two mounting holes (H) on the rod side of the top surface cannot be used.
(Note) When the rod is returning to its home position, please be mindful of possible interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flat varies depending on the product. Those flats cannot be used for vertical or horizontal reference plane.

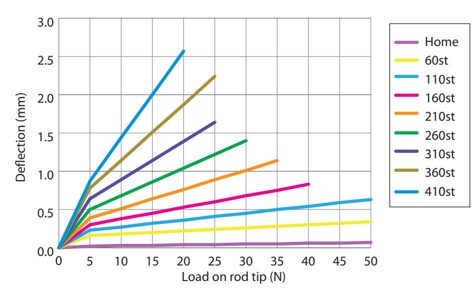


■ Dimensions and Mass by Stroke

Stroke		60	110	160	210	260	310	360	410
L		202.5	252.5	302.5	352.5	402.5	452.5	502.5	552.5
A		164	214	264	314	364	414	464	514
B		134	184	234	284	334	384	434	484
C		50	50	100	50	100	50	100	50
D		0	1	1	2	2	3	3	4
E		6	6	6	8	8	10	10	12
F		50	100	50	100	50	100	50	100
G		0	0	1	1	2	2	3	3
H *2		6	6	8	8	10	10	12	12
J		35	85	85	185	185	285	285	385
K		50	100	100	200	200	300	300	400
Allowable static load on rod tip (N)		63.4	50.7	42.1	36.0	31.3	27.6	24.6	22.2
Allowable dynamic load on rod tip (5000km life) (N)	Load offset 0mm	28.9	22.2	17.9	14.8	12.6	10.8	9.4	8.2
	Load offset 100mm	17.9	15.5	13.4	11.6	10.2	9.0	8.0	7.1
Allowable static torque on rod tip (N·m)		6.4	5.1	4.3	3.7	3.2	2.9	2.6	2.3
Allowable dynamic torque on rod tip (N·m)		1.7	1.5	1.3	1.1	1.0	0.9	0.7	0.7
Mass (kg)	W/o brake	1.6	1.7	1.8	2.0	2.1	2.2	2.3	2.5
	W/ brake	1.9	2.0	2.1	2.3	2.4	2.5	2.6	2.8

*2 Does not include holes that are not available.

■ Rod Deflection of RCS4-RRA4R (Reference Values)



Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Pulse train	Program	Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET. Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC / Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

Foreword
Slider Type
Wide Slider Type
Rod Type
Radial Cylinder®
Wide Radial Cylinder
Table Type
Cleanroom Slider
Cleanroom Wide Slider
Options
Reference Data
Controller

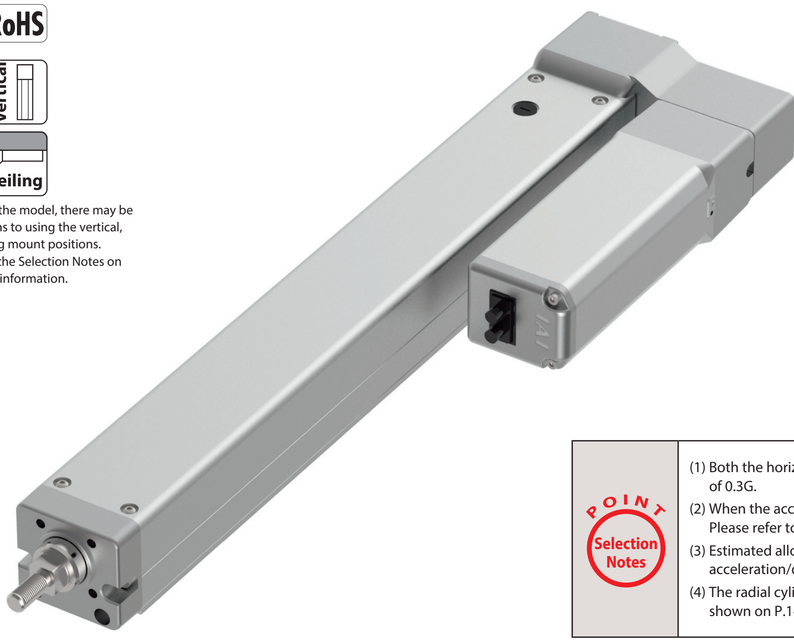
RCS4-RRA6R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 60* mm | 200v AC Servo Motor

■ Model Specification Items

RCS4	— RRA6R	— WA	— 100	— ☐	— ☐	— T2	— ☐	— ☐
Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
		WA: Battery-less Absolute	100: Servo motor 100W	20:20mm 12:12mm 6: 6mm 3: 3mm	65:65mm ~ 415:415mm (50mm increments)	T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA	N : None P : 1m S : 3m M: 5m X☐☐ : Specified Length R☐☐ : Robot Cable	Refer to Options table below.

* Body width does not include the width of the side-mounted motor.



* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.

POINT Selection Notes

(1) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(2) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(4) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.145 and after for the allowable load mass.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS4-RRA6R-WA-100-20-①-T2-②-③	100	20	15	4	85	65~415 (50mm increments)
RCS4-RRA6R-WA-100-12-①-T2-②-③		12	25	9	142	
RCS4-RRA6R-WA-100-6-①-T2-②-③		6	50	19	283	
RCS4-RRA6R-WA-100-3-①-T2-②-③		3	60	20	566	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed (Unit: mm/s)

Lead \ Stroke	65~415 (50mm increments)
20	1200
12	720
6	360
3	180

① Stroke

① Stroke (mm)	RCS4-RRA6R	① Stroke (mm)	RCS4-RRA6R
65	○	**265**	○
115	○	**315**	○
165	○	**365**	○
215	○	**415**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options * Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Cable exit direction (Outside)	**CJO**	See P.131
Flange	**FL**	See P.132
Tip adapter (Flange)	**FFA**	See P.131
Tip adapter (Keyway)	**KFA**	See P.134
Tip adapter (Internal thread)	**NFA**	See P.135
Motor side-mounted to left (standard)	**ML**	See P.135
Motor side-mounted to right	**MR**	See P.135
Non-motor end specification	**NM**	See P.136

* Be sure to confirm with the "Selection Notes (P.138)" when selecting options.

Actuator Specifications

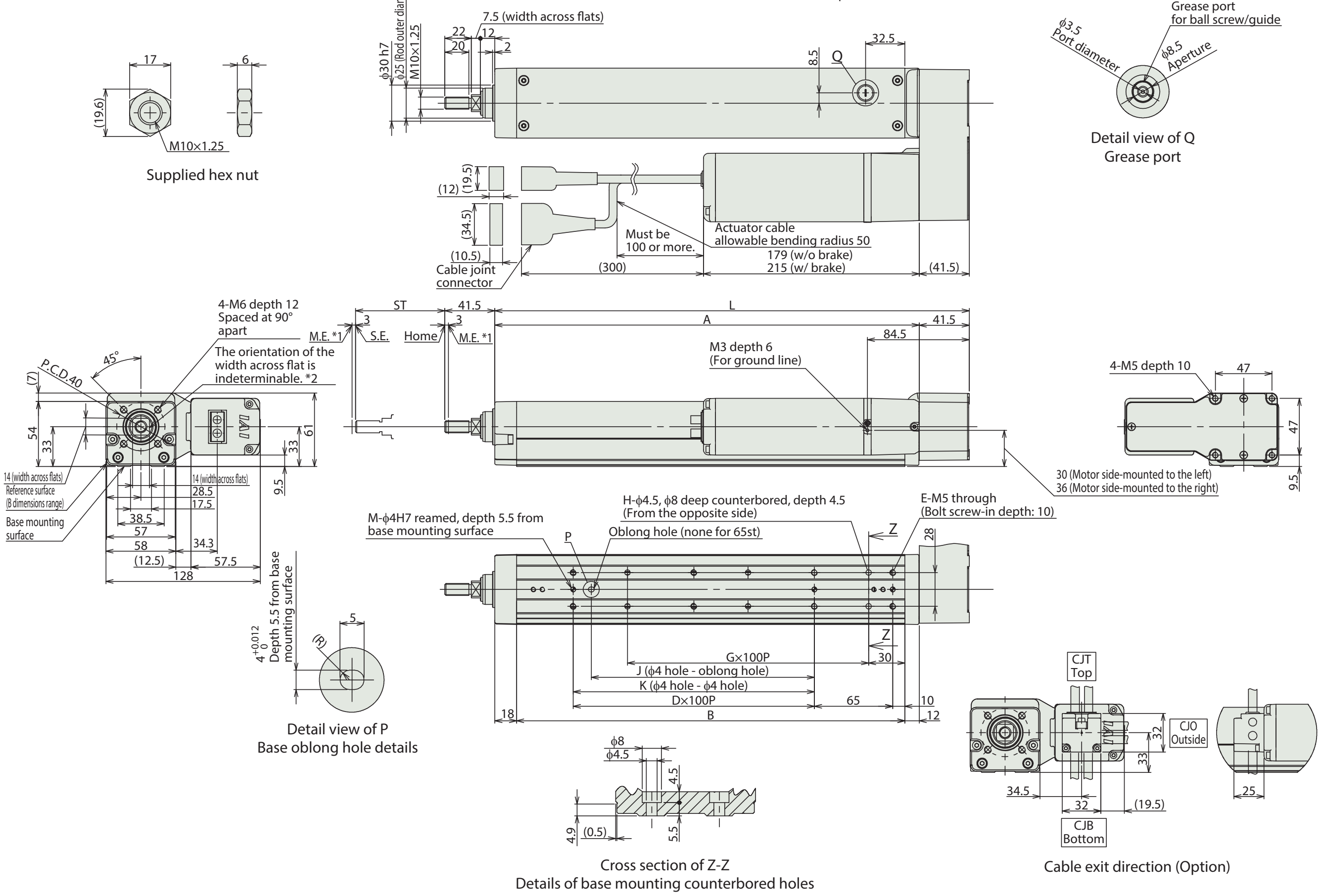
Item	Description
Drive system	Ball screw ϕ10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ25mm Material: Aluminum with hard alumite treatment
Rod non-rotation precision	0 degrees
Allowable load and torque on rod tip	Please see P. 70
Rod tip overhang distance	100mm
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

Dimensions

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

2D CAD 3D CAD

*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flat varies depending on the product. Those flats cannot be used for vertical or horizontal reference plane.



Supplied hex nut

Detail view of Q
Grease port

Detail view of P
Base oblong hole details

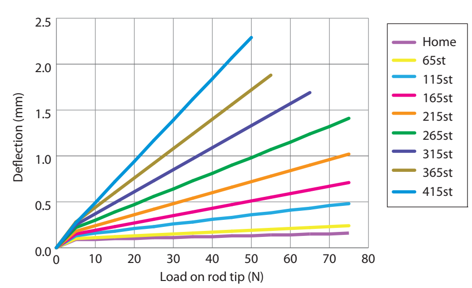
Cross section of Z-Z
Details of base mounting counterbored holes

Cable exit direction (Option)

■ Dimensions and Mass by Stroke

Stroke		65	115	165	215	265	315	365	415
L		243.5	293.5	343.5	393.5	443.5	493.5	543.5	593.5
A		202	252	302	352	402	452	502	552
B		172	222	272	322	372	422	472	522
D		0	1	1	2	2	3	3	4
E		4	6	6	8	8	10	10	12
G		1	1	2	2	3	3	4	4
H		4	4	6	6	8	8	10	10
J		0	85	85	185	185	285	285	385
K		0	100	100	200	200	300	300	400
M		2	3	3	3	3	3	3	3
Allowable static load on rod tip (N)		144	117	99	85.4	75	66.7	59.9	54.3
Allowable dynamic load on rod tip (5000km life) (N)	Load offset 0mm	58.1	46.4	38.3	32.4	27.9	24.4	21.5	19.2
	Load offset 100mm	38.8	34.0	29.7	26.2	23.2	20.8	18.7	16.8
Allowable static torque on rod tip (N·m)		14.5	11.8	10.0	8.7	7.6	6.8	6.2	5.6
Allowable dynamic torque on rod tip (N·m)		3.8	3.3	2.9	2.6	2.3	2.0	1.8	1.6
Mass (kg)	W/o brake	2.5	2.7	2.9	3.2	3.4	3.6	3.9	4.1
	W/ brake	2.8	3.0	3.2	3.5	3.7	3.9	4.2	4.4

■ Rod Deflection of RCS4-RRA6R (Reference Values)



Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Pulse train	Program	Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET. Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-RRA7R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 70* mm | 200v AC Servo Motor

■ Model Specification Items

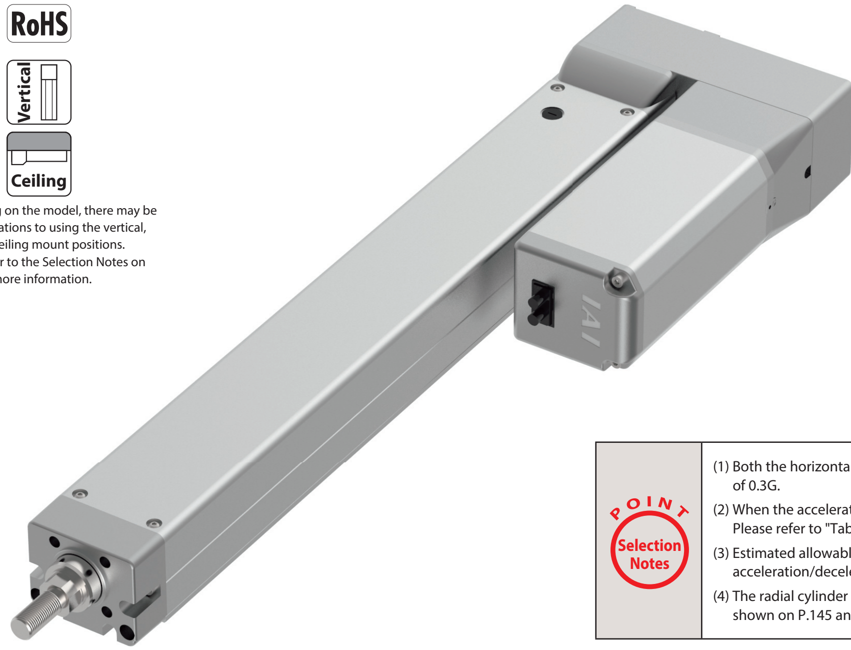
RCS4	—	RRA7R	—	WA	—	200	—	☐	—	☐	—	T2	—	☐	—	☐
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		200: Servo motor 200W		24:24mm 16:16mm 8: 8mm 4: 4mm		70:70mm ~ 520:520mm (50mm increments)		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X☐☐ : Specified Length R☐☐ : Robot Cable		Refer to Options table below.

* Body width does not include the width of the side-mounted motor.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



POINT Selection Notes

(1) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(2) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(4) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.145 and after for the allowable load mass.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-RRA7R-WA-200-24-①-T2-②-③	200	24	20	6	142	70~520 (50mm increments)
RCS4-RRA7R-WA-200-16-①-T2-②-③		16	45	12	214	
RCS4-RRA7R-WA-200-8-①-T2-②-③		8	60	25	427	
RCS4-RRA7R-WA-200-4-①-T2-②-③		4	80	35	855	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed (Unit: mm/s)

Lead \ Stroke	70~520 (50mm increments)
24	1440
16	960
8	480
4	240

① Stroke

① Stroke (mm)	RCS4-RRA7R	① Stroke (mm)	RCS4-RRA7R
70	○	**320**	○
120	○	**370**	○
170	○	**420**	○
220	○	**470**	○
270	○	**520**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options * Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Cable exit direction (Outside)	**CJO**	See P.131
Flange	**FL**	See P.132
Tip adapter (Flange)	**FFA**	See P.131
Tip adapter (Keyway)	**KFA**	See P.134
Tip adapter (Internal thread)	**NFA**	See P.135
Motor side-mounted to left (standard)	**ML**	See P.135
Motor side-mounted to right	**MR**	See P.135
Non-motor end specification	**NM**	See P.136

* Be sure to confirm with the "Selection Notes (P.138)" when selecting options.

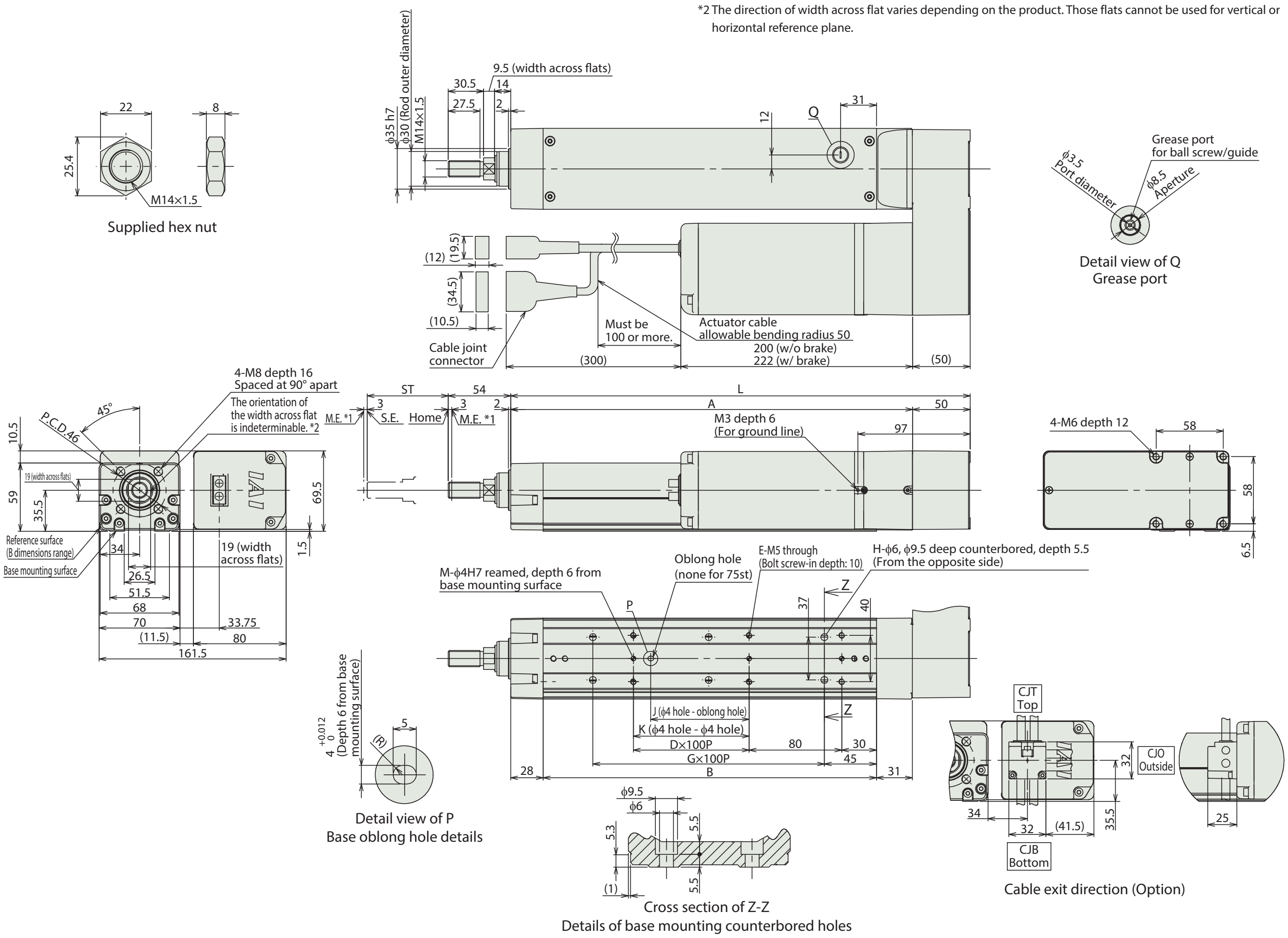
Actuator Specifications

Item	Description
Drive system	Ball screw ϕ12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ30mm Material: Aluminum with hard alumite treatment
Rod non-rotation precision	0 degrees
Allowable load and torque on rod tip	Please see P. 72
Rod tip overhang distance	150mm
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

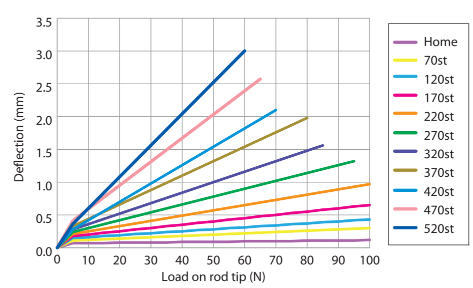
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flat varies depending on the product. Those flats cannot be used for vertical or horizontal reference plane.



■ Dimensions and Mass by Stroke

Stroke		70	120	170	220	270	320	370	420	470	520
L		297	347	397	447	497	547	597	647	697	747
A		247	297	347	397	447	497	547	597	647	697
B		188	238	288	338	388	438	488	538	588	638
D		0	1	1	2	2	3	3	4	4	5
E		4	6	6	8	8	10	10	12	12	14
G		1	1	2	2	3	3	4	4	5	5
H		4	4	6	6	8	8	10	10	12	12
J		0	85	85	185	185	285	285	385	385	485
K		0	0	100	200	200	300	300	400	400	500
M		2	2	3	3	3	3	3	3	3	3
Allowable static load on rod tip (N)		175	147	126	111	98.6	88.7	80.6	73.8	68	63
Allowable dynamic load on rod tip (5000km life) (N)	Load offset 0mm	75.7	62.6	53.1	46.0	40.5	36.1	32.5	29.4	26.9	24.7
	Load offset 100mm	49.8	45.1	40.5	36.5	33.1	30.2	27.7	25.5	23.6	21.9
Allowable static torque on rod tip (N·m)		17.6	14.7	12.7	11.2	9.9	9.0	8.2	7.5	6.94	6.45
Allowable dynamic torque on rod tip (N·m)		5.0	4.5	4.0	3.6	3.3	3.0	2.8	2.5	2.32	2.16
Mass (kg)	W/o brake	4.5	4.8	5.0	5.3	5.6	5.8	6.1	6.4	6.6	6.9
	W/ brake	5.0	5.3	5.5	5.8	6.1	6.3	6.6	6.9	7.1	7.4

■ Rod Deflection of RCS4-RRA7R (Reference Values)



Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Pulse train	Program	Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet CC-Link PROFIBUS CompoNet MECHATROLINK EtherCAT EtherNet/IP PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-RRA8R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 90* mm | 200v AC Servo Motor

■ Model Specification Items

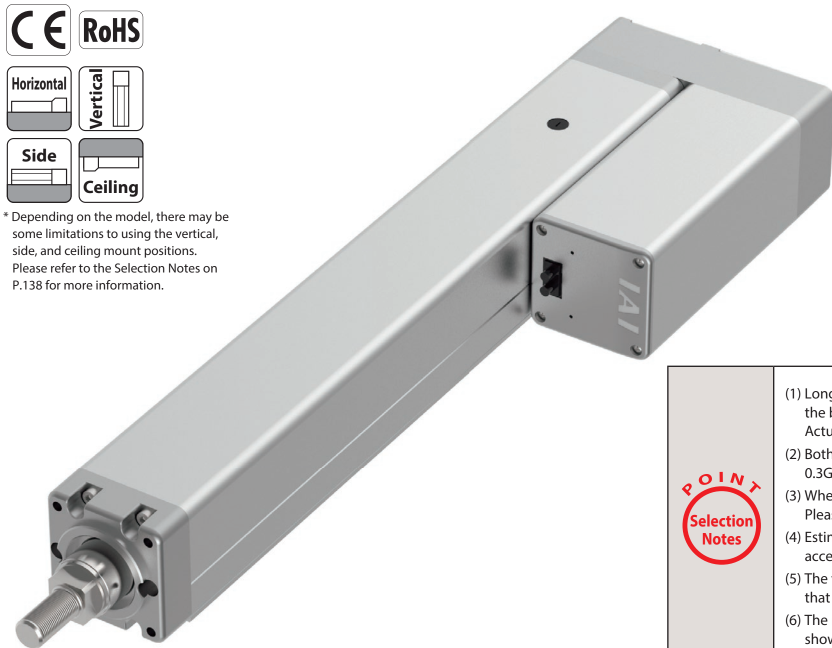
RCS4	—	RRA8R	—	WA	—	400	—	☐	—	☐	—	T2	—	☐	—	☐
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		400: Servo motor 400W		30:30mm 20:20mm 10:10mm 5: 5mm		50:50mm ≀ 700:700mm (50mm increments)		T2:SCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X☐☐ : Specified Length R☐☐ : Robot Cable		Refer to Options table below.

* Body width does not include the width of the side-mounted motor.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below
(2) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G. (0.2G for lead 5).
(3) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(5) The value of the maximum payload assumes that there is an external guide and that the rod is not subjected to external force other than in the moving direction.
(6) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.145 and after for the allowable load mass.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-RRA8R-WA-400-30-①-T2-②-③	400	30	30	8	226	50~700 (50mm increments)
RCS4-RRA8R-WA-400-20-①-T2-②-③		20	60	17	339	
RCS4-RRA8R-WA-400-10-①-T2-②-③		10	80	34	678	
RCS4-RRA8R-WA-400-5-①-T2-②-③		5	100	72	1357	

■ Stroke and Max Speed

(Unit: mm/s)

Lead \ Stroke	50~250 (50mm increments)	300 (mm)	350 (mm)	400 (mm)	450 (mm)	500 (mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)
30	1300		1230	970	790	650	540	460	400	350
20	1000		820	650	520	430	360	310	260	230
10	550	520	400	310	250	210	180	150	130	110
5	275	250	190	150	120	100	80	70	60	55

Legend: ① Stroke ② Cable Length ③ Option

① Stroke

① Stroke (mm)	RCS4-RRA8R	① Stroke (mm)	RCS4-RRA8R
50	○	**400**	○
100	○	**450**	○
150	○	**500**	○
200	○	**550**	○
250	○	**600**	○
300	○	**650**	○
350	○	**700**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options

* Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Cable exit direction (Outside)	**CJO**	See P.131
Flange	**FL**	See P.132
Tip adapter (Internal thread)	**NFA**	See P.135
Motor side-mounted to left (standard)	**ML**	See P.135
Motor side-mounted to right	**MR**	See P.135
Non-motor end specification	**NM**	See P.136

* Be sure to confirm with the "Selection Notes (P.138)" when selecting options.

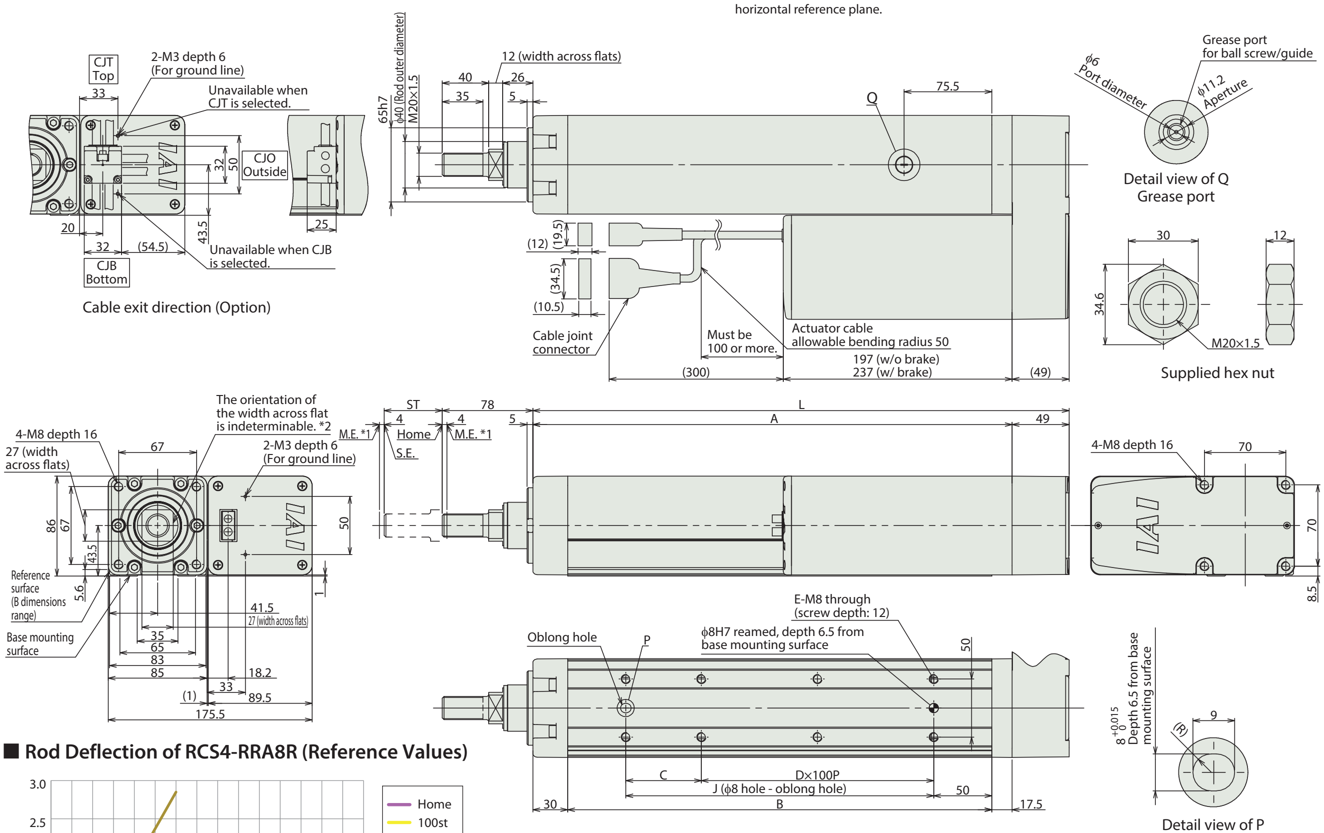
Actuator Specifications

Item	Description
Drive system	Ball screw ϕ16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ40mm Material: Aluminum with hard alumite treatment
Rod non-rotation precision	0 degrees
Allowable load and torque on rod tip	Please see P. 74
Rod tip overhang distance	150mm
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

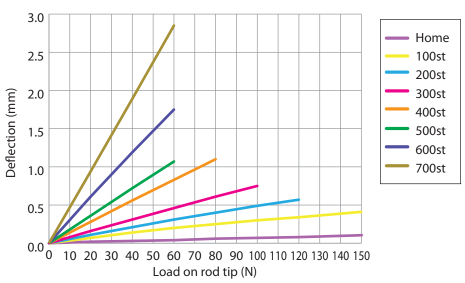
Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flat varies depending on the product. Those flats cannot be used for vertical or horizontal reference plane.



■ Rod Deflection of RCS4-RRA8R (Reference Values)



■ Dimensions and Mass by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700
L		311.5	361.5	411.5	461.5	511.5	561.5	611.5	661.5	711.5	761.5	811.5	861.5	911.5	961.5
A		262.5	312.5	362.5	412.5	462.5	512.5	562.5	612.5	662.5	712.5	762.5	812.5	862.5	912.5
B		215	265	315	365	415	465	515	565	615	665	715	765	815	865
C		115	65	115	65	115	65	115	65	115	65	115	65	115	65
D		0	1	1	2	2	3	3	4	4	5	5	6	6	7
E		4	6	6	8	8	10	10	12	12	14	14	16	16	18
J		115	165	215	265	315	365	415	465	515	565	615	665	715	765
Allowable static load on rod tip (N)		222	186	159	139	124	111	101	92	84.7	78.4	72.8	68	63.7	59.8
Allowable dynamic load on rod tip (5000km life) (N)	Load offset 0mm	93	76.3	64.7	56	49.2	43.8	39.3	35.6	32.4	29.7	27.3	25.2	23.3	21.7
	Load offset 100mm	72	61.6	53.9	48	43	38.9	35.4	32.3	29.7	27.4	25.3	23.5	21.9	20.4
Allowable static torque on rod tip (N·m)		22.3	18.7	16.1	14.1	12.6	11.3	10.3	9.4	8.7	8.1	7.6	7.1	6.7	6.3
Allowable dynamic torque on rod tip (N·m)		7.2	6.2	5.4	4.8	4.3	3.9	3.5	3.2	3	2.7	2.5	2.4	2.2	2
Mass (kg)	W/o brake	7.9	8.3	8.8	9.3	9.8	10.3	10.8	11.2	11.7	12.2	12.7	13.2	13.7	14.1
	W/ brake	8.5	8.9	9.4	9.9	10.4	10.9	11.4	11.8	12.3	12.8	13.3	13.8	14.3	14.7

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
SCON-CB/CGB		1	Single phase 200VAC	●	●	–	DeviceNet CC-Link PROFIBUS CompoNet MECHATROLINK EtherCAT EtherNet/IP PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SSEL-CS		2	Single phase 100V/200VAC	●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

Foreword
Slider Type
Wide Slider Type
Rod Type
Radial Cylinder®
Wide Radial Cylinder
Table Type
Cleanroom Slider
Cleanroom Wide Slider
Options
Reference Data
Controller

RCS4-WRA10C

Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 100 mm | 200v AC Servo Motor

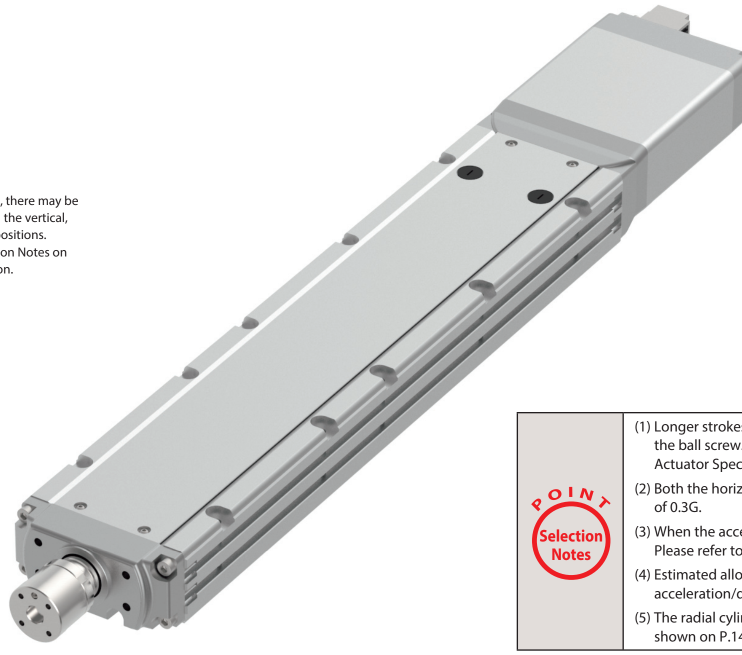
■ Model Specification Items

RCS4	—	WRA10C	—	WA	—	60	—	☐	—	☐	—	T2	—	☐	—	☐
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		60: Servo motor 60W		16: 16mm 10: 10mm 5: 5mm 2.5:2.5mm		50:50mm ≀ 500:500mm (50mm increments)		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X☐☐ : Specified Length R☐☐ : Robot Cable		Refer to Options table below. * Be sure to select a direction for the cable exit direction.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.

(2) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.

(3) When the acceleration is increased, the payload will be reduced.
Please refer to "Table of Payload by Acceleration" on P.139 for more details.

(4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.

(5) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.147 and after for the allowable load mass.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-WRA10C-WA-60-16-①-T2-②-③	60	16	5	–	53	50~500 (50mm increments)
RCS4-WRA10C-WA-60-10-①-T2-②-③		10	16	3	85	
RCS4-WRA10C-WA-60-5-①-T2-②-③		5	25	5	170	
RCS4-WRA10C-WA-60-2.5-①-T2-②-③		2.5	40	10	340	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed

(Unit: mm/s)

Lead \ Stroke	50~400 (50mm increments)	450 (mm)	500 (mm)
16	800		770
10	600	580	490
5	300	290	240
2.5	150	145	120

① Stroke

① Stroke (mm)	RCS4-WRA10C	① Stroke (mm)	RCS4-WRA10C
50	○	300	○
100	○	350	○
150	○	400	○
200	○	450	○
250	○	500	○

② Cable Length

Type	Cable Code
Standard	**P**(1m) **S**(3m) **M**(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m) **X11**(11m)~**X15**(15m) **X16**(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m) **R04**(4m) ~**R05**(5m) **R06**(6m) ~**R10**(10m) **R11**(11m)~**R15**(15m) **R16**(16m)~**R20**(20m)

③ Options

* Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Flange	**FL**	See P.132
Non-motor end specification	**NM**	See P.136
T-slot nut bar (Left)	**NTBL**	See P.136
T-slot nut bar (Right)	**NTBR**	See P.136

Actuator Specifications

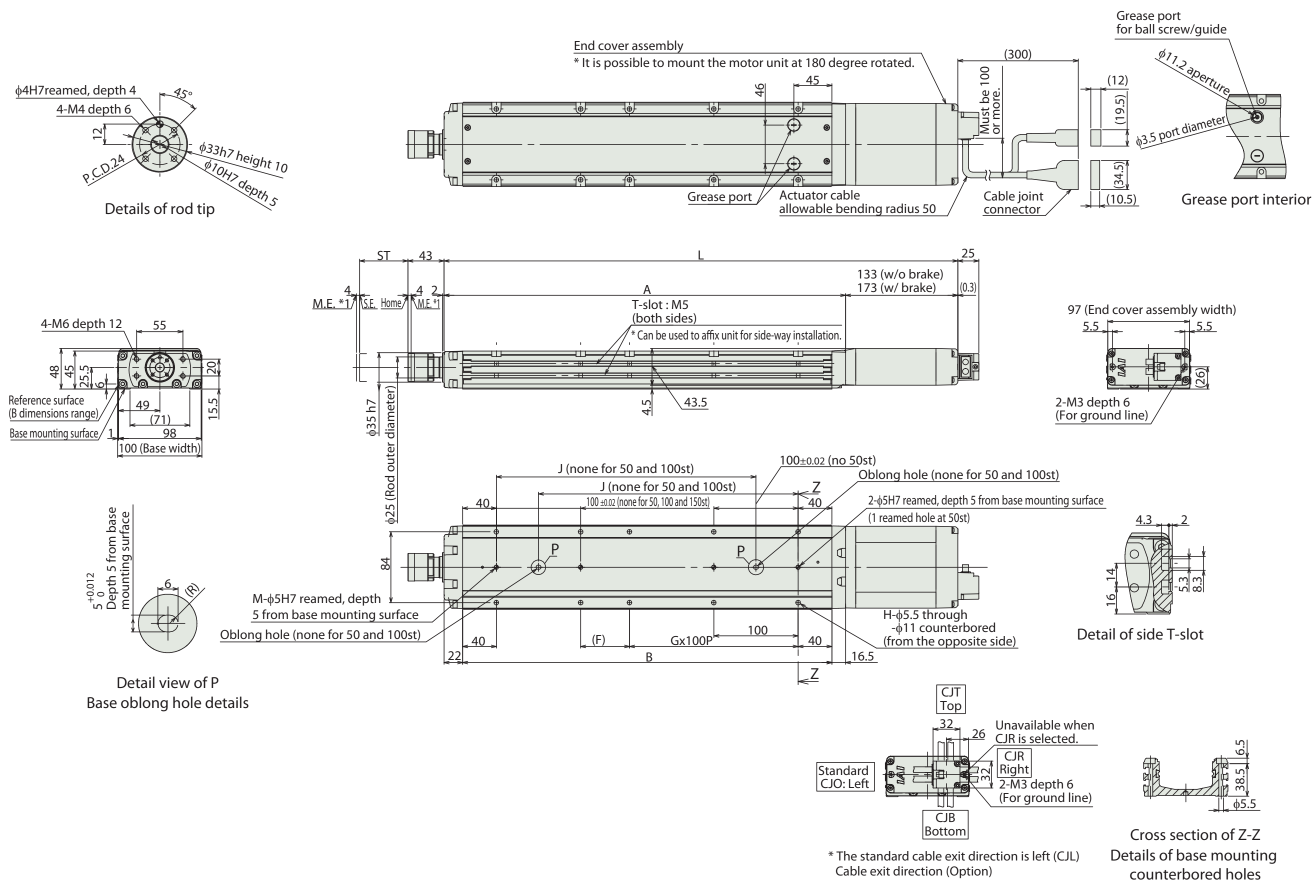
Item	Description
Drive system	Ball screw ϕ8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ25mm Stainless steel
Rod non-rotation precision	0 degrees
Allowable load and torque on rod tip	Please see P. 76
Rod tip overhang distance	100mm or less
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

IAI

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

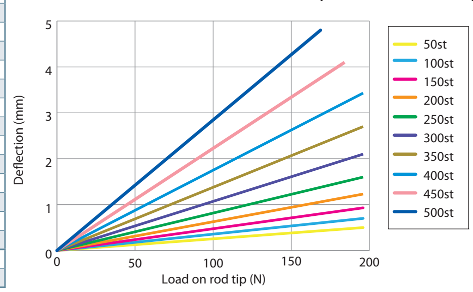
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



Dimensions and Mass by Stroke

ST			50	100	150	200	250	300	350	400	450	500
L	W/o brake		359.5	409.5	459.5	509.5	559.5	609.5	659.5	709.5	759.5	809.5
	W/ brake		399.5	449.5	499.5	549.5	599.5	649.5	699.5	749.5	799.5	849.5
A			226.5	276.5	326.5	376.5	426.5	476.5	526.5	576.5	626.5	676.5
B			188	238	288	338	388	438	488	538	588	638
F			108	58	108	58	108	58	108	58	108	58
G			0	1	1	1	1	2	2	3	3	4
H			4	6	6	8	8	10	10	12	12	14
J			–	–	158	208	258	308	358	408	458	508
M			1	1	1	2	2	2	2	2	2	2
Allowable static load on rod tip (N)			196	196	196	196	196	196	196	196	184	169
Allowable static torque on rod tip (N·m)			10	10	10	10	10	10	10	10	10	10
3000km	Allowable load on rod tip (N)	Load offset 0mm	98	98	98	95	85	76	68	62	57	52
		Load offset 100mm	50	50	50	50	50	50	50	50	50	49
	Allowable dynamic torque on rod tip (N·m)		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.9
5000km	Allowable load on rod tip (N)	Load offset 0mm	98	98	91	80	71	63	57	52	47	43
		Load offset 100mm	50	50	50	50	50	50	50	48	44	40
	Allowable dynamic torque on rod tip (N·m)		5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.8	4.4	4.0
Mass (kg)	W/o brake		3.3	3.8	4.2	4.7	5.1	5.6	6.0	6.5	6.9	7.4
	W/ brake		3.6	4.1	4.5	5.0	5.4	5.9	6.3	6.8	7.2	7.7

Rod Deflection of RCS4-WRA10C (Reference Values)



Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-WRA12C

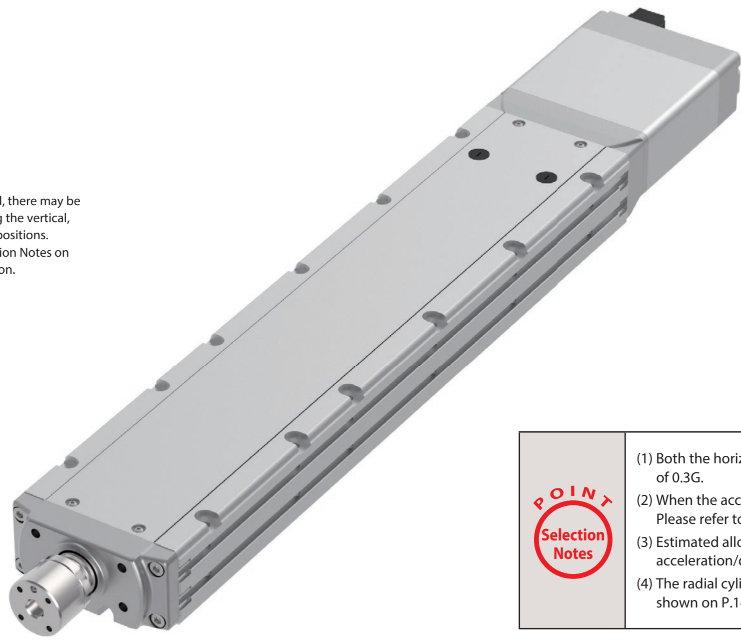
Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 120 mm | 200v AC Servo Motor

■ Model Specification Items

RCS4	—	WRA12C	—	WA	—	100	—		—		—	T2	—		—	
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		100: Servo motor 100W		20:20mm 12:12mm 6: 6mm 3: 3mm		50:50mm ~ 500:500mm (50mm increments)		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable		Refer to Options table below. * Be sure to select a direction for the cable exit direction.

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



POINT Selection Notes

(1) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(2) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(4) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.147 and after for the allowable load mass.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-WRA12C-WA-100-20-①-T2-②-③	100	20	12	2	85	50~500 (50mm increments)
RCS4-WRA12C-WA-100-12-①-T2-②-③		12	25	6	142	
RCS4-WRA12C-WA-100-6-①-T2-②-③		6	40	15	283	
RCS4-WRA12C-WA-100-3-①-T2-②-③		3	60	20	566	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed (Unit: mm/s)

Lead \ Stroke	50~500 (50mm increments)
20	1000
12	720
6	360
3	180

① Stroke

① Stroke (mm)	RCS4-WRA12C	① Stroke (mm)	RCS4-WRA12C
50	○	**300**	○
100	○	**350**	○
150	○	**400**	○
200	○	**450**	○
250	○	**500**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options * Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Flange	**FL**	See P.132
Non-motor end specification	**NM**	See P.136
T-slot nut bar (Left)	**NTBL**	See P.136
T-slot nut bar (Right)	**NTBR**	See P.136

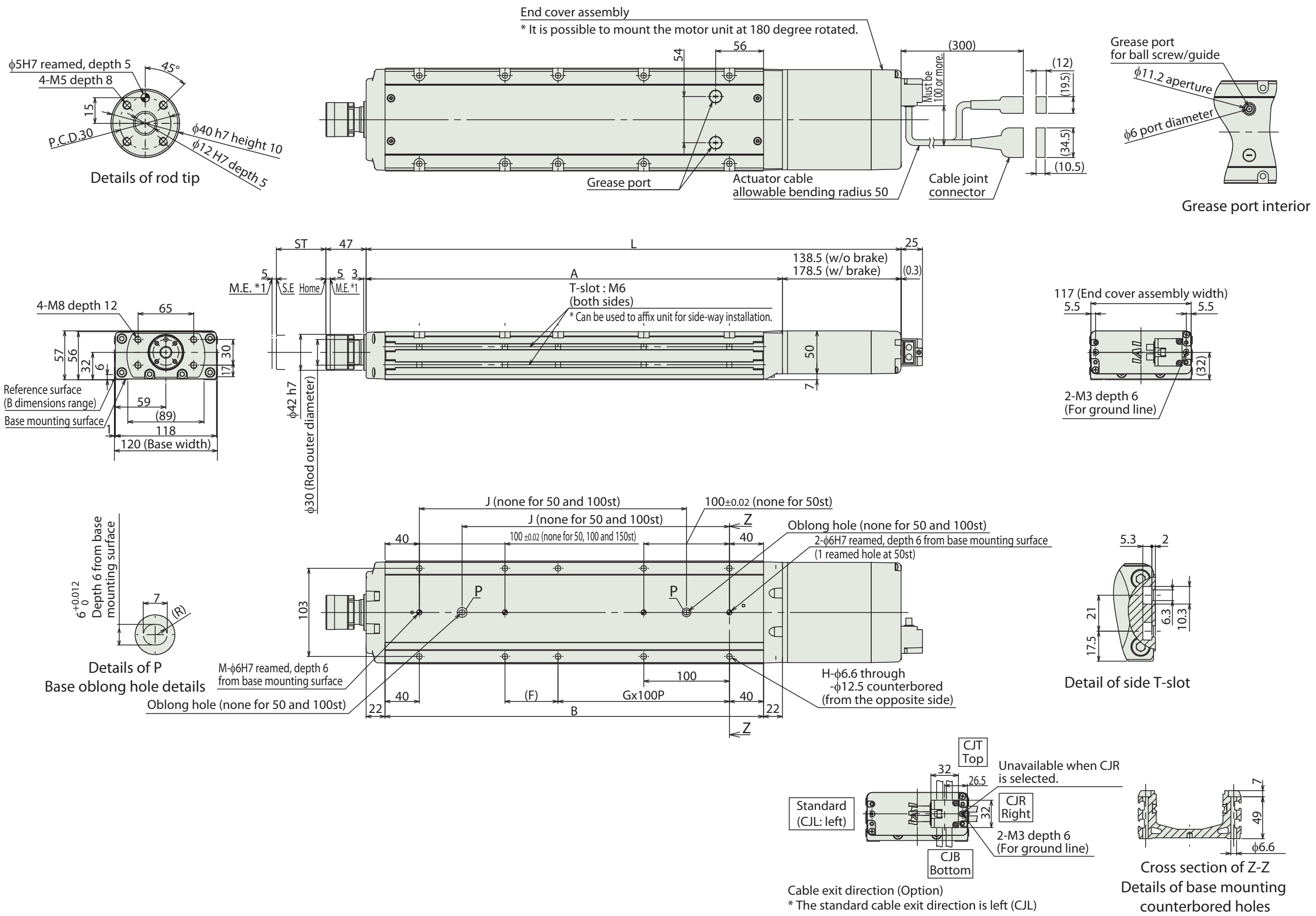
Actuator Specifications

Item	Description
Drive system	Ball screw ϕ10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ30mm Stainless steel
Rod non-rotation precision	0 degrees
Allowable load and torque on rod tip	Please see P. 78
Rod tip overhang distance	100mm or less
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

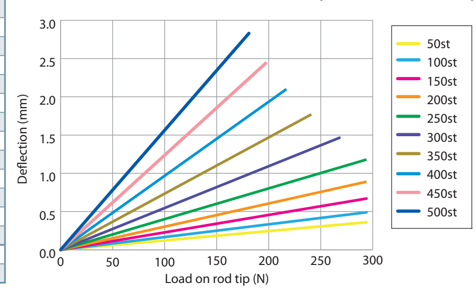
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



■ Dimensions and Mass by Stroke

ST			50	100	150	200	250	300	350	400	450	500
L		W/o brake	374.5	424.5	474.5	524.5	574.5	624.5	674.5	724.5	774.5	824.5
		W/ brake	414.5	464.5	514.5	564.5	614.5	664.5	714.5	764.5	814.5	864.5
A			236	286	336	386	436	486	536	586	636	686
B			192	242	292	342	392	442	492	542	592	642
F			112	62	112	62	112	62	112	62	112	62
G			0	1	1	1	1	2	2	3	3	4
H			4	6	6	8	8	10	10	12	12	14
J			–	–	162	212	262	312	362	412	462	512
M			1	1	1	2	2	2	2	2	2	2
Allowable static load on rod tip (N)			294	294	294	294	294	269	241	218	198	181
Allowable static torque on rod tip (N·m)			20	20	20	20	20	20	20	20	20	20
3000km	Allowable load on rod tip (N)	Load offset 0mm	147	147	137	121	107	96	87	79	72	65
		Load offset 100mm	100	100	100	100	99	90	82	75	68	63
	Allowable dynamic torque on rod tip (N·m)		10.0	10.0	10.0	10.0	9.9	9.0	8.2	7.5	6.8	6.3
5000km	Allowable load on rod tip (N)	Load offset 0mm	147	133	115	101	90	80	72	65	59	54
		Load offset 100mm	100	100	100	92	83	75	68	62	56	51
	Allowable dynamic torque on rod tip (N·m)		10.0	10.0	10.0	9.2	8.3	7.5	6.8	6.2	5.6	5.1
Mass (kg)		W/o brake	4.8	5.5	6.1	6.8	7.4	8.1	8.7	9.4	10.0	10.7
		W/ brake	5.1	5.8	6.4	7.1	7.7	8.4	9.0	9.7	10.3	11.0

■ Rod Deflection of RCS4-WRA12C (Reference Values)



Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-WRA14C

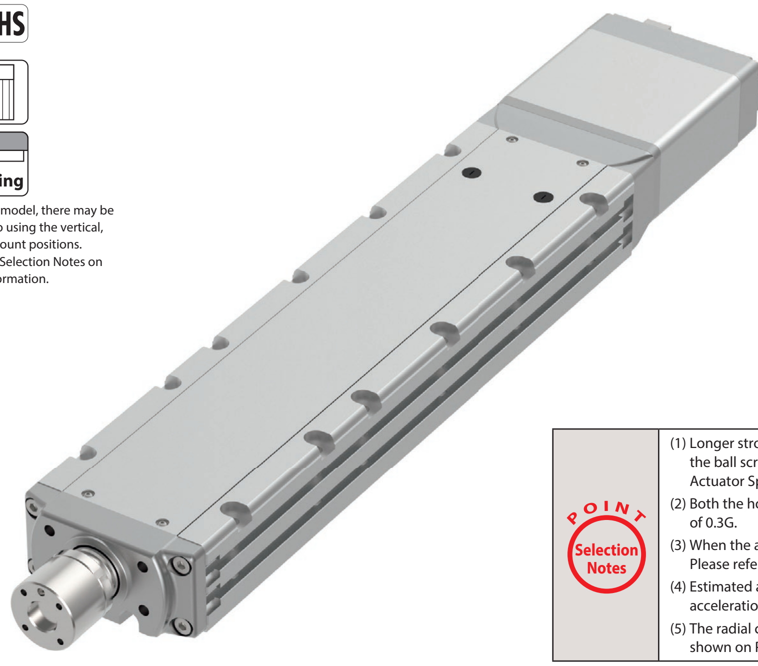
Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 140 mm | 200v AC Servo Motor

■ Model Specification Items

RCS4	WRA14C	WA	200			T2		
Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
		WA: Battery-less Absolute	200: Servo motor 200W	24:24mm 16:16mm 8: 8mm 4: 4mm	50:50mm ≀ 600:600mm (50mm increments)	T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Refer to Options table below. * Be sure to select a direction for the cable exit direction.

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.

(2) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.

(3) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.

(4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.

(5) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.147 and after for the allowable load mass.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS4-WRA14C-WA-200-24-①-T2-②-③	200	24	25	3	142	50~600 (50mm increments)
RCS4-WRA14C-WA-200-16-①-T2-②-③		16	50	8	214	
RCS4-WRA14C-WA-200-8-①-T2-②-③		8	65	20	427	
RCS4-WRA14C-WA-200-4-①-T2-②-③		4	85	30	855	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed

(Unit: mm/s)

Lead \ Stroke	50~500 (50mm increments)	550 (mm)	600 (mm)
24	1200	1200	1200
16	800	800	800
8	480	450	390
4	240	220	190

① Stroke

① Stroke (mm)	RCS4-WRA14C	① Stroke (mm)	RCS4-WRA14C
50	○	**350**	○
100	○	**400**	○
150	○	**450**	○
200	○	**500**	○
250	○	**550**	○
300	○	**600**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options

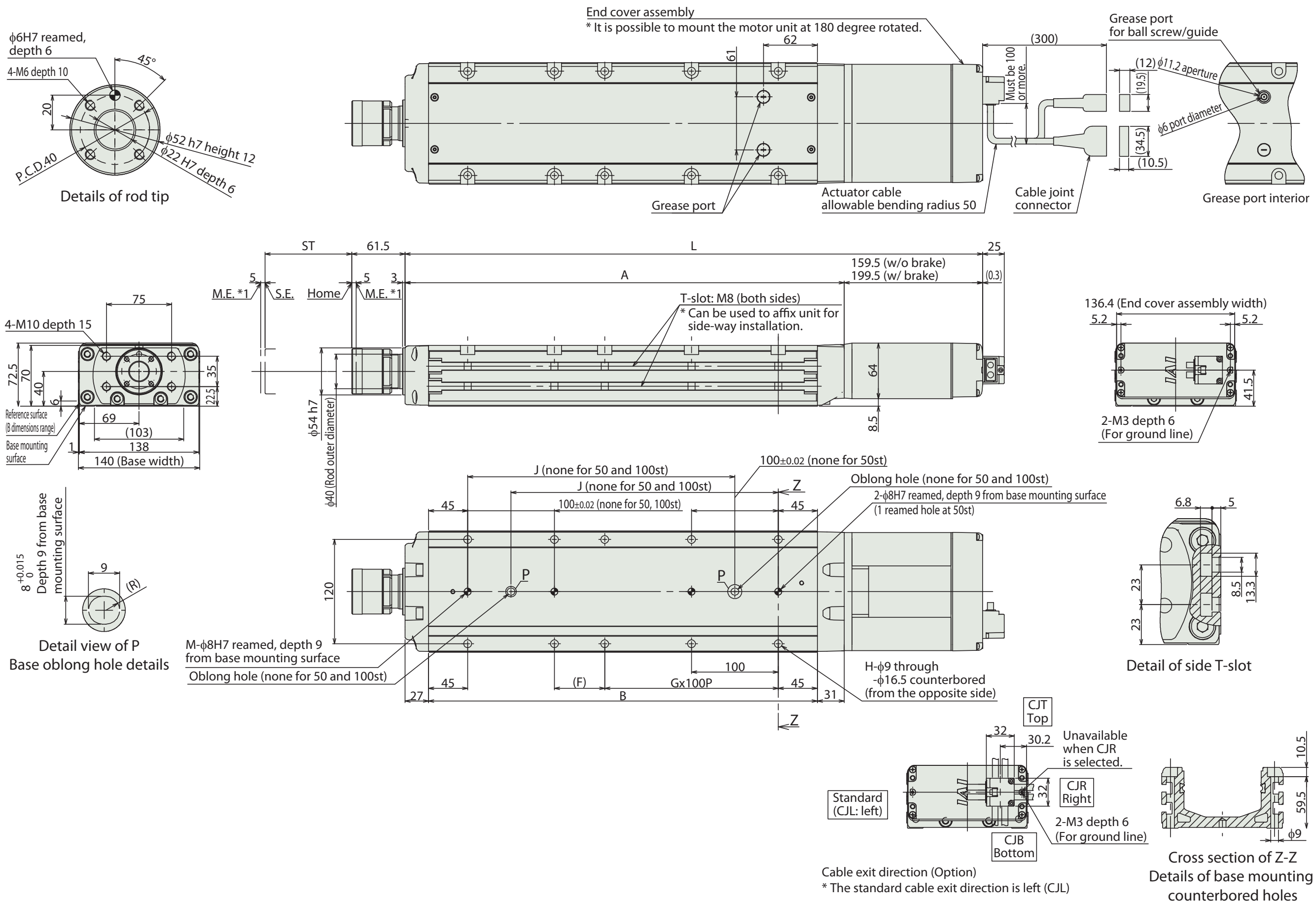
* Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Flange	**FL**	See P.132
Non-motor end specification	**NM**	See P.136
T-slot nut bar (Left)	**NTBL**	See P.136
T-slot nut bar (Right)	**NTBR**	See P.136

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1 or less
Rod	ϕ40mm Stainless steel
Rod non-rotation precision	0 degrees
Allowable load and torque on rod tip	Please see P. 80
Rod tip overhang distance	150mm or less
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

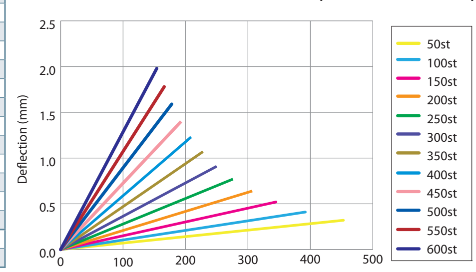
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



■ Dimensions and Mass by Stroke

ST			50	100	150	200	250	300	350	400	450	500	550	600
L		W/o brake	415.5	465.5	515.5	565.5	615.5	665.5	715.5	765.5	815.5	865.5	915.5	965.5
		W/ brake	455.5	505.5	555.5	605.5	655.5	705.5	755.5	805.5	855.5	905.5	955.5	1005.5
A			256	306	356	406	456	506	556	606	656	706	756	806
B			198	248	298	348	398	448	498	548	598	648	698	748
F			108	58	108	58	108	58	108	58	108	58	108	58
G			0	1	1	1	1	2	2	3	3	4	4	5
H			4	6	6	8	8	10	10	12	12	14	14	16
J			–	–	158	208	258	308	358	408	458	508	558	608
M			1	1	1	2	2	2	2	2	2	2	2	2
Allowable static load on rod tip (N)			454	392	345	307	276	251	229	210	193	179	166	154
Allowable static torque on rod tip (N·m)			30	30	30	30	30	30	30	30	30	30	30	30
3000km	Allowable load on rod tip (N)	Load offset 0mm	199	170	148	131	117	104	94	85	77	70	64	58
		Load offset 100mm	100	100	100	100	100	95	87	79	72	66	60	55
	Allowable dynamic torque on rod tip (N·m)		15.0	15.0	15.0	15.0	15.0	14.3	13.0	11.8	10.8	9.9	9.0	8.2
5000km	Allowable load on rod tip (N)	Load offset 0mm	167	143	124	109	97	87	78	70	63	57	51	46
		Load offset 100mm	100	100	100	96	87	79	71	65	59	53	48	44
	Allowable dynamic torque on rod tip (N·m)		15.0	15.0	15.0	14.4	13.0	11.8	10.7	9.7	8.8	8.0	7.3	6.6
Mass (kg)		W/o brake	8.0	8.8	9.8	10.6	11.6	12.4	13.3	14.2	15.1	16.0	16.9	17.8
		W/ brake	8.6	9.4	10.4	11.2	12.2	13.0	13.9	14.8	15.7	16.6	17.5	18.4

■ Rod Deflection of RCS4-WRA14C (Reference Values)



Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-WRA16C

Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 160 mm | 200v AC Servo Motor

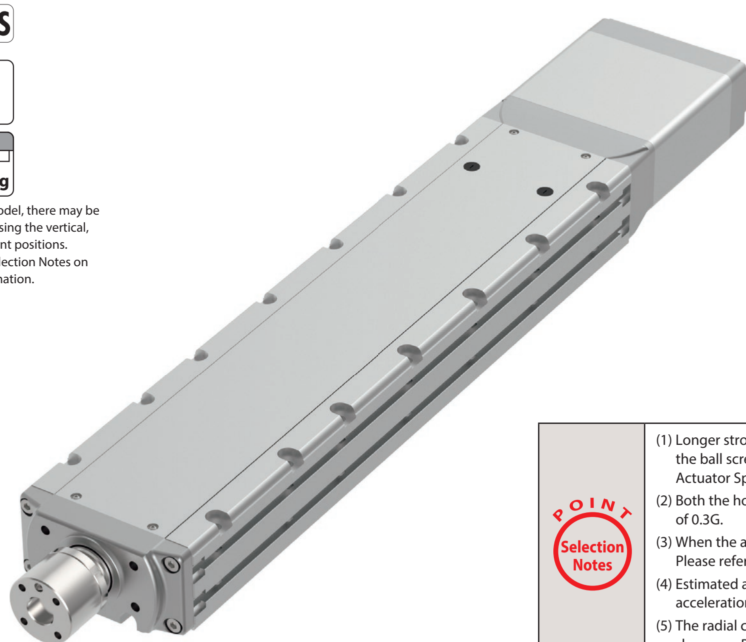
■ Model Specification Items

RCS4	—	WRA16C	—	WA	—	400	—		—		—	T2	—		—	
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		400: Servo motor 400W		30:30mm 20:20mm 10:10mm 5: 5mm		50:50mm ~ 800:800mm (50mm increments)		T2:SCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable		Refer to Options table below. * Be sure to select a direction for the cable exit direction.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.

(2) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.

(3) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.

(4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.

(5) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.147 and after for the allowable load mass.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-WRA16C-WA-400-30-①-T2-②-③	400	30	30	6	226	50~800 (50mm increments)
RCS4-WRA16C-WA-400-20-①-T2-②-③		20	60	12	339	
RCS4-WRA16C-WA-400-10-①-T2-②-③		10	80	35	678	
RCS4-WRA16C-WA-400-5-①-T2-②-③		5	100	50	1357	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed

(Unit: mm/s)

Lead \ Stroke	50~250 (50mm increments) (mm)	300 (mm)	350 (mm)	400 (mm)	450 (mm)	500 (mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
30	1300		1050	860	710	600	510	440	390	340	300	270
20	1000	880	700	570	470	400	340	295	260	225	200	180
10	500	430	340	280	230	195	165	145	125	110	100	90
5	250	210	170	130	115	95	80	70	60	55	50	45

① Stroke

① Stroke (mm)	RCS4-WRA16C	① Stroke (mm)	RCS4-WRA16C
50	○	**450**	○
100	○	**500**	○
150	○	**550**	○
200	○	**600**	○
250	○	**650**	○
300	○	**700**	○
350	○	**750**	○
400	○	**800**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options

* Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Flange	**FL**	See P.132
Non-motor end specification	**NM**	See P.136
T-slot nut bar (Left)	**NTBL**	See P.136
T-slot nut bar (Right)	**NTBR**	See P.136

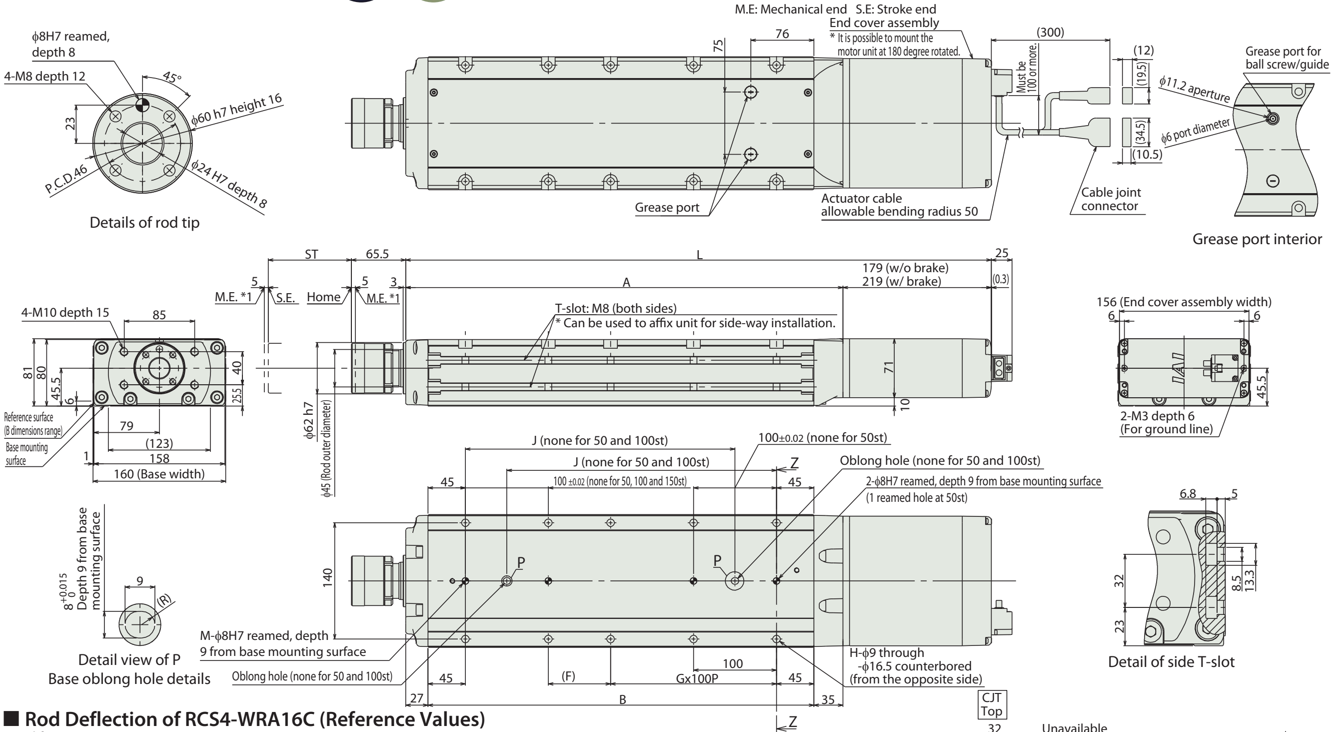
Actuator Specifications

Item	Description
Drive system	Ball screw ϕ16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ45mm Stainless steel
Rod non-rotation precision	0 degrees
Allowable load and torque on rod tip	Please see P. 82
Rod tip overhang distance	150mm or less
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

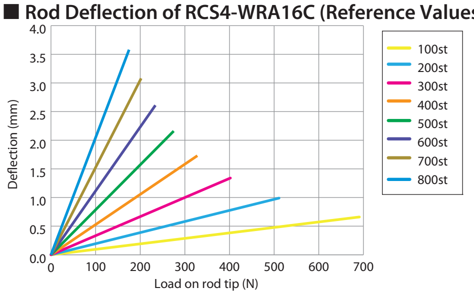
Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



■ Rod Deflection of RCS4-WRA16C (Reference Values)



■ Dimensions and Mass by Stroke

ST			50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L		W/o brake	456	506	556	606	656	706	756	806	856	906	956	1006	1056	1106	1156	1206
		W/ brake	496	546	596	646	696	746	796	846	896	946	996	1046	1096	1146	1196	1246
A			277	327	377	427	477	527	577	627	677	727	777	827	877	927	977	1027
B			215	265	315	365	415	465	515	565	615	665	715	765	815	865	915	965
F			125	75	125	75	125	75	125	75	125	75	125	75	125	75	125	75
G			0	1	1	1	1	2	2	3	3	4	4	5	5	6	6	7
H			4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
J			–	–	175	225	275	325	375	425	475	525	575	625	675	725	775	825
M			1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2
Allowable static load on rod tip (N)			588	588	588	511	451	402	362	329	300	275	254	235	217	202	188	176
Allowable static torque on rod tip (N·m)			40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
3000km	Allowable load on rod tip (N)	Load offset 0mm	255	220	191	168	149	134	120	109	99	90	81	74	67	61	55	50
		Load offset 100mm	133	133	133	133	133	122	111	101	92	84	77	70	64	58	53	48
	Allowable dynamic torque on rod tip (N·m)		20.0	20.0	20.0	20.0	20.0	18.3	16.7	15.2	13.8	12.6	11.5	10.5	9.6	8.7	7.9	7.1
5000km	Allowable load on rod tip (N)	Load offset 0mm	214	184	160	140	124	111	99	89	80	72	65	59	53	47	42	37
		Load offset 100mm	133	133	133	124	112	101	91	83	75	68	62	56	50	45	40	36
	Allowable dynamic torque on rod tip (N·m)		20.0	20.0	20.0	18.6	16.8	15.2	13.7	12.4	11.3	10.2	9.2	8.4	7.5	6.8	6.0	5.3
Mass (kg)		W/o brake	11.4	12.5	13.6	14.8	15.9	17.1	18.2	19.4	20.5	21.7	22.8	24.0	25.1	26.3	27.4	28.6
		W/ brake	12.0	13.1	14.2	15.4	16.5	17.7	18.8	20.0	21.1	22.3	23.4	24.6	25.7	26.9	28.0	29.2

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1	Single phase 200VAC	–	–	●		512 (768 for network spec.)	
SSEL-CS		2	Single phase 100V/200VAC	●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-WRA10R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 100* mm | 200v AC Servo Motor

■ Model Specification Items

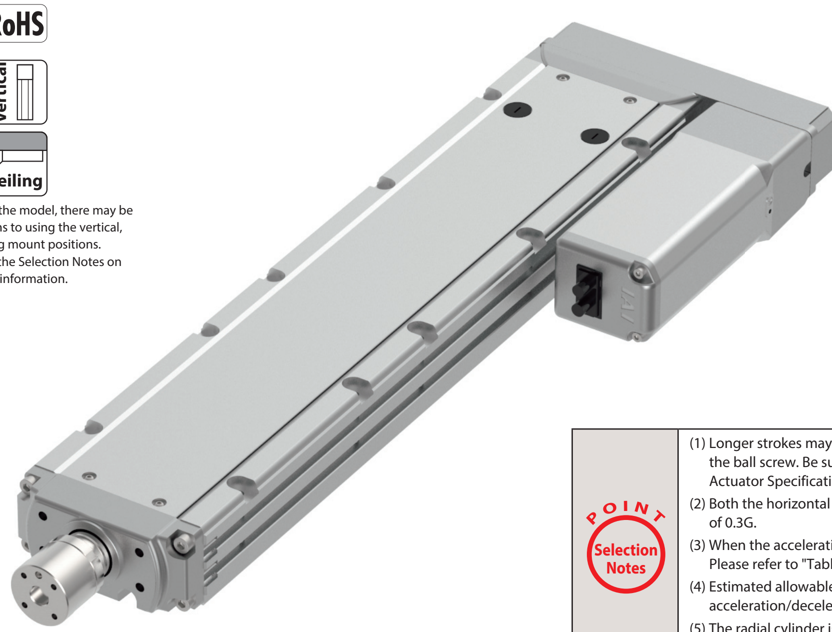
RCS4	—	WRA10R	—	WA	—	60	—	☐	—	☐	—	T2	—	☐	—	☐
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		60: Servo motor 60W		16: 16mm 10: 10mm 5: 5mm 2.5:2.5mm		50:50mm ≀ 500:500mm (50mm increments)		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X☐☐ : Specified Length R☐☐ : Robot Cable		Refer to Options table below.

* Body width does not include the width of the side-mounted motor.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.
(2) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(3) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(5) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.147 and after for the allowable load mass.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS4-WRA10R-WA-60-16-①-T2-②-③	60	16	5	–	53	50~500 (50mm increments)
RCS4-WRA10R-WA-60-10-①-T2-②-③		10	13	2.5	85	
RCS4-WRA10R-WA-60-5-①-T2-②-③		5	25	5	170	
RCS4-WRA10R-WA-60-2.5-①-T2-②-③		2.5	40	10	340	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed

(Unit: mm/s)

Lead \ Stroke	50~400 (50mm increments)	450 (mm)	500 (mm)
16	800		770
10	600	580	490
5	300	290	240
2.5	150	145	120

① Stroke

① Stroke (mm)	RCS4-WRA10R	① Stroke (mm)	RCS4-WRA10R
50	○	300	○
100	○	350	○
150	○	400	○
200	○	450	○
250	○	500	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options

* Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Cable exit direction (Outside)	**CJO**	See P.131
Flange	**FL**	See P.132
Motor side-mounted to left (standard)	**ML**	See P.135
Motor side-mounted to right	**MR**	See P.135
Non-motor end specification	**NM**	See P.136
T-slot nut bar (Left)	**NTBL**	See P.136
T-slot nut bar (Right)	**NTBR**	See P.136

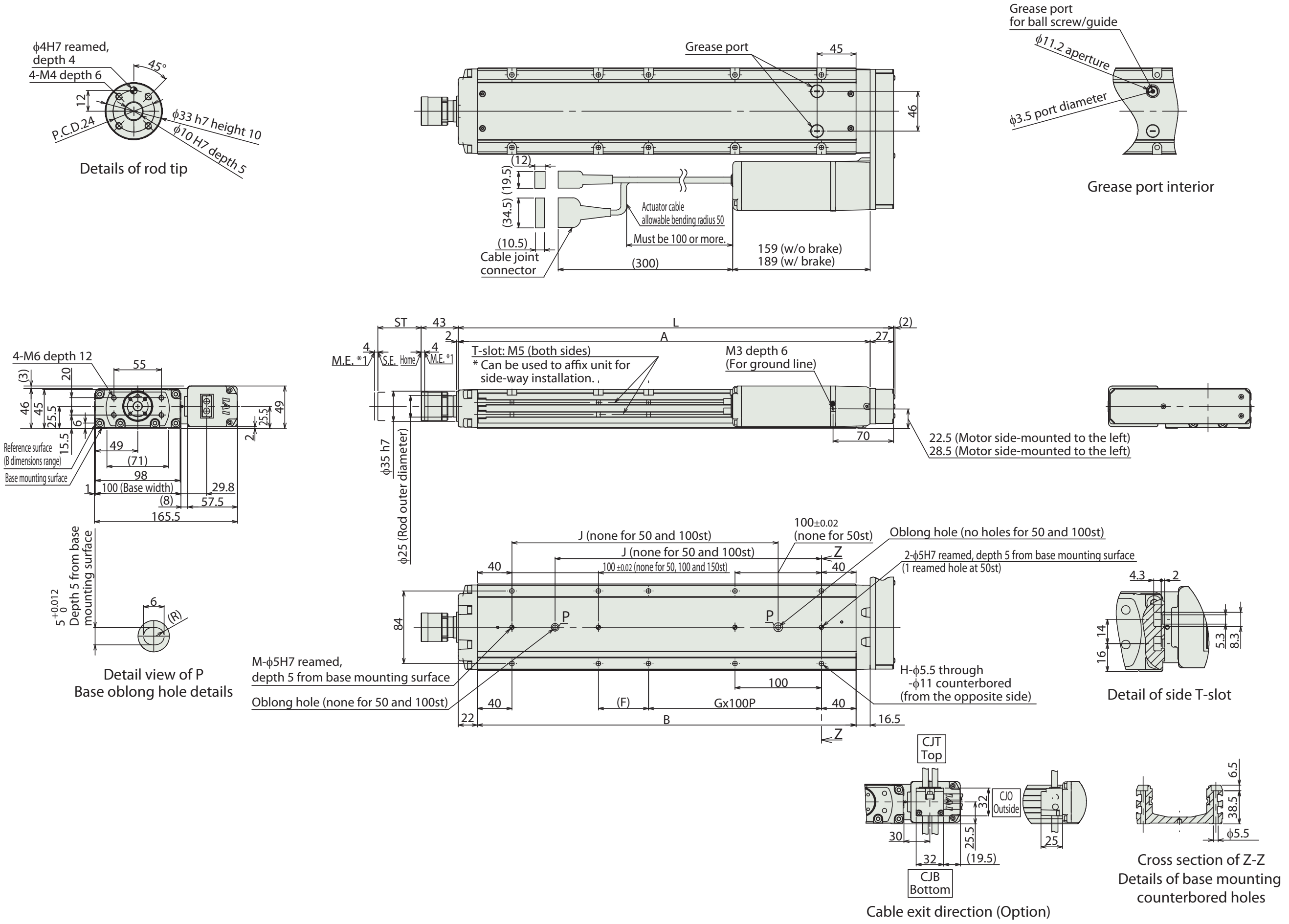
* Be sure to confirm with the "Selection Notes (P.138)" when selecting options.

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ25mm Stainless steel
Rod non-rotation precision	0 degrees
Allowable load and torque on rod tip	Please see P. 84
Rod tip overhang distance	100mm or less
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

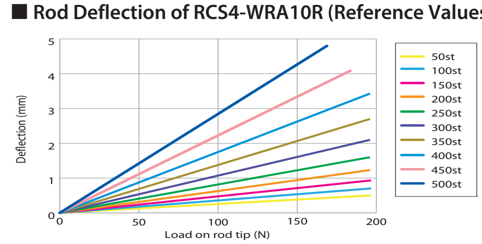
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



■ Dimensions and Mass by Stroke

ST			50	100	150	200	250	300	350	400	450	500
L			253.5	303.5	353.5	403.5	453.5	503.5	553.5	603.5	653.5	703.5
A			226.5	276.5	326.5	376.5	426.5	476.5	526.5	576.5	626.5	676.5
B			188	238	288	338	388	438	488	538	588	638
F			108	58	108	58	108	58	108	58	108	58
G			0	1	1	1	1	2	2	3	3	4
H			4	6	6	8	8	10	10	12	12	14
J			–	–	158	208	258	308	358	408	458	508
M			1	1	1	2	2	2	2	2	2	2
Allowable static load on rod tip (N)			196	196	196	196	196	196	196	196	184	169
Allowable static torque on rod tip (N·m)			10	10	10	10	10	10	10	10	10	10
3000km	Allowable load on rod tip (N)	Load offset 0mm	98	98	98	95	85	76	68	62	57	52
		Load offset 100mm	50	50	50	50	50	50	50	50	50	49
	Allowable dynamic torque on rod tip (N·m)		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.9
5000km	Allowable load on rod tip (N)	Load offset 0mm	98	98	91	80	71	63	57	52	47	43
		Load offset 100mm	50	50	50	50	50	50	50	48	44	40
	Allowable dynamic torque on rod tip (N·m)		5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.8	4.4	4.0
Mass (kg)	W/o brake		3.7	4.2	4.6	5.1	5.6	6.0	6.5	6.9	7.4	7.8
	W/ brake		4	4.5	4.9	5.4	5.9	6.3	6.8	7.2	7.7	8.1

■ Rod Deflection of RCS4-WRA10R (Reference Values)



Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Pulse train	Program	Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-WRA12R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 120* mm | 200v AC Servo Motor

■ Model Specification Items

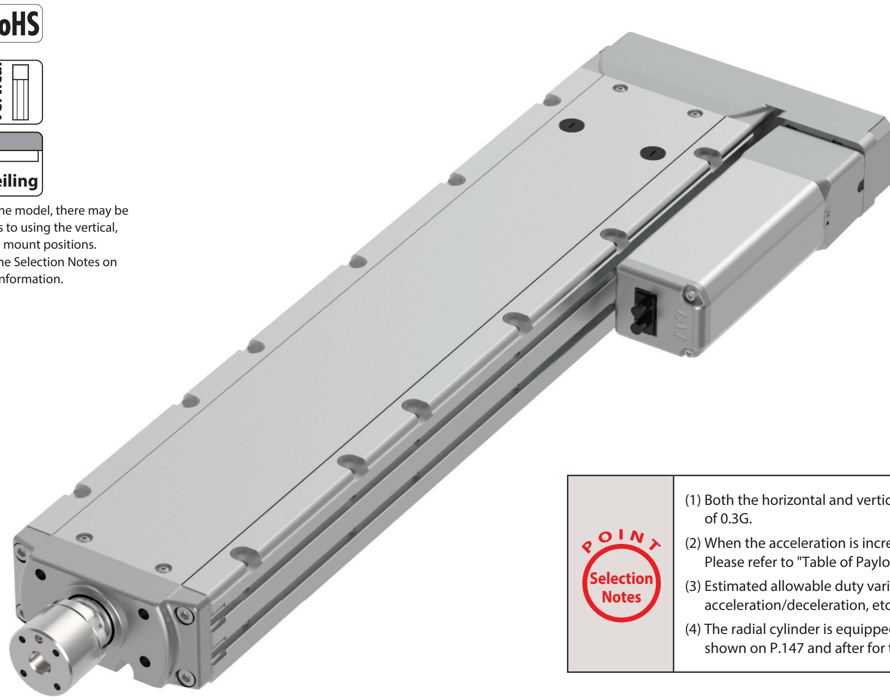
RCS4	—	WRA12R	—	WA	—	100	—		—		—	T2	—		—	
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		100: Servo motor 100W		20:20mm 12:12mm 6: 6mm 3: 3mm		50:50mm ~ 500:500mm (50mm increments)		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable		Refer to Options table below.

* Body width does not include the width of the side-mounted motor.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



POINT Selection Notes

(1) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(2) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(4) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.147 and after for the allowable load mass.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-WRA12R-WA-100-20-①-T2-②-③	100	20	12	2	85	50~500 (50mm increments)
RCS4-WRA12R-WA-100-12-①-T2-②-③		12	25	6	142	
RCS4-WRA12R-WA-100-6-①-T2-②-③		6	40	15	283	
RCS4-WRA12R-WA-100-3-①-T2-②-③		3	60	20	566	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed (Unit: mm/s)

Lead \ Stroke	50~500 (50mm increments)
20	1000
12	720
6	360
3	180

① Stroke

① Stroke (mm)	RCS4-WRA12R	① Stroke (mm)	RCS4-WRA12R
50	○	300	○
100	○	350	○
150	○	400	○
200	○	450	○
250	○	500	○

② Cable Length

Type	Cable Code
Standard	**P**(1m) **S**(3m) **M**(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m) **X11**(11m)~**X15**(15m) **X16**(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m) **R04**(4m) ~**R05**(5m) **R06**(6m) ~**R10**(10m) **R11**(11m)~**R15**(15m) **R16**(16m)~**R20**(20m)

③ Options * Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Cable exit direction (Outside)	**CJO**	See P.131
Flange	**FL**	See P.132
Motor side-mounted to left (standard)	**ML**	See P.135
Motor side-mounted to right	**MR**	See P.135
Non-motor end specification	**NM**	See P.136
T-slot nut bar (Left)	**NTBL**	See P.136
T-slot nut bar (Right)	**NTBR**	See P.136

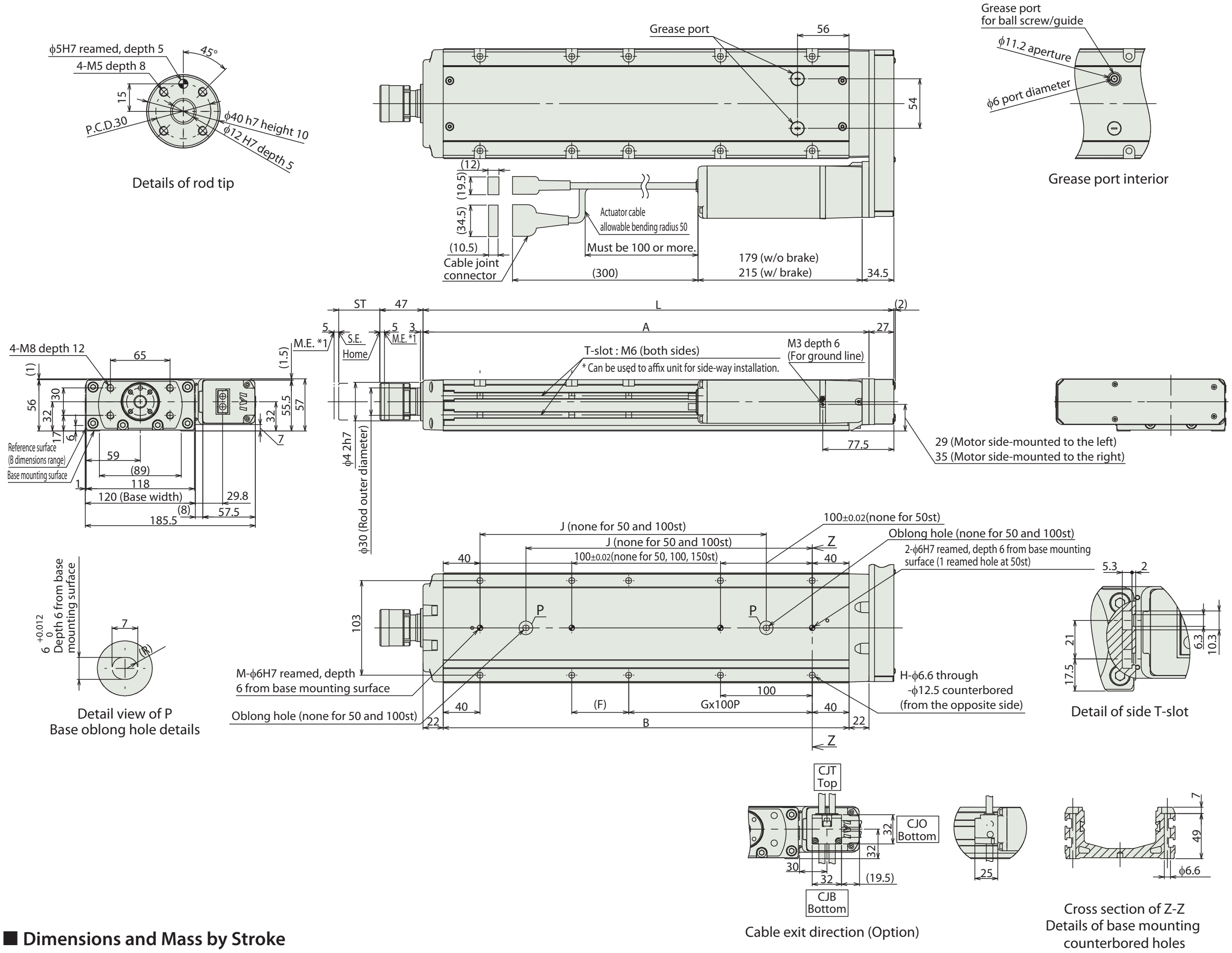
* Be sure to confirm with the "Selection Notes (P.138)" when selecting options.

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ30mm Stainless steel
Rod non-rotation precision	0 degrees
Allowable load and torque on rod tip	Please see P. 86
Rod tip overhang distance	100mm or less
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

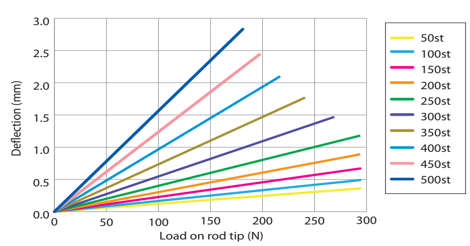
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



■ Dimensions and Mass by Stroke

ST		50	100	150	200	250	300	350	400	450	500
L		263	313	363	413	463	513	563	613	663	713
A		236	286	336	386	436	486	536	586	636	686
B		192	242	292	342	392	442	492	542	592	642
F		112	62	112	62	112	62	112	62	112	62
G		0	1	1	1	1	2	2	3	3	4
H		4	6	6	8	8	10	10	12	12	14
J		–	–	162	212	262	312	362	412	462	512
M		1	1	1	2	2	2	2	2	2	2
Allowable static load on rod tip (N)		294	294	294	294	294	269	241	218	198	181
Allowable static torque on rod tip (N·m)		20	20	20	20	20	20	20	20	20	20
3000km Allowable load on rod tip (N)	Load offset 0mm	147	147	137	121	107	96	87	79	72	65
	Load offset 100mm	100	100	100	100	99	90	82	75	68	63
	Allowable dynamic torque on rod tip (N·m)	10.0	10.0	10.0	10.0	9.9	9.0	8.2	7.5	6.8	6.3
5000km Allowable load on rod tip (N)	Load offset 0mm	147	133	115	101	90	80	72	65	59	54
	Load offset 100mm	100	100	100	92	83	75	68	62	56	51
	Allowable dynamic torque on rod tip (N·m)	10.0	10.0	10.0	9.2	8.3	7.5	6.8	6.2	5.6	5.1
Mass (kg)	W/o brake	5.2	5.9	6.5	7.2	7.8	8.5	9.1	9.8	10.4	11.1
	W/ brake	5.5	6.2	6.8	7.5	8.1	8.8	9.4	10.1	10.7	11.4

■ Rod Deflection of RCS4-WRA12R (Reference Values)



Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Pulse train	Program	Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET. Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-WRA14R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 140* mm | 200V AC Servo Motor

■ Model Specification Items

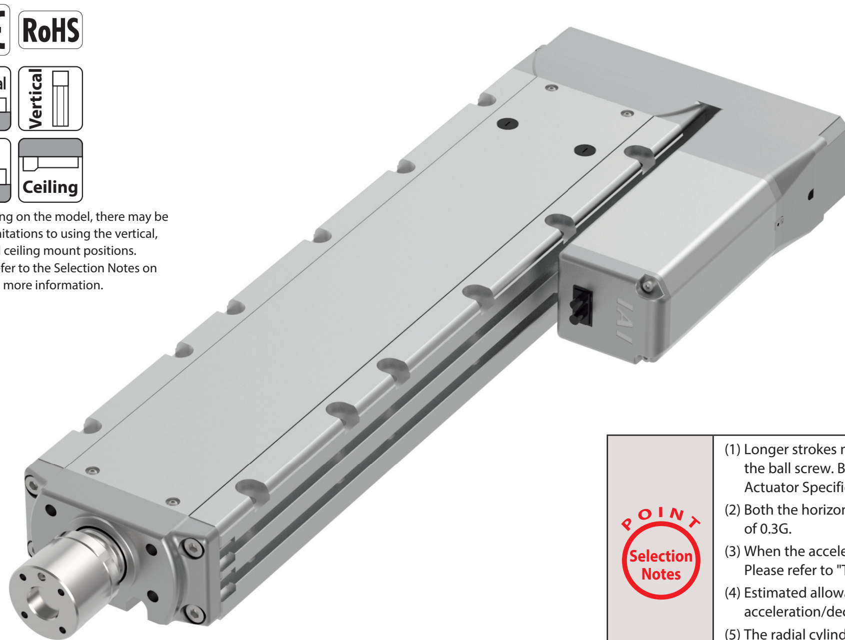
RCS4	WRA14R	WA	200			T2		
Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
		WA: Battery-less Absolute	200: Servo motor 200W	24:24mm 16:16mm 8: 8mm 4: 4mm	50:50mm ≀ 600:600mm (50mm increments)	T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable	Refer to Options table below.

* Body width does not include the width of the side-mounted motor.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.
(2) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(3) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(5) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.147 and after for the allowable load mass.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-WRA14R-WA-200-24-①-T2-②-③	200	24	25	3	142	50~600 (50mm increments)
RCS4-WRA14R-WA-200-16-①-T2-②-③		16	50	8	214	
RCS4-WRA14R-WA-200-8-①-T2-②-③		8	65	20	427	
RCS4-WRA14R-WA-200-4-①-T2-②-③		4	85	30	855	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed

(Unit: mm/s)

Lead \ Stroke	50~500 (50mm increments)	550 (mm)	600 (mm)
24	1200		
16	800		
8	480	450	390
4	240	220	190

① Stroke

① Stroke (mm)	RCS4-WRA14R	① Stroke (mm)	RCS4-WRA14R
50	○	350	○
100	○	400	○
150	○	450	○
200	○	500	○
250	○	550	○
300	○	600	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options

* Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Cable exit direction (Outside)	**CJO**	See P.131
Flange	**FL**	See P.132
Motor side-mounted to left (standard)	**ML**	See P.135
Motor side-mounted to right	**MR**	See P.135
Non-motor end specification	**NM**	See P.136
T-slot nut bar (Left)	**NTBL**	See P.136
T-slot nut bar (Right)	**NTBR**	See P.136

* Be sure to confirm with the "Selection Notes (P.138)" when selecting options.

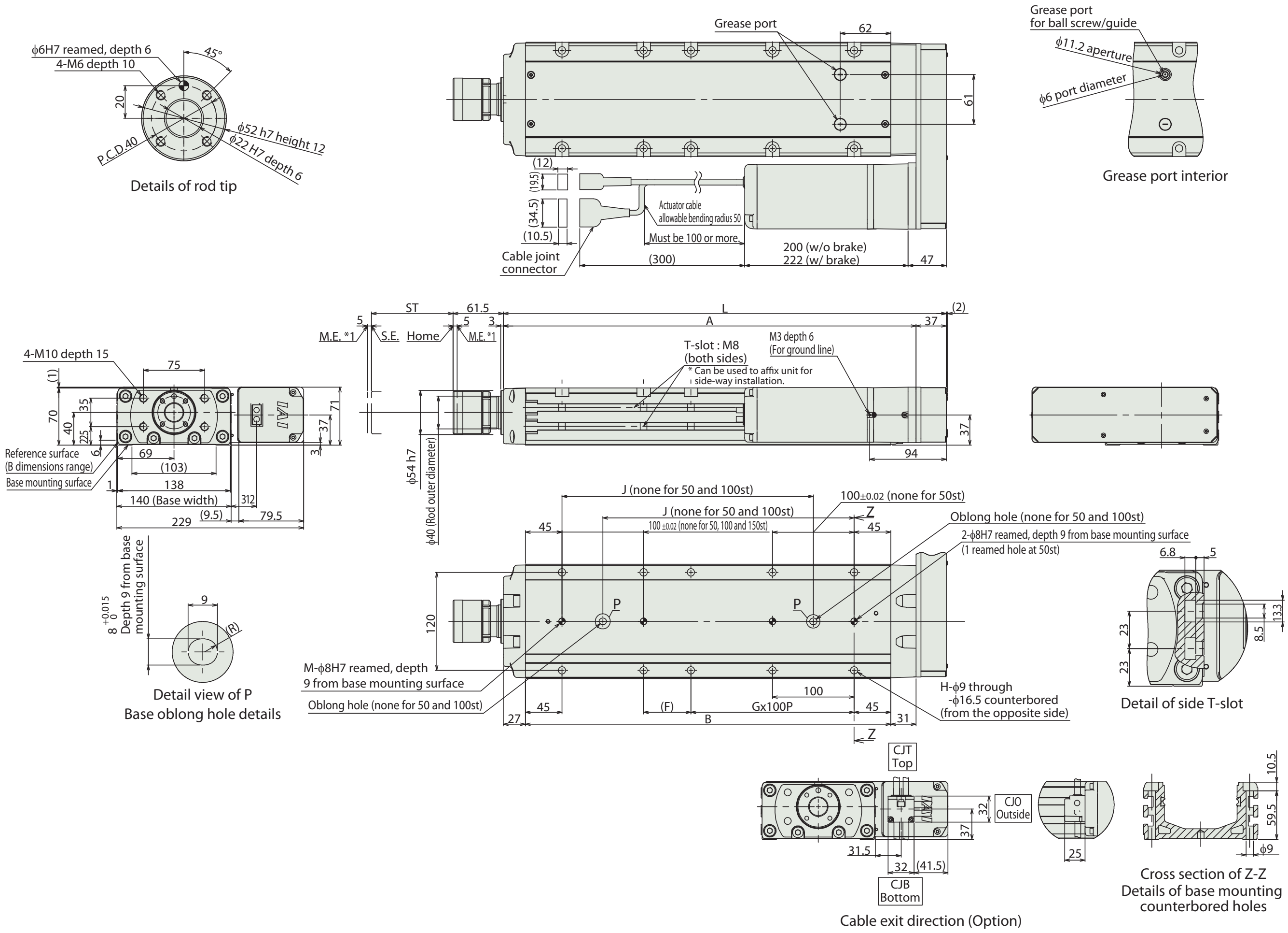
Actuator Specifications

Item	Description
Drive system	Ball screw ϕ12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1 or less
Rod	ϕ40mm Stainless steel
Rod non-rotation precision	0 degrees
Allowable load and torque on rod tip	Please see P. 88
Rod tip overhang distance	150mm or less
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

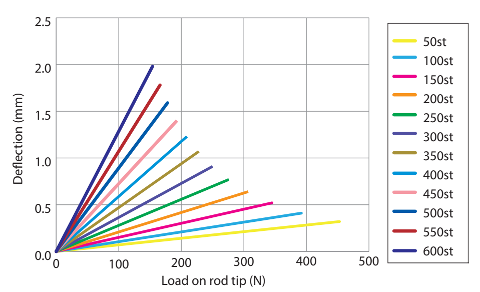
*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



■ Dimensions and Mass by Stroke

ST			50	100	150	200	250	300	350	400	450	500	550	600
L			293	343	393	443	493	543	593	643	693	743	793	843
A			256	306	356	406	456	506	556	606	656	706	756	806
B			198	248	298	348	398	448	498	548	598	648	698	748
F			108	58	108	58	108	58	108	58	108	58	108	58
G			0	1	1	1	1	2	2	3	3	4	4	5
H			4	6	6	8	8	10	10	12	12	14	14	16
J			–	–	158	208	258	308	358	408	458	508	558	608
M			1	1	1	2	2	2	2	2	2	2	2	2
Allowable static load on rod tip (N)			454	392	345	307	276	251	229	210	193	179	166	154
Allowable static torque on rod tip (N·m)			30	30	30	30	30	30	30	30	30	30	30	30
3000km	Allowable load on rod tip (N)	Load offset 0mm	199	170	148	131	117	104	94	85	77	70	64	58
		Load offset 100mm	100	100	100	100	100	95	87	79	72	66	60	55
	Allowable dynamic torque on rod tip (N·m)		15.0	15.0	15.0	15.0	15.0	14.3	13.0	11.8	10.8	9.9	9.0	8.2
5000km	Allowable load on rod tip (N)	Load offset 0mm	167	143	124	109	97	87	78	70	63	57	51	46
		Load offset 100mm	100	100	100	96	87	79	71	65	59	53	48	44
	Allowable dynamic torque on rod tip (N·m)		15.0	15.0	15.0	14.4	13.0	11.8	10.7	9.7	8.8	8.0	7.3	6.6
Mass (kg)	W/o brake		8.9	9.8	10.7	11.6	12.5	13.4	14.3	15.2	16.1	17.0	17.9	18.8
	W/ brake		9.5	10.4	11.3	12.2	13.1	14.0	14.9	15.8	16.7	17.6	18.5	19.4

■ Rod Deflection of RCS4-WRA14R (Reference Values)



Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Pulse train	Program	Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET. Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-WRA16R

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 160* mm | 200v AC Servo Motor

■ Model Specification Items

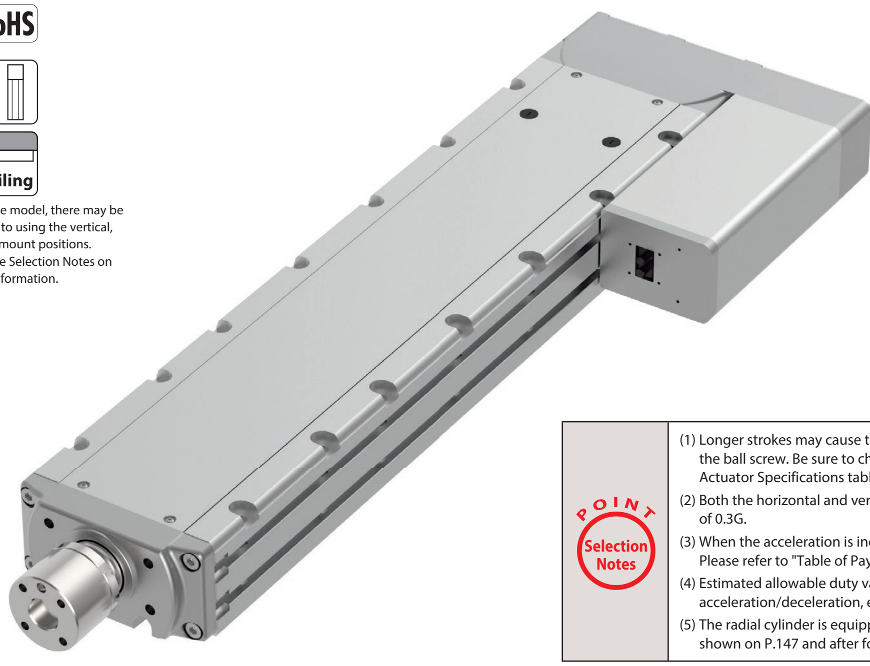
RCS4	—	WRA16R	—	WA	—	400	—	☐	—	☐	—	T2	—	☐	—	☐
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		400: Servo motor 400W		30:30mm 20:20mm 10:10mm 5: 5mm		50:50mm ~ 800:800mm (50mm increments)		T2:SCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable		Refer to Options table below.

* Body width does not include the width of the side-mounted motor.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.

(2) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.

(3) When the acceleration is increased, the payload will be reduced.
Please refer to "Table of Payload by Acceleration" on P.139 for more details.

(4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.

(5) The radial cylinder is equipped with a built-in guide. Please refer to the graphs shown on P.147 and after for the allowable load mass.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS4-WRA16R-WA-400-30-①-T2-②-③	400	30	30	6	226	50~800 (50mm increments)
RCS4-WRA16R-WA-400-20-①-T2-②-③		20	60	12	339	
RCS4-WRA16R-WA-400-10-①-T2-②-③		10	80	35	678	
RCS4-WRA16R-WA-400-5-①-T2-②-③		5	100	50	1357	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed

(Unit: mm/s)

Lead \ Stroke	50~250 (50mm increments)	300 (mm)	350 (mm)	400 (mm)	450 (mm)	500 (mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
30	1300		1050	860	710	600	510	440	390	340	300	270
20	1000	880	700	570	470	400	340	295	260	225	200	180
10	500	430	340	280	230	195	165	145	125	110	100	90
5	250	210	170	130	115	95	80	70	60	55	50	45

① Stroke

① Stroke (mm)	RCS4-WRA16R	① Stroke (mm)	RCS4-WRA16R
50	○	450	○
100	○	500	○
150	○	550	○
200	○	600	○
250	○	650	○
300	○	700	○
350	○	750	○
400	○	800	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options

* Please check the Options reference pages to confirm each option.

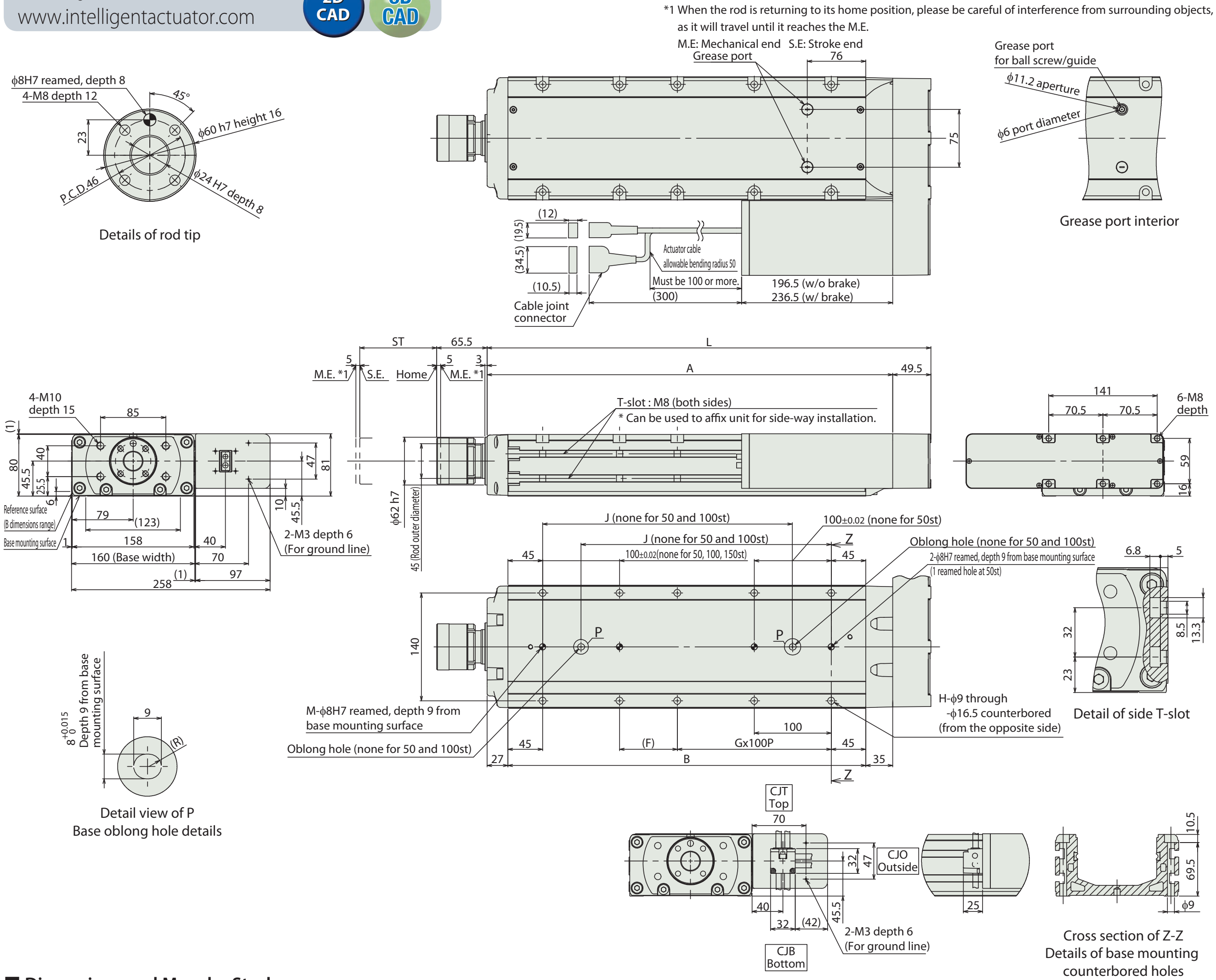
Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Cable exit direction (Outside)	**CJO**	See P.131
Flange	**FL**	See P.132
Motor side-mounted to left (standard)	**ML**	See P.135
Motor side-mounted to right	**MR**	See P.135
Non-motor end specification	**NM**	See P.136
T-slot nut bar (Left)	**NTBL**	See P.136
T-slot nut bar (Right)	**NTBR**	See P.136

* Be sure to confirm with the "Selection Notes (P.138)" when selecting options.

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Rod	ϕ45mm Stainless steel
Rod non-rotation precision	0 degrees
Allowable load and torque on rod tip	Please see P. 90
Rod tip overhang distance	150mm or less
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

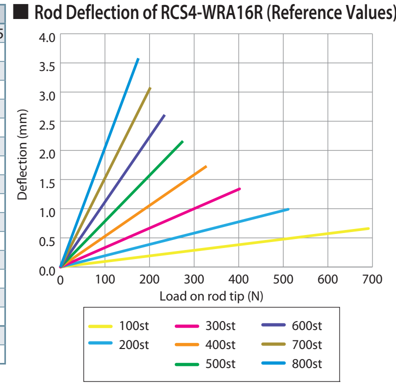
CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD



■ Dimensions and Mass by Stroke

ST			50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L			326.5	376.5	426.5	476.5	526.5	576.5	626.5	676.5	726.5	776.5	826.5	876.5	926.5	976.5	1026.5	1076.5
A			277	327	377	427	477	527	577	627	677	727	777	827	877	927	977	1027
B			215	265	315	365	415	465	515	565	615	665	715	765	815	865	915	965
F			125	75	125	75	125	75	125	75	125	75	125	75	125	75	125	75
G			0	1	1	1	1	2	2	3	3	4	4	5	5	6	6	7
H			4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
J			–	–	158	208	258	308	358	408	458	508	558	608	658	708	758	808
M			1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2
Allowable static load on rod tip (N)			588	588	588	511	451	402	362	329	300	275	254	235	217	202	188	176
Allowable static torque on rod tip (N·m)			40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
3000km	Allowable load on rod tip (N)	Load offset 0mm	255	220	191	168	149	134	120	109	99	90	81	74	67	61	55	50
		Load offset 100mm	133	133	133	133	133	122	111	101	92	84	77	70	64	58	53	48
	Allowable dynamic torque on rod tip (N·m)		20.0	20.0	20.0	20.0	20.0	18.3	16.7	15.2	13.8	12.6	11.5	10.5	9.6	8.7	7.9	7.1
5000km	Allowable load on rod tip (N)	Load offset 0mm	214	184	160	140	124	111	99	89	80	72	65	59	53	47	42	37
		Load offset 100mm	133	133	133	124	112	101	91	83	75	68	62	56	50	45	40	36
	Allowable dynamic torque on rod tip (N·m)		20.0	20.0	20.0	18.6	16.8	15.2	13.7	12.4	11.3	10.2	9.2	8.4	7.5	6.8	6.0	5.3
Mass (kg)		W/o brake	12.8	13.9	15.1	16.2	17.4	18.5	19.7	20.8	22.0	23.1	24.3	25.4	26.6	27.7	28.9	30.0
		W/ brake	13.4	14.5	15.7	16.8	18	19.1	20.3	21.4	22.6	23.7	24.9	26	27.2	28.3	29.5	30.6

■ Rod Deflection of RCS4-WRA16R (Reference Values)



Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SSEL-CS		2	Single phase 100V/200VAC	●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

Foreword
Slider Type
Wide Slider Type
Rod Type
Radial Cylinder®
Wide Radial Cylinder
Table Type
Cleanroom Slider
Cleanroom Wide Slider
Options
Reference Data
Controller

RCS4-TA4C <Single Block Specification>

Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 40 mm | 200v AC Servo Motor

■ Model Specification Items

RCS4	—	TA4C	—	WA	—	60	—	☐	—	☐	—	T2	—	☐	—	☐
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		60: Servo motor 60W		16: 16mm 10: 10mm 5: 5mm 2.5:2.5mm		25:25mm ≀ 150:150mm (25mm increments)		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X☐☐ : Specified Length R☐☐ : Robot Cable		Refer to Options table below.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.

POINT Selection Notes

(1) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(2) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(4) Please refer to the graphs shown on P.148 for the allowable load mass.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-TA4C-WA-60-16-①-T2-②-③	60	16	4	1.5	53	25~150 (25mm increments)
RCS4-TA4C-WA-60-10-①-T2-②-③		10	5	3	85	
RCS4-TA4C-WA-60-5-①-T2-②-③		5	5	6	170	
RCS4-TA4C-WA-60-2.5-①-T2-②-③		2.5	5	9	340	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed (Unit: mm/s)

Lead \ Stroke	25~150 (mm)
16	900
10	600
5	300
2.5	150

① Stroke

① Stroke (mm)	RCS4-TA4C	① Stroke (mm)	RCS4-TA4C
25	○	**100**	○
50	○	**125**	○
75	○	**150**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m) **S**(3m) **M**(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m) **X11**(11m)~**X15**(15m) **X16**(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m) **R04**(4m) ~**R05**(5m) **R06**(6m) ~**R10**(10m) **R11**(11m)~**R15**(15m) **R16**(16m)~**R20**(20m)

③ Options * Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Non-motor end specification	**NM**	See P.136

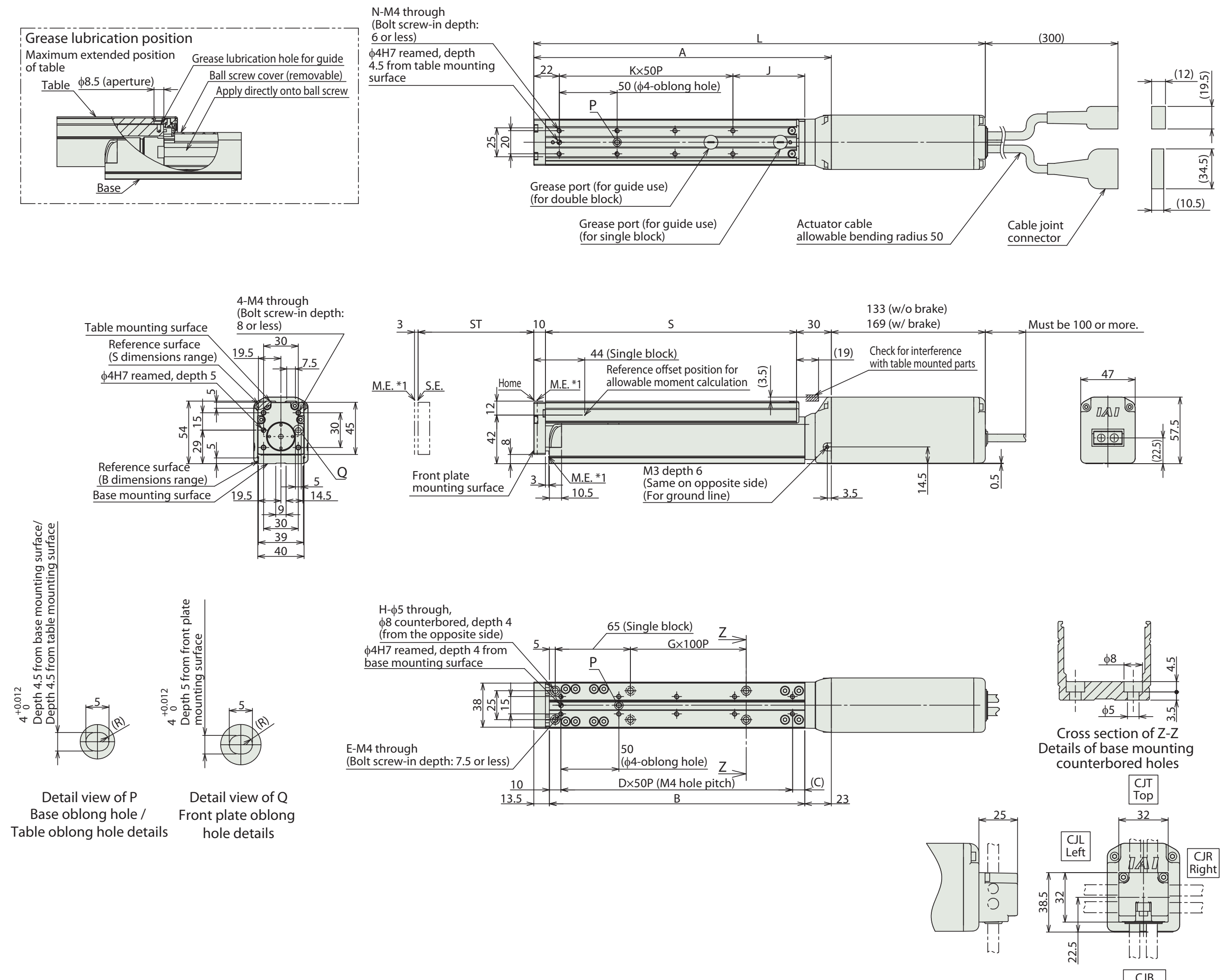
Actuator Specifications

Item	Description
Drive system	Ball screw ϕ8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 13N·m, Mb direction 18.6N·m, Mc direction 25.3N·m
Allowable dynamic moment (*1)	Ma direction 4.98N·m, Mb direction 7.11N·m, Mc direction 9.68N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*1) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions.
Please contact IAI America for details of the running life.
See page 146 for moment load directions.
If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.
Please refer to the instruction manual for the amount of displacement of the table.

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 When the table is returning to its home position, please be mindful of possible interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



Cable exit direction

■ Dimensions and Mass by Stroke

	ST	25	50	75	100	125	150
L	W/o brake	265	290	315	340	365	390
	W/ brake	301	326	351	376	401	426
	A	132	157	182	207	232	257
	B	95.5	120.5	145.5	170.5	195.5	220.5
	C	35.5	10.5	35.5	10.5	35.5	10.5
	D	1	2	2	3	3	4
	E	4	6	6	8	8	10
	G	0	0	0	0	1	1
	H	4	4	4	4	6	6
	J	37	62	37	62	37	62
	K	1	1	2	2	3	3
	N	4	4	6	6	8	8
	S	92	117	142	167	192	217
Mass (kg)	W/o brake	1.3	1.3	1.4	1.5	1.6	1.7
	W/ brake	1.6	1.6	1.7	1.8	1.9	2.0

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Pulse train	Program	Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET. Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

Foreword
Slider Type
Wide Slider Type
Rod Type
Radial Cylinder®
Wide Radial Cylinder
Table Type
Cleanroom Slider
Cleanroom Wide Slider
Options
Reference Data
Controller

RCS4-TA4C <Double Block Specification>

Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 40 mm | 200v AC Servo Motor

■ Model Specification Items

RCS4	—	TA4C	—	WA	—	60	—	☐	—	☐	—	T2	—	☐	— DB —	☐
Series		Type		Encoder Type		Motor Type		Lead		Stroke		Applicable Controllers		Cable Length		Options
				WA: Battery-less Absolute		60: Servo motor 60W		10: 10mm 5: 5mm 2.5: 2.5mm		40:40mm ≀ 240:240mm		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X☐☐ : Specified Length R☐☐ : Robot Cable		Refer to Options table below.

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.

POINT Selection Notes

(1) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(2) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(4) Please refer to the graphs shown on P.148 for the allowable load mass.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-TA4C-WA-60-10-①-T2-②-DB-③	60	10	8	3	85	40~90 (25mm increments) 140~240 (50mm increments)
RCS4-TA4C-WA-60-5-①-T2-②-DB-③		5	10	6	170	
RCS4-TA4C-WA-60-2.5-①-T2-②-DB-③		2.5	10	9	340	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed (Unit: mm/s)

Lead \ Stroke	40~240 (mm)
10	600
5	300
2.5	150

① Stroke

① Stroke (mm)	RCS4-TA4C	① Stroke (mm)	RCS4-TA4C
40	○	**140**	○
65	○	**190**	○
90	○	**240**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m) **S**(3m) **M**(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m) **X11**(11m)~**X15**(15m) **X16**(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m) **R04**(4m) ~**R05**(5m) **R06**(6m) ~**R10**(10m) **R11**(11m)~**R15**(15m) **R16**(16m)~**R20**(20m)

③ Options

* Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Non-motor end specification	**NM**	See P.136

Actuator Specifications

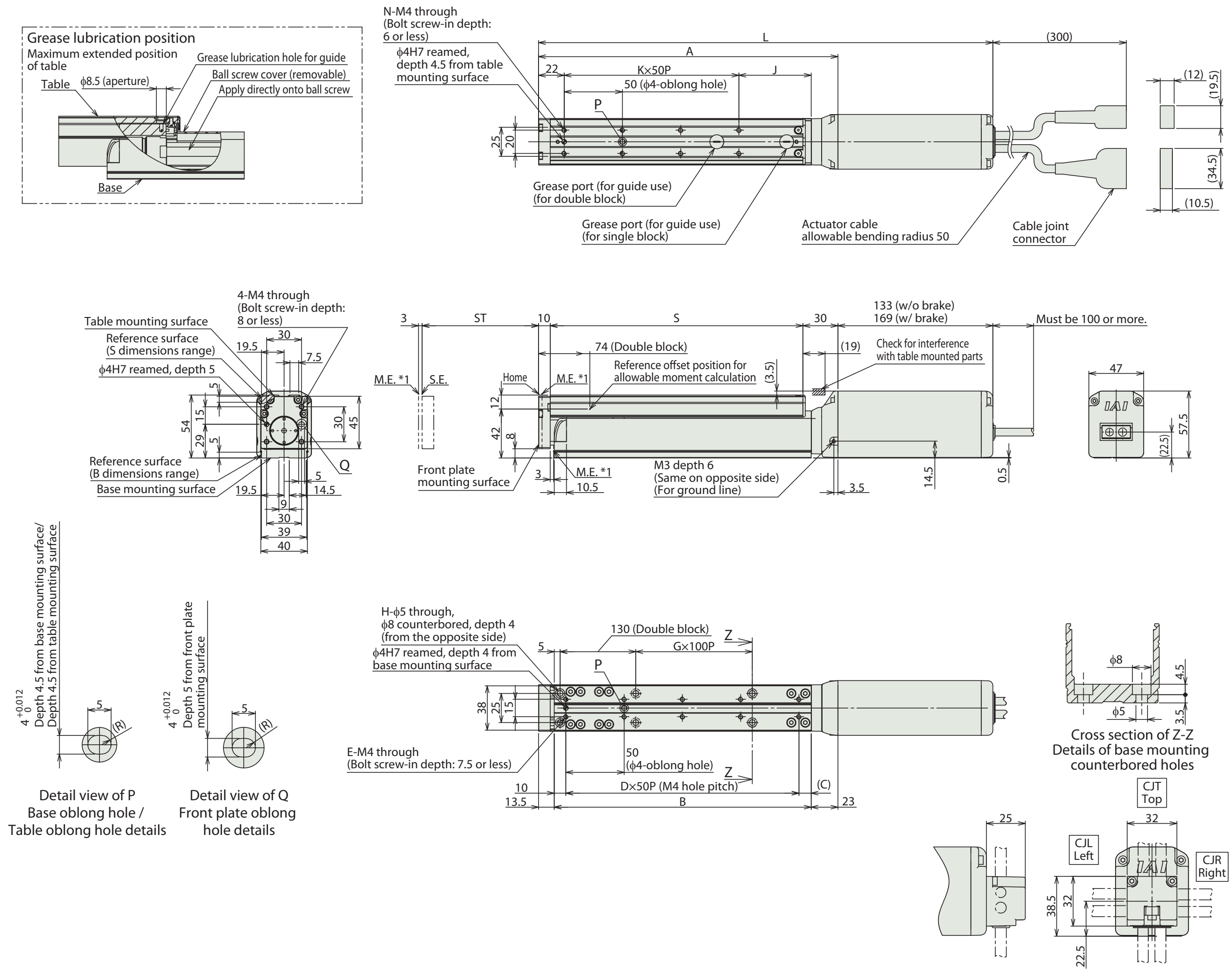
Item	Description
Drive system	Ball screw φ8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 76.8N·m, Mb direction 110N·m, Mc direction 50.5N·m
Allowable dynamic moment (*1)	Ma direction 23.9N·m, Mb direction 34.1N·m, Mc direction 15.7N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*1) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions.
Please contact IAI America for details of the running life.
See page 146 for moment load directions.
If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.
Please refer to the instruction manual for the amount of displacement of the table.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 When the table is returning to its home position, please be mindful of possible interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



■ Dimensions and Mass by Stroke

ST		40	65	90	140	190	240
L	W/o brake	340	365	390	440	490	540
	W/ brake	376	401	426	476	526	576
A		207	232	257	307	357	407
B		170.5	195.5	220.5	270.5	320.5	370.5
C		10.5	35.5	10.5	10.5	10.5	10.5
D		3	3	4	5	6	7
E		8	8	10	12	14	16
G		0	0	0	1	1	2
H		4	4	4	6	6	8
J		62	37	62	62	62	62
K		2	3	3	4	5	6
N		6	8	8	10	12	14
S		167	192	217	267	317	367
Mass (kg)	W/o brake	1.6	1.7	1.8	2.0	2.1	2.3
	W/ brake	1.9	2.0	2.1	2.3	2.4	2.6

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Pulse train	Program	Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET. Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-TA6C <Single Block Specification>

Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 60 mm | 200v AC Servo Motor

■ Model Specification Items

RCS4	—	TA6C	—	WA	—	100	—	☐	—	☐	—	T2	—	☐	—	☐
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		100: Servo motor 100W		20:20mm 12:12mm 6: 6mm 3: 3mm		25:25mm ≀ 200:200mm (25mm increments)		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable		Refer to Options table below.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.

POINT Selection Notes

(1) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(2) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(4) Please refer to the graphs shown on P.148 for the allowable load mass.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-TA6C-WA-100-20-①-T2-②-③	100	20	8	4	85	25~200 (25mm increments)
RCS4-TA6C-WA-100-12-①-T2-②-③		12	8	6	142	
RCS4-TA6C-WA-100-6-①-T2-②-③		6	8	10	283	
RCS4-TA6C-WA-100-3-①-T2-②-③		3	10	12	566	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed (Unit: mm/s)

Lead \ Stroke	25~200 (mm)
20	1100
12	720
6	360
3	180

① Stroke

① Stroke (mm)	RCS4-TA6C	① Stroke (mm)	RCS4-TA6C
25	○	**125**	○
50	○	**150**	○
75	○	**175**	○
100	○	**200**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options * Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Non-motor end specification	**NM**	See P.136

Actuator Specifications

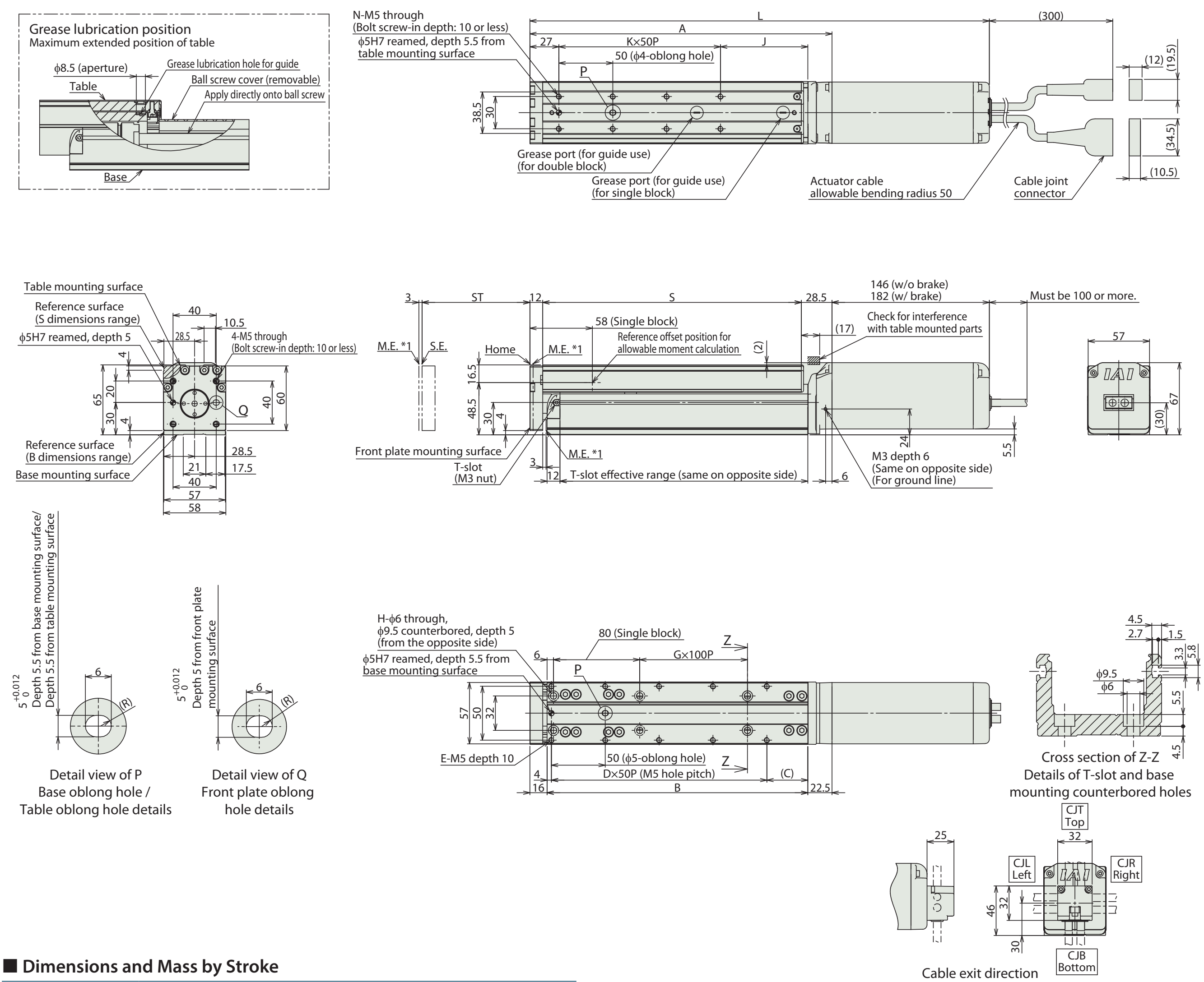
Item	Description
Drive system	Ball screw ϕ10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 32.3N·m, Mb direction 46.2N·m, Mc direction 68.3N·m
Allowable dynamic moment (*1)	Ma direction 11.6N·m, Mb direction 16.6N·m, Mc direction 24.6N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*1) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions.
Please contact IAI America for details of the running life.
See page 146 for moment load directions.
If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.
Please refer to the instruction manual for the amount of displacement of the table.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 When the table is returning to its home position, please be mindful of possible interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



■ Dimensions and Mass by Stroke

	ST	25	50	75	100	125	150	175	200
L	W/o brake	301.5	326.5	351.5	376.5	401.5	426.5	451.5	476.5
	W/ brake	337.5	362.5	387.5	412.5	437.5	462.5	487.5	512.5
	A	155.5	180.5	205.5	230.5	255.5	280.5	305.5	330.5
	B	117	142	167	192	217	242	267	292
	C	13	38	13	38	13	38	13	38
	D	2	2	3	3	4	4	5	5
	E	6	6	8	8	10	10	12	12
	G	0	0	0	0	1	1	1	1
	H	4	4	4	4	6	6	6	6
	J	56	81	56	81	56	81	56	81
	K	1	1	2	2	3	3	4	4
	N	4	4	6	6	8	8	10	10
	S	115	140	165	190	215	240	265	290
Mass (kg)	W/o brake	2.1	2.3	2.4	2.6	2.7	2.9	3.1	3.2
	W/ brake	2.4	2.6	2.7	2.9	3.0	3.2	3.4	3.5

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Pulse train	Program	Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-TA6C <Double Block Specification>

Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 60 mm | 200v AC Servo Motor

■ Model Specification Items

RCS4	—	TA6C	—	WA	—	100	—	☐	—	☐	—	T2	—	☐	DB	—	☐
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length		—	Options
				WA: Battery-less Absolute		100: Servo Motor 100W		12:12mm 6: 6mm 3: 3mm		45:45mm ≀ 320:320mm		T2: SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable			Refer to Options table below.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.

POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.
(2) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(3) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(5) Please refer to the graphs shown on P.148 for the allowable load mass.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-TA6C-WA-100-12-①-T2-②-DB-③	100	12	14	6	142	45~120 (25mm increments) 170~320 (50mm increments)
RCS4-TA6C-WA-100-6-①-T2-②-DB-③		6	20	10	283	
RCS4-TA6C-WA-100-3-①-T2-②-DB-③		3	20	12	566	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed (Unit: mm/s)

Lead \ Stroke	45~270 (mm)	320 (mm)
12	720	575
6	360	285
3	180	140

① Stroke

① Stroke (mm)	RCS4-TA6C	① Stroke (mm)	RCS4-TA6C
45	○	**170**	○
70	○	**220**	○
95	○	**270**	○
120	○	**320**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options * Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Non-motor end specification	**NM**	See P.136

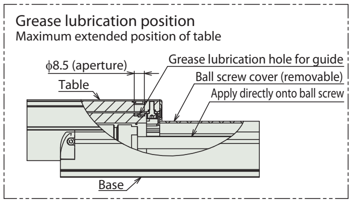
Actuator Specifications

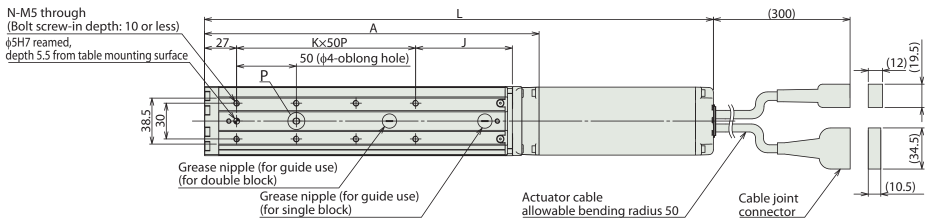
Item	Description
Drive system	Ball screw ϕ10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 169N·m, Mb direction 242N·m, Mc direction 137N·m
Allowable dynamic moment (*1)	Ma direction 49.5N·m, Mb direction 70.7N·m, Mc direction 40N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

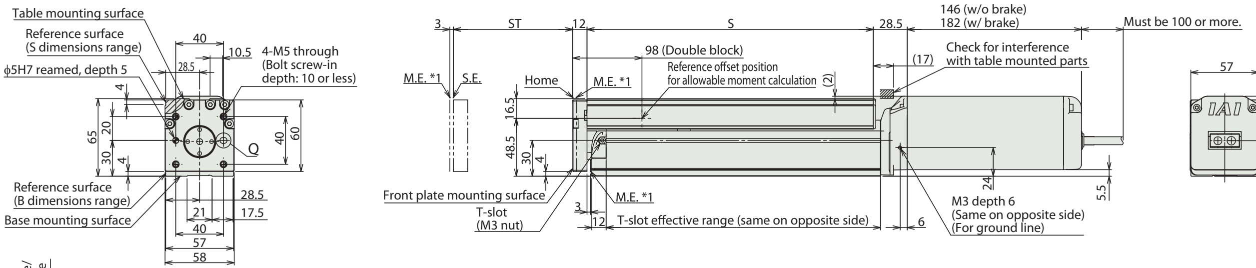
(*1) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.
Please contact IAI America for more information regarding the directions of the allowable moment and overhang load length. Please refer to the instruction manual for the amount of displacement of the table.

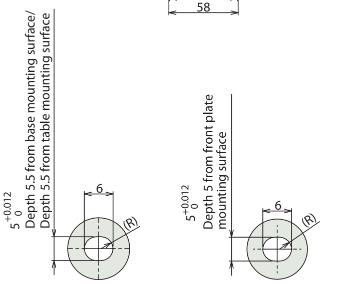
CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 When the table is returning to its home position, please be mindful of possible interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



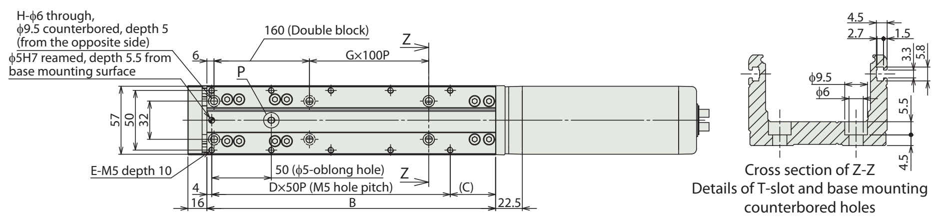




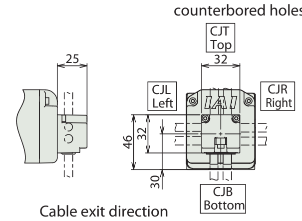


Detail view of P
Base oblong hole /
Table oblong hole details

Detail view of Q
Front plate oblong
hole details



Cross section of Z-Z
Details of T-slot and base mounting counterbored holes



Cable exit direction

■ Dimensions and Mass by Stroke

	ST	45	70	95	120	170	220	270	320
L	W/o brake	401.5	426.5	451.5	476.5	526.5	576.5	626.5	676.5
	W/ brake	437.5	462.5	487.5	512.5	562.5	612.5	662.5	712.5
	A	255.5	280.5	305.5	330.5	380.5	430.5	480.5	530.5
	B	217	242	267	292	342	392	442	492
	C	13	38	13	38	38	38	38	38
	D	4	4	5	5	6	7	8	9
	E	10	10	12	12	14	16	18	20
	G	0	0	0	0	1	1	2	2
	H	4	4	4	4	6	6	8	8
	J	56	81	56	81	81	81	81	81
	K	3	3	4	4	5	6	7	8
	N	8	8	10	10	12	14	16	18
	S	215	240	265	290	340	390	440	490
Mass (kg)	W/o brake	2.9	3.1	3.3	3.4	3.7	4.1	4.4	4.7
	W/ brake	3.2	3.4	3.6	3.7	4	4.4	4.7	5

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Pulse train	Program	Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET. Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-TA7C <Single Block Specification>

Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 70 mm | 200v AC Servo Motor

■ **Model Specification Items**

RCS4	—	TA7C	—	WA	—	200	—	☐	—	☐	—	T2	—	☐	—	☐
Series		Type		Encoder Type		Motor Type		Lead		Stroke		Applicable Controllers		Cable Length		Options
				WA: Battery-less Absolute		200: Servo motor 200W		24:24mm 16:16mm 8: 8mm 4: 4mm		25:25mm ~ 300:300mm		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable		Refer to Options table below.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.

POINT Selection Notes

(1) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(2) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(4) Please refer to the graphs shown on P.148 for the allowable load mass.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-TA7C-WA-200-24-①-T2-②-③	200	24	12	5	142	25~200 (25mm increments) 250~300 (50mm increments)
RCS4-TA7C-WA-200-16-①-T2-②-③		16	15	10	214	
RCS4-TA7C-WA-200-8-①-T2-②-③		8	15	18	427	
RCS4-TA7C-WA-200-4-①-T2-②-③		4	15	20	855	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed (Unit: mm/s)

Lead \ Stroke	25~300 (mm)
24	1300
16	960
8	480
4	240

① Stroke

① Stroke (mm)	RCS4-TA7C	① Stroke (mm)	RCS4-TA7C
25	○	**150**	○
50	○	**175**	○
75	○	**200**	○
100	○	**250**	○
125	○	**300**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

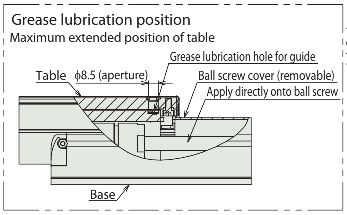
③ Options * Please check the Options reference pages to confirm each option.

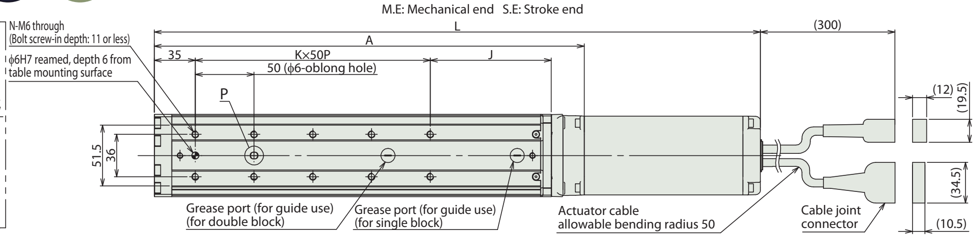
Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Non-motor end specification	**NM**	See P.136

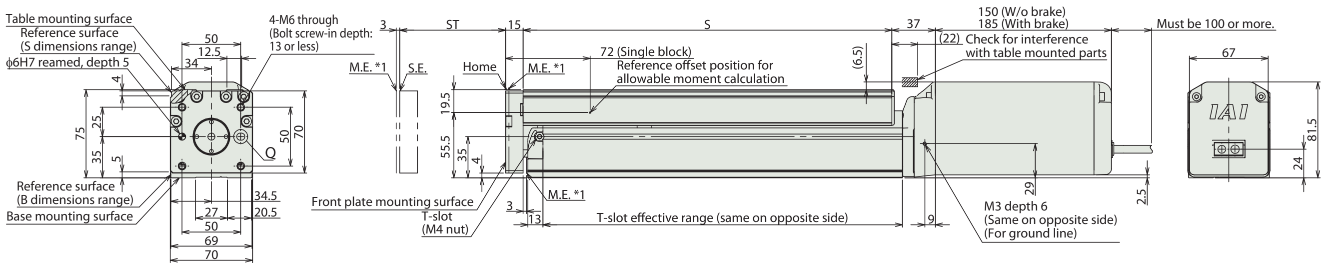
Actuator Specifications

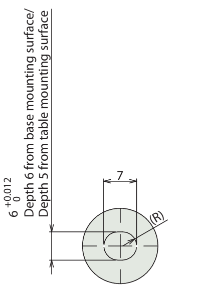
Item	Description
Drive system	Ball screw ϕ12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 115N·m, Mb direction 115N·m, Mc direction 229N·m
Allowable dynamic moment (*1)	Ma direction 44.7N·m, Mb direction 44.7N·m, Mc direction 89.1N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*1) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.
See page 146 for moment load directions.
If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.
Please refer to the instruction manual for the amount of displacement of the table.

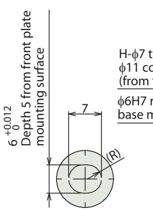




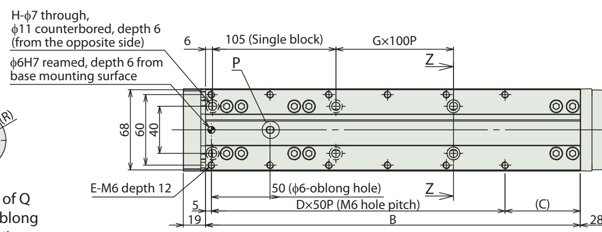


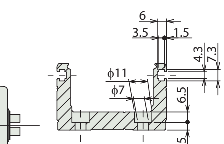


Detail view of P
Base oblong hole /
Table oblong hole details

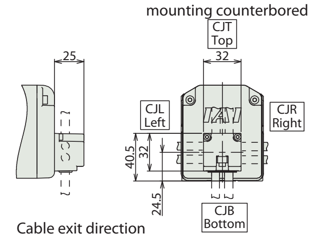


Detail view of Q
Front plate oblong
hole details





Cross section of Z-Z
Details of T-slot and base
mounting counterbored holes



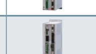
Cable exit direction

■ Dimensions and Mass by Stroke

	ST	25	50	75	100	125	150	175	200	250	300
L	W/o brake	341	366	391	416	441	466	491	516	566	616
	W/ brake	376	401	426	451	476	501	526	551	601	651
	A	191	216	241	266	291	316	341	366	416	466
	B	144	169	194	219	244	269	294	319	369	419
	C	39	64	39	64	39	64	39	64	64	64
	D	2	2	3	3	4	4	5	5	6	7
	E	6	6	8	8	10	10	12	12	14	16
	G	0	0	0	0	1	1	1	1	2	2
	H	4	4	4	4	6	6	6	6	8	8
	J	78	103	78	103	78	103	78	103	103	103
	K	1	1	2	2	3	3	4	4	5	6
	N	4	4	6	6	8	8	10	10	12	14
	S	139	164	189	214	239	264	289	314	364	414
Mass (kg)	W/o brake	3.8	4.0	4.2	4.5	4.7	4.9	5.1	5.4	5.8	6.3
	W/ brake	4.3	4.5	4.7	5.0	5.2	5.4	5.6	5.9	6.3	6.8

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Pulse train	Program	Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET. Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-TA7C <Double Block Specification>

Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 70 mm | 200v AC Servo Motor

■ Model Specification Items

RCS4	TA7C	WA	200	☐	☐	T2	☐	DB	☐
Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length		Options
		WA: Battery-less Absolute	200: Servo motor 200W	16:16mm 8: 8mm 4: 4mm	40:40mm ~ 390:390mm	T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA	N : None P : 1m S : 3m M: 5m X☐☐ : Specified Length R☐☐ : Robot Cable		Refer to Options table below.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.

POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.
(2) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(3) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(5) Please refer to the graphs shown on P.148 for the allowable load mass.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-TA7C-WA-200-16-①-T2-②-DB-③	200	16	25	8	214	40~90 (25mm increments) 140~390 (50mm increments)
RCS4-TA7C-WA-200-8-①-T2-②-DB-③		8	30	18	427	
RCS4-TA7C-WA-200-4-①-T2-②-DB-③		4	30	24	855	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed

(Unit: mm/s)

Lead \ Stroke	40~290 (mm)	340	390
16	960	730	600
8	480	365	300
4	240	180	150

① Stroke

① Stroke (mm)	RCS4-TA7C	① Stroke (mm)	RCS4-TA7C
40	○	**240**	○
65	○	**290**	○
90	○	**340**	○
140	○	**390**	○
190	○		

② Cable Length

Type	Cable Code
Standard	**P**(1m) **S**(3m) **M**(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m) **X11**(11m)~**X15**(15m) **X16**(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m) **R04**(4m) ~**R05**(5m) **R06**(6m) ~**R10**(10m) **R11**(11m)~**R15**(15m) **R16**(16m)~**R20**(20m)

③ Options

* Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Non-motor end specification	**NM**	See P.136

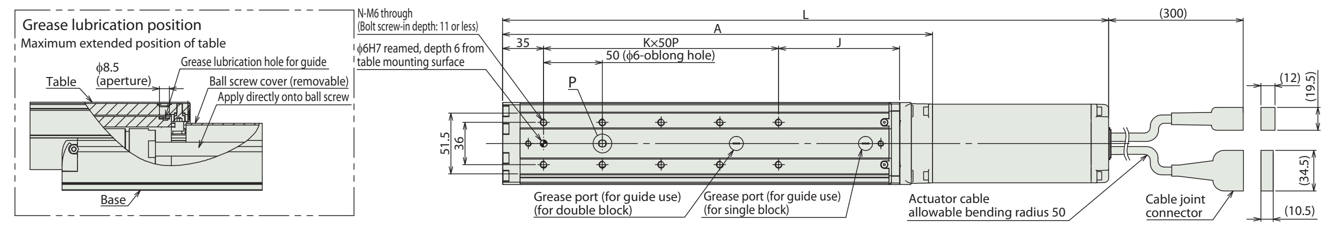
Actuator Specifications

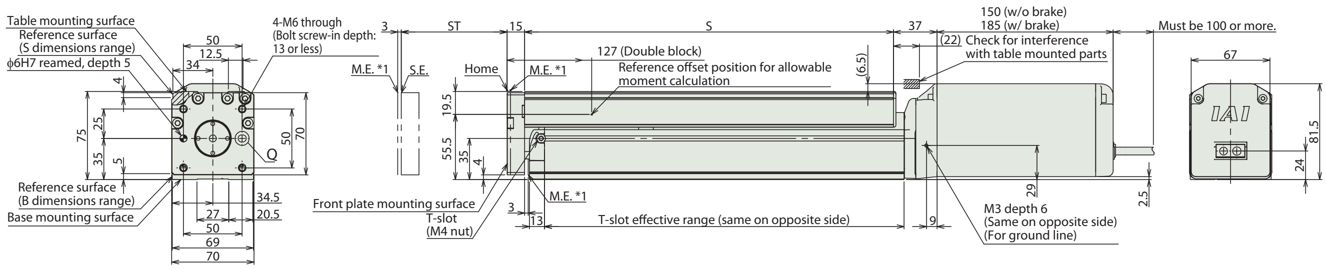
Item	Description
Drive system	Ball screw ϕ12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 620N·m, Mb direction 620N·m, Mc direction 458N·m
Allowable dynamic moment (*1)	Ma direction 196N·m, Mb direction 196N·m, Mc direction 145N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

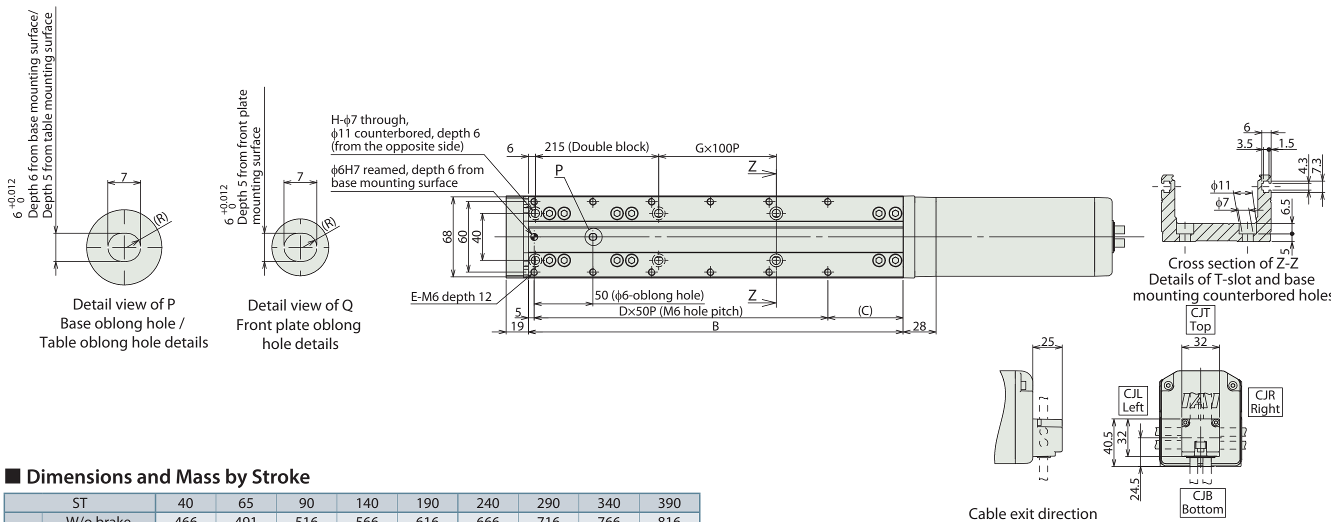
(*1) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.
See page 146 for moment load directions.
If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.
Please refer to the instruction manual for the amount of displacement of the table.

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 When the table is returning to its home position, please be mindful of possible interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end





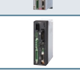


■ Dimensions and Mass by Stroke

ST		40	65	90	140	190	240	290	340	390
L	W/o brake	466	491	516	566	616	666	716	766	816
	W/ brake	501	526	551	601	651	701	751	801	851
A		316	341	366	416	466	516	566	616	666
B		269	294	319	369	419	469	519	569	619
C		64	39	64	64	64	64	64	64	64
D		4	5	5	6	7	8	9	10	11
E		10	12	12	14	16	18	20	22	24
G		0	0	0	1	1	2	2	3	3
H		4	4	4	6	6	8	8	10	10
J		103	78	103	103	103	103	103	103	103
K		3	4	4	5	6	7	8	9	10
N		8	10	10	12	14	16	18	20	22
S		264	289	314	364	414	464	514	564	614
Mass (kg)	W/o brake	5.3	5.5	5.7	6.2	6.6	7.1	7.5	8.0	8.4
	W/ brake	5.8	6.0	6.2	6.7	7.1	7.6	8.0	8.5	8.9

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Pulse train	Program	Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET. Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-TA4R <Single Block Specification>

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 40* mm | 200v AC Servo Motor

■ Model Specification Items

RCS4	—	TA4R	—	WA	—	60	—	☐	—	☐	—	T2	—	☐	—	☐
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		60: Servo motor 60W		16: 16mm 10: 10mm 5: 5mm 2.5:2.5mm		25:25mm ~ 150:150mm (25mm increments)		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X☐☐ : Specified Length R☐☐ : Robot Cable		Refer to Options table below.

* Body width does not include the width of the side-mounted motor.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.

POINT Selection Notes

(1) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(2) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(4) Please refer to the graphs shown on P.148 for the allowable load mass.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-TA4R-WA-60-16-①-T2-②-③	60	16	4	1.5	53	25~150 (25mm increments)
RCS4-TA4R-WA-60-10-①-T2-②-③		10	5	3	85	
RCS4-TA4R-WA-60-5-①-T2-②-③		5	5	6	170	
RCS4-TA4R-WA-60-2.5-①-T2-②-③		2.5	5	9	340	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed (Unit: mm/s)

Lead \ Stroke	25~150 (mm)
16	800
10	600
5	300
2.5	150

① Stroke

① Stroke (mm)	RCS4-TA4R	① Stroke (mm)	RCS4-TA4R
25	○	**100**	○
50	○	**125**	○
75	○	**150**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options

* Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Cable exit direction (Outside)	**CJO**	See P.131
Motor side-mounted to left (standard)	**ML**	See P.135
Motor side-mounted to right	**MR**	See P.135
Non-motor end specification	**NM**	See P.136
Back mounting plate	**RP**	See P.137

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 13N·m, Mb direction 18.6N·m, Mc direction 25.3N·m
Allowable dynamic moment (*1)	Ma direction 4.98N·m, Mb direction 7.11N·m, Mc direction 9.68N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*1) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.
See page 146 for moment load directions.
If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.
Please refer to the instruction manual for the amount of displacement of the table.

Dimensions

CAD drawings can be downloaded from our website.
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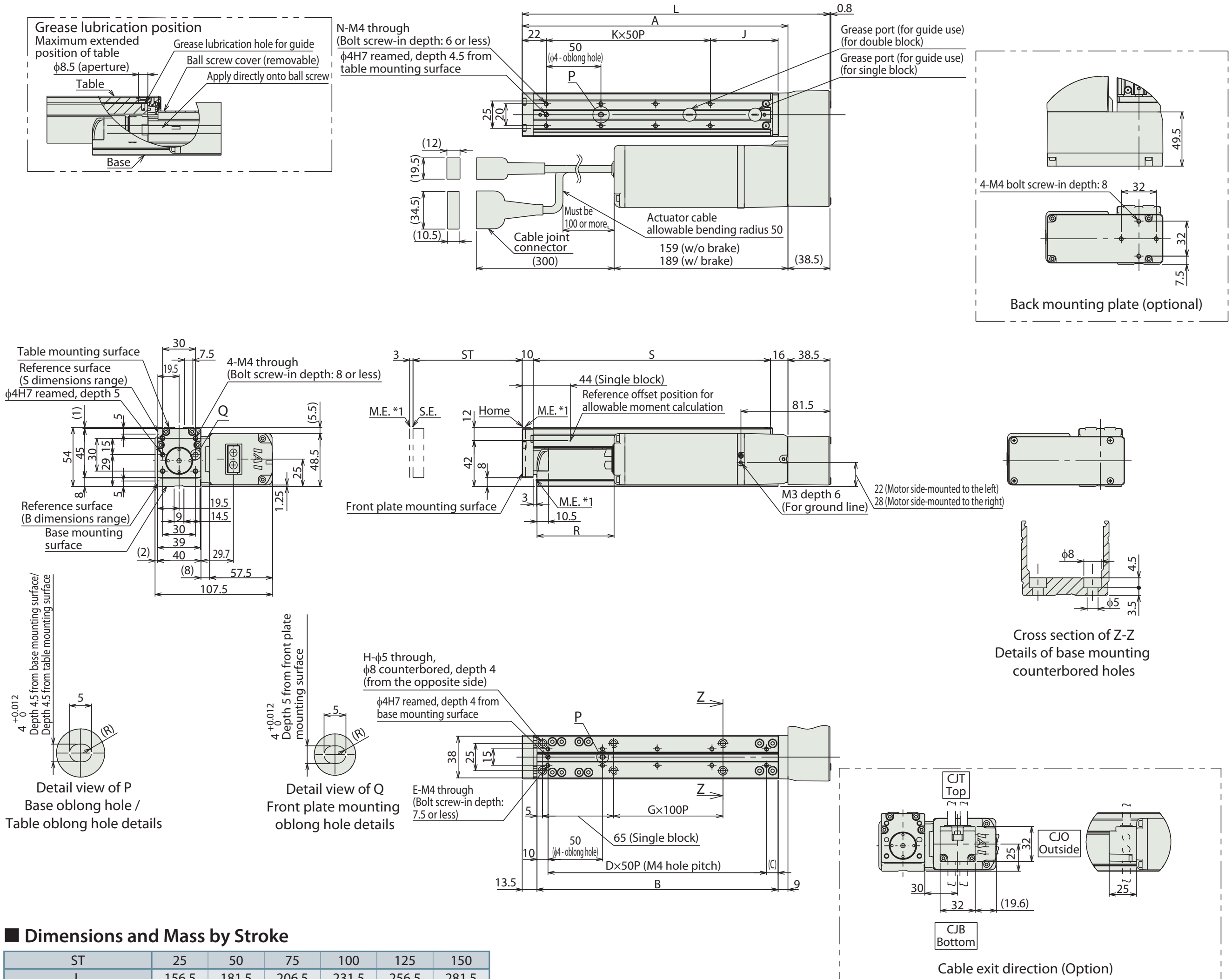
2D CAD 3D CAD

*1 When the table is returning to its home position, please be mindful of possible interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



■ Dimensions and Mass by Stroke

ST		25	50	75	100	125	150
L		156.5	181.5	206.5	231.5	256.5	281.5
A		118	143	168	193	218	243
B		95.5	120.5	145.5	170.5	195.5	220.5
C		35.5	10.5	35.5	10.5	35.5	10.5
D		1	2	2	3	3	4
E		4	6	6	8	8	10
G		0	0	0	0	1	1
H		4	4	4	4	6	6
J		37	62	37	62	37	62
K		1	1	2	2	3	3
N		4	4	6	6	8	8
R (Note)	W/o brake	-54.5	-29.5	-4.5	20.5	45.5	70.5
	W/ brake	-84.5	-59.5	-34.5	-9.5	15.5	40.5
S		92	117	142	167	192	217
Mass (kg)	W/o brake	1.5	1.6	1.7	1.8	1.9	2.0
	W/ brake	1.8	1.9	2.0	2.1	2.2	2.3

(Note) If the length for R is negative, the length of the actuator body is shorter than the motor unit.

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Pulse train	Program	Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET. Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-TA4R <Double Block Specification>

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 40* mm | 200v AC Servo Motor

■ Model Specification Items

RCS4	TA4R	WA	60	□	□	T2	□	DB	□
Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length		Options
		WA: Battery-less Absolute	60: Servo motor 60W	10: 10mm 5: 5mm 2.5:2.5mm	40:40mm ~ 240:240mm	T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA	N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable		Refer to Options table below.

* Body width does not include the width of the side-mounted motor.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.

POINT Selection Notes

(1) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(2) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(4) Please refer to the graphs shown on P.148 for the allowable load mass.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-TA4R-WA-60-10-①-T2-②-DB-③	60	10	8	3	85	40~90 (25mm increments) 140~240 (50mm increments)
RCS4-TA4R-WA-60-5-①-T2-②-DB-③		5	10	6	170	
RCS4-TA4R-WA-60-2.5-①-T2-②-DB-③		2.5	10	9	340	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed (Unit: mm/s)

Lead \ Stroke	40~240 (mm)
10	600
5	300
2.5	150

① Stroke

① Stroke (mm)	RCS4-TA4R	① Stroke (mm)	RCS4-TA4R
40	○	**140**	○
65	○	**190**	○
90	○	**240**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m) **S**(3m) **M**(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m) **X11**(11m)~**X15**(15m) **X16**(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m) **R04**(4m) ~**R05**(5m) **R06**(6m) ~**R10**(10m) **R11**(11m)~**R15**(15m) **R16**(16m)~**R20**(20m)

③ Options

* Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Cable exit direction (Outside)	**CJO**	See P.131
Motor side-mounted to left (standard)	**ML**	See P.135
Motor side-mounted to right	**MR**	See P.135
Non-motor end specification	**NM**	See P.136
Back mounting plate	**RP**	See P.137

Actuator Specifications

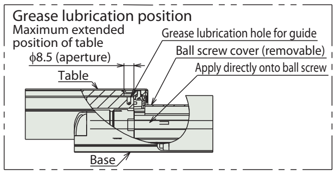
Item	Description
Drive system	Ball screw ϕ8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 76.8N·m, Mb direction 110N·m, Mc direction 50.5N·m
Allowable dynamic moment (*1)	Ma direction 23.9N·m, Mb direction 34.1N·m, Mc direction 15.7N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

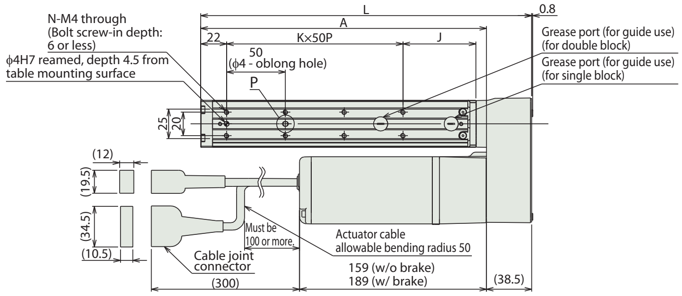
(*1) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.
See page 146 for moment load directions.
If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.
Please refer to the instruction manual for the amount of displacement of the table.

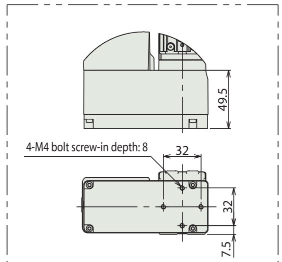
Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

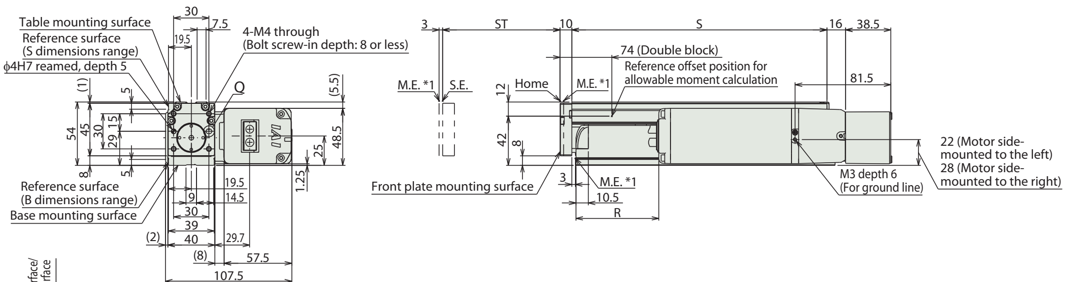
*1 When the table is returning to its home position, please be mindful of possible interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end

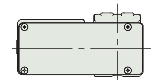


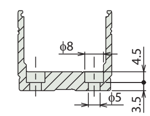




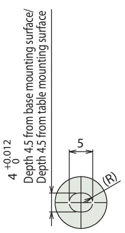
Back mounting plate (optional)



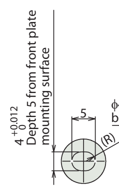




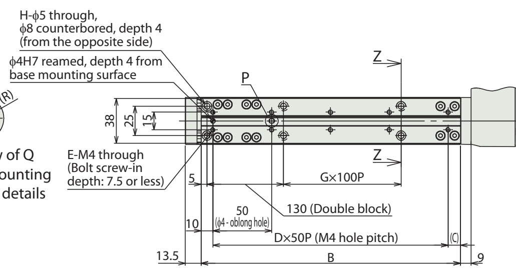
Cross section of Z-Z
Details of base mounting counterbored holes

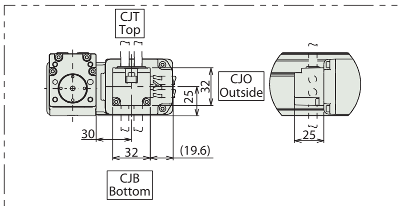


Detail view of P
Base oblong hole /
Table oblong hole details



Detail view of Q
Front plate mounting
oblong hole details





Cable exit direction (Option)

■ Dimensions and Mass by Stroke

ST		40	65	90	140	190	240
L		231.5	256.5	281.5	331.5	381.5	431.5
A		193	218	243	293	343	393
B		170.5	195.5	220.5	270.5	320.5	370.5
C		10.5	35.5	10.5	10.5	10.5	10.5
D		3	3	4	5	6	7
E		8	8	10	12	14	16
G		0	0	0	1	1	2
H		4	4	4	6	6	8
J		62	37	62	62	62	62
K		2	3	3	4	5	6
N		6	8	8	10	12	14
R (Note)	W/o brake	20.5	45.5	70.5	120.5	170.5	220.5
	W/ brake	-9.5	15.5	40.5	90.5	140.5	190.5
S		167	192	217	267	317	367
Mass (kg)	W/o brake	1.9	2.0	2.1	2.3	2.4	2.6
	W/ brake	2.2	2.3	2.4	2.6	2.7	2.9

(Note) If the length for R is negative, the length of the actuator body is shorter than the motor unit.

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet CC-Link PROFIBUS CompoNet MECHATROLINK EtherCAT EtherNet/IP PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

Foreword
Slider Type
Wide Slider Type
Rod Type
Radial Cylinder®
Wide Radial Cylinder
Table Type
Cleanroom Slider
Cleanroom Wide Slider
Options
Reference Data
Controller

RCS4-TA6R <Single Block Specification>

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 60* mm | 200v AC Servo Motor

■ Model Specification Items

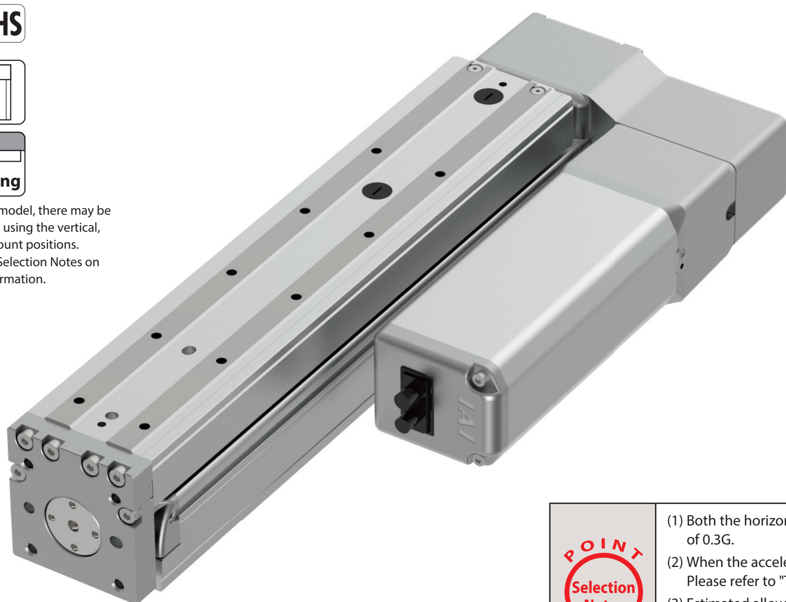
RCS4	—	TA6R	—	WA	—	100	—	☐	—	☐	—	T2	—	☐	—	☐
Series		Type		Encoder Type		Motor Type		Lead		Stroke		Applicable Controllers		Cable Length		Options
				WA: Battery-less Absolute		100: Servo motor 100W		20:20mm 12:12mm 6: 6mm 3: 3mm		25:25mm ≀ 200:200mm (25mm increments)		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X☐☐ : Specified Length R☐☐ : Robot Cable		Refer to Options table below.

* Body width does not include the width of the side-mounted motor.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



POINT Selection Notes

(1) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(2) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(4) Please refer to the graphs shown on P.148 for the allowable load mass.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS4-TA6R-WA-100-20-①-T2-②-③	100	20	8	4	85	25~200 (25mm increments)
RCS4-TA6R-WA-100-12-①-T2-②-③		12	8	6	142	
RCS4-TA6R-WA-100-6-①-T2-②-③		6	8	10	283	
RCS4-TA6R-WA-100-3-①-T2-②-③		3	10	10	566	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed (Unit: mm/s)

Lead \ Stroke	25~200 (mm)
20	1000
12	720
6	360
3	180

① Stroke

① Stroke (mm)	RCS4-TA6R	① Stroke (mm)	RCS4-TA6R
25	○	**125**	○
50	○	**150**	○
75	○	**175**	○
100	○	**200**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options * Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Cable exit direction (Outside)	**CJO**	See P.131
Motor side-mounted to left (standard)	**ML**	See P.135
Motor side-mounted to right	**MR**	See P.135
Non-motor end specification	**NM**	See P.136

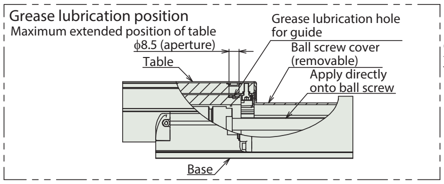
Actuator Specifications

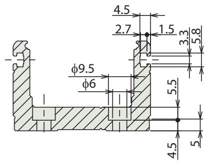
Item	Description
Drive system	Ball screw ϕ10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 32.3N·m, Mb direction 46.2N·m, Mc direction 68.3N·m
Allowable dynamic moment (*1)	Ma direction 11.6N·m, Mb direction 16.6N·m, Mc direction 24.6N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*1) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.
See page 146 for moment load directions.
If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.
Please refer to the instruction manual for the amount of displacement of the table.

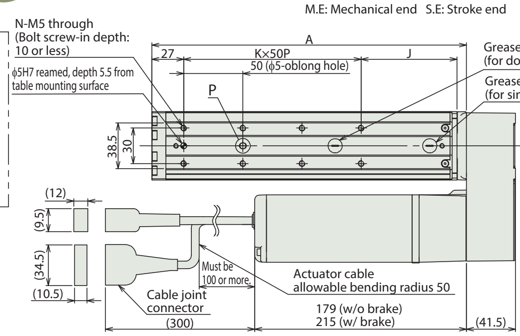
CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD
3D CAD

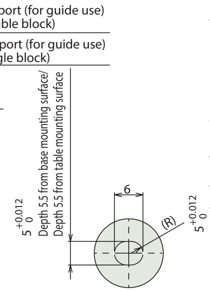
*1 When the table is returning to its home position, please be mindful of possible interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



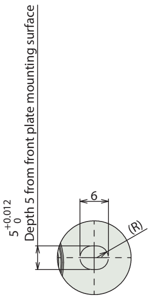


Cross section of Z-Z
Details of T-slot and base mounting counterbored holes

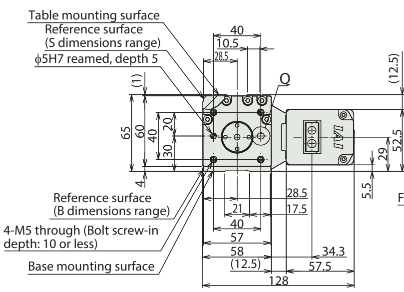


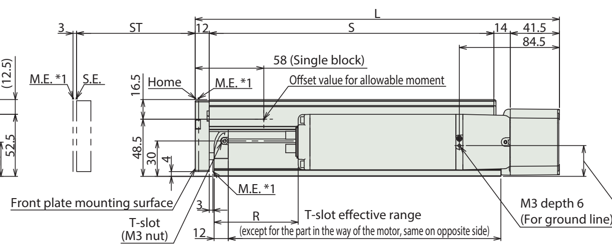


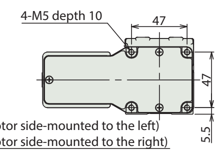
Detail view of P
Base oblong hole / Table oblong hole details

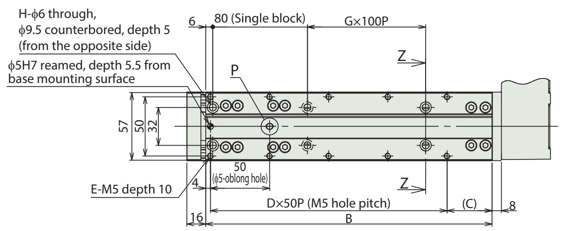


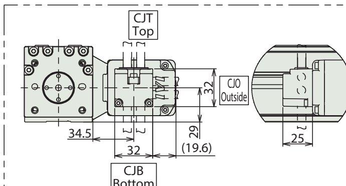
Detail view of Q
Front plate oblong hole details











Cable exit direction (Option)

■ Dimensions and Mass by Stroke

ST		25	50	75	100	125	150	175	200
L		182.5	207.5	232.5	257.5	282.5	307.5	332.5	357.5
A		141	166	191	216	241	266	291	316
B		117	142	167	192	217	242	267	292
C		13	38	13	38	13	38	13	38
D		2	2	3	3	4	4	5	5
E		6	6	8	8	10	10	12	12
G		0	0	0	0	1	1	1	1
H		4	4	4	4	6	6	6	6
J		56	81	56	81	56	81	56	81
K		1	1	2	2	3	3	4	4
N		4	4	6	6	8	8	10	10
R (Note)	W/o brake	-54	-29	-4	21	46	71	96	121
	W/ brake	-90	-65	-40	-15	10	35	60	85
S		115	140	165	190	215	240	265	290
Mass (kg)	W/o brake	2.4	2.6	2.8	2.9	3.1	3.3	3.4	3.6
	W/ brake	2.7	2.9	3.1	3.2	3.4	3.6	3.7	3.9

(Note) If the length for R is negative, the length of the actuator body is shorter than the motor unit.

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET. Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

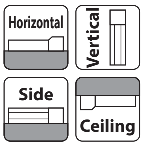
RCS4-TA6R <Double Block Specification>

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 60* mm | 200v AC Servo Motor

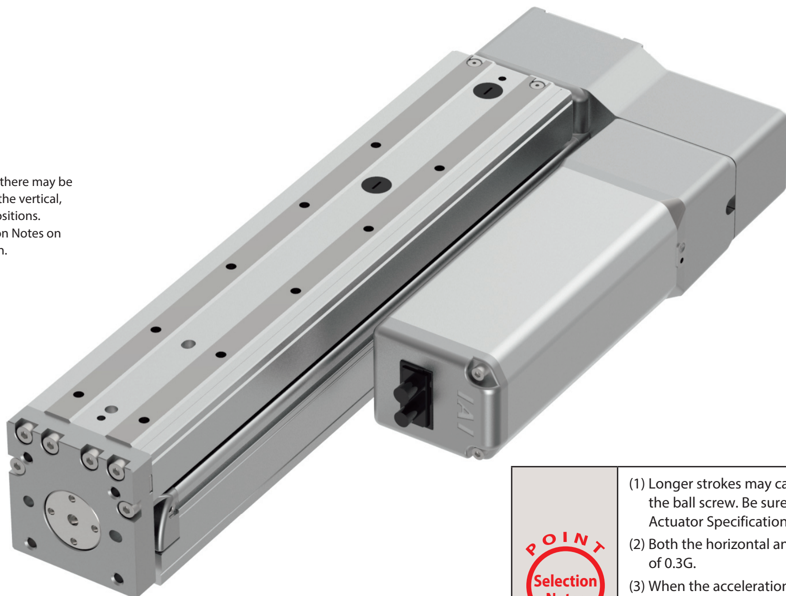
■ Model Specification Items

RCS4	—	TA6R	—	WA	—	100	—	☐	—	☐	—	T2	—	☐	— DB	—	☐
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length		—	Options
				WA: Battery-less Absolute		100: Servo motor 100W		12:12mm 6: 6mm 3: 3mm		45:45mm ~ 320:320mm		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable			Refer to Options table below.

* Body width does not include the width of the side-mounted motor.



* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.
(2) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(3) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(5) Please refer to the graphs shown on P.148 for the allowable load mass.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-TA6R-WA-100-12-①-T2-②-DB-③	100	12	14	6	142	45~120 (25mm increments) 170~320 (50mm increments)
RCS4-TA6R-WA-100-6-①-T2-②-DB-③		6	20	10	283	
RCS4-TA6R-WA-100-3-①-T2-②-DB-③		3	20	12	566	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed (Unit: mm/s)

Lead \ Stroke	45~270 (mm)	320 (mm)
12	720	575
6	360	285
3	180	140

① Stroke

① Stroke (mm)	RCS4-TA6R	① Stroke (mm)	RCS4-TA6R
45	○	170	○
70	○	220	○
95	○	270	○
120	○	320	○

② Cable Length

Type	Cable Code
Standard	**P**(1m) **S**(3m) **M**(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m) **X11**(11m)~**X15**(15m) **X16**(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m) **R04**(4m) ~**R05**(5m) **R06**(6m) ~**R10**(10m) **R11**(11m)~**R15**(15m) **R16**(16m)~**R20**(20m)

③ Options

* Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Cable exit direction (Outside)	**CJO**	See P.131
Motor side-mounted to left (standard)	**ML**	See P.135
Motor side-mounted to right	**MR**	See P.135
Non-motor end specification	**NM**	See P.136

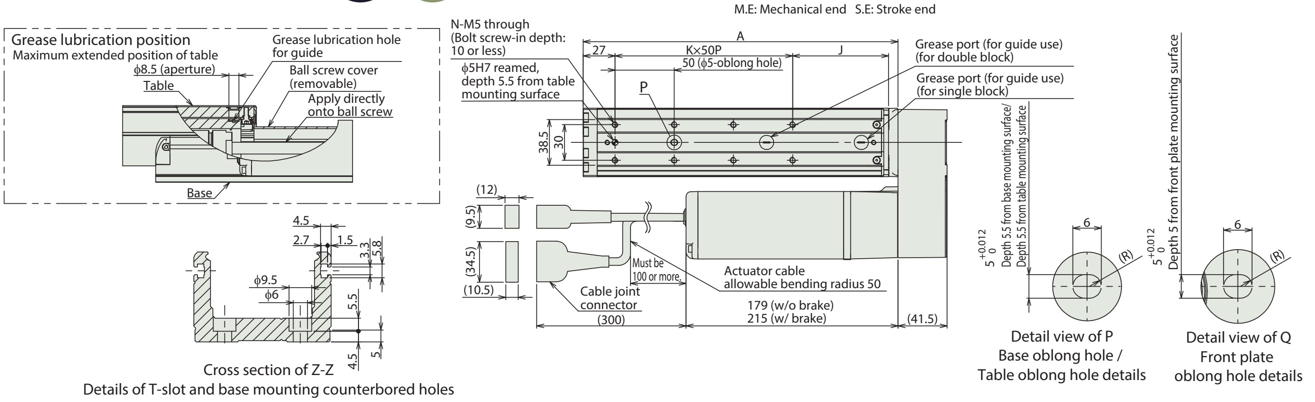
Actuator Specifications

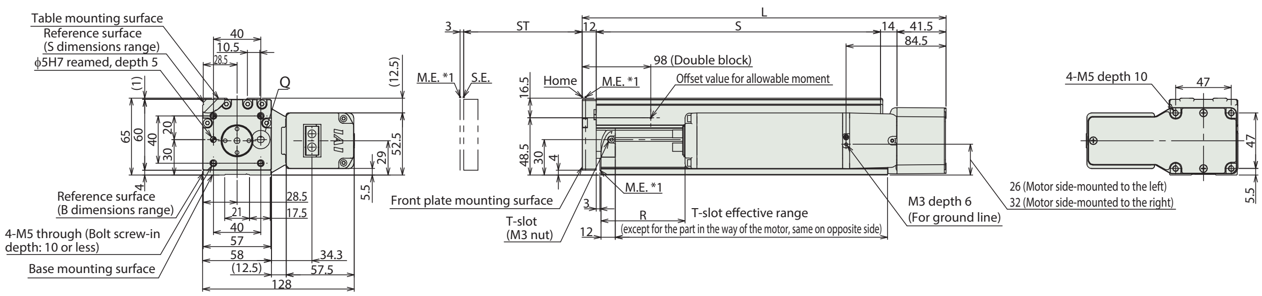
Item	Description
Drive system	Ball screw ϕ10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 169N·m, Mb direction 242N·m, Mc direction 137N·m
Allowable dynamic moment (*1)	Ma direction 49.5N·m, Mb direction 70.7N·m, Mc direction 40N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

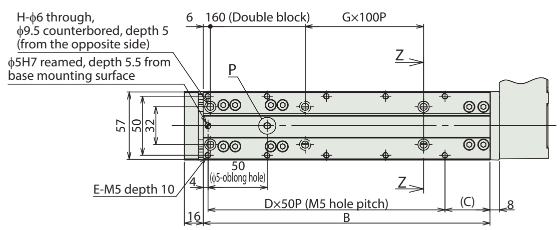
(*1) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.
See page 146 for moment load directions.
If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.
Please refer to the instruction manual for the amount of displacement of the table.

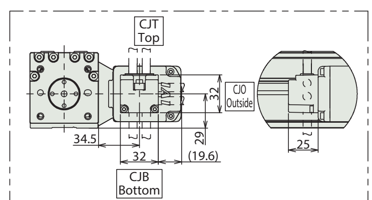
CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 When the table is returning to its home position, please be mindful of possible interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end









Cable exit direction (Option)

■ Dimensions and Mass by Stroke

ST		45	70	95	120	170	220	270	320
L		282.5	307.5	332.5	357.5	407.5	457.5	507.5	557.5
A		241	266	291	316	366	416	466	516
B		217	242	267	292	342	392	442	492
C		13	38	13	38	38	38	38	38
D		4	4	5	5	6	7	8	9
E		10	10	12	12	14	16	18	20
G		0	0	0	0	1	1	2	2
H		4	4	4	4	6	6	8	8
J		56	81	56	81	81	81	81	81
K		3	3	4	4	5	6	7	8
N		8	8	10	10	12	14	16	18
R (Note)	W/o brake	46	71	96	121	171	221	271	321
	W/ brake	10	35	60	85	135	185	235	285
S		215	240	265	290	340	390	440	490
Mass (kg)	W/o brake	3.3	3.4	3.6	3.8	4.1	4.4	4.8	5.1
	W/ brake	3.6	3.7	3.9	4.1	4.4	4.7	5.1	5.4

(Note) If the length for R is negative, the length of the actuator body is shorter than the motor unit.

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET. Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4-TA7R <Single Block Specification>

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 70* mm | 200v AC Servo Motor

■ Model Specification Items

RCS4	–	TA7R	–	WA	–	200	–	☐	–	☐	–	T2	–	☐	–	☐
Series	–	Type	–	Encoder Type	–	Motor Type	–	Lead	–	Stroke	–	Applicable Controllers	–	Cable Length	–	Options
				WA: Battery-less Absolute		200: Servo motor 200W		24:24mm 16:16mm 8: 8mm 4: 4mm		25:25mm ≀ 300:300mm		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X☐☐ : Specified Length R☐☐ : Robot Cable		Refer to Options table below.

* Body width does not include the width of the side-mounted motor.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.

POINT Selection Notes

(1) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(2) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(4) Please refer to the graphs shown on P.148 for the allowable load mass.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-TA7R-WA-200-24-①-T2-②-③	200	24	12	5	142	25~200 (25mm increments) 250~300 (50mm increments)
RCS4-TA7R-WA-200-16-①-T2-②-③		16	15	10	214	
RCS4-TA7R-WA-200-8-①-T2-②-③		8	15	18	427	
RCS4-TA7R-WA-200-4-①-T2-②-③		4	15	20	855	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed (Unit: mm/s)

Lead \ Stroke	25~300 (mm)
24	1200
16	960
8	480
4	240

① Stroke

① Stroke (mm)	RCS4-TA7R	① Stroke (mm)	RCS4-TA7R
25	○	150	○
50	○	175	○
75	○	200	○
100	○	250	○
125	○	300	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options * Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Cable exit direction (Outside)	**CJO**	See P.131
Motor side-mounted to left (standard)	**ML**	See P.135
Motor side-mounted to right	**MR**	See P.135
Non-motor end specification	**NM**	See P.136

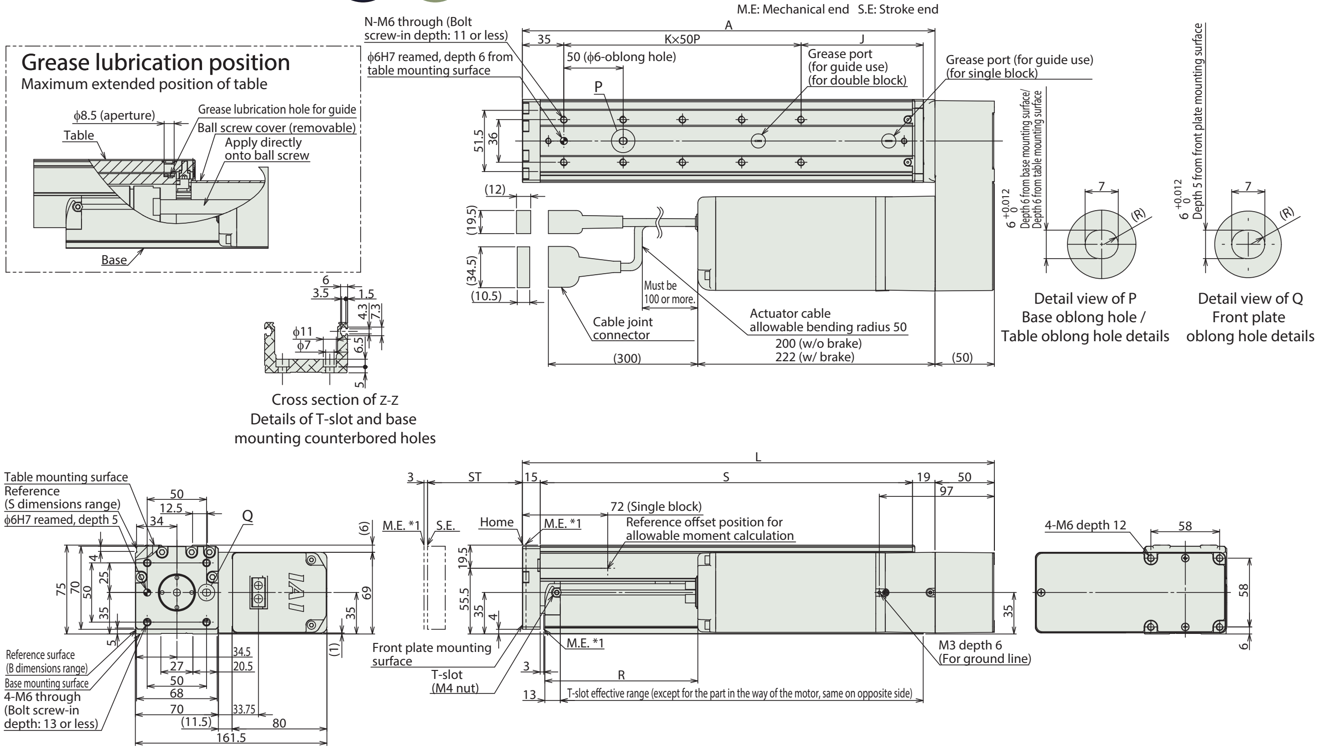
Actuator Specifications

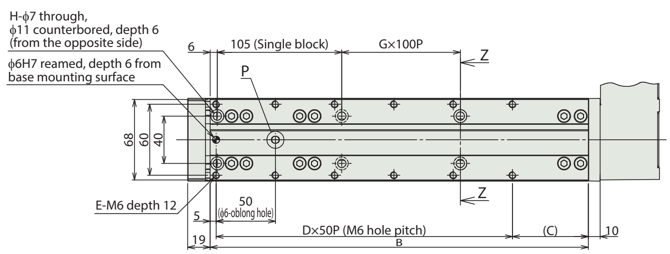
Item	Description
Drive system	Ball screw ϕ12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 115N·m, Mb direction 115N·m, Mc direction 229N·m
Allowable dynamic moment (*1)	Ma direction 44.7N·m, Mb direction 44.7N·m, Mc direction 89.1N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

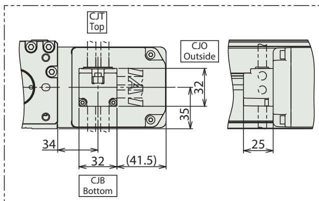
(*1) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.
See page 146 for moment load directions.
If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.
Please refer to the instruction manual for the amount of displacement of the table.

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 When the table is returning to its home position, please be mindful of possible interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end







Cable exit direction (Option)

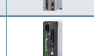
■ Dimensions and Mass by Stroke

ST		25	50	75	100	125	150	175	200	250	300
L		223	248	273	298	323	348	373	398	448	498
A		173	198	223	248	273	298	323	348	398	448
B		144	169	194	219	244	269	294	319	369	419
C		39	64	39	64	39	64	39	64	64	64
D		2	2	3	3	4	4	5	5	6	7
E		6	6	8	8	10	10	12	12	14	16
G		0	0	0	0	1	1	1	1	2	2
H		4	4	4	4	6	6	6	6	8	8
J		78	103	78	103	78	103	78	103	103	103
K		1	1	2	2	3	3	4	4	5	6
N		4	4	6	6	8	8	10	10	12	14
R (Note)	W/o brake	-46	-21	4	29	54	79	104	129	179	229
	W/ brake	-68	-43	-18	7	32	57	82	107	157	207
S		139	164	189	214	239	264	289	314	364	414
Mass (kg)	W/o brake	4.6	4.8	5.0	5.2	5.5	5.7	5.9	6.1	6.6	7.0
	W/ brake	5.1	5.3	5.5	5.7	6	6.2	6.4	6.6	7.1	7.5

(Note) If the length for R is negative, the length of the actuator body is shorter than the motor unit.

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

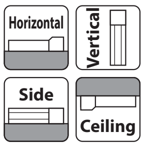
RCS4-TA7R <Double Block Specification>

Battery-less Absolute | Motor Unit Type | Side-mounted Motor | Body Width 70* mm | 200v AC Servo Motor

■ Model Specification Items

RCS4	—	TA7R	—	WA	—	200	—	☐	—	☐	—	T2	—	☐	—	DB	—	☐
Series		Type		Encoder Type		Motor Type		Lead		Stroke		Applicable Controllers		Cable Length				Options
				WA: Battery-less Absolute		200: Servo motor 200W		16:16mm 8: 8mm 4: 4mm		40:40mm ≀ 390:390mm		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X☐☐ : Specified Length R☐☐ : Robot Cable				Refer to Options table below.

* Body width does not include the width of the side-mounted motor.



* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.

POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.
(2) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(3) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.
(5) Please refer to the graphs shown on P.148 for the allowable load mass.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-TA7R-WA-200-16-①-T2-②-DB-③	200	16	25	8	214	40~90 (25mm increments) 140~390 (50mm increments)
RCS4-TA7R-WA-200-8-①-T2-②-DB-③		8	30	18	427	
RCS4-TA7R-WA-200-4-①-T2-②-DB-③		4	30	24	855	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed

(Unit: mm/s)

Lead \ Stroke	40~290 (mm)	340 (mm)	390 (mm)
16	960	730	600
8	480	365	300
4	240	180	150

① Stroke

① Stroke (mm)	RCS4-TA7R	① Stroke (mm)	RCS4-TA7R
40	○	**240**	○
65	○	**290**	○
90	○	**340**	○
140	○	**390**	○
190	○		

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options

* Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
Cable exit direction (Outside)	**CJO**	See P.131
Motor side-mounted to left (standard)	**ML**	See P.135
Motor side-mounted to right	**MR**	See P.135
Non-motor end specification	**NM**	See P.136

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 620N·m, Mb direction 620N·m, Mc direction 458N·m
Allowable dynamic moment (*1)	Ma direction 196N·m, Mb direction 196N·m, Mc direction 145N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

(*1) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.
See page 146 for moment load directions.
If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.
Please refer to the instruction manual for the amount of displacement of the table.

Dimensions

CAD drawings can be downloaded from our website.
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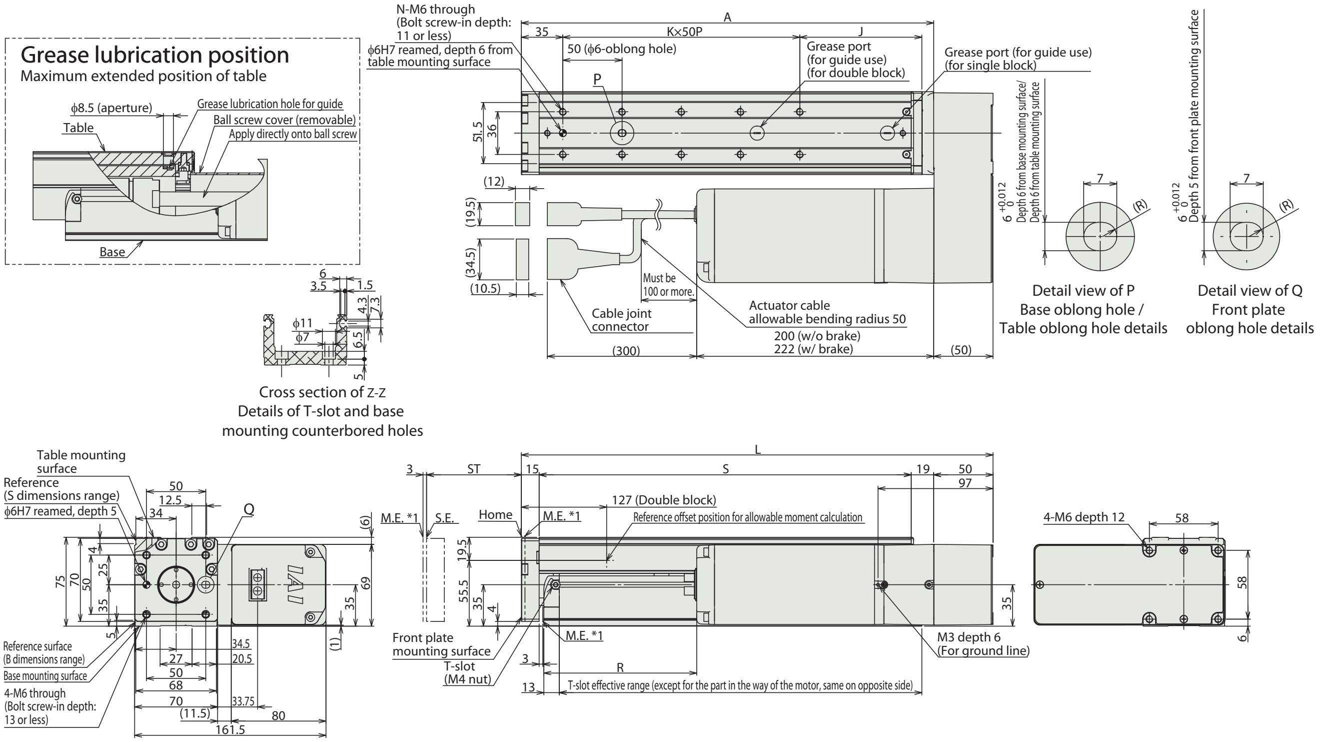
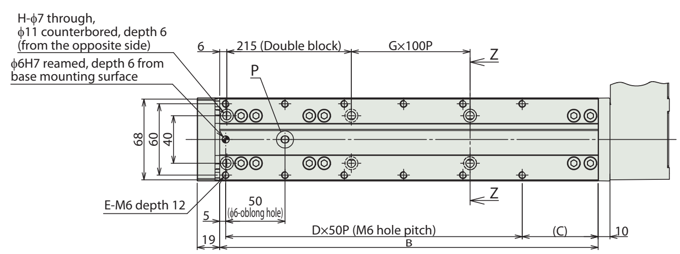
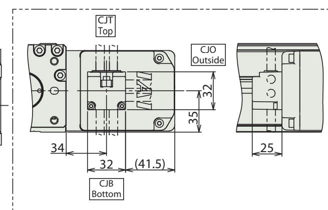
2D CAD 3D CAD

*1 When the table is returning to its home position, please be mindful of possible interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end







Cable exit direction (Option)

■ Dimensions and Mass by Stroke

ST		40	65	90	140	190	240	290	340	390
L		348	373	398	448	498	548	598	648	698
A		298	323	348	398	448	498	548	598	648
B		269	294	319	369	419	469	519	569	619
C		64	39	64	64	64	64	64	64	64
D		4	5	5	6	7	8	9	10	11
E		10	12	12	14	16	18	20	22	24
G		0	0	0	1	1	2	2	3	3
H		4	4	4	6	6	8	8	10	10
J		103	78	103	103	103	103	103	103	103
K		3	4	4	5	6	7	8	9	10
N		8	10	10	12	14	16	18	20	22
R	W/o brake	79	104	129	179	229	279	329	379	429
	W/ brake	57	82	107	157	207	257	307	357	407
S		264	289	314	364	414	464	514	564	614
Mass (kg)	W/o brake	6.1	6.3	6.5	7.0	7.4	7.9	8.3	8.8	9.2
	W/ brake	6.6	6.8	7	7.5	7.9	8.4	8.8	9.3	9.7

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●	Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

Foreword
Slider Type
Wide Slider Type
Rod Type
Radial Cylinder®
Wide Radial Cylinder
Table Type
Cleanroom Slider
Cleanroom Wide Slider
Options
Reference Data
Controller

RCS4CR-SA4C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 40 mm | 200v AC Servo Motor

■ Model Specification Items

RCS4CR	— SA4C	— WA	— 60	— ☐	— ☐	— T2	— ☐	— ☐
Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
		WA: Battery-less Absolute	60: Servo motor 60W	16: 16mm 10: 10mm 5: 5mm 2.5:2.5mm	50:50mm ~ 500:500mm (50mm increments)	T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA	N : None P : 1m S : 3m M: 5m X☐☐ : Specified Length R☐☐ : Robot Cable	Refer to Options table below.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.

POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.

(2) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.

(3) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.

(4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4CR-SA4C-WA-60-16-①-T2-②-③	60	16	10	3	53	50~500 (50mm increments)
RCS4CR-SA4C-WA-60-10-①-T2-②-③		10	14	5	85	
RCS4CR-SA4C-WA-60-5-①-T2-②-③		5	17	8	170	
RCS4CR-SA4C-WA-60-2.5-①-T2-②-③		2.5	20	12	340	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed/Suction Amount (Unit: mm/s)

Lead \ Stroke	50~450 (50mm increments)	500 (mm)	Suction amount (Nℓ/min)
16	960	875	60
10	600	555	40
5	300	275	20
2.5	150	135	10

① Stroke

① Stroke (mm)	RCS4CR-SA4C	① Stroke (mm)	RCS4CR-SA4C
50	○	**300**	○
100	○	**350**	○
150	○	**400**	○
200	○	**450**	○
250	○	**500**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options * Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
High-Precision specification (*1)	**HPR**	See P.134
Non-motor end specification	**NM**	See P.136
Air suction joint in opposite position	**VR**	See P.137
Double slide specification (*2)	**W**	See P.137

(*1) Double slider specification cannot be selected.
(*2) Some leads cannot be selected. (Please see P. 150)

Actuator Specifications

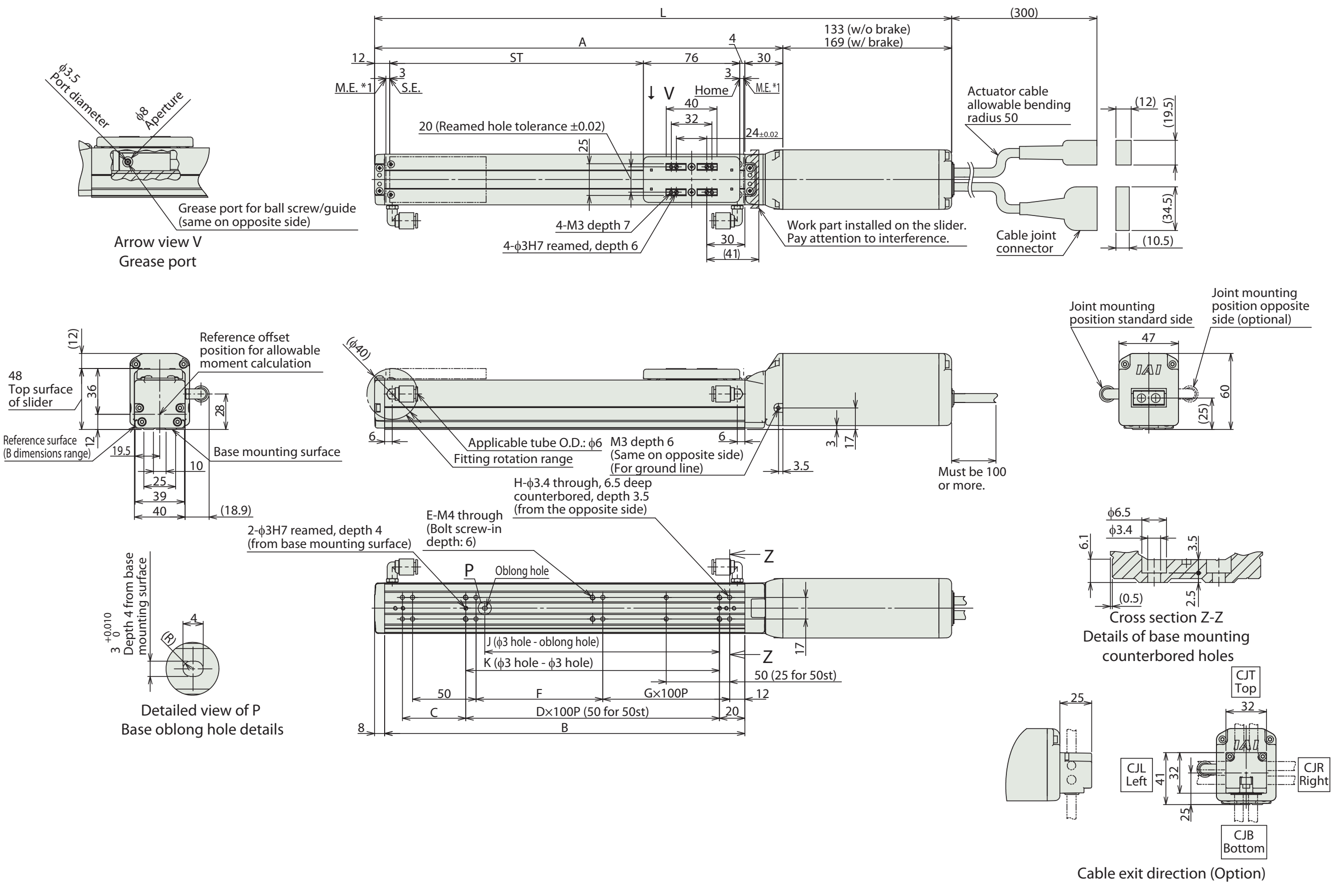
Item	Description
Drive system	Ball screw ϕ8mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 13.0N·m, Mb direction 18.6N·m, Mc direction 25.3N·m
Allowable dynamic moment (*2)	Ma direction 5.0N·m, Mb direction 7.1N·m, Mc direction 9.7N·m
Cleanliness	Class 10 (Fed.Std.209D), class 2.5 or equivalent (ISO 14644-1 Standard)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

* Reference for overhang load length: Ma direction: 150mm or less, Mb, Mc direction: 150mm or less
(*1) Values in [ ] are for high precision specification.
(*2) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.
See page 146 for moment load directions.
If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com 2D CAD 3D CAD

*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



■ Dimensions and Mass by Stroke

	Stroke	50	100	150	200	250	300	350	400	450	500
L	W/o brake	305	355	405	455	505	555	605	655	705	755
	W/ brake	341	391	441	491	541	591	641	691	741	791
	A	172	222	272	322	372	422	472	522	572	622
	B	134	184	234	284	334	384	434	484	534	584
	C	50	50	100	50	100	50	100	50	100	50
	D	–	1	1	2	2	3	3	4	4	5
	E	6	6	6	8	8	10	10	12	12	14
	F	50	100	50	100	50	100	50	100	50	100
	G	0	0	1	1	2	2	3	3	4	4
	H	8	8	10	10	12	12	14	14	16	16
	J	35	85	85	185	185	285	285	385	385	485
	K	50	100	100	200	200	300	300	400	400	500
Mass (kg)	W/o brake	1.2	1.3	1.4	1.5	1.5	1.6	1.7	1.8	1.9	2.0
	W/ brake	1.4	1.5	1.6	1.7	1.7	1.8	1.9	2	2.1	2.2

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

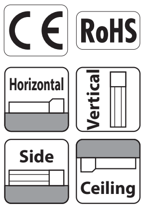
Foreword
Slider Type
Wide Slider Type
Rod Type
Radial Cylinder®
Wide Radial Cylinder
Table Type
Cleanroom Slider
Cleanroom Wide Slider
Options
Reference Data
Controller

RCS4CR-SA6C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 60 mm | 200V AC Servo Motor

■ Model Specification Items

RCS4CR	—	SA6C	—	WA	—	100	—	☐	—	☐	—	T2	—	☐	—	☐
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		100: Servo motor 100W		20:20mm 12:12mm 6: 6mm 3: 3mm		50:50mm ~ 800:800mm (50mm increments)		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable		Refer to Options table below.



* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.

POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.
(2) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(3) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS4CR-SA6C-WA-100-20-①-T2-②-③	100	20	18	6	85	50~800 (50mm increments)
RCS4CR-SA6C-WA-100-12-①-T2-②-③		12	30	11	142	
RCS4CR-SA6C-WA-100-6-①-T2-②-③		6	45	15	283	
RCS4CR-SA6C-WA-100-3-①-T2-②-③		3	45	15	566	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed/Suction Amount

(Unit: mm/s)

Lead \ Stroke	50~500 (50mm increments)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)	Suction amount (Nℓ/min)
20	1200	1130	970	840	735	650	575	100
12	720	620	535	460	405	355	315	70
6	360	305	265	230	200	175	155	30
3	180	150	130	115	100	85	75	15

① Stroke

① Stroke (mm)	RCS4CR-SA6C	① Stroke (mm)	RCS4CR-SA6C
50	○	**450**	○
100	○	**500**	○
150	○	**550**	○
200	○	**600**	○
250	○	**650**	○
300	○	**700**	○
350	○	**750**	○
400	○	**800**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options

* Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
High-Precision specification (*1)	**HPR**	See P.134
Non-motor end specification	**NM**	See P.136
Air suction joint in opposite position	**VR**	See P.137
Double slide specification (*2)	**W**	See P.137

(*1) Double slider specification cannot be selected.
(*2) Some leads cannot be selected. (Please see P. 150)

Actuator Specifications

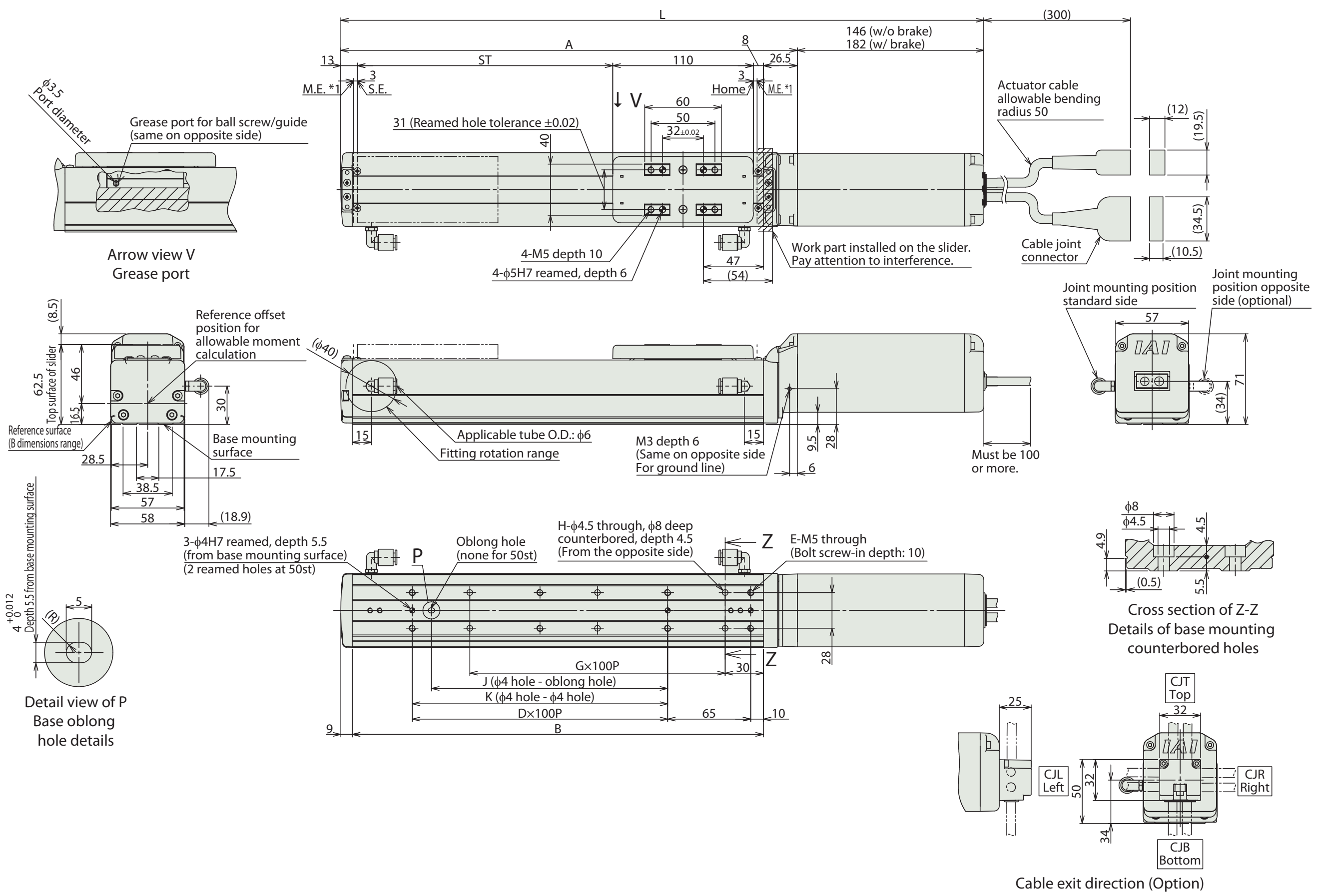
Item	Description
Drive system	Ball screw ϕ10mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction: 48.5N·m, Mb direction: 69.3N·m, Mc direction: 103N·m
Allowable dynamic moment (*2)	Ma direction: 11.6N·m, Mb direction: 16.6N·m, Mc direction: 24.6N·m
Cleanliness	Class 10 (Fed.Std.209D), class 2.5 or equivalent (ISO 14644-1 Standard)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

* Reference for overhang load length: Ma direction: 220mm or less, Mb, Mc direction: 220mm or less
(*1) Values in [ ] are for high precision specification.
(*2) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.
See page 146 for moment load directions.
If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



■ Dimensions and Mass by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	W/o brake	353.5	403.5	453.5	503.5	553.5	603.5	653.5	703.5	753.5	803.5	853.5	903.5	953.5	1003.5	1053.5	1103.5
	W/ brake	389.5	439.5	489.5	539.5	589.5	639.5	689.5	739.5	789.5	839.5	889.5	939.5	989.5	1039.5	1089.5	1139.5
A		207.5	257.5	307.5	357.5	407.5	457.5	507.5	557.5	607.5	657.5	707.5	757.5	807.5	857.5	907.5	957.5
B		172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922
D		0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
E		4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
G		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
H		4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18
J		0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
K		0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
Mass (kg)	W/o brake	2.0	2.2	2.4	2.6	2.7	2.9	3.1	3.3	3.4	3.6	3.8	4.0	4.2	4.3	4.5	4.7
	W/ brake	2.3	2.5	2.7	2.9	3	3.2	3.4	3.6	3.7	3.9	4.1	4.3	4.5	4.6	4.8	5

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet CC-Link PROFIBUS CompoNet MECHATROLINK EtherCAT EtherNet/IP PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4CR-SA7C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 70 mm | 200v AC Servo Motor

■ Model Specification Items

RCS4CR	—	SA7C	—	WA	—	200	—	☐	—	☐	—	T2	—	☐	—	☐
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		200: Servo motor 200W		24:24mm 16:16mm 8: 8mm 4: 4mm		50:50mm ≀ 800:800mm (50mm increments)		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X☐☐ : Specified Length R☐☐ : Robot Cable		Refer to Options table below.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.

POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.
(2)Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(3) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS4CR-SA7C-WA-200-24-①-T2-②-③	200	24	30	7	142	50~800 (50mm increments)
RCS4CR-SA7C-WA-200-16-①-T2-②-③		16	40	12	214	
RCS4CR-SA7C-WA-200-8-①-T2-②-③		8	45	20	427	
RCS4CR-SA7C-WA-200-4-①-T2-②-③		4	50	25	855	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed/Suction Amount

(Unit: mm/s)

Lead \ Stroke	50~500 (50mm increments)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)	Suction amount (Nℓ/min)
24	1500	1440	1240	1095	965	850	760	90
16	1000	965	830	720	635	560	500	70
8	500	475	410	355	315	275	245	40
4	240	235	205	175	155	135	120	30

① Stroke

① Stroke (mm)	RCS4CR-SA7C	① Stroke (mm)	RCS4CR-SA7C
50	○	**450**	○
100	○	**500**	○
150	○	**550**	○
200	○	**600**	○
250	○	**650**	○
300	○	**700**	○
350	○	**750**	○
400	○	**800**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options * Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
High-Precision specification (*1)	**HPR**	See P.134
Non-motor end specification	**NM**	See P.136
Air suction joint in opposite position	**VR**	See P.137
Double slide specification (*2)	**W**	See P.137

(*1) When the lead is 24, it cannot be selected. Double slider specification cannot be selected.
(*2) Some leads cannot be selected. (Please see P. 150)

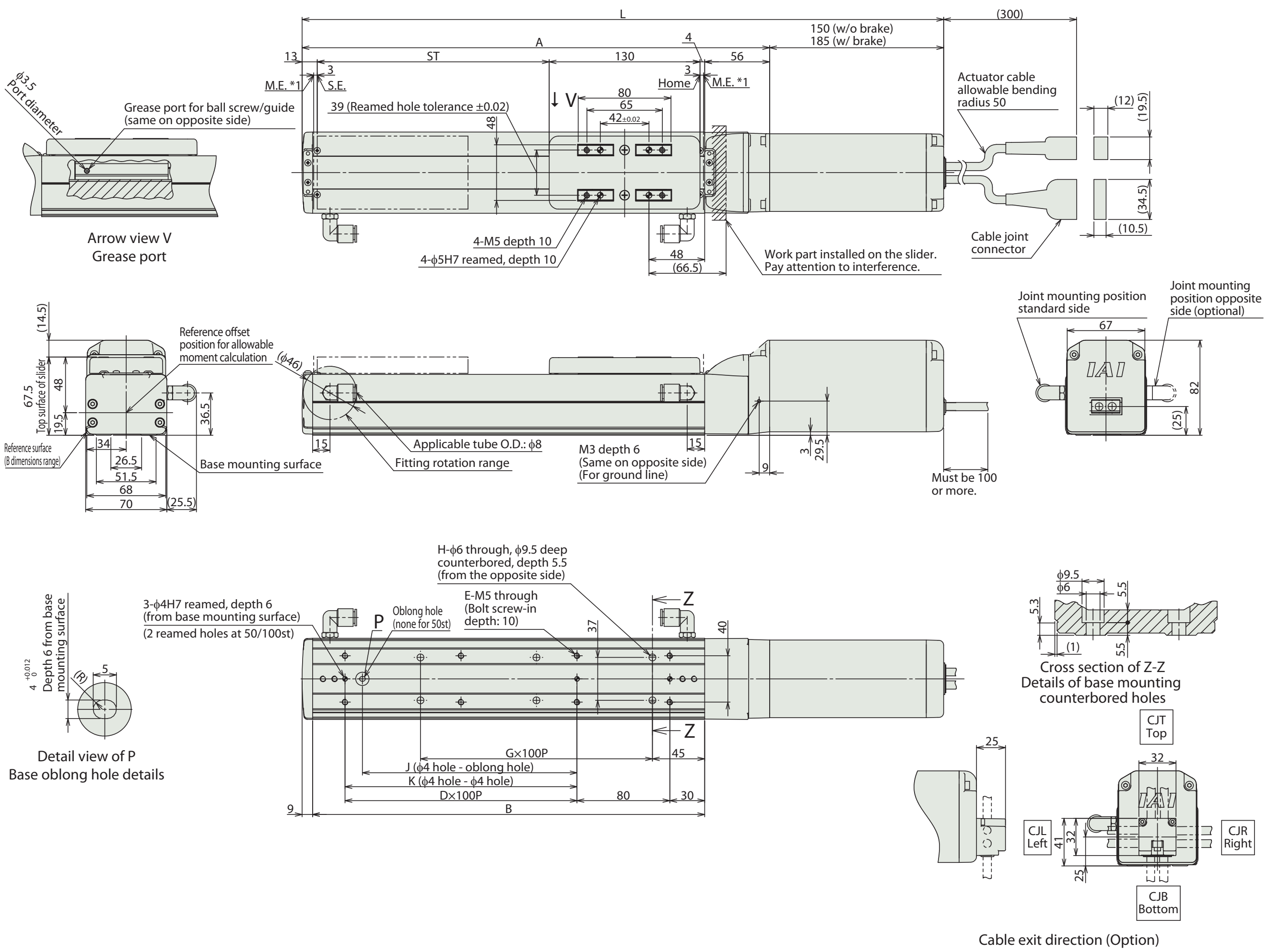
Actuator Specifications

Item	Description
Drive system	Ball screw ϕ12mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 115N·m, Mb direction 115N·m, Mc direction 229N·m
Allowable dynamic moment (*2)	Ma direction 44.7N·m, Mb direction 44.7N·m, Mc direction 89.1N·m
Cleanliness	Class 10 (Fed.Std.209D), class 2.5 or equivalent (ISO 14644-1 Standard)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

* Reference for overhang load length: Ma direction: 300mm or less, Mb, Mc direction: 300mm or less
(*1) Values in [ ] are for high precision (for lead 4/8/16) specification.
(*2) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.
See page 146 for moment load directions.
If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



■ Dimensions and Mass by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	W/o brake	403	453	503	553	603	653	703	753	803	853	903	953	1003	1053	1103	1153
	W/ brake	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188
A		253	303	353	403	453	503	553	603	653	703	753	803	853	903	953	1003
B		188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938
D		0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
E		4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
G		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
H		4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18
J		0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
K		0	0	100	200	200	300	300	400	400	500	500	600	600	700	700	800
Mass (kg)	W/o brake	3.5	3.8	4.0	4.3	4.5	4.7	5.0	5.2	5.4	5.7	5.9	6.1	6.4	6.6	6.8	7.1
	W/ brake	4	4.3	4.5	4.8	5	5.2	5.5	5.7	5.9	6.2	6.4	6.6	6.9	7.1	7.3	7.6

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4CR-SA8C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 90 mm | 200v AC Servo Motor

■ Model Specification Items

RCS4CR	—	SA8C	—	WA	—	400	—	☐	—	☐	—	T2	—	☐	—	☐
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		400: Servo motor 400W		20:20mm 10:10mm 5: 5mm		50:50mm ~ 1100:1100mm (50mm increments)		T2:SCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X☐☐ : Specified Length R☐☐ : Robot Cable		Refer to Options table below.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.

POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.
(2) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(3) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4CR-SA8C-WA-400-20-①-T2-②-③	400	20	60	20	339	50~1100 (50mm increments)
RCS4CR-SA8C-WA-400-10-①-T2-②-③		10	80	35	678	
RCS4CR-SA8C-WA-400-5-①-T2-②-③		5	90	45	1357	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed/Suction Amount

(Unit: mm/s)

Lead \ Stroke	50~600 (50mm increments)	650 (mm)	700 (mm)	750 (mm)	800 (mm)	850 (mm)	900 (mm)	950 (mm)	1000 (mm)	1050 (mm)	1100 (mm)	Suction amount (Nℓ/min)
20	1200	1090	960	860	770	695	630	570	520	480	440	160
10	600	540	480	430	385	345	310	285	260	235	220	80
5	300	270	240	215	190	175	155	140	130	120	110	40

① Stroke

① Stroke (mm)	RCS4CR-SA8C	① Stroke (mm)	RCS4CR-SA8C
50	○	**600**	○
100	○	**650**	○
150	○	**700**	○
200	○	**750**	○
250	○	**800**	○
300	○	**850**	○
350	○	**900**	○
400	○	**950**	○
450	○	**1000**	○
500	○	**1050**	○
550	○	**1100**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options * Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
High-Precision specification (*1)	**HPR**	See P.134
Non-motor end specification	**NM**	See P.136
Air suction joint in opposite position	**VR**	See P.137
Double slide specification (*2)	**W**	See P.137

(*1) Double slider specification cannot be selected.
(*2) Some leads cannot be selected. (Please see P. 150)

Actuator Specifications

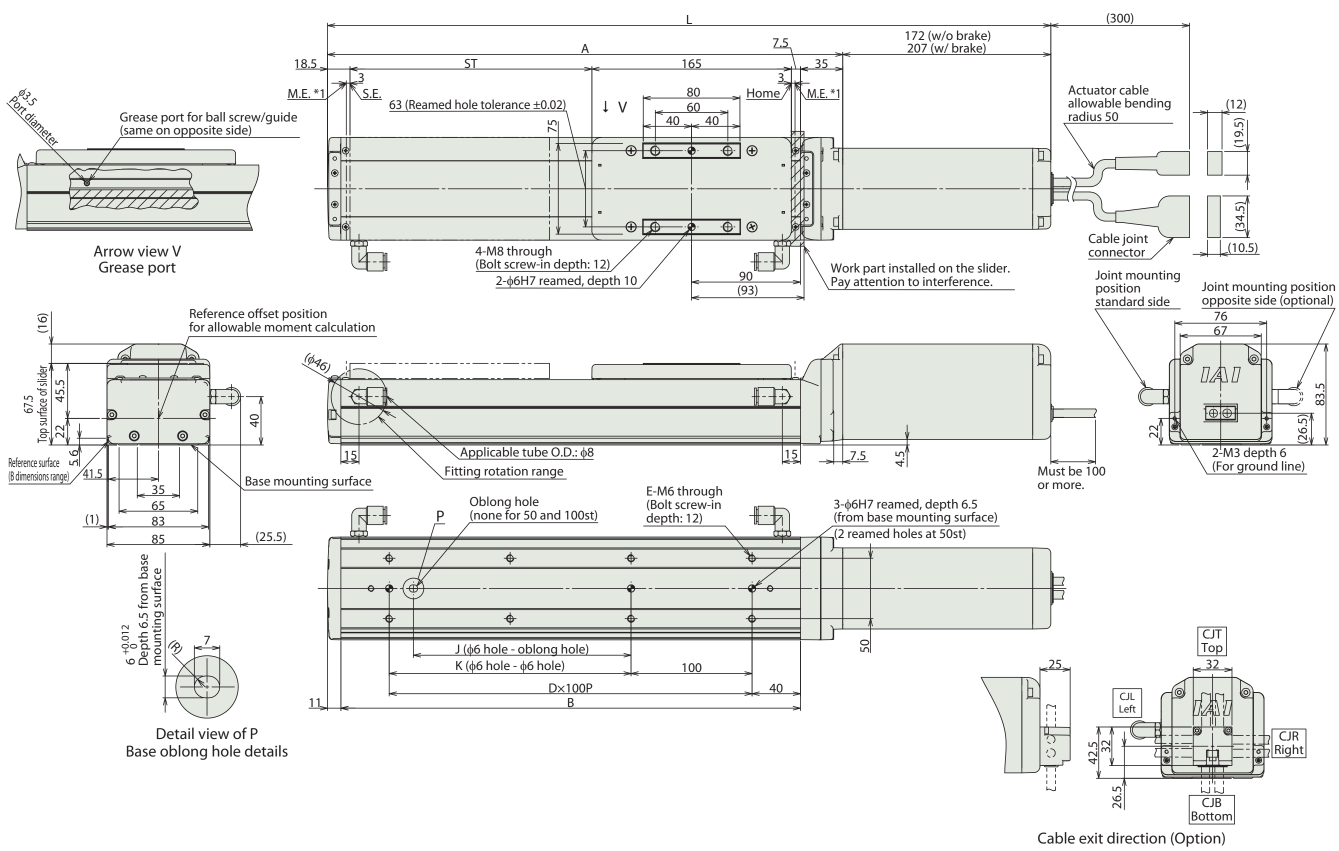
Item	Description
Drive system	Ball screw ϕ16mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 219N-m, Mb direction 219N-m, Mc direction 414N-m
Allowable dynamic moment (*2)	Ma direction 77.0N-m, Mb direction 77.0N-m, Mc direction 146N-m
Cleanliness	Class 10 (Fed.Std.209D), class 2.5 or equivalent (ISO 14644-1 Standard)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

* Reference for overhang load length: Ma direction: 400mm or less, Mb, Mc direction: 400mm or less
(*1) Values in [ ] are for high precision (for lead 5/10/20) specification.
(*2) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.
See page 146 for moment load directions.
If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



■ Dimensions and Mass by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
L	W/o brake	448	498	548	598	648	698	748	798	848	898	948	998	1048	1098	1148	1198	1248	1298	1348	1398	1448	1498
	W/ brake	483	533	583	633	683	733	783	833	883	933	983	1033	1083	1133	1183	1233	1283	1333	1383	1433	1483	1533
A		276	326	376	426	476	526	576	626	676	726	776	826	876	926	976	1026	1076	1126	1176	1226	1276	1326
B		230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280
D		1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
E		4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
J		0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980	1080
K		0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1000	1000	1100
Mass (kg)	W/o brake	4.7	5.0	5.3	5.6	5.9	6.2	6.5	6.8	7.1	7.4	7.6	7.9	8.2	8.5	8.8	9.1	9.4	9.7	10.0	10.3	10.6	10.8
	W/ brake	5.2	5.5	5.8	6.1	6.4	6.7	7	7.3	7.6	7.9	8.1	8.4	8.7	9	9.3	9.6	9.9	10.2	10.5	10.8	11.1	11.3

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. connections Max. number of controlled axes	Input power	Control method: Positioner	Pulse train	Program	Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 200VAC	●	●	–	DeviceNet CC-Link PROFIBUS CompoNet MECHATROLINK EtherCAT EtherNet/IP PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SSEL-CS		2	Single phase 100V/200VAC	●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4CR-WSA10C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 100 mm | 200v AC Servo Motor

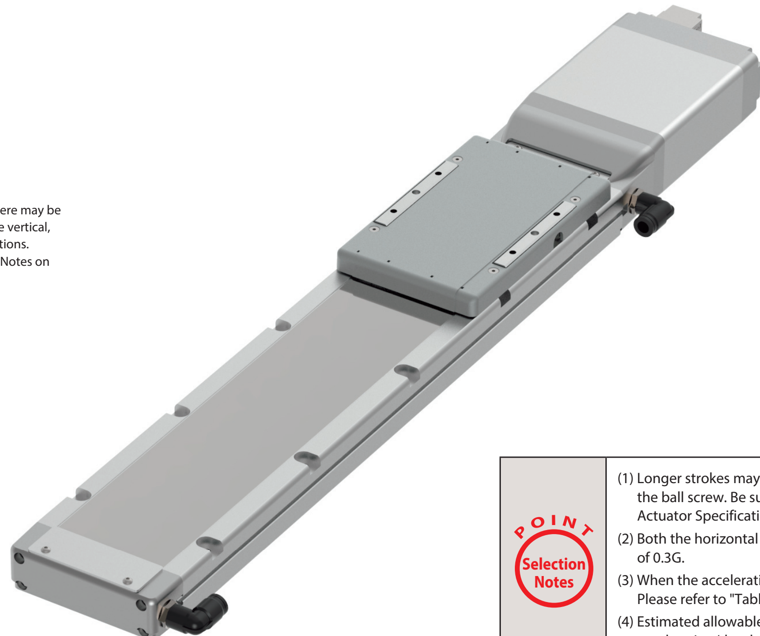
■ Model Specification Items

RCS4CR	—	WSA10C	—	WA	—	60	—	☐	—	☐	—	T2	—	☐	—	☐
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		60: Servo motor 60W		16: 16mm 10: 10mm 5: 5mm 2.5:2.5mm		50:50mm ≀ 500:500mm (50mm increments)		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable		Refer to Options table below. * Be sure to select an option for the cable exit direction.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.
(2) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(3) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4CR-WSA10C-WA-60-16-①-T2-②-③	60	16	7	–	53	50~500 (50mm increments)
RCS4CR-WSA10C-WA-60-10-①-T2-②-③		10	16	3	85	
RCS4CR-WSA10C-WA-60-5-①-T2-②-③		5	27	5	170	
RCS4CR-WSA10C-WA-60-2.5-①-T2-②-③		2.5	40	10	340	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed/Suction Amount (Unit: mm/s)

Lead \ Stroke	50~350 (50mm increments)	400 (mm)	450 (mm)	500 (mm)	Suction amount (Nℓ/min)
16	960	930	775	660	105
10	600	590	490	415	60
5	300	290	245	205	30
2.5	150	145	120	100	25

① Stroke

① Stroke (mm)	RCS4CR-WSA10C	① Stroke (mm)	RCS4CR-WSA10C
50	○	**300**	○
100	○	**350**	○
150	○	**400**	○
200	○	**450**	○
250	○	**500**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options * Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
High-precision specification	**HPR**	See P.134
Non-motor end specification	**NM**	See P.136
Air suction joint in opposite position	**VR**	See P.137

Actuator Specifications

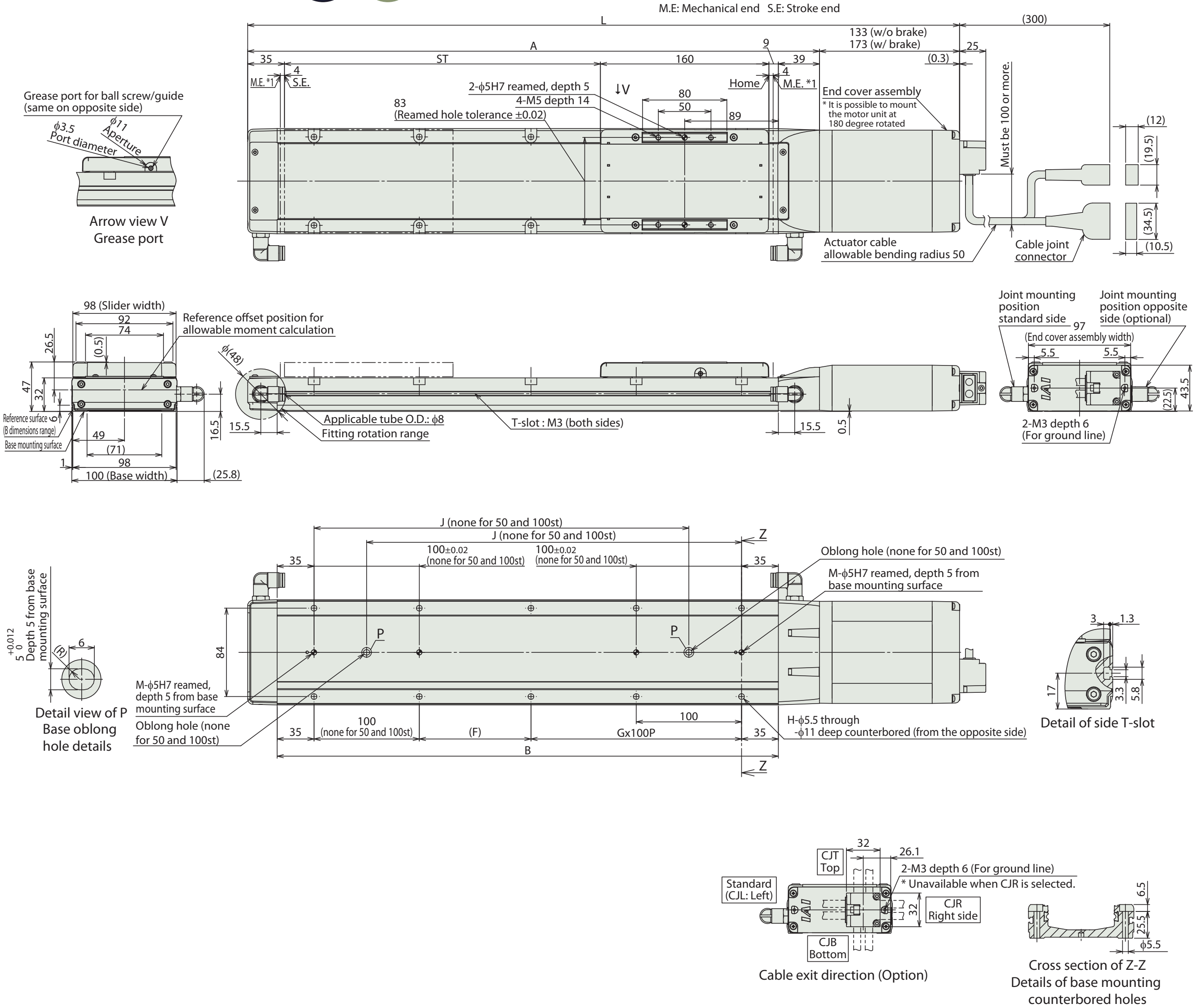
Item	Description
Drive system	Ball screw ϕ8mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 271N·m, Mb direction 271N·m, Mc direction 553N·m
Allowable dynamic moment (*2)	Ma direction 65.4N·m, Mb direction 65.4N·m, Mc direction 134N·m
Cleanliness	Class 10 (Fed.Std.209D), class 2.5 or equivalent (ISO 14644-1 Standard)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

* Reference for overhang load length: Ma direction: 500mm or less, Mb, Mc direction: 500mm or less
(*1) Values in [ ] are for high precision specification.
(*2) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.
See page 146 for moment load directions.
If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.

Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



■ Dimensions and Mass by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500
L	W/o brake	426	476	526	576	626	676	726	776	826	876
	W/ brake	466	516	566	616	666	716	766	816	866	916
A		293	343	393	443	493	543	593	643	693	743
B		226	276	326	376	426	476	526	576	626	676
F		156	206	56	106	56	106	56	106	56	106
G		0	0	1	1	2	2	3	3	4	4
H		4	4	8	8	10	10	12	12	14	14
J		–	–	206	256	306	356	406	456	506	556
M		1	1	2	2	2	2	2	2	2	2
Mass (kg)	W/o brake	2.8	3.0	3.3	3.5	3.8	4.0	4.3	4.5	4.8	5.0
	W/ brake	3.1	3.3	3.6	3.8	4.1	4.3	4.6	4.8	5.1	5.3

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4CR-WSA12C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 120 mm | 200v AC Servo Motor

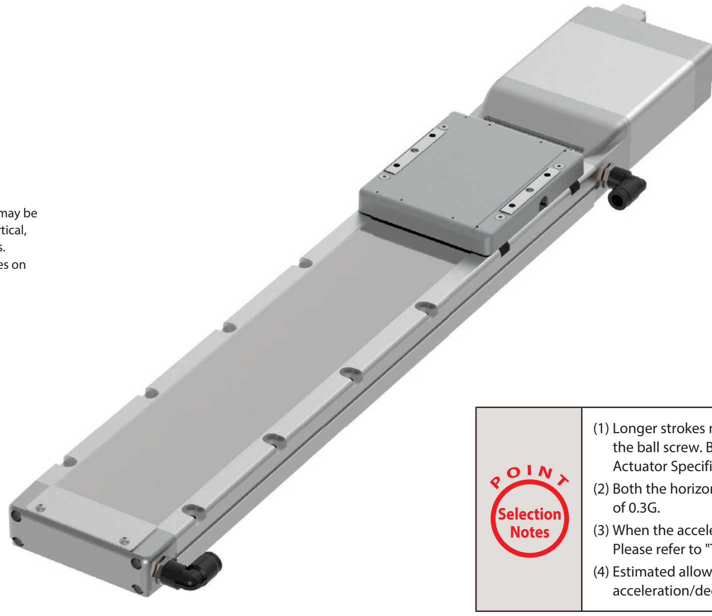
■ Model Specification Items

RCS4CR	—	WSA12C	—	WA	—	100	—	☐	—	☐	—	T2	—	☐	—	☐
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		100: Servo motor 100W		20:20mm 12:12mm 6: 6mm 3: 3mm		50:50mm ≀ 800:800mm (50mm increments)		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X☐☐ : Specified Length R☐☐ : Robot Cable		Refer to Options table below. * Be sure to select an option for the cable exit direction.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.
(2) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(3) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4CR-WSA12C-WA-100-20-①-T2-②-③	100	20	15	3	85	50~800 (50mm increments)
RCS4CR-WSA12C-WA-100-12-①-T2-②-③		12	25	8	142	
RCS4CR-WSA12C-WA-100-6-①-T2-②-③		6	45	15	283	
RCS4CR-WSA12C-WA-100-3-①-T2-②-③		3	55	15	566	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed/Suction Amount

(Unit: mm/s)

Lead \ Stroke	50~500 (50mm increments)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)	Suction amount (Nℓ/min)
20	1200	970	840	740	650	580	520	130
12	720	535	465	405	355	315	285	80
6	360	265	230	200	175	155	140	40
3	180	130	115	100	85	75	70	25

① Stroke

① Stroke (mm)	RCS4CR-WSA12C	① Stroke (mm)	RCS4CR-WSA12C
50	○	**450**	○
100	○	**500**	○
150	○	**550**	○
200	○	**600**	○
250	○	**650**	○
300	○	**700**	○
350	○	**750**	○
400	○	**800**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options * Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
High-precision specification	**HPR**	See P.134
Non-motor end specification	**NM**	See P.136
Air suction joint in opposite position	**VR**	See P.137

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ10mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 311N·m, Mb direction 311N·m, Mc direction 827N·m
Allowable dynamic moment (*2)	Ma direction 87.5N·m, Mb direction 87.5N·m, Mc direction 233N·m
Cleanliness	Class 10 (Fed.Std.209D), class 2.5 or equivalent (ISO 14644-1 Standard)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

* Reference for overhang load length: Ma direction: 450mm or less, Mb, Mc direction: 450mm or less
(*1) Values in [ ] are for high precision specification.
(*2) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.
See page 146 for moment load directions.
If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.

Dimensions

CAD drawings can be downloaded from our website.
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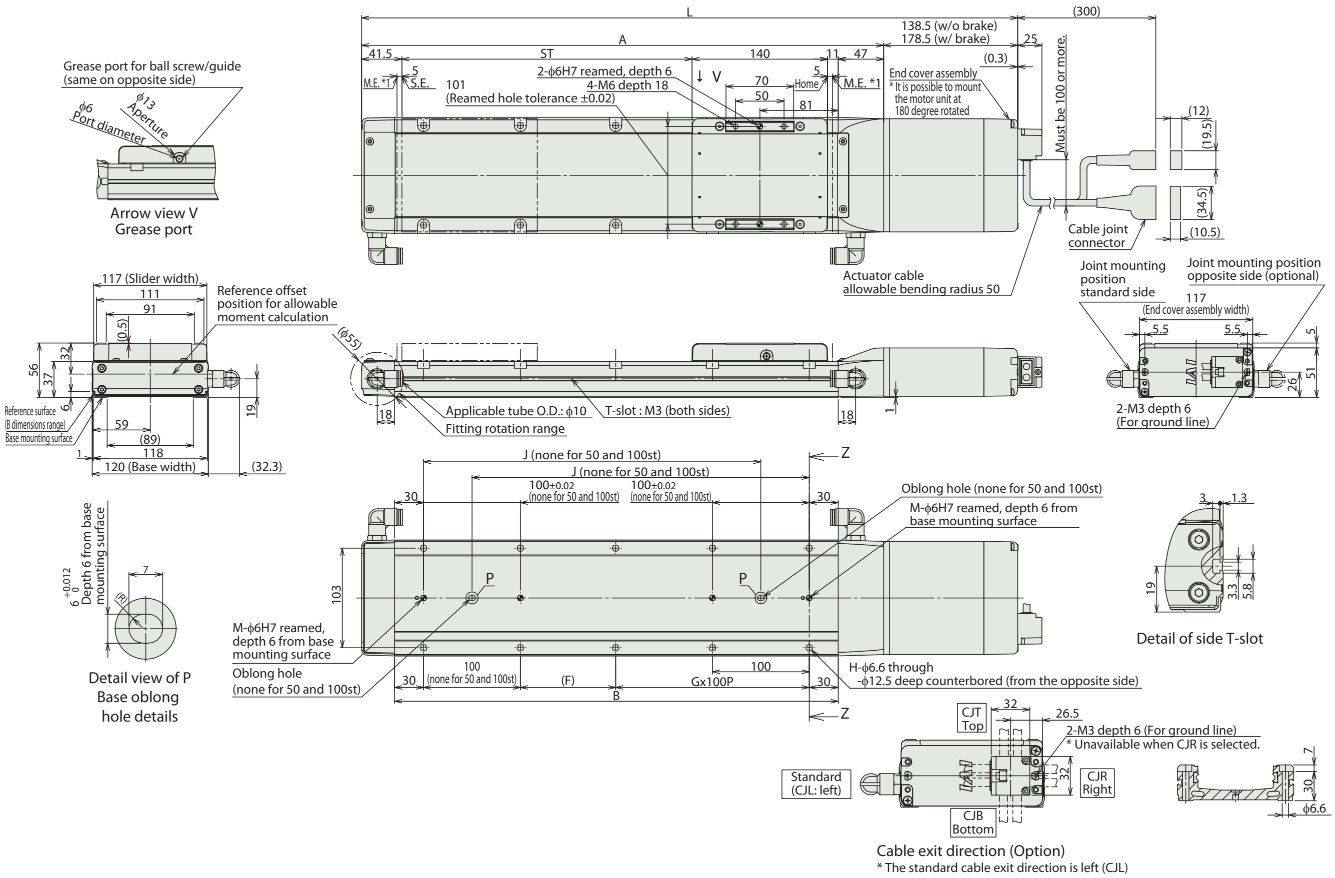
*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end

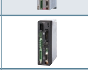


■ Dimensions and Mass by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	W/o brake	428	478	528	578	628	678	728	778	828	878	928	978	1028	1078	1128	1178
	W/ brake	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218
A		289.5	339.5	389.5	439.5	489.5	539.5	589.5	639.5	689.5	739.5	789.5	839.5	889.5	939.5	989.5	1039.5
B		208.5	258.5	308.5	358.5	408.5	458.5	508.5	558.5	608.5	658.5	708.5	758.5	808.5	858.5	908.5	958.5
F		148.5	198.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5
G		0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
H		4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20
J		–	–	198.5	248.5	298.5	348.5	398.5	448.5	498.5	548.5	598.5	648.5	698.5	748.5	798.5	848.5
M		1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mass (kg)	W/o brake	3.8	4.2	4.5	4.8	5.2	5.5	5.8	6.2	6.5	6.9	7.2	7.5	7.9	8.2	8.5	8.9
	W/ brake	4.2	4.6	4.9	5.2	5.6	5.9	6.2	6.6	6.9	7.3	7.6	7.9	8.3	8.6	8.9	9.3

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4CR-WSA14C

±10μm Standard | ±5μm High-precision Optional | Sinmpe Dust-proof | Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 140 mm | 200v AC Servo Motor

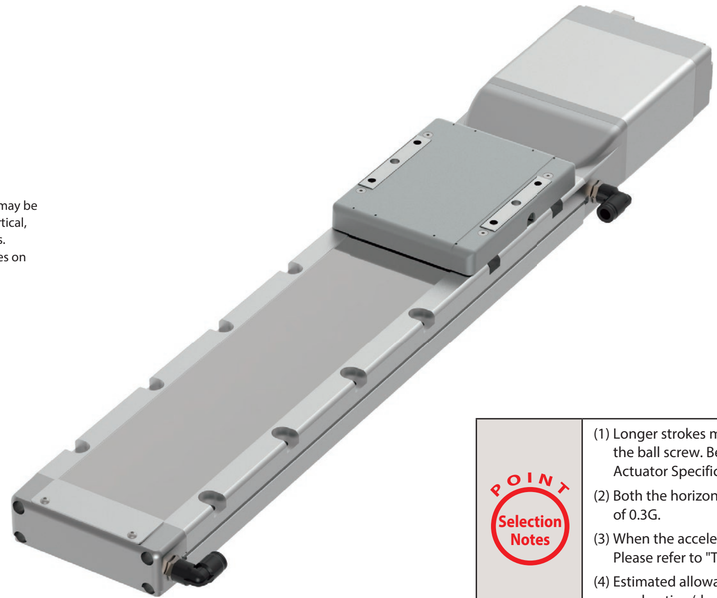
■ **Model Specification Items**

RCS4CR	—	WSA14C	—	WA	—	200	—	□	—	□	—	T2	—	□	—	□
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		200: Servo Motor 200W		24:24mm 16:16mm 8: 8mm 4: 4mm		50:50mm ≀ 800:800mm (50mm increments)		T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X□□ : Specified Length R□□ : Robot Cable		Refer to Options table below. * Be sure to select an option for the cable exit direction.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.

(2) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.

(3) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.

(4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4CR-WSA14C-WA-200-24-①-T2-②-③	200	24	20	2.5	142	50~800 (50mm increments)
RCS4CR-WSA14C-WA-200-16-①-T2-②-③		16	45	8	214	
RCS4CR-WSA14C-WA-200-8-①-T2-②-③		8	65	10	427	
RCS4CR-WSA14C-WA-200-4-①-T2-②-③		4	80	25	855	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed/Suction Amount (Unit: mm/s)

Lead \ Stroke	50~550 (50mm increments)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)	Suction amount (Nℓ/min)
24	1440	1060	930	830	740	665	135
16	960	690	610	550	490	440	110
8	480	350	305	270	240	215	70
4	240	170	150	135	120	105	45

① Stroke

① Stroke (mm)	RCS4CR-WSA14C	① Stroke (mm)	RCS4CR-WSA14C
50	○	**450**	○
100	○	**500**	○
150	○	**550**	○
200	○	**600**	○
250	○	**650**	○
300	○	**700**	○
350	○	**750**	○
400	○	**800**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options * Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
High-precision specification *	**HPR**	See P.134
Non-motor end specification	**NM**	See P.136
Air suction joint in opposite position	**VR**	See P.137

* When the lead is 24, it cannot be selected.

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ12mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 462N·m, Mb direction 462N·m, Mc direction 1170N·m
Allowable dynamic moment (*2)	Ma direction 122N·m, Mb direction 122N·m, Mc direction 308N·m
Cleanliness	Class 10 (Fed.Std.209D), class 2.5 or equivalent (ISO 14644-1 Standard)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

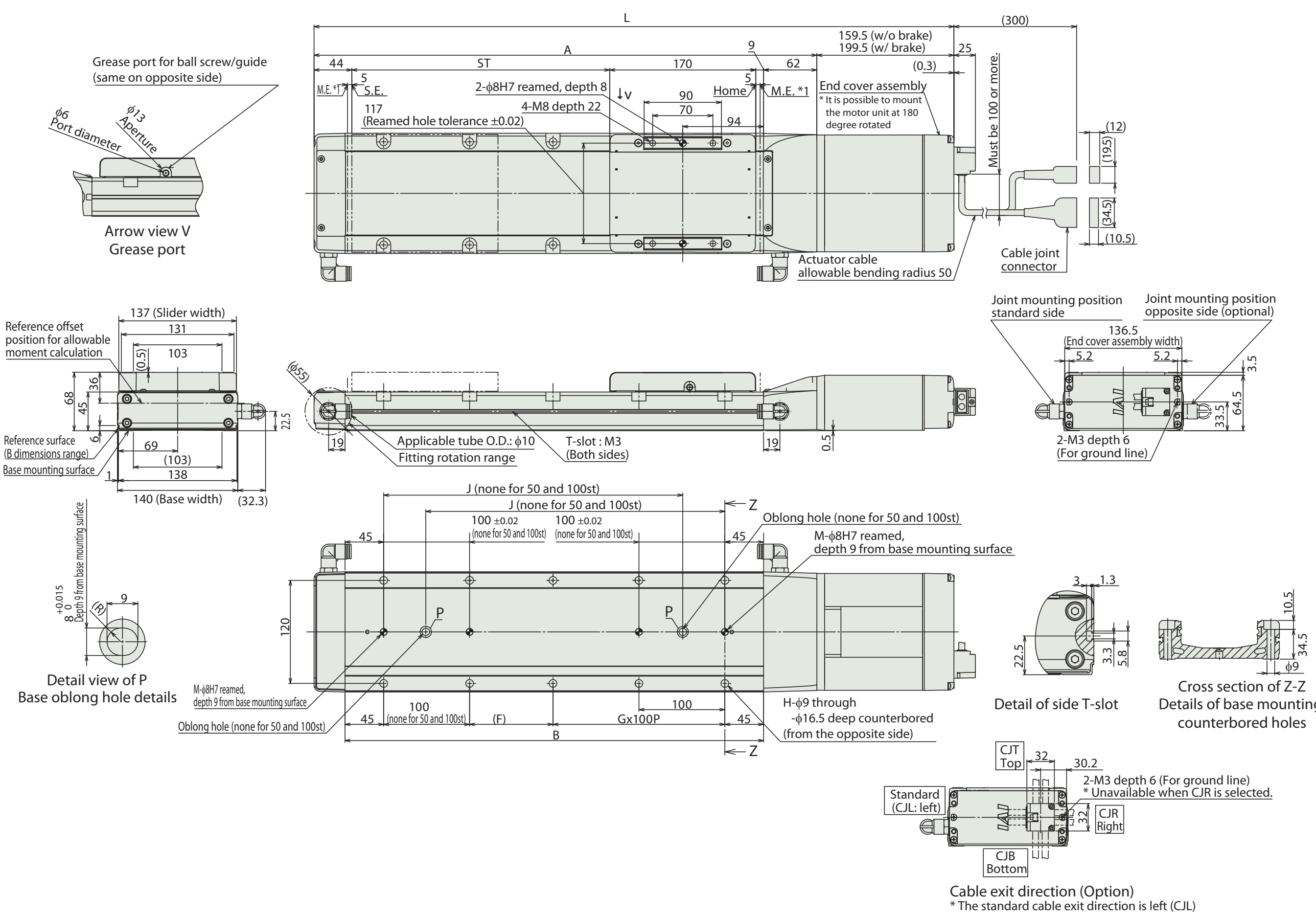
* Reference for overhang load length: Ma direction: 550mm or less, Mb, Mc direction: 550mm or less

(*1) Values in [ ] are for high precision (for lead 4/8/16) specification.

(*2) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.

Please contact IAI America for more information regarding the directions of the allowable moment and overhang load length.

*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



■ Dimensions and Mass by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	W/o brake	494.5	544.5	594.5	644.5	694.5	744.5	794.5	844.5	894.5	944.5	994.5	1044.5	1094.5	1144.5	1194.5	1244.5
	W/ brake	534.5	584.5	634.5	684.5	734.5	784.5	834.5	884.5	934.5	984.5	1034.5	1084.5	1134.5	1184.5	1234.5	1284.5
A		335	385	435	485	535	585	635	685	735	785	835	885	935	985	1035	1085
B		237	287	337	387	437	487	537	587	637	687	737	787	837	887	937	987
F		147	197	47	97	47	97	47	97	47	97	47	97	47	97	47	97
G		0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
H		4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20
J		–	–	198	248	298	348	398	448	498	548	598	648	698	748	798	848
M		1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mass (kg)	W/o brake	6.5	6.9	7.4	7.9	8.4	8.9	9.4	9.9	10.3	10.8	11.3	11.8	12.3	12.8	13.3	13.8
	W/ brake	7.1	7.5	8	8.5	9	9.5	10	10.5	10.9	11.4	11.9	12.4	12.9	13.4	13.9	14.4

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
SCON-CB/CGB		1	Single phase 100V/200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4CR-WSA16C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Type | Coupled Motor | Body Width 160 mm | 200V AC Servo Motor

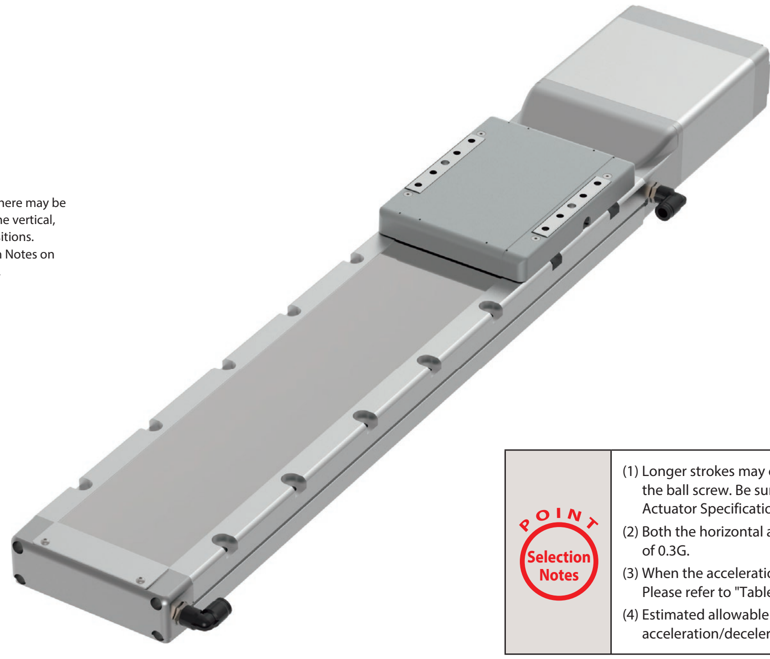
■ **Model Specification Items**

RCS4CR	—	WSA16C	—	WA	—	400	—	☐	—	☐	—	T2	—	☐	—	☐
Series	—	Type	—	Encoder Type	—	Motor Type	—	Lead	—	Stroke	—	Applicable Controllers	—	Cable Length	—	Options
				WA: Battery-less Absolute		400: Servo motor 400W		20:20mm 10:10mm 5: 5mm		50:50mm ~ 1100:1100mm (50mm increments)		T2:SCON SSEL XSEL-P/Q XSEL-RA/SA		N : None P : 1m S : 3m M: 5m X☐☐ : Specified Length R☐☐ : Robot Cable		Refer to Options table below. * Be sure to select an option for the cable exit direction.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.



POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.
(2) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(3) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4CR-WSA16C-WA-400-20-①-T2-②-③	400	20	60	20	339	50~1100 (50mm increments)
RCS4CR-WSA16C-WA-400-10-①-T2-②-③		10	80	35	678	
RCS4CR-WSA16C-WA-400-5-①-T2-②-③		5	100	50	1357	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed/Suction Amount

(Unit: mm/s)

Lead \ Stroke	50~550 (50mm increments)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)	850 (mm)	900 (mm)	950 (mm)	1000 (mm)	1050 (mm)	1100 (mm)	Suction amount (Nℓ/min)
20	1200	1120	990	880	780	715	645	590	535	490	450	415	130
10	600	560	490	440	395	355	320	290	265	240	225	205	80
5	300	280	240	220	195	175	160	145	130	120	110	100	50

① Stroke

① Stroke (mm)	RCS4CR-WSA16C	① Stroke (mm)	RCS4CR-WSA16C
50	○	**600**	○
100	○	**650**	○
150	○	**700**	○
200	○	**750**	○
250	○	**800**	○
300	○	**850**	○
350	○	**900**	○
400	○	**950**	○
450	○	**1000**	○
500	○	**1050**	○
550	○	**1100**	○

② Cable Length

Type	Cable Code
Standard	**P**(1m)
	S(3m)
	M(5m)
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)
	X11(11m)~**X15**(15m)
	X16(16m)~**X20**(20m)
Robot cable	**R01**(1m) ~**R03**(3m)
	R04(4m) ~**R05**(5m)
	R06(6m) ~**R10**(10m)
	R11(11m)~**R15**(15m)
	R16(16m)~**R20**(20m)

③ Options

* Please check the Options reference pages to confirm each option.

Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
High-precision specification	**HPR**	See P.134
Non-motor end specification	**NM**	See P.136
Air suction joint in opposite position	**VR**	See P.137

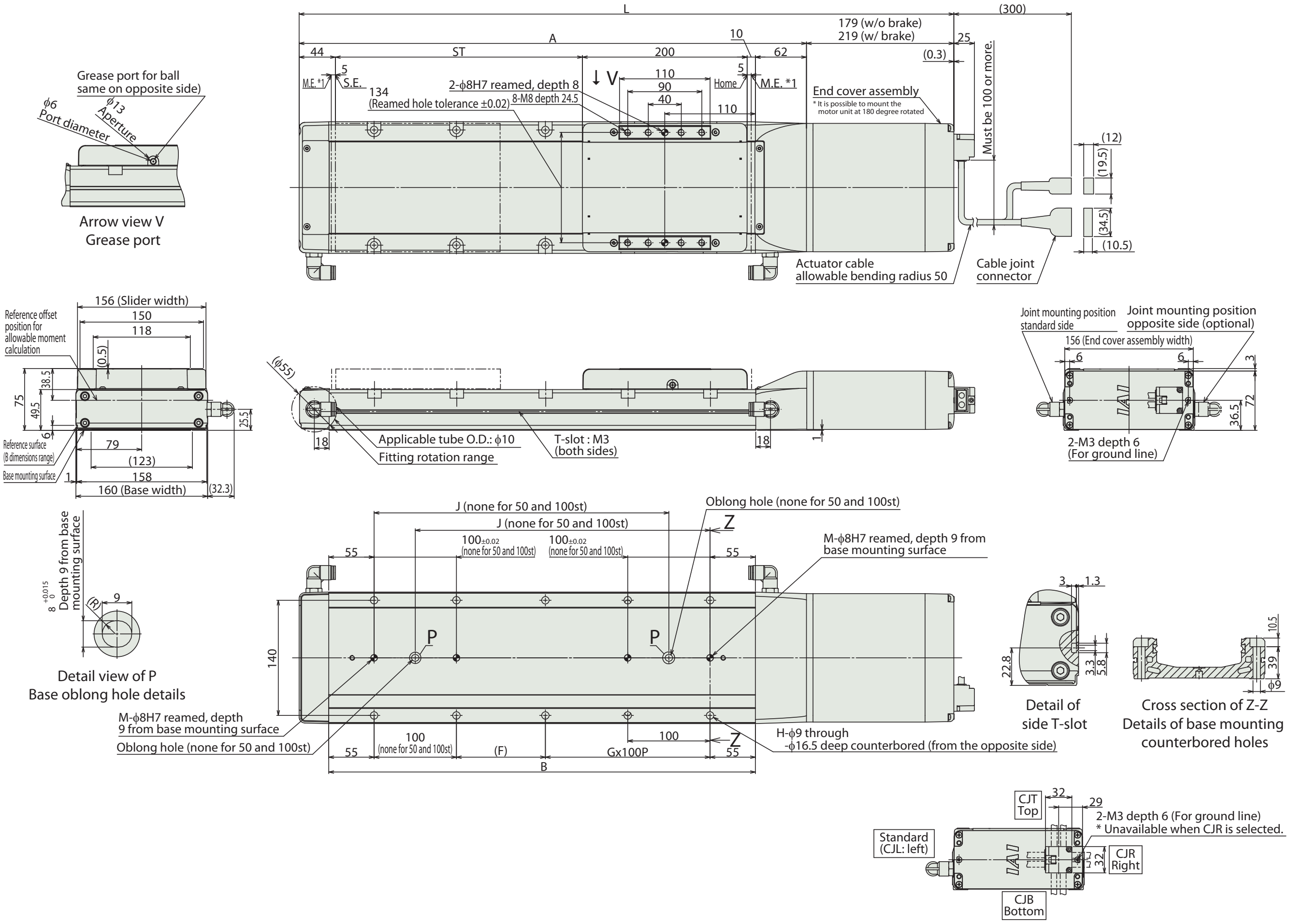
Actuator Specifications

Item	Description
Drive system	Ball screw ϕ16mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction 642N·m, Mb direction 642N·m, Mc direction 1610N·m
Allowable dynamic moment (*2)	Ma direction 161N·m, Mb direction 161N·m, Mc direction 404N·m
Cleanliness	Class 10 (Fed.Std.209D), class 2.5 or equivalent (ISO 14644-1 Standard)
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

* Reference for overhang load length: Ma direction: 650mm or less, Mb, Mc direction: 650mm or less
(*1) Values in [ ] are for high precision (for lead 5/10/20) specification.
(*2) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. Please contact IAI America for details of the running life.
See page 146 for moment load directions.
If the moment loads in Ma/Mb/Mc are within the allowable ranges, there is no overhang length limit.

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD | 3D CAD

*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end



Cable exit direction (Option)
* The standard cable exit direction is left (CJL)

■ Dimensions and Mass by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
L	W/o brake	545	595	645	695	745	795	845	895	945	995	1045	1095	1145	1195	1245	1295	1345	1395	1445	1495	1545	1595
	W/ brake	585	635	685	735	785	835	885	935	985	1035	1085	1135	1185	1235	1285	1335	1385	1435	1485	1535	1585	1635
A		366	416	466	516	566	616	666	716	766	816	866	916	966	1016	1066	1116	1166	1216	1266	1316	1366	1416
B		268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318
F		158	208	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108
G		0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
H		4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
J		–	–	208	258	308	358	408	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158
M		1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mass (kg)	W/o brake	9.1	9.8	10.4	11.0	11.6	12.2	12.8	13.4	14.0	14.7	15.3	15.9	16.5	17.1	17.7	18.3	18.9	19.6	20.2	20.8	21.4	22.0
	W/ brake	9.7	10.4	11.0	11.6	12.2	12.8	13.4	14.0	14.6	15.3	15.9	16.5	17.1	17.7	18.3	18.9	19.5	20.2	20.8	21.4	22.0	22.6

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. connections Max. number of controlled axes	Input power	Control method: Positioner	Control method: Pulse train	Control method: Program	Control method: Network * Option	Maximum number of positioning points	Reference page
SCON-CB/CGB		1	Single phase 200VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, PROFINET Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		–	–	●		512 (768 for network spec.)	
SSEL-CS		2	Single phase 100V/200VAC	●	–	●		20000	
XSEL-P/Q/RA/SA		8	Single phase 200VAC Three-phase 200VAC	–	–	●		55000 (Depending on the type)	

RCS4 Series Options

Brake

Model B

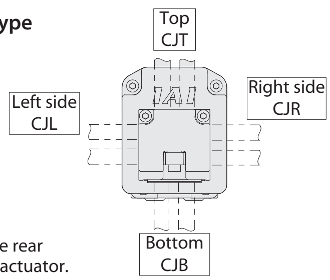
Description When the actuator is mounted vertically, this works as a holding mechanism that prevents the slider, rod, or table from falling and damaging any attachments when the power or servo is turned off.

Cable exit direction

Model CJT / CJR / CJL / CJB / CJO

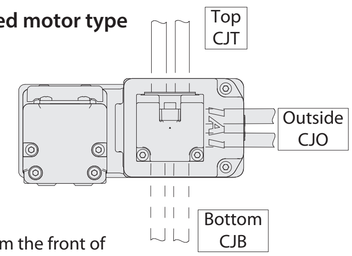
Description This option allows you to change the exit direction of the motor-encoder cable to top, bottom, left, or right.

Straight motor type



* When seen from the rear (motor side) of the actuator.

Side-mounted motor type



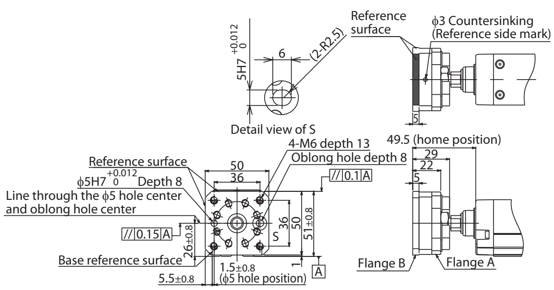
* When seen from the front of the actuator.

Tip adapter (Flange)

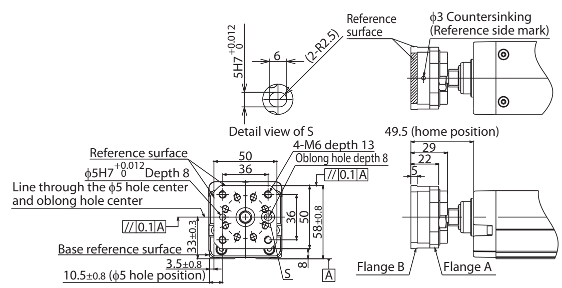
Model FFA

Description A rod tip tooling adapter with 4 threaded holes.

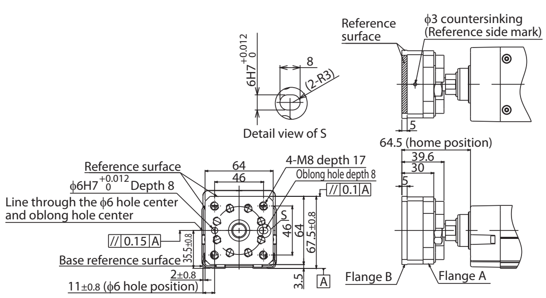
RCS4-RRA4□
Model Name: RCP6-FFA-RRA4



RCS4-RRA6□
Model Name: RCP6-FFA-RRA6



RCS4-RRA7□
Model Name: RCP6-FFA-RRA7

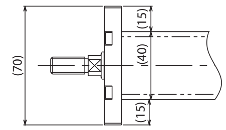


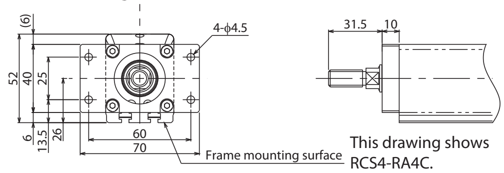
Model **FL**

Description A bracket that attaches to the actuator body with bolts. * Be sure to confirm with the Selection Notes (P.138).

RCS4-RA4☐
Model Name: RCP6-FL-RA4

* Furnished separately.
The assembly is to be performed by the customer with reference to the mechanical drawings.

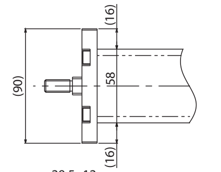


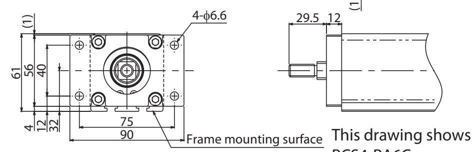


This drawing shows RCS4-RA4C.

RCS4-RA6☐
Model Name: RCP6-FL-RA6

* Furnished separately.
The assembly is to be performed by the customer with reference to the mechanical drawings.

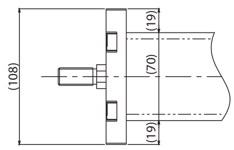


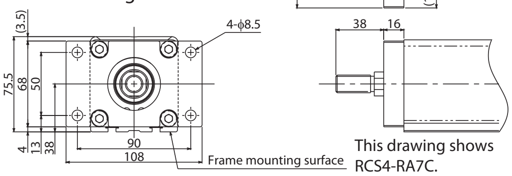


This drawing shows RCS4-RA6C.

RCS4-RA7☐
Model Name: RCP6-FL-RA7

* Furnished separately.
The assembly is to be performed by the customer with reference to the mechanical drawings.

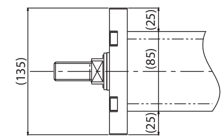


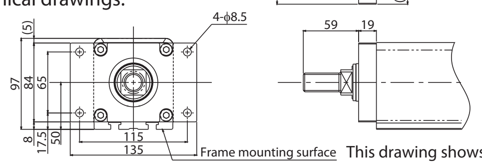


This drawing shows RCS4-RA7C.

RCS4-RA8☐
Model Name: RCP6-FL-RA8

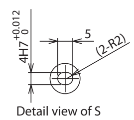
* Furnished separately.
The assembly is to be performed by the customer with reference to the mechanical drawings.

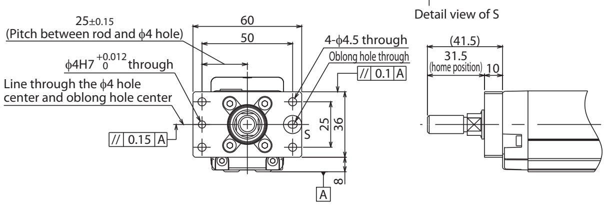




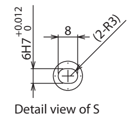
This drawing shows RCS4-RA8C.

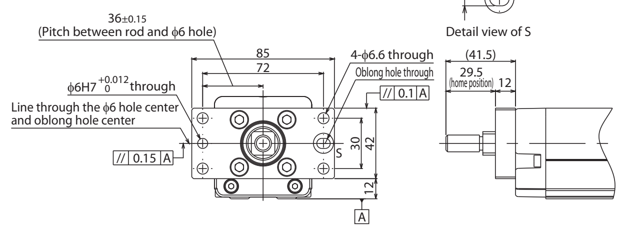
RCS4-RRA4☐
Model Name: RCP6-FL-RRA4



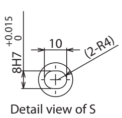


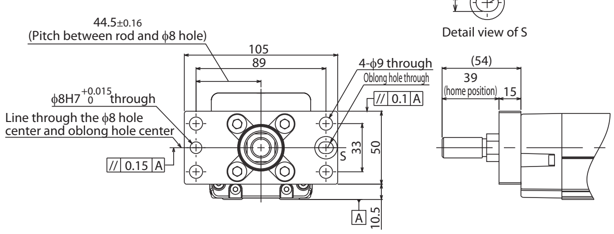
RCS4-RRA6☐
Model Name: RCP6-FL-RRA6



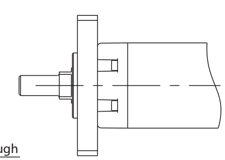


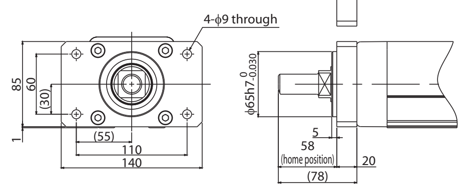
RCS4-RRA7☐
Model Name: RCP6-FL-RRA7



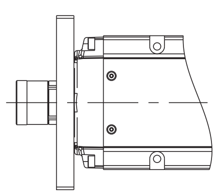


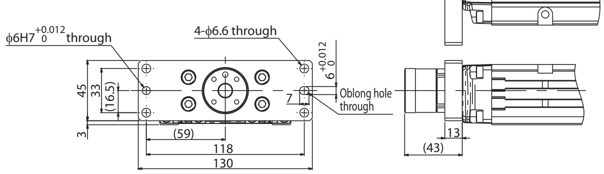
RCS4-RRA8☐
Model Name: RCP6-FL-RRA8



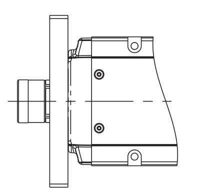


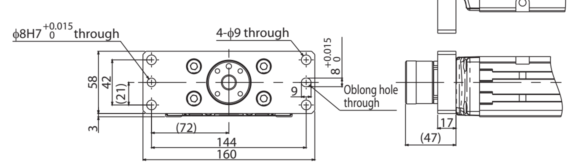
RCS4-WRA10☐
Model Name: RCP6-FL-WRA10



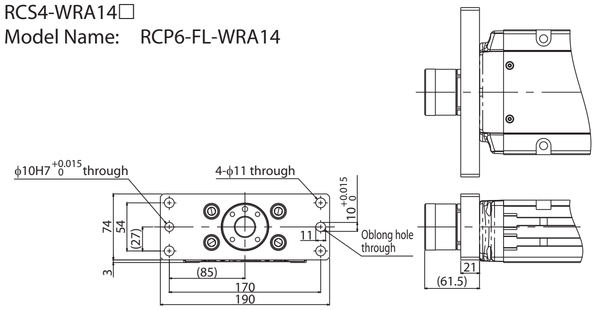


RCS4-WRA12☐
Model Name: RCP6-FL-WRA12

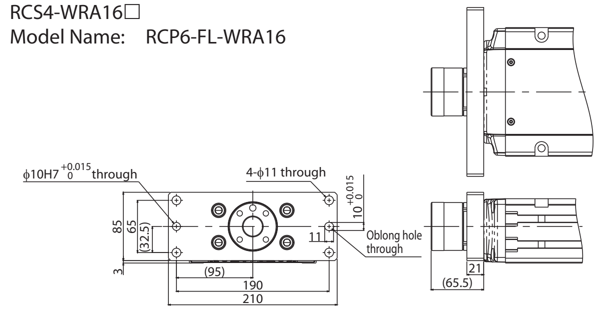




RCS4-WRA14□
Model Name: RCP6-FL-WRA14



RCS4-WRA16□
Model Name: RCP6-FL-WRA16

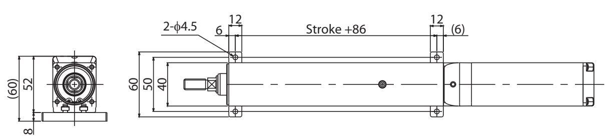


Foot bracket

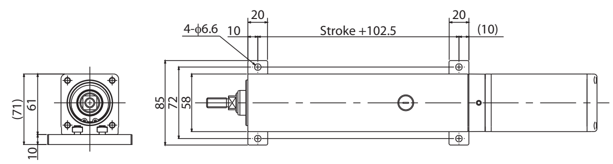
Model FT

Description This is a bracket used to fix the actuator with bolts from the top side. (Bolts are tightened from the top, not from the bottom)
For slider type actuators, when the moment load is large, please attach the foot brackets on all the mounting holes on the actuator.
The actuator body may be twisted or deformed if insufficient mounting foot brackets are used. Actuator life could also be shortened.
* Refer to the installation dimensions in the actuator drawing for the installation pitch between the foot brackets.

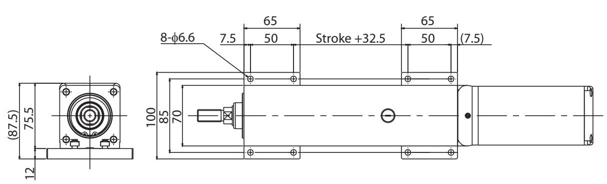
RCS4-RA4C
Model Name: RCP6-FT-RA4C



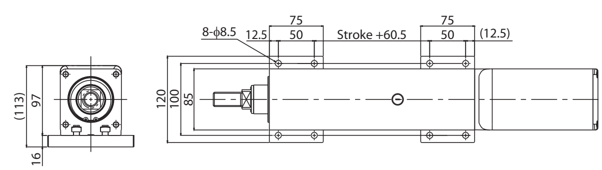
RCS4-RA6C
Model Name: RCP6-FT-RA6C



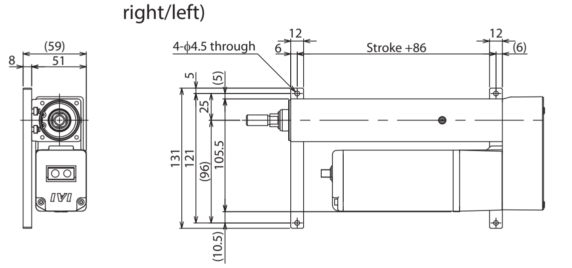
RCS4-RA7C
Model Name: RCP6-FT-RA7C



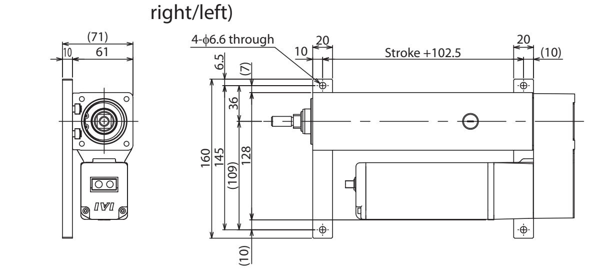
RCS4-RA8C
Model Name: RCP6-FT-RA8C



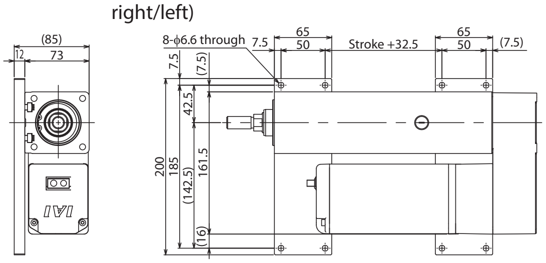
RCS4-RA4R
Model Name: RCP6-FT-RA4R-3 (For the motor side-mounted to the right/left)



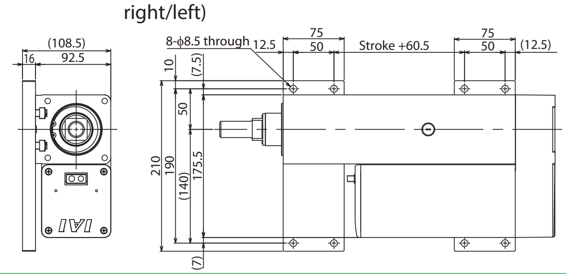
RCS4-RA6R
Model Name: RCS4-FT-RA6R (For the motor side-mounted to the right/left)



RCS4-RA7R
Model Name: RCS4-FT-RA7R (For the motor side-mounted to the right/left)



RCS4-RA8R
Model Name: RCP6-FT-RA8R-2 (For the motor side-mounted to the right/left)



High-precision Specification

Model **HPR**

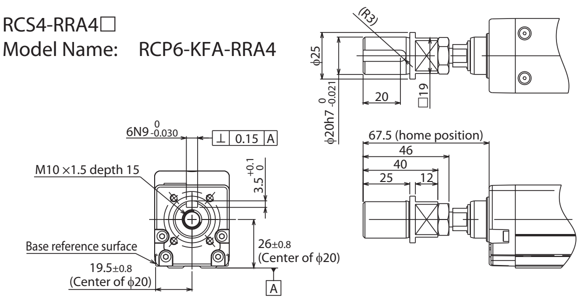
Description The positioning repeatability of the standard specification of the slider and wide slider types is ±0.01mm.
If this option is selected, the positioning repeatability can be ±0.005mm. * This option can be selected for actuators with lead 20mm or less.

Tip adapter (Keyway)

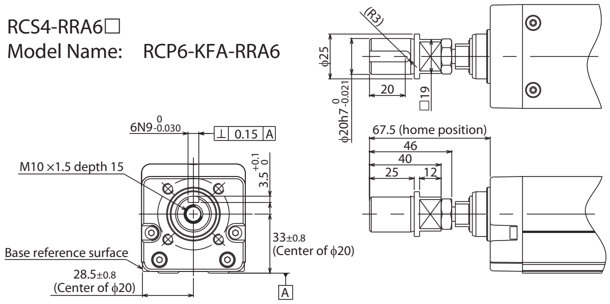
Model **KFA**

Description A rod tip adapter with 1 threaded hole and a parallel keyway.

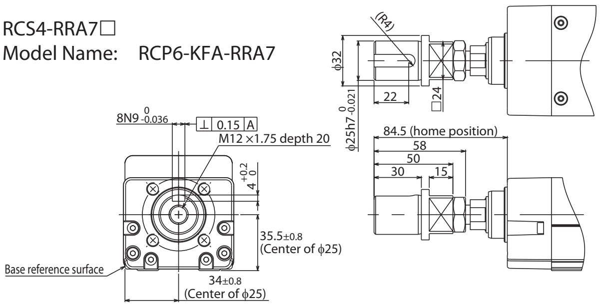
RCS4-RRA4□
Model Name: RCP6-KFA-RRA4



RCS4-RRA6□
Model Name: RCP6-KFA-RRA6



RCS4-RRA7□
Model Name: RCP6-KFA-RRA7

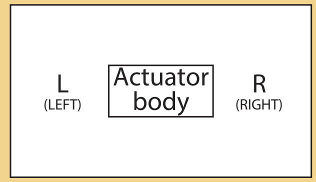


Foreword | Slider Type | Wide Slider Type | Rod Type | Radial Cylinder® | Wide Radial Cylinder | Table Type | Cleanroom Slider | Cleanroom Wide Slider | Options | Reference Data | Controller

Side-mounted motor direction

Model **ML / MR**

Description This allows you to specify the direction of the side-mounted motor type.
As viewed from the motor side of the actuator, side-mounting to left is ML and right is MR.

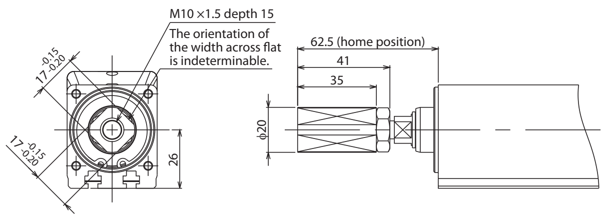


Tip adapter (Internal thread)

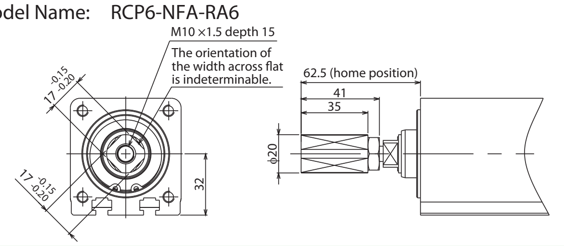
Model **NFA**

Description A rod tip tooling adapter with 1 threaded hole.

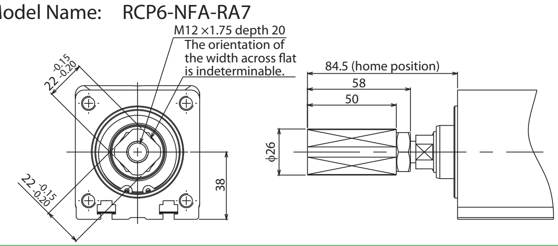
RCS4-RA4□
Model Name: RCP6-NFA-RA4



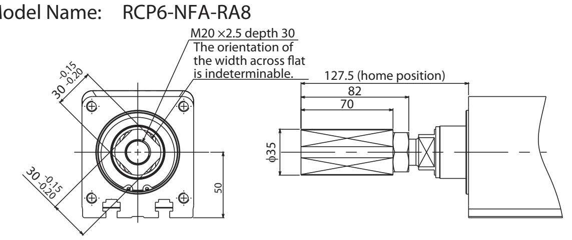
RCS4-RA6□
Model Name: RCP6-NFA-RA6



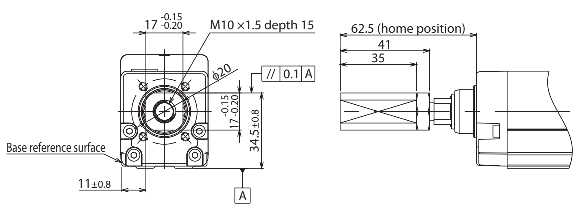
RCS4-RA7□
Model Name: RCP6-NFA-RA7



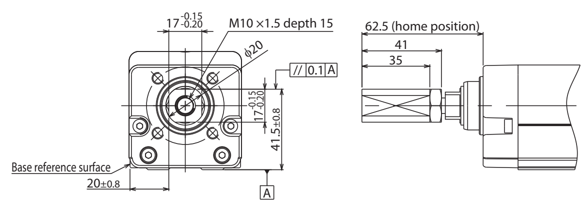
RCS4-RA8□
Model Name: RCP6-NFA-RA8



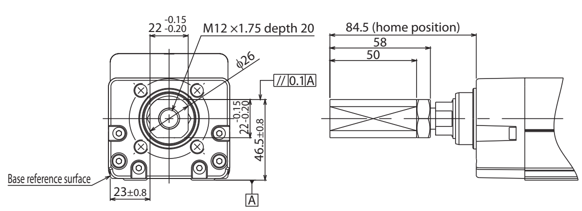
RCS4-RRA4□
Model Name: RCP6-NFA-RRA4



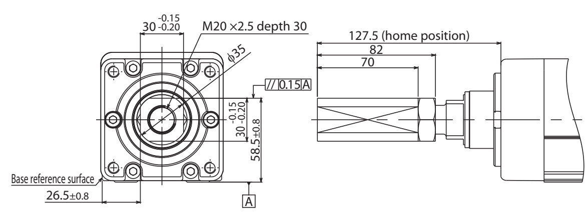
RCS4-RRA6□
Model Name: RCP6-NFA-RRA6



RCS4-RRA7□
Model Name: RCP6-NFA-RRA7



RCS4-RRA8□
Model Name: RCP6-NFA-RRA8



Non-motor End Specification

Model NM

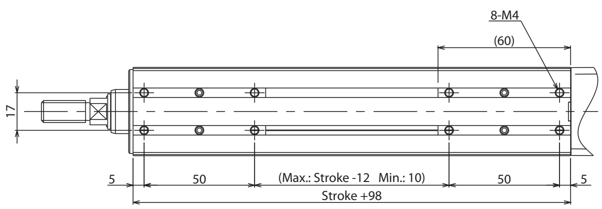
Description The standard specification home position is set by the slider, rod, and table on the motor side, but there is the option for the home position to be on the other side to accommodate variations in equipment layout, etc. (Please note that changing the home position after the actuator is manufactured and shipped from the factory may require the products to be sent back to IAI for re-setting.)

T-slot nut bar

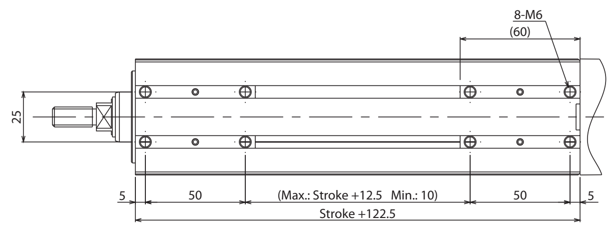
Model NTB / NTBL / NTBR

Description T-slot nut bar is a bar-shaped bracket which is to be inserted into the actuator's T-slot. There are tapped mounting holes on the T-slot nut bar. From the motor-side view, NTBL is inserted on the left side, and NTBR is inserted on the right.
* Only NTB can be selected for Rod type (RA), while either NTBL (for the actuator with its motor side-mounted to the right) or NTBR (for the actuator with its motor side-mounted to the left) can be selected for wide radial cylinder type (WRA).

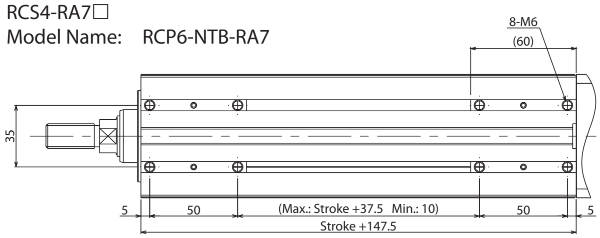
RCS4-RA4□
Model Name: RCP6-NTB-RA4



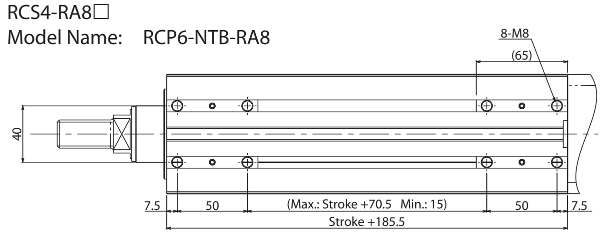
RCS4-RA6□
Model Name: RCP6-NTB-RA6



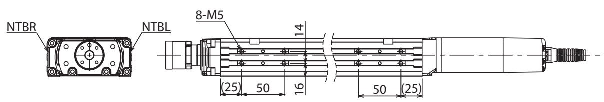
RCS4-RA7□
Model Name: RCP6-NTB-RA7



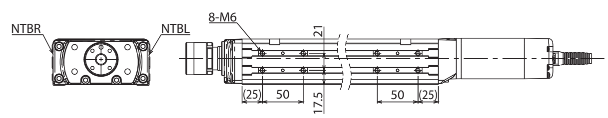
RCS4-RA8□
Model Name: RCP6-NTB-RA8



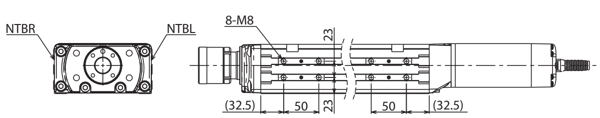
RCS4-WRA10□
Model Name: RCP6-NTB-WRA10



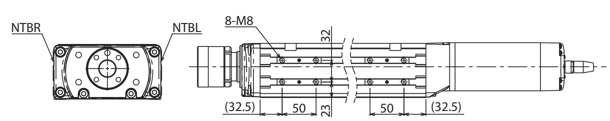
RCS4-WRA12□
Model Name: RCP6-NTB-WRA12



RCS4-WRA14□
Model Name: RCP6-NTB-WRA14



RCS4-WRA16□
Model Name: RCP6-NTB-WRA16



Back mounting plate

Model **RP**

Description A metal bracket (plate) for fixing the back of the side-mounted motor type to equipment.
* Please refer to product specification pages for drawings.

Slider Roller Specification

Model **SR**

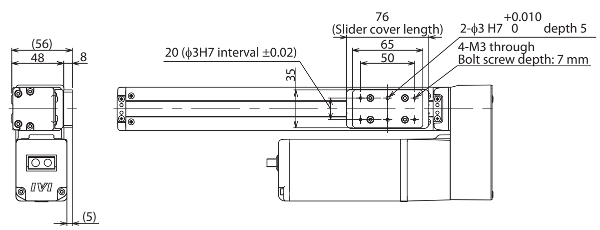
Description Changes the slider structure of the standard slider type to the same roller structure of the cleanroom specification.
Changing to roller specification will make the external view and dimensions of the slider cover the same as the cleanroom specification.

Slider spacer

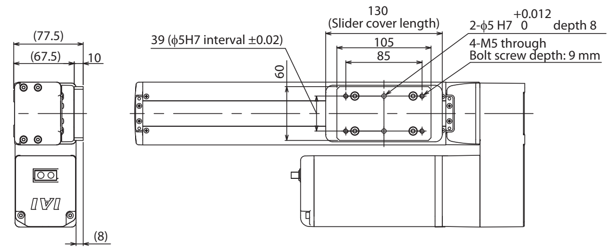
Model **SS**

Description This option changes the top of the slider position to be higher than the motor height.

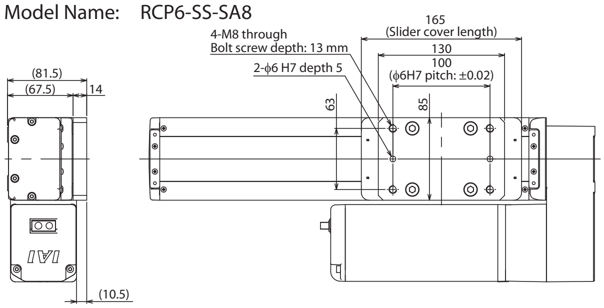
RCS4-SA4R
Model Name: RCS4-SS-SA4



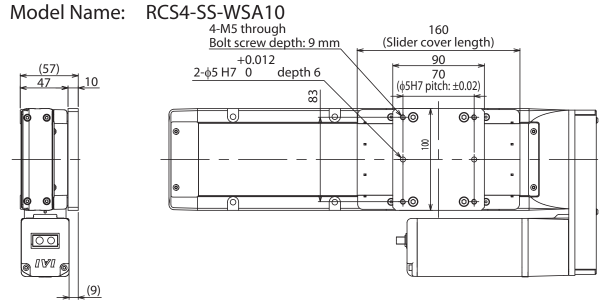
RCS4-SA7R
Model Name: RCP6-SS-SA7



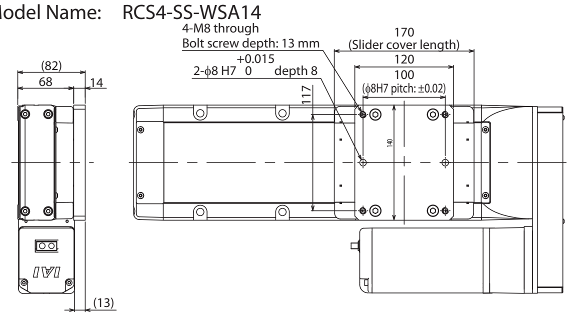
RCS4-SA8R
Model Name: RCP6-SS-SA8



RCS4-WSA10R
Model Name: RCS4-SS-WSA10



RCS4-WSA14R
Model Name: RCS4-SS-WSA14



Vacuum joint mounting position opposite

Model **VR**

Description As standard, the vacuum joint is installed on the left side of the body when seen from the motor side, but this option changes it to the right side (opposite side).

Double Slider Specification

Model **W**

Description This option adds a free slider not connected to the ball screw or drive belt.
Using a double slider enables increased moment and overhang load length.
* For the allowable dynamic moment and overhang load length of the double slider, refer to P.248.

Selection Notes for RCS4 Series

■ Cautions When Selecting the Rod Attachment Option

Model	Options		
RCS4	FL	NTBL	NTBR
RA4R	①	–	–
RA6R	①	–	–
RA7R	①	–	–
RA8R	②	–	–

Model	Options		
RCS4	FL	NTBL	NTBR
RRA4R	③	–	–
RRA6R	④	–	–
RRA7R	⑤	–	–
RRA8R	②	–	–

Model	Options		
RCS4	FL	NTBL	NTBR
WRA10R	②	⑥	⑦
WRA12R	②	⑥	⑦
WRA14R	②	⑥	⑦
WRA16R	②	⑥	⑦

Be sure to check the following conditions when selecting options.

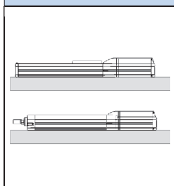
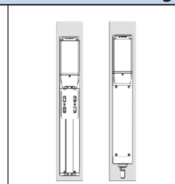
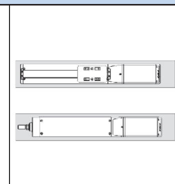
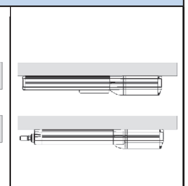
① Cannot be selected for 100st or less
② Cannot be selected for 50st
③ Cannot be selected for 110st or less
④ Cannot be selected for 65st
⑤ Cannot be selected for 70st
⑥ Can only be selected when MR is selected
⑦ Can only be selected when ML is selected

● The flange rod attachment option cannot be used on side mounting position for RCS4-RRA8R when the following strokes are selected.

· RCS4-RRA8R: 50 to 100st (standard/with brake)

■ Mounting Orientation

○: Can be installed △: Daily inspection required

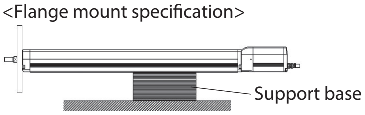
			Mounting orientation			
						
Classification	Series	Type	Horizontal mounting on flat surface	Vertical mounting (*1)	Side mounting	Ceiling mounting
Standard specification	RCS4	SA/WSA	○	○	△ (*2)	△ (*2)
		RA/RRA/WRA	○ (*3)	○	○	○
		TA	○	○	○	○
Cleanroom Specification	RCS4CR	SA/WSA	○	○	△ (*4)	△ (*4)

*1. When mounting vertically, please install the motor on the top if possible. While installing the motor on the bottom will not cause problems during normal operation, long periods of inactivity may cause the grease to separate, flow into the motor unit, and cause problems on rare occasions.

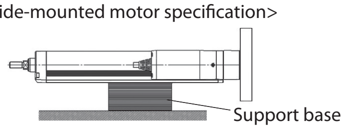
*2. While installation in the side and ceiling mount positions are available, this may cause slack or misalignment in the stainless steel sheet. Continuing to use it this way could cause the stainless steel sheet to break. Please inspect it daily and adjust the sheet if any slack or misalignment is found.

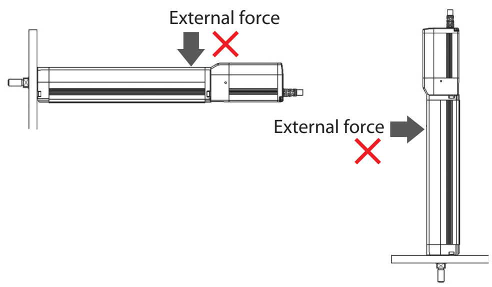
*3. Please install a support block when front mounting or back mounting a horizontally mounted actuator. Depending on the operation/installation conditions, vibration may cause damage to the actuator body. Do not fix the side-mounted motor specification only at the back of the reverse bracket. Fix the base with a support block, etc. If the actuator will experience external force or is being used in conjunction with a Cartesian robot, etc., please use the mounting holes on the base of the actuator to secure it into place.

<Flange mount specification>



<Side-mounted motor specification>





*4. Cleanliness class 10 may not be maintained in side mounting or ceiling mounting if slack or misalignment occurs in the stainless steel sheet. Please inspect it daily and adjust the sheet if any slack or misalignment is found.

■ Tables of Payload by Acceleration

The tables below show the max. payload at each acceleration/deceleration for different models. Please select a model that satisfies the operational conditions you desire.

RCS4 horizontal position

*** RCS4CR is the same.**

Series	Type	Motor wattage	Lead	Payload per Acceleration/Deceleration (kg)					
				0.2G	0.3G	0.5G	0.7G	1.0G	1.2G
RCS4	SA4C	60	2.5		20	20	20		
			5		17	17	15	15	
			10		14	14	12	10	6
			16		10	8	6	6	4
	SA6C	100	3		45	30	20		
			6		45	30	20	20	
			12		30	24	20	15	15
			20		18	15	10	8	6
			30		11	6	6	4	3
	SA7C	200	4		50	50	40		
			8		45	40	40	35	
			16		40	30	15	15	12
			24		30	12	10	6	5
			36		7	7	6	4	3
	SA8C	400	5		90	90	70		
			10		80	80	70	60	
			20		60	40	30	20	15
			30		30	25	20	15	10
			48		8	8	6	5	4
	SA4R	60	2.5		20	20	20		
			5		17	17	15	13	
			10		14	14	12	10	
			16		10	8	6	6	
	SA6R	100	3		45	30	20		
			6		45	30	20	20	
			12		30	24	20	15	
			20		18	15	10	8	
			30		11	6	6	4	
	SA7R	200	4		50	50	40		
			8		45	40	40	35	
			16		38	30	15	15	
			24		30	12	10	6	
			36		7	7	6	4	
	SA8R	400	5		90	90	70		
			10		80	80	70	60	
			20		60	40	30	20	
			30		30	25	20	15	
			48		8	8	6	5	
	RA4C	60	2.5		40	40	35		
			5		30	30	25	20	
			10		18	15	12	12	8
			16		8	8	6	5	4
	RA6C	100	3		60	50	40		
			6		50	45	30	25	
			12		25	20	20	12	12
			20		15	10	8	6	4
	RA7C	200	4		80	70	60		
			8		60	50	40	40	
			16		45	30	25	20	15
			24		20	15	10	10	8
	RA8C	400	5	100	100	80	60		
			10		80	80	70	60	
			20		60	40	25	20	15
	RA4R	60	2.5		40	40	35		
			5		30	30	25	20	
			10		18	15	12	12	
			16		8	8	6	5	
	RA6R	100	3		60	50	40		
			6		50	45	30	25	
			12		25	20	20	12	
			20		15	10	8	6	
	RA7R	200	4		80	70	60		
			8		60	50	40	40	
			16		45	30	25	20	
			24		20	15	10	10	
	RA8R	400	5	100	100	80	60		
			10		80	80	70	60	
			20		60	40	25	20	

RCS4 horizontal position

*** RCS4CR is the same.**

Series	Type	Motor wattage	Lead	Payload per Acceleration/Deceleration (kg) 0.2G	0.3G	0.5G	0.7G	1.0G	1.2G
RCS4	RRA4C	60	2.5		40	40	35		
			5		30	30	25	20	
			10		18	15	12	12	8
			16		8	8	6	5	4
	RRA6C	100	3		60	50	40		
			6		50	45	30	25	
			12		25	20	20	12	12
			20		15	10	8	6	4
	RRA7C	200	4		80	70	60		
			8		60	50	40	40	
			16		45	30	25	20	15
			24		20	15	10	10	8
	RRA8C	400	5	100	100	80	60		
			10		80	80	70	60	
			20		60	40	25	20	15
			30		30	20	15	10	8
	RRA4R	60	2.5		40	40	35		
			5		30	30	25	20	
			10		18	15	12	12	
			16		8	8	6	5	
	RRA6R	100	3		60	50	40		
			6		50	45	30	25	
			12		25	20	20	12	
			20		15	10	8	6	
	RRA7R	200	4		80	70	60		
			8		60	50	40	40	
			16		45	30	25	20	
			24		20	15	10	10	
	RRA8R	400	5	100	100	80	60		
			10		80	80	70	60	
			20		60	40	25	20	
			30		30	20	15	10	
	WRA10C	60	2.5		40	35	25		
			5		25	20	15	10	
			10		16	16	12	10	8
			16		5	5	4	3	2
	WRA12C	100	3		60	50	40		
			6		40	40	30	25	
			12		25	25	20	15	15
			20		12	10	8	6	4
	WRA14C	200	4		85	70	60		
			8		65	50	40	40	
			16		50	30	25	20	15
			24		25	15	10	6	4
	WRA16C	400	5		100	80	60		
			10		80	80	70	60	
			20		60	40	25	20	15
			30		30	20	15	8	6
	WRA10R	60	2.5		40	35	25		
			5		25	20	15	10	
			10		13	13	9	6	
			16		5	5	4	3	
	WRA12R	100	3		60	50	40		
			6		40	40	30	25	
			12		25	25	20	15	
			20		12	10	8	6	
	WRA14R	200	4		85	70	60		
			8		65	50	40	40	
			16		50	30	25	20	
			24		25	15	10	6	
	WRA16R	400	5		100	80	60		
			10		80	80	70	60	
			20		60	40	25	20	
			30		30	20	15	8	
	WSA10C	50	2.5		40	30	18		
			5		27	27	20	18	
			10		16	16	12	12	6
			16		7	7	5	4	3

Tables of Payload by Acceleration

RCS4 horizontal position

*** RCS4CR is the same.**

Series	Type	Motor wattage	Lead	Payload per Acceleration/Deceleration (kg)					
				0.2G	0.3G	0.5G	0.7G	1.0G	1.2G
RCS4	WSA12C	100	3		55	30	15		
			6		45	40	30	20	
			12		25	25	20	15	15
			20		15	10	8	6	4
			30		5	5	5	4	3
	WSA14C	200	4		80	60	30		
			8		65	50	40	40	
			16		45	30	20	20	18
			24		20	15	15	10	5
			36		7	6	6	4	3
	WSA16C	400	5		100	100	80		
			10		80	80	70	60	
			20		60	40	25	22	20
			30		30	25	20	10	8
	WSA10R	60	2.5		40	30	18		
			5		27	27	20	18	
			10		16	16	12	12	
			16		7	7	5	4	
	WSA12R	100	3		55	30	15		
			6		43	40	30	20	
			12		23	23	16	15	
			20		13	10	8	6	
			30		5	5	5	4	
	WSA14R	200	4		75	60	30		
			8		65	50	40	40	
			16		45	30	20	20	
			24		20	15	15	10	
			36		7	6	6	4	
	WSA16R	400	5		100	100	80		
			10		80	80	70	60	
			20		60	40	25	22	
			30		30	25	20	10	
	TA4C (Single)	60	2.5		5	5	5		
			5		5	5	5	5	
			10		5	5	5	5	5
			16		4	4	4	4	3
	TA4C (Double)		2.5		10	10	10		
			5		10	10	10	8	
			10		8	8	8	6	4
	TA6C (Single)	100	3		10	10	10		
			6		8	8	8	8	
			12		8	8	8	8	8
			20		8	8	8	6	4
	TA6C (Double)		3		20	20	20		
			6		20	20	20	20	
			12		14	14	14	14	12
	TA7C (Single)	200	4		15	15	15		
			8		15	15	15	15	
			16		15	15	15	15	15
			24		12	12	12	10	8
	TA7C (Double)		4		30	30	30		
			8		30	30	25	25	
			16		25	25	20	20	15
	TA4R (Single)	60	2.5		5	5	5		
			5		5	5	5	5	
			10		5	5	5	5	
			16		4	4	4	4	
	TA4R (Double)		2.5		10	10	10		
			5		10	10	10	8	
			10		8	8	8	6	
	TA6R (Single)	100	3		10	10	8		
			6		8	8	8	8	
			12		8	8	8	8	
			20		8	8	8	6	
	TA6R (Double)		3		20	20	20		
			6		20	20	20	20	
			12		14	14	14	14	
	TA7R (Single)	200	4		15	15	15		
			8		15	15	15	15	
			16		15	15	15	15	
			24		12	12	12	10	
	TA7R (Double)		4		30	30	30		
			8		30	30	25	25	
			16		25	25	20	20	

RCS4 vertical position

*** RCS4CR is the same.**

Series	Type	Motor wattage	Lead	Payload per Acceleration/Deceleration (kg)					
				0.2G	0.3G	0.5G	0.7G	1.0G	1.2G
RCS4	SA4C	60	2.5		12	12	10		
			5		8	8	6	6	
			10		5	5	3	3	2
			16		3	3	1.5	1.5	1
	SA6C	100	3		15	14	10		
			6		15	15	15	15	
			12		11	10	10	8	8
			20		6	5	4	4	2
			30		3.5	2	2	1.5	1.5
	SA7C	200	4		25	25	20		
			8		20	20	20	18	
			16		12	12	10	8	8
			24		7	7	6	5	4
			36		4	4	3	2	2
	SA8C	400	5		45	45	35		
			10		35	35	35	30	
			20		20	20	18	15	12
			30		12	12	10	8	6
	SA4R	60	2.5		12	12	10		
			5		8	8	6	6	
			10		4.5	4.5	3	3	
			16		2.5	2.5	1.5	1.5	
	SA6R	100	3		15	14	10		
			6		15	15	15	15	
			12		9	9	9	8	
			20		5	5	4	4	
			30		3	2	2	1.5	
	SA7R	200	4		25	25	20		
			8		18	18	18	16	
			16		12	12	10	8	
			24		6	6	5	5	
			36		4	4	3	2	
	SA8R	400	5		45	45	35		
			10		35	35	35	30	
			20		20	20	18	15	
			30		12	12	10	8	
	RA4C	60	2.5		10	10	10		
			5		6	6	6	6	
			10		4	4	4	4	3
			16		2	2	2	2	1
	RA6C	100	3		20	20	20		
			6		20	15	12	12	
			12		10	8	8	6	6
			20		4	4	3	3	2
	RA7C	200	4		35	35	30		
			8		25	25	20	20	
			16		12	12	10	8	8
			24		6	6	6	4	4
	RA8C	400	5	72	55	40	25		
			10		40	30	30	20	
			20		20	20	15	12	12
	RA4R	60	2.5		10	10	10		
			5		6	6	6	6	
			10		4	4	4	4	
			16		2	2	2	2	
	RA6R	100	3		20	20	20		
			6		19	15	12	12	
			12		9	8	8	6	
			20		4	4	3	3	
	RA7R	200	4		35	35	30		
			8		25	25	20	20	
			16		12	12	10	8	
			24		6	6	6	4	
	RA8R	400	5	72	55	40	25		
			10		40	30	30	20	
			20		20	20	15	12	
	RRA4C	60	2.5		10	10	10		
			5		6	6	6	6	
			10		4	4	4	4	3
			16		2	2	2	2	1

■ Tables of Payload by Acceleration

RCS4 vertical position

*** RCS4CR is the same.**

Series	Type	Motor wattage	Lead	Payload per Acceleration/Deceleration (kg)					
				0.2G	0.3G	0.5G	0.7G	1.0G	1.2G
RCS4	RRA6C	100	3		20	20	20		
			6		20	15	12	12	
			12		10	8	8	6	6
			20		4	4	3	3	2
	RRA7C	200	4		35	35	30		
			8		25	25	20	20	
			16		12	12	10	8	8
			24		6	6	6	4	4
	RRA8C	400	5	72	50	40	25		
			10		40	30	30	20	
			20		20	20	15	12	12
			30		8	8	8	6	6
	RRA4R	60	2.5		10	10	10		
			5		6	6	6	6	
			10		4	4	4	4	
			16		2	2	2	2	
	RRA6R	100	3		20	20	20		
			6		19	15	12	12	
			12		9	8	8	6	
			20		4	4	3	3	
	RRA7R	200	4		35	35	30		
			8		25	25	20	20	
			16		12	12	10	8	
			24		6	6	6	4	
	RRA8R	400	5	72	50	40	25		
			10		34	30	30	20	
			20		17	17	15	12	
			30		8	8	8	6	
	WRA10C	60	2.5		10	8	8		
			5		5	5	5	5	
			10		3	3	2	2	1
	WRA12C	100	3		20	20	20		
			6		15	15	12	12	
			12		6	6	6	5	5
			20		2	2	1.5	1.5	1
	WRA14C	200	4		30	30	30		
			8		20	20	20	20	
			16		8	6	6	6	5
			24		3	3	2	2	2
	WRA16C	400	5		50	30	25		
			10		35	35	35	20	
			20		12	12	10	10	8
			30		6	5	4	3	1.5
	WRA10R	60	2.5		10	8	8		
			5		5	5	5	5	
			10		2.5	2.5	2	2	
	WRA12R	100	3		20	20	20		
			6		15	15	12	12	
			12		6	6	6	5	
			20		2	2	1.5	1.5	
	WRA14R	200	4		30	30	30		
			8		20	20	20	20	
			16		8	6	6	6	
			24		3	3	2	2	
	WRA16R	400	5		50	30	25		
			10		35	35	35	20	
			20		12	12	10	10	
			30		6	5	4	3	
	WSA10C	60	2.5		10	10	6		
			5		5	5	5	5	
			10		3	3	3	3	2
	WSA12C	100	3		15	10	6		
			6		15	15	12	10	
			12		8	8	8	6	6
			20		3	3	2	2	2

RCS4 vertical position

*** RCS4CR is the same.**

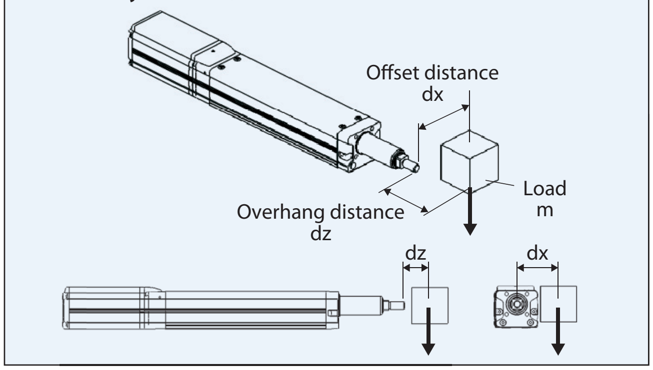
Series	Type	Motor wattage	Lead	Payload per Acceleration/Deceleration (kg) 0.2G	0.3G	0.5G	0.7G	1.0G	1.2G
RCS4	WSA14C	200	4		25	20	12		
			8		10	10	10	10	
			16		8	8	8	8	8
			24		2.5	2.5	2.5	2.5	2.5
	WSA16C	400	5		50	45	30		
			10		35	35	35	30	
			20		20	15	15	12	10
			30		12	12	8	8	6
	WSA10R	60	2.5		10	10	6		
			5		5	5	5	5	
			10		3	3	3	3	
	WSA12R	100	3		15	10	6		
			6		15	15	12	10	
			12		8	8	8	6	
			20		3	3	2	2	
	WSA14R	200	4		25	20	12		
			8		10	10	10	10	
			16		8	8	8	8	
			24		2.5	2.5	2.5	2.5	
	WSA16R	400	5		50	45	30		
			10		35	35	35	30	
			20		18	15	15	12	
			30		12	12	8	8	
	TA4C (Single)	60	2.5		9	9	9		
			5		6	6	6	6	
			10		3	3	3	3	3
			16		1.5	1.5	1.5	1.5	1.5
	TA4C (Double)		2.5		9	9	9		
			5		6	6	6	6	
			10		3	3	3	3	3
	TA6C (Single)	100	3		12	12	12		
			6		10	10	10	10	
			12		6	6	6	6	6
			20		4	4	3	3	2
	TA6C (Double)		3		12	12	12		
			6		10	10	10	10	
			12		6	6	6	6	6
	TA7C (Single)	200	4		20	20	20		
			8		18	18	18	18	
			16		10	10	8	8	6
			24		5	5	4	4	3
	TA7C (Double)		4		24	24	24		
			8		18	18	18	18	
			16		8	8	8	8	6
	TA4R (Single)	60	2.5		9	9	9		
			5		6	6	6	6	
			10		3	3	3	3	
			16		1.5	1.5	1.5	1.5	
	TA4R (Double)		2.5		9	9	9		
			5		6	6	6	6	
			10		3	3	3	3	
	TA6R (Single)	100	3		10	10	8		
			6		10	10	8	8	
			12		6	6	6	6	
			20		4	4	3	3	
	TA6R (Double)		3		12	12	12		
			6		10	10	10	10	
			12		6	6	6	6	
	TA7R (Single)	200	4		20	20	20		
			8		18	18	18	18	
			16		10	10	8	8	
			24		5	5	4	4	
	TA7R (Double)		4		24	24	24		
			8		18	18	18	18	
			16		8	8	8	8	

Selection Guideline for Allowable Load Mass

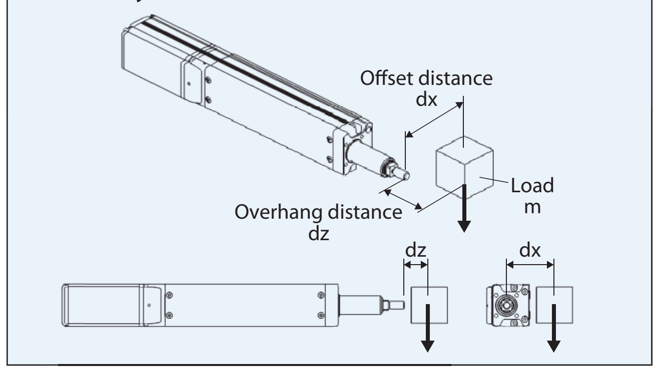
The radial cylinder has a built-in guide, so loads up to a certain level can be applied to the rod without using an external guide.
Refer to the graphs below for the allowable load mass.
If the allowable load will be exceeded under the required operating conditions, add an external guide.

■ Allowable Load Mass for Horizontally Mounted RCS4-RRA Series

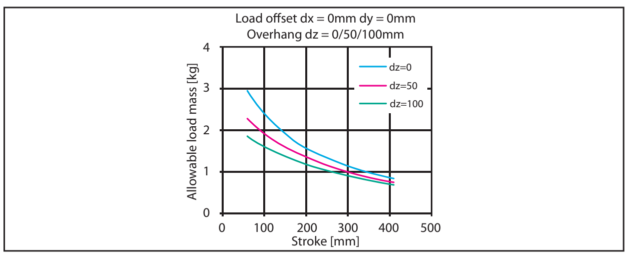
[Horizontally mounted, laid flat]

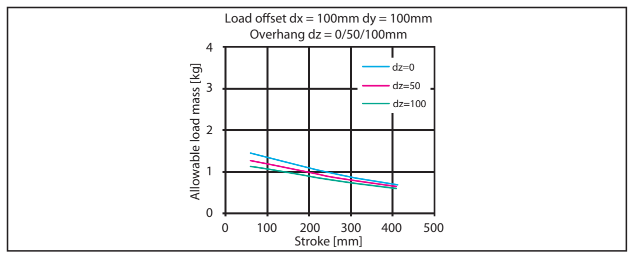


[Horizontally mounted, laid on its side]

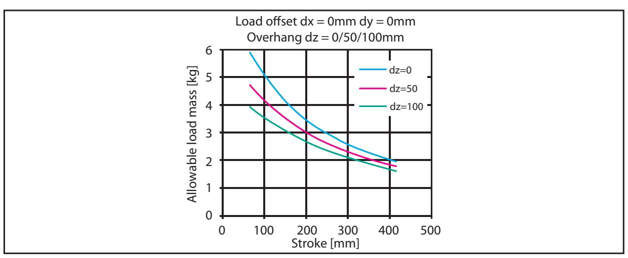


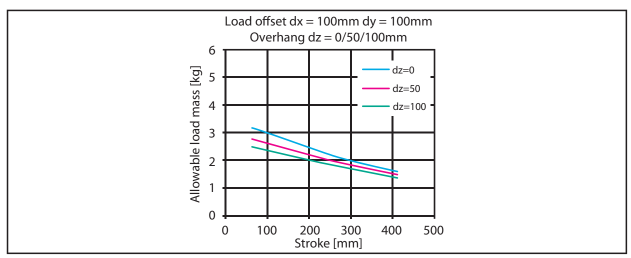
■ RCS4-RRA4



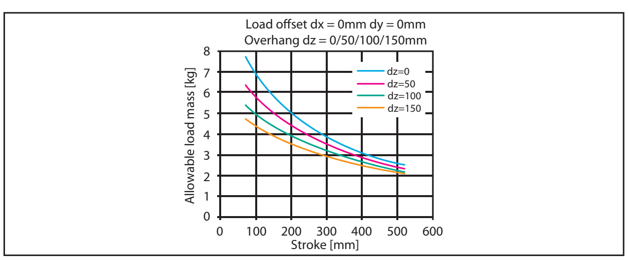


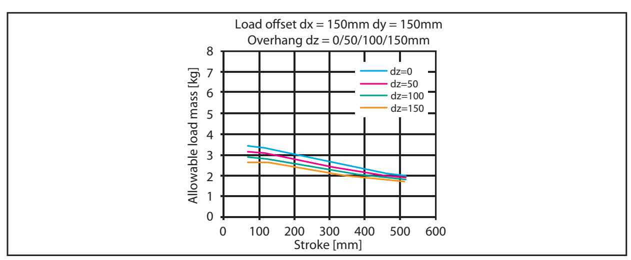
■ RCS4-RRA6



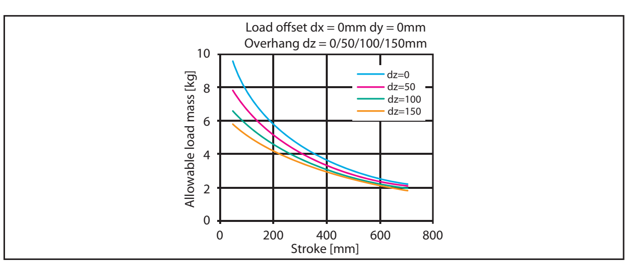


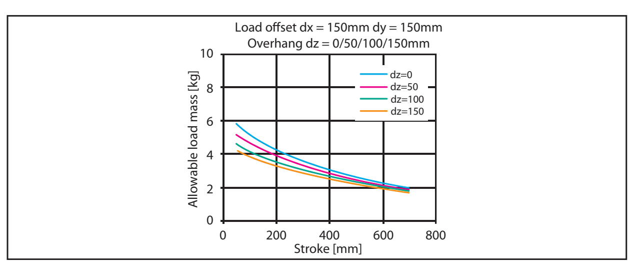
■ RCS4-RRA7



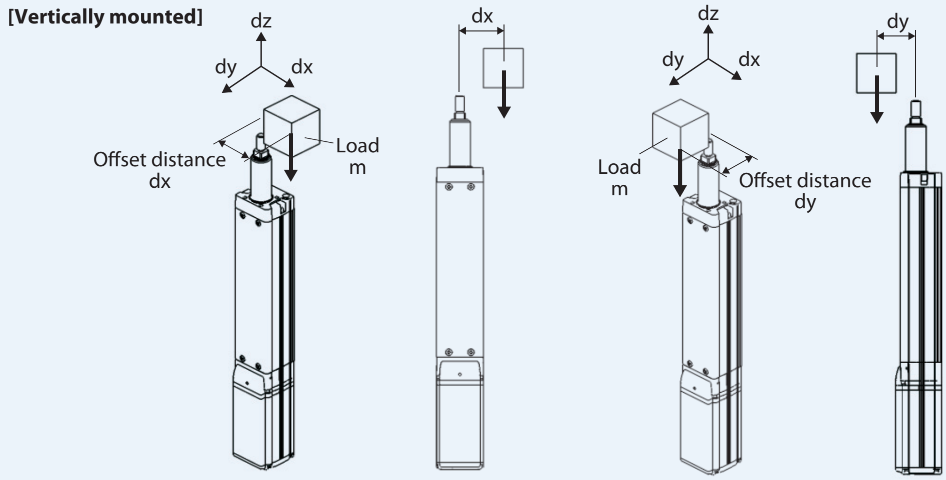


■ RCS4-RRA8



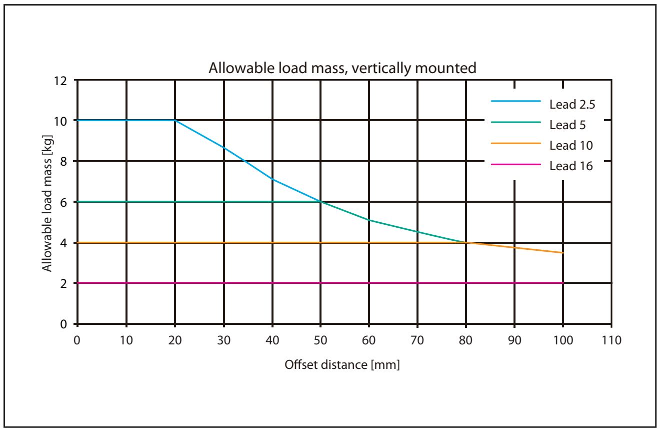


■ Allowable Load Mass for Vertically Mounted RCS4-RRA Series

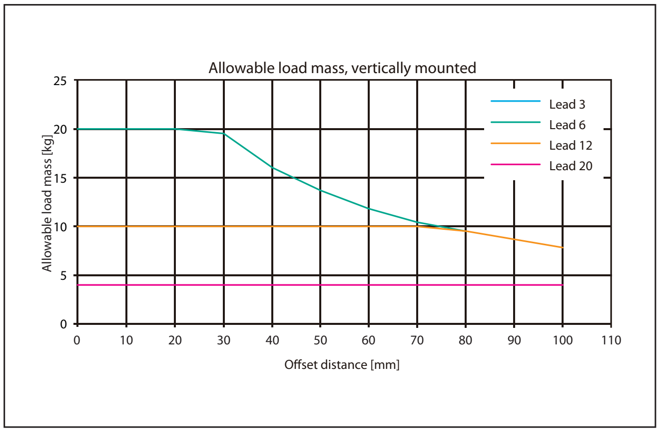


Allowable load calculation conditions.
Load mass corresponding to a product service life of 5,000 km, considering moments generated by acceleration/deceleration.
(Acceleration: 0.5G, speed: 500mm/s)

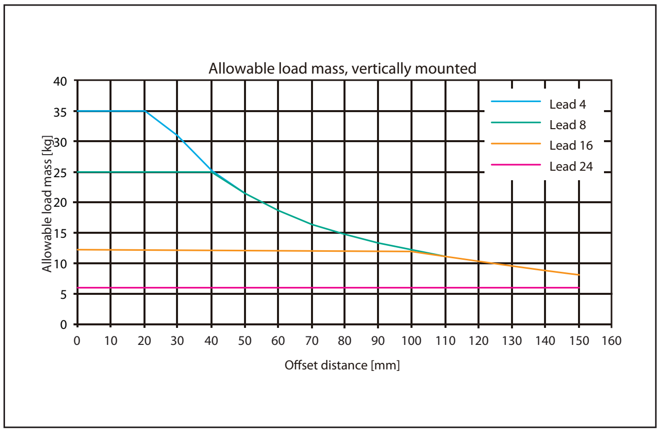
■ RCS4-RRA4



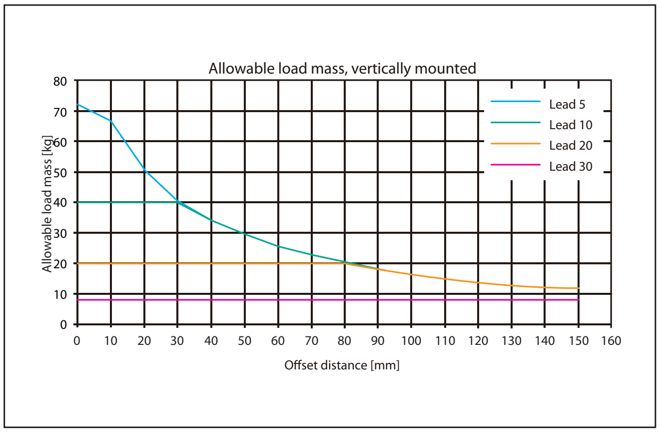
■ RCS4-RRA6



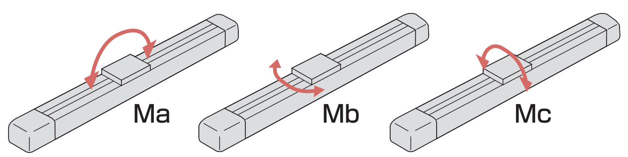
■ RCS4-RRA7



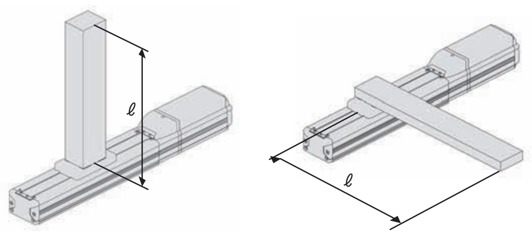
■ RCS4-RRA8



Mount Load

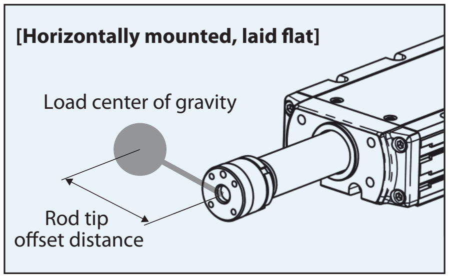


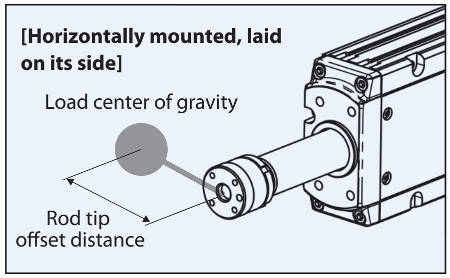
Overhang Length



Selection Guideline for Allowable Load Mass

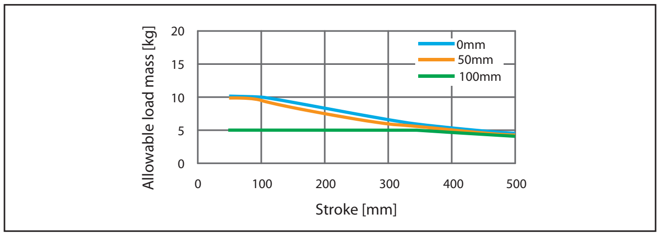
■ Allowable Load Mass for Horizontally Mounted RCS4-WRA Series



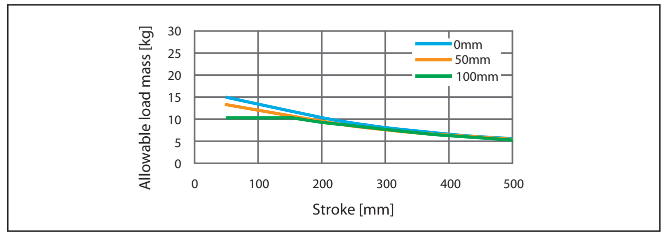


Offset = 0mm/50mm/100m
Overhang = 100mm or less

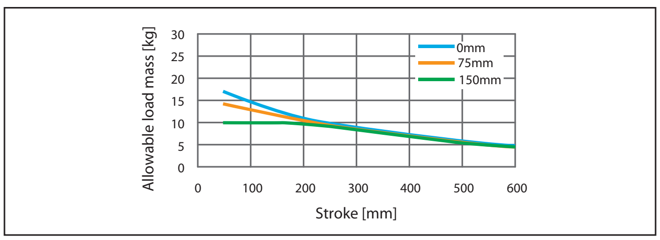
■ RCS4-WRA10



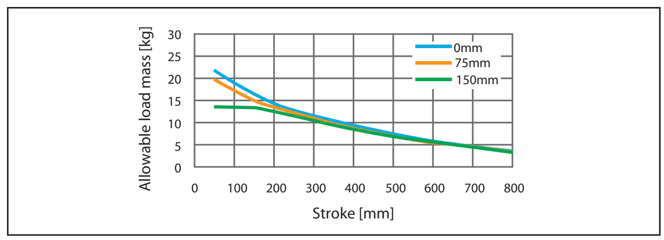
■ RCS4-WRA12



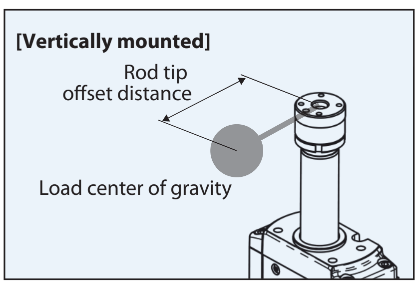
■ RCS4-WRA14



■ RCS4-WRA16

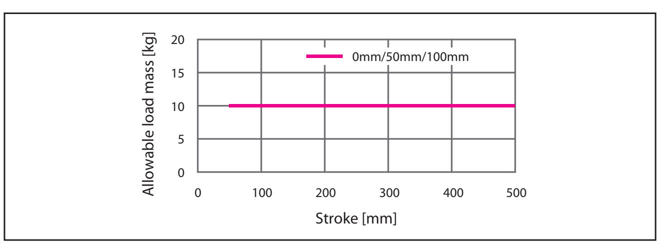


■ Allowable Load Mass for Vertically Mounted RCS4-WRA Series

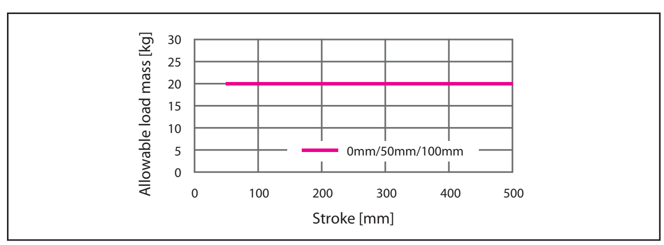


Offset = 0mm/50mm/100m
Overhang = 100mm or less

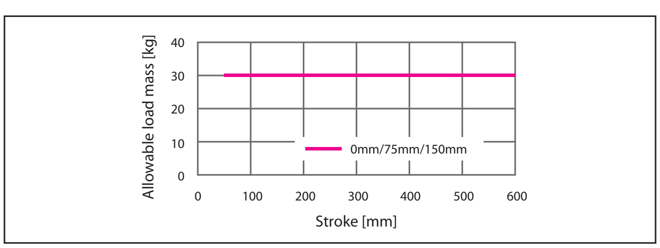
■ RCS4-WRA10



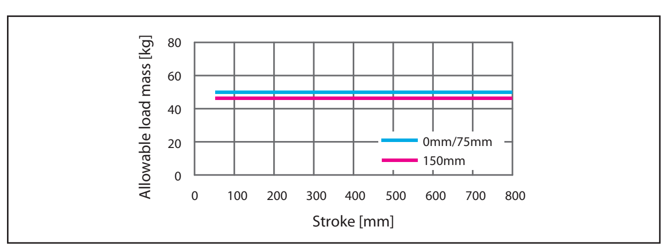
■ RCS4-WRA12



■ RCS4-WRA14



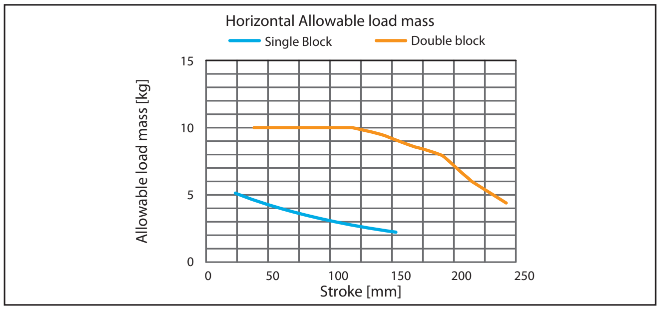
■ RCS4-WRA16



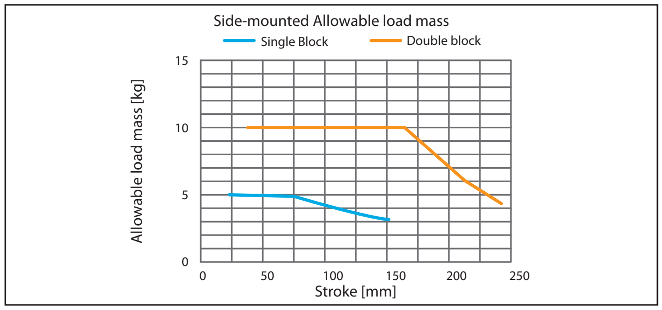
■ Allowable Load Mass for (Table Type) Horizontally Mounted RCS4-TA Series

Due to the table type structure, longer stroke actuators result in lower allowable load mass.

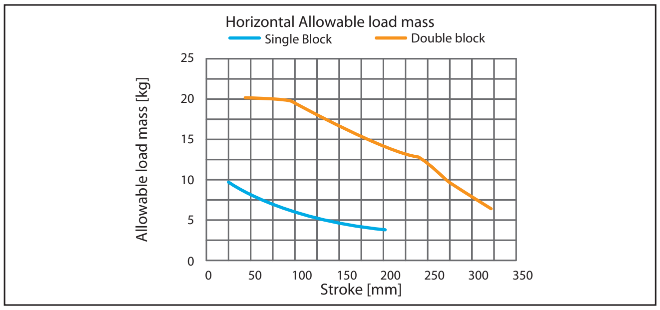
■ RCS4-TA4 (horizontal)



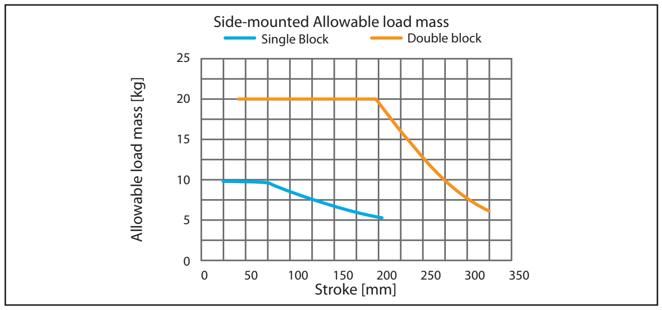
■ RCS4-TA4 (side)



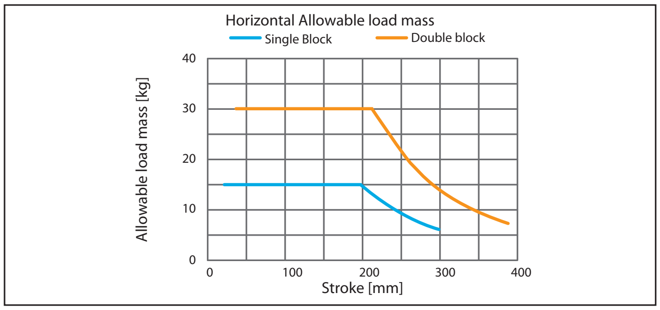
■ RCS4-TA6 (horizontal)



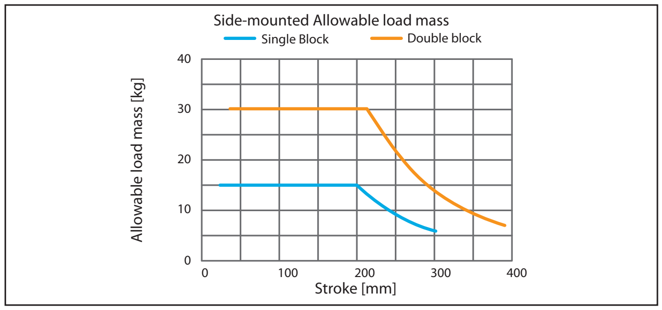
■ RCS4-TA6 (side)



■ RCS4-TA7 (horizontal)



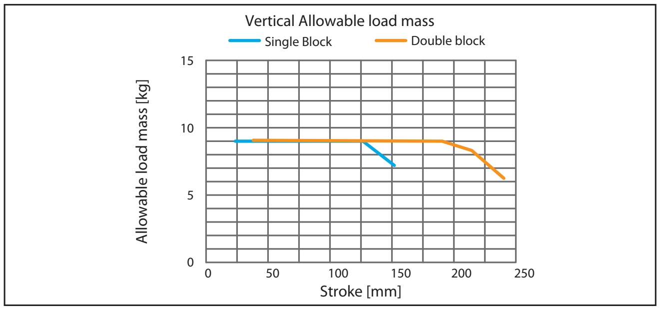
■ RCS4-TA7 (side)



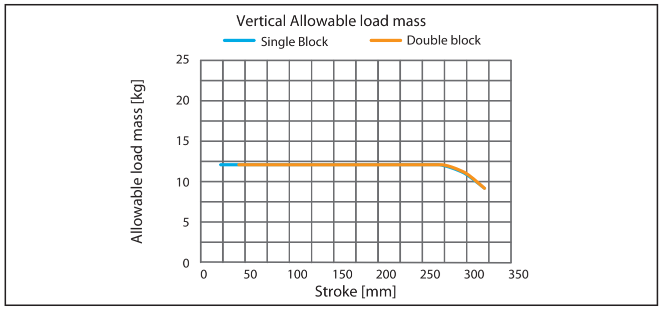
■ Allowable Load Mass for (Table Type) Vertically Mounted RCS4-TA Series

Due to the table type structure, longer stroke actuators result in lower allowable load mass.

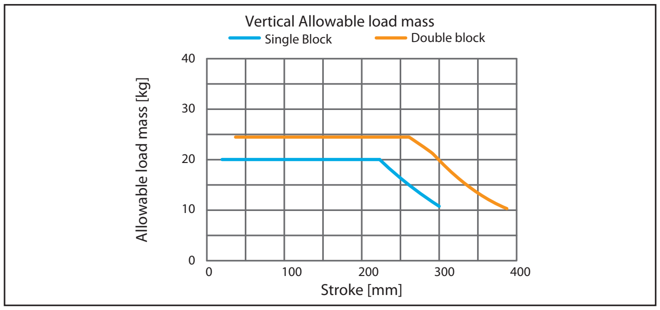
■ RCS4-TA4



■ RCS4-TA6



■ RCS4-TA7



Duty

Duty cycle varies depending on the operation conditions (payload, acceleration/deceleration, etc.).

Calculate the load factor LF and acceleration/deceleration time ratio t_{od} from the following formula and obtain it from the graph.

❶ Calculate the load factor LF from the following formula.

RCS4 can be used at or above the rated acceleration/deceleration.

The formula will differ depending on the command acceleration/deceleration.

(1) When the command acceleration/deceleration is at or below the rated acceleration/deceleration, use formula Ⓐ.

The load factor LF formula differs depending on the model. Check the target model and calculate the load factor.

Ⓐ Load factor: LF ① $= \dfrac{M \times \alpha}{M_1 \times \alpha_1}$ (%)

- Payload at rated acceleration : M_1
- Rated acceleration/deceleration : A_1
- Actual payload : M ($M \leq M_1$)
- Command acceleration/deceleration : A ($\alpha \leq \alpha_1$)

(Note) Please refer to the model number/spec table of each model for payload and rated acceleration/deceleration at rated acceleration/deceleration.

(2) When the command acceleration/deceleration is higher than the rated acceleration/deceleration, use formula Ⓑ.

Ⓑ Load factor: LF ② $= \dfrac{M \times \alpha}{M_2 \times \alpha} = \dfrac{M}{M_2}$ (%)

- Actual payload : M
- Command acceleration/deceleration : A
- Payload of command acceleration/deceleration : M_2 ($M \leq M_2$)

(Note) For the acceleration/deceleration of each model and the payload corresponding to that acceleration/deceleration, refer to the table of payload by acceleration for each model.

The load factor is as follows when operating under the following operating conditions.

As an example, we will use the table of payload by acceleration of "RCS4-SA8C 400 W Lead 30".

Model	Type	Motor wattage	Lead [mm]	Payload by Acceleration/Deceleration [kg]				
				0.3G	0.5G	0.7G	1G	1.2G
RCS3	SA8C	400W	30	30	25	20	15	10

(Note) When horizontally mounted, the rated acceleration/deceleration is 0.3G

<Example 1>

Actual payload	: 12kg
Command acceleration/deceleration	: 1.0G
Payload of command acceleration/deceleration	: 15kg
Load factor: LF ②	= 80%

<Example 2>

Actual payload	: 12.5kg
Command acceleration/deceleration	: 0.5G
Payload of command acceleration/deceleration	: 25kg
Load factor: LF ②	= 50%

<Example 3>

Actual payload	: 30kg
Command acceleration/deceleration	: 0.3G
Payload of command acceleration/deceleration	: 30kg
Load factor: LF ③	= 100%

(Note) Use load factor calculation method Ⓐ.

❷ Calculate the acceleration/deceleration time ratio t_{od} from the following formula.

$$\text{Acceleration/deceleration time ratio: } t_{od} = \frac{\text{Acceleration time} + \text{deceleration time}}{\text{Operating time}} \%$$

$$\text{Acceleration time} = \frac{\text{Speed (mm/s)}}{\text{Acceleration (mm/s}^2\text{)}} \text{ (s)}$$

Acceleration (mm/s^2) = Acceleration (G) × 9,800mm / s^2

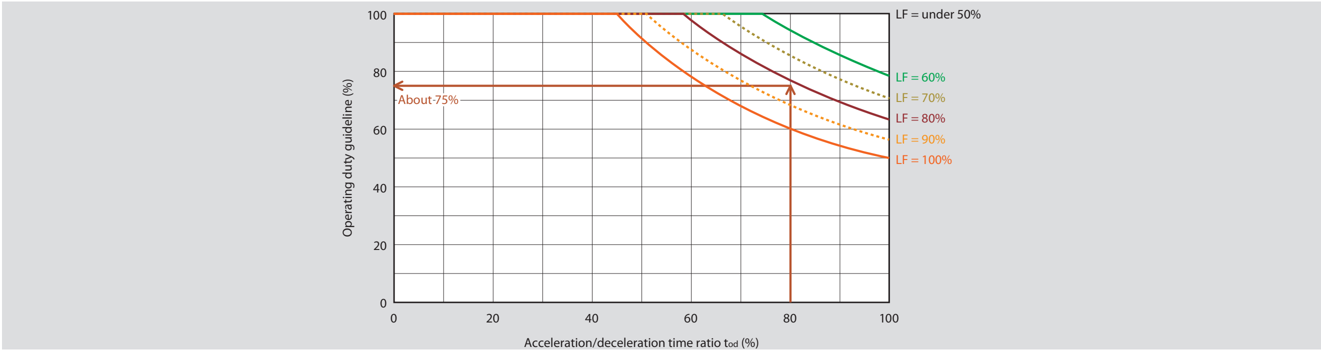
$$\text{Deceleration time} = \frac{\text{Speed (mm/s)}}{\text{Deceleration (mm/s}^2\text{)}} \text{ (s)}$$

Deceleration (mm/s^2) = Deceleration (G) × 9,800mm/s^2

❸ Read the duty guideline from calculated "load ratio" and "acceleration/deceleration time ratio".

Duty guideline graph 1 (for standard use)

Example: When the load ratio is 80% and the acceleration/deceleration time ratio is 80%, the duty guideline will be approximately 75%.



RCS4(CR) Double Slider Specification

Series name	Type name	Lead (mm)	Allowable dynamic moment: Standard rated life (km)	Slider span (mm): Slider actual span	Slider span (mm): Slider cover span	Ma direction (N·m)	Mb direction (N·m)	Mc direction (N·m)	Overhang load length (mm) Ma direction Mb/Mc direction	Cleanroom specification suction amount (Nℓ/min)	* Payload compensation (kg)	Slider length (mm)	Minimum stroke for double slider (mm)
RCS4	SA4C(R)	16	5000	60	24	44.6	63.6	15.7	420	-	1	76	50
		10											
		5											
		2.5											
	SA6C(R)	20	5000	90	40	106	152	40	630	-	2	110	50
		12											
		6											
		3											
	SA7C(R)	24	5000	70	20	285	285	145	810	-	2	130	50
		16											
		8											
		4											
	SA8C(R)	30	5000	120	35	565	565	237	1200	-	2.5	165	50
		20											
		10											
		5											
RCS4CR	SA4C	10	5000	60	24	44.6	63.6	15.7	420	60	1	76	50
		5								30			
		2.5								20			
	SA6C	12	5000	90	40	106	152	40	630	110	2	110	50
		6								60			
		3								35			
	SA7C	16	5000	70	20	285	285	145	810	100	2	130	50
		8								50			
		4								40			
	SA8C	10	5000	120	35	565	565	237	1200	120	2.5	165	50
		5								50			

* Double slider specification values obtained by subtracting the payload compensation value from the standard specification payload are the payload specification values.
(Note) Double slider is not configured for leads not listed in the table.

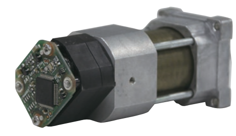
SCON-CB

Single axis robot / Cartesian robot / Linear servo / ROBO Cylinder RCS2/RCS3/ RCS4 position controller

Features

1 Supports Battery-less Absolute Encoder

The RCS2, RCS3, RCS4, ISB and ISDB can operate equipped with a battery-less absolute encoder. As no battery is needed for retaining position data, it is possible to save control panel space, which helps to keep down the initial costs and maintenance costs.

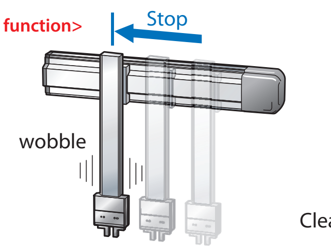


2 Major field networks supporte <Optional function>

Direct connection can be made to MECHATROLINK, CompoNet, EtherCAT, EtherNet/IP and PROFINET IO in addition to DeviceNet, CC-Link and PROFIBUS-DP. Operation is also possible by specifying the coordinate values directly via the field network.

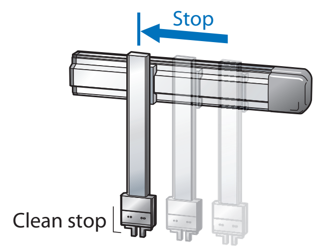
3 Equipped with vibration control function <Standard function>

The equipped vibration control function reduces the runout (vibration) of the workpiece attached to the slider of the actuator. The standby time for vibration convergence is shortened, reducing the cycle time.



Without vibration control

There is vibration after stopping.



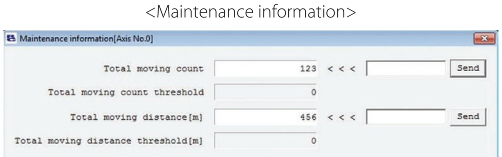
With vibration control

There is almost no vibration after stopping.

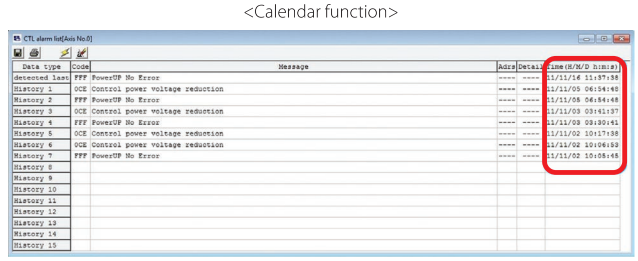
4 Capable of predictive maintenance <Standard function>

- A function that issues a warning when a motor overload is detected has been included
  Monitoring changes in the temperature of the motor makes it possible to detect abnormalities before the occurrence of a breakdown or a malfunction.
- Improvement of monitoring functions
  Similar to an oscilloscope, it is now possible to acquire the waveforms of the position, speed, etc. from the instant the state of the selected signal changes. Also, it is possible to acquire the signal states of positioning complete, alarms, etc.
- Smart tuning and off-board tuning enable acceleration/deceleration and gain adjustment according to the payload.
- A function that integrates the number of cycles with the traveled distance accumulation makes it possible to check maintenance timing.
- The calendar function makes it possible to keep a timetable of the alarms that have been generated.

<Maintenance information>



<Calendar function>



CTL alarm list[Axis No.0]

Data type	Code	Message	Adrs	Detail	Time (H/M/D h:m:s)
detected last	FFF	PowerUP No Error	----	----	11/11/16 11:37:38
History 1	0CE	Control power voltage reduction	----	----	11/11/05 06:54:48
History 2	FFF	PowerUP No Error	----	----	11/11/05 06:54:48
History 3	0CE	Control power voltage reduction	----	----	11/11/03 03:41:37
History 4	FFF	PowerUP No Error	----	----	11/11/03 03:30:41
History 5	0CE	Control power voltage reduction	----	----	11/11/02 10:17:38
History 6	0CE	Control power voltage reduction	----	----	11/11/02 10:06:53
History 7	FFF	PowerUP No Error	----	----	11/11/02 10:05:45
History 8					
History 9					
History 10					
History 11					
History 12					
History 13					
History 14					
History 15					

List of Models

Model Number		SCON-CB										
External view												
I/O type		Standard specification		Field network type (*1)								
		PIO connection specification (*1)		DeviceNet connection specification	CC-Link connection specification	PROFIBUS-DP connection specification	CompoNet connection specification	MECHATRO LINK-I/II connection specification	MECHATRO LINK-III connection specification	EtherCAT connection specification	EtherNet/IP connection specification	PROFINET IO connection specification
I/O type model number		NP/PN		DV	CC	PR	CN	ML	ML3	EC	EP	PRT
Supported encoder		Battery-less Absolute Incremental Quasi absolute	Absolute	Battery-less absolute/Incremental/Absolute/Quasi absolute								
SCON -CB	12~150W	–	–	–	–	–	–	–	–	–	–	–
	200W	–	–									
	300~400W	–	–									
	600W	–	–									
	750W	–	–									

(*1) Please note that the network specifications cannot use PIO or pulse train communication.
(Note) The index absolute type cannot be used in the pulse-train control and MECHATROLINK III control. (Please contact IAI America for more information)
(Reference) Please contact IAI America for details of the PLC function equipped type.

Model

SCON – [Type] – [Motor Type] [Encoder Type] [Options] – [I/O Type] – [I/O Cable Length] – [Input power]

Series / Type / Motor Type / Encoder Type / Options / I/O Type / I/O Cable Length / Input power

Type

CB	High-function type
CGB	Safety category type

Motor Type

12	12W	150	150W
20	20W	200	200W
30D	30W	200S	200W
30R	30W	300S	300W
60	60W	400	400W
100	100W	600	600W
100S	100W	750	750W

(Example) 12:12W servo motor supported

Encoder Type

WAI	Battery-less Absolute Incremental
A	Absolute
G	Quasi absolute *1
AI	Index absolute type *2
AM	Absolute Multi-rotation type *2

*1 The quasi absolute is for LSAS Series.
*2 DD motor operation mode is added.

Options

HA	Hi-accel./decel. specification

* High acceleration/deceleration specification is only available if the high acceleration/deceleration supported option is selected for the actuator.

<High Acceleration/Deceleration Target Actuators>
RCS2-SA4C/SA5C/SA6C/SA7C/RA4C/RA5C/RGS4C/RGS5C/RGD4C/RGD5C

I/O Type

NP	PIO NPN spec. (Standard)
PN	PIO PNP spec.
DV	DeviceNet connection specification
CN	CompoNet connection specification
CC	CC-Link connection specification
ML	MECHATROLINK-I, II connection specification (Note 1)
ML3	MECHATROLINK-III connection specification (Note 1)
PR	PROFIBUS-DP connection specification
EC	EtherCAT connection specification
EP	EtherNet/IP connection specification
PRT	PROFINET IO connection specification

(Note 1) For precautions during selection, be sure to contact IAI America for more details.

I/O Cable Length

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

* When a field network specification is selected, the I/O cable length is "0" (No cable).

Input power

1	Single phase 100VAC
2	Single phase 200VAC

* Check the power supply voltage that can be selected in the actuator page.

Notes

In principle, the same type of motor as the type of motor of the actuator to be connected should be entered, but there are some models where the motor type of some controllers and actuators do not match.
Be sure to check the corresponding models listed below during selection.

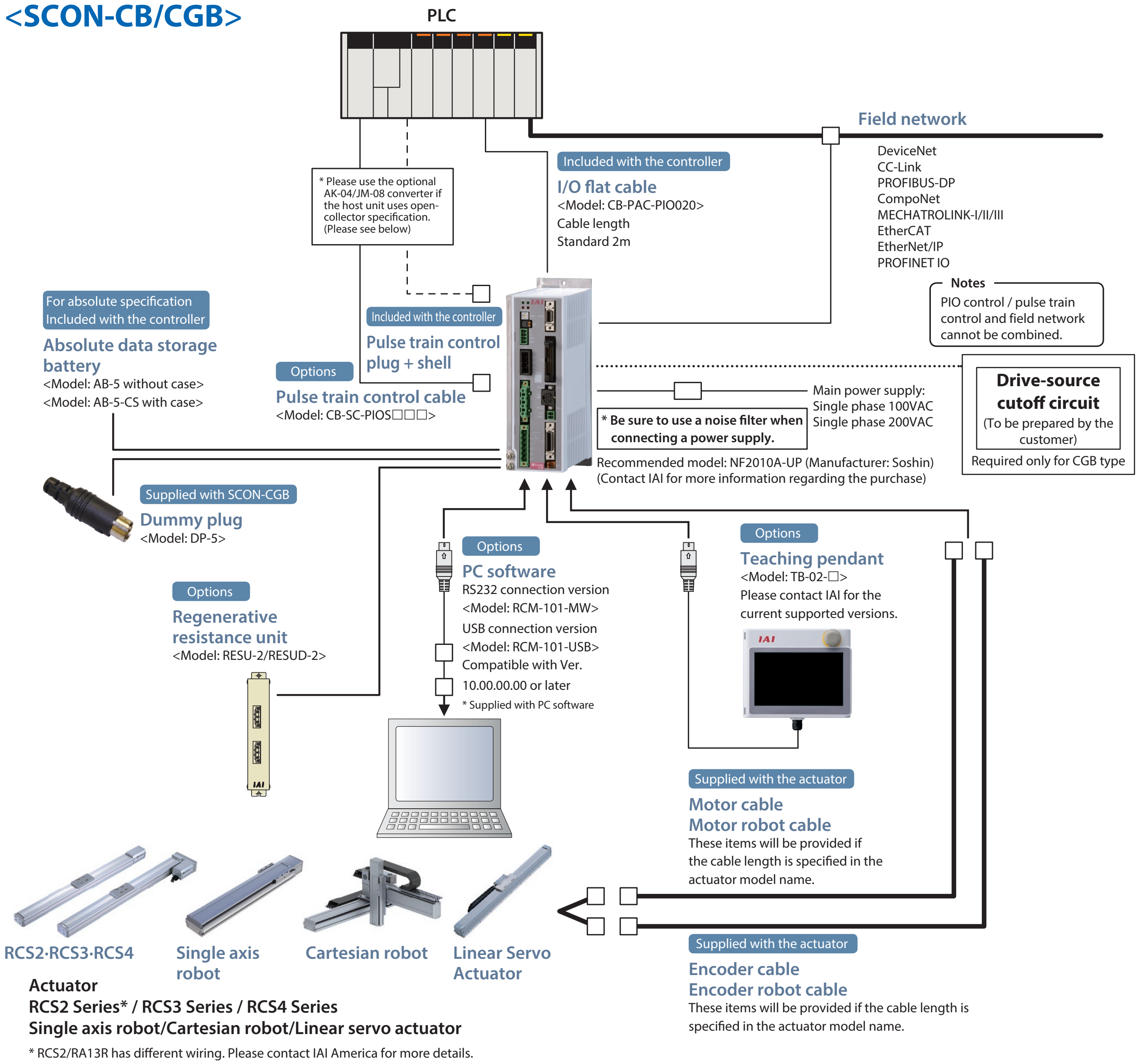
<30D/30R/200S Target Actuators>

● Controller motor type [30D]
30W actuators other than RS

● Controller motor type [30R]
RS

● Controller motor type [200S]
DD-LT18□ DDCR-LT18□
DDA-LT18C DDACR-LT18C
* For 200S, the controller casing will be 400W.
Check the 400W specification for the price.

<SCON-CB/CGB>

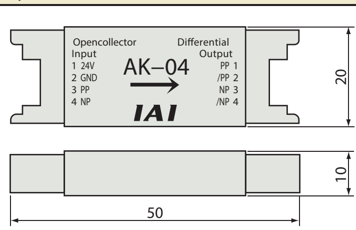


■ Pulse Converter: Model AK-04

Converts open-collector specification pulses to the differential system.
Please use this converter if the host controller uses open-collector specification for output pulse.

■ Specification

Item	Specificatio
Input power	24VDC ±10% (Max. 50mA)
Input pulse	Open collector (collector current max. 12mA)
Input frequency	200kHz or less
Output pulse	Differential output (Max. 10mA) (26C31 or equivalent)
Mass	10g or less (not including the cable connectors)
Accessories	37104-3122-000L (e-CON connector) x 2 by 3M Suitable power line AWG No.24~26

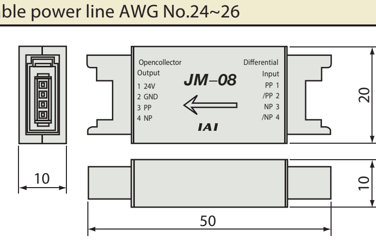


■ Pulse Converter: Model JM-08

Converts differential pulses to the open-collector specification.
Please use this converter if the host controller uses open-collector specification for pulse input.

■ Specification

Item	Specificatio
Input power	24VDC ±10% (Max. 50mA)
Input pulse	Differential input (Max. 10mA) (RS422 compliant)
Input frequency	500kHz or less
Output pulse	24VDC open collector (collector current max. 25mA)
Mass	10g or less (not including the cable connectors)
Accessories	37104-3122-000FL (e-CON connector) x 2 by 3M Suitable power line AWG No.24~26



Operation mode

The control method of this controller can be selected from positioner mode and pulse train control mode.
In positioner mode, it can be operated by specifying the position data (travel position, speed, acceleration, etc.) numbers input to the controller from the outside using I/O (input/output signal).
As well, in positioner mode, 8 different operation modes can be selected depending on the parameters.
In pulse train control mode, it is possible to control the travel distance, speed, acceleration and the like with pulses sent from an external pulse generator.

Mode		Type	Number of positioning points	Features
Positioner mode	Positioning mode	PIO pattern 0	64 points	This is the factory default standard mode. Specify from outside the position number you want to move.
	Teaching mode	PIO pattern 1	64 points	In this mode, the slider (rod) can be moved with an external signal to register the stop position as position data.
	256-point mode	PIO pattern 2	256 points	In this mode, the number of positioning points in positioning mode is increased to 256.
	512-point mode	PIO pattern 3	512 points	In this mode, the number of positioning points in positioning mode is increased to 512.
	Solenoid valve mode 1	PIO pattern 4	7 points	This mode allows travel by signal ON/OFF alone, as with air cylinder solenoid valves.
	Solenoid valve mode 2	PIO pattern 5	3 points	In solenoid valve mode, the output signal is the same as the air cylinder auto switch.
	Force control mode 1	PIO pattern 6	32 points	In this mode, position movement during force control can be done with positioning mode. (The maximum number of positioning points is 32)
	Force control mode 2	PIO pattern 7	5 points	In this mode, position movement during force control can be done with solenoid valve mode. (The maximum number of positioning points is 5)
Pulse train control mode	Pulse train control mode for incremental	PIO pattern 0	—	Position data input to the controller is not required, as operation is according to the transmitted pulses.
	Pulse train control mode for absolute	PIO pattern 1		

Table of I/O Signals * I/O signal assignment can be selected from 9 types.

Pin No.	Category		Parameter (PIO pattern) selection								
			0	1	2	3	4	5	6	7	0/1
			Positioning mode	Teaching mode	256-point mode	512-point mode	Solenoid valve mode 1	Solenoid valve mode 2	Force control mode 1	Force control mode 2	Pulse train mode
		Number of positioning points	64 points	64 points	256 points	512 points	7 points	3 points	32 points	5 points	—
1A	24V		P24								P24
2A	24V		P24								P24
3A	—		NC								NC
4A	—		NC								NC
5A	Input	IN0	PC1	PC1	PC1	PC1	ST0	ST0	PC1	ST0	SON
6A		IN1	PC2	PC2	PC2	PC2	ST1	ST1(JOG+)	PC2	ST1	RES
7A		IN2	PC4	PC4	PC4	PC4	ST2	ST2(−)	PC4	ST2	HOME
8A		IN3	PC8	PC8	PC8	PC8	ST3	—	PC8	ST3	TL
9A		IN4	PC16	PC16	PC16	PC16	ST4	—	PC16	ST4	CSTP
10A		IN5	PC32	PC32	PC32	PC32	ST5	—	—	—	DCLR
11A		IN6	—	MODE	PC64	PC64	ST6	—	—	—	BKRL
12A		IN7	—	JISL	PC128	PC128	—	—	—	—	RMOD
13A		IN8	—	JOG+	—	PC256	—	—	CLBR	CLBR	RSTR Note 1
14A		IN9	BKRL	JOG−	BKRL	BKRL	BKRL	BKRL	BKRL	BKRL	—
15A		IN10	RMOD	RMOD	RMOD	RMOD	RMOD	RMOD	RMOD	RMOD	—
16A		IN11	HOME	HOME	HOME	HOME	HOME	—	HOME	HOME	—
17A		IN12	*STP	*STP	*STP	*STP	*STP	—	*STP	*STP	—
18A		IN13	CSTR	CSTR/PWRT	CSTR	CSTR	—	—	CSTR	—	—
19A		IN14	RES	RES	RES	RES	RES	RES	RES	RES	—
20A		IN15	SON	SON	SON	SON	SON	SON	SON	SON	—
1B	Output	OUT0	PM1	PM1	PM1	PM1	PE0	LSO	PM1	PE0	PWR
2B		OUT1	PM2	PM2	PM2	PM2	PE1	LS1(TRQS)	PM2	PE1	SV
3B		OUT2	PM4	PM4	PM4	PM4	PE2	LS2(−)	PM4	PE2	INP
4B		OUT3	PM8	PM8	PM8	PM8	PE3	—	PM8	PE3	HEND
5B		OUT4	PM16	PM16	PM16	PM16	PE4	—	PM16	PE4	TLR
6B		OUT5	PM32	PM32	PM32	PM32	PE5	—	TRQS	TRQS	*ALM
7B		OUT6	MOVE	MOVE	PM64	PM64	PE6	—	LOAD	LOAD	*EMGS
8B		OUT7	ZONE1	MODES	PM128	PM128	ZONE1	ZONE1	CEND	CEND	RMDS
9B		OUT8	PZONE/ZONE2	PZONE/ZONE1	PZONE/ZONE1	PM256	PZONE/ZONE2	PZONE/ZONE2	PZONE/ZONE1	PZONE/ZONE1	ALM1
10B		OUT9	RMDS	RMDS	RMDS	RMDS	RMDS	RMDS	RMDS	RMDS	ALM2
11B		OUT10	HEND	HEND	HEND	HEND	HEND	HEND	HEND	HEND	ALM4
12B		OUT11	PEND	PEND/WEND	PEND	PEND	PEND	—	PEND	PEND	ALM8
13B		OUT12	SV	SV	SV	SV	SV	SV	SV	SV	* OVLW/ * ALML
14B		OUT13	*EMGS	*EMGS	*EMGS	*EMGS	*EMGS	*EMGS	*EMGS	*EMGS	REND Note 1
15B		OUT14	*ALM	*ALM	*ALM	*ALM	*ALM	*ALM	*ALM	*ALM	ZONE1
16B		OUT15	* BALM	* BALM	* BALM	* BALM	* BALM	* BALM	* BALM	* BALM	ZONE2
17B	—		—								—
18B	—		—								—
19B	0V		N								N
20B	0V		N								N

* Parentheses in the above symbol names show functions before home return.
* The above signal names marked with * are set to OFF when the actuator is operating.
Note 1: Used only with pulse train control mode PIO pattern 1

Field Network Specification: Explanation of Operation Modes

If the SCON-CB is controlled via a field network, you can select one of the following nine modes to operate the actuator. Please note that the data areas required on the PLC side will vary depending on the mode.

■ Mode Description

	Mode	Description
0	Remote I/O mode	Similarly to the PIO specification, this mode operates by directing bytes to ON/OFF via a network. The number of positioning points and functions will vary depending on the operation patterns (PIO patterns) set by the controller's parameters.
1	Position/simple direct value mode	The target position value is directly input, while all other operational conditions (speed, acceleration, etc.) are set by indicating the position number corresponding to the desired operating conditions from the position data table.
2	Half direct value mode	The actuator is operated by directly inputting values for speed, acceleration/deceleration rate and push current, as well as the target position.
3	Full direct value mode	The actuator is operated by directly inputting values for the target position, speed, acceleration/deceleration rate and push current limit value, etc. In addition, you are able to read the current position, current speed, and the command current value, etc.
4	Remote I/O mode 2	This mode is the same as the remote I/O mode above, with the added functionality of reading current position and the command current value.
5	Position/simple direct value mode 2	This mode is equipped with a force control function instead of the teaching and zone functions of the position/simple direct value mode above.
6	Half direct value mode 2	Instead of the half direct value mode command current reading function, it can read load cell data. It also supports the force control function.
7	Remote I/O mode 3	This mode is the same as the remote I/O mode above, with the added functionality of reading current position and load cell data.
8	Half direct value mode 3	This mode supports the vibration control function instead of the jog function of the half direct value mode.

■ Required Data Size for Each Network

	Mode	DeviceNet	CompoNet	CC-Link	MECHATROLINK-I, II	PROFIBUS-DP	EtherCAT	EtherNet/IP	PROFINET IO
0	Remote I/O mode	2 bytes	2 bytes	1 station	2 bytes	2 bytes	2 bytes	2 bytes	2 bytes
1	Position/simple direct value mode	8 bytes	8 bytes	1 station	8 bytes	8 bytes	8 bytes	8 bytes	8 bytes
2	Half direct value mode	16 bytes	16 bytes	2 stations	16 bytes	16 bytes	16 bytes	16 bytes	16 bytes
3	Full direct value mode	32 bytes	32 bytes	4 stations	× (Note 1)	32 bytes	32 bytes	32 bytes	32 bytes
4	Remote I/O mode 2	12 bytes	12 bytes	1 station	12 bytes	12 bytes	12 bytes	12 bytes	12 bytes
5	Position/simple direct value mode 2	8 bytes	8 bytes	1 station	8 bytes	8 bytes	8 bytes	8 bytes	8 bytes
6	Half direct value mode 2	16 bytes	16 bytes	2 stations	16 bytes	16 bytes	16 bytes	16 bytes	16 bytes
7	Remote I/O mode 3	12 bytes	12 bytes	1 station	12 bytes	12 bytes	12 bytes	12 bytes	12 bytes
8	Half direct value mode 3	16 bytes	16 bytes	2 stations	16 bytes	16 bytes	16 bytes	16 bytes	16 bytes

(Note 1) Please note that the MECHATROLINK specification does not support the full direct value mode.

■ List of Functions by Operation Mode

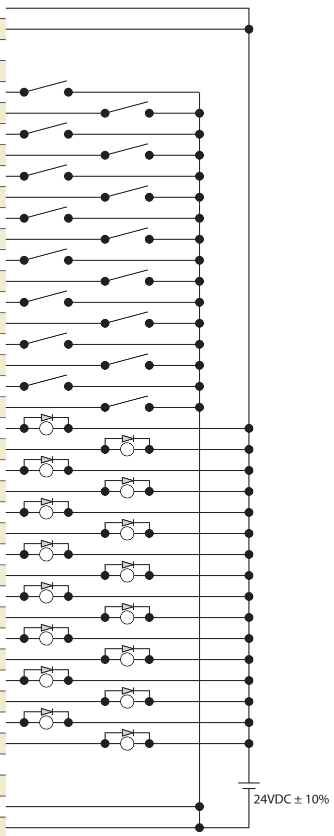
	Remote I/O mode	Position/simple direct value mode	Half direct value mode	Full direct value mode (Note 1)	Remote I/O mode 2	Position/simple direct value mode 2	Half direct value mode 2	Remote I/O mode 3	Half direct value mode 3
Number of positioning points	512 points	768 points	Unlimited	Unlimited	512 points	768 points	Unlimited	512 points	Unlimited
Operates by direct assignment of position data	×	○	○	○	×	○	○	×	○
Direct assignment of speed/acceleration	×	×	○	○	×	×	○	×	○
Push-motion operation	○	○	○	○	○	○	○	○	○
Current position read	×	○	○	○	○	○	○	○	○
Current speed read	×	×	○	○	×	×	○	×	○
Operation by position number input	○	○	×	×	○	○	×	○	×
Completed position number read	○	○	×	×	○	○	×	○	×
Force control	△ (Note 2)	×	×	○	△ (Note 2)	○	○	△ (Note 2)	×
Vibration control	○	○	×	○	○	○	×	○	○
Servo gain switching	○	○	○	○	○	○	×	○	○

* ○ indicates that the operation is supported, and X indicates that it is not supported.
(Note 1) Please note that the MECHATROLINK specification does not support the full direct value mode.
(Note 2) Usable when PIO pattern is set to 6 or 7.

Positioning Mode / Teaching Mode / Solenoid Valve Mode

PIO connector (NPN specification)

Pin No.	Category	Signal name
1A	Power	24V
2A		24V
3A	—	Not used
4A	—	Not used
5A	Input	IN 0
6A		IN 1
7A		IN2
8A		IN3
9A		IN4
10A		IN5
11A		IN6
12A		IN7
13A		IN8
14A		IN9
15A		IN10
16A		IN11
17A		IN12
18A		IN13
19A		IN14
20A		IN15
1B	Output	OUT0
2B		OUT1
3B		OUT2
4B		OUT3
5B		OUT4
6B		OUT5
7B		OUT6
8B		OUT7
9B		OUT8
10B		OUT9
11B		OUT10
12B		OUT11
13B		OUT12
14B		OUT13
15B		OUT14
16B		OUT15
17B	—	Not used
18B	—	Not used
19B	Power	0V
20B		0V

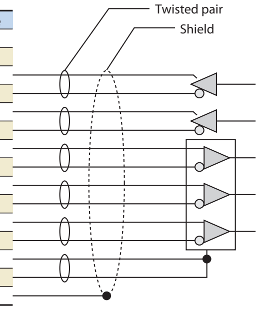


* Connect pin numbers 1A and 2A to 24V, and connect pin numbers 19B and 20B to 0V.

Pulse Train Mode (Differential output)

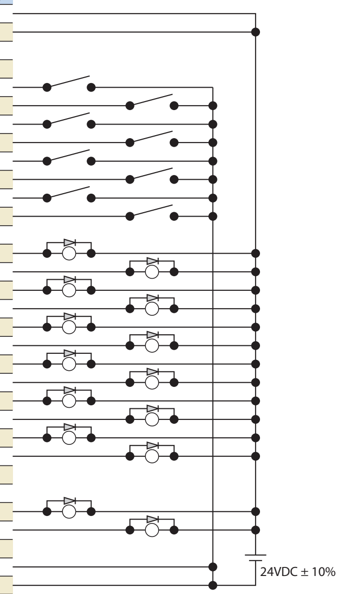
Pulse connector

Pin No.	Category	Signal name
1		Not used
2		Not used
3	Input	PP
4		/PP
5		NP
6		/NP
7	Output	AFB
8		/AFB
9		BFB
10		/BFB
11		ZFB
12		/ZFB
13	Ground	GND
14		GND
Shell	Shield	Shield



PIO connector (NPN specification)

Pin No.	Category	Signal name
1A	Power	24V
2A		24V
3A		Not used
4A		Not used
5A	Input	SON
6A		RES
7A		HOME
8A		TL
9A		CSTP
10A		DCLR
11A		BKRL
12A		RMOD
13A~20A	—	Not used
1B	Output	PWR
2B		SV
3B		INP
4B		HEND
5B		TLR
6B		*ALM
7B		*EMGS
8B		RMDS
9B		ALM1
10B		ALM2
11B		ALM4
12B		ALM8
13B		See (*1)
14B		—
15B		ZONE1
16B		ZONE2
17B~18B	—	Not used
19B	Power	0V
20B		0V



* The shield of the twisted pair cable connected to the pulse connector must be connected to the shell. Also, **set the cable length within 10m.**

* Connect pin numbers 1A and 2A to 24V, and connect pin numbers 19B and 20B to 0V.

(*1) -/*ALML/*OVLW/*BALM (can be switched by parameter)

PIO Input/Output Interface

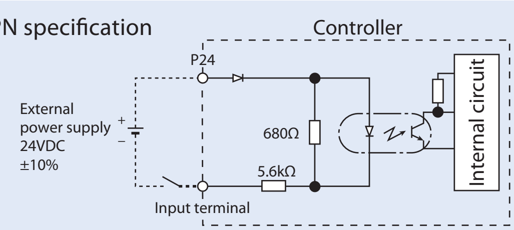
Input External input specification

Item	Specificatio
Input voltage	24VDC ±10%
Input current	4mA/circuit
ON/OFF voltage	ON voltage: Min. 18.0VDC OFF voltage Max. 6.0VDC
Isolation method	Photocoupler

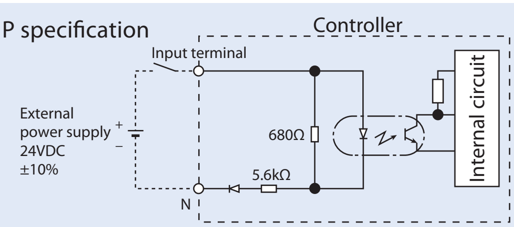
Output External output specification

Item	Specificatio
Load voltage	24VDC
Maximum load current	50mA/point
Leakage current	Max. 0.1mA/point
Isolation method	Photocoupler

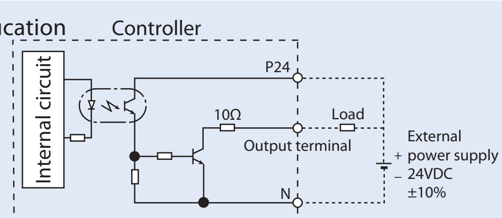
NPN specification



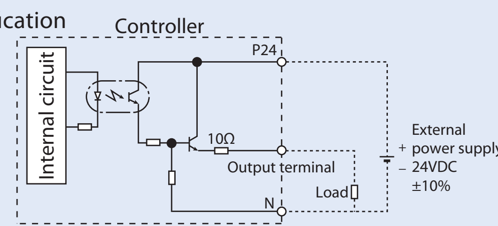
PNP specification



NPN specification



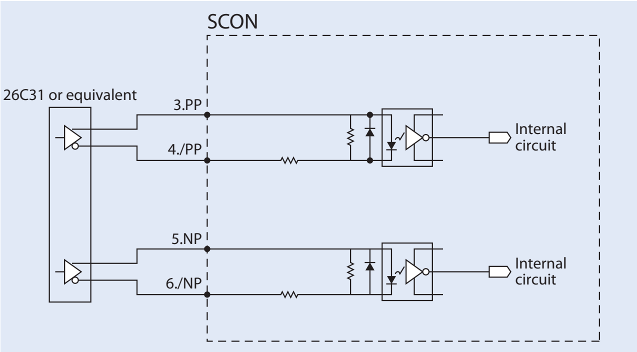
PNP specification



Pulse Train Type Input/Output Specification (differential line driver specificati

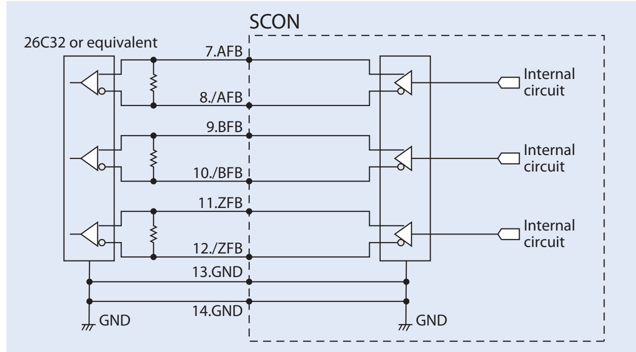
■ Input part

Maximum input pulse	: Line driver interface 2.5Mpps
Isolation method	: Photocoupler isolation



■ Output part

Maximum output pulse	: Line driver interface 2.5Mpps
Isolated/Non-isolated	: Non-isolated

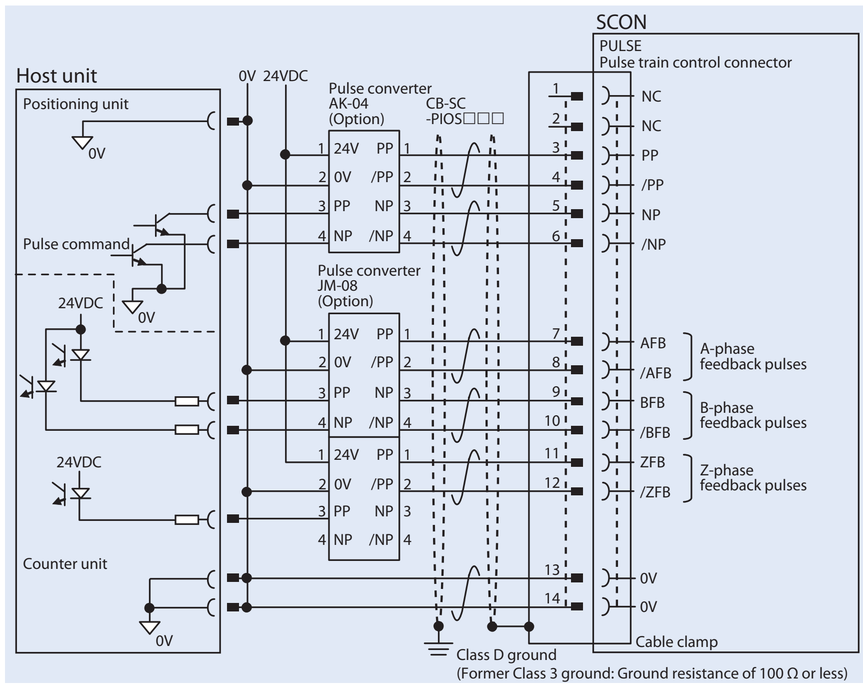


Pulse Train Type Input/Output Specification (open collector specificatio

The AK-04 (optional) is needed to input pulses. The JM-08 (optional) is required for pulse train output.

Maximum input pulse	: 200kpps (AK-04 required)
Maximum output pulse	: 500kpps (JM-08 required)

* The 24VDC power supply connected to the AK-04 should be common with the PIO interface power supply.
* Make sure that the cable between the pulse output unit (PLC) and AK-04/JM-08 is as short as possible. Also, make sure that the cable length **between AK-04/JM-08 and the pulse connector is within 2m.**



Notes

Use the same power supply for open collector input/output to/from the host and for the AK-04 and JM-08.

Command Pulse Input Patterns

	Command pulse train pattern	Input terminal	Forward	Reverse
Negative logic	Forward pulse train	PP·/PP		
	Reverse pulse train	NP·/NP		
	A forward pulse train indicates the amount of motor rotation in the forward direction, while a reverse pulse train indicates the amount of motor rotation in the reverse direction.			
	Pulse train	PP·/PP		
	Sign	NP·/NP	Low	High
	The command pulses indicate the amount of motor rotation, while the sign indicates the rotating direction.			
	Phase A/B pulse train	PP·/PP		
		NP·/NP		
	Command phases A and B pulse having a 90° phase difference (multiplier is 4) indicate the amount of motor rotation and the rotating direction.			
Positive logic	Forward pulse train	PP·/PP		
	Reverse pulse train	NP·/NP		
	Pulse train	PP·/PP		
	Sign	NP·/NP	High	Low
	Phase A/B pulse train	PP·/PP		
		NP·/NP		

Specifications Tabl

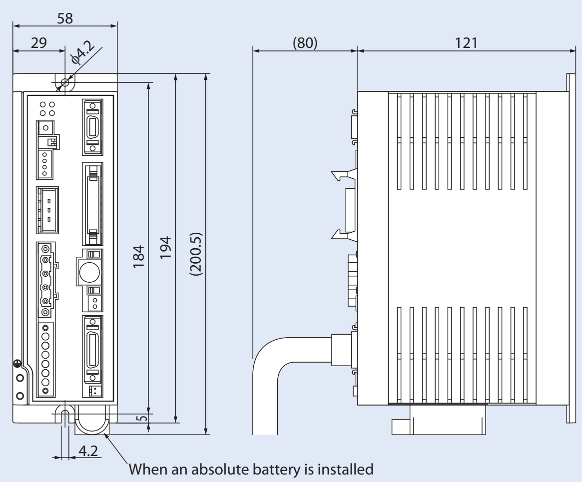
Item		Specificatio	
Compatible motor capacity		Less than 400W	400W or more
Number of controlled axes		1-axis	
Method of operation		Positioner type/Pulse train type	
Number of positioning points		512 points (PIO specification), 768 points (fieldbus specification)	
Backup memory		Non-volatile memory (FRAM)	
I/O connector		40-pin connector	
Number of I/O points		Input 16 points / output 16 points	
I/O power supply		External supply 24VDC ±10%	
Serial communication		RS485 1ch	
Command pulse train input method (Note 1)		Differential line driver output supported	
Maximum input pulse frequency		Differential line driver system: Max. 2.5Mpps / Open collector system (pulse converter used): Max. 200kpps	
Position detection method		Incremental encoder / absolute encoder / serial encoder quasi absolute / battery-less absolute encoder	
Drive-source cutoff function		CB: available (relay built in) CGB: not available	
Electromagnetic brake forced release		External brake release switch ON/OFF	
Input power		Single phase 100~115VAC ±10% Single phase 200~230VAC ±10%	Single phase 200~230VAC ±10%
Power supply capacity (Note 2)		12W / 89VA 20W / 74VA 30W (Excluding RS)/94VA 30W (For RS)/186VA 60W (Excluding RCS3-CTZ5C)/186VA 60W (For RCS3-CTZ5C)/245VA 100W / 282VA 150W / 376VA 200W / 469VA	100SW (For LSA/LSAS-N10) (*)/331VA 200SW (For LSA-S10H, LSA/LSAS-N15S) (*)/534VA 200SW (For LSA/LSAS-N15H) (*)/821VA 300W (For LSA-N19) (*)/710VA 400W (Excluding RCS3-CT8C)/968VA 400W (For RCS3-CT8C)/1278VA 600W / 1212VA 750W / 1569VA
Vibration resistant		X, Y, and Z directions 10~57Hz Single-side width 0.035mm (continuous), 0.075mm (intermittent) 58~150Hz 4.9m/s² (continuous), 9.8m/s² (intermittent)	
Calendar/clock functionality	Retention time	Approx. 10 days	
	Charging time	Approx. 100 hours	
Protection functionality		Overcurrent, abnormal temperature, fan speed degradation monitoring, encoder disconnection, etc.	
Ambient operating temperature		0 to 40°C	
Ambient operating humidity		85% or less (Non-condensing)	
Operating ambience		Free from corrosive gases	
Ingress protection		IP20	
Mass		Approx. 900g (25g added for simple absolute specification)	Approx. 1.2kg (25g added for simple absolute specification)
External dimensions		58mm(W)×194mm(H)×121mm(D)	72mm(W)×194mm(H)×121mm(D)

(Note 1) Use a differential line driver method resistant to noise for the command pulse input method.
If the open collector method must be used, convert the pulse to differential using the optional pulse converter (AK-04/JM-08).
(Note 2) External dimensions of controllers under 400W that operate models marked with (*) are that of 400W or more.

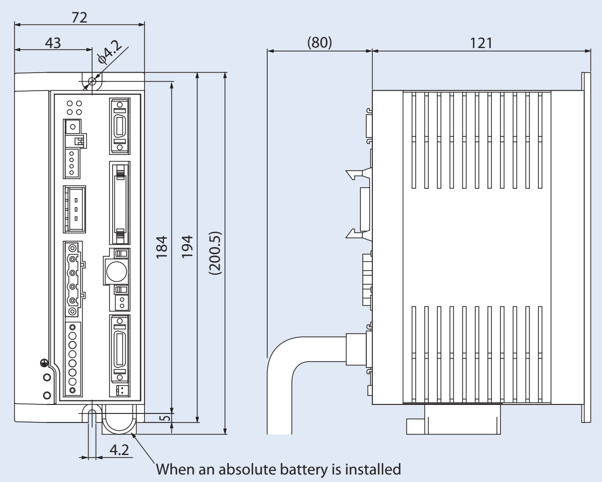
* The number of encoder pulses of actuators that can be operated with SCON-CB is 3,072 pulses for RCS2-SRA7BD/SRGS7BD/SRGD7BD, 1,600 pulses for RCS2-□□5N (incremental), 1,048,576 pulses for DD-□18P: 20 bits, 131,072 pulses for DD-□18S: 17 bits, 2,400 pulses for NS-S□M□ (incremental), 131,072 pulse for ISB (battery-less absolute) and 16,384 pulses for all other models.

External Dimensions

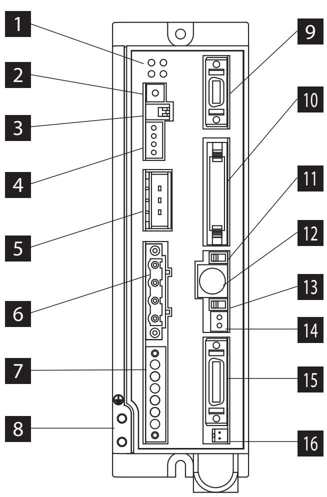
Less than 400W

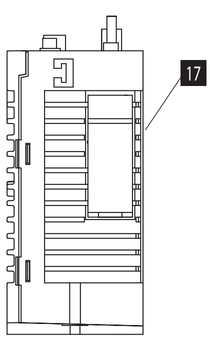


400W or more



Name of Each Component





1 LED display

It represents the state of the controller.

Name	Color	Description
PWR	Green	Lights up on system-ready (after the power is turned on, in normal CPU)
SV	Green	Lights up on servo-on
ALM	Orange	Lights up on alarm
EMG	Red	Lights up on emergency stop

2 Rotary switch

Used to set up the controller address after connecting the controller in order to identify every controller connected.

3 Piano switch

Switch for the controller system.

Name	Description
1	Press-operation mode selection switch OFF: Positioner mode, ON: Pulse train control mode * Enabled at power on.
2	Used by the manufacturer for adjustment. Always keep this switch OFF.

4 System I/O connector

Connector for emergency stop switch, etc.

5 Regenerative resistance unit cable connector

Resistance unit connector for absorbing regenerative current that occurs when the actuator decelerates to a stop.

6 Motor connector

Connector for motor cable of actuator.

7 Power supply connector

Connector for the AC power supply. It has divided inputs on the control power supply side and motor power supply side.

8 Ground terminal

Screw for protective grounding. Be sure to ground.

9 Pulse train control connector

Connector used when operating in pulse train control mode. Feedback pulses are also enabled in positioner mode.

10 PIO connector

Cable connector for performing parallel communication with peripheral devices such as PLC.

11 Operation mode selection switch

Name	Description
MANU	Does not accept commands from PIO.
AUTO	Ready to accept commands from PIO.

* The emergency stop switch on the teaching pendant is enabled when the connection is made, regardless of the states, AUTO or MANU. Be sure to turn OFF the power when disconnecting the teaching pendant and SIO communication cable.

12 SIO connector

Connector for teaching pendant or PC communication cable.

13 Brake release switch

Used to forcibly release the electromagnetic brake installed in the actuator.

* To release the brake, the power supply (24VDC) for driving brake must be connected.

14 Brake power supply connector

Brake power 24VDC supply connector (required only when a brake-equipped actuator is connected).

15 Encoder/sensor connector

Connector for encoder/sensor cable.

16 Connector for the absolute data backup battery

Absolute data backup battery connector (required only for the absolute encoder specifications).

17 Absolute battery holder

Battery holder for installing the absolute data backup battery.

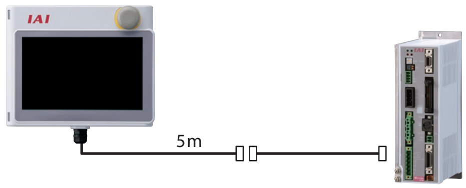
Foreword
Slider Type
Wide Slider Type
Rod Type
Radial Cylinder®
Wide Radial Cylinder
Table Type
Cleanroom Slider
Cleanroom Wide Slider
Options
Reference Data
Controller

Touch panel teaching pendant

■ **Features** A teaching device equipped with functions such as position teaching, trial operation, and monitoring.

■ **Model** **TB-02-C**

■ **Configuratio**



■ **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 (Non-condensing)
Environmental resistance	IP20
Mass	470g (TB-02 unit only)

PC software (Windows only)

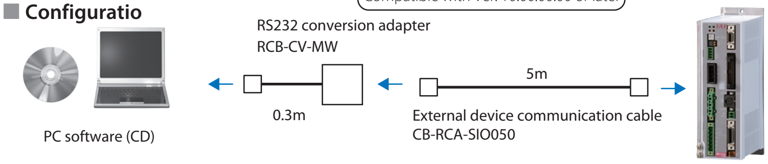
■ **Features** The start-up support software which comes equipped with functions such as position teaching, trial operation, and monitoring.
A complete range of functions needed for making adjustments contributes to shortened start-up time.

XP SP2 or later / Vista / 7 / 8

■ **Model** **RCM-101-MW** (with an external device communication cable + RS232 conversion unit)

Compatible with Ver. 10.00.00.00 or later

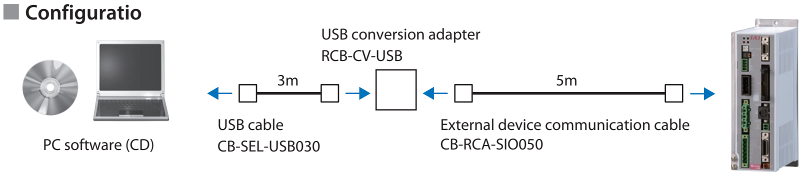
■ **Configuratio**



■ **Model** **RCM-101-USB** (with an external device communication cable + USB conversion adapter + USB cable)

Compatible with Ver. 10.00.00.00 or later

■ **Configuratio**



Regenerative resistance unit

■ **Features** Unit that converts the regenerative current generated in motor deceleration to heat.
Check the total W of the actuator to be operated in the table below, and prepare one if regenerative resistance is required.

* If two regenerative units are required, please prepare RESU-2 and RESU-1 (Consult IAI America for more information).

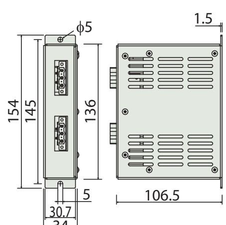
■ **Model** **RESU-2** (standard specification)/**RESUD-2** (DIN rail mounting specification)

■ **Specification**

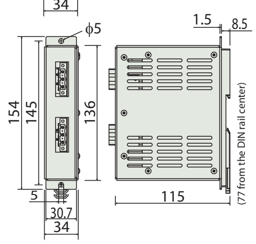
Model	RESU-2	RESUD-2
Unit weight	About 0.4kg	
Built-in regenerative resistance value	235Ω 80W	
Unit mounting method	Screw mount	DIN rail mount
Attached cable	CB-SC-REU010	

■ **External Dimensions**

<RESU-2>



<RESUD-2>



■ **Necessary Amount Guideline**

	Horizontal	Vertical
0	~100W	~100W
1	~400W	~400W
2	~750W	~750W

* Depending on the operating conditions, a regeneration resistance higher than that mentioned above may be necessary.
* The measure of linear servo actuator is in the table above. However, one unit is required for the LSA/LSAS-N10S type.

■ **Necessary Amount Guideline (RCS2-RA13R)**

	Lead 2.5	Lead 1.25
Horizontal	1	0
Vertical	1	1

* Depending on the operating conditions, a regeneration resistance higher than that mentioned above may be necessary.

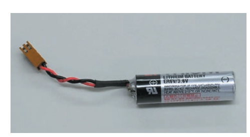
■ **Necessary Amount Guideline (DD)**

Series	Type	Required number
DD · DDA	LT18□	1
	LH18□	2

Absolute data storage battery

■ **Features** Absolute data storage battery for operating an actuator of the absolute specification.

■ **Model** **AB-5 (battery)**
AB-5-CS (with case)



Dummy plug

■ **Features** This is required when the safety category specification (SCON-CGB) is used.

■ **Model** **DP-5**

Maintenance Parts

When placing an order for a replacement cable, please use the model name shown below.

■ Cable Compatibility Chart

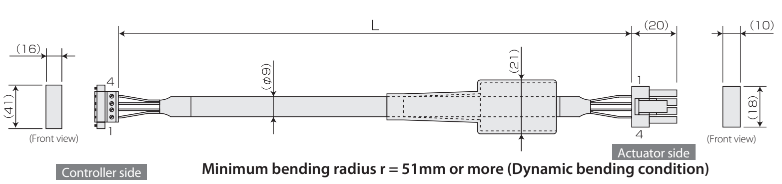
	Model name		Motor cable	Motor robot cable	Encoder cable	Encoder robot cable
①	RCS2(CR/W) RCS3(CR)	Models other than ② ~ ④	CB-RCC-MA□□□	CB-RCC-MA□□□-RB	CB-RCS2-PA□□□	CB-X3-PA□□□
②	RCS3	CTZ5C CT8C	CB-RCC-MA□□□	CB-RCC-MA□□□-RB	–	CB-X1-PA□□□
②	RCS4(CR)		CB-RCC-MA□□□	CB-RCC-MA□□□-RB	–	CB-X1-PA□□□
③	RCS2**	RT	CB-RCC-MA□□□	CB-RCC-MA□□□-RB	CB-RCS2-PLA□□□	CB-X2-PLA□□□
④	RCS2**	RA13R(Standard)	CB-RCC-MA□□□	CB-RCC-MA□□□-RB	CB-RCS2-PLA□□□	CB-X2-PLA□□□
④	RCS2**	RA13R (With brake)	CB-RCC-MA□□□	CB-RCC-MA□□□-RB	CB-RCS2-PLA□□□ * CB-RCS2-PLA□□□ between the controller and brake	CB-X2-PLA□□□ * CB-X2-PLA□□□ between the controller and brake
⑤	NS	Without LS	–	CB-X-MA□□□	–	CB-X3-PA□□□
⑥	NS	With LS	–	CB-X-MA□□□	–	CB-X2-PLA□□□
⑦	LSA	S/H/L/N	–	CB-X-MA□□□	–	CB-X3-PA□□□
⑦	LSA	W	–	CB-XMC-MA□□□	–	CB-X2-PLA□□□
⑧	DD/DDA DDCR/DDACR DDW	LT18□	–	CB-X-MA□□□	–	CB-X3-PA□□□
⑨	DD/DDA DDCR/DDACR DDW	LH18□	–	CB-XMC-MA□□□	–	CB-X3-PA□□□
⑩	DDA DDACR (With brake)	LT18	–	CB-X-MA□□□	–	CB-X3-PA□□□ CB-DDB-BK□□□ between brake box and actuator
⑪	DDA DDACR (With brake)	LH18	–	CB-XMC-MA□□□	–	CB-X3-PA□□□ CB-DDB-BK□□□ between brake box and actuator
⑫	IS(P)WA	S/M/L	–	CB-XEU-MA□□□	–	CB-X1-PA□□□-WC
⑬	Models other than ① ~ ⑫		–	CB-X-MA□□□	–	CB-X1-PA□□□ (for 20m or less) * CB-X1-PA□□□-AWG24 (For 21m or more)
⑭	Models other than ① ~ ⑫ LS specification		–	CB-X-MA□□□	–	CB-X1-PLA□□□ (for 20m or less) * CB-X1-PLA□□□-AWG24 (For 21m or more)

* Those that do not have the battery-less absolute specification will also be CB-X1-PA□□□/CB-X1-PLA□□□ for 20m or more.
** For the RCS2-RA13R load cell specification cables, please contact IAI America.

	Model name	PIO flat cable	Pulse train control cable
⑮	SCON-CB	CB-PAC-PIO□□□	CB-SC-PIOS□□□

Model Name CB-RCC-MA□□□/CB-RCC-MA□□□-RB

* Please indicate the cable length (L) in □□□, (e.g. 080 = 8m), maximum 30m



Minimum bending radius r = 51mm or more (Dynamic bending condition)

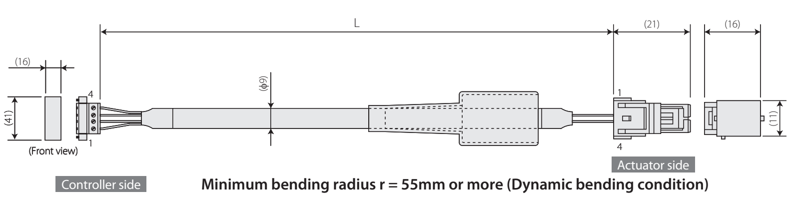
*** Please use the robot cable if the cable needs to be installed through the cable track**

Wiring	Color	Signal	
0.75sq	Green	PE	1
	Red	U	2
	White	V	3
	Black	W	4

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

Model Name CB-XMC-MA□□□

* Please indicate the cable length (L) in □□□, (e.g. 080 = 8m), SCON/SSEL: 20m, XSEL: 30m



Wiring	Color	Signal	
1.25sq	Green	PE	1
	Red	U	2
	White	V	3
	Black	W	4

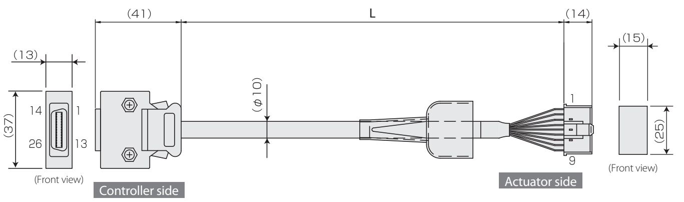
	Signal	Color	Wiring
1	U	Red	1.25sq (Crimped)
2	V	White	
3	W	Black	
4	PE	Green	

Minimum bending radius r = 55mm or more (Dynamic bending condition)

*** Only the robot cable is available for this model.**

Model Name CB-RCS2-PA□□□ (for RCS2/RCS3)/CB-X3-PA□□□ (for NS/RCS2/RCS3)

* Please indicate the cable length (L) in □□□, (e.g. 080 = 8m), maximum 30m



Minimum bending radius r = 58mm or more (Dynamic bending condition)
* Please use the robot cable if the cable needs to be installed through the cable track.

(Controller side)

Wiring	Color (RCS2)	Color (X3)	Signal	No.
AWG26 (Soldered)	–	–	–	10
	–	–	–	11
	–	–	E24V	12
	Gray/White	White/Green	0V	13
	Brown/White	White/Orange	LS	26
			CREEP	25
	–	–	OT	24
	–	–	RSV	23
	–	–	–	9
	–	–	–	18
	–	–	–	19
	Pink	White/Blue	A+	1
	Purple	White/Yellow	A−	2
	White	White/Red	B+	3
	Blue/Red	White/Black	B−	4
	Orange/White	White/Purple	Z+	5
	Green/White	White/Gray	Z−	6
	Blue	Orange	SRD+	7
	Orange	Green	SRD−	8
	Black	Purple	BAT+	14
	Yellow	Gray	BAT−	15
	Green	Red	VCC	16
	Brown	Black	GND	17
	Gray	Blue	BKR−	20
	Red	Yellow	BKR+	21
	–	–	–	22
Shield is clamp connected to the hood				

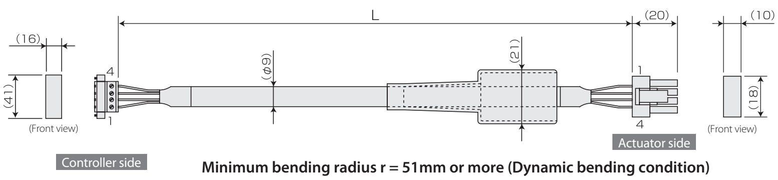
Ground wire and braided shield

(Actuator side)

No.	Signal	Color (RCS2)	Color (X3)	Wiring
1	A	Pink	White/Blue	AWG26 (Crimped)
2	$\overline{A}$	Purple	White/Yellow	
3	B	White	White/Red	
4	$\overline{B}$	Blue/Red	White/Black	
5	Z	Orange/White	White/Purple	
6	$\overline{Z}$	Green/White	White/Gray	
7	LS+	Brown/White	White/Orange	
8	–	–	–	
9	FG	Drain	Drain	
10	SD	Blue	Orange	
11	$\overline{SD}$	Orange	Green	
12	BAT+	Black	Purple	
13	BAT−	Yellow	Gray	
14	VCC	Green	Red	
15	GND	Brown	Black	
16	LS−	Gray/White	White/Green	
17	BK−	Gray	Blue	
18	BK+	Red	Yellow	

Model Name CB-X-MA□□□

* Please indicate the cable length (L) in □□□, (e.g. 080 = 8m), maximum 30m



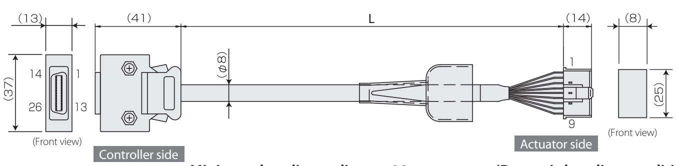
Wiring	Color	Signal	
0.75sq	Green	PE	1
	Red	U	2
	White	V	3
	Black	W	4

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

Minimum bending radius r = 51mm or more (Dynamic bending condition)
* Only the robot cable is available for this model.

Model Name CB-X1-PA□□□

* Please indicate the cable length (L) in □□□, (e.g. 080 = 8m), maximum 30m



Minimum bending radius r = 44mm or more (Dynamic bending condition)
* Only the robot cable is available for this model.
* If you require ISB/ISDB/ISDBCR (encoder type is battery-less absolute) with the cable of 21m or more, select the CB-X1-PA□□□-AWG24.

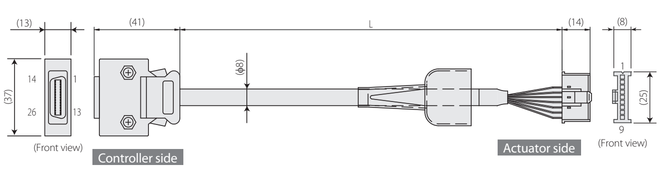
Wiring	Color	Signal	No.
AWG26 (Soldered)	-	-	10
	-	-	11
	-	E24V	12
	-	OV	13
	-	LS	26
	-	CREEP	25
	-	OT	24
	-	RSV	23
	-	-	9
	-	-	18
	-	-	19
	-	A+	1
	-	A-	2
	-	B+	3
	-	B-	4
	-	Z+	5
	-	Z-	6
	Orange	SRD+	7
	Green	SRD-	8
	Purple	BAT+	14
	Gray	BAT-	15
	Red	VCC	16
	Black	GND	17
	Blue	BKR-	20
	Yellow	BKR+	21
	-	-	22
Shield is clamp connected to the hood			

Ground wire and braided shield

No.	Signal	Color	Wiring
1	BAT+	Purple	AWG26 (Crimped)
2	BAT-	Gray	
3	SD	Orange	
4	SD	Green	
5	VCC	Red	
6	GND	Black	
7	FG	Drain	
8	BK-	Blue	
9	BK+	Yellow	

Model Name CB-X1-PA□□□-AWG24

* Please indicate the cable length (L) in □□□, (e.g. 210 = 21m), maximum 30m



Minimum bending radius r = 44mm or more (Dynamic bending condition)
* Only the robot cable is available for this model.

Wiring	Color	Signal	No.
AWG24 (Soldered)	–	–	10
	–	–	11
	–	E24V	12
	–	0V	13
	–	LS	26
	–	CREEP	25
	–	OT	24
	–	RSV	23
	–	–	9
	–	–	18
	–	–	19
	–	A+	1
	–	A–	2
	–	B+	3
	–	B–	4
	–	Z+	5
	–	Z–	6
	Orange	SRD+	7
	Green	SRD–	8
	–	BAT+	14
	–	BAT–	15
	Red	VCC	16
	Black	GND	17
	Blue	BKR–	20
	Yellow	BKR+	21
	–	–	22
Shield is clamp connected to the hood			

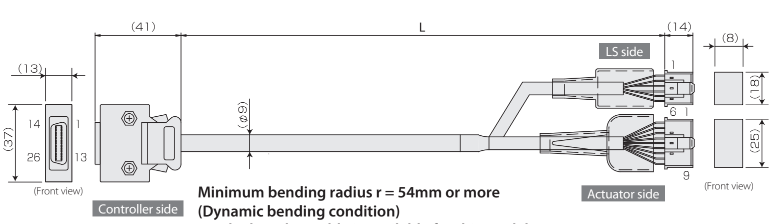
Twisted pair

Ground wire and braided shield

No.	Signal	Color	Wiring
1	BAT+	–	AWG24 (Crimped)
2	BAT–	–	
3	SD	Orange	
4	SD	Green	
5	VCC	Red	
6	GND	Black	
7	FG	Drain	
8	BK–	Blue	
9	BK+	Yellow	

Model Name CB-X1-PLA□□□

* Please indicate the cable length (L) in □□□, (e.g. 080 = 8m), maximum 30m



Minimum bending radius r = 54mm or more (Dynamic bending condition)
* Only the robot cable is available for this model.
* If you require ISB/ISDB/ISDBCR (encoder type is battery-less absolute) with the cable of 21m or more, select the CB-X1-PLA□□□-AWG24.

Wiring	Color	Signal	No.
AWG26 (Soldered)	-	-	10
	-	-	11
	White/Blue	E24V	12
	White/Yellow	OV	13
	White/Red	LS	26
	White/Black	CREEP	25
	White/Purple	OT	24
	White/Gray	RSV	23
	-	-	9
	-	-	18
	-	-	19
	-	A+	1
	-	A-	2
	-	B+	3
	-	B-	4
	-	Z+	5
	-	Z-	6
	Orange	SRD+	7
	Green	SRD-	8
	Purple	BAT+	14
	Gray	BAT-	15
	Red	VCC	16
	Black	GND	17
	Blue	BKR-	20
	Yellow	BKR+	21
	-	-	22
Shield is clamp connected to the hood			

Ground wire and braided shield

No.	Signal	Color	Wiring
1	E24V	White/Blue	AWG26 (Crimped)
2	OV	White/Yellow	
3	LS	White/Red	
4	CREEP	White/Black	
5	OT	White/Purple	
6	RSV	White/Gray	

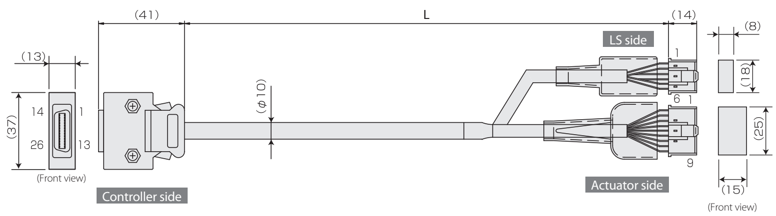
No.	Signal	Color	Wiring
1	BAT+	Purple	AWG26 (Crimped)
2	BAT-	Gray	
3	SD	Orange	
4	SD	Green	
5	VCC	Red	
6	GND	Black	
7	FG	Drain	
8	BK-	Blue	
9	BK+	Yellow	

(White/blue cable colors indicate the band color and insulator color.)

When placing an order for a replacement cable, please use the model name shown below.

Model Name CB-RCS2-PLA□□□ (for RCS2 rotary)/CB-X2-PLA□□□ (NS LS specification/for RCS2 rotary)

* Please indicate the cable length (L) in □□□, (e.g. 080 = 8m), maximum 30m



Minimum bending radius r = 58mm or more (Dynamic bending condition)
* Please use the robot cable if the cable needs to be installed through the cable track.

(Controller side)

Wiring	Color (RCS2)	Color (X2)	Signal	No.
AWG26 (Soldered)	–	–	–	10
	–	–	–	11
	Brown/White	White/Orange	E24V	12
	Gray/White	White/Green	OV	13
	Red/White	Brown/Blue	LS	26
	Black/White	Brown/Yellow	CREEP	25
	Yellow/Black	Brown/Red	OT	24
	Pink/Black	Brown/Black	RSV	23
	–	–	–	9
	–	–	–	18
	–	–	–	19
	Pink	White/Blue	A+	1
	Purple	White/Yellow	A–	2
	White	White/Red	B+	3
	Blue/Red	White/Black	B–	4
	Orange/White	White/Purple	Z+	5
	Green/White	White/Gray	Z–	6
	Blue	Orange	SRD+	7
	Orange	Green	SRD–	8
	Black	Purple	BAT+	14
	Yellow	Gray	BAT–	15
	Green	Red	VCC	16
	Brown	Black	GND	17
	Gray	Blue	BKR–	20
	Red	Yellow	BKR+	21
	–	–	–	22
Shield is clamp connected to the hood				

Ground wire and braided shield

(Actuator side)

No.	Signal	Color (RCS2)	Color (X2)	Wiring
1	E24V	Brown/White	White/Orange	AWG26 (Crimped)
2	OV	Gray/White	White/Green	
3	LS	Red/White	Brown/Blue	
4	CREEP	Black/White	Brown/Yellow	
5	OT	Yellow/Black	Brown/Red	
6	RSV	Pink/Black	Brown/Black	

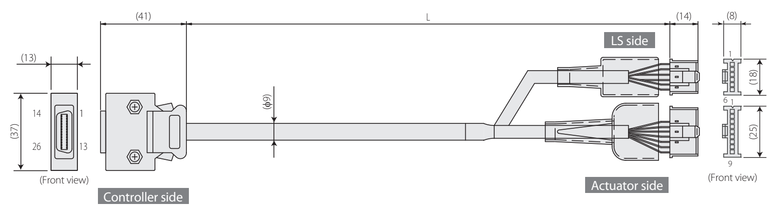
No.	Signal	Color (RCS2)	Color (X2)	Wiring
1	A+	Pink	White/Blue	AWG26 (Crimped)
2	A–	Purple	White/Yellow	
3	B+	White	White/Red	
4	B–	Blue/Red	White/Black	
5	Z+	Orange/White	White/Purple	
6	Z–	Green/White	White/Gray	
7	–	–	–	
8	–	–	–	
9	FG	Drain	Drain	
10	SD	Blue	Orange	
11	SD	Orange	Green	
12	BAT+	Black	Purple	
13	BAT–	Yellow	Gray	
14	VCC	Green	Red	
15	GND	Brown	Black	
16	–	–	–	
17	BK–	Gray	Blue	
18	BK+	Red	Yellow	

(White/blue cable colors indicate the band color and insulator color.)

*** The above is the wiring diagram of encoder cables. For the wiring diagram of encoder robot cables, please contact IAI.**

Model Name CB-X1-PLA□□□-AWG24

* Please indicate the cable length (L) in □□□, (e.g. 210 = 21m), maximum 30m



Minimum bending radius r = 54mm or more (Dynamic bending condition)
* Only the robot cable is available for this model.

Wiring	Color	Signal	No.
AWG24 (Soldered)	–	–	10
	–	–	11
	White/Blue	E24V	12
	White/Yellow	0V	13
	White/Red	LS	26
	White/Black	CREEP	25
	White/Purple	OT	24
	White/Gray	RSV	23
	–	–	9
	–	–	18
	–	–	19
	–	A+	1
	–	A–	2
	–	B+	3
	–	B–	4
	–	Z+	5
	–	Z–	6
	Orange	SRD+	7
	Green	SRD–	8
	–	BAT+	14
	–	BAT–	15
	Red	VCC	16
	Black	GND	17
	Blue	BKR–	20
	Yellow	BKR+	21
	–	–	22
Shield is clamp connected to the hood			

Twisted pair

Ground wire and braided shield

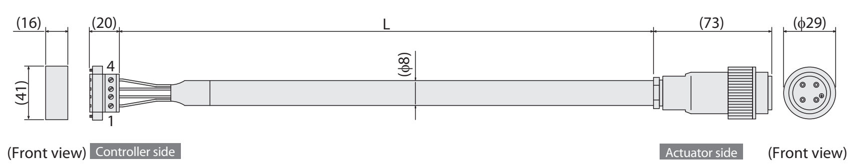
No.	Signal	Color	Wiring
1	E24V	White/Blue	AWG24 (Crimped)
2	0V	White/Yellow	
3	LS	White/Red	
4	CREEP	White/Black	
5	OT	White/Purple	
6	RSV	White/Gray	

No.	Signal	Color	Wiring
1	BAT+	–	AWG24 (Crimped)
2	BAT–	–	
3	SD	Orange	
4	SD	Green	
5	VCC	Red	
6	GND	Black	
7	FG	Drain	
8	BK–	Blue	
9	BK+	Yellow	

(White/blue cable colors indicate the band color/insulator color)

Model Name CB-XEU-MA□□□

* Please indicate the cable length (L) in □□□, (e.g. 080 = 8m), maximum 30m



Plug
GIC2.5/4-STF-7.62 (Phoenix)

Wiring	Signal	No.
0.75sq	PE	1
	U	2
	V	3
	W	4

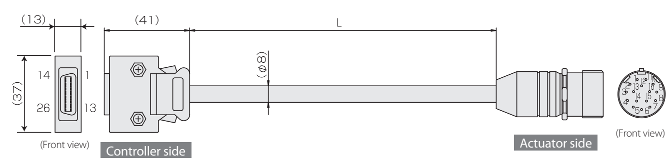
Plug connector
99-4222-00-04(BINDER)

No.	Signal	Wiring
⊕	PE	0.75sq (Crimped)
1	U	
2	V	
3	W	

Minimum bending radius r = 48mm or more (Dynamic bending condition)
* Only the robot cable is available for this model.

Model Name CB-X1-PA□□□-WC

* Please indicate the cable length (L) in □□□, (e.g. 080 = 8m), maximum 30m



Minimum bending radius r = 44mm or more (Dynamic bending condition)
* Only the robot cable is available for this model.

Wiring	Color	Signal	No.
AWG26 (Soldered)	-	-	10
	-	-	11
	-	E24V	12
	-	OV	13
	-	LS	26
	-	CREEP	25
	-	OT	24
	-	RSV	23
	-	-	9
	-	-	18
	-	-	19
	-	A+	1
	-	A-	2
	-	B+	3
	-	B-	4
	-	Z+	5
	-	Z-	6
	-	SRD+	7
	Green	SRD-	8
	Purple	BAT+	14
	Gray	BAT-	15
	Red	VCC	16
	Black	GND	17
	Blue	BKR-	20
	Yellow	BKR+	21
	-	-	22
Shield is clamp connected to the hood			

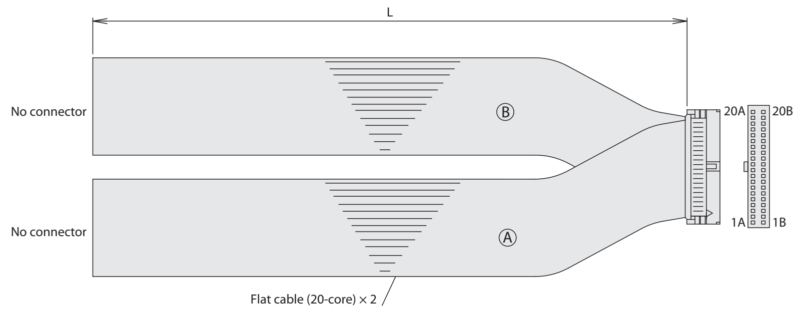
Ground wire and braided shield

No.	Signal	Color	Wiring
1	SD	Orange	AWG26 (Soldered)
2	SD	Green	
3	-	-	
4	-	-	
5	-	-	
6	-	-	
7	-	-	
8	-	-	
9	-	-	
10	VCC	Red	
11	GND	Black	
12	BAT+	Purple	
13	BAT-	Gray	
14	-	-	
15	BK-	Blue	
16	BK+	Yellow	
Shield is connected to the ground sleeve			

(White/blue cable colors indicate the band color and insulator color.)

Model Name CB-PAC-PIO□□□

* Please indicate the cable length (L) in □□□, (e.g. 080 = 8m), maximum 10m



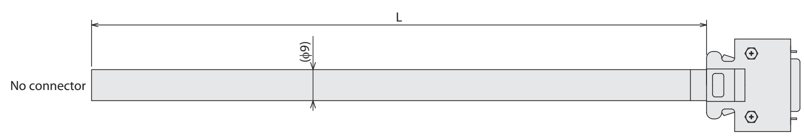
HIF6-40D-1.27R

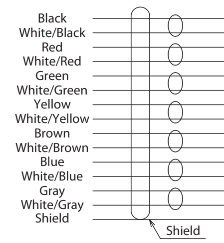
No.	Signal Name	Cable Color	Wiring
1A	24V	Brown-1	Flat cableⒶ (pressure-welded)
2A	24V	Red-1	
3A	–	Orange-1	
4A	–	Yellow-1	
5A	IN0	Green-1	
6A	IN1	Blue-1	
7A	IN2	Purple-1	
8A	IN3	Gray-1	
9A	IN4	White-1	
10A	IN5	Black-1	
11A	IN6	Brown-2	
12A	IN7	Red-2	
13A	IN8	Orange-2	
14A	IN9	Yellow-2	
15A	IN10	Green-2	
16A	IN11	Blue-2	
17A	IN12	Purple-2	
18A	IN13	Gray-2	
19A	IN14	White-2	
20A	IN15	Black-2	

No.	Signal Name	Cable Color	Wiring
1B	OUT0	Brown-3	Flat cableⒷ (pressure-welded) AWG28
2B	OUT1	Red-3	
3B	OUT2	Orange-3	
4B	OUT3	Yellow-3	
5B	OUT4	Green-3	
6B	OUT5	Blue-3	
7B	OUT6	Purple-3	
8B	OUT7	Gray-3	
9B	OUT8	White-3	
10B	OUT9	Black-3	
11B	OUT10	Brown-4	
12B	OUT11	Red-4	
13B	OUT12	Orange-4	
14B	OUT13	Yellow-4	
15B	OUT14	Green-4	
16B	OUT15	Blue-4	
17B	–	Purple-4	
18B	–	Gray-4	
19B	0V	White-4	
20B	0V	Black-4	

Model Name CB-SC-PIOS□□□

* Please indicate the cable length (L) in □□□, (e.g. 080 = 8m), maximum 10m





Wiring	Color	Signal	No.
0.2sq Soldered	Black	Not used	1
	White/Black	Not used	2
	Red	PP	3
	White/Red	/ PP	4
	Green	NP	5
	White/Green	/ NP	6
	Yellow	AFB	7
	White/Yellow	/ AFB	8
	Brown	BFB	9
	White/Brown	/ BFB	10
	Blue	ZFB	11
	White/Blue	/ ZFB	12
	Gray	GND	13
	White/Gray	GND	14
The shield is connected to the cable clamp			

Model Name CB-DDB-BK□□□

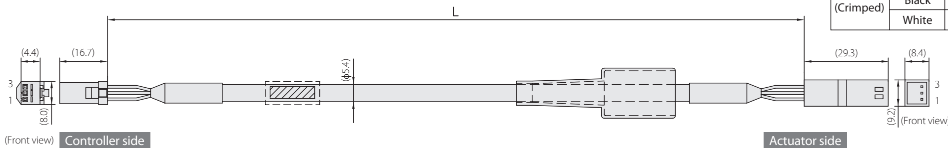
* Please indicate the cable length (L) in □□□, (e.g. 080 = 8m), maximum 20m

J11SF-03V-KX

Wiring	Color	Signal	No.
AWG20 (Crimped)	Red	+	3
	Black	–	2
	White	FG	1

J11SFM-03V-KX

No.	Signal	Color	Wiring
3	+	Red	AWG20 (Crimped)
2	–	Black	
1	FG	White	



Off board tuning compatible with RCS4-SA4C/R、SA6C/R、SA7C/R、SA8C/R

1. Contents

RCS4-SA series supports off-board tuning.
Please check the attached payload table with acceleration / deceleration.
Depending on the model, it supports up to 4.5G horizontally and 3G vertically.

2. Applicable controller

SCON-CB、RCON-SC、SCON-CAL、MSCON-C
*SCON-CAL does not support servo monitor.

3. Corresponding timing

The above controller is compatible

4. Corresponding tool

RC PC software V13.01.00.00 or later
TB-02/03：V2.60

RCS4-SA4C

Payload and acceleration / deceleration of off-board tuning

Payload unit: kg

	Lead	Payload of acceleration / deceleration (kg)																	Max. Speed (mm/s)	
		0.3G	0.5G	0.7G	1.0G	1.2G	1.5G	2.0G	2.2G	2.5G	2.7G	3.0G	3.2G	3.5G	3.7G	4.0G	4.2G	4.5G	Standard	After tuning
Horizontal	16	10	8	6	6	4	3.5	3	2.75	2.5	2.25	2	2	1.75	1.5	1.25	1	1	960	960
	10	14	14	12	10	6	5	4.5	4	3.5	3	2.5	2.25	2	1.75	1.5	1.25	1	600	600
	5	17	17	15	15	14.5	14	11	10	9	8	7	6.5	6	5.5	5	4.5	4	300	300
	2.5	20	20	20	20	17	11	-	-	-	-	-	-	-	-	-	-	-	150	150
Vertical	16	3	3	1.5	1.5	1	1	1	1	1	0.75	0.75	-	-	-	-	-	-	960	960
	10	5	5	3	3	2	2	2	1.5	1.5	1	1	-	-	-	-	-	-	600	600
	5	8	8	6	6	5.75	5.5	5.25	5	4.75	4.5	4.25	-	-	-	-	-	-	300	300
	2.5	12	12	10	8	7	6	-	-	-	-	-	-	-	-	-	-	-	150	150

RCS4-SA6C

Payload and acceleration / deceleration of off-board tuning

Payload unit: kg

	Lead	Payload of acceleration / deceleration (kg)																	Max. Speed (mm/s)	
		0.3G	0.5G	0.7G	1.0G	1.2G	1.5G	2.0G	2.2G	2.5G	2.7G	3.0G	3.2G	3.5G	3.7G	4.0G	4.2G	4.5G	Standard	After tuning
Horizontal	30	11	6	6	4	3	2.5	2	1.5	1.5	1.5	1.5	1.5	1.25	1.25	1	1	1	1600	1800
	20	18	15	10	8	6	5	4.5	4	3.5	2.5	2	2	2	2	2	2	1.75	1200	1200
	12	30	24	20	15	15	9	6	5.5	5	4	3.5	3.5	3	3	2.5	2.5	2	720	720
	6	45	30	20	20	18	16	11	9	7.5	7	5.75	5	4	3.5	3	2.5	2	360	360
	3	45	30	20	12	7.5	2.5	-	-	-	-	-	-	-	-	-	-	-	180	180
Vertical	30	3.5	2	2	1.5	1.5	1.5	1.5	1.5	1	1	1	-	-	-	-	-	-	1600	1800
	20	6	5	4	4	2	2	2	2	2	2	2	-	-	-	-	-	-	1200	1200
	12	11	10	10	8	8	7	6	5	4	3.5	3	-	-	-	-	-	-	720	720
	6	15	15	15	15	11	9	6.5	6	5	4	4	-	-	-	-	-	-	360	360
	3	15	14	10	6	4	1	-	-	-	-	-	-	-	-	-	-	-	180	180

RCS4-SA7C

Payload and acceleration / deceleration of off-board tuning

Payload unit: kg

	Lead	Payload of acceleration / deceleration (kg)																	Max. Speed (mm/s)	
		0.3G	0.5G	0.7G	1.0G	1.2G	1.5G	2.0G	2.2G	2.5G	2.7G	3.0G	3.2G	3.5G	3.7G	4.0G	4.2G	4.5G	Standard	After tuning
Horizontal	36	7	7	6	4	3	3	2.5	2.5	2	2	1.5	1.5	1.5	1.5	1.5	1.5	1	1800	2150
	24	30	12	10	6	5	5	5	5	4	4	3	3	3	3	3	3	3	1500	1500
	16	40	30	15	15	12	12	10	10	9	8	7	6	6	5.5	5	4	3.5	1000	1000
	8	45	40	40	35	30	25	18	15	10	9	9	9	8	7	6	5	4	500	500
	4	50	50	40	25	15	5	-	-	-	-	-	-	-	-	-	-	-	240	240
Vertical	36	4	4	3	2	2	2	2	2	1.5	1.5	1.5	-	-	-	-	-	-	1800	2150
	24	7	7	6	5	4	4	4	3.5	3.5	3	3	-	-	-	-	-	-	1500	1500
	16	12	12	10	8	8	8	5	5	5	5	5	-	-	-	-	-	-	1000	1000
	8	20	20	20	18	15	12	10	10	8	7	7	-	-	-	-	-	-	500	500
	4	25	25	20	12	8	3	-	-	-	-	-	-	-	-	-	-	-	240	240

RCS4-SA8C

Payload and acceleration / deceleration of off-board tuning

Payload unit: kg

	Lead	Payload of acceleration / deceleration (kg)																	Max. Speed (mm/s)	
		0.3G	0.5G	0.7G	1.0G	1.2G	1.5G	2.0G	2.2G	2.5G	2.7G	3.0G	3.2G	3.5G	3.7G	4.0G	4.2G	4.5G	Standard	After tuning
Horizontal	48	8	8	6	5	4	3.5	3	2.5	2	1.5	1	1	1	0.5	0.5	0.5	0.5	2200	2500
	30	30	25	20	15	10	9	8	7	6	5	4	4	4	3.75	3.75	3	3	1800	1800
	20	60	40	30	20	15	13	10	9	8	7	6	5	5	4	4	3	3	1200	1200
	10	80	80	70	60	58	55	43	35	30	25	20	18	15	13	12	10	8	600	600
	5	90	90	70	50	40	25	-	-	-	-	-	-	-	-	-	-	-	300	300
Vertical	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	30	12	12	10	8	6	5.5	5	4.5	3.5	3.5	3	-	-	-	-	-	-	1800	1800
	20	20	20	18	15	12	10	8	7	6	5	4	-	-	-	-	-	-	1200	1200
	10	35	35	35	30	28	25	23	20	18	16	14	-	-	-	-	-	-	600	600
	5	45	45	35	30	22	15	-	-	-	-	-	-	-	-	-	-	-	300	300

Note: Excerpts from the 2020 general catalog

RCS4-SA4R

Payload and acceleration / deceleration of off-board tuning

Payload unit: kg

	Lead	Payload of acceleration / deceleration (kg)																	Max. Speed (mm/s)	
		0.3G	0.5G	0.7G	1.0G	1.2G	1.5G	2.0G	2.2G	2.5G	2.7G	3.0G	3.2G	3.5G	3.7G	4.0G	4.2G	4.5G	Standard	After tuning
Horizontal	16	10	8	6	6	4	3.5	3	2.75	2.5	2.25	2	2	1.75	1.5	1.25	1	1	960	960
	10	14	14	12	10	6	5	4.5	4	3.5	3	2.5	2.25	2	1.75	1.5	1.25	1	600	600
	5	17	17	15	13	12.5	12	11	10	9	8	7	6.5	6	5.5	5	4.5	4	300	300
	2.5	20	20	20	20	17	11	-	-	-	-	-	-	-	-	-	-	-	150	150
Vertical	16	2.5	2.5	1.5	1.5	1	1	1	1	1	0.75	0.75	-	-	-	-	-	-	960	960
	10	4.5	4.5	3	3	2	2	2	1.5	1.5	1	1	-	-	-	-	-	-	600	600
	5	8	8	6	6	5.75	5.5	5.25	5	4.75	4.5	4.25	-	-	-	-	-	-	300	300
	2.5	12	12	10	8	7	6	-	-	-	-	-	-	-	-	-	-	-	150	150

RCS4-SA6R

Payload and acceleration / deceleration of off-board tuning

Payload unit: kg

	Lead	Payload of acceleration / deceleration (kg)																	Max. Speed (mm/s)	
		0.3G	0.5G	0.7G	1.0G	1.2G	1.5G	2.0G	2.2G	2.5G	2.7G	3.0G	3.2G	3.5G	3.7G	4.0G	4.2G	4.5G	Standard	After tuning
Horizontal	30	11	6	6	4	3	2.5	2	1.5	1.5	1.5	1.25	1.25	1.25	1.25	1	1	1	1600	1800
	20	18	15	10	8	6	5	4.5	4	3.5	2.5	2	2	2	2	1.75	1.75	1.75	1200	1200
	12	30	24	20	15	15	9	6	5.5	5	4	3.5	3.5	3	3	2.5	2.5	2	720	720
	6	45	30	20	20	18	16	11	9	7.5	7	5.75	5	4	3.5	3	2.5	2	360	360
	3	45	30	20	12	7.5	2.5	-	-	-	-	-	-	-	-	-	-	-	180	180
Vertical	30	3	2	2	1.5	1.5	1.5	1.5	1.5	1	1	1	-	-	-	-	-	-	1600	1800
	20	5	5	4	4	3	2	2	2	2	2	2	-	-	-	-	-	-	1200	1200
	12	9	9	9	8	8	7	6	5	4	3.5	3	-	-	-	-	-	-	720	720
	6	15	15	15	15	11	9	6.5	6	5	4	4	-	-	-	-	-	-	360	360
	3	15	14	10	6	4	1	-	-	-	-	-	-	-	-	-	-	-	180	180

RCS4-SA7R

Payload and acceleration / deceleration of off-board tuning

Payload unit: kg

	Lead	Payload of acceleration / deceleration (kg)																	Max. Speed (mm/s)	
		0.3G	0.5G	0.7G	1.0G	1.2G	1.5G	2.0G	2.2G	2.5G	2.7G	3.0G	3.2G	3.5G	3.7G	4.0G	4.2G	4.5G	Standard	After tuning
Horizontal	36	7	7	6	4	3	3	2.5	2.5	2	2	1.5	1.5	1.5	1.5	1.5	1.5	1	1800	2150
	24	30	12	10	6	5	5	5	5	4	4	3	3	3	3	3	3	3	1500	1500
	16	38	30	15	15	12	12	10	10	9	8	7	6	6	5.5	5	4	3.5	1000	1000
	8	45	40	40	35	30	25	18	15	10	9	9	9	8	7	6	5	4	500	500
	4	50	50	40	25	15	5	-	-	-	-	-	-	-	-	-	-	-	240	240
Vertical	36	4	4	3	2	2	2	2	2	1.5	1.5	1.5	-	-	-	-	-	-	1800	2150
	24	6	6	5	5	4	4	4	3.5	3.5	3	3	-	-	-	-	-	-	1500	1500
	16	12	12	10	8	8	8	5	5	5	5	5	-	-	-	-	-	-	1000	1000
	8	18	18	18	16	15	12	10	10	8	7	7	-	-	-	-	-	-	500	500
	4	25	25	20	12	8	3	-	-	-	-	-	-	-	-	-	-	-	240	240

RCS4-SA8R

Payload and acceleration / deceleration of off-board tuning

Payload unit: kg

	Lead	Payload of acceleration / deceleration (kg)																	Max. Speed (mm/s)	
		0.3G	0.5G	0.7G	1.0G	1.2G	1.5G	2.0G	2.2G	2.5G	2.7G	3.0G	3.2G	3.5G	3.7G	4.0G	4.2G	4.5G	Standard	After tuning
Horizontal	48	8	8	6	5	4	3.5	3	2.5	2	1.5	1	1	1	0.5	0.5	0.5	0.5	2100	2500
	30	30	25	20	15	10	9	8	7	6	5	4	4	4	3.75	3.75	3.5	3.5	1800	1800
	20	60	40	30	20	15	13	10	9	8	7	6	6	6	6	6	5	5	1200	1200
	10	80	80	70	60	58	55	43	35	30	25	20	18	15	13	12	10	8	600	600
	5	90	90	70	50	40	25	-	-	-	-	-	-	-	-	-	-	-	300	300
Vertical	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	30	12	12	10	8	6	5.5	5	4.5	4	3.5	3	-	-	-	-	-	-	1800	1800
	20	20	20	18	15	12	10	8	7	6	5	4	-	-	-	-	-	-	1200	1200
	10	35	35	35	30	28	25	23	20	18	16	14	-	-	-	-	-	-	600	600
	5	45	45	35	30	22	15	-	-	-	-	-	-	-	-	-	-	-	300	300

Note: Excerpts from the 2020 general catalog

Catalog No. CE0255-1.5A (2020APR)

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Bangna, Bangna, Bangkok 10260, Thailand

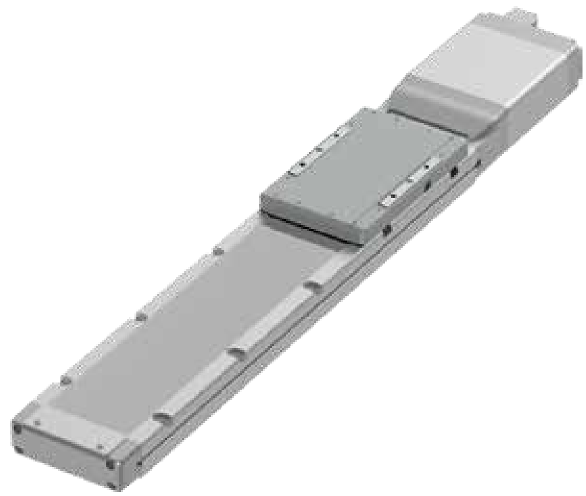
RCS4-WSA10C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Coupled Motor | Body Width 100 mm | 200V AC Servo Motor | 60 W

■Model Specification Items

RCS4 - WSA10C - WA - 60 - ☐ - ☐ - ☐ - ☐ - ☐

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
RCS4	WSA10C	WA: Battery-less Absolute	60: Servo motor 60W	16: 16mm 10: 10mm 5: 5mm 2.5: 2.5mm	50 ~ 500: 50mm ~ 500mm (50mm increments)	T2: SCON, MSCON, SSEL, XSEL-P/Q, XSEL-RA/SA T4: RCON, RSEL	N: None P: 1m S: 3m M: 5m X☐☐: Specified Length R☐☐: Robot Cable	Refer to Options table below.



Horizontal | Vertical | Side | Ceiling

Stroke

Stroke (mm)	RCS4-WSA10C	Stroke (mm)	RCS4-WSA10C
50	○	**300**	○
100	○	**350**	○
150	○	**400**	○
200	○	**450**	○
250	○	**500**	○

Options

Name	Option Code	Reference Page
Brake	**B**	2-611
Cable exit direction (Top) (Note 1)	**CJT**	2-612
Cable exit direction (Right) (Note 1)	**CJR**	2-612
Cable exit direction (Left) (Note 1)	**CJL**	2-612
Cable exit direction (Bottom) (Note 1)	**CJB**	2-612
High-precision specification	**HPR**	2-613
Non-motor end specification	**NM**	2-614
Slider roller specification	**SR**	2-615

(Note 1) Make sure to specify a code in the option column of the model specification items.

Cable Length

Type	Cable Code	T2	T4
Standard	**P**(1m)	○	○
	S(3m)	○	○
	M(5m)	○	○
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)	○	○
	X11(11m)~**X15**(15m)	○	○
	X16(16m)~**X20**(20m)	○	○
Robot cable	**R01**(1m) ~**R03**(3m)	○	○
	R04(4m) ~**R05**(5m)	○	○
	R06(6m) ~**R10**(10m)	○	○
	R11(11m)~**R15**(15m)	○	○
	R16(16m)~**R20**(20m)	○	○

POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Confirm the Max. speed of the desired stroke in the "Stroke and Max. Speed."
(2) When the acceleration is increased, the payload will be reduced. Refer to the "Table of Payload by Acceleration" for details.
(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P.149 for more information.
(4) Refer to P.138 for details on Notes of mounting orientation. Possible cautions may be required.
(5) Guideline for overhang length is 500mm or less in the Ma, Mb and Mc directions. Refer to the drawing on P.146 for the overhang length.

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Main specifications

Item			Specification			
Lead		Ball screw lead (mm)	16	10	5	2.5
Horizontal	Payload	Maximum payload capacity (kg)	7	16	27	40
	Speed and acceleration/ deceleration	Maximum speed (mm/s)	960	600	300	150
		Rated acceleration/ deceleration (G)	0.5	0.5	0.5	0.3
		Maximum acceleration/ deceleration (G)	1.2	1.2	1	0.7
Vertical	Payload	Maximum payload (kg)	—	3	5	10
	Speed and acceleration/ deceleration	Maximum speed (mm/s)	—	600	300	150
		Rated acceleration/ deceleration (G)	—	1	1	0.5
		Maximum acceleration/ deceleration (G)	—	1.2	1	0.7
Thrust force		Rated thrust force (N)	53	85	170	340
Brake		Brake specification	Non-exciting electromagnetic brake			
		Brake-holding force (kgf)	—	3	5	10
Stroke		Minimum stroke (mm)	50	50	50	50
		Maximum stroke (mm)	500	500	500	500
		Stroke increments (mm)	50	50	50	50

Item	Description
Drive system	Ball screw ϕ8mm, rolled C10
Positioning repeatability (Note 2)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Bearing return guide	Direct-acting infinite circulation type
Allowable static moment	Ma direction 271N·m, Mb direction 271N·m, Mc direction 553N·m
Allowable dynamic moment (Note 3)	Ma direction 65N·m, Mb direction 65N·m, Mc direction 134N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)
Degree of protection	IP20
Anti-vibration and anti-shock	4.9m/s²
International standards	CE marking, RoHS directive
Motor type	AC servo motor
Encoder type	Battery-less absolute
Number of encoder pulses	16384 pulse/rev

(Note 2) Values in [ ] are for high precision specification.
(Note 3) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. See P.1-180 for moment load directions.

■ Moment directions of the slider type

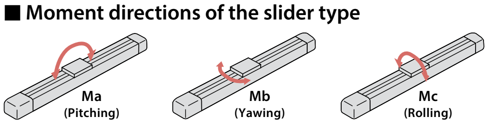

Table of Payload by Acceleration

The unit of payload is kg. Operations are not possible in the blank positions.

Mounting posture	Horizontal					Vertical				
Lead (mm)	Acceleration (G)									
	0.3	0.5	0.7	1.0	1.2	0.3	0.5	0.7	1.0	1.2
16	7	7	5	4	3					
10	16	16	12	12	6	3	3	3	3	2
5	27	27	20	18		5	5	5	5	
2.5	40	30	18			10	10	6		

Stroke and Max Speed

Lead \ Stroke	50~350 (50mm increments)	400 (mm)	450 (mm)	500 (mm)
16	960	930	775	660
10	600	590	490	415
5	300	290	245	205
2.5	150	145	120	100

(Unit: mm/s)

Payload and acceleration/deceleration at the time of off-board tuning.

The unit of payload is kg. Operations are not possible in the blank positions.

	Lead	Payload by acceleration/deceleration (kg)												Maximum speed (mm/s)	
		0.3G	0.5G	0.7G	1.0G	1.2G	1.5G	2.0G	2.5G	3.0G	3.5G	4.0G	4.5G	Standard	After tuning
Horizontal	16	7	7	5	4	3	3	2.5	2	1.5	1.25	1	1	960	960
	10	16	16	12	12	6	4.5	4	3	2	1.5	1	1	600	600
	5	27	27	20	18	14	13.5	9	6.5	4.5	3.25	2.25	1.5	300	300
	2.5	40	30	18	11	6.5	2							150	150
Vertical	16														
	10	3	3	3	3	2	1.5	1.5	1	1				600	600
	5	5	5	5	5	5	5	5	4.5	3				300	300
	2.5	10	10	6	5	3.25	1							150	150

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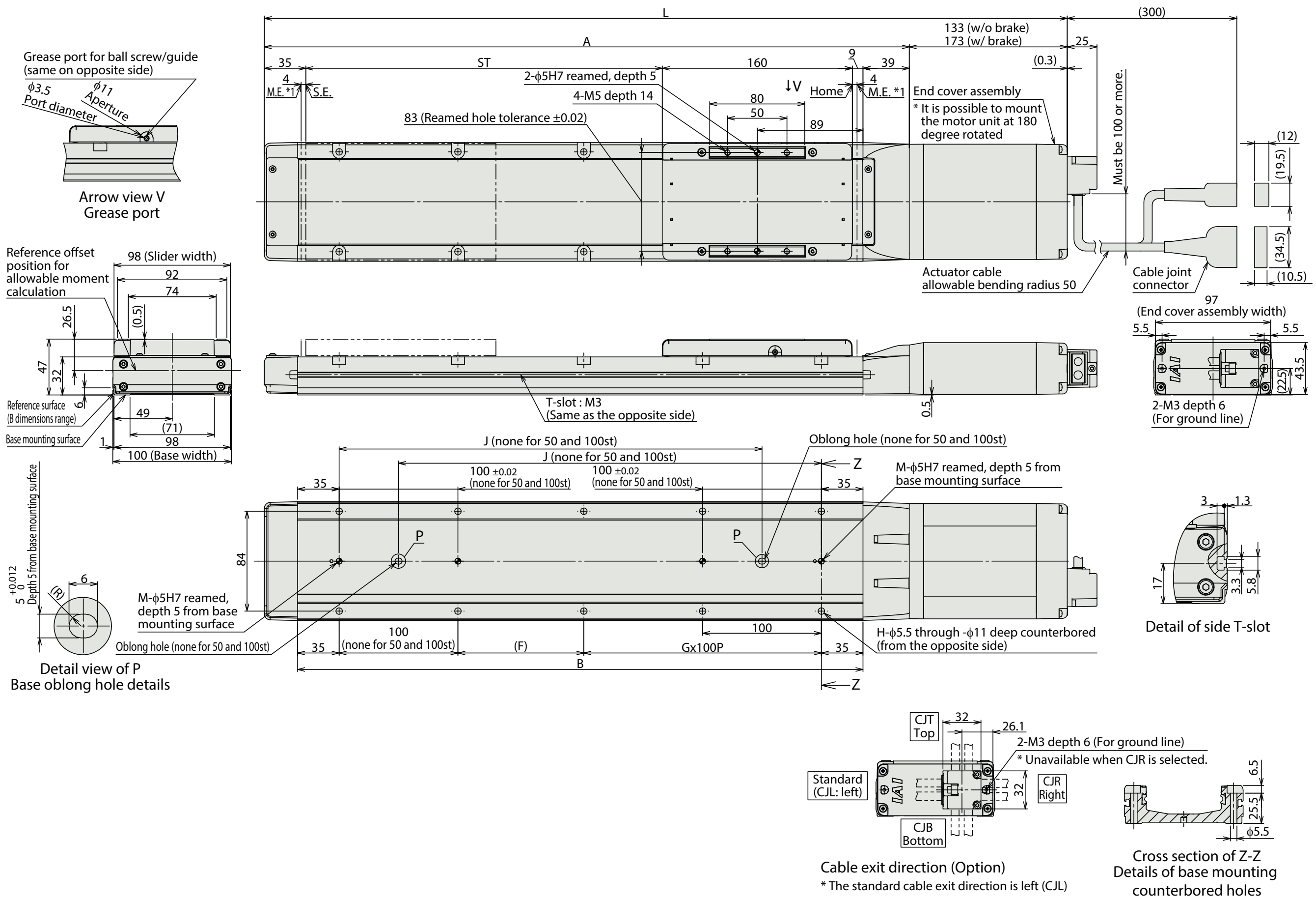
Dimensions

(Note) When the rod is returning to its home position, please be careful of interference with surrounding objects, as it will travel until it reaches the ME.

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

ST: Stroke
M.E: Mechanical end
S.E: Stroke end



■ Dimensions by stroke

Stroke		50	100	150	200	250	300	350	400	450	500
L	Without brake	426	476	526	576	626	676	726	776	826	876
	With brake	466	516	566	616	666	716	766	816	866	916
A		293	343	393	443	493	543	593	643	693	743
B		226	276	326	376	426	476	526	576	626	676
F		156	206	56	106	56	106	56	106	56	106
G		0	0	1	1	2	2	3	3	4	4
H		4	4	8	8	10	10	12	12	14	14
J		–	–	206	256	306	356	406	456	506	556
M		1	1	2	2	2	2	2	2	2	2

■ Mass by stroke

Stroke		50	100	150	200	250	300	350	400	450	500
Mass (kg)	Without brake	2.8	3.0	3.3	3.5	3.8	4.0	4.3	4.5	4.8	5.0
	With brake	3.1	3.3	3.6	3.8	4.1	4.3	4.6	4.8	5.1	5.3

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Applicable controllers

The actuator shown in this page is operable with the following controllers. Select a controller that suits your application.

Name	External view	Number of maximum conntectable axes	Power supply voltage	Control method															Number of maximum positioning points	Reference page
				Positioner	Pulse train	Program	Network * Selection													
							DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM		
MSCON-C		6	Single-phase 100VAC / 200VAC	—	—	—	●	●	—	●	●	—	—	●	●	—	—	—	256	0-000
RCON		16	DC24V	—	—	—	●	●	●	●	—	—	—	●	●	●	—	—	128	0-000
RSEL		8	Single-phase 200VAC Three-phase 200VAC	—	—	●	●	●	●	●	—	—	—	●	●	●	—	—	36000	0-000
SCON-CAL/ CGAL		1	Single-phase 100VAC / 200VAC	●	—	—	●	●	—	●	●	●	—	●	●	●	—	—	512 (768 for network specification)	0-000
SCON-CB/ CGB		1		●	●	—	●	●	●	●	●	●	●	●	●	●	—	—	512 (768 for network specification)	0-000
SSEL-CS		2		●	—	●	●	●	—	●	—	—	—	—	●	—	—	—	20000	0-000
XSEL-P/Q		6	Single-phase 200VAC Three-phase 200VAC	—	—	●	●	●	—	●	—	—	—	—	●	—	—	—	20000	0-000
XSEL-RA/SA		8		—	—	●	●	●	—	●	—	—	—	●	●	—	—	—	55000 (varies depending on the type)	0-000

(Note) Refer to P.7-17 of the General Catalog 2020 for the network abbreviations such as DV and CC.

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RCS4-WSA12C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Coupled Motor | Body Width 120 mm | 200v AC Servo Motor | 100 W

■Model Specification Items

RCS4	-	WSA12C	-	WA	-	100	-		-		-		-		-	
Series		Type		Encoder Type		Motor Type		Lead		Stroke		Applicable Controllers		Cable Length		Options

Encoder Type	
WA	Battery-less Absolute

Motor Type	
100	Servo motor 100W

Lead	
30	30mm
20	20mm
12	12mm
6	6mm
3	3mm

Stroke	
50 ~ 500	50mm ~ 800mm (50mm increments)

Applicable Controllers	
T2	SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA
T4	RCON RSEL

Cable Length	
N	None
P	1m
S	3m
M	5m
X□□	Specified Length
R□□	Robot Cable

Options
Refer to Options table below.

CE RoHS

Horizontal | Vertical | Side | Ceiling

Stroke

Stroke (mm)	RCS4-WSA12C	Stroke (mm)	RCS4-WSA12C
50	○	**450**	○
100	○	**500**	○
150	○	**550**	○
200	○	**600**	○
250	○	**650**	○
300	○	**700**	○
350	○	**750**	○
400	○	**800**	○

POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Confirm the Max. speed of the desired stroke in the "Stroke and Max. Speed."
(2) When the acceleration is increased, the payload will be reduced. Refer to the "Table of Payload by Acceleration" for details.
(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P.149 for more information.
(4) Refer to P.138 for details on Notes of mounting orientation. Possible cautions may be required.
(5) Guideline for overhang length is 500mm or less in the Ma, Mb and Mc directions. Refer to the drawing on P.146 for the overhang length.

Options

Name	Option Code	Reference Page
Brake	**B**	2-611
Cable exit direction (Top) (Note 1)	**CJT**	2-612
Cable exit direction (Right) (Note 1)	**CJR**	2-612
Cable exit direction (Left) (Note 1)	**CJL**	2-612
Cable exit direction (Bottom) (Note 1)	**CJB**	2-612
High-precision specification (Note 2)	**HPR**	2-613
Non-motor end specification	**NM**	2-614
Slider roller specification	**SR**	2-615

(Note 1) Make sure to specify a code in the option column of the model specification items.
(Note 2) When the lead is 30, it cannot be selected.

Cable Length

Type	Cable Code	T2	T4
Standard	**P**(1m)	○	○
	S(3m)	○	○
	M(5m)	○	○
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)	○	○
	X11(11m)~**X15**(15m)	○	○
	X16(16m)~**X20**(20m)	○	○
Robot cable	**R01**(1m) ~**R03**(3m)	○	○
	R04(4m) ~**R05**(5m)	○	○
	R06(6m) ~**R10**(10m)	○	○
	R11(11m)~**R15**(15m)	○	○
	R16(16m)~**R20**(20m)	○	○

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Main specifications

Item			Specification				
Lead		Ball screw lead (mm)	30	20	12	6	3
Horizontal	Payload	Maximum payload capacity (kg)	5	15	25	45	55
	Speed and acceleration/ deceleration	Maximum speed (mm/s)	1600	1200	720	360	180
		Rated acceleration/ deceleration (G)	0.7	0.3	0.5	0.3	0.3
		Maximum acceleration/ deceleration (G)	1.2	1.2	1.2	1	0.7
Vertical	Payload	Maximum payload (kg)	—	3	8	15	15
	Speed and acceleration/ deceleration	Maximum speed (mm/s)	—	1200	720	360	180
		Rated acceleration/ deceleration (G)	—	0.5	0.7	0.5	0.3
		Maximum acceleration/ deceleration (G)	—	1.2	1.2	1	0.7
Thrust force		Rated thrust force (N)	57	85	142	283	566
Brake		Brake specification	Non-exciting electromagnetic brake				
		Brake-holding force (kgf)	—	3	8	15	15
Stroke		Minimum stroke (mm)	50	50	50	50	50
		Maximum stroke (mm)	800	800	800	800	800
		Stroke increments (mm)	50	50	50	50	50

Item	Description
Drive system	Ball screw ϕ10mm, rolled C10
Positioning repeatability (Note 3)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Bearing return guide	Direct-acting infinite circulation type
Allowable static moment	Ma direction 311N·m, Mb direction 311N·m, Mc direction 827N·m
Allowable dynamic moment (Note 4)	Ma direction 87N·m, Mb direction 87N·m, Mc direction 233N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)
Degree of protection	IP20
Anti-vibration and anti-shock	4.9m/s²
International standards	CE marking, RoHS directive
Motor type	AC servo motor
Encoder type	Battery-less absolute
Number of encoder pulses	16384 pulse/rev

(Note 3) Values in [ ] are for high precision (for lead 3/6/12/20) specification.
(Note 4) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. See P.1-180 for moment load directions.

■ Moment directions of the slider type

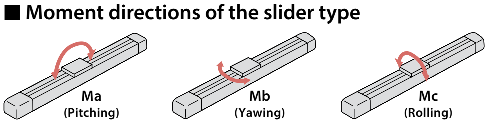


Table of Payload by Acceleration

The unit of payload is kg. Operations are not possible in the blank positions.

Mounting posture	Horizontal					Vertical				
Lead (mm)	Acceleration (G)									
	0.3	0.5	0.7	1.0	1.2	0.3	0.5	0.7	1.0	1.2
30	5	5	5	4	3					
20	15	10	8	6	4	3	3	2	2	2
12	25	25	20	15	15	8	8	8	6	6
6	45	40	30	20		15	15	12	10	
3	55	30	15			15	10	6		

Stroke and Max Speed

Stroke / Lead	50~450 (50mm increments)	500 (mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
30	1600		1450	1260	1100	970	860	770
20	1200	1130	970	840	740	650	580	520
12	720	610	535	465	405	355	315	285
6	360	310	265	230	200	175	155	140
3	180	150	130	115	100	85	75	70

(Unit: mm/s)

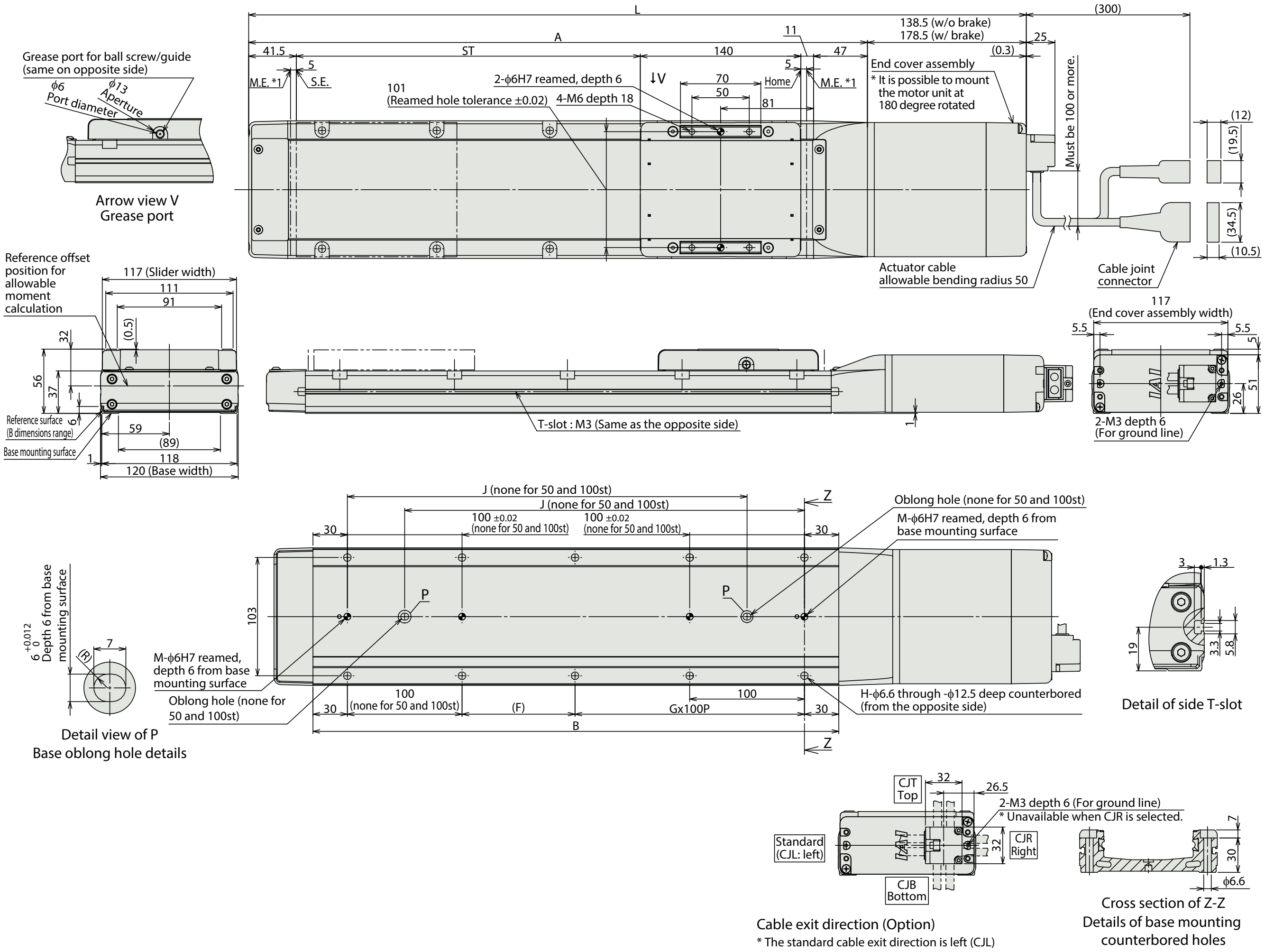
Payload and acceleration/deceleration at the time of off-board tuning.

The unit of payload is kg. Operations are not possible in the blank positions.

	Lead	Payload by acceleration/deceleration (kg)												Maximum speed (mm/s)	
		0.3G	0.5G	0.7G	1.0G	1.2G	1.5G	2.0G	2.5G	3.0G	3.5G	4.0G	4.5G	Standard	After tuning
Horizontal	30	5	5	5	4	3	2	1.5	1	1	1	1	1	1600	1800
	20	15	10	8	6	4	4	4	3	1.5	1	1	1	1200	1200
	12	25	25	20	15	15	8.5	5.5	4.5	2.5	1	1	1	720	720
	6	45	40	30	20	17	12	7.5	4.5	2.5	1			360	360
	3	55	30	15	2									180	180
Vertical	30														
	20	3	3	2	2	2	1.5	1.5	1.5	1.5				1200	1200
	12	8	8	8	6	6	5	4.75	3	1.75				720	720
	6	15	15	12	10	7.5	7	4.75	3	1.75				360	360
	3	15	10	6	0.75									180	180

(Note) When the rod is returning to its home position, please be careful of interference with surrounding objects, as it will travel until it reaches the ME.

ST: Stroke
M.E: Mechanical end
S.E: Stroke end



■ Dimensions by stroke

Stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	Without brake	428	478	528	578	628	678	728	778	828	878	928	978	1028	1078	1128	1178
	With brake	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218
A		289.5	339.5	389.5	439.5	489.5	539.5	589.5	639.5	689.5	739.5	789.5	839.5	889.5	939.5	989.5	1039.5
B		208.5	258.5	308.5	358.5	408.5	458.5	508.5	558.5	608.5	658.5	708.5	758.5	808.5	858.5	908.5	958.5
F		148.5	198.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5
G		0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
H		4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20
J		–	–	198.5	248.5	298.5	348.5	398.5	448.5	498.5	548.5	598.5	648.5	698.5	748.5	798.5	848.5
M		1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2

■ Mass by stroke

Stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Mass (kg)	Without brake	3.8	4.2	4.5	4.8	5.2	5.5	5.8	6.2	6.5	6.9	7.2	7.5	7.9	8.2	8.5	8.9
	With brake	4.2	4.6	4.9	5.2	5.6	5.9	6.2	6.6	6.9	7.3	7.6	7.9	8.3	8.6	8.9	9.3

Updated from Page 29

Applicable controllers

The actuator shown in this page is operable with the following controllers. Select a controller that suits your application.

Name	External view	Number of maximum conntectable axes	Power supply voltage	Control method															Number of maximum positioning points	Reference page
				Positioner	Pulse train	Program	Network * Selection													
							DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM		
MSCON-C		6	Single-phase 100VAC / 200VAC	—	—	—	●	●	—	●	●	—	—	●	●	—	—	—	256	0-000
RCON		16	DC24V	—	—	—	●	●	●	●	—	—	—	●	●	●	—	—	128	0-000
RSEL		8	Single-phase 200VAC Three-phase 200VAC	—	—	●	●	●	●	●	—	—	—	●	●	●	—	—	36000	0-000
SCON-CAL/ CGAL		1	Single-phase 100VAC / 200VAC	●	—	—	●	●	—	●	●	●	—	●	●	●	—	—	512 (768 for network specification)	0-000
SCON-CB/ CGB		1		●	●	—	●	●	●	●	●	●	●	●	●	●	—	—	512 (768 for network specification)	0-000
SSEL-CS		2		●	—	●	●	●	—	●	—	—	—	—	●	—	—	—	20000	0-000
XSEL-P/Q		6	Single-phase 200VAC Three-phase 200VAC	—	—	●	●	●	—	●	—	—	—	—	●	—	—	—	20000	0-000
XSEL-RA/SA		8		—	—	●	●	●	—	●	—	—	—	●	●	—	—	—	55000 (varies depending on the type)	0-000

(Note) Refer to P.7-17 of the General Catalog 2020 for the network abbreviations such as DV and CC.

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RCS4-WSA14C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Coupled Motor | Body Width 140 mm | 200v AC Servo Motor | 200 W

■Model Specification Items

RCS4	-	WSA14C	-	WA	-	200	-		-		-		-		-	
Series	-	Type	-	Encoder Type	-	Motor Type	-	Lead	-	Stroke	-	Applicable Controllers	-	Cable Length	-	Options

Encoder Type

WA	Battery-less Absolute

Motor Type

200	Servo motor 200W

Lead

36	36mm
24	24mm
16	16mm
8	8mm
4	4mm

Stroke

50	50mm
≀	≀
800	800mm (50mm increments)

Applicable Controllers

T2	SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA
T4	RCON RSEL

Cable Length

N	None
P	1m
S	3m
M	5m
X□□	Specified Length
R□□	Robot Cable

Options

Refer to Options table below.

CE RoHS

Horizontal | Vertical | Side | Ceiling

Stroke

Stroke (mm)	RCS4-WSA14C	Stroke (mm)	RCS4-WSA14C
50	○	**450**	○
100	○	**500**	○
150	○	**550**	○
200	○	**600**	○
250	○	**650**	○
300	○	**700**	○
350	○	**750**	○
400	○	**800**	○

Options

Name	Option Code	Reference Page
Brake	**B**	2-611
Cable exit direction (Top) (Note 1)	**CJT**	2-612
Cable exit direction (Right) (Note 1)	**CJR**	2-612
Cable exit direction (Left) (Note 1)	**CJL**	2-612
Cable exit direction (Bottom) (Note 1)	**CJB**	2-612
High-precision specification (Note 2)	**HPR**	2-613
Non-motor end specification	**NM**	2-614
Slider roller specification	**SR**	2-615

(Note 1) Make sure to specify a code in the option column of the model specification items.
(Note 2) Cannot be selected for Lead 24 and 36.

Cable Length

Type	Cable Code	T2	T4
Standard	**P**(1m)	○	○
	S(3m)	○	○
	M(5m)	○	○
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)	○	○
	X11(11m)~**X15**(15m)	○	○
	X16(16m)~**X20**(20m)	○	○
Robot cable	**R01**(1m) ~**R03**(3m)	○	○
	R04(4m) ~**R05**(5m)	○	○
	R06(6m) ~**R10**(10m)	○	○
	R11(11m)~**R15**(15m)	○	○
	R16(16m)~**R20**(20m)	○	○

POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Confirm the Max. speed of the desired stroke in the "Stroke and Max. Speed."
(2) When the acceleration is increased, the payload will be reduced. Refer to the "Table of Payload by Acceleration" for details.
(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P.149 for more information.
(4) Refer to P.138 for details on Notes of mounting orientation. Possible cautions may be required.
(5) Guideline for overhang length is 550mm or less in the Ma, Mb and Mc directions. Refer to the drawing on P.146 for the overhang length.

Updated from Page 31

Main specifications

Item			Specification				
Lead		Ball screw lead (mm)	36	24	16	8	4
Horizontal	Payload	Maximum payload capacity (kg)	7	20	45	65	80
	Speed and acceleration/ deceleration	Maximum speed (mm/s)	1800	1440	960	480	240
		Rated acceleration/ deceleration (G)	0.3	0.3	0.3	0.3	0.3
		Maximum acceleration/ deceleration (G)	1.2	1.2	1.2	1	0.7
Vertical	Payload	Maximum payload (kg)	—	2.5	8	10	25
	Speed and acceleration/ deceleration	Maximum speed (mm/s)	—	1440	960	480	240
		Rated acceleration/ deceleration (G)	—	1.2	1.2	1	0.3
		Maximum acceleration/ deceleration (G)	—	1.2	1.2	1	0.7
Thrust force		Rated thrust force (N)	95	142	214	427	855
Brake		Brake specification	Non-exciting electromagnetic brake				
		Brake-holding force (kgf)	—	2.5	8	10	25
Stroke		Minimum stroke (mm)	50	50	50	50	50
		Maximum stroke (mm)	800	800	800	800	800
		Stroke increments (mm)	50	50	50	50	50

Item	Description
Drive system	Ball screw ϕ12mm, rolled C10
Positioning repeatability (Note 3)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Bearing return guide	Direct-acting infinite circulation type
Allowable static moment	Ma direction 462N·m, Mb direction 462N·m, Mc direction 1170N·m
Allowable dynamic moment (Note 4)	Ma direction 122N·m, Mb direction 122N·m, Mc direction 308N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)
Degree of protection	IP20
Anti-vibration and anti-shock	4.9m/s²
International standards	CE marking, RoHS directive
Motor type	AC servo motor
Encoder type	Battery-less absolute
Number of encoder pulses	16384 pulse/rev

(Note 3) Values in [ ] are for high precision (for lead 4/8/16) specification.
(Note 4) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. See P.1-180 for moment load directions.

■ **Moment directions of the slider type**

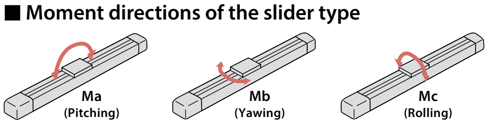

Table of Payload by Acceleration

The unit of payload is kg. Operations are not possible in the blank positions.

Mounting posture	Horizontal					Vertical				
Lead (mm)	Acceleration (G)									
	0.3	0.5	0.7	1.0	1.2	0.3	0.5	0.7	1.0	1.2
36	7	6	6	4	3					
24	20	15	15	10	5	2.5	2.5	2.5	2.5	2.5
16	45	30	20	20	18	8	8	8	8	8
8	65	50	40	40		10	10	10	10	
4	80	60	30			25	20	12		

Stroke and Max Speed

Lead \ Stroke	50~450 (50mm increments)	500 (mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
36	1800			1590	1400	1240	1110	990
24	1440	1420	1220	1060	930	830	740	665
16	960	920	790	690	610	550	490	440
8	480	460	400	350	305	270	240	215
4	240	230	200	170	150	135	120	105

(Unit: mm/s)

Payload and acceleration/deceleration at the time of off-board tuning.

The unit of payload is kg. Operations are not possible in the blank positions.

	Lead	Payload by acceleration/deceleration (kg)												Maximum speed (mm/s)	
		0.3G	0.5G	0.7G	1.0G	1.2G	1.5G	2.0G	2.5G	3.0G	3.5G	4.0G	4.5G	Standard	After tuning
Horizontal	36	7	6	6	4	3	2.5	2	1.5	1	1	1	1	1800	2150
	24	20	15	15	10	5	4.5	4.5	3.5	2.5	2.5	1.75	1.75	1440	1440
	16	45	30	20	20	18	11.5	9.5	8.5	6.5	3.5	1.75	1.75	960	960
	8	65	50	40	40	29.5	24.5	17	9.5	6.5	3.5	1.75		480	480
	4	80	60	30	10									240	240
Vertical	36														
	24	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5				1440	1440
	16	8	8	8	8	8	7.5	4.5	4.5	4.5				960	960
	8	10	10	10	10	9	9	9	7.5	4.5				480	480
	4	25	20	12	4.5									240	240

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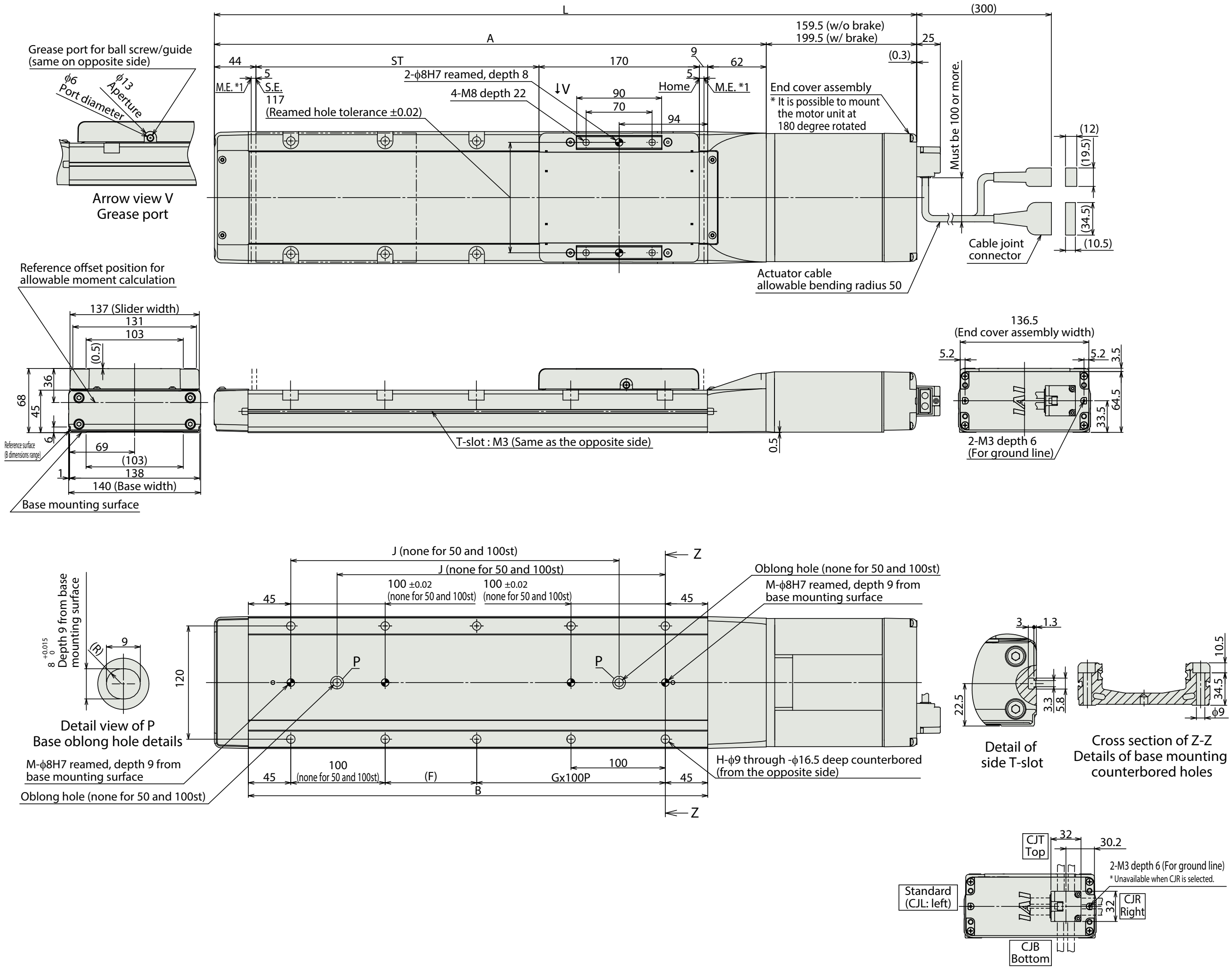
Dimensions

(Note) When the rod is returning to its home position, please be careful of interference with surrounding objects, as it will travel until it reaches the ME.

ST: Stroke
M.E: Mechanical end
S.E: Stroke end



Cable exit direction (Option)
* The standard cable exit direction is left (CJL)

■ Dimensions by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	Without brake	494.5	544.5	594.5	644.5	694.5	744.5	794.5	844.5	894.5	944.5	994.5	1044.5	1094.5	1144.5	1194.5	1244.5
	With brake	534.5	584.5	634.5	684.5	734.5	784.5	834.5	884.5	934.5	984.5	1034.5	1084.5	1134.5	1184.5	1234.5	1284.5
A		335	385	435	485	535	585	635	685	735	785	835	885	935	985	1035	1085
B		237	287	337	387	437	487	537	587	637	687	737	787	837	887	937	987
F		147	197	47	97	47	97	47	97	47	97	47	97	47	97	47	97
G		0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
H		4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20
J		–	–	198	248	298	348	398	448	498	548	598	648	698	748	798	848
M		1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2

■ Mass by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Mass (kg)	Without brake	6.5	6.9	7.4	7.9	8.4	8.9	9.4	9.9	10.3	10.8	11.3	11.8	12.3	12.8	13.3	13.8
	With brake	7.1	7.5	8.0	8.5	9.0	9.5	10.0	10.5	10.9	11.4	11.9	12.4	12.9	13.4	13.9	14.4

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Applicable controllers

The actuator shown in this page is operable with the following controllers. Select a controller that suits your application.

Name	External view	Number of maximum conntectable axes	Power supply voltage	Control method															Number of maximum positioning points	Reference page
				Positioner	Pulse train	Program	Network * Selection													
							DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM		
MSCON-C		6	Single-phase 100VAC / 200VAC	—	—	—	●	●	—	●	●	—	—	●	●	—	—	—	256	0-000
RCON		16	DC24V	—	—	—	●	●	●	●	—	—	—	●	●	●	—	—	128	0-000
RSEL		8	Single-phase 200VAC Three-phase 200VAC	—	—	●	●	●	●	●	—	—	—	●	●	●	—	—	36000	0-000
SCON-CAL/ CGAL		1	Single-phase 100VAC / 200VAC	●	—	—	●	●	—	●	●	●	—	●	●	●	—	—	512 (768 for network specification)	0-000
SCON-CB/ CGB		1		●	●	—	●	●	●	●	●	●	●	●	●	●	—	—	512 (768 for network specification)	0-000
SSEL-CS		2		●	—	●	●	●	—	●	—	—	—	—	●	—	—	—	20000	0-000
XSEL-P/Q		6	Single-phase 200VAC Three-phase 200VAC	—	—	●	●	●	—	●	—	—	—	—	●	—	—	—	20000	0-000
XSEL-RA/SA		8		—	—	●	●	●	—	●	—	—	—	●	●	—	—	—	55000 (varies depending on the type)	0-000

(Note) Refer to P.7-17 of the General Catalog 2020 for the network abbreviations such as DV and CC.

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RCS4-WSA16C

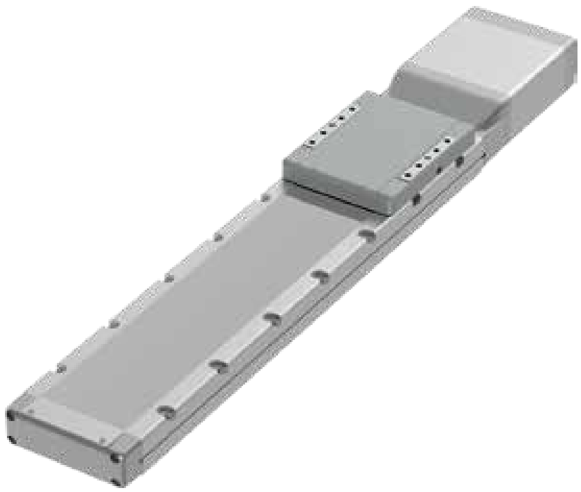
±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Coupled Motor | Body Width 160 mm | 200v AC Servo Motor | 400 W

■Model Specification Items

RCS4	-	WSA16C	-	WA	-	400	-		-		-		-		-	
Series	-	Type	-	Encoder Type	-	Motor Type	-	Lead	-	Stroke	-	Applicable Controllers	-	Cable Length	-	Options

- **Encoder Type:** WA — Battery-less Absolute
- **Motor Type:** 400 — Servo motor 400W
- **Lead:** 30 — 30mm; 20 — 20mm; 10 — 10mm; 5 — 5mm
- **Stroke:** 50 ~ 1100 — 50mm ~ 1100mm (50mm increments)
- **Applicable Controllers:** T2 — SCON, SSEL, XSEL-P/Q, XSEL-RA/SA; T4 — RCON, RSEL
- **Cable Length:** N — None; P — 1m; S — 3m; M — 5m; X□□ — Specified Length; R□□ — Robot Cable
- **Options:** Refer to Options table below.

Horizontal | Vertical | Side | Ceiling



Stroke

Stroke (mm)	RCS4-WSA16C	Stroke (mm)	RCS4-WSA16C
50	○	**600**	○
100	○	**650**	○
150	○	**700**	○
200	○	**750**	○
250	○	**800**	○
300	○	**850**	○
350	○	**900**	○
400	○	**950**	○
450	○	**1000**	○
500	○	**1050**	○
550	○	**1100**	○

POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Confirm the Max. speed of the desired stroke in the "Stroke and Max. Speed."

(2) When the acceleration is increased, the payload will be reduced. Refer to the "Table of Payload by Acceleration" for details.

(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P.149 for more information.

(4) Refer to P.138 for details on Notes of mounting orientation. Possible cautions may be required.

(5) Guideline for overhang length is 650mm or less in the Ma, Mb and Mc directions. Refer to the drawing on P.146 for the overhang length.

Options

Name	Option Code	Reference Page
Brake	**B**	2-611
Cable exit direction (Top) (Note 1)	**CJT**	2-612
Cable exit direction (Right) (Note 1)	**CJR**	2-612
Cable exit direction (Left) (Note 1)	**CJL**	2-612
Cable exit direction (Bottom) (Note 1)	**CJB**	2-612
High-precision specification (Note 2)	**HPR**	2-613
Non-motor end specification	**NM**	2-614
Slider roller specification	**SR**	2-615

(Note 1) Make sure to specify a code in the option column of the model specification items.
(Note 2) Cannot be selected for Lead 30.

Cable Length

Type	Cable Code	T2	T4
Standard	**P**(1m)	○	○
	S(3m)	○	○
	M(5m)	○	○
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)	○	○
	X11(11m)~**X15**(15m)	○	○
	X16(16m)~**X20**(20m)	○	○
Robot cable	**R01**(1m) ~**R03**(3m)	○	○
	R04(4m) ~**R05**(5m)	○	○
	R06(6m) ~**R10**(10m)	○	○
	R11(11m)~**R15**(15m)	○	○
	R16(16m)~**R20**(20m)	○	○

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Main specifications

Item			Specification			
Lead		Ball screw lead (mm)	30	20	10	5
Horizontal	Payload	Maximum payload capacity (kg)	30	60	80	100
	Speed and acceleration/deceleration	Maximum speed (mm/s)	1800	1200	600	300
		Rated acceleration/deceleration (G)	0.3	0.3	0.5	0.5
		Maximum acceleration/deceleration (G)	1.2	1.2	1	0.7
Vertical	Payload	Maximum payload (kg)	12	20	35	50
	Speed and acceleration/deceleration	Maximum speed (mm/s)	1800	1200	600	300
		Rated acceleration/deceleration (G)	0.5	0.3	0.7	0.3
		Maximum acceleration/deceleration (G)	1.2	1.2	1	0.7
Thrust force		Rated thrust force (N)	226	339	678	1357
Brake		Brake specification	Non-exciting electromagnetic brake			
		Brake-holding force (kgf)	12	20	35	50
Stroke		Minimum stroke (mm)	50	50	50	50
		Maximum stroke (mm)	1100	1100	1100	1100
		Stroke increments (mm)	50	50	50	50

Item	Description
Drive system	Ball screw ϕ16mm, rolled C10
Positioning repeatability (Note 3)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Bearing return guide	Direct-acting infinite circulation type
Allowable static moment	Ma direction 642N·m, Mb direction 642N·m, Mc direction 1610N·m
Allowable dynamic moment (Note 4)	Ma direction 161N·m, Mb direction 161N·m, Mc direction 404N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)
Degree of protection	IP20
Anti-vibration and anti-shock	4.9m/s^2
International standards	CE marking, RoHS directive
Motor type	AC servo motor
Encoder type	Battery-less absolute
Number of encoder pulses	16384 pulse/rev

(Note 3) Values in [ ] are for high precision (for lead 5/10/20) specification.
(Note 4) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. See P.1-180 for moment load directions.

■ Moment directions of the slider type

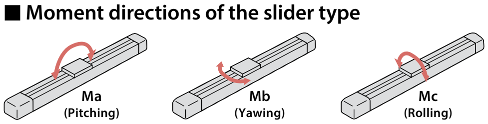

Table of Payload by Acceleration

The unit of payload is kg. Operations are not possible in the blank positions.

Mounting posture	Horizontal					Vertical				
Lead (mm)	Acceleration (G)									
	0.3	0.5	0.7	1.0	1.2	0.3	0.5	0.7	1.0	1.2
30	30	25	20	10	8	12	12	8	8	6
20	60	40	25	22	20	20	15	15	12	10
10	80	80	70	60		35	35	35	30	
5	100	100	80			50	45	30		

Stroke and Max Speed

Lead \ Stroke	50~550 (50mm increments)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)	850 (mm)	900 (mm)	950 (mm)	1000 (mm)	1050 (mm)	1100 (mm)
30	1800	1680	1480	1320	1180	1060	960	870	790	730	670	620
20	1200	1120	990	880	780	715	645	590	535	490	450	415
10	600	560	490	440	395	355	320	290	265	240	225	205
5	300	280	240	220	195	175	160	145	130	120	110	100

(Unit: mm/s)

Payload and acceleration/deceleration at the time of off-board tuning.

The unit of payload is kg. Operations are not possible in the blank positions.

	Lead	Payload by acceleration/deceleration (kg)												Maximum speed (mm/s)	
		0.3G	0.5G	0.7G	1.0G	1.2G	1.5G	2.0G	2.5G	3.0G	3.5G	4.0G	4.5G	Standard	After tuning
Horizontal	30	30	25	20	10	8	8	7.5	5.5	3.5	3.5	3.25	2.5	1800	1800
	20	60	40	25	22	20	12.5	9.5	7.5	5.5	4.5	3.5	2.5	1200	1200
	10	80	80	70	60	57.5	54.5	37	26	18	12	8	4.5	600	600
	5	100	100	80	37	17								300	300
Vertical	30	12	12	8	8	6	5	4.5	3	2.5				1800	1800
	20	20	15	15	12	10	9.5	7.5	5.5	3.5				1200	1200
	10	35	35	35	30	27.5	24.5	22.5	17.5	13				600	600
	5	50	45	30	17	8								300	300

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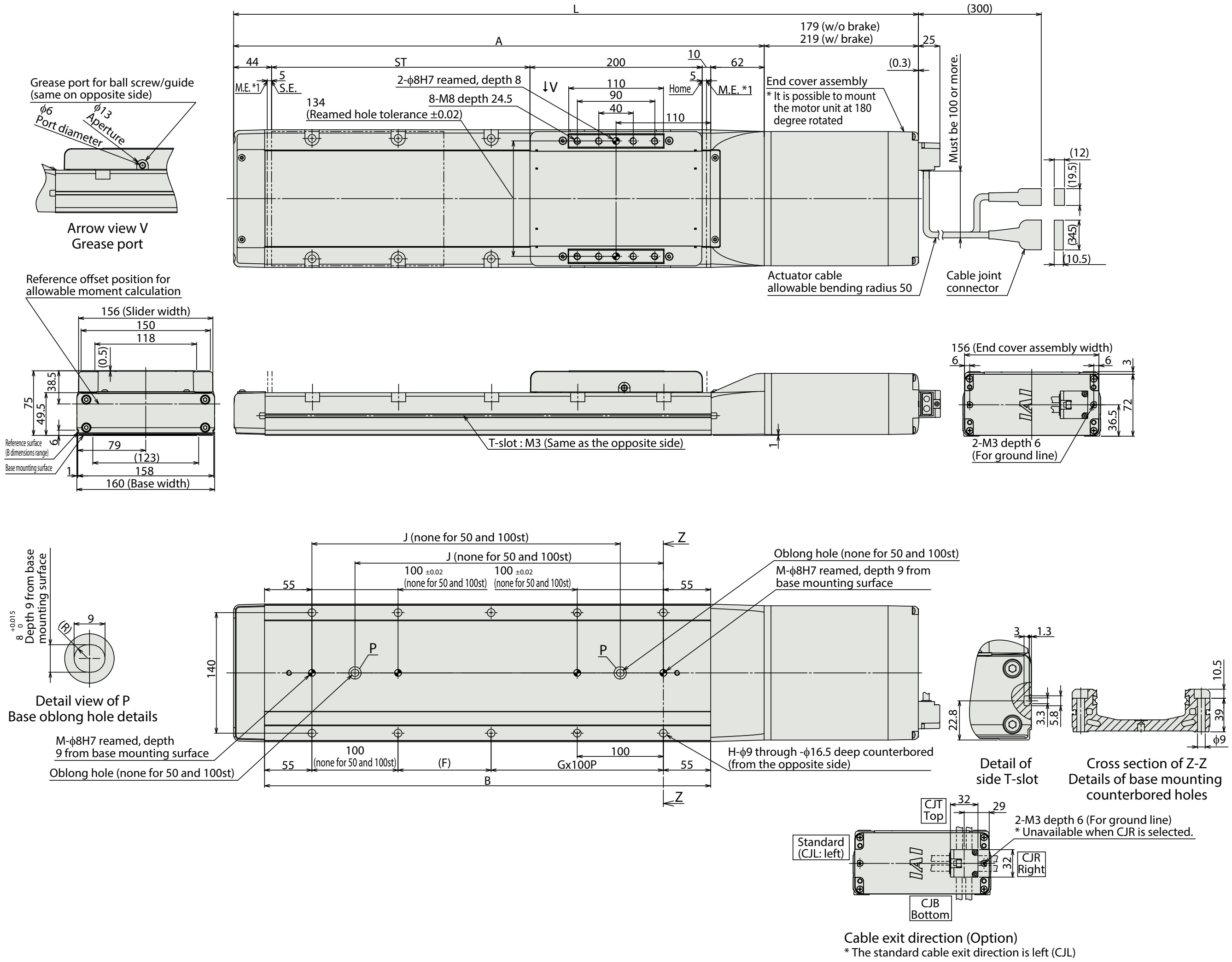
Dimensions

(Note) When the rod is returning to its home position, please be careful of interference with surrounding objects, as it will travel until it reaches the ME.

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

ST: Stroke
M.E: Mechanical end
S.E: Stroke end



■ Dimensions by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
L	Without brake	545	595	645	695	745	795	845	895	945	995	1045	1095	1145	1195	1245	1295	1345	1395	1445	1495	1545	1595
	With brake	585	635	685	735	785	835	885	935	985	1035	1085	1135	1185	1235	1285	1335	1385	1435	1485	1535	1585	1635
A		366	416	466	516	566	616	666	716	766	816	866	916	966	1016	1066	1116	1166	1216	1266	1316	1366	1416
B		268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318
F		158	208	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108
G		0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
H		4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
J		–	–	208	258	308	358	408	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158
M		1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

■ Mass by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
Mass (kg)	Without brake	9.1	9.8	10.4	11.0	11.6	12.2	12.8	13.4	14.0	14.7	15.3	15.9	16.5	17.1	17.7	18.3	18.9	19.6	20.2	20.8	21.4	22.0
	With brake	9.7	10.4	11.0	11.6	12.2	12.8	13.4	14.0	14.6	15.3	15.9	16.5	17.1	17.7	18.3	18.9	19.5	20.2	20.8	21.4	22.0	22.6

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Applicable controllers

The actuator shown in this page is operable with the following controllers. Select a controller that suits your application.

Name	External view	Number of maximum conntectable axes	Power supply voltage	Control method															Number of maximum positioning points	Reference page
				Positioner	Pulse train	Program	Network * Selection													
							DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM		
RCON		16	DC24V	—	—	—	●	●	●	●	—	—	—	●	●	●	—	—	128	0-000
RSEL		8	Single-phase 200VAC Three-phase 200VAC	—	—	●	●	●	●	●	—	—	—	●	●	●	—	—	36000	0-000
SCON-CB/ CGB		1	Single-phase 200VAC	●	●	—	●	●	●	●	●	●	●	●	●	●	—	—	512 (768 for network specification)	0-000
SSEL-CS		2	Single-phase 100VAC / 200VAC	●	—	●	●	●	—	●	—	—	—	—	●	—	—	—	20000	0-000
XSEL-P/Q		6	Single-phase 200VAC Three-phase 200VAC	—	—	●	●	●	—	●	—	—	—	—	●	—	—	—	20000	0-000
XSEL-RA/SA		8		—	—	●	●	●	—	●	—	—	—	●	●	—	—	—	55000 (varies depending on the type)	0-000

(Note) Refer to P.7-17 of the General Catalog 2020 for the network abbreviations such as DV and CC.

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RCS4-WSA10R

±10μm Standard | Simple Dust-proof | Battery-less Absolute | Side-mounted Motor | Body Width 100 mm | 200v AC Servo Motor | 60 W

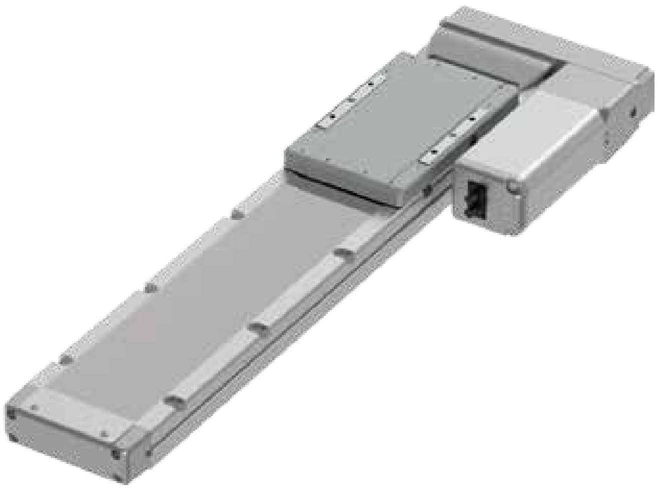
■Model Specification Items

RCS4 - WSA10R - WA - 60 - ☐ - ☐ - ☐ - ☐ - ☐

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
RCS4	WSA10R	WA: Battery-less Absolute	60: Servo motor 60W	16: 16mm 10: 10mm 5: 5mm 2.5: 2.5mm	50 ~ 500: 50mm ~ 500mm (50mm increments)	T2: SCON, MSCON, SSEL, XSEL-P/Q, XSEL-RA/SA T4: RCON, RSEL	N: None P: 1m S: 3m M: 5m X☐☐: Specified Length R☐☐: Robot Cable	Refer to Options table below.

CE RoHS

Horizontal | Vertical | Side | Ceiling



(Note) The above photo shows motor side-mounted to the left (ML).

Stroke

Stroke (mm)	RCS4-WSA10R	Stroke (mm)	RCS4-WSA10R
50	○	**300**	○
100	○	**350**	○
150	○	**400**	○
200	○	**450**	○
250	○	**500**	○

Options

Name	Option Code	Reference Page
Brake	**B**	2-611
Cable exit direction (Top)	**CJT**	2-612
Cable exit direction (Bottom)	**CJB**	2-612
Cable exit direction (Outside)	**CJO**	2-612
Motor side-mounted to left (Note 1)	**ML**	2-614
Motor side-mounted to right (Note 1)	**MR**	2-614
Non-motor end specification	**NM**	2-614
Slider roller specification	**SR**	2-615
Slider spacer	**SS**	2-615

(Note 1) Make sure to specify a code in the option column of the model specification items.

Cable Length

Type	Cable Code	T2	T4
Standard	**P**(1m)	○	○
	S(3m)	○	○
	M(5m)	○	○
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)	○	○
	X11(11m)~**X15**(15m)	○	○
	X16(16m)~**X20**(20m)	○	○
Robot cable	**R01**(1m) ~**R03**(3m)	○	○
	R04(4m) ~**R05**(5m)	○	○
	R06(6m) ~**R10**(10m)	○	○
	R11(11m)~**R15**(15m)	○	○
	R16(16m)~**R20**(20m)	○	○

POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Confirm the Max. speed of the desired stroke in the "Stroke and Max. Speed.".
(2) When the acceleration is increased, the payload will be reduced. Refer to the "Table of Payload by Acceleration" for details.
(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P.149 for more information.
(4) Refer to P.138 for details on Notes of mounting orientation. Possible cautions may be required.
(5) Guideline for overhang length is 500mm or less in the Ma, Mb and Mc directions. Refer to the drawing on P.146 for the overhang length.

Updated from Page 35

Main specifications

Item			Specification			
Lead		Ball screw lead (mm)	16	10	5	2.5
Horizontal	Payload	Maximum payload capacity (kg)	7	16	27	40
	Speed and acceleration/ deceleration	Maximum speed (mm/s)	960	600	300	150
		Rated acceleration/ deceleration (G)	0.5	0.5	0.5	0.3
		Maximum acceleration/ deceleration (G)	1	1	1	0.7
Vertical	Payload	Maximum payload (kg)	—	3	5	10
	Speed and acceleration/ deceleration	Maximum speed (mm/s)	—	600	300	150
		Rated acceleration/ deceleration (G)	—	1	1	0.5
		Maximum acceleration/ deceleration (G)	—	1	1	0.7
Thrust force		Rated thrust force (N)	53	85	170	340
Brake		Brake specification	Non-exciting electromagnetic brake			
		Brake-holding force (kgf)	—	3	5	10
Stroke		Minimum stroke (mm)	50	50	50	50
		Maximum stroke (mm)	500	500	500	500
		Stroke increments (mm)	50	50	50	50

Item	Description
Drive system	Ball screw ϕ8mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Bearing return guide	Direct-acting infinite circulation type
Allowable static moment	Ma direction 271N·m, Mb direction 271N·m, Mc direction 553N·m
Allowable dynamic moment (Note 2)	Ma direction 65N·m, Mb direction 65N·m, Mc direction 134N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)
Degree of protection	IP20
Anti-vibration and anti-shock	4.9m/s²
International standards	CE marking, RoHS directive
Motor type	AC servo motor
Encoder type	Battery-less absolute
Number of encoder pulses	16384 pulse/rev

(Note 2) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. See P.1-180 for moment load directions.

■ **Moment directions of the slider type**

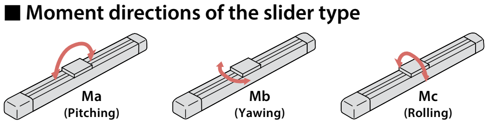


Table of Payload by Acceleration

The unit of payload is kg. Operations are not possible in the blank positions.

Mounting posture	Horizontal				Vertical			
Lead (mm)	Acceleration (G)							
	0.3	0.5	0.7	1.0	0.3	0.5	0.7	1.0
16	7	7	5	4				
10	16	16	12	12	3	3	3	3
5	27	27	20	18	5	5	5	5
2.5	40	30	18		10	10	6	

Stroke and Max Speed

Stroke / Lead	50~350 (50mm increments)	400 (mm)	450 (mm)	500 (mm)
16	960	930	775	660
10	600	590	490	415
5	300	290	245	205
2.5	150	145	120	100

(Unit: mm/s)

Payload and acceleration/deceleration at the time of off-board tuning.

The unit of payload is kg. Operations are not possible in the blank positions.

	Lead	Payload by acceleration/deceleration (kg)												Maximum speed (mm/s)	
		0.3G	0.5G	0.7G	1.0G	1.2G	1.5G	2.0G	2.5G	3.0G	3.5G	4.0G	4.5G	Standard	After tuning
Horizontal	16	7	7	5	4	3	3	2.5	2	1.5	1.25	1	1	960	960
	10	16	16	12	12	5.5	4.5	4	3	2	1.5	1	1	600	600
	5	27	27	20	18	12	11.5	9	6.5	4.5	3.25	2.25	1.5	300	300
	2.5	40	30	18	11	6.5	2							150	150
Vertical	16														
	10	3	3	3	3	1.5	1.5	1.5	1	1				600	600
	5	5	5	5	5	5	5	5	4.5	3				300	300
	2.5	10	10	6	5	3.25	1							150	150

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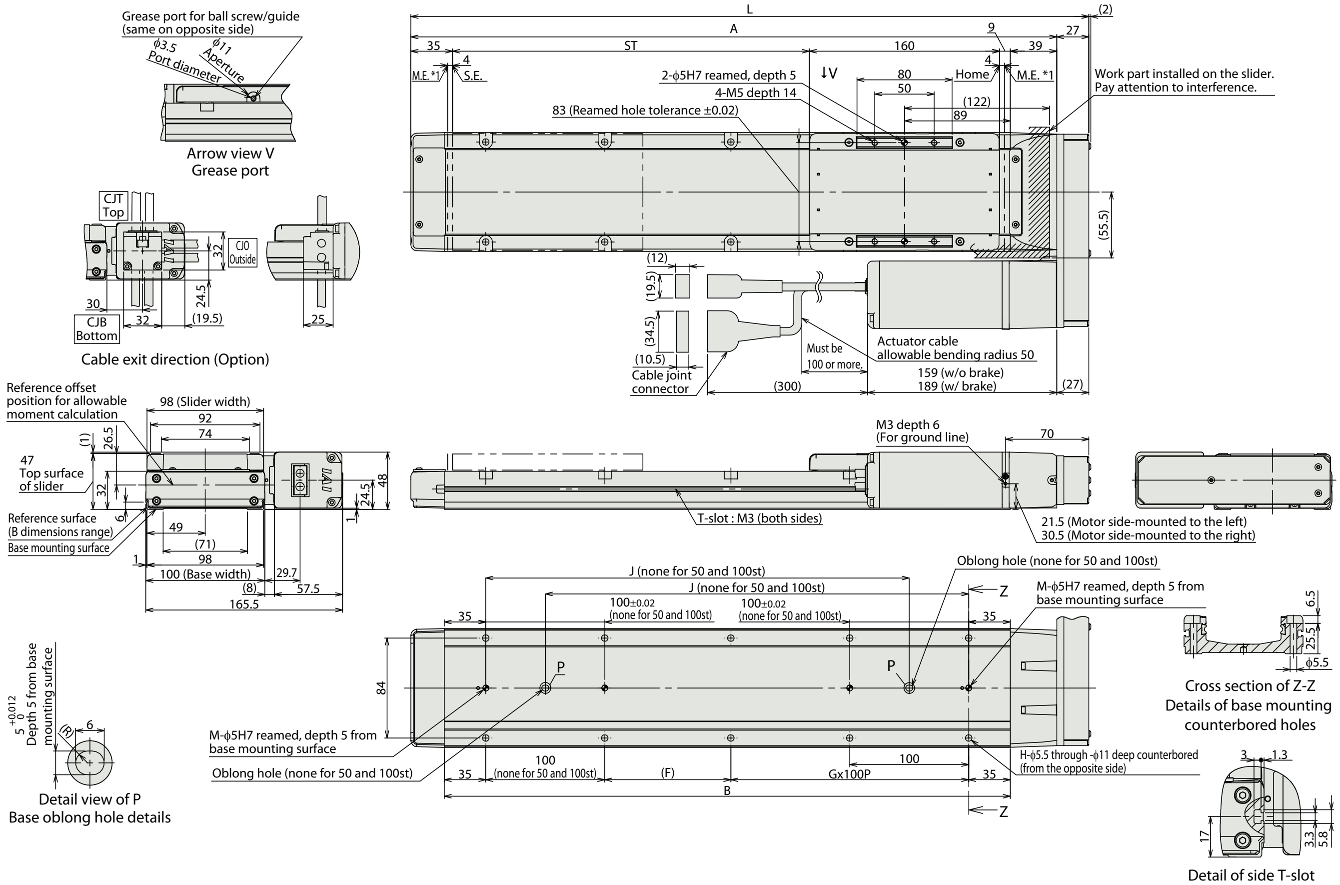
Dimensions

(Note) When the rod is returning to its home position, please be careful of interference with surrounding objects, as it will travel until it reaches the ME.

ST: Stroke
M.E: Mechanical end
S.E: Stroke end



■ Dimensions by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500
L	320	370	420	470	520	570	620	670	720	770
A	293	343	393	443	493	543	593	643	693	743
B	226	276	326	376	426	476	526	576	626	676
F	156	206	56	106	56	106	56	106	56	106
G	0	0	1	1	2	2	3	3	4	4
H	4	4	8	8	10	10	12	12	14	14
J	–	–	206	256	306	356	406	456	506	556
M	1	1	2	2	2	2	2	2	2	2

■ Mass by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500
Mass (kg)	Without brake	3.2	3.5	3.7	4.0	4.2	4.5	4.7	4.9	5.2	5.4
	With brake	3.5	3.8	4.0	4.3	4.5	4.8	5.0	5.2	5.5	5.7

Updated from Page 35

Applicable controllers

The actuator shown in this page is operable with the following controllers. Select a controller that suits your application.

Name	External view	Number of maximum conntectable axes	Power supply voltage	Control method															Number of maximum positioning points	Reference page
				Positioner	Pulse train	Program	Network * Selection													
							DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM		
MSCON-C		6	Single-phase 100VAC / 200VAC	—	—	—	●	●	—	●	●	—	—	●	●	—	—	—	256	0-000
RCON		16	DC24V	—	—	—	●	●	●	●	—	—	—	●	●	●	—	—	128	0-000
RSEL		8	Single-phase 200VAC Three-phase 200VAC	—	—	●	●	●	●	●	—	—	—	●	●	●	—	—	36000	0-000
SCON-CAL/ CGAL		1	Single-phase 100VAC / 200VAC	●	—	—	●	●	—	●	●	●	—	●	●	●	—	—	512 (768 for network specification)	0-000
SCON-CB/ CGB		1		●	●	—	●	●	●	●	●	●	●	●	●	●	—	—	512 (768 for network specification)	0-000
SSEL-CS		2		●	—	●	●	●	—	●	—	—	—	—	●	—	—	—	20000	0-000
XSEL-P/Q		6	Single-phase 200VAC Three-phase 200VAC	—	—	●	●	●	—	●	—	—	—	—	●	—	—	—	20000	0-000
XSEL-RA/SA		8		—	—	●	●	●	—	●	—	—	—	●	●	—	—	—	55000 (varies depending on the type)	0-000

(Note) Refer to P.7-17 of the General Catalog 2020 for the network abbreviations such as DV and CC.

Updated from Page 35

RCS4-WSA12R

±10μm Standard | Simple Dust-proof | Battery-less Absolute | Side-mounted Motor | Body Width 120 mm | 200v AC Servo Motor | 100 W

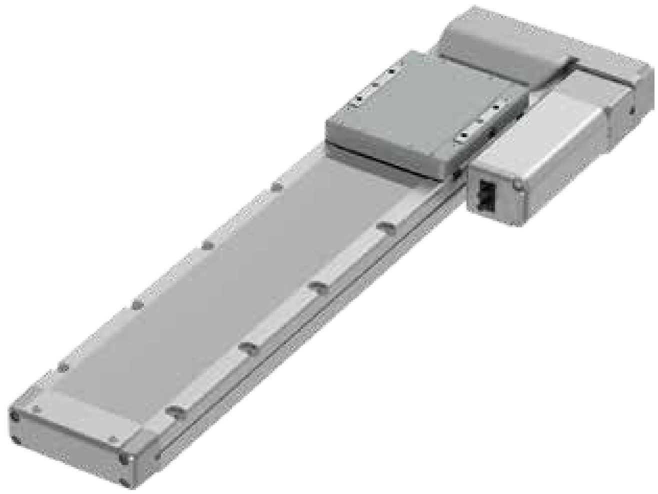
■Model Specification Items

RCS4 - WSA12R - WA - 100 - [Lead] - [Stroke] - [Applicable Controllers] - [Cable Length] - [Options]

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
RCS4	WSA12R	WA: Battery-less Absolute	100: Servo motor 100W	30: 30mm	50 ~ 800: 50mm ~ 800mm (50mm increments)	T2: SCON, MSCON, SSEL, XSEL-P/Q, XSEL-RA/SA	N: None	Refer to Options table below.
				20: 20mm		T4: RCON, RSEL	P: 1m	
				12: 12mm			S: 3m	
				6: 6mm			M: 5m	
				3: 3mm			X□□: Specified Length	
							R□□: Robot Cable	

CE RoHS

Horizontal | Vertical | Side | Ceiling



(Note) The above photo shows motor side-mounted to the left (ML).

Stroke

Stroke (mm)	RCS4-WSA12R	Stroke (mm)	RCS4-WSA12R
50	○	**450**	○
100	○	**500**	○
150	○	**550**	○
200	○	**600**	○
250	○	**650**	○
300	○	**700**	○
350	○	**750**	○
400	○	**800**	○

Options

Name	Option Code	Reference Page
Brake	**B**	2-611
Cable exit direction (Top)	**CJT**	2-612
Cable exit direction (Bottom)	**CJB**	2-612
Cable exit direction (Outside)	**CJO**	2-612
Motor side-mounted to left (Note 1)	**ML**	2-614
Motor side-mounted to right (Note 1)	**MR**	2-614
Non-motor end specification	**NM**	2-614
Slider roller specification	**SR**	2-615

(Note 1) Make sure to specify a code in the option column of the model specification items.

Cable Length

Type	Cable Code	T2	T4
Standard	**P**(1m)	○	○
	S(3m)	○	○
	M(5m)	○	○
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)	○	○
	X11(11m)~**X15**(15m)	○	○
	X16(16m)~**X20**(20m)	○	○
Robot cable	**R01**(1m) ~**R03**(3m)	○	○
	R04(4m) ~**R05**(5m)	○	○
	R06(6m) ~**R10**(10m)	○	○
	R11(11m)~**R15**(15m)	○	○
	R16(16m)~**R20**(20m)	○	○

POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Confirm the Max. speed of the desired stroke in the "Stroke and Max. Speed."
(2) When the acceleration is increased, the payload will be reduced. Refer to the "Table of Payload by Acceleration" for details.
(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P.149 for more information.
(4) Refer to P.138 for details on Notes of mounting orientation. Possible cautions may be required.
(5) Guideline for overhang length is 450mm or less in the Ma, Mb and Mc directions. Refer to the drawing on P.146 for the overhang length.

Updated from Page 37

Main specifications

Item			Specification				
Lead		Ball screw lead (mm)	30	20	12	6	3
Horizontal	Payload	Maximum payload capacity (kg)	5	13	23	43	55
	Speed and acceleration/ deceleration	Maximum speed (mm/s)	1600	1200	720	360	180
		Rated acceleration/ deceleration (G)	0.7	0.3	0.5	0.3	0.3
		Maximum acceleration/ deceleration (G)	1	1	1	1	0.7
Vertical	Payload	Maximum payload (kg)	—	3	8	15	15
	Speed and acceleration/ deceleration	Maximum speed (mm/s)	—	1200	720	360	180
		Rated acceleration/ deceleration (G)	—	0.5	0.7	0.5	0.3
		Maximum acceleration/ deceleration (G)	—	1	1	1	0.7
Thrust force		Rated thrust force (N)	57	85	142	283	566
Brake		Brake specification	Non-exciting electromagnetic brake				
		Brake-holding force (kgf)	—	3	8	15	15
Stroke		Minimum stroke (mm)	50	50	50	50	50
		Maximum stroke (mm)	800	800	800	800	800
		Stroke increments (mm)	50	50	50	50	50

Item	Description
Drive system	Ball screw ϕ10mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Bearing return guide	Direct-acting infinite circulation type
Allowable static moment	Ma direction 311N·m, Mb direction 311N·m, Mc direction 827N·m
Allowable dynamic moment (Note 2)	Ma direction 87N·m, Mb direction 87N·m, Mc direction 233N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)
Degree of protection	IP20
Anti-vibration and anti-shock	4.9m/s²
International standards	CE marking, RoHS directive
Motor type	AC servo motor
Encoder type	Battery-less absolute
Number of encoder pulses	16384 pulse/rev

(Note 2) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. See P.1-180 for moment load directions.

■ Moment directions of the slider type

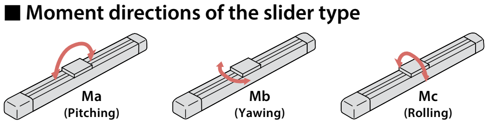


Table of Payload by Acceleration

The unit of payload is kg. Operations are not possible in the blank positions.

Mounting posture	Horizontal				Vertical			
Lead (mm)	Acceleration (G)							
	0.3	0.5	0.7	1.0	0.3	0.5	0.7	1.0
30	5	5	5	4				
20	13	10	8	6	3	3	2	2
12	23	23	16	15	8	8	8	6
6	43	40	30	20	15	15	12	10
3	55	30	15		15	10	6	

Stroke and Max Speed

Lead \ Stroke	50~450 (50mm increments)	500 (mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
30	1600		1450	1260	1100	970	860	770
20	1200	1130	970	840	740	650	580	520
12	720	610	535	465	405	355	315	285
6	360	310	265	230	200	175	155	140
3	180	150	130	115	100	85	75	70

(Unit: mm/s)

Payload and acceleration/deceleration at the time of off-board tuning.

The unit of payload is kg. Operations are not possible in the blank positions.

	Lead	Payload by acceleration/deceleration (kg)												Maximum speed (mm/s)	
		0.3G	0.5G	0.7G	1.0G	1.2G	1.5G	2.0G	2.5G	3.0G	3.5G	4.0G	4.5G	Standard	After tuning
Horizontal	30	5	5	5	4	2.5	2	1.5	1	1	1	1	1	1600	1800
	20	13	10	8	6	4	4	4	3	1.5	1	1	1	1200	1200
	12	23	23	16	15	14.5	8.5	5.5	4.5	2.5	1	1	1	720	720
	6	43	40	30	20	17	12	7.5	4.5	2.5	1			360	360
	3	55	30	15	2									180	180
Vertical	30														
	20	3	3	2	2	2	1.5	1.5	1.5	1.5				1200	1200
	12	8	8	8	6	6	6	4.75	3	1.75				720	720
	6	15	15	12	10	7.5	7	4.75	3	1.75				360	360
	3	15	10	6	0.75									180	180

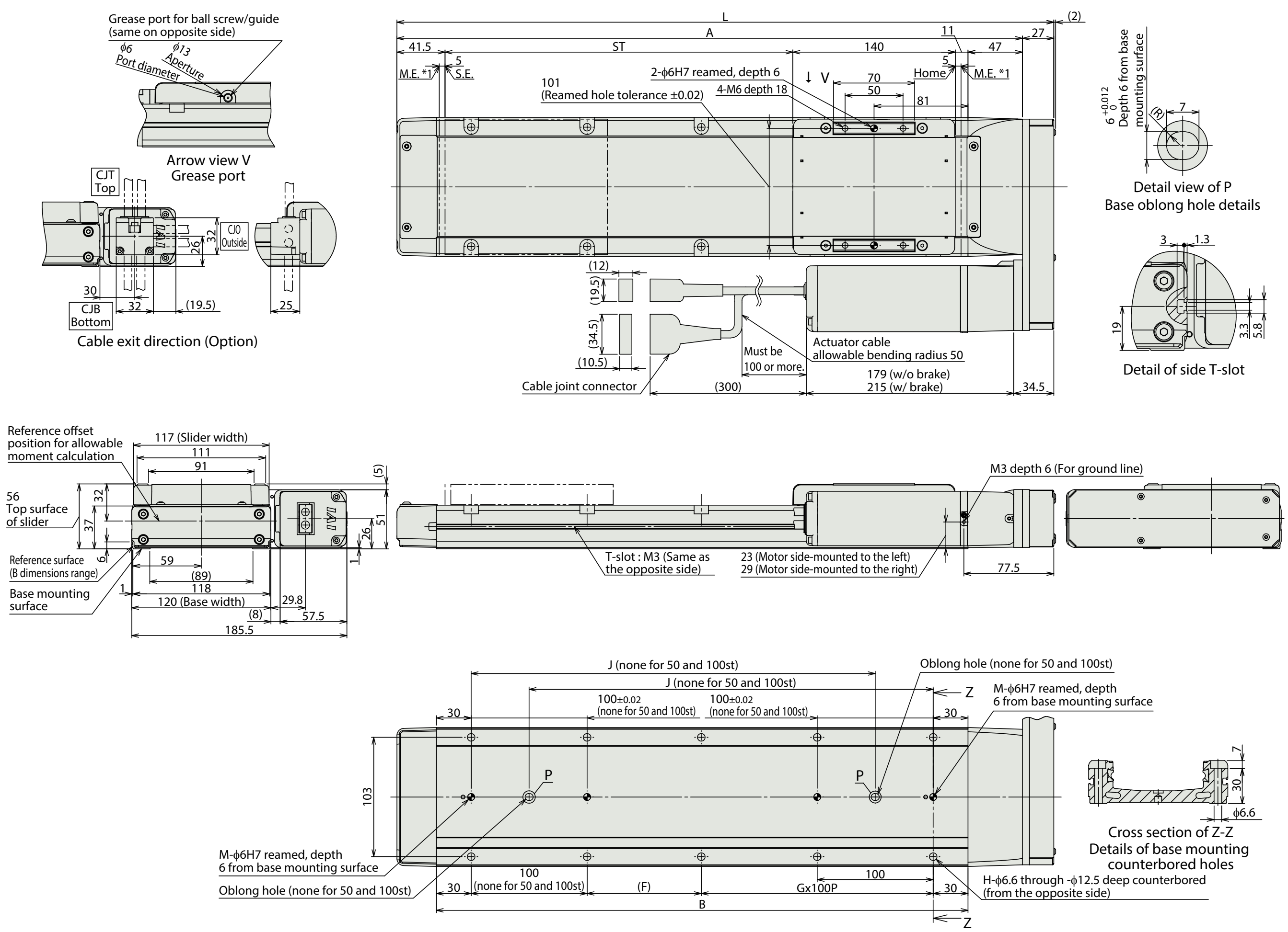
Updated from Page 37

Dimensions

(Note) When the rod is returning to its home position, please be careful of interference with surrounding objects, as it will travel until it reaches the ME.

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD 3D CAD

ST: Stroke
M.E: Mechanical end
S.E: Stroke end



■ Dimensions by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	316.5	366.5	416.5	466.5	516.5	566.5	616.5	666.5	716.5	766.5	816.5	866.5	916.5	966.5	1016.5	1066.5
A	289.5	339.5	389.5	439.5	489.5	539.5	589.5	639.5	689.5	739.5	789.5	839.5	889.5	939.5	989.5	1039.5
B	208.5	258.5	308.5	358.5	408.5	458.5	508.5	558.5	608.5	658.5	708.5	758.5	808.5	858.5	908.5	958.5
F	148.5	198.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5	48.5	98.5
G	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
H	4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20
J	–	–	198.5	248.5	298.5	348.5	398.5	448.5	498.5	548.5	598.5	648.5	698.5	748.5	798.5	848.5
M	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2

■ Mass by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Mass (kg)	Without brake	4.2	4.5	4.9	5.2	5.6	5.9	6.2	6.6	6.9	7.2	7.6	7.9	8.3	8.6	8.9	9.3
	With brake	4.5	4.8	5.2	5.5	5.9	6.2	6.5	6.9	7.2	7.5	7.9	8.2	8.6	8.9	9.2	9.6

Updated from Page 37

Applicable controllers

The actuator shown in this page is operable with the following controllers. Select a controller that suits your application.

Name	External view	Number of maximum conntectable axes	Power supply voltage	Control method															Number of maximum positioning points	Reference page
				Positioner	Pulse train	Program	Network * Selection													
							DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM		
MSCON-C		6	Single-phase 100VAC / 200VAC	—	—	—	●	●	—	●	●	—	—	●	●	—	—	—	256	0-000
RCON		16	DC24V	—	—	—	●	●	●	●	—	—	—	●	●	●	—	—	128	0-000
RSEL		8	Single-phase 200VAC Three-phase 200VAC	—	—	●	●	●	●	●	—	—	—	●	●	●	—	—	36000	0-000
SCON-CAL/CGAL		1	Single-phase 100VAC / 200VAC	●	—	—	●	●	—	●	●	●	—	●	●	●	—	—	512 (768 for network specification)	0-000
SCON-CB/CGB		1	Single-phase 100VAC / 200VAC	●	●	—	●	●	●	●	●	●	●	●	●	●	—	—	512 (768 for network specification)	0-000
SSEL-CS		2	Single-phase 100VAC / 200VAC	●	—	●	●	●	—	●	—	—	—	—	●	—	—	—	20000	0-000
XSEL-P/Q		6	Single-phase 200VAC Three-phase 200VAC	—	—	●	●	●	—	●	—	—	—	—	●	—	—	—	20000	0-000
XSEL-RA/SA		8	Single-phase 200VAC Three-phase 200VAC	—	—	●	●	●	—	●	—	—	—	●	●	—	—	—	55000 (varies depending on the type)	0-000

(Note) Refer to P.7-17 of the General Catalog 2020 for the network abbreviations such as DV and CC.

Updated from Page 37

RCS4-WSA14R

±10μm Standard | Simple Dust-proof | Battery-less Absolute | Side-mounted Motor | Body Width 140 mm | 200v AC Servo Motor | 200 W

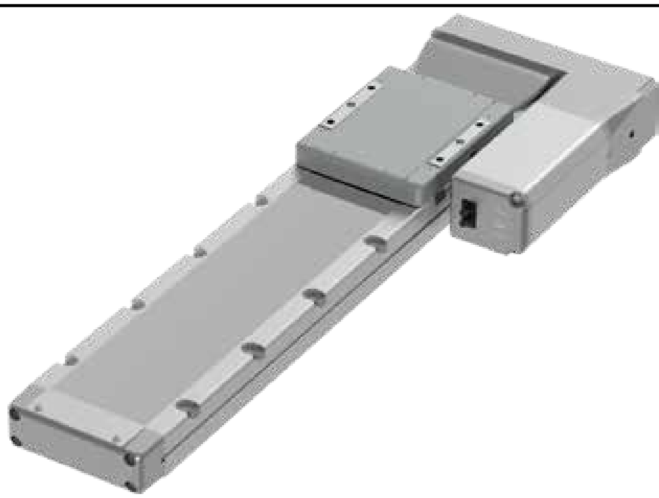
■Model Specification Items

RCS4 - WSA14R - WA - 200 - [ ] - [ ] - [ ] - [ ] - [ ]

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
RCS4	WSA14R	WA: Battery-less Absolute	200: Servo motor 200W	36: 36mm 24: 24mm 16: 16mm 8: 8mm 4: 4mm	50: 50mm ≀ 800: 800mm (50mm increments)	T2: SCON, MSCON, SSEL, XSEL-P/Q, XSEL-RA/SA T4: RCON, RSEL	N: None P: 1m S: 3m M: 5m X□□: Specified Length R□□: Robot Cable	Refer to Options table below.

CE RoHS

Horizontal | Vertical | Side | Ceiling



(Note) The above photo shows motor side-mounted to the left (ML).

Stroke

Stroke (mm)	RCS4-WSA14R	Stroke (mm)	RCS4-WSA14R
50	○	**450**	○
100	○	**500**	○
150	○	**550**	○
200	○	**600**	○
250	○	**650**	○
300	○	**700**	○
350	○	**750**	○
400	○	**800**	○

POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Confirm the Max. speed of the desired stroke in the "Stroke and Max. Speed."
(2) When the acceleration is increased, the payload will be reduced. Refer to the "Table of Payload by Acceleration" for details.
(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P.149 for more information.
(4) Refer to P.138 for details on Notes of mounting orientation. Possible cautions may be required.
(5) Guideline for overhang length is 550mm or less in the Ma, Mb and Mc directions. Refer to the drawing on P.146 for the overhang length.

Options

Name	Option Code	Reference Page
Brake	**B**	2-611
Cable exit direction (Top)	**CJT**	2-612
Cable exit direction (Bottom)	**CJB**	2-612
Cable exit direction (Outside)	**CJO**	2-612
Motor side-mounted to left (Note 1)	**ML**	2-614
Motor side-mounted to right (Note 1)	**MR**	2-614
Non-motor end specification	**NM**	2-614
Slider roller specification	**SR**	2-615
Slider spacer	**SS**	2-615

(Note 1) Make sure to specify a code in the option column of the model specification items.

Cable Length

Type	Cable Code	T2	T4
Standard	**P**(1m)	○	○
	S(3m)	○	○
	M(5m)	○	○
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)	○	○
	X11(11m)~**X15**(15m)	○	○
	X16(16m)~**X20**(20m)	○	○
Robot cable	**R01**(1m) ~**R03**(3m)	○	○
	R04(4m) ~**R05**(5m)	○	○
	R06(6m) ~**R10**(10m)	○	○
	R11(11m)~**R15**(15m)	○	○
	R16(16m)~**R20**(20m)	○	○

Updated from Page 39

Main specifications

Item			Specification				
Lead		Ball screw lead (mm)	36	24	16	8	4
Horizontal	Payload	Maximum payload capacity (kg)	7	20	45	65	75
	Speed and acceleration/ deceleration	Maximum speed (mm/s)	1710	1440	960	480	240
		Rated acceleration/ deceleration (G)	0.3	0.3	0.3	0.3	0.3
		Maximum acceleration/ deceleration (G)	1	1	1	1	0.7
Vertical	Payload	Maximum payload (kg)	—	2.5	8	10	25
	Speed and acceleration/ deceleration	Maximum speed (mm/s)	—	1440	960	480	240
		Rated acceleration/ deceleration (G)	—	1	1	1	0.3
		Maximum acceleration/ deceleration (G)	—	1	1	1	0.7
Thrust force		Rated thrust force (N)	95	142	214	427	855
Brake		Brake specification	Non-exciting electromagnetic brake				
		Brake-holding force (kgf)	—	2.5	8	10	25
Stroke		Minimum stroke (mm)	50	50	50	50	50
		Maximum stroke (mm)	800	800	800	800	800
		Stroke increments (mm)	50	50	50	50	50

Item	Description
Drive system	Ball screw ϕ12mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Bearing return guide	Direct-acting infinite circulation type
Allowable static moment	Ma direction 462N·m, Mb direction 462N·m, Mc direction 1170N·m
Allowable dynamic moment (Note 2)	Ma direction 122N·m, Mb direction 122N·m, Mc direction 308N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)
Degree of protection	IP20
Anti-vibration and anti-shock	4.9m/s²
International standards	CE marking, RoHS directive
Motor type	AC servo motor
Encoder type	Battery-less absolute
Number of encoder pulses	16384 pulse/rev

(Note 2) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. See P.1-180 for moment load directions.

■ Moment directions of the slider type

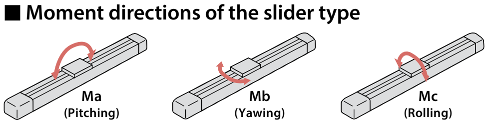


Table of Payload by Acceleration

The unit of payload is kg. Operations are not possible in the blank positions.

Mounting posture	Horizontal				Vertical			
Lead (mm)	Acceleration (G)							
	0.3	0.5	0.7	1.0	0.3	0.5	0.7	1.0
36	7	6	6	4				
24	20	15	15	10	2.5	2.5	2.5	2.5
16	45	30	20	20	8	8	8	8
8	65	50	40	40	10	10	10	10
4	75	60	30		25	20	12	

Stroke and Max Speed

Stroke / Lead	50~450 (50mm increments)	500 (mm)	550 (mm)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)
36	1710			1590	1400	1240	1110	990
24	1440	1420	1220	1060	930	830	740	665
16	960	920	790	690	610	550	490	440
8	480	460	400	350	305	270	240	215
4	240	230	200	170	150	135	120	105

(Unit: mm/s)

Payload and acceleration/deceleration at the time of off-board tuning.

The unit of payload is kg. Operations are not possible in the blank positions.

	Lead	Payload by acceleration/deceleration (kg)												Maximum speed (mm/s)	
		0.3G	0.5G	0.7G	1.0G	1.2G	1.5G	2.0G	2.5G	3.0G	3.5G	4.0G	4.5G	Standard	After tuning
Horizontal	36	7	6	6	4	2.5	2.5	2	1.5	1	1	1	0.5	1710	2150
	24	20	15	15	10	4.5	4.5	4.5	3.5	2.5	2.5	1.75	1.75	1440	1440
	16	45	30	20	20	11.5	11.5	9.5	8.5	6.5	3.5	1.75	1.75	960	960
	8	65	50	40	40	29.5	24.5	17	9.5	6.5	3.5	1.75		480	480
	4	75	60	30	10									240	240
Vertical	36														
	24	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5				1440	1440
	16	8	8	8	8	7.5	7.5	4.5	4.5	4.5				960	960
	8	10	10	10	10	9	9	9	7.5	4.5				480	480
	4	25	20	12	4.5									240	240

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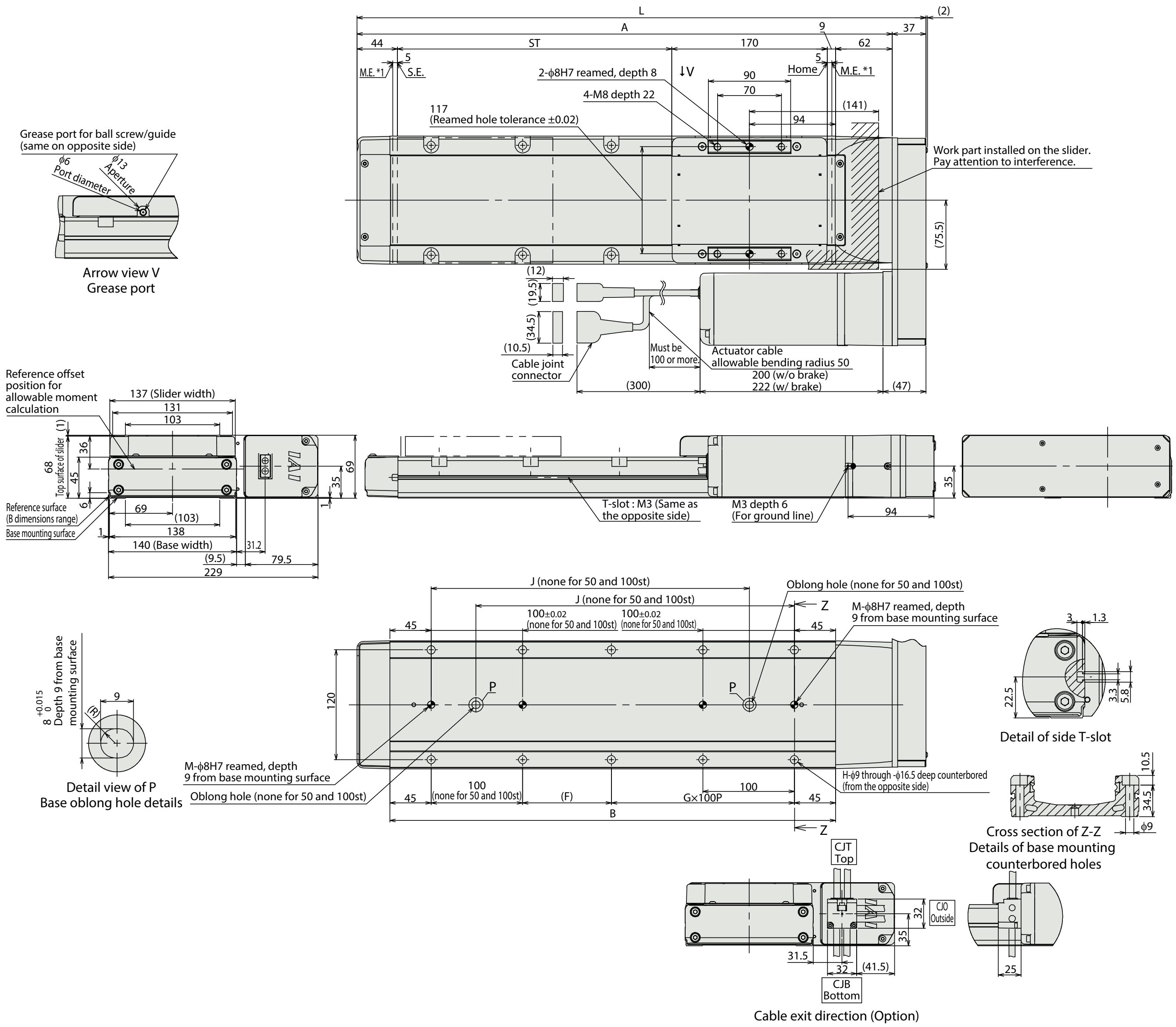
Dimensions

(Note) When the rod is returning to its home position, please be careful of interference with surrounding objects, as it will travel until it reaches the ME.

CAD drawings can be downloaded from our website.
www.intelligentactuator.com
2D CAD
3D CAD

ST: Stroke
M.E: Mechanical end
S.E: Stroke end



■ Dimensions by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	372	422	472	522	572	622	672	722	772	822	872	922	972	1022	1072	1122
A	335	385	435	485	535	585	635	685	735	785	835	885	935	985	1035	1085
B	237	287	337	387	437	487	537	587	637	687	737	787	837	887	937	987
F	147	197	47	97	47	97	47	97	47	97	47	97	47	97	47	97
G	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
H	4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20
J	–	–	198	248	298	348	398	448	498	548	598	648	698	748	798	848
M	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2

■ Mass by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Mass (kg)	Without brake	7.4	7.9	8.4	8.9	9.4	9.9	10.3	10.8	11.3	11.8	12.3	12.8	13.3	13.8	14.2	14.7
	With brake	8.0	8.5	9.0	9.5	10.0	10.5	10.9	11.4	11.9	12.4	12.9	13.4	13.9	14.4	14.8	15.3

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Applicable controllers

The actuator shown in this page is operable with the following controllers. Select a controller that suits your application.

Name	External view	Number of maximum conntectable axes	Power supply voltage	Control method															Number of maximum positioning points	Reference page
				Positioner	Pulse train	Program	Network * Selection													
							DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM		
MSCON-C		6	Single-phase 100VAC / 200VAC	—	—	—	●	●	—	●	●	—	—	●	●	—	—	—	256	0-000
RCON		16	DC24V	—	—	—	●	●	●	●	—	—	—	●	●	●	—	—	128	0-000
RSEL		8	Single-phase 200VAC Three-phase 200VAC	—	—	●	●	●	●	●	—	—	—	●	●	●	—	—	36000	0-000
SCON-CAL/ CGAL		1	Single-phase 100VAC / 200VAC	●	—	—	●	●	—	●	●	●	—	●	●	●	—	—	512 (768 for network specification)	0-000
SCON-CB/ CGB		1		●	●	—	●	●	●	●	●	●	●	●	●	●	—	—	512 (768 for network specification)	0-000
SSEL-CS		2		●	—	●	●	●	—	●	—	—	—	—	●	—	—	—	20000	0-000
XSEL-P/Q		6	Single-phase 200VAC Three-phase 200VAC	—	—	●	●	●	—	●	—	—	—	—	●	—	—	—	20000	0-000
XSEL-RA/SA		8		—	—	●	●	●	—	●	—	—	—	●	●	—	—	—	55000 (varies depending on the type)	0-000

(Note) Refer to P.7-17 of the General Catalog 2020 for the network abbreviations such as DV and CC.

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RCS4-WSA16R

±10μm Standard | Simple Dust-proof | Battery-less Absolute | Side-mounted Motor | Body Width 160 mm | 200v AC Servo Motor | 400 W

■Model Specification Items

RCS4	-	WSA16R	-	WA	-	400	-		-		-		-		-	
Series	-	Type	-	Encoder Type	-	Motor Type	-	Lead	-	Stroke	-	Applicable Controllers	-	Cable Length	-	Options

Encoder Type

WA	Battery-less Absolute

Motor Type

400	Servo motor 400W

Lead

30	30mm
20	20mm
10	10mm
5	5mm

Stroke

50 ≀ 1100	50mm ≀ 1100mm (50mm increments)

Applicable Controllers

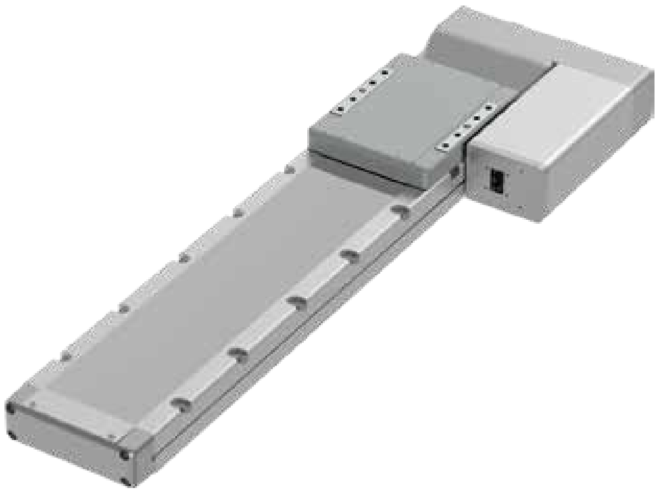
T2	SCON SSEL XSEL-P/Q XSEL-RA/SA
T4	RCON RSEL

Cable Length

N	None
P	1m
S	3m
M	5m
X□□	Specified Length
R□□	Robot Cable

Options

Refer to Options table below.



CE RoHS

Horizontal | Vertical | Side | Ceiling

(Note) The above photo shows motor side-mounted to the left (ML).

Stroke

Stroke (mm)	RCS4-WSA16R	Stroke (mm)	RCS4-WSA16R
50	○	**600**	○
100	○	**650**	○
150	○	**700**	○
200	○	**750**	○
250	○	**800**	○
300	○	**850**	○
350	○	**900**	○
400	○	**950**	○
450	○	**1000**	○
500	○	**1050**	○
550	○	**1100**	○

POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Confirm the Max. speed of the desired stroke in the "Stroke and Max. Speed."
(2) When the acceleration is increased, the payload will be reduced. Refer to the "Table of Payload by Acceleration" for details.
(3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P.149 for more information.
(4) Refer to P.138 for details on Notes of mounting orientation. Possible cautions may be required.
(5) Guideline for overhang length is 550mm or less in the Ma, Mb and Mc directions. Refer to the drawing on P.146 for the overhang length.

Options

Name	Option Code	Reference Page
Brake	**B**	2-611
Cable exit direction (Top)	**CJT**	2-612
Cable exit direction (Bottom)	**CJB**	2-612
Cable exit direction (Outside)	**CJO**	2-612
Motor side-mounted to left (Note 1)	**ML**	2-614
Motor side-mounted to right (Note 1)	**MR**	2-614
Non-motor end specification	**NM**	2-614
Slider roller specification	**SR**	2-615

(Note 1) Make sure to specify a code in the option column of the model specification items.

Cable Length

Type	Cable Code	T2	T4
Standard	**P**(1m)	○	○
	S(3m)	○	○
	M(5m)	○	○
Specified length (Standard cable)	**X06**(6m) ~**X10**(10m)	○	○
	X11(11m)~**X15**(15m)	○	○
	X16(16m)~**X20**(20m)	○	○
Robot cable	**R01**(1m) ~**R03**(3m)	○	○
	R04(4m) ~**R05**(5m)	○	○
	R06(6m) ~**R10**(10m)	○	○
	R11(11m)~**R15**(15m)	○	○
	R16(16m)~**R20**(20m)	○	○

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Main specifications

Item			Specification			
Lead		Ball screw lead (mm)	30	20	10	5
Horizontal	Payload	Maximum payload capacity (kg)	30	60	80	100
	Speed and acceleration/ deceleration	Maximum speed (mm/s)	1800	1200	600	300
		Rated acceleration/ deceleration (G)	0.3	0.3	0.5	0.5
		Maximum acceleration/ deceleration (G)	1	1	1	0.7
Vertical	Payload	Maximum payload (kg)	12	18	35	50
	Speed and acceleration/ deceleration	Maximum speed (mm/s)	1800	1200	600	300
		Rated acceleration/ deceleration (G)	0.5	0.3	0.7	0.3
		Maximum acceleration/ deceleration (G)	1	1	1	0.7
Thrust force		Rated thrust force (N)	226	339	678	1357
Brake		Brake specification	Non-exciting electromagnetic brake			
		Brake-holding force (kgf)	12	18	35	50
Stroke		Minimum stroke (mm)	50	50	50	50
		Maximum stroke (mm)	1100	1100	1100	1100
		Stroke increments (mm)	50	50	50	50

Item	Description
Drive system	Ball screw ϕ16mm, rolled C10
Positioning repeatability	±0.01mm
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Bearing return guide	Direct-acting infinite circulation type
Allowable static moment	Ma direction 642N·m, Mb direction 642N·m, Mc direction 1610N·m
Allowable dynamic moment (Note 2)	Ma direction 161N·m, Mb direction 161N·m, Mc direction 404N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)
Degree of protection	IP20
Anti-vibration and anti-shock	4.9m/s²
International standards	CE marking, RoHS directive
Motor type	AC servo motor
Encoder type	Battery-less absolute
Number of encoder pulses	16384 pulse/rev

(Note 2) Assumes a standard rated life of 5,000km. The running life will vary depending on operation and installation conditions. See P.1-180 for moment load directions.

■ **Moment directions of the slider type**

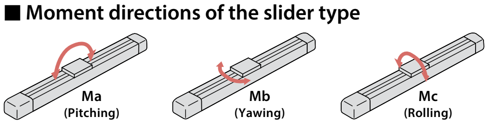

Table of Payload by Acceleration

The unit of payload is kg. Operations are not possible in the blank positions.

Mounting posture	Horizontal				Vertical			
Lead (mm)	Acceleration (G)							
	0.3	0.5	0.7	1.0	0.3	0.5	0.7	1.0
30	30	25	20	10	12	12	8	8
20	60	40	25	22	18	15	15	12
10	80	80	70	60	35	35	35	30
5	100	100	80		50	45	30	

Stroke and Max Speed

Lead \ Stroke	50~550 (50mm increments)	600 (mm)	650 (mm)	700 (mm)	750 (mm)	800 (mm)	850 (mm)	900 (mm)	950 (mm)	1000 (mm)	1050 (mm)	1100 (mm)
30	1800	1680	1480	1320	1180	1060	960	870	790	730	670	620
20	1200	1120	990	880	780	715	645	590	535	490	450	415
10	600	560	490	440	395	355	320	290	265	240	225	205
5	300	280	240	220	195	175	160	145	130	120	110	100

(Unit: mm/s)

Payload and acceleration/deceleration at the time of off-board tuning.

The unit of payload is kg. Operations are not possible in the blank positions.

	Lead	Payload by acceleration/deceleration (kg)												Maximum speed (mm/s)	
		0.3G	0.5G	0.7G	1.0G	1.2G	1.5G	2.0G	2.5G	3.0G	3.5G	4.0G	4.5G	Standard	After tuning
Horizontal	30	30	25	20	10	8	8	7.5	5.5	3.5	3.5	3.25	3	1800	1800
	20	60	40	25	22	14.5	12.5	9.5	7.5	5.5	5.5	5.5	4.5	1200	1200
	10	80	80	70	60	57.5	54.5	37	26	18	12	8	4.5	600	600
	5	100	100	80	37	17								300	300
Vertical	30	12	12	8	8	5.5	5	4.5	3.5	2.5				1800	1800
	20	18	15	15	12	10	9.5	7.5	5.5	3.5				1200	1200
	10	35	35	35	30	27.5	24.5	22.5	17.5	13				600	600
	5	50	45	30	17	8								300	300

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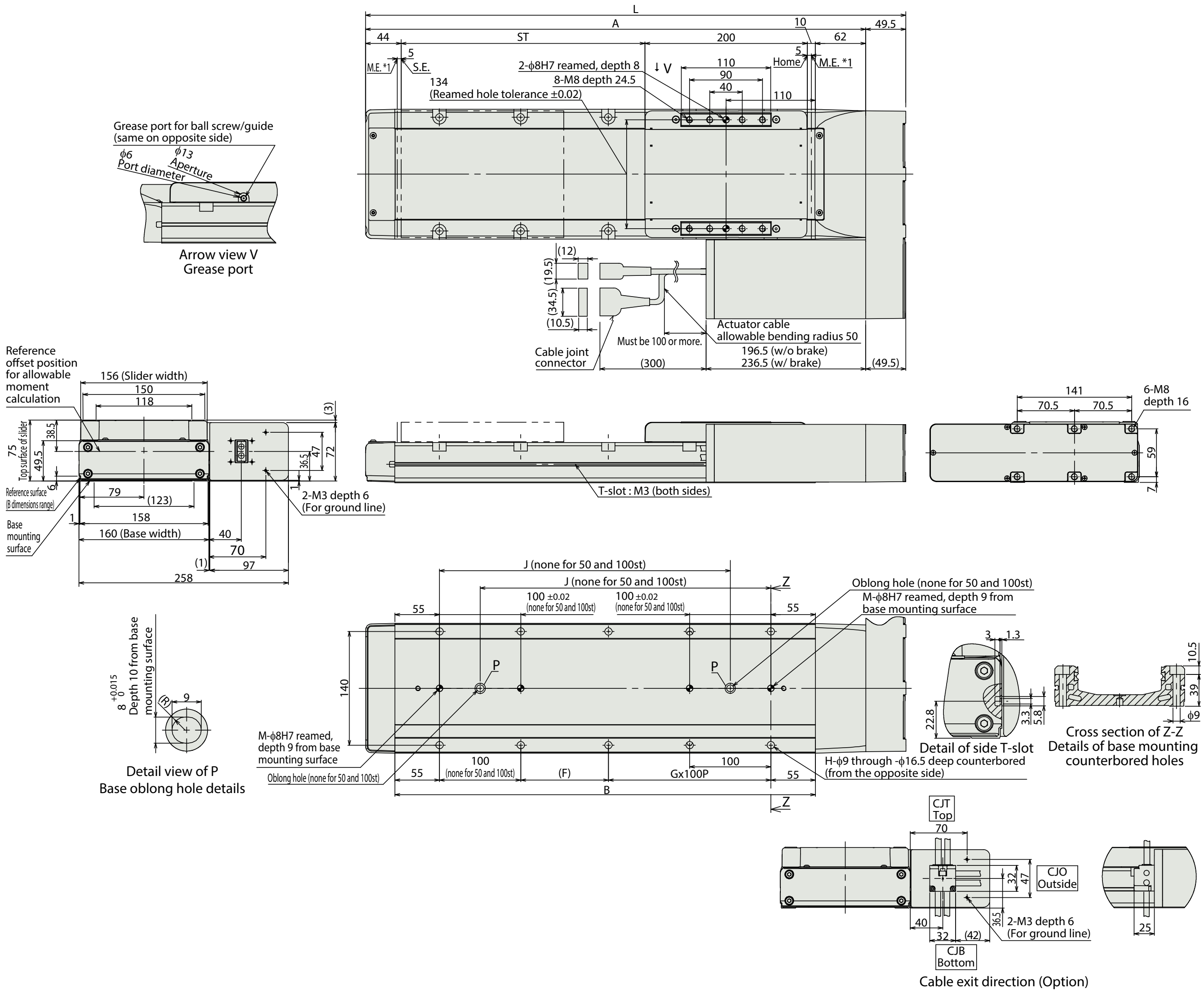
Dimensions

(Note) When the rod is returning to its home position, please be careful of interference with surrounding objects, as it will travel until it reaches the ME.

ST: Stroke
M.E: Mechanical end
S.E: Stroke end



■ Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
L	415.5	465.5	515.5	565.5	615.5	665.5	715.5	765.5	815.5	865.5	915.5	965.5	1015.5	1065.5	1115.5	1165.5	1215.5	1265.5	1315.5	1365.5	1415.5	1465.5
A	366	416	466	516	566	616	666	716	766	816	866	916	966	1016	1066	1116	1166	1216	1266	1316	1366	1416
B	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318
F	158	208	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108
G	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
H	4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
J	–	–	208	258	308	358	408	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158
M	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

■ Dimensions and Mass by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
Mass (kg)	Without brake	10.6	11.2	11.8	12.4	13.0	13.6	14.2	14.9	15.5	16.1	16.7	17.3	17.9	18.5	19.1	19.8	20.4	21.0	21.6	22.2	22.8	23.4
	With brake	11.2	11.8	12.4	13.0	13.6	14.2	14.8	15.5	16.1	16.7	17.3	17.9	18.5	19.1	19.7	20.4	21.0	21.6	22.2	22.8	23.4	24.0

Updated from Page 41

Applicable controllers

The actuator shown in this page is operable with the following controllers. Select a controller that suits your application.

Name	External view	Number of maximum conntectable axes	Power supply voltage	Control method															Number of maximum positioning points	Reference page
				Positioner	Pulse train	Program	Network * Selection													
							DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM		
RCON		16	DC24V	—	—	—	●	●	●	●	—	—	—	●	●	●	—	—	128	0-000
RSEL		8	Single-phase 200VAC Three-phase 200VAC	—	—	●	●	●	●	●	—	—	—	●	●	●	—	—	36000	0-000
SCON-CB/CGB		1	Single-phase 200VAC	●	●	—	●	●	●	●	●	●	●	●	●	●	—	—	512 (768 for network specification)	0-000
SSEL-CS		2	Single-phase 100VAC / 200VAC	●	—	●	●	●	—	●	—	—	—	—	●	—	—	—	20000	0-000
XSEL-P/Q		6	Single-phase 200VAC Three-phase 200VAC	—	—	●	●	●	—	●	—	—	—	—	●	—	—	—	20000	0-000
XSEL-RA/SA		8		—	—	●	●	●	—	●	—	—	—	●	●	—	—	—	55000 (varies depending on the type)	0-000

(Note) Refer to P.7-17 of the General Catalog 2020 for the network abbreviations such as DV and CC.

Catalog No. CE0255-1.6A (2020NOV)

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