

Linear Servo Type

RCL



Linear Servo Type

	Slider Type	Mini Slim Model	20mm Width	RCL-SA1L	373
			24mm Width	RCL-SA2L	375
			28mm Width	RCL-SA3L	377
		Mini Long Stroke Type	40mm Width	RCL-SA4L	379
RCL			48mm Width	RCL-SA5L	383
series			58mm Width	RCL-SA6L	387
Linear Servo		Mini Multi-Slider Type	40mm Width	RCL-SM4L	381
Motor Type			48mm Width	RCL-SM5L	385
			58mm Width	RCL-SM6L	389
	Rod Type	Mini Slim Type	ø16mm	RCL-RA1L	391
			ø20mm	RCL-RA2L	393
			ø25mm	RCL-RA3L	395

Slider Type

Mini

Standar

Rod Type

Mini

Standard

Table/Arm

Mini

Standar

Linear Serv

Cleanroor

Splash Pro

Controllers

/AMEC PSEP

ROBO NET

ACON

SCON

PSEL

ASEL

XSEL

Pulse Moto

Servo Moto

Servo Mot (200V)

Servo Mo

Type

Standard

ntegrated

Тур

Standar

Tahle/Arm

/Flat Type

Standard

Gripper Rotary Type

Туре

Controllers

PSEP /ASEP

ERC2

ACON

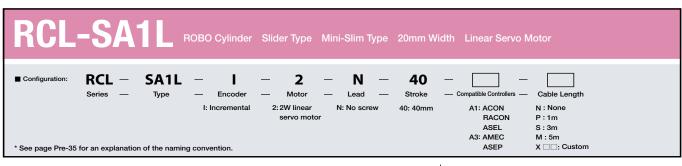
PSEI

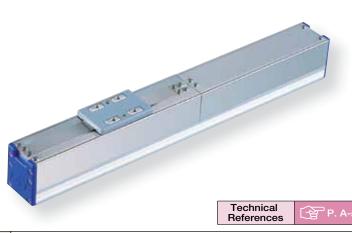
SSF

Servo Moto (24V

Servo Motor (200V)

> Linear ervo Motor





■ Load Capacity (Horizontal) vs. Acceleration

Max.	Load Cap	acity (kg)		
Acceleration (G)	Continuous Operation (100% duty)	(70% or less duty)		
0.1	0.5			
0.3	0.5	0.5		
0.5	0.42			
1	0.25	0.32		
1.5	0.18	0.24		
2	0.15	0.2		

Notes on Selection

(1) The load capacity is determined by the acceleration and the duty.

Check the load capacity on the Load Capacity (Horizontal) vs. Acceleration graph on the right.

Operating time

The duty is Operating time + stationary time ×100 per cycle.

The mounting orientation is horizontal only. When operated vertically, please use caution, as the slider will fall when the power is turned OFF.

(3) Please note that an absolute unit cannot be used.

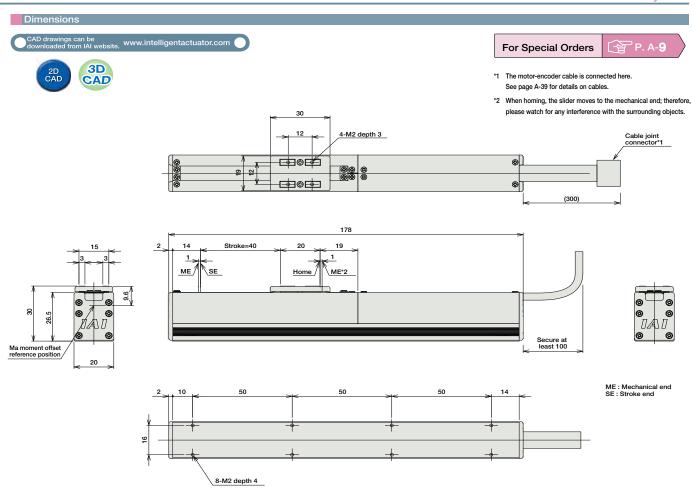
Actuator Specifications											
■ Lead and Load Capacity ■ Stroke and Maximum Speed											
Model	Motor Output	Max. Load	Capacity	Rated Thrust	Max. Momentary	Max.	Positioning Repeatability	Stroke	s	roke	40
Widdel	(W)	Horizontal (kg)	Vertical (kg)	(N)	Thrust (N)	(G)	(mm)	(mm)	Lead		(mm)
RCL-SA1L-I-2-N-40-①-②	2	See table above	I	2	10	2	±0.1	40 (Fixed)	(No lead s	crew)	420
Legend: ① Compatible controller ② Cab	le length					-					(Unit: mm/s

Stroke List	
Stroke (mm)	Standard Price
40	_

2 Cable List						
Туре	Cable Symbol	Standard Price				
Standard Type	P (1m)	_				
• • •	S (3m)	-				
(Robot Cables)	M (5m)	-				
	X06 (6m) ~ X10 (10m)	_				
Special Lengths	X11 (11m) ~ X15 (15m)	-				
	X16 (16m) ~ X20 (20m)	_				

- * The RCL comes standard with a robot cable.
- * See page A-39 for cables for maintenance.

Actuator Specifications						
Item	Description					
Drive System	Linear servo motor					
Encoder Resolution	0.042mm					
Base	Material: Aluminum (white alumite treated)					
Allowable Dynamic Moment (Note)	Ma: 0.13N·m Mb: 0.12N·m Mc: 0.21N·m					
Overhang Load Length	50mm or less					
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)					



■ Dimensions and Weight by Stroke

■ Dimensions and weight by Stroke						
Stroke	40					
Weight (kg)	0.28					

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	Standard Price	See Page	
		AMEC-C-2I-NP-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	-	→ P477	
Solenoid Valve Type	1	ASEP-C-2I-NP-2-0	Operable with same signal as solenoid valve.	3 points			-	→ P487	
Splash-Proof Solenoid Valve Type	1	ASEP-CW-2I-NP-2-0	Supports both single and double solenoid types. No homing necessary with simple absolute type.		DC24V	4.6A max.	-		
Positioner Type	Í	ACON-C-2I-NP-2-0	Positioning is possible for up to 512 points	512 points			-		
Safety-Compliant Positioner Type		ACON-CG-2I-NP-2-0	Positioning is possible for up to 512 points				-	→ P535	
Pulse Train Input Type Differential Line Driver)	Û	ACON-PL-2I-NP-2-0	Pulse train input type with differential line driver support				-		
Pulse Train Input Type (Open Collector)	ė.	ACON-PO-2I-NP-2-0	Pulse train input type with open collector support				-		
Serial Communication Type		ACON-SE-2I-N-0-0	Dedicated to serial communication	64 points					
Field Network Type		RACON-2	Dedicated to field network	768 points			-	→ P503	
Program Control Type		ASEL-C-1-2I-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			-	→ P567	

RCL-SA1L **374**

IAI

Slider Type

Standard

ontrollers ntegrated

> Roo Type

Mir

ontrollers ntegrated

> Table/Arm /Flat Type

Mini

Gripper Rotary Type

inear Servo Type

Prod

Splash Proo

Controller

PSEP /ASEP

ERC2

SCON

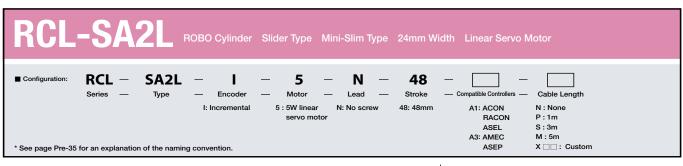
SSEL

Pulse Motor

Servo Moto (24V

Servo Motor (200V)

> Linear ervo Motor





■ Load Capacity (Horizontal) vs. Acceleration

Max.	Load Capacity (kg)							
Acceleration (G)	Continuous Operation (100% duty)	(70% or less duty)						
0.1	1							
0.3	•	1						
0.5	0.85							
1	0.5	0.6						
1.5	0.36	0.45						
2	0.3	0.36						

(1) The load capacity is determined by the acceleration and the duty.

Check the load capacity on the Load Capacity (Horizontal) vs. Acceleration graph on the right.
The duty is Operating time
Operating time + stationary time

x100 per cycle.

The mounting orientation is horizontal only. When operated vertically, please use caution, as the slider will fall when the power is turned OFF.

(3) Please note that an absolute unit cannot be used.

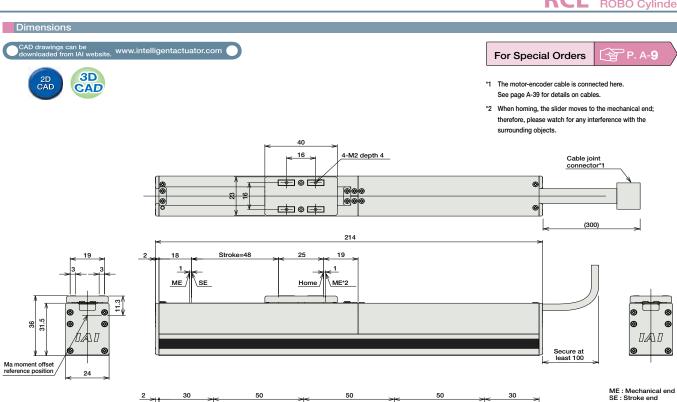
Actuator Specifications										
■ Lead and Load Capacity ■ Stroke and Maximum Speed										
Model	Motor Output	Max. Load	l Capacity	Rated Thrust	Max. Momentary	Max. Acceleration	Positioning	Stroke	Stroke	48
Model	(W) ·	Horizontal (kg)	Vertical (kg)	(N)	Thrust (N)	(G)	Repeatability (mm)	(mm)	Lead	(mm)
RCL-SA2L-I-5-N-48-①-②	5	See table above	-	4	18	2	±0.1	48 (Fixed)	(No lead screw)	460
Legend: ① Compatible controller ② Cable length (Unit: mm/s)										

Stroke List	
Stroke (mm)	Standard Price
48	_

2 Cable List						
Туре	Cable Symbol	Standard Price				
Standard Type	P (1m)	_				
• • •	S (3m)	-				
(Robot Cables)	M (5m)	-				
	X06 (6m) ~ X10 (10m)	_				
Special Lengths	X11 (11m) ~ X15 (15m)	-				
	X16 (16m) ~ X20 (20m)	_				

- * The RCL comes standard with a robot cable.
- * See page A-39 for cables for maintenance.

Actuator Specifications					
Item	Description				
Drive System	Linear servo motor				
Encoder Resolution	0.042mm				
Base	Material: Aluminum (white alumite treated)				
Allowable Dynamic Moment (Note)	Ma: 0.2N·m Mb: 0.17N·m Mc: 0.25N·m				
Overhang Load Length	60mm or less				
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)				



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8-M2 depth 4

■ Dimensions and Weight by Stroke

Stroke	48					
Weight (kg)	0.45					

The RCL series actuators can operate with the controllers below. Select the controller according to your usage.								
Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	Standard Price	See Page
Solenoid Valve Type		AMEC-C-5I-NP-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	-	→ P477
olicitora valve Type		ASEP-C-5I-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types.	3 points			-	→ P487
Splash-Proof Solenoid Valve Type	1	ASEP-CW-5I-NP-2-0	No homing pagescapy with cimple absolute type			-	7 F407	
Positioner Type	Í	ACON-C-5I-NP-2-0	- Positioning is possible for up to 512 points	512 points			-	
Safety-Compliant Positioner Type	AC	ACON-CG-5I-NP-2-0					-	
Pulse Train Input Type Differential Line Driver)	O.	ACON-PL-5I-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	6.4A max.	-	→ P535
Pulse Train Input Type (Open Collector)		ACON-PO-5I-NP-2-0	Pulse train input type with open collector support	(-)			-	
Serial communication Type	ACON-SE-5I-N-0-0		Dedicated to serial communication	64 points				
Field Network Type		RACON-5	Dedicated to field network	768 points			-	→ P503
Program Control Type		ASEL-C-1-5I-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			-	→ P567

PMEC AMEC
PSEP //ASEP
ROBO NET
ERC2
PCON
ACON
SCON
PSEL
ASEL
SSEL

Slider Type

Standard

ontrollers Integrated

> Roo Type

Min

ontrollers integrated

> Table/Arm /Flat Type

....

Gripper Rotary Type

inear Servo Type

Proc

Splash Proo

2011(101161

PSEP /ASEP

ERC2

SCON

ASEL

XSFI

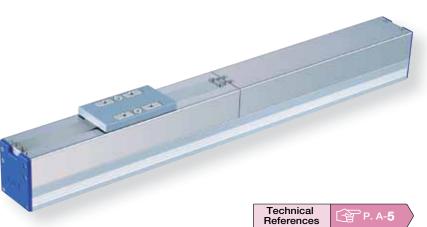
Pulse Motor

Servo Motoi (24V)

Servo Motor (200V)

> Linear ervo Motor





■ Load Capacity (Horizontal) vs. Acceleration

Max.	Load Capacity (kg)				
Acceleration (G)	Continuous Operation (100% duty)	(70% or less duty)			
0.1	2				
0.3	2	2			
0.5	1.8				
1	1	1.2			
1.5	0.65	0.8			
2	0.5	0.6			

(1) The load capacity is determined.

Check the load capacity on the

The duty is Operating
Operating time + s

(2) The mounting orientation is however the power is turned OFF.

(1) The load capacity is determined by the acceleration and the duty. Check the load capacity on the Load Capacity (Horizontal) vs. Acceleration graph on the right.

 $\label{eq:continuity} \text{The duty is} \quad \frac{\text{Operating time}}{\text{Operating time + stationary time}} \quad \times 100 \quad \text{per cycle.}$

2) The mounting orientation is horizontal only. When operated vertically, please use caution, as the slider will fall when the power is turned OFF.

(3) Please note that an absolute unit cannot be used.

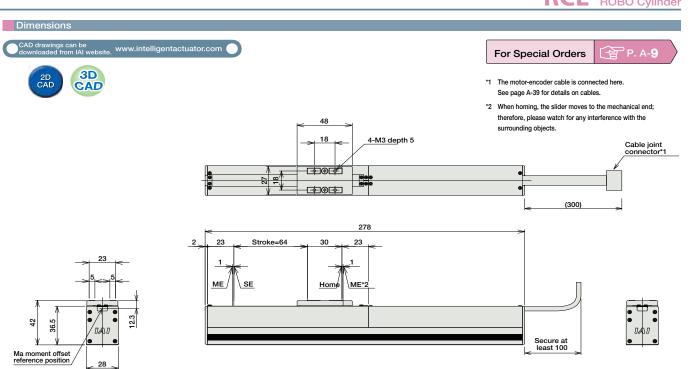
Actuator Specifications										
■ Lead and Load Capacity										
Model	Motor Output	Max. Load Capacity		Rated Thrust	Max. Momentary	Max. Acceleration		Positioning Repeatability (mm) Stroke (mm)	Stroke	64
Wiodei	(W) ·	Horizontal (kg)	Vertical (kg)	(N)	Thrust (N)	(G)	(mm)		Lead	(mm)
RCL-SA3L-I-10-N-64-①-②	10	See table above	-	8	30	2	±0.1	64 (Fixed)	(No lead screw)	600
Legend: ①Compatible controller ②Cable length (Unit: mm/s)										

Stroke List	
Stroke (mm)	Standard Price
64	_

② Cable List					
Туре	Cable Symbol	Standard Price			
Standard Type	P (1m)	-			
	S (3m)	-			
(Robot Cables)	M (5m)	-			
Special Lengths	X06 (6m) ~ X10 (10m)	-			
	X11 (11m) ~ X15 (15m)	-			
	X16 (16m) ~ X20 (20m)	_			

- * The RCL comes standard with a robot cable.
- * See page A-39 for cables for maintenance.

Actuator Specifications					
Item	Description				
Drive System	Linear servo motor				
Encoder Resolution	0.042mm				
Base	Material: Aluminum (white alumite treated)				
Allowable Dynamic Moment (Note)	Ma: 1.22N·m Mb: 1.08N·m Mc: 0.34N·m				
Overhang Load Length	Ma direction: 120mm or less Mb, Mc direction: 80mm or less				
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)				



2 30 50 50 50 44 8 10-M3 depth 4

■ Dimensions and Weight by Stroke

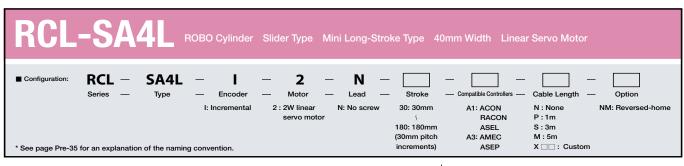
ME : Mechanical end SE : Stroke end

■ Dimensions and Weight by Strok						
Stroke	64					
Weight (kg)	0.82					

The RCL series actuators can operate with the controllers below. Select the controller according to your usage.								
Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	Standard Price	See Page
olenoid Valve Type	(A)	AMEC-C-10I-NP-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	-	→ P477
olenoid valve type		ASEP-C-10I-NP-2-0	Operable with same signal as solenoid valve.	3 points			-	→ P487
Splash-Proof colenoid Valve Type		ASEP-CW-10I-NP-2-0	Supports both single and double solenoid types. No homing necessary with simple absolute type.				-	→ P487
Positioner Type		ACON-C-10I-NP-2-0	Positioning is possible for up to 512 points	512 points			-	
Safety-Compliant Positioner Type			ACON-CG-10I-NP-2-0				-	
ulse Train Input Type ifferential Line Driver)	O.	ACON-PL-10I-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	6.4A max.	-	→ P535
ulse Train Input Type (Open Collector)	ė.	ACON-PO-10I-NP-2-0	Pulse train input type with open collector support	(-)			-	
Serial ommunication Type		ACON-SE-10I-N-0-0	Dedicated to serial communication	64 points			-	
Field Network Type		RACON-10	Dedicated to field network	768 points			-	→ P503
Program Control Type	9	ASEL-C-1-10I-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			-	→ P567

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RCL-SA3L **378**





■ Load Cap	pacity (Horizontal) vs. Acceleration
Maria	

Max. Acceleration	Load Capacity (kg)
(G)	Continuous Operation (100% duty)
0.1	0.8
0.3	0.0
0.5	0.5
1	0.25
1.5	0.18
2	0.14

	.,	(If magnetism	n is a p
>	(2)	The load cap Check the lo	•
)		The duty is	Opera

Actuator Specifications

- (1) Please note that this type has magnetic flux leakage. problem, please use SA1L, SA2L, or SA3L)
 - s determined by the acceleration and the duty.
 - pacity on the Load Capacity (Horizontal) vs. Acceleration graph on the right.
 - rating time + stationary time x100 per cycle. Operating time
- (3) The mounting orientation is horizontal only. When operated vertically, please use caution, as the slider will fall when the power is turned OFF.
- (4) Please note that an absolute unit cannot be used.

Ctrolco and	Marrimum Chand
Stroke and	Maximum Speed

■ Lead and Load Capacity								
Model	Motor Output	Max. Load	Capacity	Rated Thrust	Max. Momentary	Max. Acceleration	Positioning Repeatability	Stroke
mouti	(W)	Horizontal (kg)	Vertical (kg)	(N)	Thrust (N)	(G)	(mm)	(mm)
RCL-SA4L-I-2-N-①-②-③-④	2	See table above	-	2.5	10	2	±0.1	30~180 (30mm increments)
<u> </u>								

	Otroke and Maximum opeca					
		Stroke	30 ∼ 180			
		Lead	(30mm increments)			
s)		(No lead screw)	1200			
			(Unit: mm/s)			

						-
Legend:	1 Stroke	2 Compatible controlle	er ③C	able length	4 Opt	ior

						_
gend:	1 Stroke	2 Compatible control	ler ③C	able length	n ④ Opt	ions

① Stroke List

Stroke (mm)	Standard Price			
30	-			
60	-			
90	-			
120	-			
150	-			
180	-			

3	Cable	List
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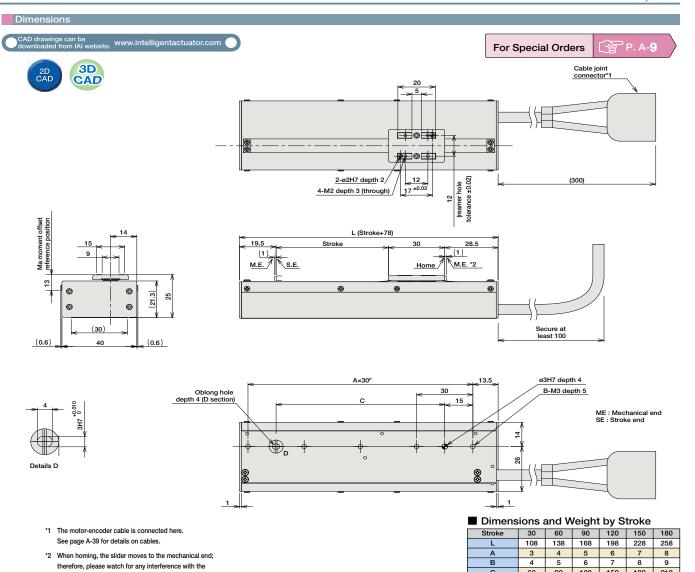
Туре	Cable Symbol	Standard Price
Standard Type	P (1m)	-
· · ·	S (3m)	-
(Robot Cables)	M (5m)	=
	X06 (6m) ~ X10 (10m)	-
Special Lengths	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

^{*} The RCL comes standard with a robot cable.

4 Option List			
Name	Option Code	See Page	Standard Price
Reversed-home	NM	→ A-33	_

Actuator Specifications				
Item	Description			
Drive System	Linear servo motor			
Encoder Resolution	0.042mm			
Base	Material: Aluminum (white alumite treated)			
Allowable Dynamic Moment (Note)	Ma: 0.2N·m Mb: 0.17N·m Mc: 0.25N·m			
Overhang Load Length	Ma direction: 60mm or less Mb, Mc direction: 80mm or less			
Ambient Operating Temp / Humidity	0~40°C, 85% BH or less (non-condensing)			

^{*} See page A-39 for cables for maintenance.



	2 Com	patible	controller	
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surrounding objects.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	Standard Price	See Page	
Solenoid Valve Type	M	AMEC-C-2I-NP-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	-	→ P477	
Soleriold valve Type	1	ASEP-C-2I-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types.	3 points		4.6A max.	-		
Splash-Proof Solenoid Valve Type		ASEP-CW-2I-NP-2-0	No homing necessary with simple absolute type.				-	→ P487	
Positioner Type	Í	ACON-C-2I-NP-2-0	Positioning is possible for up to 512 points	512 points			-	→ P535	
Safety-Compliant Positioner Type		ACON-CG-2I-NP-2-0	Positioning is possible for up to 512 points	312 points	DC24V		-		
Pulse Train Input Type (Differential Line Driver)	O.	ACON-PL-2I-NP-2-0	Pulse train input type with differential line driver support	(-)			-		
Pulse Train Input Type (Open Collector)		ACON-PO-2I-NP-2-0	Pulse train input type with open collector support	(-)			-		
Serial Communication Type		ACON-SE-2I-N-0-0	Dedicated to serial communication	64 points			-		
Field Network Type		RACON-2	Dedicated to field network	768 points			-	→ P503	
Program Control Type	1	ASEL-C-1-2I-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			-	→ P567	

* This is for the single-axis ASEL.

PMEC JAMEC
PSEP JASEP
ROBO NET
ERC2
PCON
ACON
SCON
PSEL
ASEL
SSEL

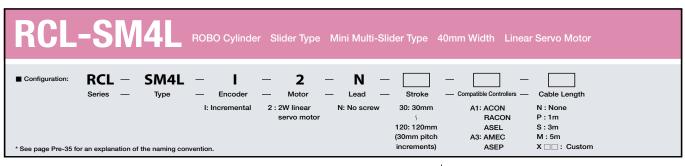
120 150 180 210

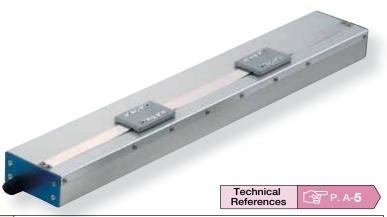
0.4

90

Weight (kg) 0.21 0.25 0.29 0.32 0.36

60





■ Load Cap	Load Capacity (Horizontal) vs. Acceleration						
Max.	Load Capacity (kg)						
(G)	Continuous Operation (100% duty)						
0.1	0.8						
0.3	0.0						
0.5	0.5						
1	0.25						
1.5	0.18						

0.14

Please note that this type has magnetic flux leakage. (If magnetism is a problem, please use SA1L, SA2L, or SA3L)

(2) The load capacity is determined by the acceleration and the duty. $\label{lem:check} \textbf{Check the load capacity on the Load Capacity (Horizontal) vs. Acceleration graph on the right.}$

Operating time The duty is Operating time Operating time + stationary time ×100 per cycle.

(3) The mounting orientation is horizontal only. When operated vertically, please use caution, as the slider will fall when the power is turned OFF.

(4) Please note that an absolute unit cannot be used.

Actuator Specifications										
■ Lead and Load Capacity										
Model	Motor Output Max. Load Capaci		Capacity	Rated Thrust	Max. Momentary	Max. Acceleration		Stroke	Stroke	30 ∼ 120
Model	(W) ·	Horizontal (kg)	Vertical (kg)	(N)	Thrust (N)	(G)	Repeatability (mm)	(mm)	Lead	(30mm increments)
RCL-SM4L-I-2-N-①-②-③	2	See table above	-	2.5	10	2	±0.1	30~120 (30mm increments)	(No lead screw)	1200
egend: ①Stroke ②Compatible controller ③Cable length (Unit: mm/s)										

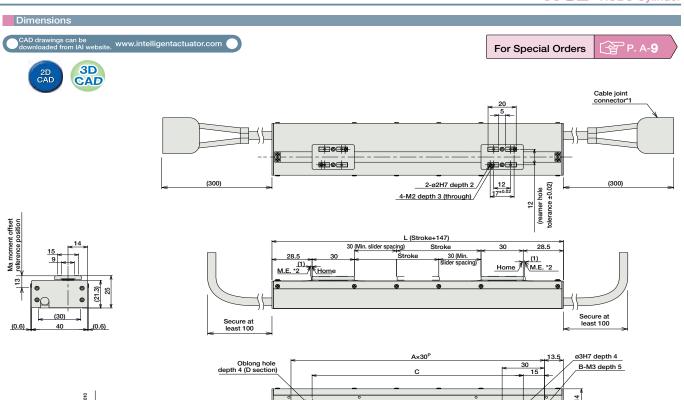
① Stroke List							
Stroke (mm)	Standard Price						
30	-						
60	-						
90	-						
120	-						

③ Cable List							
Туре	Cable Symbol	Standard Price					
Standard Type	P (1m)	_					
1	S (3m)	-					
(Robot Cables)	M (5m)	-					
	X06 (6m) ~ X10 (10m)	-					
Special Lengths	X11 (11m) ~ X15 (15m)	-					
	X16 (16m) ~ X20 (20m)	_					

^{*} The RCL comes standard with a robot cable.

Actuator Specifications						
Item	Description					
Drive System	Linear servo motor					
Encoder Resolution	0.042mm					
Base	Material: Aluminum (white alumite treated)					
Allowable Dynamic Moment (Note)	Ma: 0.2N·m Mb: 0.17N·m Mc: 0.25N·m					
Overhang Load Length	Ma direction: 60mm or less Mb, Mc direction: 80mm or less					
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)					

^{*} See page A-39 for cables for maintenance.



*1 The motor-encoder cable is connected here. See page A-39 for details on cables.

*2 When homing, the slider moves to the mechanical end; therefore, please watch for any interference with the surrounding objects.

Note: A controller is required for each slider. (or, one unit of 2-axis controller is required.)

■ Dimensions and Weight by Stroke

ME : Mechanical end SE : Stroke end

Stroke	30	60	90	120					
L	177	207	237	267					
Α	5	6	7	8					
В	6	7	8	9					
С	120	150	180	210					
Weight (kg)	0.37	0.4	0.44	0.48					

(2)	Compatible control	lor

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Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	Standard Price	See Page	
		AMEC-C-2I-NP-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	-	→ P477	
Solenoid Valve Type		ASEP-C-2I-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types.	3 points			-	. 8407	
Splash-Proof Solenoid Valve Type	D	ASEP-CW-2I-NP-2-0	No homing necessary with simple absolute type.		DC24V	4.6A max.	-	→ P487	
Positioner Type	É	ACON-C-2I-NP-2-0	Positioning is possible for up to 512 points	512 points			-		
Safety-Compliant Positioner Type		ACON-CG-2I-NP-2-0	rositioning is possible for up to 312 points	312 points			-	→ P535	
Pulse Train Input Type Differential Line Driver)	O.	ACON-PL-2I-NP-2-0	Pulse train input type with differential line driver support	()			-		
Pulse Train Input Type (Open Collector)	ACON-PO-2I-NP-2-0		Pulse train input type with open collector support	(-)			-		
Serial Communication Type		ACON-SE-2I-N-0-0	Dedicated to serial communication	64 points			-		
Field Network Type		RACON-2	Dedicated to field network	768 points			-	→ P503	
Program Control Type		ASEL-C-1-2I-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			-	→ P567	

IAI

RCL-SM4L 382

Type

Controllers Integrated

> Roc Type

Min

ontrollers ntegrated

/Flat Type

Ctondovd

Gripper Rotary Type

Тур

Cleanroon Proo

plash Proo

Controlle

PSEP /ASEP

ERC

.

SCON

PSEL

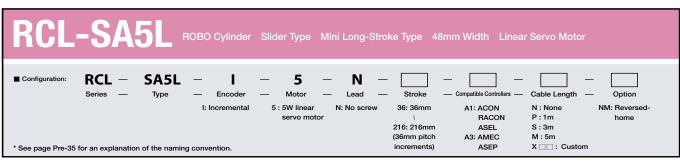
SSEL

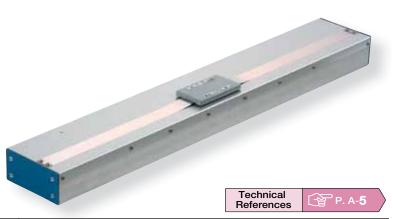
Pulse Moto

Servo Motor (24V)

Servo Motor (200V)

> Linear ervo Motor





■ Load Capacity (Horizontal) vs. Acceleration

Max. Acceleration (G)	Load Capacity (kg) Continuous Operation (100% duty)				
0.1	1.6				
0.3	1.0				
0.5	1.0				
1	0.5				
1.5	0.35				
2	0.25				

Notes on Selection

180

Actuator Specifications

- (1) Please note that this type has magnetic flux leakage.
 - (If magnetism is a problem, please use SA1L, SA2L, or SA3L)
- (2) The load capacity is determined by the acceleration and the duty. Check the load capacity on the Load Capacity (Horizontal) vs. Acceleration graph on the right.
 - The duty is $\frac{\text{Operating time}}{\text{Operating time + stationary time}} \times 100$ per cycle.
- (3) The mounting orientation is horizontal only. When operated vertically, please use caution, as the slider will fall when the power is turned OFF.
- 4) Please note that an absolute unit cannot be used.

■ Stroke and	Maximum	Speed

■ Lead and Load Capacity									
Model	Motor Output	Max. Load Capacity		Rated Thrust	Max. Momentary	Max. Acceleration	Positioning Repeatability	Stroke	
Model	(W) '	Horizontal (kg)	Vertical (kg)	(N)	Thrust (N)	(G)	(mm)	(mm)	
RCL-SA5L-I-5-N-①-②-③-④	5	See table above	-	5	18	2	±0.1	36~216 (36mm increments)	
Legend: ①Stroke ②Compatible controller ③Cable length ④Options									

		a maximum opeca
	Stroke	36 ~ 216 (36mm increments)
s)	(No lead screw)	1400
		(Unit: mm/s)

① Stroke Li	st
Stroke (mm)	Standard Price
36	-
72	-
108	1
144	-

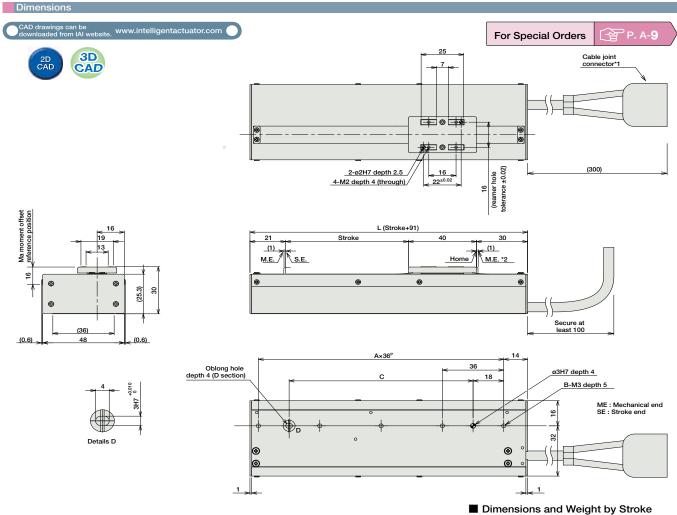
© Cabic List					
Туре	Cable Symbol	Standard Price			
Standard Type	P (1m)	_			
(Robot Cables)	S (3m)	-			
(Robot Cables)	M (5m)	-			
	X06 (6m) ~ X10 (10m)	_			
Special Lengths	X11 (11m) ~ X15 (15m)	_			
	X16 (16m) ~ X20 (20m)	-			

- * The RCL comes standard with a robot cable.
- * See page A-39 for cables for maintenance.

3 Cable List

4 Options List			
Name	Option Code	See Page	Standard Price
Reversed-home	NM	→ A-33	1

Actuator Specifications						
Item	Description					
Drive System	Linear servo motor					
Encoder Resolution	0.042mm					
Base	Material: Aluminum (white alumite treated)					
Allowable Dynamic Moment (Note)	Ma: 0.49N·m Mb: 0.41N·m Mc: 0.72N·m					
Overhang Load Length	Ma direction: 80mm or less Mb, Mc direction: 100mm or less					
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)					



*1 The motor-encoder cable is connected here. See page A-39 for details on cables.

*2 When homing, the slider moves to the mechanical end; therefore, please watch for any interference with the surrounding objects.

Stroke	36	72	108	144	180	216
L	127	163	199	235	271	307
Α	3	4	5	6	7	8
В	4	5	6	7	8	9
С	72	108	144	180	216	252
Weight (kg)	0.35	0.42	0.48	0.55	0.62	0.68

ווכיו	(`omr	atible	control	lor -

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	Standard Price	See Page	
AMEC-C-5I-NP-2-1 Easy-to-use controller, Solenoid Valve Type		Easy-to-use controller, even for beginners		AC100V	2.4A rated	-	→ P477		
Soleriold valve Type =	1	ASEP-C-5I-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types.	3 points			-	D407	
Splash-Proof Solenoid Valve Type			No homing necessary with simple absolute type.				-	→ P487	
Positioner Type	ACON-C-5I-NP-2-0			512 points			-		
Safety-Compliant Positioner Type		ACON-CG-5I-NP-2-0	Positioning is possible for up to 512 points	312 points			-		
Pulse Train Input Type Differential Line Driver)	ACON-PL-5I-NP-2-0 ACON-PO-5I-NP-2-0		Pulse train input type with differential line driver support	(-)	DC24V	6.4A max.	-	→ P535	
Pulse Train Input Type (Open Collector)			Pulse train input type with open collector support				-		
Serial Communication Type		ACON-SE-5I-N-0-0	Dedicated to serial communication	64 points			-		
Field Network Type	e RACON-5 Dedicated to field network		768 points			-	→ P503		
Program Control Type		ASEL-C-1-5I-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			-	→ P567	

IAI

RCL-SA5L 384

Туре

Standard

ontrollers ntegrated

> Roo Type

Mir

ontrollers ntegrated

/Flat Type

Gripper Rotary Type

Type

Cleanroom Proo

plash Proo

Controller

PSEP /ASEP

ERC2

ACON

ASE

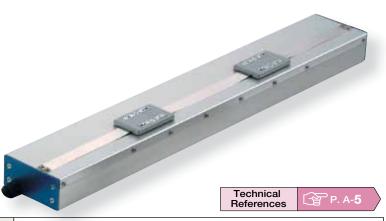
Carvo Motor

Servo Motor

Linear ervo Motor

205

■ Configuration: RCL -SM5L 5:5W linear 36: 36mm A1: ACON N: None servo motor RACON P:1m 144: 144mm S:3m ASEL (36mm pitch A3: AMEC increments) X □□: Custom * See page Pre-35 for an explanation of the naming convention.



■ Load Capacity (Horizontal) vs. Acceleration

Max.	Load Capacity (kg)	
Acceleration (G)	Continuous Operation (100% duty)	
0.1	1.6	
0.3	1.0	
0.5	1.0	
1	0.5	
1.5	0.35	
2	0.25	

Please note that this type has magnetic flux leakage.
 (If magnetism is a problem, please use SA1L, SA2L, or SA3L)

 The load canacity is determined by the acceleration and the content of th

(2) The load capacity is determined by the acceleration and the duty. Check the load capacity on the Load Capacity (Horizontal) vs. Acceleration graph on the right.

The duty is $\frac{\text{Operating time}}{\text{Operating time} + \text{stationary time}}$ ×100 per cycle.

(3) The mounting orientation is horizontal only. When operated vertically, please use caution, as the slider will fall when the power is turned OFF.

(4) Please note that an absolute unit cannot be used.

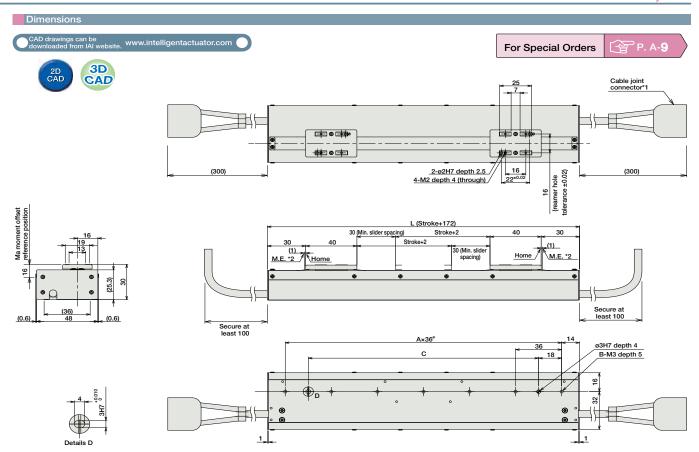
Actuator Specifications										
■ Lead and Load Capacity ■ Stroke and Maximum Speed										
Model	Motor Output	Max. Load	d Capacity	Rated Thrust	Max. Momentary	Max. Acceleration	Positioning Repeatability	Stroke	Stroke	36 ∼ 144
Wode	(W)	Horizontal (kg)	Vertical (kg)	(N)	Thrust (N)	(G)	(mm)	(mm)	Lead	(36mm increments)
RCL-SM5L-I-5-N-①-②-③	5	See table above	-	5	18	2	±0.1	36~144 (36mm increments)	(No lead screw)	1400
Legend: ①Stroke ②Compatible controller ③Cable length (Unit: mm/s)										

① Stroke List						
Stroke (mm)	Standard Price					
36	-					
72	-					
108	-					
144	_					

	③ Cable List							
	Туре	Cable Symbol	Standard Price					
	Standard Type	P (1m)	_					
		S (3m)	-					
	(Robot Cables)	M (5m)	-					
		X06 (6m) ~ X10 (10m)	-					
	Special Lengths	X11 (11m) ~ X15 (15m)	_					
		X16 (16m) ~ X20 (20m)						

- * The RCL comes standard with a robot cable.
- * See page A-39 for cables for maintenance.

Actuator Specifications					
Item	Description				
Drive System	Linear servo motor				
Encoder Resolution	0.042mm				
Base	Material: Aluminum (white alumite treated)				
Allowable Dynamic Moment (Note)	Ma: 0.49N·m Mb: 0.41N·m Mc: 0.72N·m				
Overhang Load Length	Ma direction: 80mm or less Mb, Mc direction: 100mm or less				
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)				



*1 The motor-encoder cable is connected here. See page A-39 for details on cables.

*2 When homing, the slider moves to the mechanical end; therefore, please watch for any interference with the surrounding objects.

A controller is required for each slider.
(or, one unit of 2-axis controller is required.)

■ Dimensions and Weight by Stroke

ME : Mechanical end SE : Stroke end

Stroke	36	72	108	144		
L	208	244	280	316		
Α	5	6	7	8		
В	6	7	8	9		
С	144	180	216	252		
Weight (kg)	0.62	0.69	0.75	0.82		

(2)	Compa	tiblo	control	lor

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	Standard Price	See Page	
Solenoid Valve Type		AMEC-C-5I-NP-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	-	→ P477	
Solenoid valve Type		ASEP-C-5I-NP-2-0	Operable with same signal as solenoid valve.	3 points			-	→ P487	
Splash-Proof Solenoid Valve Type	1	ASEP-CW-5I-NP-2-0	Supports both single and double solenoid types. No homing necessary with simple absolute type.				-	→ P487	
Positioner Type	ACON-C-5I-NI	Í	ACON-C-5I-NP-2-0	Positioning is possible for up to 512 points	512 points			-	
Safety-Compliant Positioner Type		ACON-CG-5I-NP-2-0		312 points			-		
Pulse Train Input Type (Differential Line Driver)		ACON-PL-5I-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	6.4A max.	-	→ P535	
Pulse Train Input Type (Open Collector)		ACON-PO-5I-NP-2-0	Pulse train input type with open collector support	(-)			-		
Serial Communication Type		ACON-SE-5I-N-0-0	Dedicated to serial communication	64 points			-		
Field Network Type		RACON-5	Dedicated to field network	768 points			-	→ P503	
Program Control Type		ASEL-C-1-5I-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			-	→ P567	

* This is for the single-axis ASEL.

IAI RCL-SM5L 386

Slider Type

Mini

Controller

Rod Type

Mini

Controllers

Table/Arm

/Flat Type

Standard

Gripper/ Rotary Type

Linear Servo Type

Cleanroom

ontrollers

PSEP /ASEP

ROBO NET

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PSEL

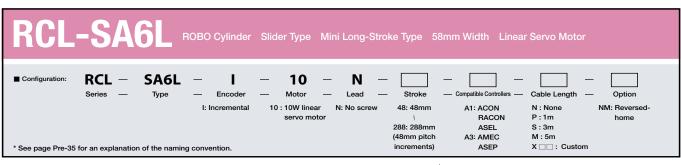
ASEL

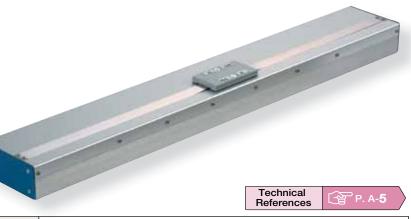
Pulse Moto

Servo Mot

Servo Mo

Linear Servo Mo





■ Load Capacity (Horizontal) vs. Acceleration Max. Load Capacity (kg) Acceleration (G)

Continuous Operation (100% duty) 0.1 3.2 0.3 0.5 2 1 1 1.5 0.65 2 0.5

Please note that this type has magnetic flux leakage (If magnetism is a problem, please use SA1L, SA2L, or SA3L) The load capacity is determined by the acceleration and the duty.

 $\label{lem:check} \mbox{Check the load capacity on the Load Capacity (Horizontal) vs. Acceleration graph on the right.}$

Operating time The duty is Operating time + stationary time ×100 per cycle.

The mounting orientation is horizontal only. When operated vertically, please use caution, as the slider will fall when the power is turned OFF.

(4) Please note that an absolute unit cannot be used.

Actuator Specifications										
■ Lead and Load Capacity ■ Stroke and Maximum Speed										
Model	Motor Output	Max. Load	Capacity	Rated Thrust	Max. Momentary	Max. Acceleration	Positioning Repeatability	Stroke	Stroke	48 ~ 288
Wodel	(W)	Horizontal (kg)	Vertical (kg)	(N)	Thrust (N)	(G)	(mm)	(mm)	Lead	(48mm increments)
RCL-SA6L-I-10-N-①-②-③-④	10	See table above	I	10	30	2	±0.1	48~288 (48mm increments)	(No lead screw)	1600
Legend: ①Stroke ②Compatible controller ③Cable length ④Options (Unit: mm/s)										

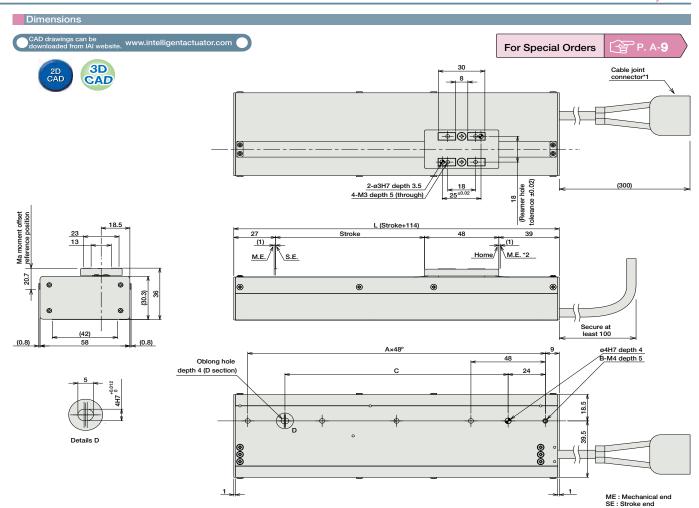
① Stroke Li	① Stroke List						
Stroke (mm)	Standard Price						
48	-						
96	-						
144	-						
192	-						
240	-						
288	-						

③ Cable List						
Туре	Cable Symbol	Standard Price				
Standard Type	P (1m)	-				
1	S (3m)	-				
(Robot Cables)	M (5m)	-				
	X06 (6m) ~ X10 (10m)	-				
Special Lengths	X11 (11m) ~ X15 (15m)	_				
	X16 (16m) ~ X20 (20m)	_				

- * The RCL comes standard with a robot cable.
- * See page A-39 for cables for maintenance.

Option Code	See Page	Standard Price
NM	ightarrow A-33	1
		-1

Actuator Specifications					
Item	Description				
Drive System	Linear servo motor				
Encoder Resolution	0.042mm				
Base	Material: Aluminum (white alumite treated)				
Allowable Dynamic Moment (Note)	Ma: 0.87N·m Mb: 0.75N·m Mc: 1.22N·m				
Overhang Load Length	Ma direction: 80mm or less Mb·Mc direction: 120mm or less				
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)				



*1 The motor-encoder cable is connected here. See page A-39 for details on cables.

*2 When homing, the slider moves to the mechanical end; therefore, please watch for any interference with the surrounding objects.

■ Dimensions and Weight by Stroke

	- Dimensions and Weight by eache					
Stroke	48	96	144	192	240	288
L	162	210	258	306	354	402
Α	3	4	5	6	7	8
В	4	5	6	7	8	9
С	96	144	192	240	288	336
Weight (kg)	0.67	0.8	0.93	1.07	1.2	1.34

② Compatible controller

The RCL series actuators can operate with the controllers below. Select the controller according to your usage.								
Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	Standard Price	See Page
Solenoid Valve Type	la constitution de la constituti	AMEC-C-10I-NP-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	-	→ P477
Colciloid valve Type		ASEP-C-10I-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types.	3 points			-	→ P487
Splash-Proof Solenoid Valve Type		ASEP-CW-10I-NP-2-0	No homing necessary with simple absolute type.				-	→ P407
Positioner Type	Ĥ	ACON-C-10I-NP-2-0	Positioning is possible for up to 512 points	512 points			-	
Safety-Compliant Positioner Type		ACON-CG-10I-NP-2-0	Positioning is possible for up to 312 points	312 points			-	
Pulse Train Input Type (Differential Line Driver)		ACON-PL-10I-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	6.4A max.	-	→ P535
Pulse Train Input Type (Open Collector)		ACON-PO-10I-NP-2-0	Pulse train input type with open collector support	(-)			-	
Serial Communication Type		ACON-SE-10I-N-0-0	Dedicated to serial communication	64 points			-	
Field Network Type		RACON-10	Dedicated to field network	768 points			-	→ P503
Program Control Type		ASEL-C-1-10I-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			-	→ P567

This is for the single-axis ASEL.

Type

Mini

ontrollers integrated

> Roc Type

Mir

ontrollers Integrated

/Flat Type

Mini

Gripper Rotary Type

Type

Cleanroon Proo

plash Proo

Controllers

PSEP /ASEP

ERC2

PSEL

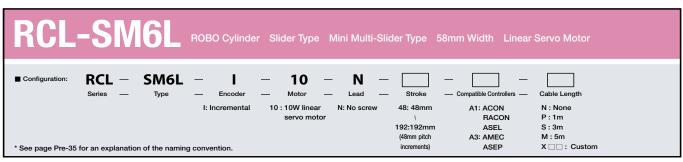
SSEL

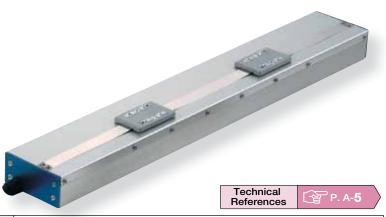
Pulse Motor

Servo Moto (24V

Servo Motor (200V)

> Linear ervo Motor





Load Capacity (Horizontal) vs. Acceleration

Max. Acceleration	Load Capacity (kg) Continuous Operation (100% duty)
0.1	3.2
0.3	3.2
0.5	2
1	1
1.5	0.65
2	0.5

) Please note that this type has magnetic flux leakage. (If magnetism is a problem, please use SA1L, SA2L, or SA3L)

(2) The load capacity is determined by the acceleration and the duty.

The duty is Operating time Operating time + stationary time x100 per cycle.

(3) The mounting orientation is horizontal only. When operated vertically, please use caution, as the slider will fall when the power is turned OFF.

(4) Please note that an absolute unit cannot be used.

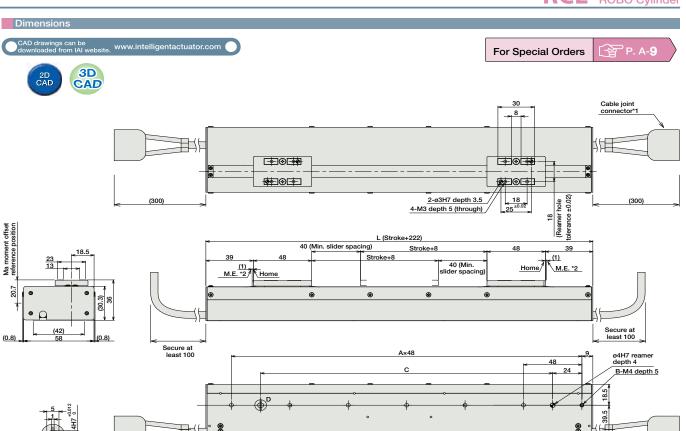
Actuator Specifications										
■ Lead and Load Capacity ■ Stroke and Maximum Speed										
Model	Motor Output	Max. Load	Capacity	Rated Thrust	Max. Momentary	Max. Acceleration	Positioning	Stroke	Stroke	48 ∼ 192
Model	(W) ·	Horizontal (kg)	Vertical (kg)	(N)	Thrust (N)	Acceleration Repeatability (mm)	Lead	(48mm increments)		
RCL-SM6L-I-10-N-①-②-③	10	See table above	-	10	30	2	±0.1	48~192 (48mm increments)	(No lead screw)	1600
Legend: ① Stroke ② Compatible controller ③ Cable length (Unit: mm/s)										

① Stroke List					
Stroke (mm)	Standard Price				
48	-				
96	-				
144	-				
192	-				

3 Cable List					
Туре	Cable Symbol	Standard Price			
Standard Type	P (1m)	-			
	S (3m)	-			
(Robot Cables)	M (5m)	-			
	X06 (6m) ~ X10 (10m)	-			
Special Lengths	X11 (11m) ~ X15 (15m)	-			
	X16 (16m) ~ X20 (20m)	_			

- * The RCL comes standard with a robot cable.
- * See page A-39 for cables for maintenance.

Actuator Specifications					
Item	Description				
Drive System	Linear servo motor				
Encoder Resolution	0.042mm				
Base	Material: Aluminum (white alumite treated)				
Allowable Dynamic Moment (Note)	Ma: 0.87N·m Mb: 0.75N·m Mc: 1.22N·m				
Overhang Load Length	Ma direction: 80mm or less Mb·Mc direction: 120mm or less				
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)				



*1 The motor-encoder cable is connected here. See page A-39 for details on cables.

*2 When homing, the slider moves to the mechanical end; therefore, please watch for any interference with the surrounding objects.

A controller is required for each slider. (or, one unit of 2-axis controller is required.)

■ Dimensions and Weight by Stroke

ME : Mechanical end SE : Stroke end

Stroke	48	96	144	192
L	270	318	366	414
Α	5	6	7	8
В	6	7	8	9
С	192	240	288	336
Weight (kg)	1.17	1.31	1.44	1.58

	Compatible contro	
(Z)	Compatible contro	iller -

Details D

The RCL series actuators can operate with the controllers below. Select the controller according to your usage.								
Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	Standard Price	See Page
Solenoid Valve Type		AMEC-C-10I-NP-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	-	→ P477
Solenoid valve Type	1	ASEP-C-10I-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types.	3 points			-	→ P487
Splash-Proof Solenoid Valve Type	D	ASEP-CW-10I-NP-2-0	No homing necessary with simple absolute type.				-	
Positioner Type	I	ACON-C-10I-NP-2-0	Positioning is possible for up to 512 points	512 points			-	
Safety-Compliant Positioner Type		ACON-CG-10I-NP-2-0	rositioning is possible for up to 312 points	512 points	DC24V	6.4A max.	-	
Pulse Train Input Type (Differential Line Driver)	O.	ACON-PL-10I-NP-2-0	Pulse train input type with differential line driver support	DC24V			-	→ P535
Pulse Train Input Type (Open Collector)	ė.	ACON-PO-10I-NP-2-0	Pulse train input type with open collector support			-		
Serial Communication Type		ACON-SE-10I-N-0-0	Dedicated to serial communication	64 points			-	
Field Network Type		RACON-10	Dedicated to field network	768 points			-	→ P503
Program Control Type		ASEL-C-1-10I-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			-	→ P567

* This is for the single-axis ASEL.

* See page Pre-35 for an explanation of the naming convention.

■ Configuration: RCL -RA1L 25 B : Brake (with brake box) BN: Brake (without brake box) 2:2W linear 25: 25mm A1: ACON N: None servo motor RACON P:1m S:3m ASEL M : 5m A3: AMEC X □□: Custom



[全 P. A-**5** References The load capacity is determined by the acceleration and the duty.

Check the load capacity on the Load Capacity (Horizontal) vs. Acceleration graph on the right. Operating time The duty is Operating time + stationary time ×100 per cycle.

- (2) If you will be operating the actuator vertically, please use the optional brake.
- Please use an external guide to avoid horizontal or rotational load on the rod.
- (4) The pushing force will fluctuate significantly at low electrical limits.
- (5) Please note that an absolute unit cannot be used.

■ Load Capacity (Horizontal) vs. Acceleration

Max.	Load Capacity (kg)				
Acceleration	Continuous (100%		(70% or less duty)		
(G)	Horizontal Vertical		Horizontal	Vertical	
0.1	0.5				
0.3	0.5	0.1	0.5	0.1	
0.5	0.42	0.1			
1	0.2		0.25		
1.5	0.11	-	0.15	-	
2	0.07	ı	0.1	-	

■ Pushing Force Guideline

The pushing motion is possible within the values below. (N)

Electrical Limit	30%	40%	50%	60%	70%	80%
Pushing Force	0.75	1	1.25	1.5	1.75	2

(Note) The above pushing force is applicable to horizontal usage. For vertical upward motions, subtract 0.5N from the above value, and for downward motions, add 0.5N.

Actuator Specifications Lead and Load Capacity ■ Stroke and Maximum Speed Model Stroke (mm) See table 25 RCL-RA1L-I-2-N-25-1 - 2 - 3 2.5 10 ±0.1 (No lead screw) 300 (Fixed) above above (Unit: mm/s) Legend ① Compatible controller ② Cable length ③ Options

Stroke List	
Stroke (mm)	Standard Price
25	-

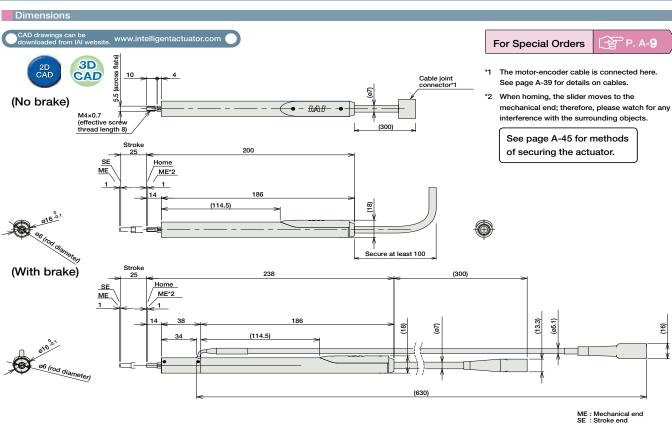
2 Gable List					
Type	Cable Symbol	Standard Price			
Type	Cable Symbol	No Brake	With Break		
Standard Type	P (1m)	-	-		
	S (3m)	-	-		
(Robot Cables)	M (5m)	-	-		
	X06 (6m) ~ X10 (10m)	-	-		
Special Lengths	X11 (11m) ~ X15 (15m)	-	-		
	X16 (16m) ~ X20 (20m)	-	-		

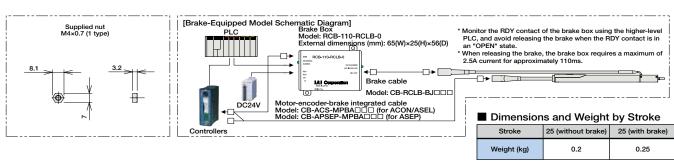
- * The RCL comes standard with a robot cable.
- * See page A-39 for cables for the brake-less model.
- * See page 392 for cables for the brake-equipped model.

3 Option Price List			
Name	Option Code	See Page	Standard Price
Brake (with brake box)	В	→ P392	-
Brake (without brake box)	BN	→ P392	-

 $^{^{\}star}$ To use the brake, a brake box and a dedicated cable for the brake-equipped model are required. If you just need the brake-equipped actuator itself for maintenance, please specify option "BN" (no brake box).

Actuator Specifications					
Item	Description				
Drive System	Linear servo motor				
Encoder Resolution	0.042mm				
Base	Material: Carbon steel tube (nickel-plated)				
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)				
Service Life	10 million round trip cycles				





The RCL series actuators can operate with the controllers below. Select the controller according to your usa	① Compatible Controllers
	The RCL series actuators can operate with the controllers below. Select the controller according to your usage

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	Standard Price	See Page
Onland Makes Toron		AMEC-C-2I-NP-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	-	→ P477
Solenoid Valve Type		ASEP-C-2I-NP-2-0	Operable with same signal as solenoid valve.	3 points			-	→ P487
Splash-Proof Solenoid Valve Type		ASEP-CW-2I-NP-2-0	Supports both single and double solenoid types. No homing necessary with simple absolute type.				-	→ F40
Positioner Type	ACON-C-2I-NP-2-0	Positioning is possible for up to 512 points	512 points			-		
Safety-Compliant Positioner Type		ACON-CG-2I-NP-2-0	Positioning is possible for up to 512 points Pulse train input type with differential line driver support	5 312 points			-	
Pulse Train Input Type Differential Line Driver)	O.	ACON-PL-2I-NP-2-0		(-)	DC24V	4.6A max.	-	→ P53
Pulse Train Input Type (Open Collector)	e l	ACON-PO-2I-NP-2-0	Pulse train input type with open collector support	(-)			-	
Serial Communication Type		ACON-SE-2I-N-0-0	Dedicated to serial communication	64 points			-	
Field Network Type		RACON-2	Dedicated to field network	768 points			-	→ P50
Program Control Type		ASEL-C-1-2I-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			-	→ P56

RCL-RA1L 392

Controllers

PMEC
//AMEC

PSEP
//ASEP

ROBO
NET

ERC2

PCON

ACON

SCON

PSEL

ASEL

XSEL

* See page Pre-35 for an explanation of the naming convention.

Type

Standard

ontrollers ntegrated

> Roi Typ

Min

ontrollers Integrated

/Flat Type

Standard

Gripper Rotary Type

Туре

Proo

Splash Proof

Controller

PSEP /ASEP

ERC2

FUUI

SCON

ASE

XSE

Pulse Motor

Servo Moto (24V)

Servo Motor (200V)

> Linear ervo Motor



Technical References P. A-5

The load capacity is determined by the acceleration and the duty.

Check the load capacity on the Load Capacity (Horizontal) vs. Acceleration graph on the right.

The duty is Operating time + stationary time

**100 per cycle.

- (2) If you will be operating the actuator vertically, please use the optional brake.
- (3) Please use an external guide to avoid horizontal or rotational load on the rod.
- (4) The pushing force will fluctuate significantly at low electrical limits.
- (5) Please note that an absolute unit cannot be used.

ASEP X .: Custom Load Capacity (Horizontal) vs. Acceleration

Load Capacity (Horizontal) vs. Acceleration								
Load Capacity (kg)								
		(70% or less duty)						
Horizontal	Vertical	Horizontal	Vertical					
1	1							
•	0.2	1	0.2					
0.85	0.2		0.2					
0.4		0.5						
0.24	-	0.3	-					
0.15	ı	0.2	-					
	Continuous (100% Horizontal 1 0.85 0.4 0.24	Continuous Operation (100% duty) Horizontal Vertical 1	Load Capacity (kg)					

■ Pushing Force Guideline

A3: AMEC

The pushing motion is possible within the values below. (N)

Electrical Limit	30%	40%	50%	60%	70%	80%
Pushing Force	1.5	2	2.5	3	3.5	4

(Note) The above pushing force is applicable to horizontal usage. For vertical upward motions, subtract 1N from the above value, and for downward motions, add 1N.

Actuator Specifications Lead and Load Capacity ■ Stroke and Maximum Speed 30 Model Motor Outpu (W) Stroke (mm) See table 30 RCL-RA2L-I-5-N-30-1 - 2 - 3 5 18 ±0.1 (No lead screw) 340 Vertical 1G above above (Fixed) (Unit: mm/s) Legend ① Compatible controller ② Cable length ③ Options

Stroke List	
Stroke (mm)	Standard Price
30	_

2 Cable List							
Tuna	Cabla Combal	Standard Price					
Туре	Cable Symbol	No Brake	With Break				
Standard Type	P (1m)	-	-				
	S (3m)	-	-				
(Robot Cables)	M (5m)	-	-				
	X06 (6m) ~ X10 (10m)	-	_				
Special Lengths	X11 (11m) ~ X15 (15m)	_	_				
	X16 (16m) ~ X20 (20m)	-	_				

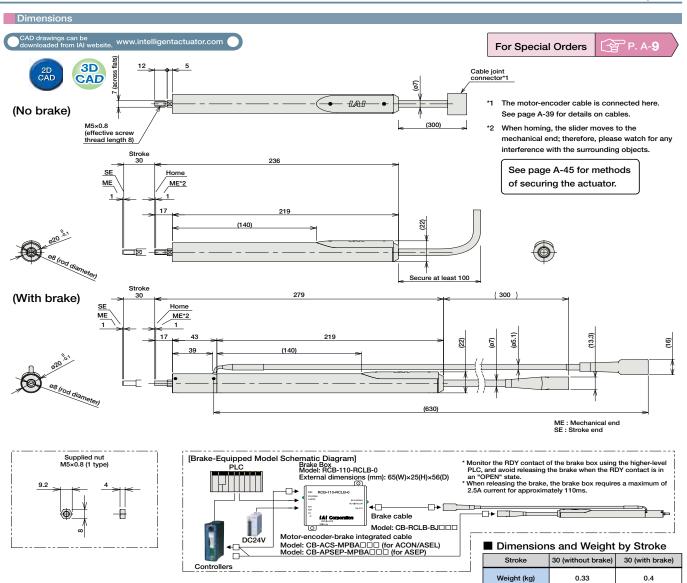
- * The RCL comes standard with a robot cable.
- * See page A-39 for cables for the brake-less model.
- * See page 394 for cables for the brake-equipped model.

3 Option Price List			
Name	Option Code	See Page	Standard Price
Brake (with brake box)	В	→ P394	-
Brake (without brake box)	BN	→ P394	-

^{*} To use the brake, a brake box and a dedicated cable for the brake-equipped model are required.

If you just need the brake-equipped actuator itself for maintenance, please specify option "BN" (no brake box)

Actuator Specification	Actuator Specifications					
Item	Description					
Drive System	Linear servo motor					
Encoder Resolution	0.042mm					
Base	Material: Carbon steel tube (nickel-plated)					
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)					
Service Life	10 million round trip cycles					



Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	Standard Price	See Page	
Dalamaid Malama Tana		AMEC-C-5I-NP-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	-	→ P477	
Solenoid Valve Type -	i	ASEP-C-5I-NP-2-0	Operable with same signal as solenoid valve.	3 points			-		
Splash-Proof Solenoid Valve Type		ASEP-CW-5I-NP-2-0	Supports both single and double solenoid types. No homing necessary with simple absolute type.	No homing possessory with simple absolute type				-	→ P487
Positioner Type	Í	ACON-C-5I-NP-2-0			-				
Safety-Compliant Positioner Type		ACON-CG-5I-NP-2-0	- Positioning is possible for up to 512 points	512 points			-		
Pulse Train Input Type Differential Line Driver)	O.	ACON-PL-5I-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	6.4A max.	-	→ P535	
Pulse Train Input Type (Open Collector)		ACON-PO-5I-NP-2-0	Pulse train input type with open collector support	(-)			-		
Serial Communication Type		ACON-SE-5I-N-0-0	Dedicated to serial communication	64 points			<u>-</u>		
Field Network Type		RACON-5	Dedicated to field network	768 points			-	→ P503	
Program Control Type		ASEL-C-1-5I-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			-	→ P567	

RCL-RA2L 394 IAI

* See page Pre-35 for an explanation of the naming convention.

Type Mini

Standard

ontrollers ntegrated

> Ro Typ

Min

ontrollers ntegrated

/Flat Type

Standard

Rotary Type

Cleanroom

Controllers

PSEP /ASEP

ERC

AUUI

PSEL

SSE

Pulse Motor

Servo Motor (24V)

Servo Motor (200V)

> Linear ervo Motor

■ Configuration: RCL -RA3L 10 40 B : Brake (with brake box) BN: Brake (without brake box) 10:10W linear 40: 40mm A1: ACON N : None servo motor RACON P:1m S : 3m ASEL M : 5m A3: AMEC

Technical References

Notes on Selection

The load capacity is determined by the acceleration and the duty.

Check the load capacity on the Load Capacity (Horizontal) vs. Acceleration graph on the right.

 $\label{eq:continuity} The \mbox{ duty is } \quad \frac{\mbox{ Operating time}}{\mbox{ Operating time} + \mbox{ stationary time}} \quad \times 100 \quad \mbox{ per cycle.}$

- (2) If you will be operating the actuator vertically, please use the optional brake.
- (3) Please use an external guide to avoid horizontal or rotational load on the rod.
- (4) The pushing force will fluctuate significantly at low electrical limits.
- (5) Please note that an absolute unit cannot be used.

ASEP X □□: Custom Load Capacity (Horizontal) vs. Acceleration

Mari	Load Capacity (kg)					
Max. Acceleration	Continuous (100%		(70% or less duty)			
(G)	Horizontal	Vertical	Horizontal	Vertical		
0.1	2					
0.3	-	0.4	2	0.4		
0.5	1.6	0.4		0.4		
1	0.78		1			
1.5	0.46	-	0.6	-		
2	0.3	-	0.4	-		

■ Pushing Force Guideline

The pushing motion is possible within the values below. (N)

Electrical Limit	30%	40%	50%	60%	70%	80%
Pushing Force	3	4	5	6	7	8

(Note) The above pushing force is applicable to horizontal usage. For vertical upward motions, subtract 1.8N from the above value, and for downward motions, add 1.8N.

	Actuator Specifications												
■ Lead and Load Capacity ■ Stroke and Maximum Speed											d Maximum Speed		
	Model	Motor Output	Max. Load Capacity R		Rated Thrust	Max. Momentary	Max. Acceleration	Positioning Repeatability	Stroke	Stroke	40		
	Wouei	(W)	Horizontal (kg)	Vertical (kg)	(N)	Thrust (N)	(G)	(mm)	(mm)	Lead	(mm)		
	RCL-RA3L-I-10-N-40-①-②-③	10	See table above	See table above	10	30	Horizontal 2G Vertical 1G	+0.1	40 (Fixed)	(No lead screw)	450		
	Legend ① Compatible controller ② Cabl	e length	③ Option	s							(Unit: mm		

Stroke List	
Stroke (mm)	Standard Price
40	

2 Cable List					
Type	Cable Symbol	Standard Price			
Турс	Cable Cymbol	No Brake	With Break		
Standard Type	P (1m)	_	_		
(Robot Cables)	S (3m)	-	-		
(Robot Cables)	M (5m)	ı	-		
	X06 (6m) ~ X10 (10m)	-	-		
Special Lengths	X11 (11m) ~ X15 (15m)	-	-		
	X16 (16m) ~ X20 (20m)	ı	-		

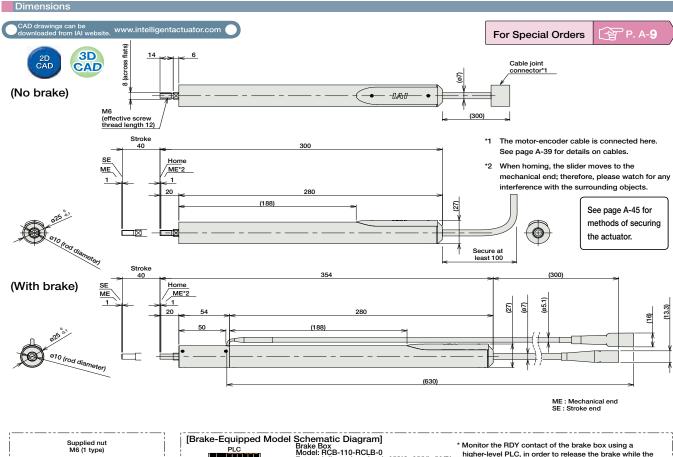
- * The RCL comes standard with a robot cable.
- * See page A-39 for cables for the brake-less model.
- * See page 396 for cables for the brake-equipped model.

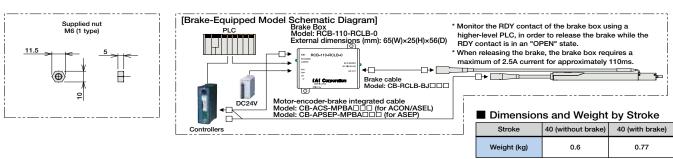
3 Option Price List			
Name	Option Code	See Page	Standard Price
Brake (with brake box)	В	→ P396	-
Brake (without brake box)	BN	→ P396	_

^{*} To use the brake, a brake box and a dedicated cable for the brake-equipped model are required.

If you just need the brake-equipped actuator itself for maintenance, please specify option "BN" (no brake box).

Actuator Specifications					
Item	Description				
Drive System	Linear servo motor				
Encoder Resolution	0.042mm				
Base	Material: Carbon steel tube (nickel-plated)				
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (non-condensing)				
Service Life	10 million round trip cycles				





Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	Standard Price	See Page
Dalamaid Value Tona	M	AMEC-C-10I-NP-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	-	→ P477
Solenoid Valve Type	1	ASEP-C-10I-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types. No homing necessary with simple absolute type.	3 points		6.4A max.	-	→ P487
Splash-Proof Solenoid Valve Type	1	ASEP-CW-10I-NP-2-0					-	
Positioner Type		ACON-C-10I-NP-2-0	Positioning is possible for up to 512 points	512 points			-	→ P535
Safety-Compliant Positioner Type		ACON-CG-10I-NP-2-0	r ustituting is possible for up to 312 points				-	
Pulse Train Input Type Differential Line Driver)	O.	ACON-PL-10I-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V		-	
Pulse Train Input Type (Open Collector)		ACON-PO-10I-NP-2-0	Pulse train input type with open collector support	(-)			-	
Serial Communication Type		ACON-SE-10I-N-0-0	Dedicated to serial communication	64 points			-	
Field Network Type		RACON-10	Dedicated to field network	768 points			-	→ P503
Program Control Type		ASEL-C-1-10I-NP-2-0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			-	→ P567

Slider Type

Mini

Controlle Integrate

> Rod Type

Mini

Standard

Controllers Integrated

/Flat Type

Mini

Standard

Linear Servo

Cleanroom

Proof

Splash Proof

Controllers

/AMEC PSEP

ROBO NET

ERC2

TOOK

PSEL

ASEL

Servo Mot

Servo Mot (200V)

Servo Moto