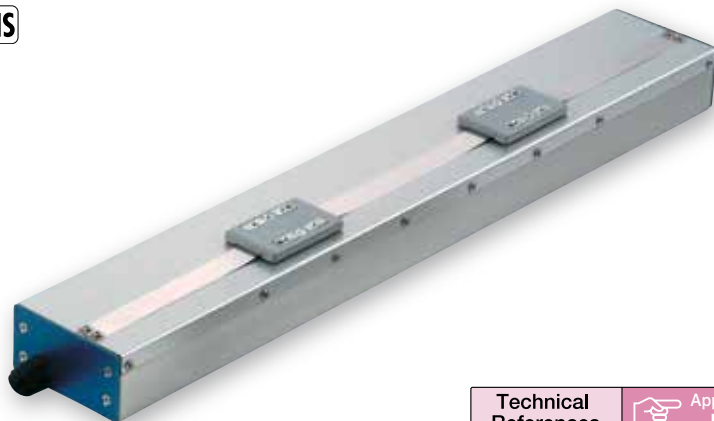


# RCL-SM5L

ROBO Cylinder, Slider Type, Mini Multi-Slider Type, Actuator Width 48mm, Linear Servo Motor

Model Specification Items	<b>RCL</b> — <b>SM5L</b> — <b>I</b> — <b>5</b> — <b>N</b> — <input type="text"/> — <input type="text"/> — <input type="text"/>
	Series — Type — Encoder type — Motor type — Lead — Stroke — Applicable controller — Cable length
	I: Incremental specification    5: Linear servo motor 5W    N: No screw    36: 36mm ? 144: 144mm (36mm pitch increments)
	A1: ACON    ASEL    A3: AMEC    ASEP    MSEP    N: None    P: 1m    S: 3m    M: 5m    X <input type="checkbox"/> : Custom Length

\* See page Pre-47 for details on the model descriptions.



Technical References Appendix P.5

### Relation between payload (horizontal) and acceleration

Maximum Acceleration (G)	Load Capacity (kg)	
	Continuous operation (Duty is 100%)	
0.1	1.6	
0.3		
0.5	1.0	
1	0.5	
1.5	0.35	
2	0.25	

**POINT** Notes on selection

- Please take care because this type has magnetic flux leakage. (If magnetism is a problem, use SA1L/SA2L/SA3L)
- The payload is determined by the acceleration and duty. Verify the payload in the payload (horizontal) and acceleration chart at right.  
The duty is  $\frac{\text{Operating time}}{\text{Operating time} + \text{stop time}} \times 100$  per cycle.
- The mounting position is horizontal-only. Please take care because the slider will drop down with power OFF when operating vertically.
- Simple absolute unit cannot be used with the RCL series.

### Actuator Specifications

#### Lead and Payload

Model number	Motor output(W)	Maximum payload		Rated thrust (N)	Instantaneous maximum thrust (N)	Maximum acceleration (G)	Positioning repeatability (mm)	Stroke (mm)
		Horizontal (kg)	Vertical (kg)					
RCL-SM5L-I-5-N-①-②-③	5	See chart above	—	5	18	2	±0.1	36~144 (Every 36mm)

#### Stroke and Maximum Speed

Stroke Lead	36~144 (Every 36mm)
(no screw)	1400

Code explanation ① Stroke ② Applicable controller ③ Cable length

(Unit: mm/s)

#### ① Stroke

① Stroke (mm)	Standard price
36	—
72	—
108	—
144	—

#### ③ Cable Length

Type	Cable symbol	Standard price
Standard (Robot Cables)	P (1m)	—
	S (3m)	—
	M (5m)	—
Special length	X06 (6m) ~ X10 (10m)	—
	X11 (11m) ~ X15 (15m)	—
	X16 (16m) ~ X20 (20m)	—
		—

\* The standard cable for the RCL is the robot cable.  
\* See page A-59 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 (*)	Ma: 0.49 N·m, Mb: 0.41 N·m, Mc: 0.72 N·m
Overhung load length	Ma direction: 80mm or less Mb and Mc directions: 100mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

(\*) Based on 5,000km of traveling life

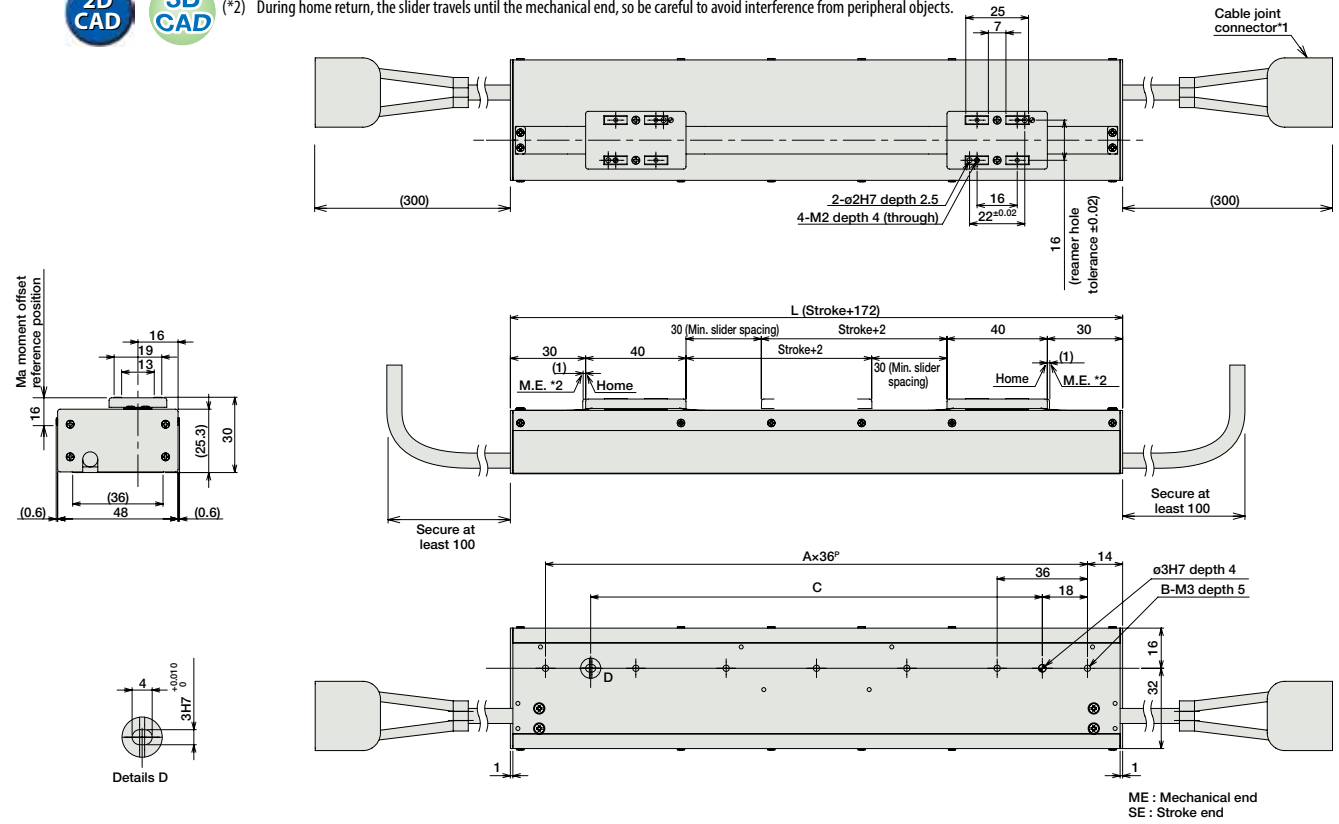
Dimensional Drawings

CAD drawings can be downloaded from the website. [www.intelligentactuator.com](http://www.intelligentactuator.com)

For Special Orders Appendix P.15



- (\*1) Connect the motor-encoder integrated cable here. See page A-59 for details on cables.
- (\*2) During home return, the slider travels until the mechanical end, so be careful to avoid interference from peripheral objects.



Dimensions and Weight by Stroke

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

Note:  
One controller is required for each slider.  
(Or, one 2-axis controller is required.)

② Applicable Controllers

RCL series actuators can be operated with the controllers indicated below. Select the type according to your intended application.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Solenoid Valve Type		AMEC-C-51-①-2-1	Easy-to-use controller, even for beginners	3 points	AC100V	2.4A rated	—	→ P537
		ASEP-C-51-①-2-0	Simple controller operable with the same signal as a solenoid valve					→ P547
Solenoid valve multi-axis type PIO specification		MSEP-C-①①-①-2-0	Positioner type based on PIO control, allowing up to 8 axes to be connected	256 points	DC24V	1.0A rated 6.4A max.	—	→ P563
Solenoid valve multi-axis type Network specification		MSEP-C-①①-①①-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected					→ P631
Positioner type		ACON-C-51-①-2-0	Positioning is possible for up to 512 points	512 points	DC24V	1.0A rated 6.4A max.	—	—
Safety-Compliant Positioner Type		ACON-CG-51-①-2-0						
Pulse Train Input Type (Differential Line Driver)		ACON-PL-51-①-2-0	Pulse train input type with differential line driver support	(—)	DC24V	1.0A rated 6.4A max.	—	→ P631
Pulse Train Input Type (Open Collector)		ACON-PO-51-①-2-0	Pulse train input type with open collector support					
Serial Communication Type		ACON-SE-51-N-0-0	Dedicated Serial Communication	64 points	DC24V	1.0A rated 6.4A max.	—	—
Program Control Type		ASEL-CS-1-51-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points	DC24V	1.0A rated 6.4A max.	—	→ P675

\* This is for the single-axis ASEL. \* ① indicates I/O type (NP/PN). \* ①① indicates number of axes (1 to 8). \* ①①① indicates field network specification symbol.

- Slider Type
- Mini
- Standard
- Controllers Integrated
- Rod Type
- Mini
- Standard
- Controllers Integrated
- Table/Arm/Flat Type
- Mini
- Standard
- Gripper/Rotary Type
- Linear Servo Type
- Clean-room Type
- Splash-Proof Type
- Pulse Motor
- Servo Motor (24V)
- Servo Motor (200V)
- Linear Servo Motor