

RCL-SA6L

ROBO Cylinder Slider Type Mini Long-Stroke Type 58mm Width Linear Servo Motor

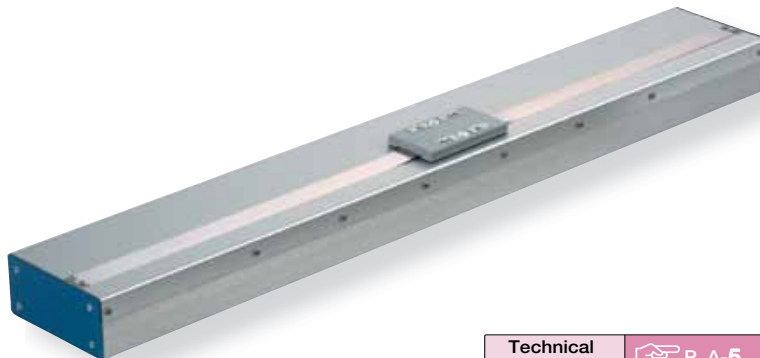
■ Configuration: **RCL** — **SA6L** — **I** — **10** — **N** — — — —

Series — Type — Encoder — Motor — Lead — Stroke — Compatible Controllers — Cable Length — Option

I: Incremental 10: 10W linear servo motor N: No screw 48: 48mm
288: 288mm (48mm pitch increments)

A1: ACON RACON ASEL A3: AMEC ASEP
N: None P: 1m S: 3m M: 5m X : Custom
NM: Reversed-home

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



Technical References P. A-5

- POINT** (Notes on Selection)
- 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. Check the load capacity on the Load Capacity (Horizontal) vs. Acceleration graph on the right. The duty is $\frac{\text{Operating time}}{\text{Operating time} + \text{stationary time}} \times 100$ 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.
 - Please note that an absolute unit cannot be used.

Load Capacity (Horizontal) vs. Acceleration

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

Actuator Specifications

Lead and Load Capacity

| Model | Motor Output (W) | Max. Load Capacity | | Rated Thrust (N) | Max. Momentary Thrust (N) | Max. Acceleration (G) | Positioning Repeatability (mm) | Stroke (mm) |
|-------------------------|------------------|--------------------|---------------|------------------|---------------------------|-----------------------|--------------------------------|--------------------------|
| | | Horizontal (kg) | Vertical (kg) | | | | | |
| RCL-SA6L-I-10-N-①-②-③-④ | 10 | See table above | - | 10 | 30 | 2 | ±0.1 | 48~288 (48mm increments) |

Legend: ① Stroke ② Compatible controller ③ Cable length ④ Options

Stroke and Maximum Speed

| Lead | Stroke | 48 ~ 288 (48mm increments) |
|------|-----------------|----------------------------|
| | (No lead screw) | 1600 |

(Unit: mm/s)

① Stroke List

| Stroke (mm) | Standard Price |
|-------------|----------------|
| 48 | - |
| 96 | - |
| 144 | - |
| 192 | - |
| 240 | - |
| 288 | - |

③ Cable List

| Type | Cable Symbol | Standard Price |
|------------------------------|-----------------------|----------------|
| Standard Type (Robot Cables) | P (1m) | - |
| | S (3m) | - |
| | 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.

④ Options 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: 0.87N·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) |

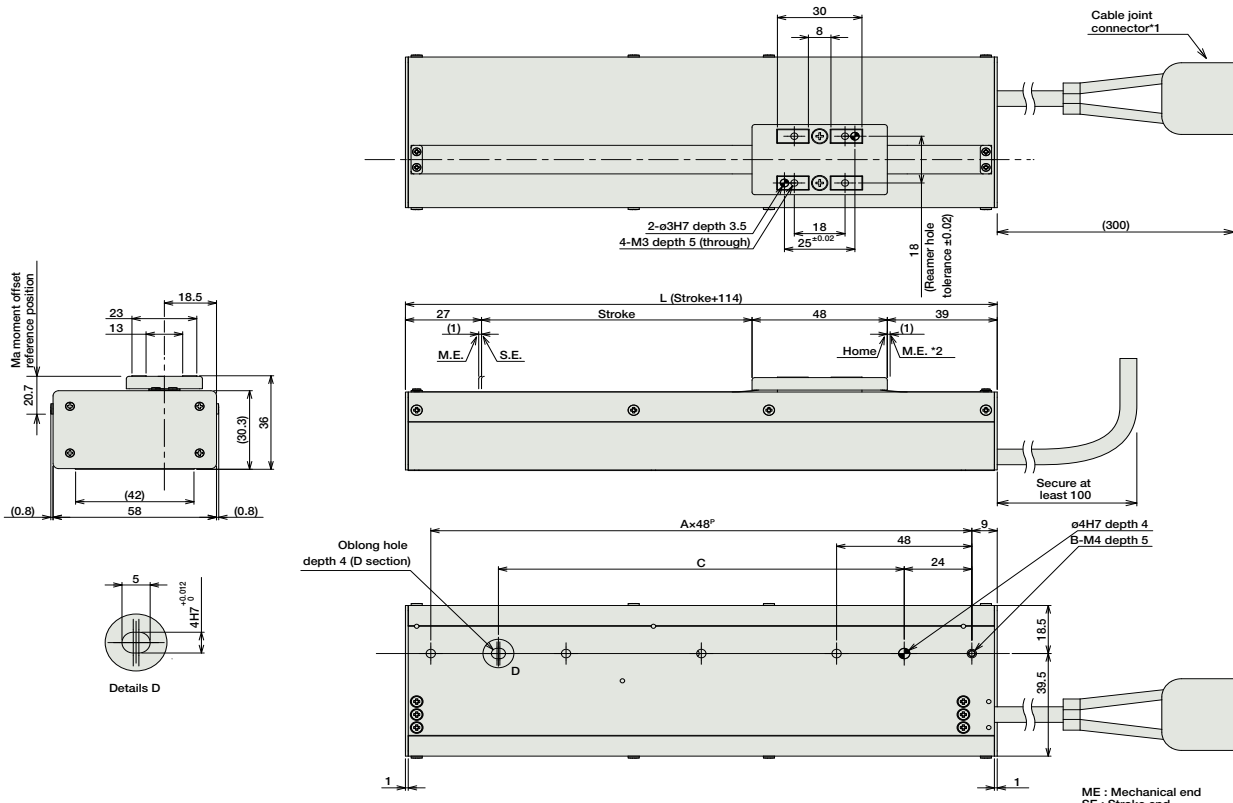
(Note) Based on a 5,000km service life.

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RCL-SA6L

Dimensions

For Special Orders P. A-9



- *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

| Stroke | 48 | 96 | 144 | 192 | 240 | 288 |
|-------------|------|-----|------|------|-----|------|
| L | 162 | 210 | 258 | 306 | 354 | 402 |
| A | 3 | 4 | 5 | 6 | 7 | 8 |
| B | 4 | 5 | 6 | 7 | 8 | 9 |
| C | 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 | | AMEC-C-10I-NP-2-1 | Easy-to-use controller, even for beginners | 3 points | AC100V | 2.4A rated | - | → P477 |
| | | 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. | | | | | → P487 |
| Splash-Proof Solenoid Valve Type | | ASEP-CW-10I-NP-2-0 | | | | | | |
| 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 | | | | | | |
| 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.

- Slider Type
- Mini
- Standard
- Controllers Integrated
- Rod Type
- Mini
- Standard
- Controllers Integrated
- Table/Arm /Flat Type
- Mini
- Standard
- Gripper/ Rotary Type
- Linear Servo Type
- Cleanroom Proof
- Splash Proof
- Controllers
- PMEC /AMEC
- PSEP /ASEP
- ROBO NET
- ERC2
- PCON
- ACON
- SCON
- PSEL
- ASEL
- SSEL
- XSEL
- Pulse Motor
- Servo Motor (24V)
- Servo Motor (200V)
- Linear Servo Motor