**RCL-SM6L**

**ROBO Cylinder**

**Slider Type**

**Mini Multi-Slider Type**

**58mm Width**

**Linear Servo Motor**

**Configuration:**

- **RCL – SM6L – I – 10 – N –**
  - Encoder: Incremental
  - Motion: 10 : 10W linear servo motor
  - Lead: No screw
  - Stroke: 48-488mm
  - Load: 192-192mm (48mm pitch increments)

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

**Actuator Specifications**

- **Model:** RCL-SM6L-I-10-N-
  - Stroke List:
    - 48
    - 96
    - 144
    - 192

**Load Capacity (Horizontal) vs. Acceleration**

<table>
<thead>
<tr>
<th>Max. Acceleration (G)</th>
<th>Load Capacity (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1</td>
<td>3.2</td>
</tr>
<tr>
<td>0.3</td>
<td>2</td>
</tr>
<tr>
<td>0.5</td>
<td>1.5</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1.5</td>
<td>0.65</td>
</tr>
<tr>
<td>2</td>
<td>0.5</td>
</tr>
</tbody>
</table>

**Load Capacity (Horizontal) vs. Acceleration (Over 100% Duty)**

- **Continuous Operation**
  - Operating time: \( \times 100 \) per cycle.

**Stroke and Maximum Speed**

- **Max. Stroke (mm):** 48 – 192 (48mm increments)
  - (No lead screw): 1600

**Technical References**

- P. A-5

**Notes on Selection**

1. Please note that this type has magnetic flux leakage.
   - (If magnetism is a problem, please use SA4L, SA5L, or SA6L)
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.
   - Operating 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.

**Legend:**

- **1:** Stroke
- **2:** Compatible controller
- **3:** Cable length

**Actuator Specifications**

**Model**

- **RCL-SM6L-I-10-N-**
  - Stroke: 48 – 192
  - Lead: 30
  - N: No screw
  - Stroke and Maximum Speed:
    - Stroke: 48 – 192
    - (48mm increments)
    - (No lead screw): 1600

**Cable List**

- **Type: Standard Cable**
  - **Cable Symbol:** P, S, M
  - **Standard Price:** ~

- **Special Lengths:**
  - **Length (mm):** X06, X10, X15
  - **Standard Price:** ~

*See page A-39 for cables for maintenance.

**Actuator Specifications**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive System</td>
<td>Linear servo motor</td>
</tr>
<tr>
<td>Encoder Resolution</td>
<td>0.042mm</td>
</tr>
<tr>
<td>Base Material</td>
<td>Aluminum (white alumite treated)</td>
</tr>
<tr>
<td>Allowable Dynamic Moment (N/mm)</td>
<td>0.87N/m – 0.75N/m – 1.22N/m</td>
</tr>
<tr>
<td>Overhang Load Length</td>
<td>Max: 80mm or less – Mb-M: 125mm or less</td>
</tr>
<tr>
<td>Ambient Operating Temp/Humidity</td>
<td>0 – 40°C, 85% RH or less (non-condensing)</td>
</tr>
</tbody>
</table>

(Note) Based on a 5,000km service life.
**Dimensions and Weight by Stroke**

<table>
<thead>
<tr>
<th>Stroke</th>
<th>40</th>
<th>46</th>
<th>54</th>
<th>60</th>
<th>68</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>48</td>
<td>56</td>
<td>64</td>
<td>72</td>
<td>80</td>
</tr>
<tr>
<td>B</td>
<td>64</td>
<td>72</td>
<td>80</td>
<td>88</td>
<td>96</td>
</tr>
<tr>
<td>C</td>
<td>80</td>
<td>88</td>
<td>96</td>
<td>104</td>
<td>112</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>1.17</td>
<td>1.31</td>
<td>1.44</td>
<td>1.59</td>
<td></td>
</tr>
</tbody>
</table>

**Dimensions**

- 40 mm: Home, Stroke ± 40 mm
- 46 mm: Home, Stroke ± 46 mm
- 54 mm: Home, Stroke ± 54 mm
- 60 mm: Home, Stroke ± 60 mm
- 68 mm: Home, Stroke ± 68 mm
- 48 mm: Home, Stroke ± 48 mm
- 80 mm: Home, Stroke ± 80 mm

**Note:**

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

**Compatible Controller**

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

<table>
<thead>
<tr>
<th>Name</th>
<th>External View</th>
<th>Model</th>
<th>Description</th>
<th>Max. Positioning Points</th>
<th>Input Voltage</th>
<th>Power Supply Capacity</th>
<th>Standard Price</th>
<th>See Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solenoid Valve</td>
<td></td>
<td>ASEC-C-10I-10P-D-1</td>
<td>Easy-to-use controller with 10 points</td>
<td>10 points</td>
<td>AC100V</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ASEP-C-10I-10P-D-2</td>
<td>Operable with 10 points</td>
<td>10 points</td>
<td>AC240V</td>
<td>4.4A rated</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ASEP-CW-10I-10P-D-3</td>
<td>Operable with 10 points</td>
<td>10 points</td>
<td>DC24V</td>
<td>4.4A max.</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ASEC-C-10I-10P-D-4</td>
<td>Operable with 10 points</td>
<td>10 points</td>
<td>DC24V</td>
<td>4.4A max.</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ASEP-CW-10I-10P-D-5</td>
<td>Operable with 10 points</td>
<td>10 points</td>
<td>DC24V</td>
<td>4.4A max.</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Note:**

- This is for the single-axis ASEL.