**RCP3-ROBO Cylinder**

### Actuator Specifications

#### RCP3-ROBO Cylinder: Slider Type 32mm Width  Pulse Motor Side-Mounted Motor

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>l: Incremental</td>
<td>28P: Pulse motor</td>
<td>28: size</td>
<td>6: 4mm</td>
<td>50: 50mm</td>
<td>Cable Length</td>
<td>Option</td>
</tr>
</tbody>
</table>

* The Simple absolute encoder models are labeled as "l".
* See page Pre-35 for explanation of each code that make up the configuration name.

**Note:**

1. Since the RCP3 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.

2. The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 2mm-lead models). These values are the upper limits for the acceleration.

**Actuator Specifications**

#### RCP3-S4AR

**RCP3-SA3R-I-28P-6-**

<table>
<thead>
<tr>
<th>Model</th>
<th>Lead (mm)</th>
<th>Max. Load Capacity Vertical (kg)</th>
<th>Load Capacity (kg) Vertical (kg)</th>
<th>Max. Push Force (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCP3-SA3R-I-28P-6-</td>
<td>6</td>
<td>1</td>
<td>0.5</td>
<td>15</td>
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</tbody>
</table>

**RCP3-SA3R-I-28P-4-**

<table>
<thead>
<tr>
<th>Model</th>
<th>Lead (mm)</th>
<th>Max. Load Capacity Vertical (kg)</th>
<th>Load Capacity (kg) Vertical (kg)</th>
<th>Max. Push Force (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCP3-SA3R-I-28P-4-</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>22</td>
</tr>
</tbody>
</table>

**RCP3-SA3R-I-28P-2-**

<table>
<thead>
<tr>
<th>Model</th>
<th>Lead (mm)</th>
<th>Max. Load Capacity Vertical (kg)</th>
<th>Load Capacity (kg) Vertical (kg)</th>
<th>Max. Push Force (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCP3-SA3R-I-28P-2-</td>
<td>2</td>
<td>3</td>
<td>1.5</td>
<td>44</td>
</tr>
</tbody>
</table>

**Model:**

- **P3**: PMEC
- **M3**: AMEC
- **L3**: ASEP
- **N3**: SCON
- **M**: PCON
- **B**: ERC

**Series:**

- **A**: 32mm
- **B**: 10mm
- **C**: 6.5mm

**Type:**

- **C**: Standard
- **N**: Cleanroom
- **E**: Table/Arm
- **L**: XSEL
- **P**: PSEL

**Note:**

- The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 2mm-lead model, or when used vertically).
- See Options below for cable length.

**Speed vs. Load Capacity**

Due to the characteristics of the pulse motor, the RCP3 series load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.

- **Speed (mm/s):** 0, 50, 100, 150, 200, 250, 300
- **Load Capacity (kg):** 0.5, 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5

**Stroke and Maximum Speed**

<table>
<thead>
<tr>
<th>Model</th>
<th>Lead (mm)</th>
<th>Max. Load Capacity Vertical (kg)</th>
<th>Load Capacity (kg) Vertical (kg)</th>
<th>Max. Push Force (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCP3-SA3R-I-28P-6-</td>
<td>6</td>
<td>3</td>
<td>2.0</td>
<td>300</td>
</tr>
<tr>
<td>RCP3-SA3R-I-28P-4-</td>
<td>4</td>
<td>2</td>
<td>1.5</td>
<td>200</td>
</tr>
<tr>
<td>RCP3-SA3R-I-28P-2-</td>
<td>2</td>
<td>3</td>
<td>1.0</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>Lead (mm)</th>
<th>Max. Load Capacity Vertical (kg)</th>
<th>Load Capacity (kg) Vertical (kg)</th>
<th>Max. Push Force (N)</th>
</tr>
</thead>
</table>

**Cable List**

<table>
<thead>
<tr>
<th>Cable Symbol</th>
<th>Standard Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>1</td>
</tr>
<tr>
<td>M</td>
<td>2</td>
</tr>
<tr>
<td>X06</td>
<td>3</td>
</tr>
<tr>
<td>X11</td>
<td>4</td>
</tr>
<tr>
<td>X16</td>
<td>5</td>
</tr>
</tbody>
</table>

**Notes on Selection**

- The standard cable is the motor-encoder integrated robot cable.
- See page A-39 for cables for maintenance.

**Technical References**

- A-5

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**Actuator Specifications**

- **Drive System:** Ball screw Ø6mm C10 grade
- **Positioning Repetitability:** ±0.02mm
- **Cable Exit Direction (Top):** Left-Mounted Motor (Standard)
- **Cable Exit Direction (Bottom):** Left-Mounted Motor (Standard)
- **Cable Exit Direction (Middle):** Left-Mounted Motor (Standard)
- **Cable Exit Direction (Bottom):** Left-Mounted Motor (Standard)
- **Cable Exit Direction (Middle):** Left-Mounted Motor (Standard)
- **Cable Exit Direction (Bottom):** Left-Mounted Motor (Standard)
- **Cable Exit Direction (Middle):** Left-Mounted Motor (Standard)
- **Cable Exit Direction (Bottom):** Left-Mounted Motor (Standard)
- **Cable Exit Direction (Middle):** Left-Mounted Motor (Standard)
- **Cable Exit Direction (Bottom):** Left-Mounted Motor (Standard)

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**Option List**

<table>
<thead>
<tr>
<th>Name</th>
<th>Option Code</th>
<th>See Page</th>
<th>Standard Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brake-Equipped</td>
<td>B</td>
<td>A-25</td>
<td></td>
</tr>
<tr>
<td>Cable Exit Direction (Top)</td>
<td>CJT</td>
<td>A-25</td>
<td></td>
</tr>
<tr>
<td>Cable Exit Direction (Middle)</td>
<td>CJO</td>
<td>A-25</td>
<td></td>
</tr>
<tr>
<td>Cable Exit Direction (Bottom)</td>
<td>CJB</td>
<td>A-25</td>
<td></td>
</tr>
<tr>
<td>Left-Mounted Motor (Standard)</td>
<td>ML</td>
<td>A-33</td>
<td></td>
</tr>
<tr>
<td>Right-Mounted Motor</td>
<td>MR</td>
<td>A-33</td>
<td></td>
</tr>
<tr>
<td>No Cover</td>
<td>NCO</td>
<td>A-33</td>
<td></td>
</tr>
<tr>
<td>Reversed-Home</td>
<td>NM</td>
<td>A-33</td>
<td></td>
</tr>
</tbody>
</table>

**Actuator Specifications**

- **Lost Motion:** ±0.02mm
- **Ball screw Ø6mm C10 grade**
- **Material: Aluminum**
- **Motor: 5.0N.m**
- **Allowable Dynamic Load Moment:** ±0.5N.m
- **Allowable Static Load Moment:** ±1.0N.m
- **Vertical Overhang Load Length:** 100mm or less
- **Horizontal Overhang Load Length:** 200mm or less
- **Ambient Operating Temp./Humidity:** 0~40°C, 85% RH or less (non-condensing)
- **Overhang Load Length:** 5,000 km service life

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**References**

- Technical References: A-5
## Dimensions

### Dimensions/Weight by Stroke

<table>
<thead>
<tr>
<th>Stroke</th>
<th>50</th>
<th>100</th>
<th>150</th>
<th>200</th>
<th>250</th>
<th>300</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>143</td>
<td>193</td>
<td>243</td>
<td>293</td>
<td>343</td>
<td>393</td>
</tr>
<tr>
<td>B</td>
<td>84</td>
<td>84</td>
<td>84</td>
<td>84</td>
<td>84</td>
<td>84</td>
</tr>
</tbody>
</table>

### Weight

- With Cover
  - 0.0, 0.0, 0.0, 1.5, 1.5, 1.5
- No Cover
  - 0.0, 0.0, 0.0, 0.9, 0.9, 1.0

### Motor-encoder cable connector (*1)

- Secure at least 100
  - 32
  - 25
  - 32
  - 38

### Motor-encoder cable from bottom of base

- 4.4
- 4.4
- 21.4
- 21.4

### Details of F

- 32
- 32
- 40
- 29

With Brake

### Dimensions

- ME : Mechanical end
- SE : Stroke end

### Reference position for calculating the moment Ma

- Brake-equipped model is heavier by 0.2kg.

### Table

<table>
<thead>
<tr>
<th>Name</th>
<th>External Use</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 Type</td>
<td>PNMC-C-28PI-NP-2-0</td>
<td>Easy-to-use controller, even for beginners</td>
<td>3 points</td>
<td>AC100V</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Pulse Train Input Type (Differential Line Driver)</td>
<td>PCOM-PL-28PI-NP-2-0</td>
<td>Pulse train input type with differential line driver support</td>
<td>–</td>
<td>DC14V</td>
<td>3A Max.</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Field Network Type</td>
<td>RPCEN-2IP</td>
<td>Dedicated to field network</td>
<td>783 points</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Program Control Type</td>
<td>PSCL-1-28PI-NP-2-0</td>
<td>Programmed operation is possible. Can operate up to 2 axes</td>
<td>1500 points</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
</tbody>
</table>

### Note

- (*1) The motor-encoder cable provided is an integrated cable. (See page A-39)
- (*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.
- (*3) Reference position for calculating the moment Ma

### Controllers

- PMEC-C-28PI-NP-2-0
  - Easy-to-use controller, even for beginners
  - Operable with same signal as solenoid valve.
  - Supports both single and double solenoid types.
  - No homing necessary with simple absolute type.
  - DC24V 2A Max.

- PMEC-CW-28PI-NP-2-0
  - Positioning is possible for up to 512 points
  - Pulse train input type with differential line driver support
  - –
  - DCON-2IP
  - Dedicated to field network
  - 783 points

- PSCL-1-28PI-NP-2-0
  - Programmed operation is possible. Can operate up to 2 axes

### Special Orders

- For Special Orders

### Controllers

- PMEC-C-28PI-NP-2-0
  - Easy-to-use controller, even for beginners
  - Operable with same signal as solenoid valve.
  - Supports both single and double solenoid types.
  - No homing necessary with simple absolute type.
- PMEC-CW-28PI-NP-2-0
  - Positioning is possible for up to 512 points
  - Pulse train input type with differential line driver support
- PSCL-1-28PI-NP-2-0
  - Programmed operation is possible. Can operate up to 2 axes

### Note

- (*1) The motor-encoder cable provided is an integrated cable. (See page A-39)
- (*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.
- (*3) Reference position for calculating the moment Ma

### Reference

- (*3) Reference position for calculating the moment Ma

### Brake-equipped model

- Brake-equipped model is heavier by 0.2kg.