Field Network Controllers

RCP2/RCP3/RCP4 Position Controller PowerCon 150

RCP2/RCP2W Position Controller High-thrust Motor Type

www.robocylinder.de
Supporting seven major field networks
DeviceNet, CC-Link, PROFIBUS-DP, CompoNet, MECHATROLINK (I, II), EtherCAT and EtherNet/IP are supported. Key features include wire-saving, direct numerical specification, position number specification, and current position read.

PCON-CFA for high-thrust motors

<table>
<thead>
<tr>
<th>Supported actuators</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PCON-CA</td>
<td>RoboCylinder RCP4 / RCP3 / RCP2 series</td>
</tr>
<tr>
<td>PCON-CFA</td>
<td>RoboCylinder RCP2-RA8C / RA8R / RA10C / HS8C / HS8R series</td>
</tr>
<tr>
<td></td>
<td>RoboCylinder splash-proof RCP2W-SA16C / RA10C series</td>
</tr>
</tbody>
</table>

List of Models

RoboCylinder Position Controller PowerCon <PCON-CA>

<p>| External view |  |</p>
<table>
<thead>
<tr>
<th>I/O type</th>
<th>Positioner type</th>
<th>Pulse-train type</th>
<th>Field network type</th>
</tr>
</thead>
<tbody>
<tr>
<td>I/O type model code</td>
<td>DeviceNet connection specification</td>
<td>CC-Link connection specification</td>
<td>PROFIBUS-DP connection specification</td>
</tr>
<tr>
<td>Incremental specification</td>
<td>NP/PN</td>
<td>PLN/PLP</td>
<td>DV</td>
</tr>
<tr>
<td>Simple absolute specification</td>
<td>With absolute battery</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Only with absolute connection</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

RoboCylinder Position Controller High-thrust Motor Type <PCON-CFA>

<p>| External view |  |</p>
<table>
<thead>
<tr>
<th>I/O type</th>
<th>Positioner type</th>
<th>Pulse-train type</th>
<th>Field network type</th>
</tr>
</thead>
<tbody>
<tr>
<td>I/O type model code</td>
<td>DeviceNet connection specification</td>
<td>CC-Link connection specification</td>
<td>PROFIBUS-DP connection specification</td>
</tr>
<tr>
<td>Incremental specification</td>
<td>NP/PN</td>
<td>PLN/PLP</td>
<td>DV</td>
</tr>
</tbody>
</table>
**Model Number**

---

**<Controller>**

<table>
<thead>
<tr>
<th>Series</th>
<th>Type</th>
<th>Motor type</th>
<th>Encoder type</th>
<th>I/O type</th>
<th>I/O cable length</th>
<th>Power supply voltage</th>
<th>Simple absolute specification</th>
<th>Actuator mounting specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCON</td>
<td>CA</td>
<td>Standard type</td>
<td>Incremental</td>
<td>0</td>
<td>No cable</td>
<td>DC24V</td>
<td>AB</td>
<td>Screw fastening specification</td>
</tr>
</tbody>
</table>

---

**<Controller>**

<table>
<thead>
<tr>
<th>Series</th>
<th>Type</th>
<th>Motor type</th>
<th>Encoder type</th>
<th>I/O type</th>
<th>I/O cable length</th>
<th>Power supply voltage</th>
<th>Simple absolute specification</th>
<th>Actuator mounting specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCON</td>
<td>CFA</td>
<td>High-thrust motor type</td>
<td>Incremental</td>
<td>0</td>
<td>No cable</td>
<td>DC24V</td>
<td>AB</td>
<td>Screw fastening specification</td>
</tr>
</tbody>
</table>

---

**Specification Table**

- **Item**: Number of controlled axes
  - **Description**: 1 axis
- **Item**: Power supply voltage
  - **Description**: 24 VDC ± 10%
- **Item**: Load capacity
  - **Description**: 1 A max.
- **Item**: Motor type
  - **Description**: PCON2, PCON3, PCON4
- **Item**: Pulse-train (PNP) specification
  - **Description**: 2.2 A max.
- **Item**: High-output setting enabled: 3.5 A rated / 4.2 A max.
- **Item**: Current consumption of controlled axes included (Note 1)
  - **Description**: 10 A
- **Item**: Rush current (Note 2)
  - **Description**: 3 A
- **Item**: Momentary power failure resistance
  - **Description**: 500 μs max.
- **Item**: Actuator cable length
  - **Description**: 20 m max.
- **Item**: External interface
  - **Description**: DC24V, 0/DC24V
- **Item**: Input pulse
  - **Description**: Differential method (line driver method): 200 kpps max. / Cable length: 10 m max.
- **Item**: Command pulse magnification
  - **Description**: 1/50 < A/B < 50/1
  - **Setting range of A and B (set by parameters): 1 to 4096
- **Item**: Feedback pulse output
  - **Description**: None
- **Item**: Isolation resistance
  - **Description**: 500 VDC 100 MΩ or more
- **Item**: Electric shock protection mechanism
  - **Description**: Class II basic isolation
- **Item**: Simple absolute specification
  - **Description**: Scrubbing current: 275 g or less / DIN rail securing: 805 g or less
- **Item**: Cooling method
  - **Description**: Natural air cooling
- **Item**: Ambient operating humidity
  - **Description**: 85%RH or less (non-condensing)
- **Item**: Protection degree
  - **Description**: IP20

---

**Note 1)** The value increases by 0.3 A for the field network specification.

**Note 2)** After the power is turned on, rush current will flow for approx. 5 msec (at 40°C). Take note that the rush current varies depending on the impedance of the power-supply line.

**Note 3)** The value increases by 30 g for the field network specification.
External Dimensions

**<PCON-CA>**

<table>
<thead>
<tr>
<th>Incremental specification</th>
<th>Screw fastening specification</th>
<th>Incremental specification</th>
<th>DIN rail mounting specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Diagram" /></td>
<td><img src="image2" alt="Diagram" /></td>
<td><img src="image3" alt="Diagram" /></td>
<td><img src="image4" alt="Diagram" /></td>
</tr>
</tbody>
</table>

**Simple absolute specification**

- **With absolute battery**
  - Absolute battery
  - *The absolute battery is installed on the left side when the controller is viewed from the front side.*

- **DIN rail mounting specification**
  - Absolute battery unit
  - *The above absolute battery unit comes with the controller.*

**<PCON-CFA>**

<table>
<thead>
<tr>
<th>Incremental specification</th>
<th>Screw fastening specification</th>
<th>Incremental specification</th>
<th>DIN rail mounting specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image5" alt="Diagram" /></td>
<td><img src="image6" alt="Diagram" /></td>
<td><img src="image7" alt="Diagram" /></td>
<td><img src="image8" alt="Diagram" /></td>
</tr>
</tbody>
</table>

**Simple absolute specification**

- **With absolute battery unit**
  - Absolute battery unit
  - *The above absolute battery unit comes with the controller.*

- **DIN rail mounting specification**