The PC61 is a miniature series single pole double throw contactor designed for printed circuit board mounting. Devised for both interrupted and uninterrupted loads, the PC61 is suitable for switching Resistive, Capacitive and Inductive loads. Typical applications include Telecommunication, UPS and other power conversion systems.

- **Interrupted current** - opening and closing on load with frequent switching (results in increased contact resistance).
- **Uninterrupted current** - no or infrequent load switching requirements (maintains a lower contact resistance).

The PC61 features single pole double breaking main contacts with silver alloy tips, which are weld resistant, hard wearing and have excellent conductivity. The PC61 can be secured to the printed circuit board by means of an M4 bolt.

**Note:** The PC range now incorporates the mounting board option, previously assigned to the MB range (existing MB part numbers remain valid).

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**Application**

<table>
<thead>
<tr>
<th>Thermal Current Rating (%)</th>
<th>Interrupted</th>
<th>Uninterrupted</th>
</tr>
</thead>
<tbody>
<tr>
<td>30% Duty</td>
<td>145A</td>
<td></td>
</tr>
<tr>
<td>40% Duty</td>
<td>125A</td>
<td></td>
</tr>
<tr>
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<td>115A</td>
<td></td>
</tr>
<tr>
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<td>105A</td>
<td></td>
</tr>
<tr>
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<td>95A</td>
<td></td>
</tr>
</tbody>
</table>

**Intermittent Current Rating:**

- 5 - 7 Watts

**Rated Fault Current Breaking Capacity (on) 5ms Time Constant:**

- PC61: 400A at 48V D.C.
- PC61B: 400A at 96V D.C.

**Rated Current (Uninterrupted) (in accordance with UL508):**

- PC61: 120A at 48V D.C.
- PC61B: 120A at 96V D.C.

**Maximum Recommended Contact Voltages (\(U_c\))**

- PC61: 48V D.C., 60V D.C.
- PC61B: 96V D.C., 120V D.C.

**Typical Voltage Drop per pole across New Contacts at 80A**

- 40mV

**Mechanical Durability**

- >3 x 10⁶ Cycles

**Coil Voltage Available (\(U_{coil}\)) (Rectifier board required for A.C.)**

- From 6 to 130V D.C.

**Power Dissipation:**

- Highly Intermittent Rated Types: 14 - 21 Watts
- Intermittently Rated types: 10 - 14 Watts
- Prolonged Rated Types: 7 - 10 Watts
- Continuously Rated Types: 5 - 7 Watts

**Maximum Pull-In Voltage (Coil at 20°C) Guideline:**

- Highly Intermittent Rated types (Max 25% Duty Cycle): 60% \(U_{c}\)
- Intermittently Rated types (Max 70% Duty Cycle): 60% \(U_{c}\)
- Prolonged Operation (Max 95% Duty Cycle): 60% \(U_{c}\)
- Continuously Rated Types (100% Duty Cycle): 66% \(U_{c}\)
- Drop-Out Voltage Range: 10 - 25% \(U_{c}\)
- Typical Pull-In Time: 15ms
- Typical Drop-Out Time (N/O Contacts to Open): Without Suppression 6ms
- With Diode Suppression: 35ms
- With Diode and Resistor (Subject to resistance value): 8 - 20ms
- Typical Contact Bounce Period: 3ms

**Operating Ambient Temperature**

- +40°C to +60°C

**Guideline - Contactor Weight:**

- PC61: 190 gms
- With Auxiliary: + 20 gms
- With Blowouts: + 8 gms

**Auxiliary Details**

**Auxiliary Thermal Current Rating**

- 5A

**Auxiliary Contact Switching Capabilities (Resistive Load):**

- 5A at 24V D.C.
- 1A at 60V D.C.
- 0.5A at 120V D.C.
- 0.25A at 240V D.C.

**Advised Connection Sizes for Maximum Continuous Current**

**Connection Board Tracks**

- Rated suitable for Application

**Key:**

- Interrupted
- Uninterrupted

**Note:** Where applicable values shown are at 20°C

* Please check our web site for product UL status.

† Normally Open contacts only - Normally Closed contacts are not designed to make and break current

- Performance data provided should be used as a guide only. Some de-rating or variation from figures may be necessary according to application.

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- For further technical advice email: technical@albrightinternational.com

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**PC61 Available Options**

<table>
<thead>
<tr>
<th>Suffix</th>
<th>General Options</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>Auxiliary Contacts</td>
</tr>
<tr>
<td>B</td>
<td>Magnetic Blowouts</td>
</tr>
<tr>
<td>X</td>
<td>Magnetic Blowouts - High Powered</td>
</tr>
<tr>
<td>M</td>
<td>Mounting Brackets</td>
</tr>
<tr>
<td>P</td>
<td>Environmentally Protected</td>
</tr>
<tr>
<td>T</td>
<td>EE Type (Steel Shroud)</td>
</tr>
</tbody>
</table>

**Contacts**

- Large Tips
- Textured Tips
- Silver Plating
- Washable

**Notes**

- AC Rectifier Board (Fitted)
- Coil Suppression†
- Flying Leads
- Manual Override Operation
- M4 Stud Terminals
- M5 Terminal Board
- Vacuum Impregnation

**Notes**

- Connections become polarity sensitive
- Not Available XB
- Not Suitable with Mounting Base

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**Dimensions in mm [inches]**

- Figures are for guideline purposes only

**Connection Diagram**

**Contact Performance Key:**

- Interrupted & Uninterrupted

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<tbody>
<tr>
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Mounting Boards

All configurations of the PC61 can be supplied with an optional separate mounting base which can be soldered to the circuit board. After soldering and washing the printed circuit board, the PC contactor can be plugged into the base and secured by means of an M4 nut on the underside of the board. Removal for servicing or replacement is possible by removal of the nut and unplugging the PC contactor from the base.

PC61 with Mounting Base Drawing

Installation

To accommodate the PC Contactors, printed circuit boards should be drilled in accordance with the mounting details opposite. Prior to soldering, the PC61 can be secured to the circuit board by means of a M4 bolt which protrudes from the underside of the contactor.

If the full current ratings of the contactors are to be utilised, circuit board tracks should have the appropriate thickness and width of copper. Conventional hand or wave soldering techniques can be used.

Washable Contactors and Auxiliary Contacts (PC61AW)

Normally the auxiliary contacts are supplied already fitted to the contactor. However, if the printed circuit boards are to be washed after soldering, the auxiliary contact is supplied separately and the contactor is temporarily sealed with a rubber plug. After washing this is removed and the auxiliary contact can then be fitted.

Note: The PC61AW contactors (with or without optional mounting board) are not therefore fully protected against the environment to the same degree as the PC61P.

Dimensions in mm [inches]