The DC88P series of contactors has been designed for direct current loads, particularly motors as used on electric vehicles such as industrial trucks. The DC88P is a monoblock construction, resulting in a neat compact design which is compatible with modern electronic control systems. Developed for both interrupted and uninterruptible loads, the DC88P is suitable for switching Resistive, Capacitive and Inductive loads. The DC88P is sealed to IP66 thus offering greater protection against adverse environments such as water or dust.

- **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 main contact circuit, designed for motor reversing, has a built in failsafe, so that if both coils are energised simultaneously the contact arrangement is open circuit. The DC88P has double breaking main contacts with silver alloy contact tips, which are weld resistant, hard wearing and have excellent conductivity. The DC88P M8 main stud terminals can be configured in a variety of ways in order to suit the application. Coil connections are by means of 6.3mm spades and mounting is via the supplied bracket and can be horizontal or vertical, when vertical the M8 contact studs should point upwards. If the requirement is for downwards orientation we can adjust the contactor to compensate for this.

### DC88P Contactor Performance

<table>
<thead>
<tr>
<th>Application</th>
<th>Interrupted</th>
<th>Uninterrupted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermal Current Rating (%)</td>
<td>100A</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intermittent Current Rating:</th>
</tr>
</thead>
<tbody>
<tr>
<td>30% Duty</td>
</tr>
<tr>
<td>40% Duty</td>
</tr>
<tr>
<td>50% Duty</td>
</tr>
<tr>
<td>60% Duty</td>
</tr>
<tr>
<td>70% Duty</td>
</tr>
</tbody>
</table>

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

800A at 48V D.C.

Maximum Recommended Contact Voltages ($U_{cl}$):

48V D.C.

Typical Voltage Drop per pole across New Contacts at 100A:

- Normally Open: 40mV
- Normally Closed: 50mV

Mechanical Durability: $> 5 \times 10^5$ Cycles

Coil Voltage Available ($U_k$): From 6 to 240V D.C.

Coil Power Dissipation:

- Highly Intermittent Rated Types: 20 - 30 Watts
- Intermittently Rated types: 15 - 20 Watts
- Prolonged Rated Types: 13 - 15 Watts
- Continuously Rated Types: 7 - 13 Watts

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

- Highly Intermittent Rated types (Max 75% Duty Cycle): 60%$U_k$
- Intermittently Rated types (Max 50% Duty Cycle): 60%$U_k$
- Prolonged Operation (Max 50% Duty Cycle): 60%$U_k$
- Continuously Rated Types (100% Duty Cycle): 66%$U_k$

Drop-Out Voltage Range: 10 - 25%

Typical Pull-In Time: 20ms

Typical Drop-Out Time (N/O Contacts to Open):

- Without Suppression: 5ms
- With Diode Suppression: 50ms
- With Diode and Resistor (Subject to resistance value): 8 - 20ms

Typical Main Contact Changeover Time (milliseconds):

- Normally Closed to Normally Open: 7ms
- Normally Open to Normally Closed: 4ms
- Typical Contact Bounce Period: 3ms

Guideline Contact Weight: 990 gms

Connection Conductor Sizes for Maximum Continuous Current Should be Rated Suitable for Application

<table>
<thead>
<tr>
<th>Key</th>
<th>Interrupted</th>
<th>Uninterrupted</th>
</tr>
</thead>
</table>

#### Environmentally Protected IP66

- Magnetic Blowouts - High Powered
- Armature Cap
- Mounting Brackets
- Magnetic Latching (Not fail safe)
- Closed Contact Housing
- Environmentally Protected IP66
- EE Type (Steel Shroud)

### DC88P Available Options

<table>
<thead>
<tr>
<th>General</th>
<th>Suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auxiliary Contacts</td>
<td>X</td>
</tr>
<tr>
<td>Auxiliary Contacts - V3</td>
<td>X</td>
</tr>
<tr>
<td>Magnetic Blowouts</td>
<td>X</td>
</tr>
<tr>
<td>Magnetic Blowouts - High Powered</td>
<td>X</td>
</tr>
<tr>
<td>Armature Cap</td>
<td>X</td>
</tr>
<tr>
<td>Mounting Brackets</td>
<td>●</td>
</tr>
<tr>
<td>Magnetic Latching (Not fail safe)</td>
<td>○ M</td>
</tr>
<tr>
<td>Closed Contact Housing</td>
<td>●</td>
</tr>
<tr>
<td>Environmentally Protected IP66</td>
<td>● P</td>
</tr>
<tr>
<td>EE Type (Steel Shroud)</td>
<td>X</td>
</tr>
</tbody>
</table>

#### Contacts

- Large Tips | ○ L |
- Textured Tips | ○ T |
- Silver Plating | X |

#### Coil

- AC Reactor Board (Fitted) | X |
- Coil Suppression | ○ |
- Flying Leads | ○ |
- Manual Override Operation | X |
- M4 Stud Terminals | ○ |
- M5 Terminal Board | X |
- Vacuum Impregnation | ○ |

Contact Performance Key:

- **Interrupted** and **Uninterrupted** Current

**Contact Performance Key:**

- Figures are for guideline purposes only

**Connection Diagram**

| M8 MAIN TERMINALS TO BE TIGHTENED WITHIN RANGE 6 - 3.0Nm |
| 3.0mm [0.12] SPADE TERMINALS FOR COIL CONNECTIONS |

**Dimensions in mm [inches]**

**DC88P Contactor Performance**

<table>
<thead>
<tr>
<th>Time (Seconds)</th>
<th>Current (Amperes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>100A</td>
</tr>
<tr>
<td>200</td>
<td>200W</td>
</tr>
<tr>
<td>300</td>
<td>300W</td>
</tr>
<tr>
<td>400</td>
<td>400W</td>
</tr>
<tr>
<td>500</td>
<td>500W</td>
</tr>
<tr>
<td>600</td>
<td>600W</td>
</tr>
<tr>
<td>700</td>
<td>700W</td>
</tr>
<tr>
<td>800</td>
<td>800W</td>
</tr>
<tr>
<td>900</td>
<td>900W</td>
</tr>
</tbody>
</table>

**DC88P Available Options**

- Auxiliary Contacts
- Auxiliary Contacts - V3
- Magnetic Blowouts
- Magnetic Blowouts - High Powered
- Armature Cap
- Mounting Brackets
- Magnetic Latching (Not fail safe)
- Closed Contact Housing
- Environmentally Protected IP66
- EE Type (Steel Shroud)

**Contacts**

- Large Tips
- Textured Tips
- Silver Plating

**Coil**

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

**Key:**

- Optional
- Standard
- Not Available
- Connections become polarity sensitive