The ED520 range of switches have been designed to provide a rapid means of disconnecting batteries or other power supplies in the event of serious electrical faults. Whilst the switches are primarily intended for use with battery powered vehicles they are also suitable for use with static power systems. All types are capable of safely rupturing full load battery currents in the event of an emergency.

- **Uninterrupted current** - no or infrequent load switching requirements (maintains a lower contact resistance).

The ED520 is a manually operated device with a snap action for both opening and closing of the main contacts. The ED520 is easy to install (see drilling details) and can be mounted using the main terminal busbars or secured with supplied M5 posidrive mounting screws on the frame of the device.

**Precautions:**

The switch is to be used to rupture current in an emergency or as a no-load isolator.

Do not use as a regular On-Load Switching Device.

---

### ED520 Contact Performance

Figures are for guideline purposes only

<table>
<thead>
<tr>
<th>Current (Amperes)</th>
<th>Time (Seconds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>6000</td>
</tr>
<tr>
<td>300</td>
<td>7000</td>
</tr>
<tr>
<td>400</td>
<td>8000</td>
</tr>
<tr>
<td>500</td>
<td>9000</td>
</tr>
</tbody>
</table>

**Contact Performance Key:**

- Uninterrupted Current

---

### ED520 Available Options

<table>
<thead>
<tr>
<th>General</th>
<th>Suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auxiliary Contacts</td>
<td>○ A</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>Mounting Brackets</td>
<td>X</td>
</tr>
<tr>
<td>Closed Contact Housing</td>
<td>X</td>
</tr>
<tr>
<td>Environmentally Protected IP66</td>
<td>X</td>
</tr>
<tr>
<td>EE Type (Steel Shroud)</td>
<td>X</td>
</tr>
<tr>
<td>Lockable</td>
<td>X</td>
</tr>
</tbody>
</table>

**Contacts**

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

**Key:**

- Optional ○ Standard ● Not Available X

* Connections become polarity sensitive

---

### Application Interrupted Uninterrupted

Thermal Current Rating (100%) 250A 350A

Intermittent Current Rating:

<table>
<thead>
<tr>
<th>Duty</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>30%</td>
<td>915A</td>
</tr>
<tr>
<td>40%</td>
<td>790A</td>
</tr>
<tr>
<td>50%</td>
<td>705A</td>
</tr>
<tr>
<td>60%</td>
<td>645A</td>
</tr>
<tr>
<td>70%</td>
<td>600A</td>
</tr>
</tbody>
</table>

Overload Currents that can be Ruptured:

- ED520: 750A at 60V D.C.

Maximum Recommended Contact Voltages ($U_e$):

- ED520: 60V D.C.

Typical Voltage Drop per pole across New Contacts at 500A:

- 20 - 50mV

Mechanical Durability:

- $>10^3$ Cycles

Operating Ambient Temperature:

- -40˚C to +60˚C

Guideline Contactor Weight:

- ED520: 1800 gms

With Auxiliary:

- + 20 gms

**Auxiliary Details**

- Auxiliary Thermal Current Rating: 15A

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

- 15A at 24V D.C.
- 10A at 48V D.C.
- 5A at 96V D.C.

**Advised Connection Sizes for Maximum Continuous Current**

- Copper busbar
  - 32mm$^2$ [0.50 inch$^2$]

**Key:**

- ○ = Uninterrupted

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

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### The Use of Battery Disconnecting Switches in Electric Vehicles

Modern battery powered electric vehicles are inherently very reliable and safe. However, even when sophisticated electronic controllers are used it is desirable to have a means of disconnecting the battery in the event of an emergency, such as a vehicle failing to stop or an electrical short circuit.

In many countries it is mandatory to fit one or more devices to achieve an emergency disconnection of the battery.

- Performance data provided should be used as a guide only. Some de-rating or variation from figures may be necessary according to application
- Thermal current ratings stated are dependant upon the size of conductor being used
- For further technical advice email: technical@albrightinternational.com
- Albright reserve the right to change data without prior notice