The SD200 has been designed to provide a rapid means of disconnecting batteries or other power supplies in the event of serious electrical faults.

The SD200 combines the dual function of a manual disconnect and coil operated line contactor. The benefits of this design include compact size and reduced installation costs combined with an electrical capacity sufficient for small and medium size electric vehicles.

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.

Optionally a fuseholder for an inline fuse can be provided pre-fitted. This modification adjusts the positions of the coil terminals and is suitable for ANL or MEGA fuse configurations.

**Modes of Operation:**

Knob depressed
- Coil de-energised
- Main contacts open
- N.O. auxiliary contacts open

Knob in "ON" position
- Coil de-energised
- Main contacts open
- N.O. auxiliary contacts closed

Knob in "ON" position
- Coil energised
- Main contacts closed
- N.O. auxiliary contacts closed

The operation of the switch is such that with the operating knob depressed i.e. in the "off" position, no electrical functions can take place. However, if the knob is in the "on" position, the option of energising the coil and thus closing the main contacts becomes available. The coil energisation can be carried out either through the vehicle keyswitch or as a result of a signal from the vehicle electronic controller. When used as an emergency battery disconnect switch, manually depressing the operating knob will override the energised coil such that the main contact and the auxiliary contact (where fitted) will open until such time as the knob is again moved to the "on" position.

**SD200 Contactor Performance**

- **Time (Seconds):**
  - 0 to 100
  - 100 to 200
  - 200 to 300
  - 300 to 400
  - 400 to 500
  - 500 to 600
  - 600 to 700
  - 700 to 800
  - 800 to 900

- **Current (Amperes):**
  - 0 to 100
  - 100 to 200
  - 200 to 300
  - 300 to 400
  - 400 to 500
  - 500 to 600
  - 600 to 700
  - 700 to 800
  - 800 to 900

**Contact Performance Key:**

- **Uninterrupted Current**

**SD200 Available Options**

- **Auxiliary Contacts**
  - General
  - Suffix
  - X

- **Magnetic Blowouts**
  - General
  - Suffix
  - B

- **Armature Cap**
  - General
  - Suffix
  - Ø

- **Mounting Brackets**
  - General
  - Suffix
  - X

- **Closed Contact Housing**
  - General
  - Suffix
  - X

- **EE Type (Steel Shroud)**
  - General
  - Suffix
  - X

- **Lockable**
  - General
  - Suffix
  - X

**Contacts**

- **Large Tips**
  - General
  - Suffix
  - X

- **Textured Tips**
  - General
  - Suffix
  - T

- **Silver Plating**
  - General
  - Suffix
  - X

**Coil**

- **AC Rectifier Board (Fitted)**
  - General
  - Suffix
  - Ø

- **Coil Suppression**
  - General
  - Suffix
  - Ø

- **Flying Leads**
  - General
  - Suffix
  - Ø

- **Manual Override Operation**
  - General
  - Suffix
  - X

- **M6 Stud Terminals**
  - General
  - Suffix
  - X

- **M5 Terminal Board**
  - General
  - Suffix
  - Ø

- **Vacuum Impregnation**
  - General
  - Suffix
  - Ø

**Key:**

- Optional
- Standard
- Not Available

- Connections become polarity sensitive
- Fuseholder type only

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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.

SD200A Technical Drawing

Drilling Details for Mounting

SD200A Fuseholder Technical Drawing

Precautions:

When fitted with magnetic blowouts the polarity marked on the contact housing must be observed when connecting the main terminals. Ensure that the switches are installed in a position where heavy arcs emanating from the switch cannot damage or electrically jump across to adjacent parts.

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.**