High Power Switches

High Current Disconnectors

- Accept busbar dilatations thanks to built-in deformability (Flexible joints are not necessary)
- Low and constant voltage drop
- Self-cleaning effect on contact
- High short-circuit current withstand
- Large insulation and creepage distances
- Easy connections to:
  - Aluminium busbars by welding
  - Copper busbars by bolting
- Large customization possible with:
  - Actuators (motor, pneumatic, manual)
  - Auxiliaries (limit switches, locks, control boxes)
  - Adaptation to the connecting busbars.
- According to IEC 60947-3 / IEC 60077-1 (NFF 16101 / 16102)

Main technical characteristics

**Electrical Data**
- Temperature rise at nominal current (with 40°C max. Ambient temperature) less than : 65°C
- Typical temperature rise at nominal current (with 40°C max. Ambient temperature) : 15°C above busbars
- Typical voltage drop at nominal current : 40 mV
- Peak short-circuit current withstand (upon circuit configuration) : 8 x (Nominal current)
- Dielectric withstand strength
  - Between live parts in open position : 10 kV - 50 Hz - 1 min
  - Between live parts and earth : 10 kV - 50 Hz - 1 min
  - Between auxiliary contacts and earth : 2.5 kV - 50 Hz - 1 min
  - Between motor (AC) and earth : 2 kV - 50 Hz - 1 min
- SCR leakage current breaking capacity (upon request) : 1 A - 100 V DC L/R = 5 ms
- Power breaking capacity up to 100 kA - 100 V DC - L/R < 20 msec : Upon request

**Mechanical Data**
- Built-in standard deformability (longitudinally (dL) / transversally (dT) / axially (dA)) [higher values available upon request] : 25 / 80 / 10 mm
- Mechanical endurance (with respect to maintenance instructions).
  - Higher endurance upon request : 20 000 Cycles
- Typical duration of opening or closing operation
  - With motor operation : 3 to 12 seconds
  - With pneumatic operation : Less than 1 second
- Punctual contact temperature on live parts withstand without equipment damages : 140° C

NORD Range
1500 V DC - 14 kA to 140 kA
Single pole / Double pole / Change-over
Aluminum or Copper Terminals
High Power Switches

Technology
- Visible break by direct seeing of the mobile silver-plated copper contacts
- Mechanically independent mobile contact arms with high-pressure springs
- Electrical contact with silver to silver contact
- Insulation with Fiberglass reinforced polyester insulators
- Operation mechanism of bichromate galvanized steel by a toggle closed system
- Disconnectors are self-supporting - Busbars support must be sized to withstand the disconnector additional weight
- Upon request, choice of input and output terminals in aluminium or silver-plated copper
- Upon request, two poles or change-over design by side association of two disconnectors

Main dimensions

<table>
<thead>
<tr>
<th>Nominal current (kA)</th>
<th>No. mobile contacts</th>
<th>A mm</th>
<th>B mm</th>
<th>Weight kg</th>
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<tbody>
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<td>14</td>
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<td>68</td>
<td>970</td>
<td>97</td>
<td>485</td>
</tr>
</tbody>
</table>

Deformability

(Factory settings at: dL: ±12.5 - dT: ±40 - dA: ±5)

Typical bolting scheme on copper connecting plates chosen from 0 to 60 mm
High Power Switches

Aluminium type

Copper type

* Control device  Auxiliary contact

* Control device  Auxiliary contact  Bolting scheme below
FERRAZ has it all for defining and offering customized solutions to meet your most specific requirements:

- Adapted drives or control units
- Enclosures for switch protection
- Adapted technical performances (short-circuit current capability, endurance, grounding contacts)