UniSec offers the following features:

- Air insulation of all live parts
- SF₆ switch-disconnector
- LSC2A and LSC2B service continuity classification
- Removable and withdrawable vacuum and SF₆ circuit-breakers for LSC2A service continuity panel
- Withdrawable vacuum and SF₆ circuit-breakers for LSC2B service continuity panel
- Withdrawable vacuum contactor for LSC2B service continuity panel
- Multi-function apparatus with integrated vacuum circuit-breaker and gas-insulated disconnector
- Complete range of functional units and accessories
- Large selection of state-of-the-art protection relays, integrated on removable circuit-breakers or mounted for protection, control and measurement functions in LV compartment.

Reference Standards
The switchgear and the main equipment it contains comply with the following standards:

- IEC 62271-1 for the general application
- IEC/EN 62271-200 for the switchgear. With reference to the classifications established by the standards, UniSec switchgear is defined as described below:
  - Continuity of service classification: LSC2A and LSC2B
  - Classification of the segregations: PM (metallic partition) and PI (insulation partition) for withdrawable circuit-breakers at 24 kV only
    - IEC 62271-102 for the earthing switch
    - IEC 62271-100 for the circuit-breakers
    - IEC 60071-2 for insulation co-ordination
    - IEC 60470 for the contactors
    - IEC 60265-1 for the switch disconnectors
    - IEC 60529 for the protection classes
    - IEEE 693 Seismic qualification testing of the switchgear
    - IEC 62271-304 for severe climatic conditions
    - IEC 62271-1 for IK07 for structure strength.

Fields of application
Medium voltage secondary power distribution
- Transformer substations
- Control and protection of feeders and power transformers
- Infrastructures, data centers, Small Power Generation
- Airports
- Hospitals and shopping centres
- Industries, renewable energy systems
- Marine.
## Switchgear electrical characteristics

### Rated voltage
- **kV:** 12, 17.5, 24

### Test voltage (50-60 Hz x 1 min)
- **kV:** 28, 38, 50

### Impulse withstand voltage
- **kV:** 75, 95, 125

### Rated frequency
- **Hz:** 50-60, 50-60, 50-60

### Rated main busbar current
- **A:** 630/800/1250, 630/800/1250, 630/1250

### Rated current of apparatus:
- **VD4/R-Sec - VD4/L-Sec - HD4/R-Sec - HD4/RE-Sec**
  - **A:** 630/800 (630/800/630)
- **VD4/R-Sec - HD4/R-Sec withdrawable circuit-breaker**
  - **A:** 630 (630/1250/–)
- **HySec multi-function apparatus**
  - **A:** 630 (630/1250/–)
- **GSec gas switch-disconnector**
  - **A:** 630 (630/1250/630)
- **VD4/P withdrawable circuit-breaker**
  - **A:** 630/800 (630/1250/–)
- **VD4/Sec withdrawable circuit-breaker**
  - **A:** 630/1250 (630/1250/630)
- **HD4/Sec withdrawable circuit-breaker**
  - **A:** 630/1250 (630/1250/630)
- **VSC/P withdrawable vacuum contactor**
  - **A:** 630/1250 (630/1250/–)

### Rated short time withstand current
- **kA (3s):** 16(4)/20(3)/25(1)/20(1) / 16(4)/20(3)/25(1)/20(1)

### Peak current
- **kA:** 40(4)/50(3)/62.5 (40(4)/50(3)/62.5)

### Internal arc withstand current (up to IAC AFLR)
- **kA (1s):** 12.5/16(4)/20(3)/25(1)/20(1) / 12.5/16(4)/20(3)/25(1)/20(1) / 12.5/16(4)/20(3)/20(1)

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### SDC
- **Width [mm]:** 375, 500, 600, 750, 190
- **Feeder with switch-disconnector:** ① ②
- **Coupler with switch-disconnector:** ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩
- **Coupler with switch-disconnector for measure:** ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩
- **Feeder with double switch-disconnector:** ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

### UMP
- **Width [mm]:** 375, 500, 600, 750, 190
- **Universal Metering Unit:** ① ②
- **Feeder with fused switch-disconnector:** ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩
- **Coupler with fused switch-disconnector:** ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

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(1) 25 kA 2s for LSC2A service continuity classification  
(2) For LSC2B service continuity classification  
(3) Contact ABB for 21 kA/52.5 kA p  
(4) For HySec 16 kA(1s)/40 kAP  
(5) If LSC2A unit, only with gas duct at 12kV, height 2000 mm and width 750 mm (further details on page 96)
<table>
<thead>
<tr>
<th>Width</th>
<th>Feeder with circuit-breaker and switch-disconnector</th>
<th>Feeder with withdrawable circuit-breaker and switch-disconnector</th>
<th>Coupler with circuit-breaker and switch-disconnector</th>
<th>Coupler with withdrawable circuit-breaker and switch-disconnector</th>
<th>Coupler with circuit-breaker and double switch-disconnector</th>
</tr>
</thead>
<tbody>
<tr>
<td>375</td>
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<td>750</td>
<td>① ② ④ ⑥ ⑨ ⑪ ⑫ ① ④ ⑥ ⑨ ⑪ ⑫ ① ④ ⑥ ⑨ ⑪ ⑫ ① ④ ⑥ ⑨ ⑪ ⑫ ① ④ ⑥ ⑨ ⑪ ⑫ ① ④ ⑥ ⑨ ⑪ ⑫</td>
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<table>
<thead>
<tr>
<th>Width</th>
<th>Reversed feeder with circuit-breaker and switch-disconnector</th>
<th>Feeder with integrated circuit-breaker and disconnecter</th>
<th>Measure with switch-disconnector</th>
<th>Direct feeder with measurement and busbar earthing</th>
<th>Riser with measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>375</td>
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<td>①</td>
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<tr>
<td>500</td>
<td>① ②(*) ③ ④ ⑨ ⑪ ⑫ ① ③ ④ ⑨ ⑪ ⑫ ① ③ ④ ⑨ ⑪ ⑫ ① ③ ④ ⑨ ⑪ ⑫ ① ④ ⑨ ⑪ ⑫ ① ④ ⑨ ⑪ ⑫ ① ④ ⑨ ⑪ ⑫</td>
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<td>① ②(*) ③ ④ ⑨ ⑪ ⑫ ① ③ ④ ⑨ ⑪ ⑫ ① ③ ④ ⑨ ⑪ ⑫ ① ③ ④ ⑨ ⑪ ⑫ ① ③ ④ ⑨ ⑪ ⑫ ① ③ ④ ⑨ ⑪ ⑫</td>
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<td>750</td>
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<table>
<thead>
<tr>
<th>Width</th>
<th>Left lateral cable riser</th>
<th>Right lateral cable riser</th>
<th>Feeder with withdrawable frontal circuit-breaker</th>
<th>Coupler with withdrawable frontal circuit-breaker</th>
<th>Direct feeder with measurement and busbar earthing</th>
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</thead>
<tbody>
<tr>
<td>375</td>
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<td>750</td>
<td>① ② ④ ⑨ ⑪ ⑫ ① ② ④ ⑨ ⑪ ⑫ ① ② ④ ⑨ ⑪ ⑫ ① ② ④ ⑨ ⑪ ⑫ ① ② ④ ⑨ ⑪ ⑫ ① ② ④ ⑨ ⑪ ⑫</td>
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(*) VTs not available in case of CTs
(**) Only for 12-17.5 kV
(***) As option

① Current transformers (CT)
② Voltage transformers (VT)
③ Busbar earthing
④ Separate lower earthing switch
⑤ Voltage transformers with left busbar exit only (only for panel H = 1700 mm)
⑥ Separate lower earthing switch without making capacity
⑦ Direction of lower busbar exit, left
⑧ Direction of lower busbar exit, right
⑨ Surge arresters
⑩ Contactor
⑪ Adaptor panel for LSC2A and LSC2B panels
⑫ Top application please refer to UniSec Catalog