LeanGear ZS9
Arc-proof air-insulated switchgear for primary distribution
12kV 630/1250A 25kA

LeanGear ZS9 is an arc-proof air-insulated switchgear designed to meet space requirements and ratings of low electrical distribution grids.

It offers optimal safety and reliability standards, consistent with the ABB’s UniGear range of switchgear. With a proven robustness and flexibility, the LeanGear ZS9 is tested for tropical conditions.

**Main benefits**
- **Safety:** Increased safety level assured by integrated ducting system against effects of internal arc
- **Security:** Comprehensive interlocks provide optimum protection for both personnel and equipment
- **Space:** Maximum functionality in a compact design with reduced footprint and height
- **Service:** Ease of service and operation by personnel as switchgear and cable termination height are ergonomically designed
- **Speed:** Minimal service downtime attributable to modular circuit breaker design and built-in features that eliminate use of special handling tools
- **Strength:** Robust panel structure that is proven against external mechanical impacts

**Main features**
- Type-tested to IEC standard by STL lab
- Internal arc classification IAC AFLR 25kA 1s
- Classified as LSC2B, PM
- Proven to be used in severe climatic conditions compliant to IEC 62271-304 Class 2
- CB racking with closed door
- Cable termination height of 700 mm
- IP4X degree of protection
- Extensible on both sides
- Integrate with ABB Relion® series relay for protection and control

**VInd circuit breaker**
- Floor-rolling circuit breaker
- Suitable for E2, M2, and C2 endurance class application
- Integral spring charging handle
- Built-in mechanical anti-pumping device
### Technical data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated voltage</td>
<td>[kV]</td>
<td>12</td>
</tr>
<tr>
<td>Rated power frequency withstand voltage</td>
<td>[kV 1 min]</td>
<td>28</td>
</tr>
<tr>
<td>Rated lightning impulse withstand voltage</td>
<td>[kV]</td>
<td>75</td>
</tr>
<tr>
<td>Rated frequency</td>
<td>[Hz]</td>
<td>50</td>
</tr>
<tr>
<td>Rated short time withstand current</td>
<td>[kA 3 s]</td>
<td>25</td>
</tr>
<tr>
<td>Peak current</td>
<td>[kA]</td>
<td>63</td>
</tr>
<tr>
<td>Rated main busbar current (40°C)</td>
<td>[A]</td>
<td>800/1250</td>
</tr>
<tr>
<td>Rated branch connection current (40°C)</td>
<td>[A]</td>
<td>630/1250</td>
</tr>
<tr>
<td>Internal arc withstand current</td>
<td>[kA 1 s]</td>
<td>25</td>
</tr>
<tr>
<td>Internal arc classification to IEC 62271-200</td>
<td></td>
<td>IAC AFLR</td>
</tr>
<tr>
<td>Overall dimensions of basic cubicles</td>
<td>[mm]</td>
<td>1755/600/1560/2070</td>
</tr>
<tr>
<td>Degree of protection (internal and external)</td>
<td></td>
<td>IP4X²</td>
</tr>
<tr>
<td>Cable connection height</td>
<td>[mm]</td>
<td>700</td>
</tr>
<tr>
<td>Approximate weight</td>
<td>[kg]</td>
<td>600</td>
</tr>
</tbody>
</table>

1) Varies according to the configuration
2) Higher rating up to IP42 external degree of protection available on request

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### Single line diagram of typical units

![Single line diagram](image)

**Legend:**

- IF – Incoming/ outgoing feeder
- IF – Incoming feeder with measurements (Fixed fuses)
- IF – Incoming feeder with measurements (Isolatable fuses)
- BC – Bus coupler
- R – Bus riser
- RM – Bus riser with measurements
- M – Measurements

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### Typical feeder unit

![Typical feeder unit](image)

A. Circuit breaker compartment  
B. Busbar compartment  
C. Cable compartment  
D. Low voltage compartment  
E. Integral panel gas duct

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