Medium-voltage switchgear for Distribution Network Solutions

cgm.800

Fully gas insulated modular system

Up to 36 kV
Up to 38.5 kV

IEC Standards
ANSI/IEEE Standards

Reliable innovation. Personal solutions.

www.ormazabal.com
Foreword

cgm.800 is the logical evolution of the full insulation systems which Ormazabal has developed over several decades, for facilities which require a larger range of rated currents whilst maintaining all other characteristics.

CGM-CGC, cgmcosmos and cgm systems have been integrated in numerous applications in smart grids and renewable energy systems. There are currently more than 565,000 functional units of these systems in service in over 35 countries.

cgm.800 system provides reliable, efficient solutions for the distribution network (DNS) for all types of medium-voltage installations, from energy companies to infrastructure, leisure facilities to industrial installations and from windfarms to photovoltaic plants.

Benefits

Safety
» Tested against internal arc
» All live parts are housed in a hermetically-sealed gas tank
» Mechanical/electrical interlocking to prevent unsafe operation
» Indicators for switch position, voltage presence and acoustic alarm

Reliability
» Full insulation with lifetime sealing
» 24-hour immersion tests
» Factory routine tests on 100 % of the units

Efficiency
» Modular design extensible on both sides thanks to ormalink
» Uninterrupted motorisation of supply
» Easy front access to install and test medium voltage cables and fuses
» Compact size and lightweight

Sustainability
» Ongoing reduction in the use of greenhouse gases
» End-of-life and recycling management
» Use of highly-recyclable materials
» Self-powered protection relays

Continuous innovation
» Cubicles operating at - 30 °C
» Evolution in the driving mechanisms
» Protection and automation units integrated in the cubicle
» System prepared for smart grids
» Voltage and current sensors
» Cable faults preventive diagnosis
» Partial discharge (PD) detection for network diagnosis

Technical details

General
» Metal enclosure, single busbar
   Indoor use up to altitude 2000* m
» Environmental temp:
   Standard - 5 °C to + 40 °C*
   Extended - 30 °C to + 40 °C*
» Loss of service continuity:
   LSC 2B
» Compartmentalisation class:
   PM
» Rated frequency
   50/60 Hz

Technical details

<table>
<thead>
<tr>
<th>Function</th>
<th>IEEE</th>
<th>IEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated voltage</td>
<td>Up to 38.5 kV</td>
<td>Up to 36 kV</td>
</tr>
<tr>
<td>Rated current</td>
<td>Up to 800 A</td>
<td></td>
</tr>
<tr>
<td>Classification of internal arc</td>
<td>AFL 20 - 25 kA (1 s)</td>
<td>AF/AFL 16 - 25 kA (1 s)</td>
</tr>
<tr>
<td>AF/AFLR 25 kA (1 - 3 s)/25 (1 s)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rated short-time withstand current</td>
<td>20(2) kA (1 - 3 s)/25 (1 s)</td>
<td>16-20(2) kA (1 - 3 s)/25 (1 s)</td>
</tr>
</tbody>
</table>

(*) Other conditions to order
(1) Tests conducted at 21 kA/52.5 kA
(2) With gas output via the relief duct. Check availability in accordance with model.
Product range

Unifunctional units

- Feeder
- Fuse-protection
- Circuit-breaker

Dimensions and weights

<table>
<thead>
<tr>
<th>Module</th>
<th>Height [mm]</th>
<th>Width [mm]</th>
<th>Depth [mm]</th>
<th>Weight [kg]</th>
</tr>
</thead>
<tbody>
<tr>
<td>-l</td>
<td>1400</td>
<td>418</td>
<td>850</td>
<td>147</td>
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<td>1745</td>
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<tr>
<td>-p</td>
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<td>480</td>
<td>1010</td>
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<td>1745</td>
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<td>215</td>
<td>230</td>
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<tr>
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<td>600</td>
<td>850</td>
<td>240</td>
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<tr>
<td></td>
<td>1745</td>
<td></td>
<td>240</td>
<td>255</td>
</tr>
</tbody>
</table>

[1] In the case of double symmetrical terminal, the switchgear is an extra 80 mm deep.
[2] As an option, there is also a 595 mm wide cgm.800-v cubicle module available. Please check with Ormazabal.