MV Switchgear for Distribution Network Solutions

CGM.3
Fully gas insulated modular and compact (RMU) system

Up to 40.5 kV
Up to 38 kV

IEC Standards
ANSI / IEEE Standards

Reliable innovation. Personal solutions.

www.ormazabal.com
The earlier version of CGM.3 was CGM-CGC, the first modular and extensible fully gas insulated secondary distribution cubicle in the world market. After the worldwide success of its antecedent, CGM.3 was launched in 2008. During the recent years CGM.3 has been extended to higher electrical ratings, e.g. up to 40.5 kV and up to 25 kA. CGM-CGC and CGM.3 systems have already been integrated into several smart grid and RES applications. Currently more than 165,000 functional units of these systems have been in service in more than 35 countries.

SAFETY
- Internal arc tested (21-25 kA 1s)
- All live components are inside a hermetically sealed gas tank
- Mechanical / electrical interlocks to prevent unsafe operations
- Switch position, voltage presence and acoustic alarm indicators

RELIABILITY
- Fully insulated & sealed for life
- Immersion tested for 24 hours
- 100% routine tested at factory

EFFICIENCY
- Modular design extensible to both sides thanks to ORMALINK
- Mechanism motorization without interrupting the supply
- Easy frontal access to install and to test MV cables and fuses
- Small size and light weight

SUSTAINABILITY
- Continuous reduction in use of greenhouse gases
- End-of-life management and re-cycling
- Use of highly recyclable material
- Self-powered protection relays

CONTINUOUS INNOVATION
- New modules for 25 kA
- Modules operating in -30 °C
- New metering cubicles
- Evolution in driving mechanisms
- Integrated in cubicle own protection and automation units
- Smart grid ready system
- Voltage and current sensors
- Preventive cable fault diagnosis
- Partial discharge (PD) detection for network diagnosis

STANDARDS
IEC
- IEC 62271-1
- IEC 62271-200
- IEC 62271-100
- IEC 62271-102
- IEC 62271-105
- IEC 62271-103
- IEC 60529
- IEC 62271-206

ANSI / IEEE
- IEEE Std C37.74
- IEEE Std C37.20.3
- IEEE Std 1247
- IEEE Std C37.123
- IEEE Std C37.20.4
- IEEE Std C37.04
- IEEE Std C37.06
- IEEE Std C37.09
- IEEE Std C37.20.7

Others: GB,...

TECHNICAL DATA
General
- Rated voltages: up to 40.5 kV
- Rated values: 36-38-38.5-40.5 kV
- 400-630 A
- 16-20-25 kA 1-3 s
- 50 / 60 Hz
- Metal enclosed, single busbar
- Indoor use up to 2000* m altitude
- Ambient Tª: Standard -5°C to +40°C*
- Extended -30°C to +55°C*
- Loss of service continuity: LSC 2B
- Partition class: PM
- (*) Other conditions under consultation

IAC Standards
- Rated voltages: up to 40.5 kV
- Internal arc class
  - IAC AFL(R*) 25 kA 1s (up to 36 kV)
  - IAC AFL(R*) 21 kA 1s (up to 40.5 kV)
- Functions: L, P, V, S, RB, RC, M, 2LP, RLP, RLV

ANSI / IEEE Standards
- Rated voltage: up to 38 kV
- Internal arc qualified: 25 kA 1s
- Functions: L, P, V, S, RB, RC

DESIGN
1a Gas Tank
1b Busbar connection
1c Switching devices
2 Driving Mechanism
3a Base
3b Cable Compartment
3c Gas relief duct
4 Control Box

FAMILY
MODULAR FUNCTIONAL UNITS
L Feeder
P Fuse protection
V Vacuum Circuit Breaker protection
S Busbar switch
RB Busbar rise
RC Cable rise (1)
M Metering

RES CONFIGURATIONS
2LP (RMU) RLP RLV
- Fuse protection and feeder
- Fuse protection, rise and feeder
- CB protection, rise and feeder

Available other RES configurations

(1) Available: Double cable version

CgM.3