RTU

ORMAZABAL
velatia

MV Switchgear for
Distribution Network Solutions

CGMCOSMOS

Fully gas insulated modular and compact (RMU) system

Up to 24 kV
Up to 27 kV

IEC Standards
ANSI / IEEE Standards

Reliable innovation. Personal solutions.

CA-434-EN -1303

www.ormazabal.com

PREFACE

The first **CGMCOSMOS** was launched in 2000, as the most flexible modular and compact ring main unit (RMU) range for secondary distribution networks up to 24 kV.

Since then, **CGMCOSMOS** system has been continuously evolving into a more extended range with higher ratings based on our customers' demands.

CGMCOSMOS system has already been integrated into several smart grid applications. Currently more than 350,000 **CGMCOSMOS** functional units have been in service in more than 60 countries.

SAFETY

» Internal arc tested (16-21-25 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

» Modules operating in -30 ºC
» 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: SANS, HN, GB, SDMS,...

TECHNICAL DATA

General

Rated values 12-17.5-24-27 kV
400-630 A
16-20-21-25# kA 1-3 s
50 / 60 Hz

Metal enclosed, single busbar
Indoor use up to 2000* m altitude

Ambient Ta: Standard -5ºC to +40ºC*
Extended -30ºC to +55ºC*

Loss of service continuity: LSC 2B

Partition class: PM

(#) Consult availability
(*) Other conditions under consultation

IEC Standards

Rated voltages: up to 24 kV

Internal arc class
IAC AFL(R*) 21-25# kA 1s

(*) R with rear chimney
(#) Consult availability

Functions: L, P, V, S, RC, RB, R2C, M, 2LP, 2LV, 2L, 3LP, 2L2P, 3L2P, RLP

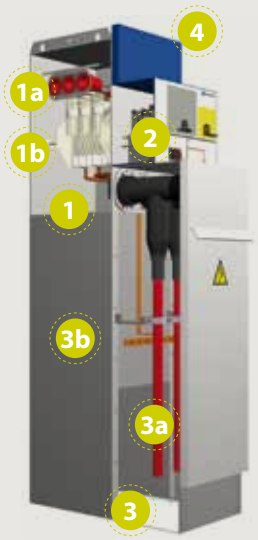
ANSI / IEEE Standards

Rated voltage: up to 27 kV

Internal arc qualified: 21 kA 1s

Functions: L, P, V, S, RB, RC, R2C

DESIGN



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

FAMILY

MODULAR FUNCTIONAL UNITS


L Feeder

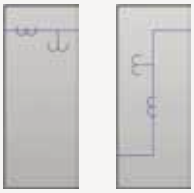

P Fuse protection


V Vacuum Circuit Breaker protection


S Busbar switch


RB Busbar rise

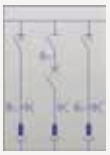

RC Cable rise (1)


M Metering

COMPACT FUNCTIONAL UNITS


2LP (RMU) Fuse protection and feeder (2)


RLP Fuse protection and feeder and busbar rise


2LV (RMU) CB protection and feeder

NEW 2013!

(1) Available: Double cable version (R2C)
(2) Other versions: 2L, 2L2P, 3L2P

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