

CT5V.5



Medium voltage switchgear for
Distribution Network Solutions

cgm.3

Modular compact system (RMU)
with full gas insulation

Up to 40.5 kV
Up to 38 kV

IEC Standards
ANSI/IEEE Standards

Reliable innovation. Personal solutions.

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Foreword

The previous version of **cgm.3** was the **cgm-cgc**, the first full insulation, modular, extensible secondary distribution cubicle on the global market. **cgm.3** was launched in 2008, following the international success of its predecessor. Over recent years, the **cgm.3** has been upgraded with higher electrical values, e.g. up to 40.5 kV and 25 kA.

cgm-cgc and **cgm.3** systems have been integrated in numerous applications in smart grids and renewable energy systems. There are currently more than 165,000 functional units of these systems in service in over 35 countries.

The **cgm.3** 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.

Design



- 1 Gas tank
- 1a Busbar connection
- 1b Switching and breaking elements
- 2 Driving mechanisms
- 3 Base
- 3a Cable compartment cover
- 3b Gas expansion

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

- » New modules for 25 kA
- » 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

Standard

IEC

IEC 62271-1
IEC 62271-200
IEC 62271-100
IEC 62271-102
IEC 62271-105
IEC 62271-103
IEC 60255
IEC 60529
IEC 62271-206
IEC 61243-5



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 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

➔ (*) Other conditions to order

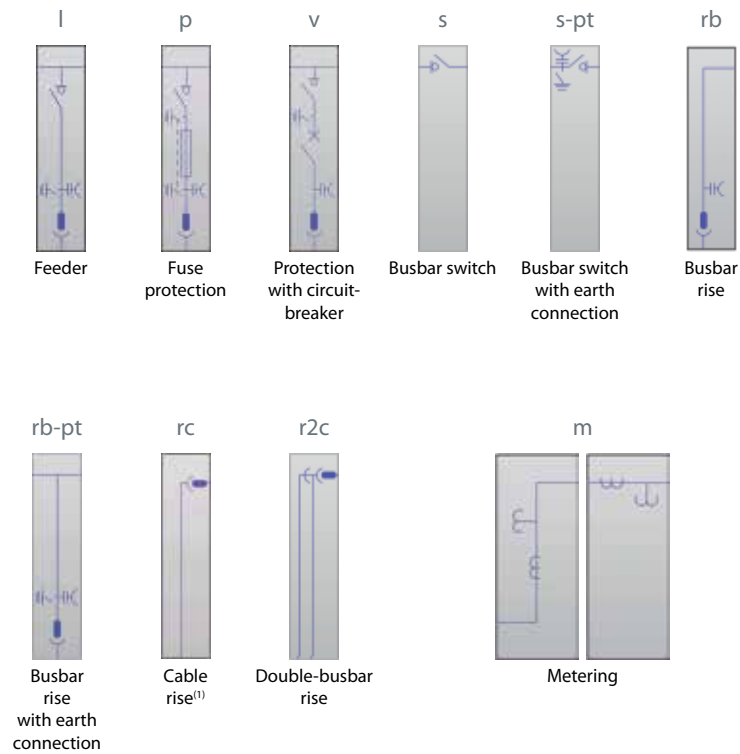
	IEC		IEEE
	Up to 36 kV	Up to 40.5 kV	Up to 38 kV
Rated voltage	Up to 36 kV	Up to 40.5 kV	Up to 38 kV
Rated current	Up to 630 A		Up to 600 A
Classification of internal arc	AF/AFL 16 - 25 - 25 kA (1 s) AFLR ^[2] 20 ^[1] - 25 kA (1 s)	AFL 20 ^[1] - 25 kA (1 s) AFLR ^[2] 20 - 25 kA (1 s)	AFL 20 ^[1] - 25 kA (1 s)
Rated short-time withstand current	16 - 20 ^[1] kA (1 - 3 s)/25 (1 s)	20 ^[1] kA (1 - 3 s)/25 (1 s)	20 ^[1] kA (1 - 3 s)/25 (1 s)
Functions	l, p, v, s, s-pt, rc, r2c, rb, rb-pt, m, 2lp, 2lv, rlp		l, p, v, s, s-pt, rc, r2c, rb, rb-pt

^[1] Tests conducted at 21 kA/52.5 kA

^[2] With gas discharge via the relief duct. Check availability in accordance with model.

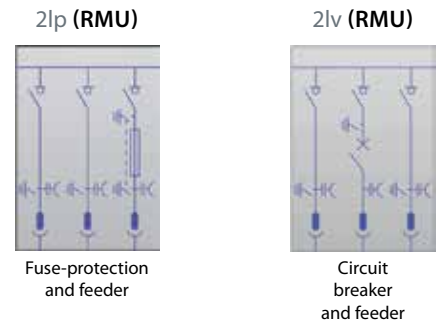
Product range

Unifunctional units

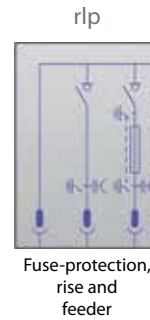


⁽¹⁾ Available: Double cable version

Multifunctional units



Renewable energy configurations



Other configurations for renewable energies available

Dimensions and weights

Module	Height [mm]	Width [mm]	Depth [mm]	Weight [kg]
-l	1400	418	850 ⁽¹⁾	147
	1745			162
-s	1745	418	850	143
-s-pt	1745	600	850	185
-p	1400	480	1010	215
	1745			230
-v	1400	600 ⁽²⁾	850	240
	1745			255
-rc	1745	367	831	42
-r2c	1745	550	831	65
-rb/-rb-pt	1745	418	850 ⁽¹⁾	158
-m	1950	900	1160	258
		1100		300
-2lp	1400	1316	1010 ⁽¹⁾	460
	1745			490
-2lv	1745	1436	850	547

⁽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 cg_m.3-v cubicle module available. Please check with **Ormazabal**.



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