



MV/LV Transformer substations
for distribution network solutions

cms.m

Prefabricated outdoor switchgear
and controlgear substation

Up to 40.5 kV

IEC Standards

Reliable innovation. Personal solutions.

www.ormazabal.com

Preface

Ormazabal's cms.m is a prefabricated surface-mounted switchgear and controlgear substation, metal-enclosed, outdoor operation, compact and built in series, which is supplied from the factory as a unit.

The cms.m substation is designed for installation in electrical networks with rated voltage up to 40.5 kV in alternating current.

The cms.m family is made up of different models designed to house a wide range of medium voltage configurations.



Benefits

Safety

- » High level of safety for people
- » Protection against internal arcs: Class IAC-AB tested in accordance with IEC 62271-202 (optional)
- » Accessibility of the medium voltage connectors through cover interlocked with the earthing switch
- » Voltage presence indicator through **ekor.vpis** or **ekor.ivds** unit
- » Medium voltage switchgear with earthing switch in all functions

Reliability

- » Fully assembled at factory
- » Product tested as a unit
- » Corrosion category C5M-H (ISO 12944-1)
- » Ventilation grilles with dust-capture filter R 15, class g2 (EN 779)
- » Insulation chamber under self-ventilating cover

Efficiency

- » Fast, straightforward replacement of the medium voltage switchgear on site
- » Easy to transport and handle

Sustainability

- » Reduced visual impact
- » Reduced dimensions and weight

Continuous innovation

- » Transportable in sea container HC 40' (up to 8 units)
- » Controlgear for switchgear automation (optional). Indoor and outdoor installation variants
- » Built-in electronic control units for reliable integration with the telemanagement and remote control systems (optional)
- » Auxiliary services supply unit up to 500 VA in **cgmcosmos** system (optional)

Standards

IEC

IEC 62271-200
IEC 62271-202

Technical data

Construction characteristics

- » Fully gas-insulated medium voltage switchgear, for outdoor use:
 - **cgmcosmos**:
 - up to 24 kV IEC
 - up to 27 kV IEEE
 - **cgm.3**:
 - up to 38 kV IEEE
 - up to 40.5 kV IEC
- » Metal enclosure with front access
- » Medium voltage interconnections
- » Earthing circuit connection

Technical characteristics

System		cgmcosmos		cgm.3	
Rated voltage	[kV]	24	27	38	40.5
Frequency	[Hz]	50/60			
Rated current	[A]	400/630			
Lightning impulse withstand voltage	[kV]	125	150	185	
Short-time current	[kA/1 s]	16/20/25			

* in cgmcosmos and cgm.3

🔗 For other rated voltages or values, check with **Ormazabal**.

Model	cms.m-3f cms.m-4f	cms.m-220p cms.m-230p cms.m-320p cms.m-330p
Internal arc classification (optional)	IAC AB-20 kA 1 s	IAC AB-20 kA 0.5 s*
IP grade metal enclosure	IP 34D	IP 45

* only with concrete pit

Design

cms.m-3f
cms.m-4f

cms.m-220p
cms.m-230p
cms.m-320p
cms.m-330p

Available configurations

cms.m comes in different lengths and heights, fitted with fully gas-insulated switchgear.

cgmcosmos system

	cms.m-3f	cms.m-4f	cms.m-220p	cms.m-230p
I-I-I	o	o	o	o
I-v-I	o	o	o	o
I-p-I	o	o	o	o
I-I-v-I	x	o	o	o
I-I-p-I	x	o	o	o
I-I-I-I	x	o	o	o
I-v-v-I	x	o	o	o
I-p-p-I	x	o	o	o
I-I-I-I-I	x	o	o	o
I-I-s-I-I	x	o	o	o
I-I-s-v-I	x	o	o	o
I-v-s-v-I	x	o	x	o
I-I-v-v-v-v	x	x	x	o
I-I-I-s-I-I-I	x	x	x	o

cgm.3 system

	cms.m-3f	cms.m-4f	cms.m-320p	cms.m-330p
I-I-I	o	o	o	o
I-v-I	o	o	o	o
I-p-I	o	o	o	o
I-I-v-I	x	o	o	o
I-I-p-I	x	o	o	o
I-I-I-I	x	o	o	o
I-v-v-I	x	o	o	o
I-p-p-I	x	o	o	o
I-I-I-I-I	x	o	x	o
I-I-s-I-I	x	o	x	o
I-I-s-v-I	x	x	x	o
I-v-s-v-I	x	x	x	o
I-I-I-s-I-I-I	x	x	x	o

Where:
 >> I = feeder function
 >> p = fuse protection function
 >> v = circuit-breaker protection function
 >> s = busbar switch function

(o) Available
(X) Unavailable

➔ For other configurations, contact **Ormazabal**.

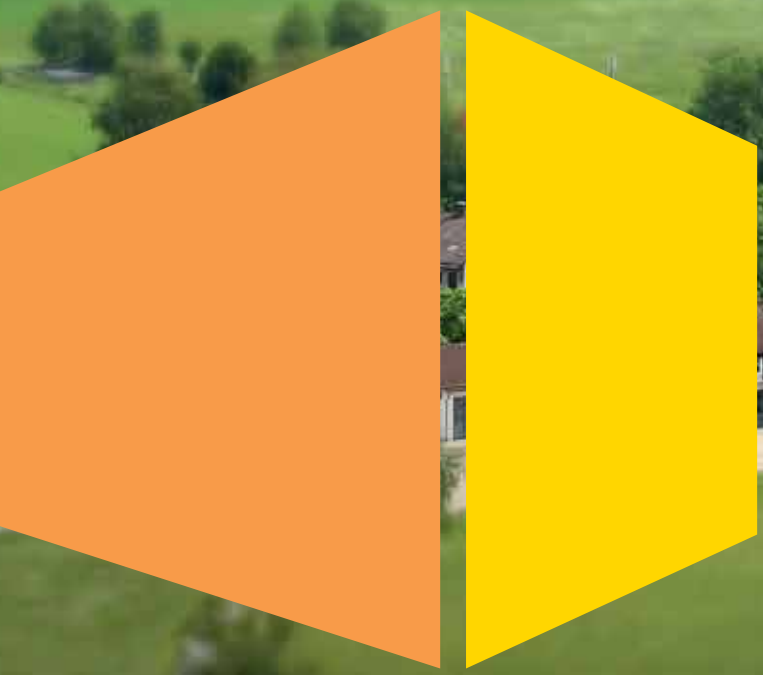


- 1 Medium voltage switchgear
- 2 Metal enclosure
- 3 Automation control box (optional)

External dimensions and weights

		cms.m-3f	cms.m-4f	cms.m-220p	cms.m-230p	cms.m-320p	cms.m-330p
Length	[mm]	1766	2296	2314	3352	2314	3352
Width	[mm]	1404	1404	1409	1409	1409	1409
Height	[mm]	2224	2224	1552	1552	1682	1682
Maximum weight	[kg]	1123	1673	1491	2103	1528	1944





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